



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

73

46291

RE: 2291251 - SIMQUE CONST. - JOHNS RES.

**MiTek USA, Inc.**

6904 Parke East Blvd.  
Tampa, FL 33610-4115

**Site Information:**

Customer Info: Simque Const. Project Name: Johns Res. Model: Custom  
Lot/Block: N/A Subdivision: N/A  
Address: 283 Heathridge Dr., N/A  
City: Columbia Cty State: FL

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

Name: License #:  
Address:  
City: State:

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

Design Code: FBC2017/TPI2014 Design Program: MiTek 20/20 8.2  
Wind Code: ASCE 7-10 Wind Speed: 130 mph  
Roof Load: 37.0 psf Floor Load: N/A psf

This package includes 21 individual, Truss Design Drawings and 0 Additional Drawings.  
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date
1	T20273081	CJ01	5/21/20
2	T20273082	CJ03	5/21/20
3	T20273083	CJ05	5/21/20
4	T20273084	EJ01	5/21/20
5	T20273085	EJ01G	5/21/20
6	T20273086	HJ10	5/21/20
7	T20273087	T01	5/21/20
8	T20273088	T01G	5/21/20
9	T20273089	T02	5/21/20
10	T20273090	T03	5/21/20
11	T20273091	T04	5/21/20
12	T20273092	T05	5/21/20
13	T20273093	T06	5/21/20
14	T20273094	T07	5/21/20
15	T20273095	T08	5/21/20
16	T20273096	T09	5/21/20
17	T20273097	T10	5/21/20
18	T20273098	T11	5/21/20
19	T20273099	T12	5/21/20
20	T20273100	T13	5/21/20
21	T20273101	T13G	5/21/20

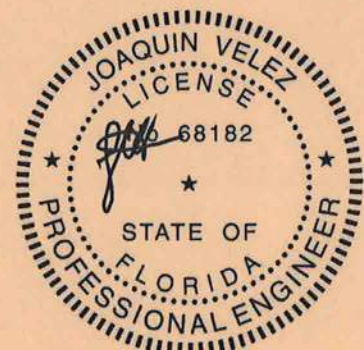


The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource-Jacksonville.

Truss Design Engineer's Name: Velez, Joaquin

My license renewal date for the state of Florida is February 28, 2021.

**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.



Joaquin Velez PE No. 68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21, 2020

Velez, Joaquin

1 of 1

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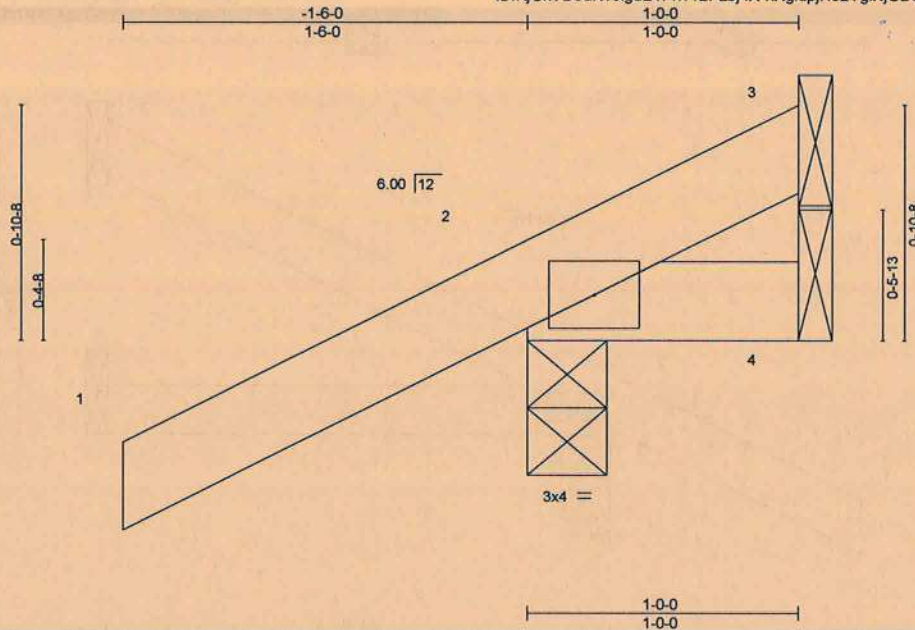




Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273081
2291251	CJ01	Jack-Open	4	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:47 2020 Page 1  
ID:KjGkVdDouK1eiguE1Pn?12Pzbj4X-nXgidpjHo2YgiNjGD3Xs6vmptLyUQjZCdd3QMRzEKpw



Scale = 1:8.2

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 0.17	Vert(LL)	0.00	7	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.04	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 FBC2017/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=55(LC 12)  
Max Uplift 3=6(LC 1), 2=107(LC 12), 4=19(LC 1)  
Max Grav 3=12(LC 8), 2=179(LC 1), 4=25(LC 16)

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

#### NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 4 except (jt=lb) 2=107.



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Date:

May 21,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273082
2291251	CJ03	Jack-Open	4	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:48 2020 Page 1  
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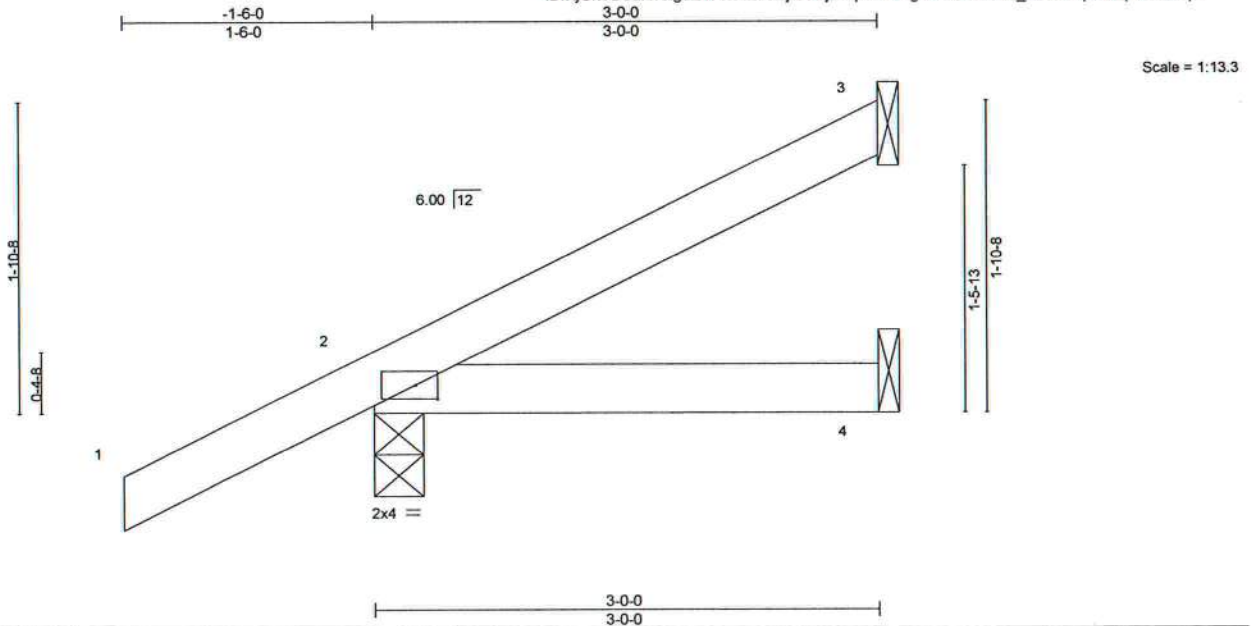


Plate Offsets (X,Y) - [2:0-1-9,0-1-0]

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 0.17	Vert(LL)	-0.00	4-7	>999	240	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.07	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 FBC2017/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=103(LC 12)  
Max Uplift 3=54(LC 12), 2=97(LC 12)  
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 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) 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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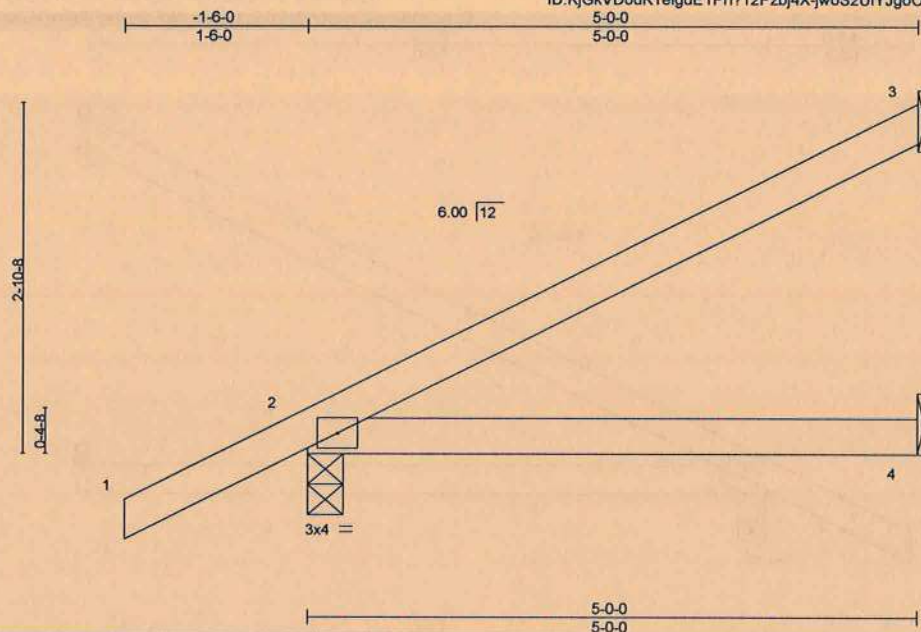
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Tampa, FL 33610



Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273083
2291251	CJ05	Jack-Open	4	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:49 2020 Page 1  
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Scale = 1:18.2

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.31	Vert(LL) 0.04	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 FBC2017/TPI2014	Matrix-MP					Weight: 18 lb	FT = 20%

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

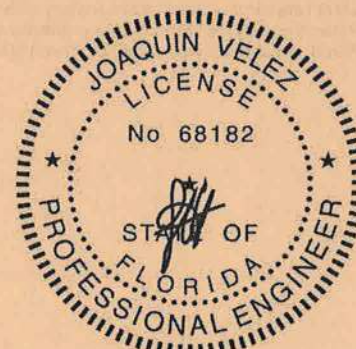
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=151(LC 12)  
Max Uplift 3=102(LC 12), 2=112(LC 12), 4=5(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 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 3=102, 2=112.



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Date:

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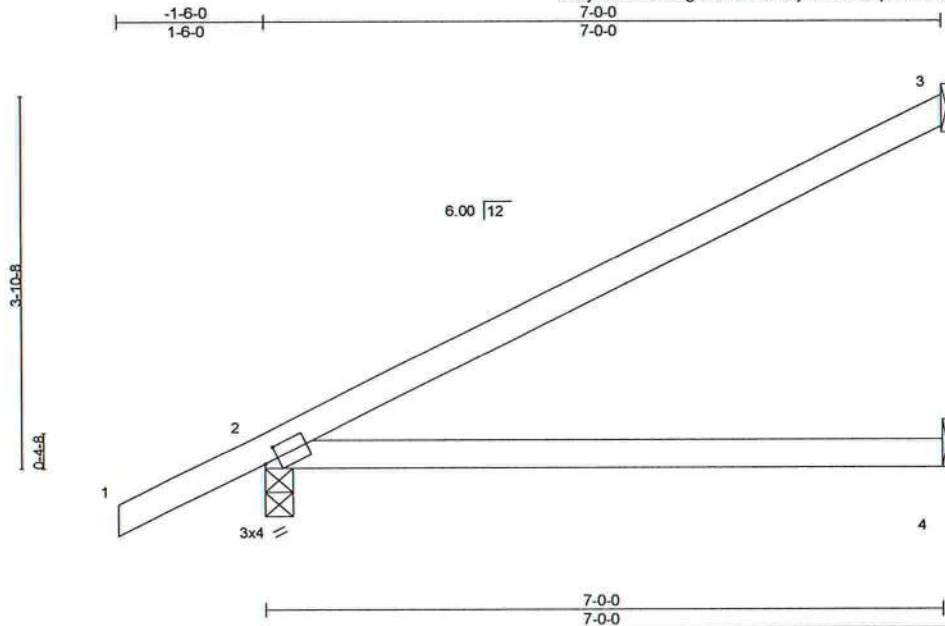
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Tampa, FL 33610



Job 2291251	Truss EJ01	Truss Type Jack-Partial	Qty 27	Ply 1	SIMQUE CONST. - JOHNS RES. T20273084
Builders FirstSource, Jacksonville, FL - 32244,					Job Reference (optional)

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:50 2020 Page 1  
ID:KjGkVDouK1eiguE1Pn?12Pzbj4X-B6MrFqIA4zwFZqSrvC4ZkYOCzsjd4JfKbl4zmzEKpt



Scale = 1:23.0

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

LOADING (psf)	SPACING-		CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	2-0-0	TC 0.69	Vert(LL)	0.14	4-7	>588	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.51	Vert(CT)	-0.22	4-7	>385	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.01	2	n/a	n/a		
BCDL 10.0	Code FBC2017/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=138(LC 12)  
Max Uplift 3=95(LC 12), 2=69(LC 12)  
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 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) 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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MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

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Tampa, FL 33610

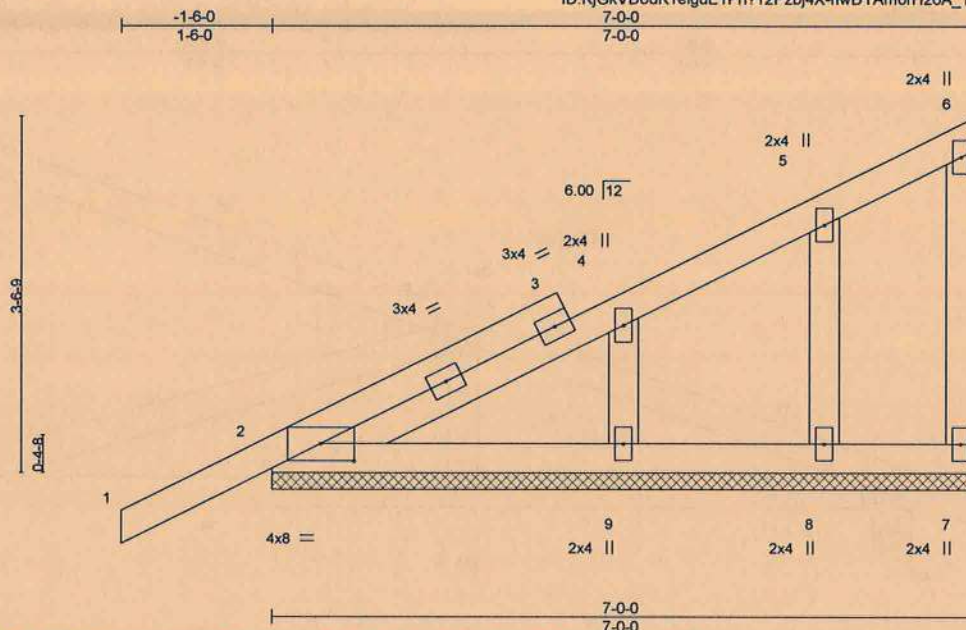


Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273085
2291251	EJ01G	Jack-Open Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:51 2020 Page 1

ID:KjGkVDDouK1eiguE1Pn712Pzbj4X-flwDTAmorH26A\_11SvcoHlwVzzJnMXfoYF1eVCzEKps



Scale = 1:22.1

Plate Offsets (X,Y)=[2:0-4-0,0-2-1]

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 0.17	Vert(LL)	0.00	1	n/r	120	MT20
TCDL 7.0	Lumber DOL	1.25	BC 0.08	Vert(CT)	0.00	1	n/r	120	244/190
BCLL 0.0	Rep Stress Incr	YES	WB 0.06	Horz(CT)	-0.00	7	n/a	n/a	
BCDL 10.0	Code FBC2017/TPI2014		Matrix-S						
								Weight: 38 lb	FT = 20%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 7-0-0.

(lb) - Max Horz 2=183(LC 12)

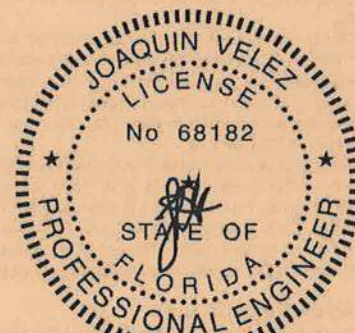
Max Uplift All uplift 100 lb or less at joint(s) 2, 7, 8 except 9=111(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 2, 7, 9, 8

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

#### NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 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.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 7, 8 except (jt=lb) 9=111.



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MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

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**MiTek**

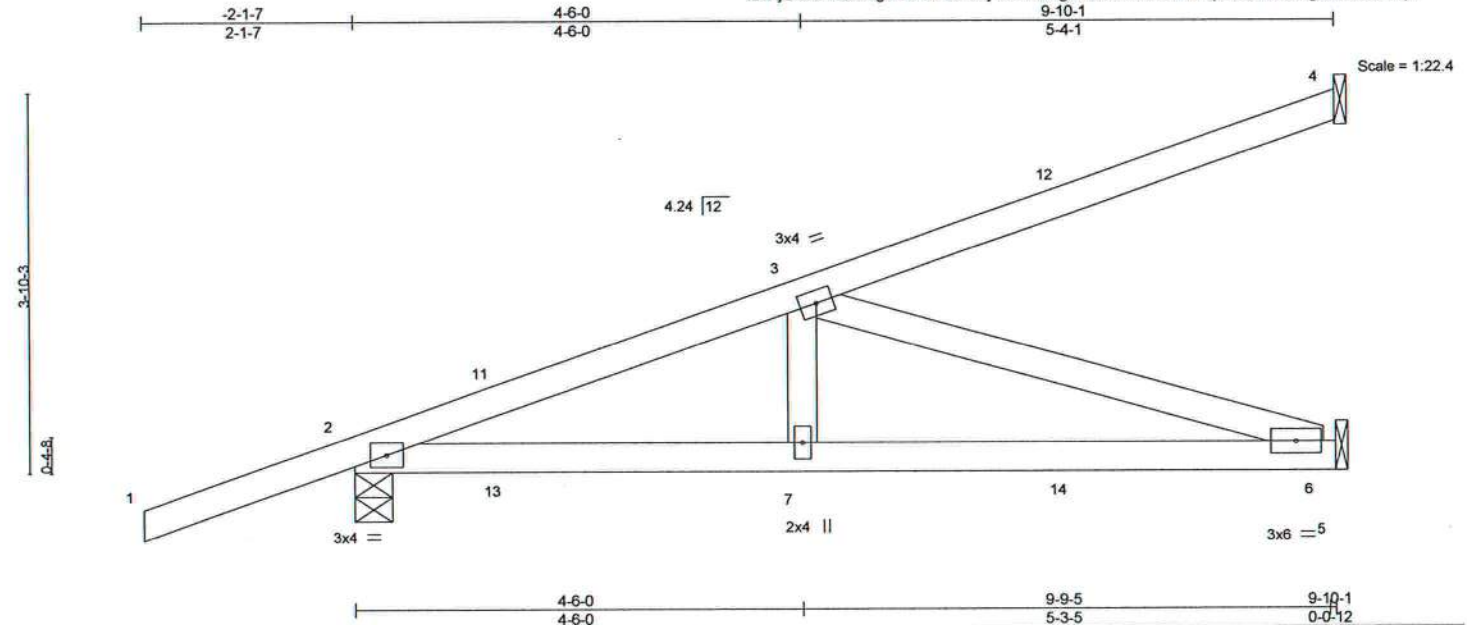
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Tampa, FL 36610



Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273086
2291251	HJ10	Diagonal Hip Girder	2	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:52 2020 Page 1  
ID:KjGkVDouK1eiguE1Pn712Pzbj4X-8VUbgWnQcbAzo8cE0d71pzTaKMXt5tgnvnb2fzEKpr



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>2-0-0</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>in</b>	<b>(loc)</b>	<b>l/defl</b>	<b>L/d</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.25	TC 0.58	Vert(LL)	0.05	6-7	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.56	Vert(CT)	-0.10	6-7	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.46	Horz(CT)	0.01	6	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS						Weight: 44 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 9-3-8 oc bracing.

#### REACTIONS.

(size) 4=Mechanical, 2=0-4-9, 6=Mechanical  
Max Horz 2=217(LC 22)  
Max Uplift 4=141(LC 4), 2=232(LC 4), 6=124(LC 8)  
Max Grav 4=148(LC 1), 2=525(LC 1), 6=303(LC 1)

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

TOP CHORD 2-3=-786/306  
BOT CHORD 2-7=-379/718, 6-7=-379/718  
WEBS 3-7=0/265, 3-6=-754/398

#### NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
- 2) n/a
- 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) except (jt=lb) 4=141, 2=232, 6=124.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 87 lb down and 63 lb up at 1-6-1, 87 lb down and 63 lb up at 1-6-1, 28 lb down and 45 lb up at 4-4-0, 28 lb down and 45 lb up at 4-4-0, and 51 lb down and 101 lb up at 7-1-15, and 51 lb down and 101 lb up at 7-1-15 on top chord, and 25 lb down and 38 lb up at 1-6-1, 25 lb down and 38 lb up at 1-6-1, 24 lb down at 4-4-0, 24 lb down at 4-4-0, and 42 lb down and 20 lb up at 7-1-15, and 42 lb down and 20 lb up at 7-1-15 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).

#### LOAD CASE(S) Standard

- 1) 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) 14=-59(F=-29, B=-29)



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
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Date:

May 21,2020

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8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:53 2020 Page 1

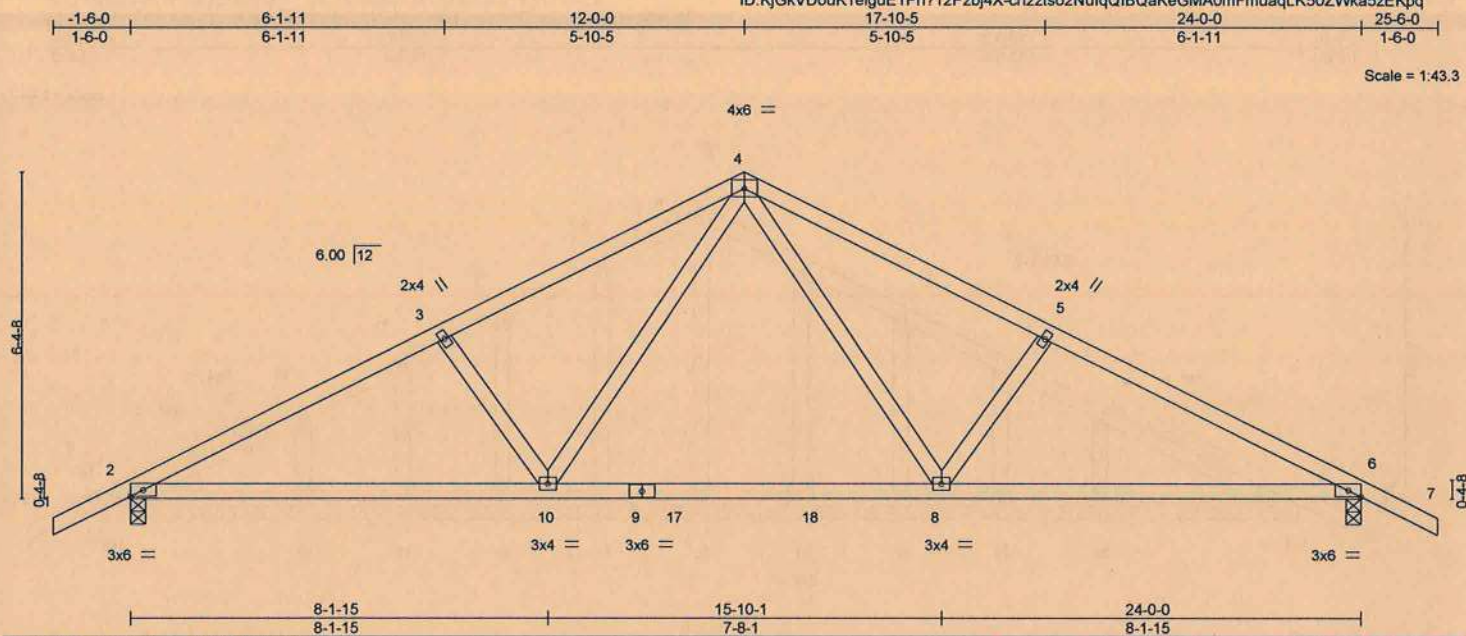


Plate Offsets (X,Y)– [6:0-2-15,Edge]											
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d				PLATES GRIP	
TCLL	20.0	Plate Grip DOL 1.25		TC	0.50	Vert(LL)	0.25	8-10	>999	240	MT20 244/190
TCDL	7.0	Lumber DOL 1.25		BC	0.50	Vert(CT)	-0.42	8-10	>685	180	
BCLL	0.0 *	Rep Stress Incr NO		WB	0.43	Horz(CT)	0.04	6	n/a	n/a	
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS						Weight: 112 lb FT = 20%	

**LUMBER-**

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP M 31
WEBS	2x4 SP No.3

**BRACING-**

TOP CHORD	Structural wood sheathing directly applied or 3-9-3 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 8-3-4 oc bracing.

### REACTIONS.

(size) 2=0-3-8, 6=0-3-8  
Max Horz 2=-142(LC 13)  
Max Uplift 2=-490(LC 12), 6=-490(LC 13)  
Max Grav 2=1199(LC 1), 6=1199(LC 1)

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

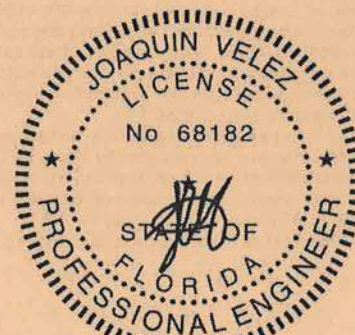
TOP CHORD 2-3=2085/1118, 3-4=1911/1097, 4-5=1911/1097, 5-6=2085/1118  
 BOT CHORD 2-10=860/1809, 8-10=458/1216, 6-8=871/1809  
 WEBS 4-8=431/806, 5-8=309/323, 4-10=431/806, 3-10=309/323

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCPi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=490, 6=490.
- 6) 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

- 1) 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



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Date:

May 21, 2020



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8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:55 2020 Page 1  
ID:KjGkVDouK1eiguE1Pn?12Pzbj4X-Y49kIYpJvWYYfbKphlqkRb5ByagKIKIOTI?re zEKpo

-1-6-0      12-0-0      24-0-0      25-6-0  
1-6-0      12-0-0      12-0-0      1-6-0

Scale = 1:44.7

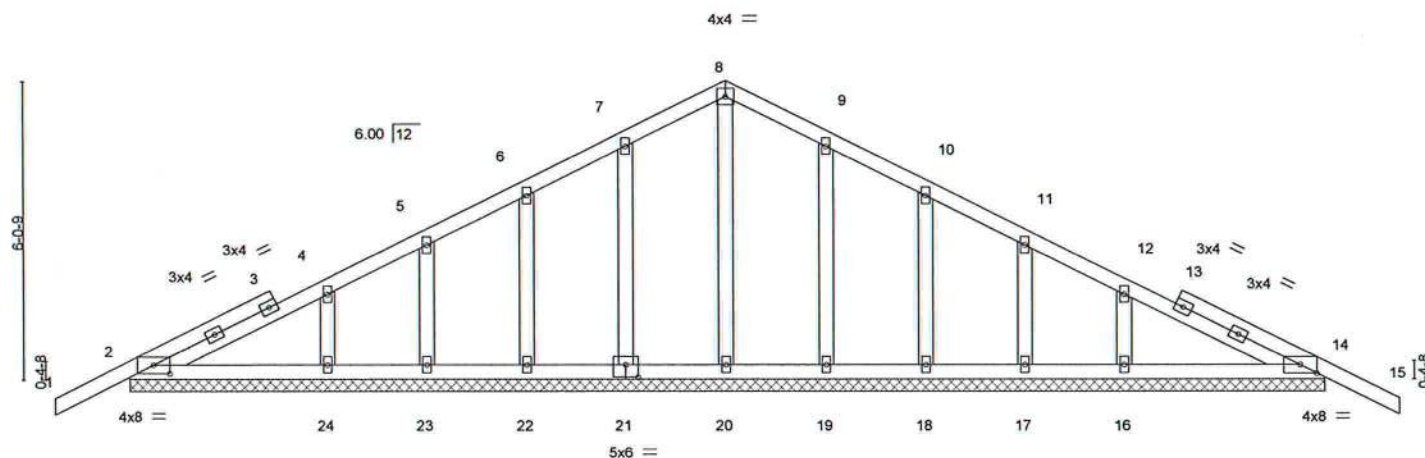


Plate Offsets (X,Y)— [2:0-4-0,0-2-1], [14:0-4-0,0-2-1], [21:0-3-0,0-3-0]

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**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 24-0-0.  
(lb) - Max Horz 2=135(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 14, 21, 22, 23, 19, 18, 17 except 24=130(LC 12),  
16=135(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 2, 14, 20, 21, 22, 23, 24, 19, 18, 17, 16

**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 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf, BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCp=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 14, 21, 22, 23, 19, 18, 17 except (jt=lb) 24=130, 16=135.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 14.



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Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273089
2291251	T02	Half Hip Girder	2	1		

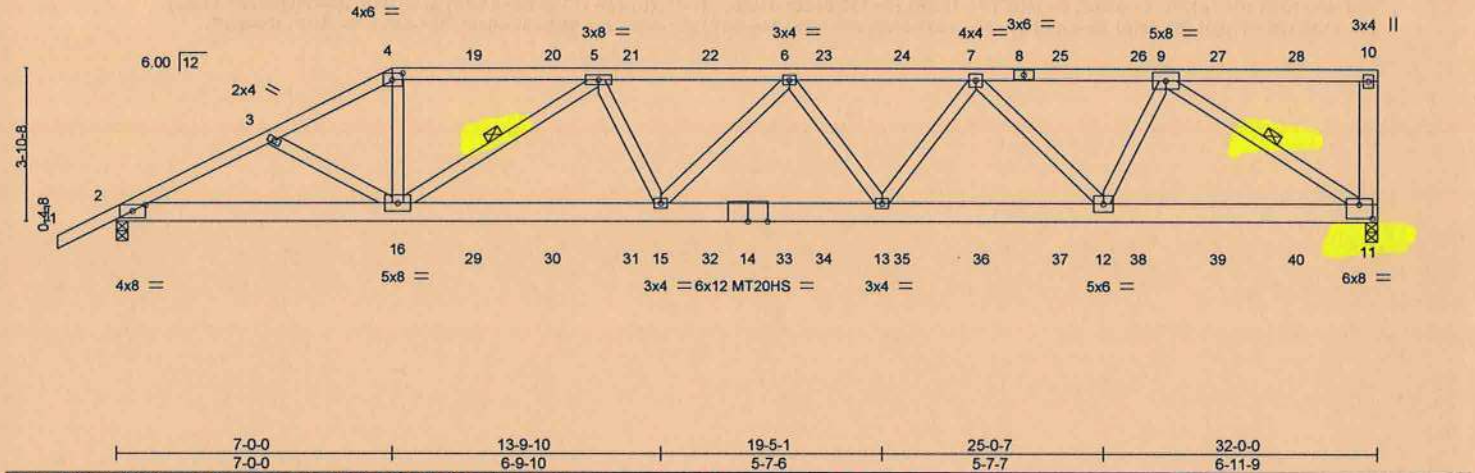
Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:57 2020 Page 1

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-1-6-0	3-11-15	7-0-0	12-2-11	17-0-10	21-9-7	26-7-6	32-0-0
1-6-0	3-11-15	3-0-1	5-2-11	4-10-0	4-8-13	4-10-0	5-4-10

Scale = 1:56.2



LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.70	Vert(LL)	-0.27 13-15	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.40	Vert(CT)	-0.51 13-15	>745	180	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr NO	WB 0.98	Horz(CT)	0.11 11	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014	Matrix-MS						
							Weight: 196 lb	FT = 20%

**LUMBER-**  
**TOP CHORD** 2x4 SP No.2 \*Except\*  
 4-8: 2x4 SP M 31  
**BOT CHORD** 2x6 SP M 26  
**WEBS** 2x4 SP No.3 \*Except\*  
 10-11: 2x6 SP No.2

**BRACING-**  
**TOP CHORD** Structural wood sheathing directly applied or 2-5-2 oc purlins, except end verticals.  
**BOT CHORD** Rigid ceiling directly applied or 7-4-7 oc bracing.  
**WEBS** 1 Row at midpt 5-16, 9-11

**REACTIONS.** (size) 11=0-3-8, 2=0-3-8  
 Max Horz 2=151(LC 24)  
 Max Uplift 11=830(LC 5), 2=674(LC 8)  
 Max Grav 11=2689(LC 1), 2=2420(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-3=-4854/1391, 3-4=-4699/1376, 4-5=-4251/1266, 5-6=-5940/1717, 6-7=-5719/1641, 7-9=-4001/1143, 10-11=-360/199  
**BOT CHORD** 2-16=-1345/4300, 15-16=-1773/5738, 13-15=-1849/6034, 12-13=-1583/5198, 11-12=-1014/3276  
**WEBS** 4-16=-400/1679, 5-16=-1854/591, 5-15=-12/562, 6-13=-562/280, 7-13=-195/930, 7-12=-1759/611, 9-12=-371/1760, 9-11=-3863/1167

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCCL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope); end vertical right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - \* This 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) 11=830, 2=674.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 128 lb down and 102 lb up at 7-0-0, 110 lb down and 102 lb up at 9-0-12, 110 lb down and 102 lb up at 11-0-12, 110 lb down and 102 lb up at 13-0-12, 110 lb down and 102 lb up at 15-0-12, 110 lb down and 102 lb up at 16-11-4, 110 lb down and 102 lb up at 17-11-4, 110 lb down and 102 lb up at 19-11-4, 110 lb down and 102 lb up at 21-11-4, 110 lb down and 102 lb up at 23-11-4, 110 lb down and 102 lb up at 25-11-4, 110 lb down and 102 lb up at 27-11-4, and 110 lb down and 102 lb up at 29-11-4, and 141 lb down and 98 lb up at 31-9-4 on top chord, and 339 lb down and 150 lb up at 7-0-0, 86 lb down at 9-0-12, 86 lb down at 11-0-12, 86 lb down at 13-0-12, 86 lb down at 15-0-12, 86 lb down at 16-11-4, 86 lb down at 17-11-4, 86 lb down at 19-11-4, 86 lb down at 21-11-4, 86 lb down at 23-11-4, 86 lb down at 25-11-4, and 86 lb down at 27-11-4, and 86 lb down at 29-11-4 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).



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Continued on page 2  
**LOAD CASE(S) Standard** parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273089
2291251	T02	Half Hip Girder	2	1	Job Reference (optional)	

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8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:15:57 2020 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, 4-10=-54, 2-11=-20

Concentrated Loads (lb)

Vert: 4=-110(B) 10=-141(B) 16=-339(B) 6=-110(B) 7=-110(B) 19=-110(B) 20=-110(B) 21=-110(B) 22=-110(B) 23=-110(B) 24=-110(B) 25=-110(B) 26=-110(B) 27=-110(B) 28=-110(B) 29=-64(B) 30=-64(B) 31=-64(B) 32=-64(B) 33=-64(B) 34=-64(B) 35=-64(B) 36=-64(B) 37=-64(B) 38=-64(B) 39=-64(B) 40=-64(B)

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Job 2291251	Truss T03	Truss Type Half Hip	Qty 2	Ply 1	SIMQUE CONST. - JOHNS RES.	T20273090
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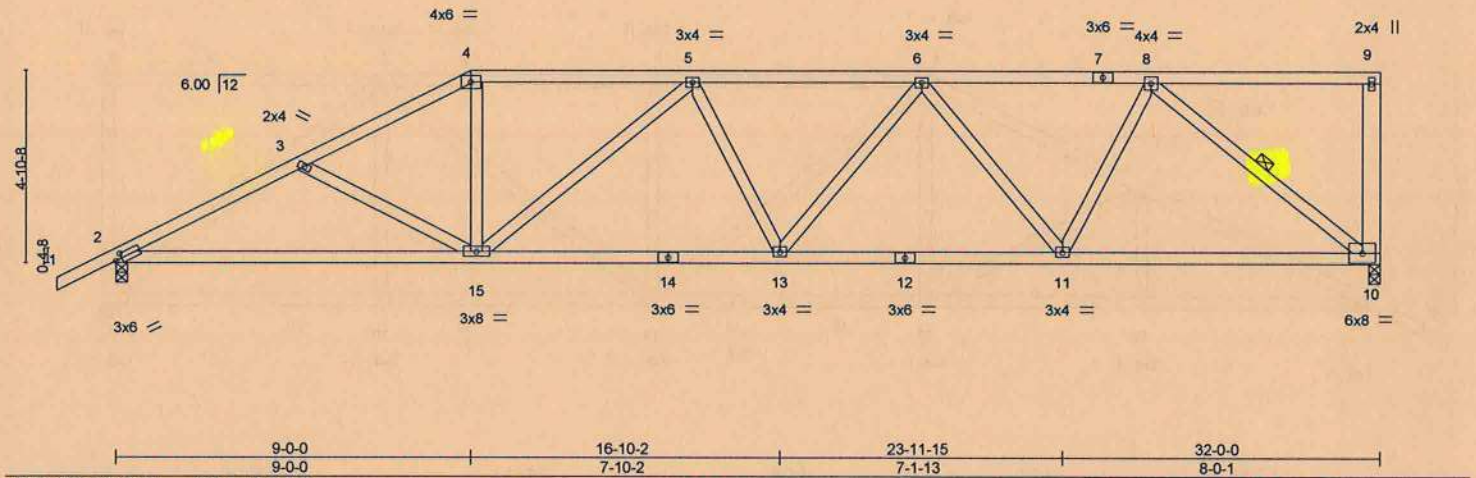
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-1-6-0	4-9-8	9-0-0	14-7-5	20-5-1	26-2-10	32-0-0
1-6-0	4-9-8	4-2-8	5-7-6	5-9-12	5-9-9	5-9-6

Scale = 1:56.2



LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.35	Vert(LL)	-0.15 15-18	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.82	Vert(CT)	-0.32 15-18	>999	180		
BCLL 0.0	Rep Stress Incr YES	WB 0.53	Horz(CT)	0.09 10	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014	Matrix-MS						
							Weight: 174 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
9-10: 2x6 SP No.2

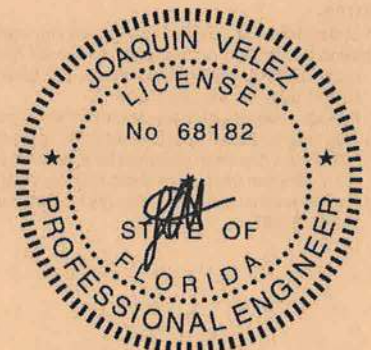
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-9-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 5-6-6 oc bracing.  
WEBS 1 Row at midpt 8-10

**REACTIONS.** (size) 10=0-3-8, 2=0-3-8  
Max Horz 2=173(LC 12)  
Max Uplift 10=305(LC 9), 2=242(LC 9)  
Max Grav 10=1174(LC 1), 2=1258(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=2188/1095, 3-4=1934/948, 4-5=1697/904, 5-6=2026/1024, 6-8=1511/738  
BOT CHORD 2-15=1145/1928, 13-15=1075/2044, 11-13=973/1888, 10-11=617/1199  
WEBS 3-15=283/280, 4-15=223/597, 5-15=536/227, 6-11=613/381, 8-11=279/714, 8-10=1519/788

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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=305, 2=242.



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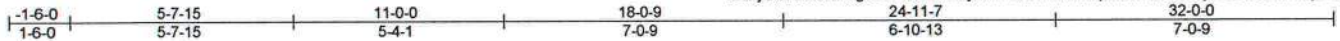
6904 Parke East Blvd.  
Tampa, FL 33610



Job 2291251	Truss T04	Truss Type Half Hip	Qty 1	Ply 1	SIMQUE CONST. - JOHNS RES. Job Reference (optional)	T20273091
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Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:00 2020 Page 1  
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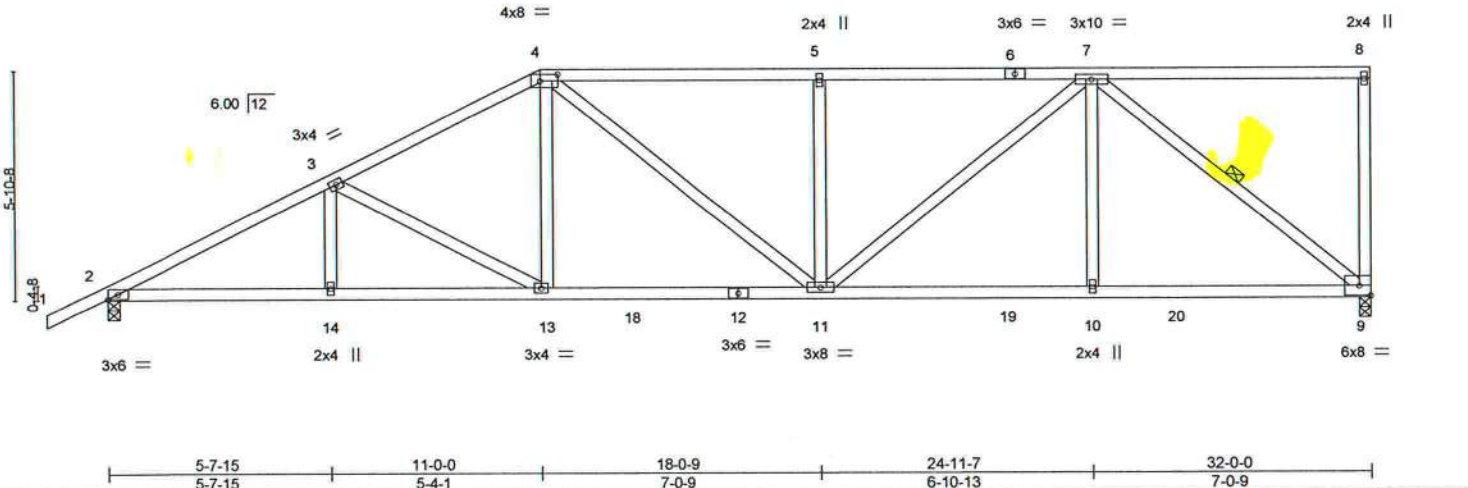


Plate Offsets (X,Y)- [4:0-5-4,0-2-0]

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 0.56	Vert(LL)	-0.11	11-13	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.56	Vert(CT)	-0.23	11-13	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.63	Horz(CT)	0.08	9	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS						Weight: 182 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 3-7-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 5-5-12 oc bracing.  
WEBS 1 Row at midpt 7-9

#### REACTIONS.

(size) 9=0-3-8, 2=0-3-8  
Max Horz 2=207(LC 12)  
Max Uplift 9=304(LC 9), 2=237(LC 12)  
Max Grav 9=1177(LC 1), 2=1262(LC 1)

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

TOP CHORD 2-3=-2215/1057, 3-4=-1787/892, 4-5=-1702/897, 5-7=-1702/897  
BOT CHORD 2-14=-1155/1929, 13-14=-1155/1929, 11-13=-859/1546, 10-11=-614/1197, 9-10=-614/1197  
WEBS 3-13=-443/339, 4-13=-121/406, 4-11=-124/326, 5-11=-400/301, 7-11=-364/649, 7-10=0/307, 7-9=-1515/777

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) 9=304, 2=237.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIT-7473 rev. 10/03/2015 BEFORE USE.

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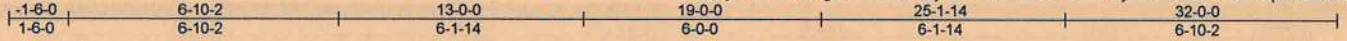


Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273092
2291251	T05	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:01 2020 Page 1

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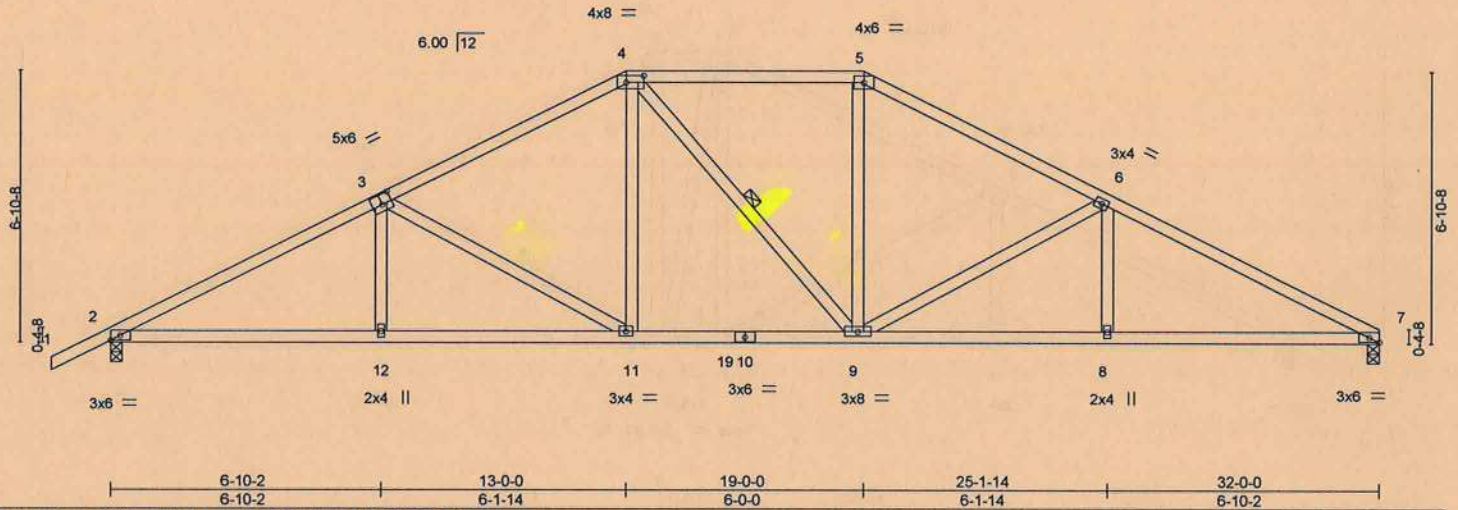


Plate Offsets (X,Y)- [3-0-3-0,0-3-0], [4-0-5-4,0-2-0], [7-0-2-15,Edge]

LOADING (psf)	SPACING-		CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25		TC 0.53	Vert(LL)	-0.11	9-11	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL 1.25		BC 0.64	Vert(CT)	-0.21	9-11	>999	180		
BCLL 0.0 *	Rep Stress Incr YES		WB 0.57	Horz(CT)	0.09	7	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS							
									Weight: 164 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 3-5-9 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 5-11-5 oc bracing.  
WEBS 1 Row at midpt 4-9

#### REACTIONS.

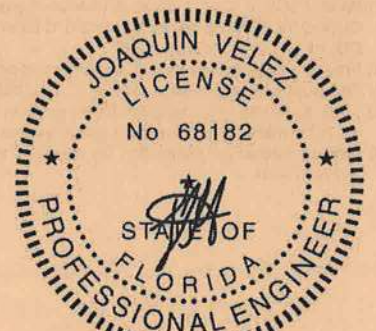
(size) 7=0-3-8, 2=0-3-8  
Max Horz 2=101(LC 16)  
Max Uplift 7=-232(LC 13), 2=-261(LC 12)  
Max Grav 7=1182(LC 1), 2=1267(LC 1)

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

TOP CHORD 2-3=-2186/1130, 3-4=-1648/928, 4-5=-1409/897, 5-6=-1650/930, 6-7=-2198/1142  
BOT CHORD 2-12=-909/1894, 11-12=-909/1895, 9-11=-547/1408, 8-9=-920/1906, 7-8=-920/1906  
WEBS 3-12=0/273, 3-11=-569/417, 4-11=-163/435, 5-9=-168/437, 6-9=-582/431, 6-8=0/274

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) 7=232, 2=261.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

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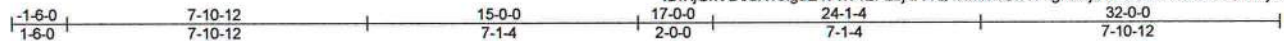


Job 2291251	Truss T06	Truss Type Hip	Qty 1	Ply 1	SIMQUE CONST. - JOHNS RES.	T20273093
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Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:02 2020 Page 1

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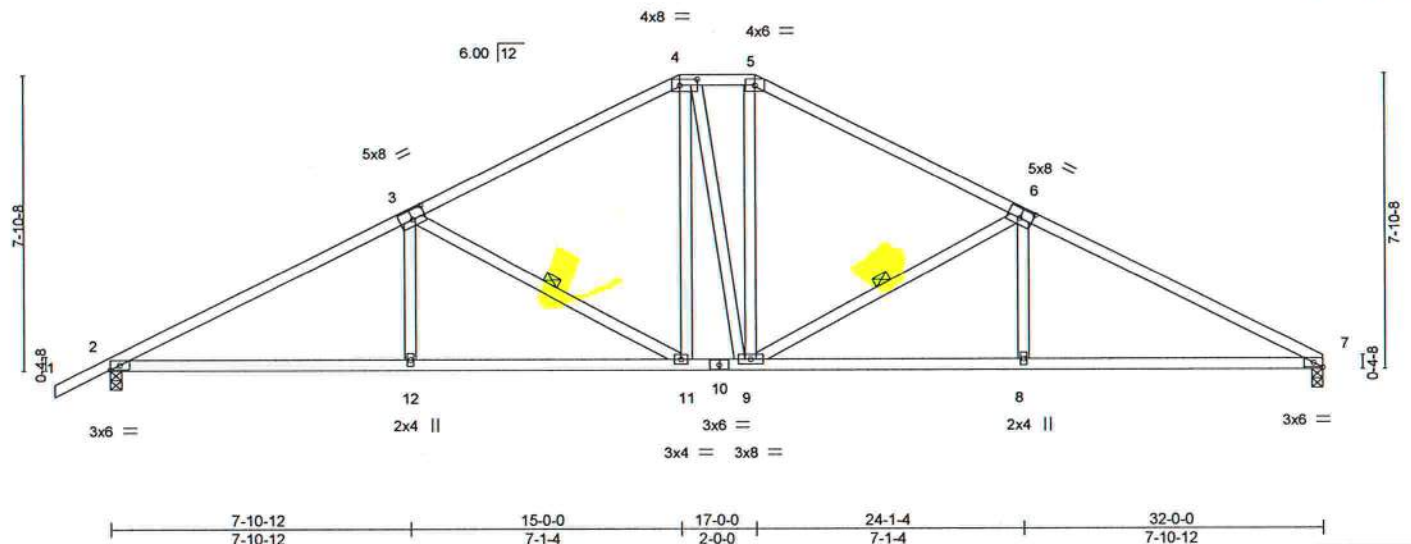


Plate Offsets (X,Y)-- [3:0-4-0,0-3-0], [4:0-5-8,0-2-0], [6:0-4-0,0-3-0], [7:0-2-15,Edge]

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 0.68	Vert(LL)	0.13	8-18	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.73	Vert(CT)	-0.26	8-18	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.26	Horz(CT)	0.09	7	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS							
									Weight: 171 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 3-0-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 5-10-6 oc bracing.  
WEBS 1 Row at midpt 3-11, 6-9

#### REACTIONS.

(size) 2=0-3-8, 7=0-3-8  
Max Horz 2=115(LC 9)  
Max Uplift 2=273(LC 12), 7=244(LC 13)  
Max Grav 2=1267(LC 1), 7=1182(LC 1)

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

TOP CHORD 2-3=-2143/1122, 3-4=-1498/880, 4-5=-1260/862, 5-6=-1500/881, 6-7=-2153/1132  
BOT CHORD 2-12=-887/1847, 11-12=-888/1846, 9-11=-458/1258, 8-9=-898/1857, 7-8=-898/1857  
WEBS 3-12=0/329, 3-11=-686/496, 4-11=-210/406, 5-9=-214/413, 6-9=-698/507, 6-8=0/328

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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, 7=244.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

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6904 Parke East Blvd.  
Tampa, FL 36610



Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273094
2291251	T07	Hip	1	1	Job Reference (optional)	

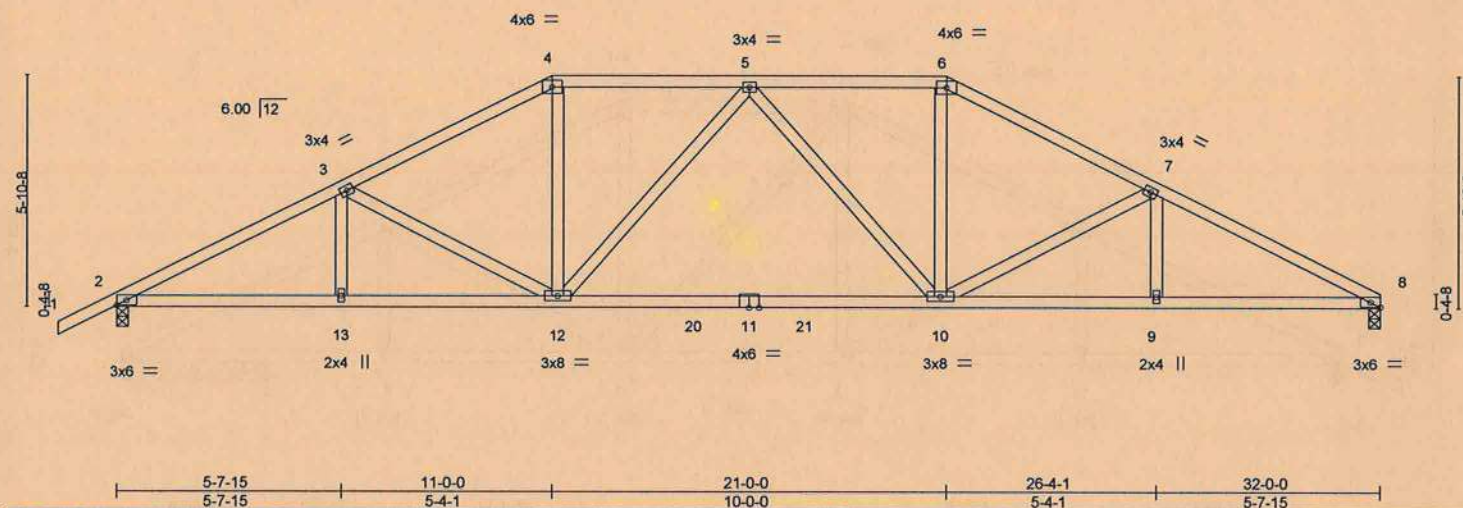
Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:03 2020 Page 1

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-1-6-0	5-7-15	11-0-0	16-0-0	21-0-0	26-4-1	32-0-0
1-6-0	5-7-15	5-4-1	5-0-0	5-0-0	5-4-1	5-7-15

Scale = 1:56.2



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.42	Vert(LL)	-0.25 10-12 >999	MT20	244/190		
TCDL	7.0	Lumber DOL	1.25	BC	0.90	Horz(CT)	-0.52 10-12 >732				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.34		0.09 8 n/a n/a				
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS						Weight: 164 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 3-8-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 5-11-11 oc bracing.

#### REACTIONS.

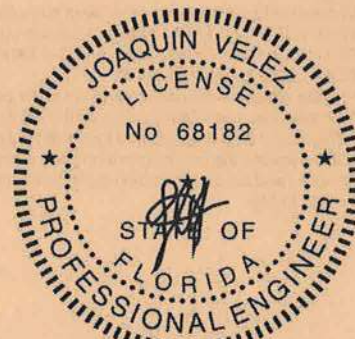
(size) 8=0-3-8, 2=0-3-8  
Max Horz 2=89(LC 12)  
Max Uplift 8=219(LC 13), 2=248(LC 12)  
Max Grav 8=1182(LC 1), 2=1267(LC 1)

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

TOP CHORD 2-3=-2223/1140, 3-4=-1808/966, 4-5=-1566/925, 5-6=-1568/927, 6-7=-1811/969,  
7-8=-2241/1156  
BOT CHORD 2-13=-933/1937, 12-13=-933/1937, 10-12=-725/1695, 9-10=-950/1956, 8-9=-950/1956  
WEBS 3-12=-440/351, 4-12=-225/526, 5-12=-304/149, 5-10=-302/144, 6-10=-228/529,  
7-10=-458/368

#### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCCL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCp=0.18; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=219, 2=248.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21, 2020

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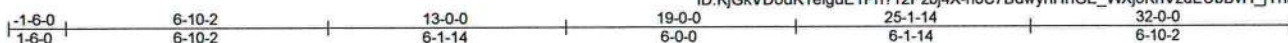


Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273095
2291251	T08	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:04 2020 Page 1

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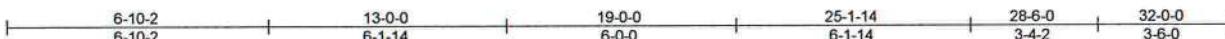
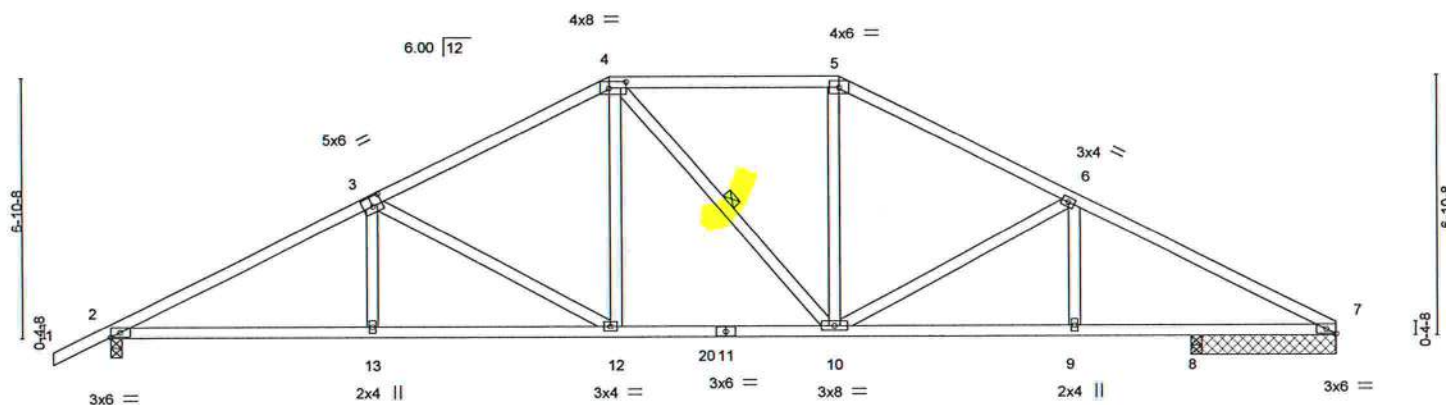


Plate Offsets (X,Y)-- [3:0-3-0,0-3-0], [4:0-5-4,0-2-0], [7:0-2-15,Edge]

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 0.52	Vert(LL)	-0.12	9-10	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.76	Vert(CT)	-0.24	9-10	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.56	Horz(CT)	0.08	7	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS						Weight: 164 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 3-7-5 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-1-13 oc bracing.  
WEBS 1 Row at midpt 4-10

#### REACTIONS.

(size) 7=3-9-8, 2=0-3-8, 8=0-3-8  
Max Horz 2=101(LC 12)  
Max Uplift 7=189(LC 13), 2=258(LC 12), 8=50(LC 13)  
Max Grav 7=972(LC 1), 2=1240(LC 1), 8=237(LC 1)

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

TOP CHORD 2-3=-2128/1100, 3-4=-1587/896, 4-5=-1338/861, 5-6=-1569/888, 6-7=-1940/1008  
BOT CHORD 2-13=-883/1842, 12-13=-882/1844, 10-12=-518/1353, 9-10=-796/1665, 8-9=-796/1665, 7-8=-796/1665  
WEBS 3-13=0/275, 3-12=-571/419, 4-12=-159/428, 5-10=-146/399, 6-10=-399/330

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) 8 except (jt=lb) 7=189, 2=258.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

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6904 Parke East Blvd.  
Tampa, FL 33610



Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273096
2291251	T09	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:06 2020 Page 1

ID:KjGkVDouK1eiguE1Pn712Pzbj4X-jBKuclyCJux\_TlgwrZNJOW2yu0FwNDZ??4AwXrzEKpd

-1-6-0	8-0-0	15-0-0	17-0-0	21-2-1	26-3-11	28-2-8	32-0-0
1-6-0	8-0-0	7-0-0	2-0-0	4-2-1	5-1-10	1-10-13	3-9-8

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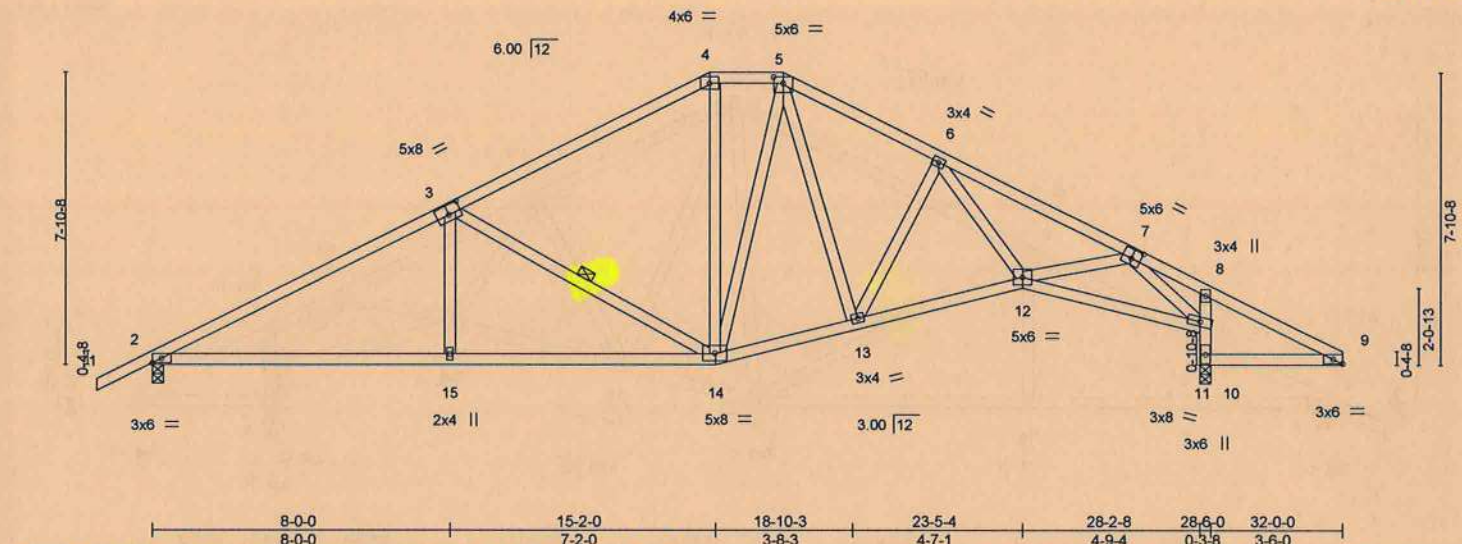


Plate Offsets (X,Y)– [3:0-4-0,0-3-0], [5:0-3-0,0-2-0], [7:0-3-0,0-3-0], [9:0-2-15,Edge]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.		PLATES GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.63	Vert(LL)	0.11 15-18 >999 240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.80	Vert(CT)	-0.22 15-18 >999 180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.09 10 n/a n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS				Weight: 177 lb	FT = 20%

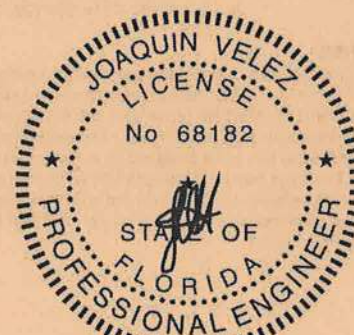
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2 \*Except\*  
8-10: 2x4 SP No.3  
WEBS 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-6-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 4-0-10 oc bracing.  
WEBS 1 Row at midpt 3-14

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
Max Horz 2=115(LC 9)  
Max Uplift 2=251(LC 12), 10=275(LC 13)  
Max Grav 2=1115(LC 1), 10=1334(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1809/922, 3-4=-1158/680, 4-5=-951/681, 5-6=-1290/773, 6-7=-1908/823,  
7-8=-490/414, 8-9=-279/280  
BOT CHORD 2-15=-708/1548, 14-15=-708/1553, 13-14=-275/999, 12-13=-486/1390, 11-12=-243/1002,  
10-11=-1299/822, 9-10=-197/273  
WEBS 3-15=0/341, 3-14=-696/494, 4-14=-84/285, 5-13=-223/500, 6-13=-545/320,  
6-12=-76/566, 7-12=-285/714, 7-11=-1879/1136

**NOTES-**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl.,  
GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever right exposed ;C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) Provide adequate drainage to prevent water ponding.  
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=251, 10=275.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



6904 Parke East Blvd.  
Tampa, FL 33610



Job 2291251	Truss T10	Truss Type Roof Special	Qty 1	Ply 1	SIMQUE CONST. - JOHNS RES.	T20273097
Builders FirstSource, Jacksonville, FL - 32244,						8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:07 2020 Page 1
Job Reference (optional)						ID:KjGkVDouK1eiguE1Pn?12Pzbj4X-CNUGqeyq4C3r5RF6OGuYw7b5PPb86gq9EkWU4HzEKpc

1-6-0	8-0-0	16-0-0	21-2-1	26-3-11	28-2-8	32-0-0
1-6-0	8-0-0	8-0-0	5-2-1	5-1-10	1-10-13	3-9-8

Scale = 1:59.5

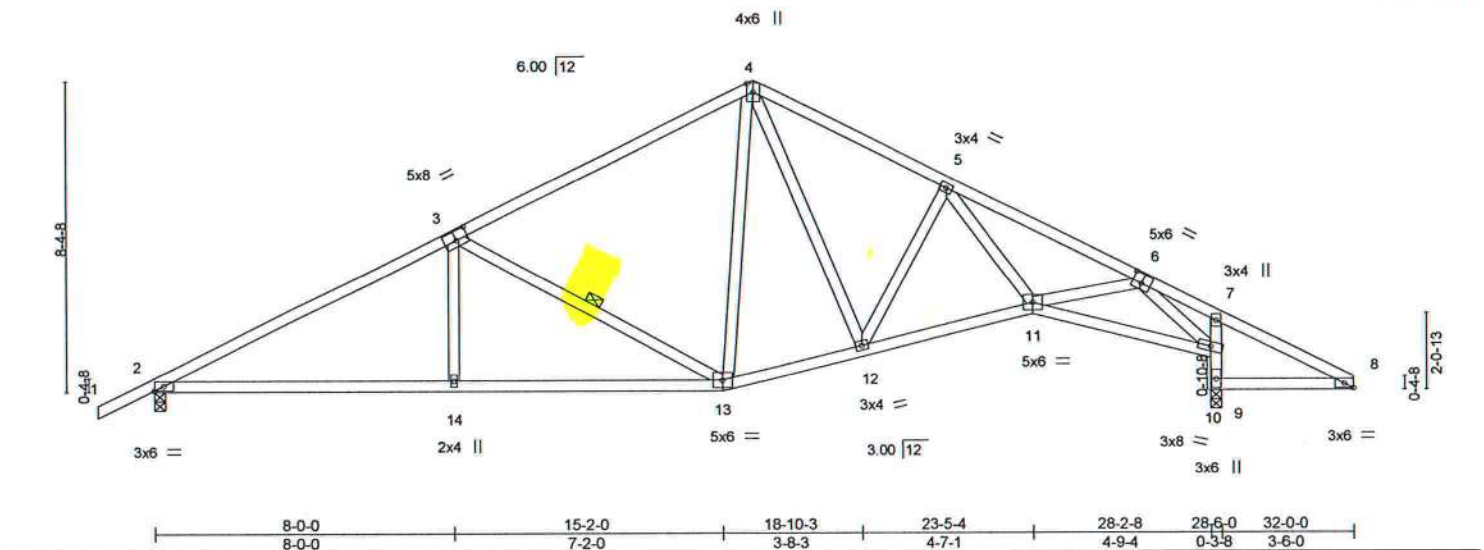


Plate Offsets (X,Y) -		[3:0-4-0,0-3-0], [6:0-3-0,0-3-0], [8:0-2-15,Edge]					
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d
TCLL 20.0	Plate Grip DOL	1.25	TC 0.71	Vert(LL)	0.11 14-17	>999	240
TCDL 7.0	Lumber DOL	1.25	BC 0.81	Vert(CT)	-0.22 14-17	>999	180
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.43	Horz(CT)	0.09 9	n/a	n/a
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS				
				PLATES	GRIP		
				MT20	244/190		
				Weight: 168 lb	FT = 20%		

LUMBER-	BRACING-	
TOP CHORD	TOP CHORD	Structural wood sheathing directly applied or 3-6-10 oc purlins.
BOT CHORD	BOT CHORD	Rigid ceiling directly applied or 4-0-10 oc bracing.
WEBS	WEBS	1 Row at midpt 3-13

REACTIONS.	(size) 2=0-3-8, 9=0-3-8
	Max Horz 2=121(LC 9)
	Max Uplift 2=-255(LC 12), 9=281(LC 13)
	Max Grav 2=1115(LC 1), 9=1334(LC 1)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-1812/934, 3-4=-1150/684, 4-5=-1287/784, 5-6=-1908/834, 6-7=-489/411, 7-8=-279/279
BOT CHORD	2-14=-720/1553, 13-14=-720/1553, 12-13=-258/945, 11-12=-496/1392, 10-11=-245/996, 9-10=-1299/826, 8-9=-197/273
WEBS	3-14=0/341, 3-13=-723/525, 4-13=-164/284, 4-12=-227/504, 5-12=-546/324, 5-11=-77/565, 6-11=-294/720, 6-10=-1874/1140

- NOTES-
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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=255, 9=281.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

<p><b>WARNING</b> - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p><b>MiTek</b></p> <p>6904 Parke East Blvd. Tampa, FL 33610</p>
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Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273098
2291251	T11	Roof Special	7	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:08 2020 Page 1

ID:KjGkVDouK1eiguE1Pn712Pzbj4X-gaSe1\_zSrVBjibqJy\_PnTL7GupyLr2QISOH1cjzEKpb

-1-6-0	8-0-0	16-0-0	21-2-1	26-3-11	32-0-0	33-6-0
1-6-0	8-0-0	8-0-0	5-2-1	5-1-10	5-8-5	1-6-0

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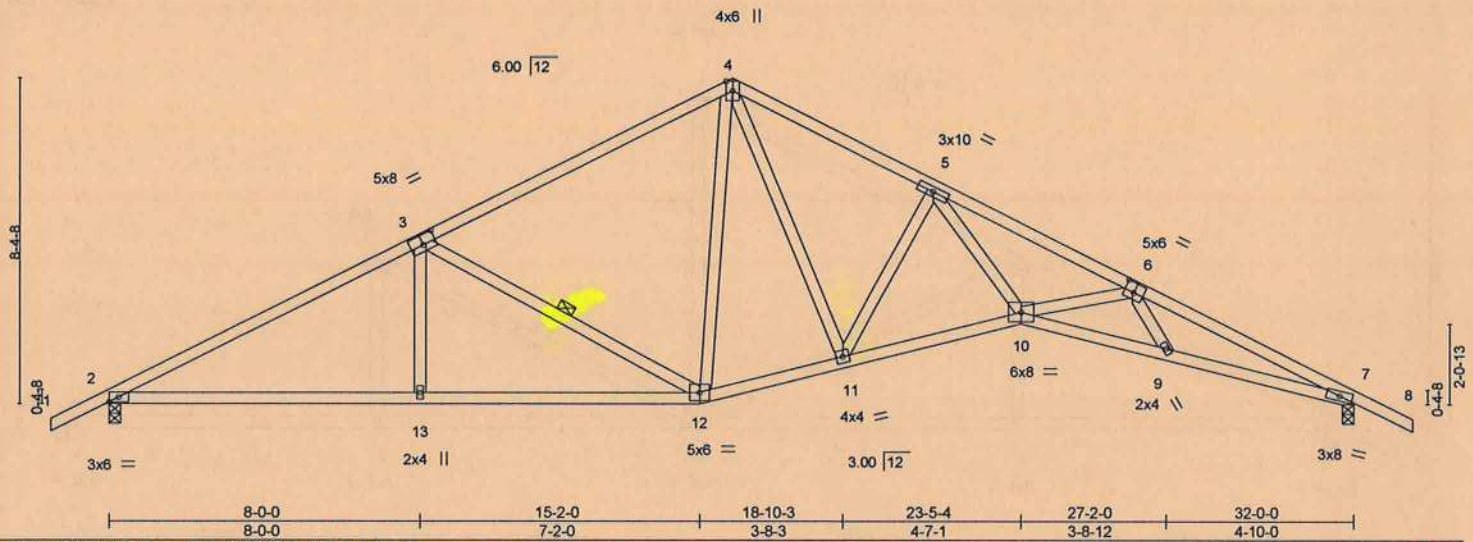


Plate Offsets (X,Y)- [3:0-4-0,0-3-0], [6:0-3-0,0-3-0]

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 0.73	Vert(LL)	-0.25	10	>999	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.74	Vert(CT)	-0.47	10-11	>819		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.73	Horz(CT)	0.24	7	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS						
								Weight: 167 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2 \*Except\*  
7-10: 2x4 SP M 31  
WEBS 2x4 SP No.3

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 5-10-11 oc bracing.  
WEBS 1 Row at midpt 3-12

#### REACTIONS.

(size) 2=0-3-8, 7=0-3-8  
Max Horz 2=118(LC 11)  
Max Uplift 2=277(LC 12), 7=277(LC 13)  
Max Grav 2=1265(LC 1), 7=1265(LC 1)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=2141/1127, 3-4=1483/880, 4-5=1840/1103, 5-6=3631/1834, 6-7=3934/1980  
BOT CHORD 2-13=848/1846, 12-13=848/1845, 11-12=407/1261, 10-11=935/2214, 9-10=1737/3594,  
7-9=1689/3555  
WEBS 3-13=0/339, 3-12=720/522, 4-11=515/1012, 5-11=1215/707, 5-10=859/1908,  
6-10=318/309

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=277, 7=277.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



6904 Parke East Blvd.  
Tampa, FL 36610



Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273099
2291251	T12	Common	3	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:09 2020 Page 1  
ID:KjGkVdOuK1eiguE1Pn712Pzbj4X-8m00EK\_5cpJZKIPVWhw0?YgReDlaaYdSh2Pb8AzEKpa



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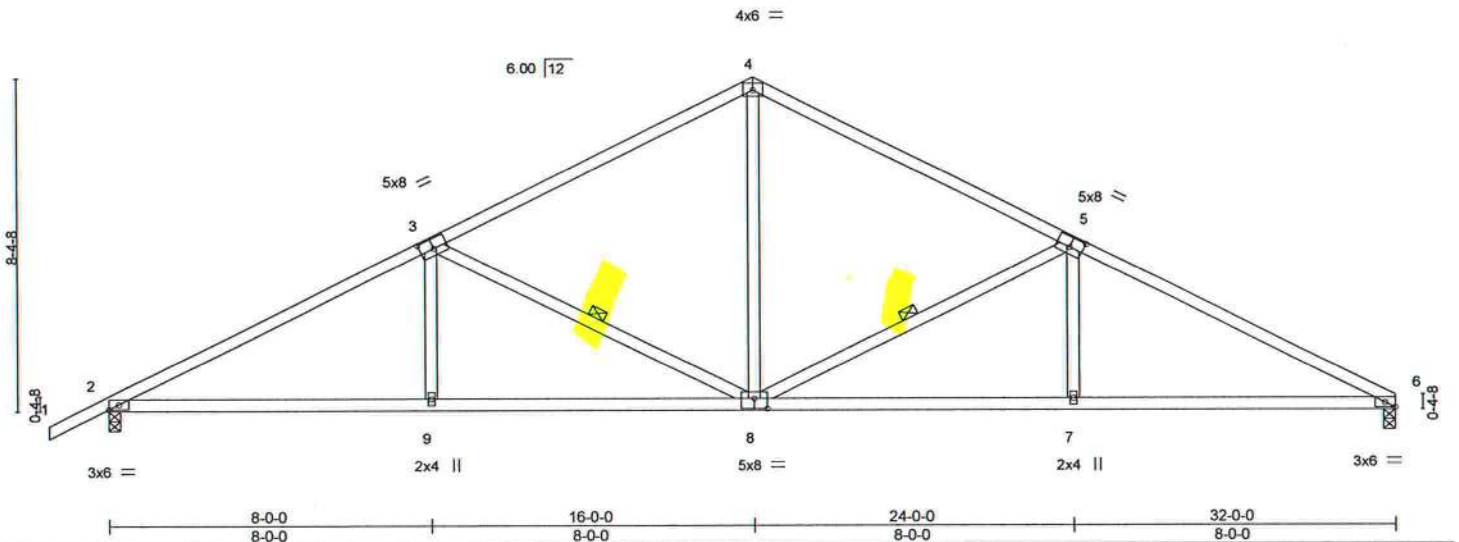


Plate Offsets (X,Y)-- [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-2-15,Edge], [8:0-4-0,0-3-0]

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 0.73	Vert(LL)	0.13	7-15	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.74	Vert(CT)	-0.26	7-15	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.54	Horz(CT)	0.09	6	n/a	n/a		
BCDL 10.0	Code FBC2017/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 2-2-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 5-10-3 oc bracing.  
WEBS 1 Row at midpt 5-8, 3-8

#### REACTIONS.

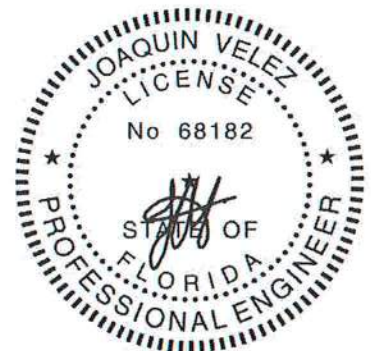
(size) 2=0-3-8, 6=0-3-8  
Max Horz 2=121(LC 9)  
Max Uplift 2=278(LC 12), 6=249(LC 13)  
Max Grav 2=1267(LC 1), 6=1182(LC 1)

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

TOP CHORD 2-3=-2143/1133, 3-4=-1449/858, 4-5=-1450/859, 5-6=-2153/1142  
BOT CHORD 2-9=-897/1847, 8-9=-897/1846, 7-8=-907/1858, 6-7=-907/1858  
WEBS 4-8=-432/816, 5-8=-754/544, 5-7=0/335, 3-8=-741/533, 3-9=0/334

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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=278, 6=249.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MIT-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



6904 Parke East Blvd.  
Tampa, FL 36610



Job	Truss	Truss Type	Qty	Ply	SIMQUE CONST. - JOHNS RES.	T20273100
2291251	T13	COMMON	2	1	Job Reference (optional)	

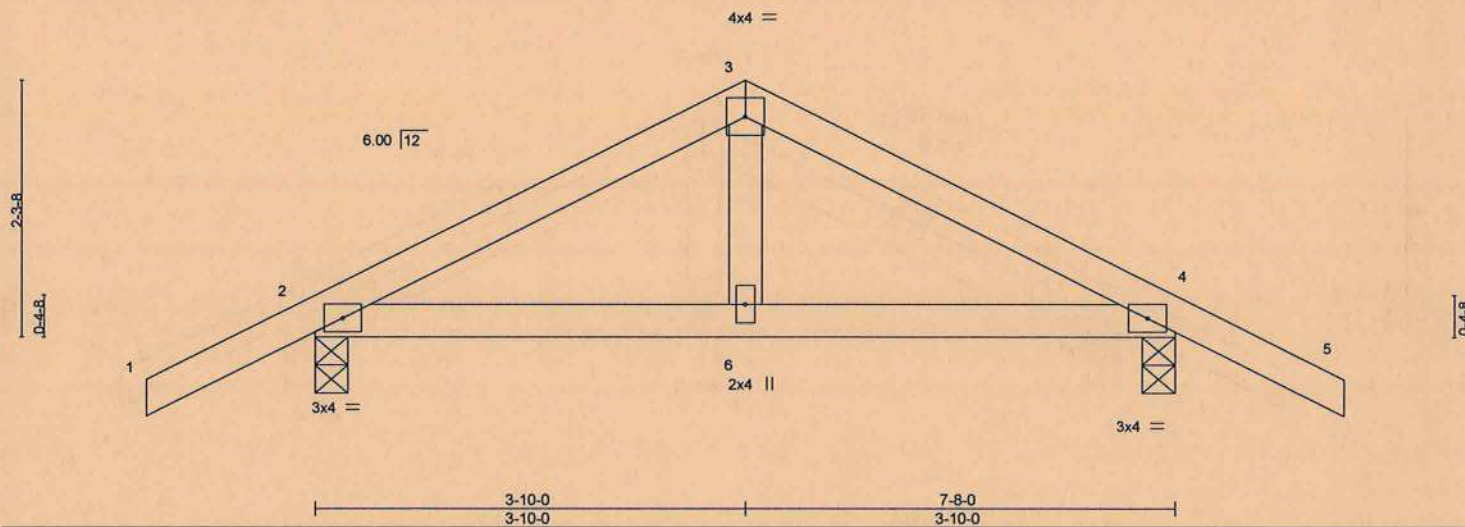
Builders FirstSource, Jacksonville, FL - 32244,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:10 2020 Page 1

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Scale = 1:19.8



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 0.21	Vert(LL)	0.02	6-12	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.15	Vert(CT)	-0.01	6-12	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.00	4	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS							
									Weight: 32 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 9-7-14 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 4=0-3-8  
Max Horz 2=-56(LC 13)  
Max Uplift 2=-159(LC 12), 4=-159(LC 13)  
Max Grav 2=365(LC 1), 4=365(LC 1)

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

TOP CHORD 2-3=-350/534, 3-4=-350/534  
BOT CHORD 2-6=-356/277, 4-6=-356/277  
WEBS 3-6=-260/163

#### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=159, 4=159.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 21, 2020

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

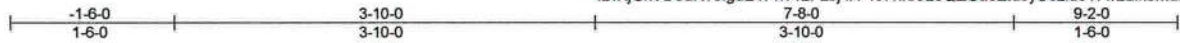
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6904 Parke East Blvd.  
Tampa, FL 33610



Job 2291251	Truss T13G	Truss Type KINGPOST	Qty 1	Ply 1	SIMQUE CONST. - JOHNS RES. T20273101
Builders FirstSource, Jacksonville, FL - 32244,					8.240 s Mar 9 2020 MiTek Industries, Inc. Thu May 21 08:16:11 2020 Page 1
Job Reference (optional)					ID:KjGkVDouK1eiguE1Pn?12Pzbj4X-497nf00L8QZGa3Zld6yU5zlu517w2alk9MuhD2zEKpY



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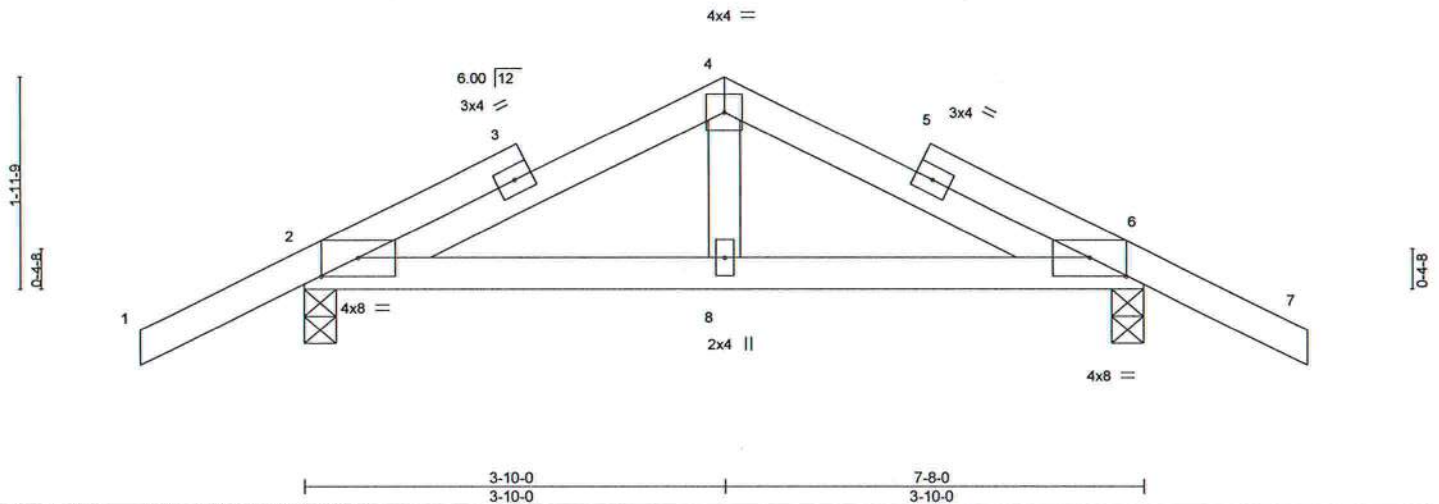


Plate Offsets (X,Y)-- [2-0-4-0,0-2-1], [6-0-4-0,0-2-1]

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)	0.02	8-15	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.11	Vert(CT)	-0.01	8	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	-0.00	6	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS						Weight: 36 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 8-7-10 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 6=0-3-8  
Max Horz 2=49(LC 12)  
Max Uplift 2=162(LC 12), 6=162(LC 13)  
Max Grav 2=362(LC 1), 6=362(LC 1)

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

TOP CHORD 2-4=-310/508, 4-6=-310/506  
BOT CHORD 2-8=-454/300, 6-8=-454/300

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) 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
- 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=162, 6=162.



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Date:

May 21,2020

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

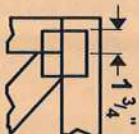


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Tampa, FL 33610

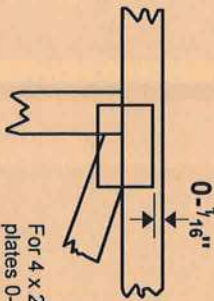


# Symbols

## PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.



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

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

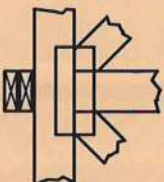
4 X 4

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.



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/TP11: National Design Specification for Metal

Plate Connected Wood Truss Construction.

DSB-89: Design Standard for Bracing.

Building Component Safety Information,

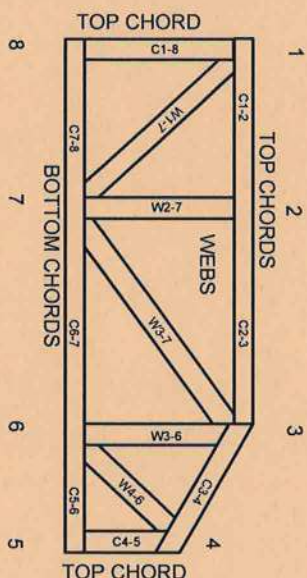
Guide to Good Practice for Handling,

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/CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 1 section 6.3 These truss designs rely on lumber values established by others.

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MiTek Engineering Reference Sheet: MIL-7473 rev. 10/03/2015



# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purflins 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.





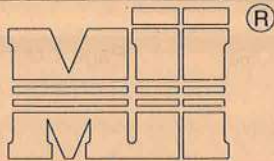


AUGUST 1, 2016

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

MII-T-BRACE 2

MITek USA, Inc. Page 1 of 1



MITek USA, Inc.

ENGINEERED BY  
**TRENCO**  
A MITek Affiliate

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

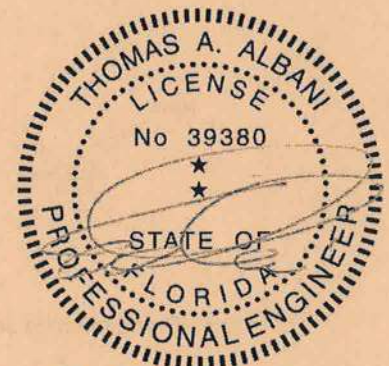
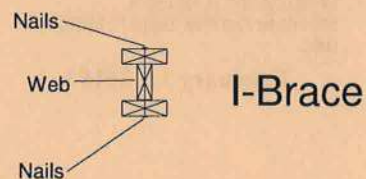
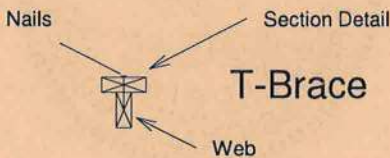
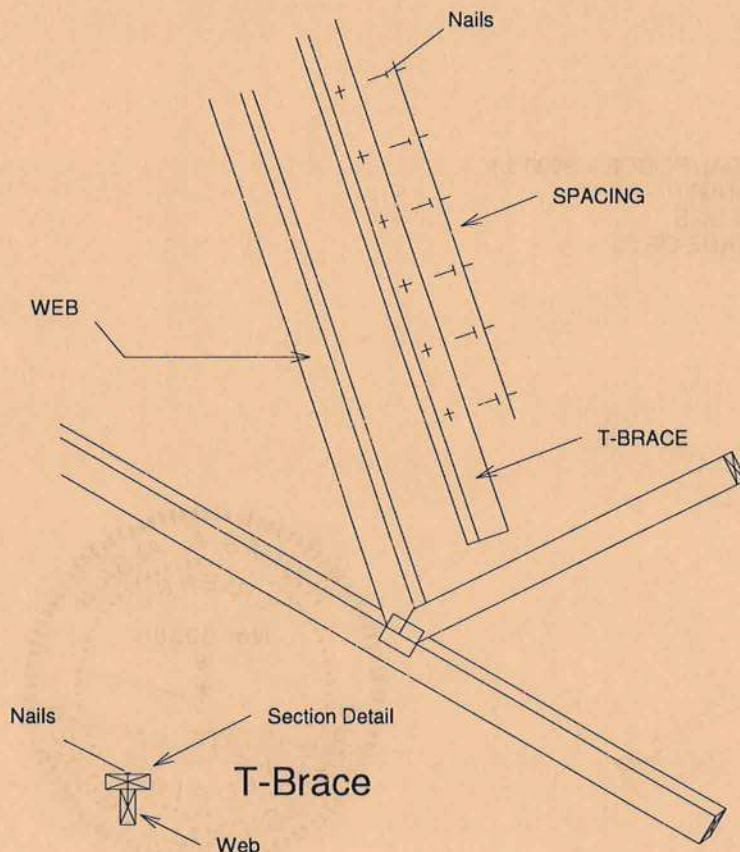
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

## 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.



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February 12, 2018



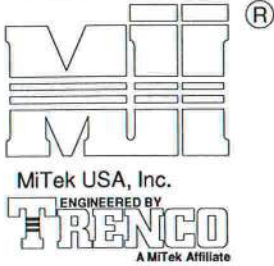
AUGUST 1, 2016

SCAB-BRACE DETAIL

MII-SCAB-BRACE

MiTek USA, Inc.

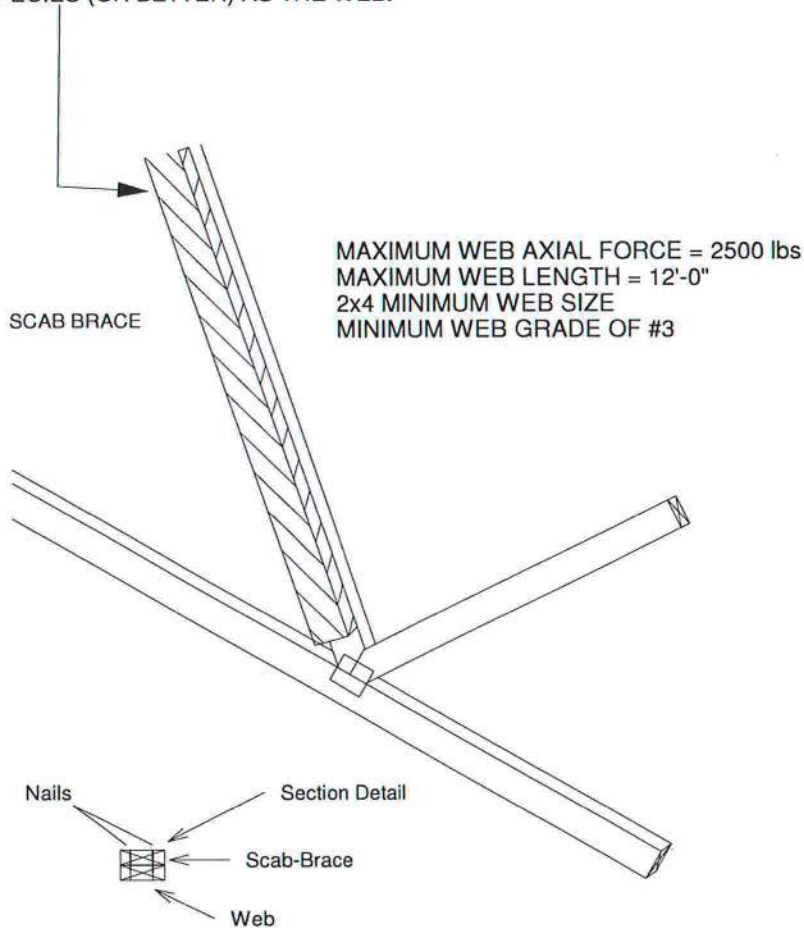
Page 1 of 1



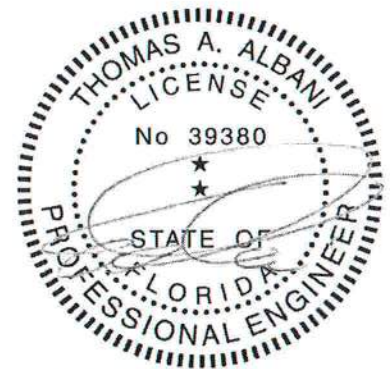
Note: Scab-Bracing to be used when continuous lateral bracing at midpoint (or T-Brace) is impractical.  
Scab must cover full length of web +/- 6".

\*\*\* 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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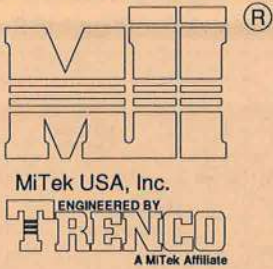


AUGUST 1, 2016

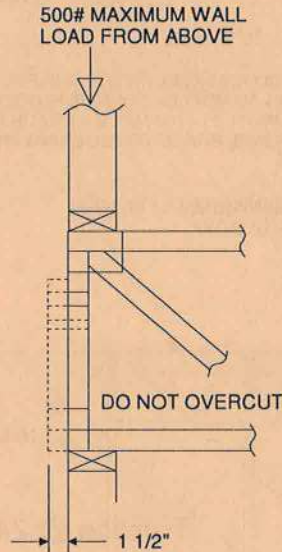
STANDARD REPAIR TO REMOVE END  
VERTICAL (RIBBON NOTCH VERTICAL)

MII-REP05

MiTek USA, Inc. Page 1 of 1



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

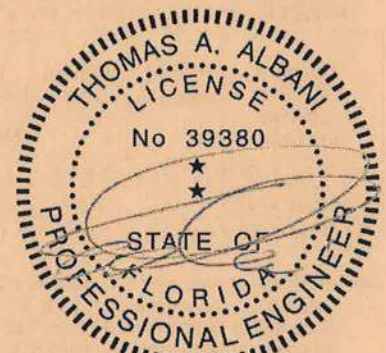


REFER TO INDIVIDUAL  
TRUSS DESIGN FOR  
PLATE SIZES AND  
LUMBER GRADES



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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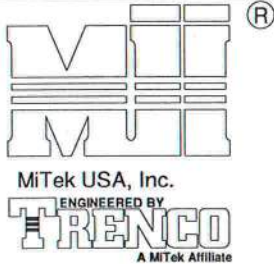


AUGUST 1, 2016

## Standard Gable End Detail

MII-GE130-D-SP

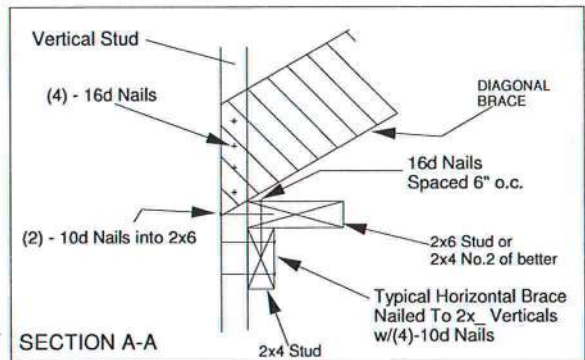
MiTek USA, Inc. Page 1 of 2



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

Vertical Stud

SECTION B-B

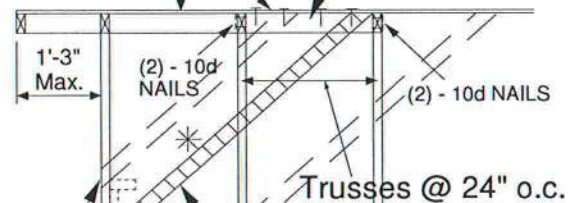


SECTION A-A

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

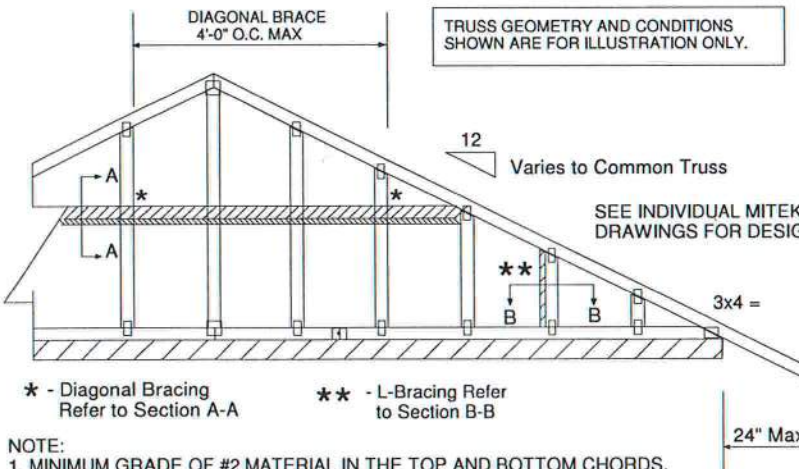
Roof Sheathing



Diag. Brace at 1/3 points if needed

End Wall

HORIZONTAL BRACE (SEE SECTION A-A)



\* - Diagonal Bracing Refer to Section A-A

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

## NOTE:

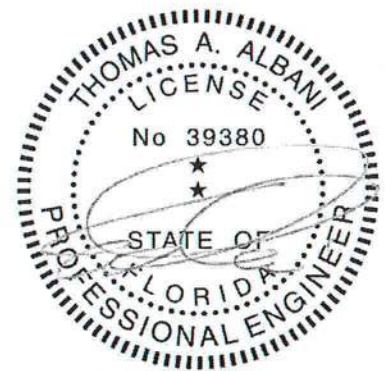
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF 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.
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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February 12, 2018



AUGUST 1, 2016

## Standard Gable End Detail

MII-GE130-SP

MiTek USA, Inc.

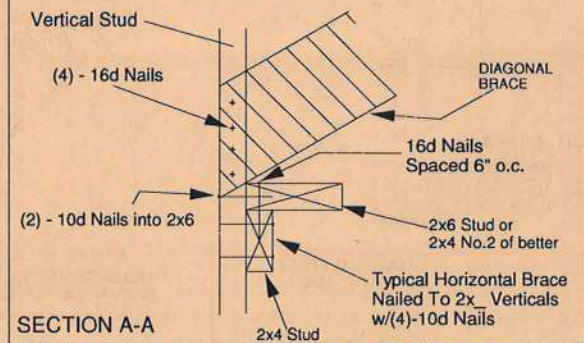
Page 1 of 2



Typical 1x4 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.

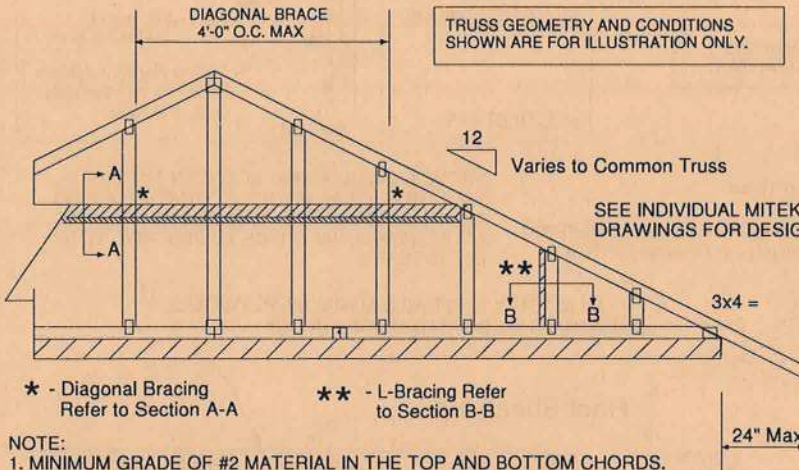
(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

Roof Sheathing

Diag. Brace at 1/3 points if needed

End Wall

HORIZONTAL BRACE (SEE SECTION A-A)



\* - Diagonal Bracing Refer to Section A-A

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

## NOTE:

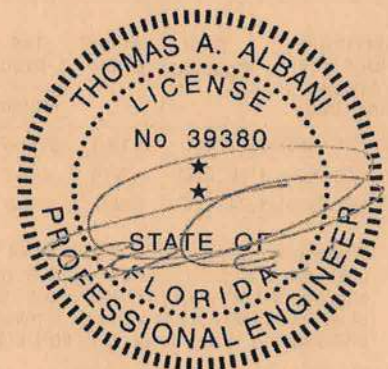
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF 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.
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.	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

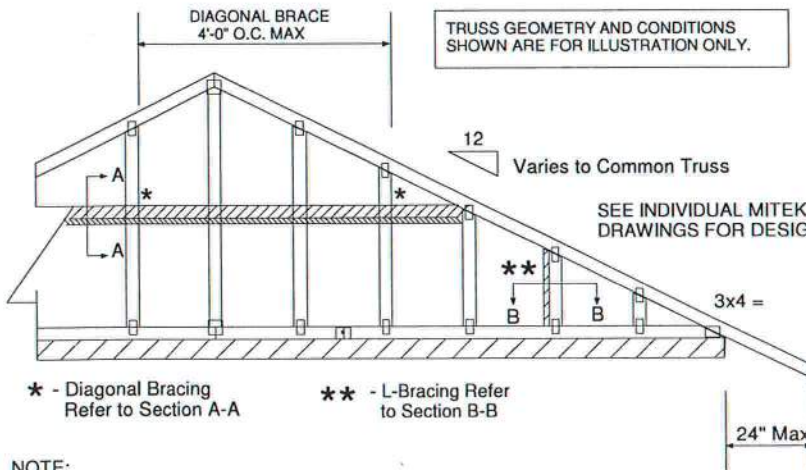
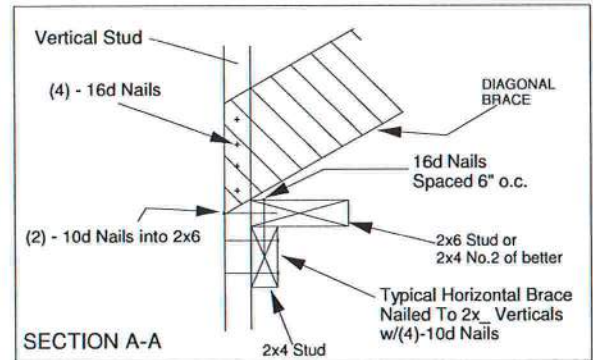
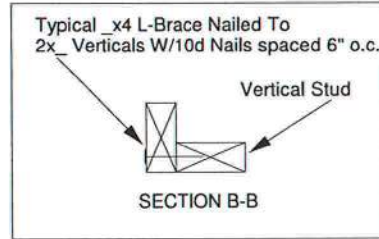
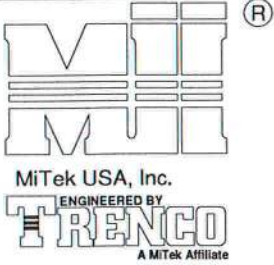


JANUARY 6, 2017

## Standard Gable End Detail

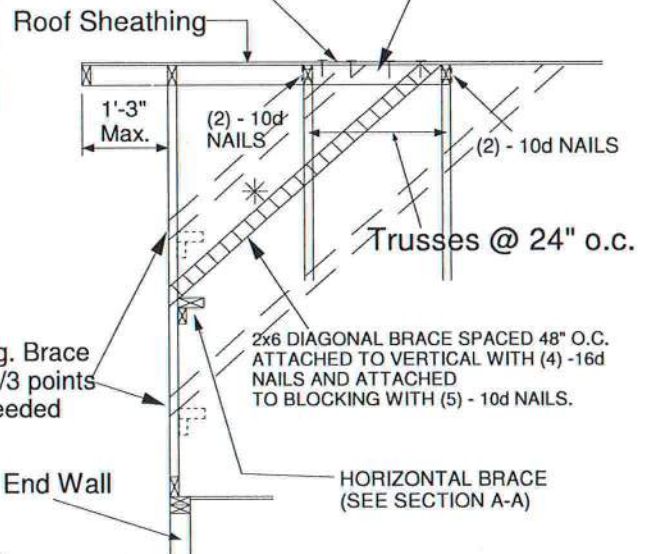
MII-GE140-001

MiTek USA, Inc. Page 1 of 2



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



## 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



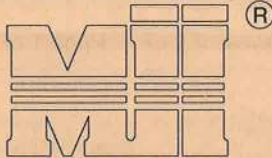
AUGUST 1, 2016

## Standard Gable End Detail

MII-GE170-D-SP

MiTek USA, Inc.

Page 1 of 2



MiTek USA, Inc.

ENGINEERED BY  
**TRENCO**

A MiTek Affiliate

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.12  
Varies to Common TrussSEE INDIVIDUAL MITEK ENGINEERING  
DRAWINGS FOR DESIGN CRITERIA

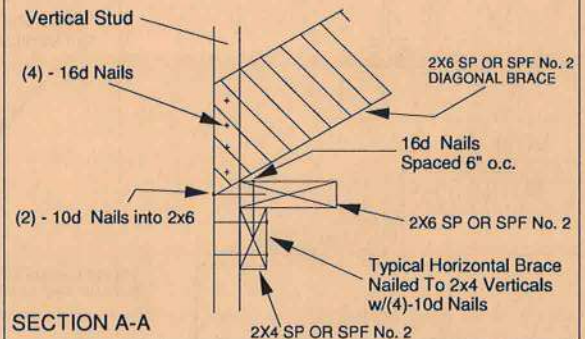
3x4 =

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")



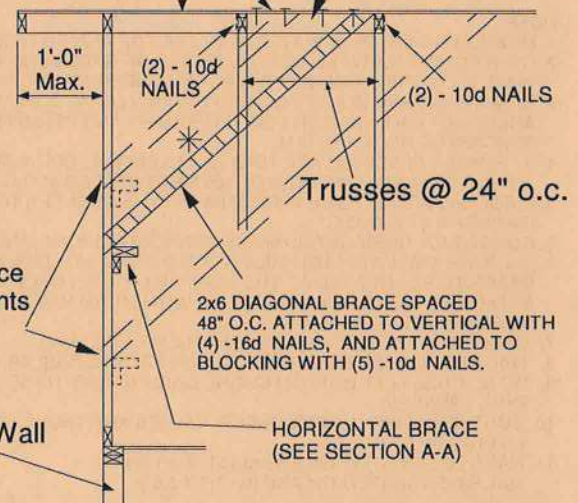
PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

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

Roof Sheathing

Diag. Brace  
at 1/3 points  
if needed

End Wall

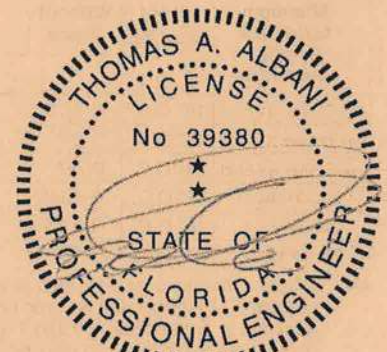


Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
Maximum Stud Length					
2x4 SP No. 3 / Stud	12" O.C.	3-9-7	5-8-8	6-11-1	11-4-4
2x4 SP No. 3 / Stud	16" O.C.	3-4-12	4-11-15	6-9-8	10-2-3
2x4 SP No. 3 / Stud	24" O.C.	2-9-4	4-0-7	5-6-8	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 I-braces attached to both edges. Fasten T and I 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 I 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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February 12, 2018

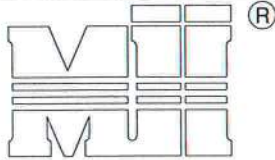


AUGUST 1, 2016

## Standard Gable End Detail

MII-GE180-D-SP

MiTek USA, Inc. Page 1 of 2



MiTek USA, Inc.

ENGINEERED BY  
**TRENCO**A MiTek Affiliate  
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.12  
Varies to Common TrussSEE 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:

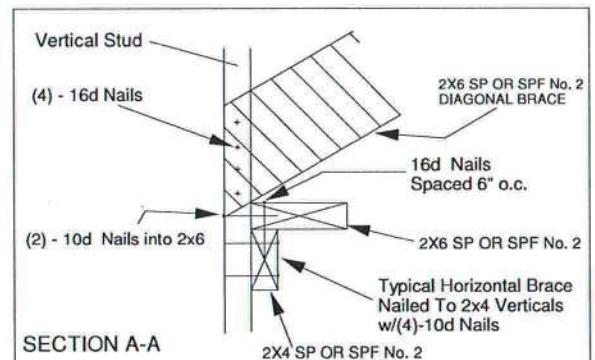
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF 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")

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
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 I-braces attached to both edges. Fasten T and I 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 I 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.



SECTION A-A

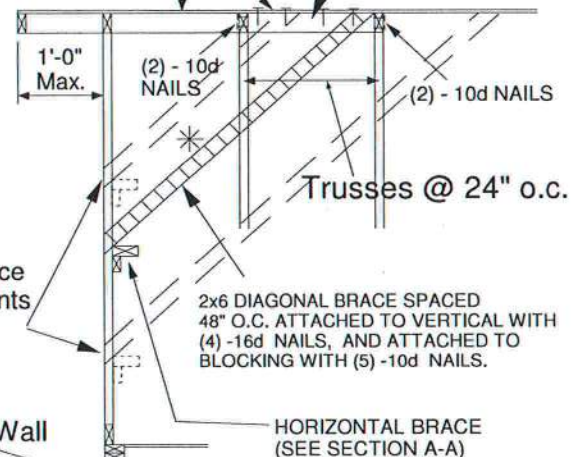
PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

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

Roof Sheathing

Diag. Brace at 1/3 points if needed

End Wall



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February 12, 2018

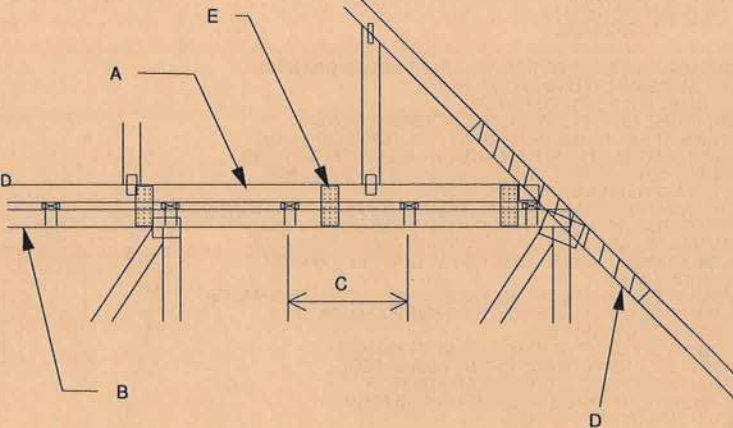




MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E  
 MAX MEAN ROOF HEIGHT = 30 FEET  
 MAX TRUSS SPACING = 24" O.C.  
 CATEGORY II BUILDING  
 EXPOSURE B or C  
 ASCE 7-10  
 DURATION OF LOAD INCREASE : 1.60

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

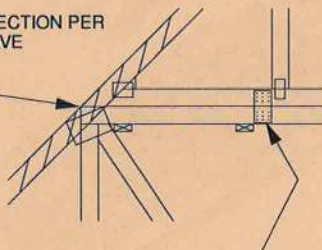
- A - PIGGYBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) (0.131" X 3.5") TOE-NAILED.
- B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
- C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C. UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING. CONNECT TO BASE TRUSS WITH (2) (0.131" X 3.5") NAILS EACH.
- D - 2 X  $\frac{1}{2}$  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 (0.131" 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)



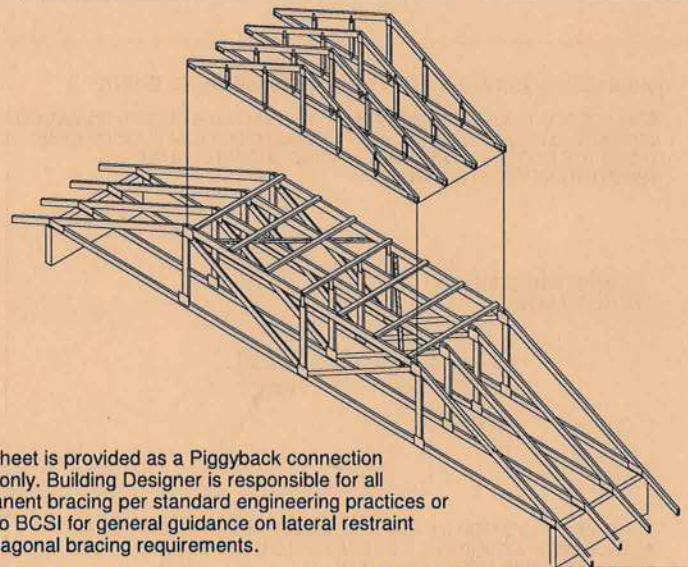
#### WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

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

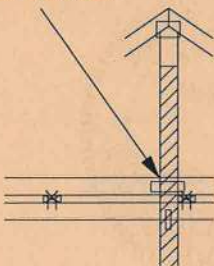


FOR ALL WIND SPEEDS, ATTACH MITEK 3X6 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48" O.C. W/ (4) (0.131" X 1.5") PER MEMBER. STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5" EDGE DISTANCE.



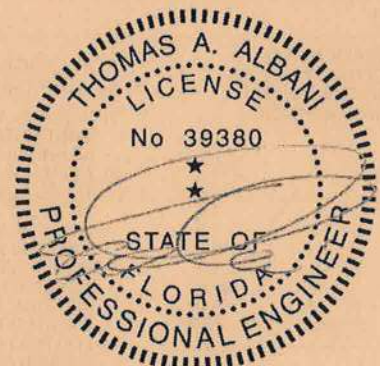
This sheet is provided as a Piggyback connection detail only. Building Designer is responsible for all permanent bracing per standard engineering practices or refer to BCSI for general guidance on lateral restraint and diagonal bracing requirements.

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  $\frac{1}{2}$  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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 Date:

February 12, 2018

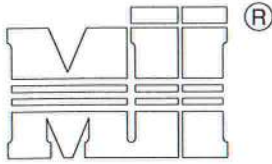


AUGUST 1, 2016

# STANDARD PIGGYBACK TRUSS CONNECTION DETAIL

MII-PIGGY-ALT  
7-10

MiTek USA, Inc. Page 1 of 1



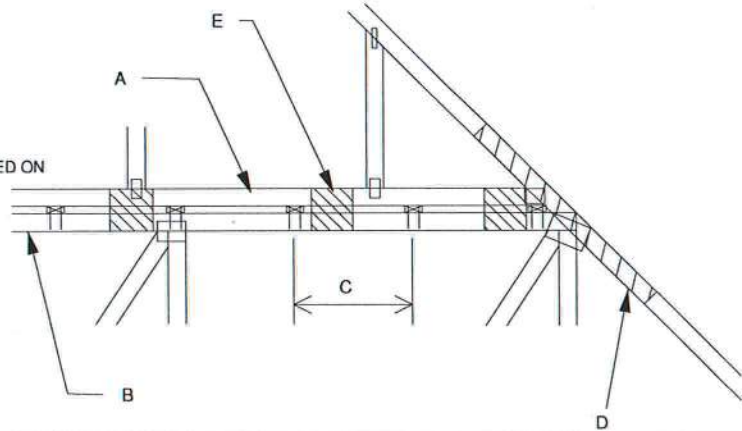
MiTek USA, Inc.



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.

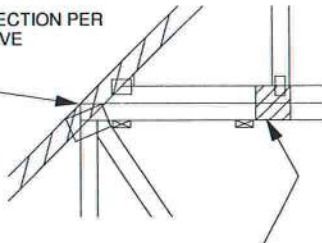
- A - PIGGYBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.  
SHALL BE CONNECTED TO EACH PURLIN  
WITH (2) 0(0.131" X 3.5") TOE-NAILED.
- B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
- C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C.  
UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING.  
CONNECT TO BASE TRUSS WITH (2) (0.131" 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 (0.131" 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)



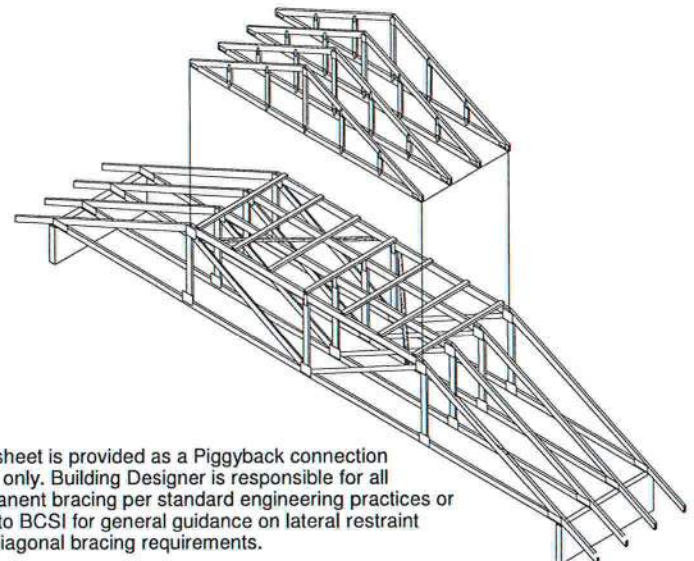
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

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

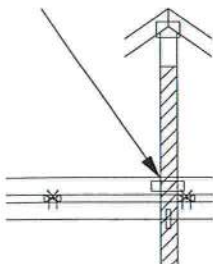


7" x 7" x 1/2" PLYWOOD (or 7/16" OSB) GUSSET EACH SIDE AT 24" O.C.  
ATTACH WITH 3 - 6d (0.113" X 2") NAILS INTO EACH CHORD  
FROM EACH SIDE (TOTAL - 12 NAILS)



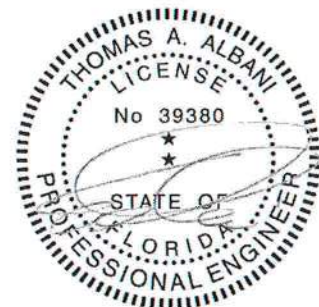
This sheet is provided as a Piggyback connection  
detail only. Building Designer is responsible for all  
permanent bracing per standard engineering practices or  
refer to BCSI for general guidance on lateral restraint  
and diagonal bracing requirements.

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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Date:

January 19, 2018



AUGUST 1, 2016

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

MII-REP01A1

MiTek USA, Inc. Page 1 of 1



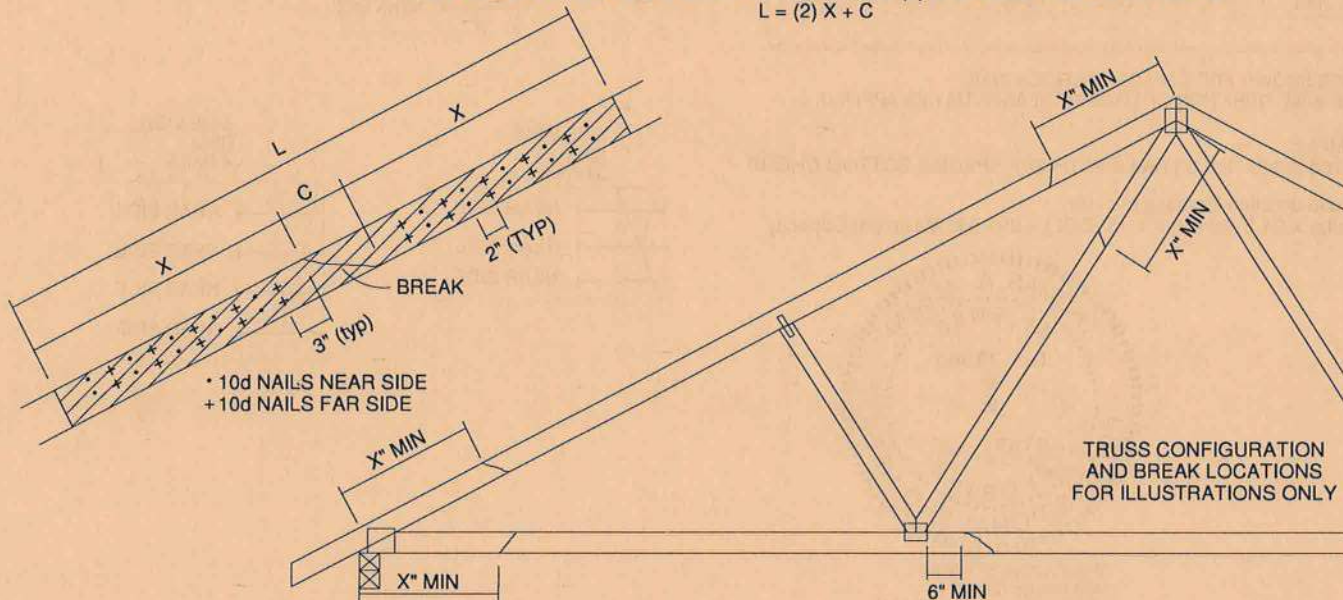
TOTAL NUMBER OF NAILS EACH SIDE OF BREAK *		X INCHES	MAXIMUM FORCE (lbs) 15% LOAD DURATION							
			SP		DF		SPF		HF	
2x4	2x6		2x4	2x6	2x4	2x6	2x4	2x6	2x4	2x6
20	30	24"	1706	2559	1561	2342	1320	1980	1352	2028
26	39	30"	2194	3291	2007	3011	1697	2546	1738	2608
32	48	36"	2681	4022	2454	3681	2074	3111	2125	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:

$$L = (2) X + C$$

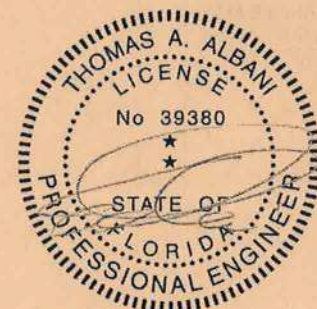


THE LOCATION OF THE BREAK MUST BE GREATER THAN OR EQUAL TO THE REQUIRED X DIMENSION FROM ANY PERIMETER BREAK OR HEEL JOINT AND A MINIMUM OF 6" FROM ANY INTERIOR JOINT (SEE SKETCH ABOVE)

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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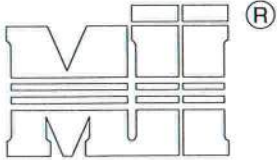
AUGUST 1, 2016

## LATERAL TOE-NAIL DETAIL

MII-TOENAIL\_SP

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Page 1 of 1



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## 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:

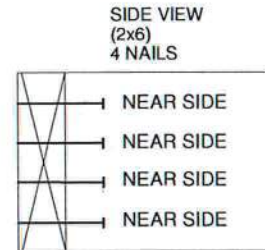
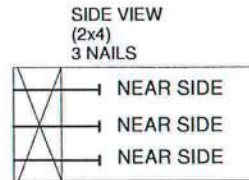
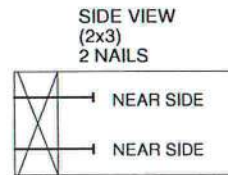
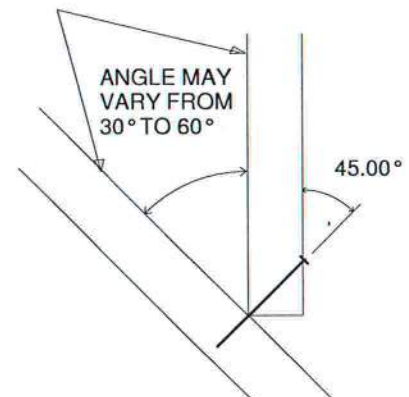
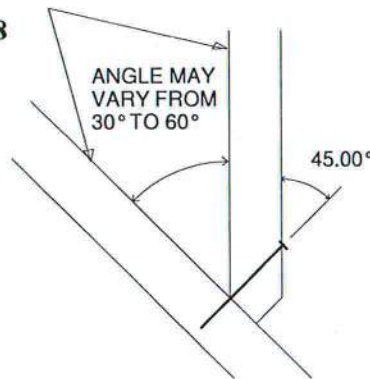
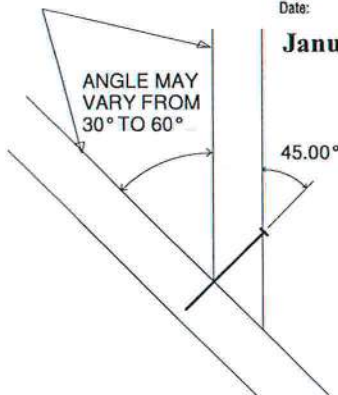
(3) - 16d (0.162" X 3.5") NAILS WITH SPF SPECIES BOTTOM CHORD

For load duration increase of 1.15:

3 (nails) X 84.5 (lb/nail) X 1.15 (DOL) = 291.5 lb Maximum Capacity


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# TRUSSED VALLEY SET DETAIL

MII-VALLEY HIGH WIND1

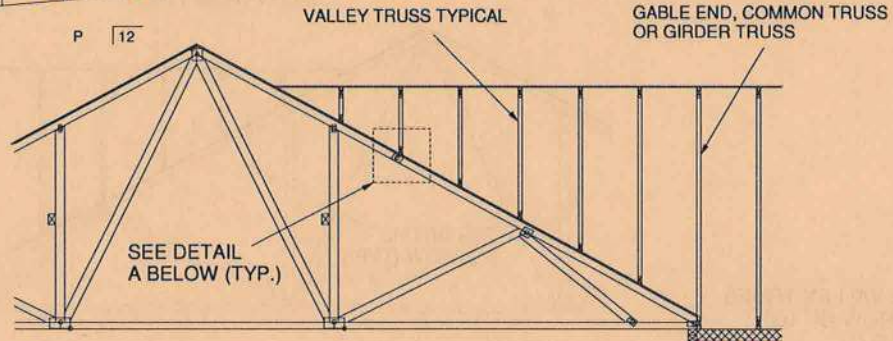
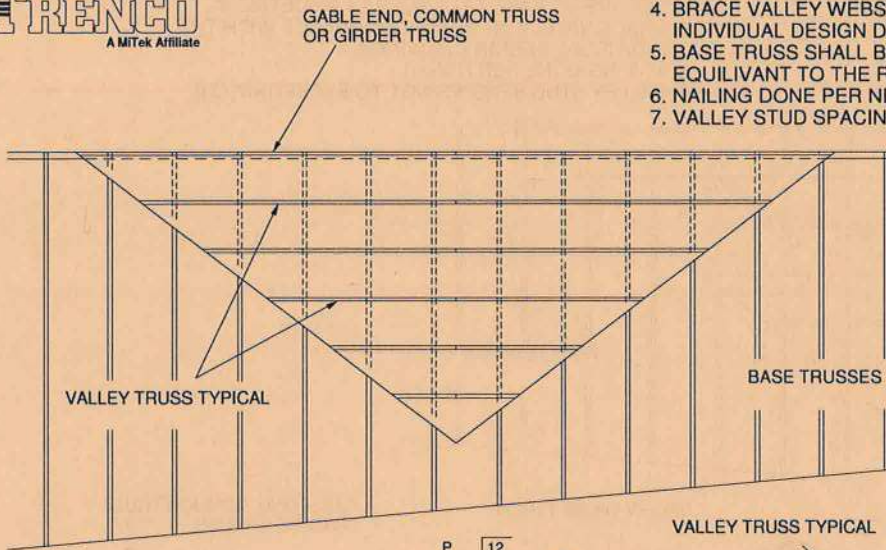
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Page 1 of 1

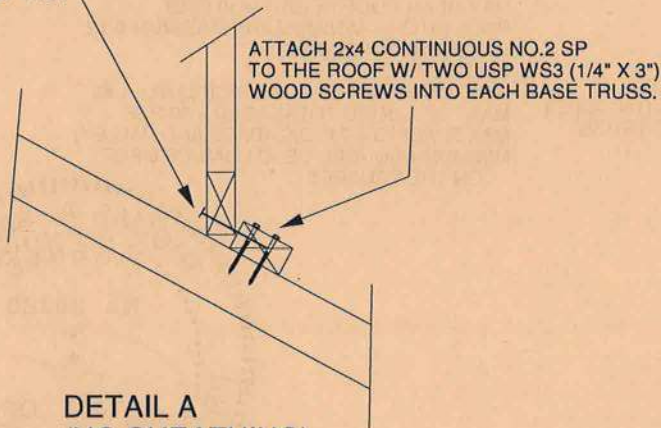


## GENERAL SPECIFICATIONS

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 EQUIVARIANT 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.

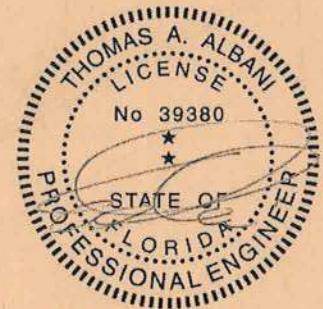


SECURE VALLEY TRUSS  
W/ ONE ROW OF 10d  
NAILS 6" O.C.



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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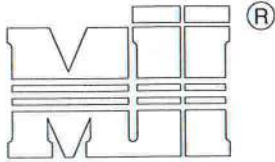
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# TRUSSED VALLEY SET DETAIL

MII-VALLEY HIGH WIND2

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Page 1 of 1

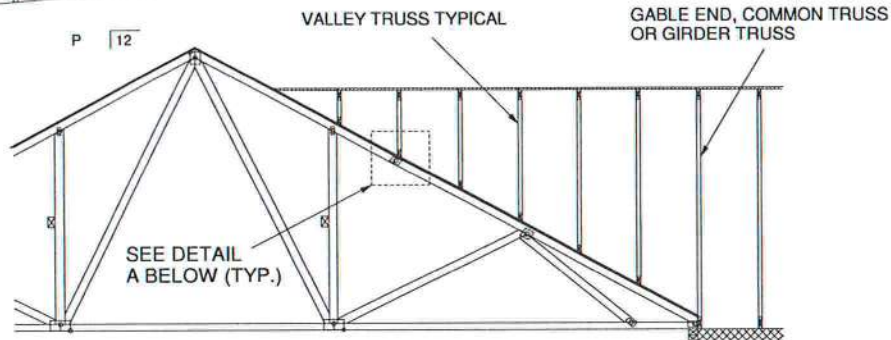
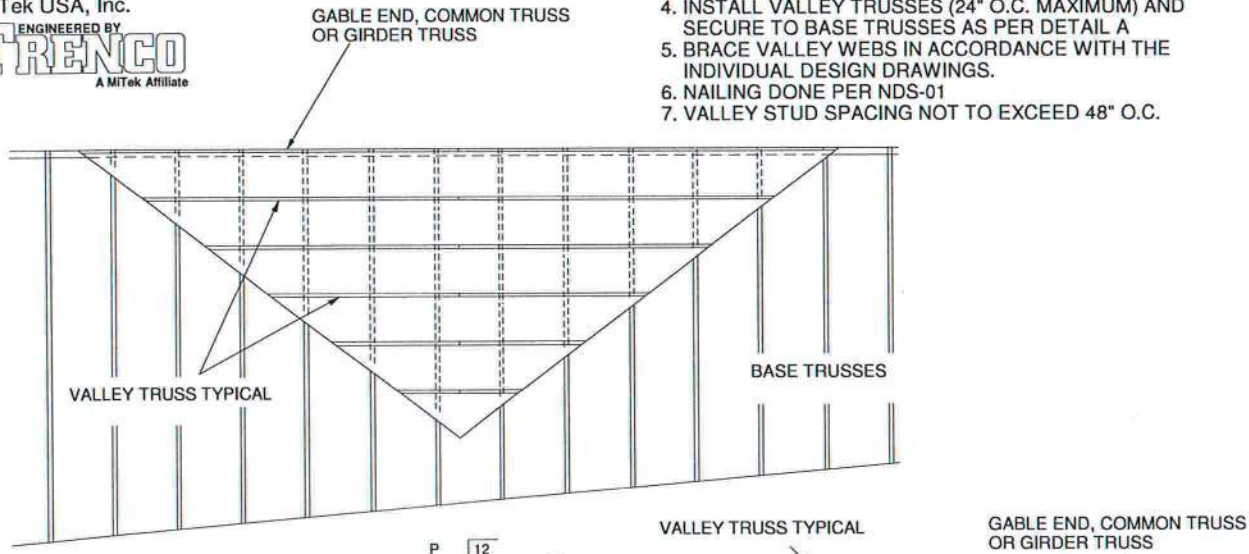


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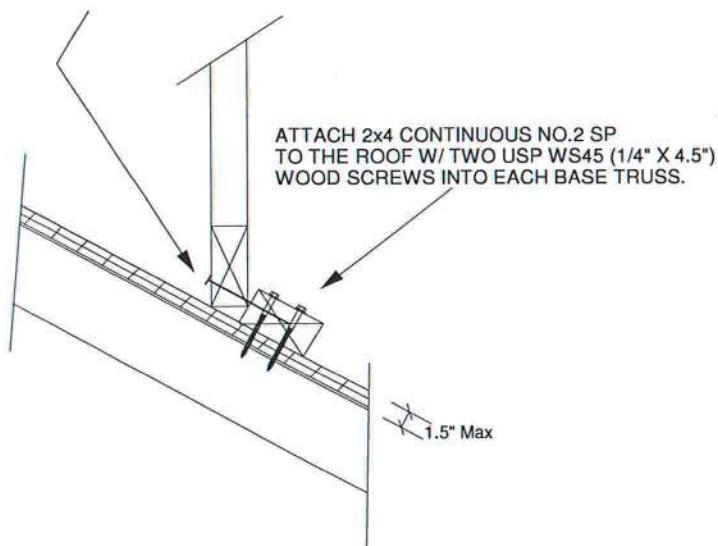
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## GENERAL SPECIFICATIONS

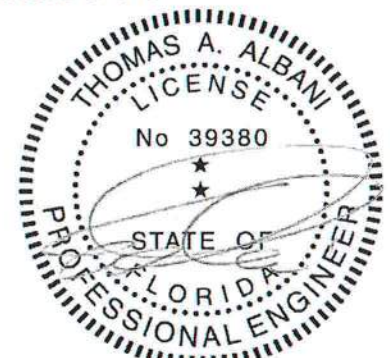
1. NAIL SIZE 10d (0.131" X 3")
2. WOOD SCREW = 4.5" WS45 USP OR EQUIVANT
3. INSTALL SHEATHING TO TOP CHORD OF BASE TRUSSES.
4. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE TO BASE TRUSSES AS PER DETAIL A
5. BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS.
6. NAILING DONE PER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



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



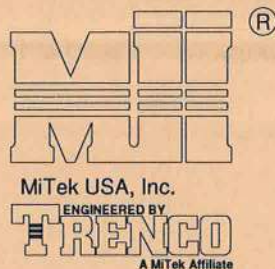
WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH  
WIND DESIGN PER ASCE 7-10 160 MPH  
MAX MEAN ROOF HEIGHT = 30 FEET  
ROOF PITCH = MINIMUM 3/12 MAXIMUM 6/12  
CATEGORY II BUILDING  
EXPOSURE C  
WIND DURATION OF LOAD INCREASE : 1.60  
MAX TOP CHORD TOTAL LOAD = 50 PSF  
MAX SPACING = 24" O.C.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



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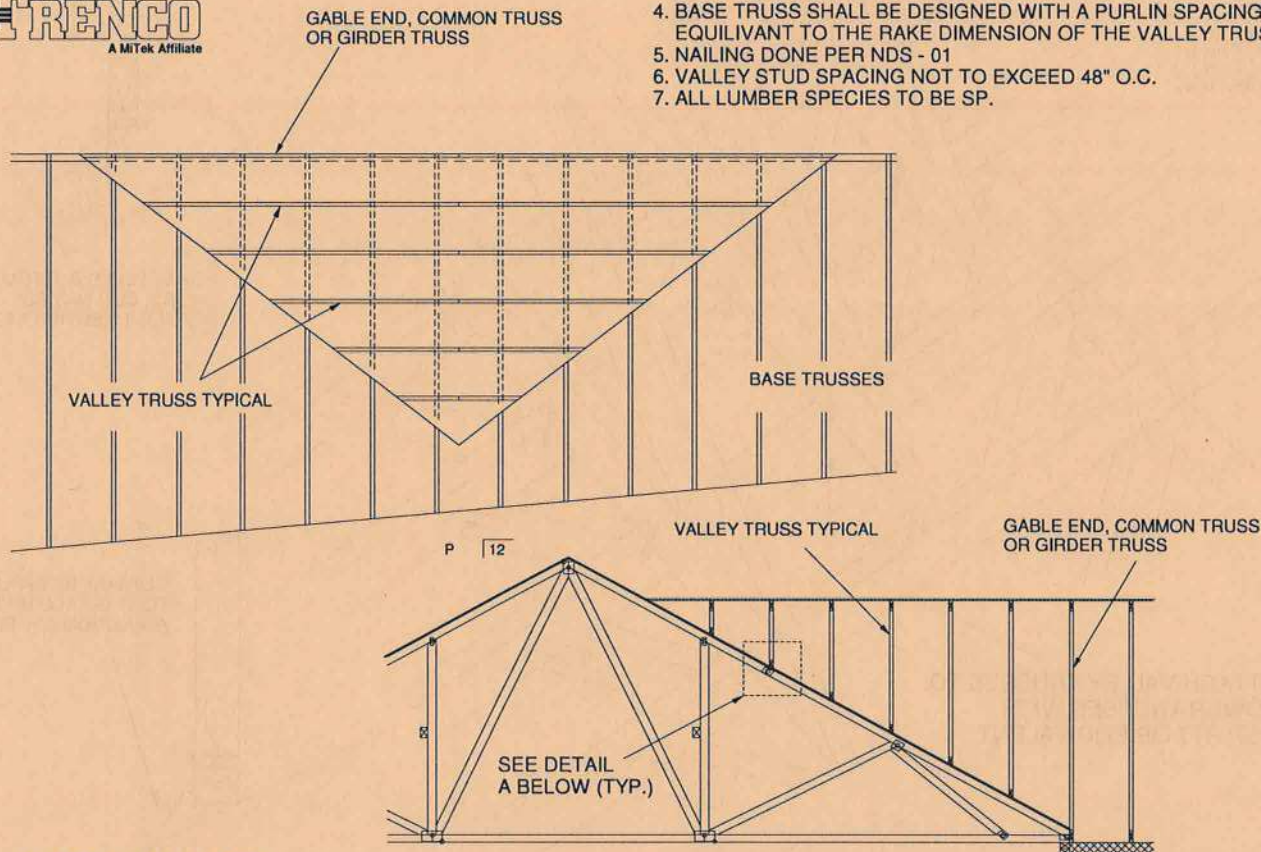
February 12, 2018



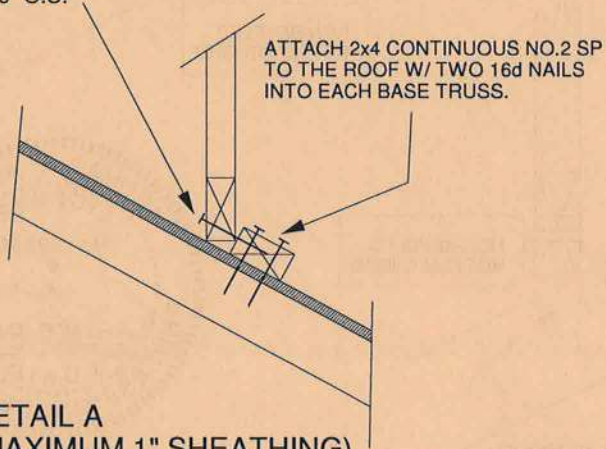


## GENERAL SPECIFICATIONS

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 EQUIVANT 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.

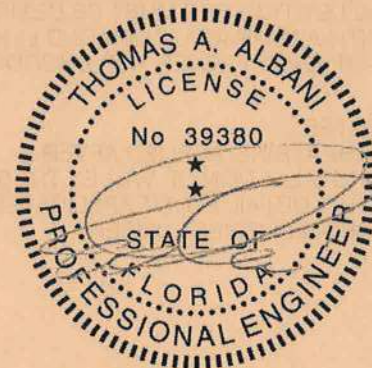


SECURE VALLEY TRUSS  
W/ ONE ROW OF 16d  
NAILS 6" O.C.



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

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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February 12, 2018



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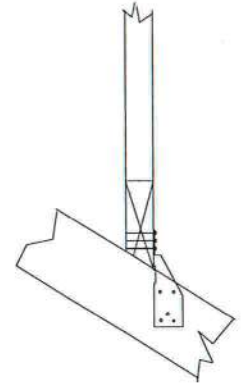
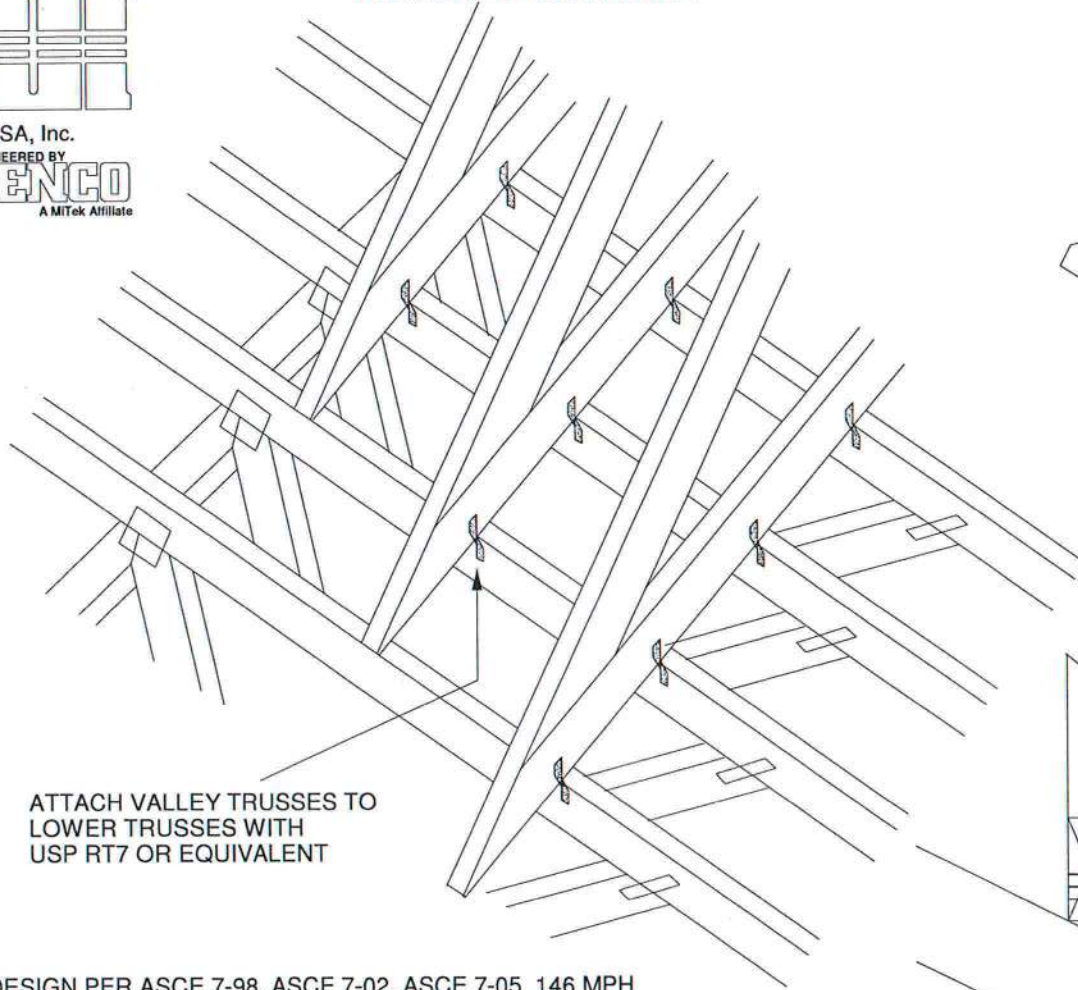
TRUSSED VALLEY SET DETAIL  
(HIGH WIND VELOCITY)

MII-VALLEY

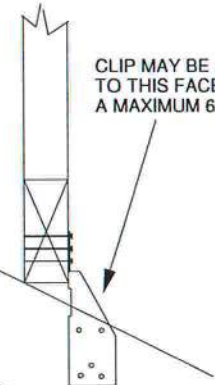
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NOTE: VALLEY STUD SPACING NOT  
TO EXCEED 48" O.C. SPACING



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.

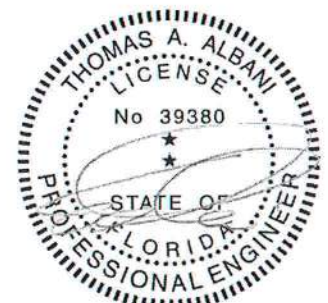
NOTES:

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

NON-BEVELED  
BOTTOM CHORD

NON-BEVELED  
BOTTOM CHORD

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



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January 19, 2018

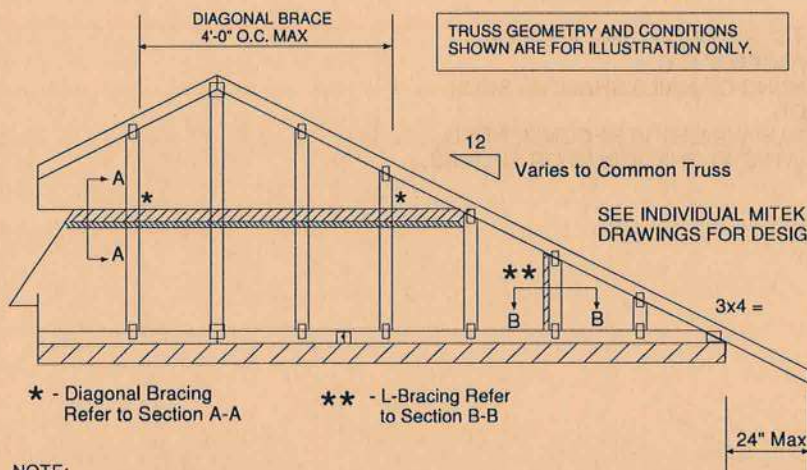
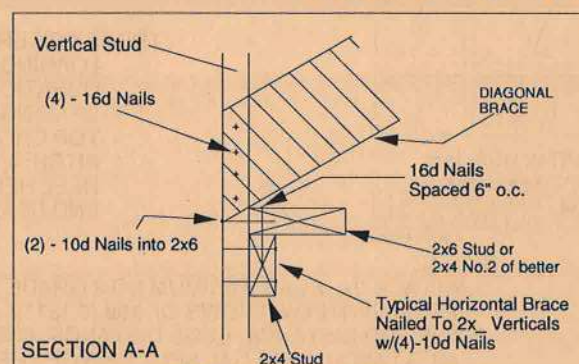
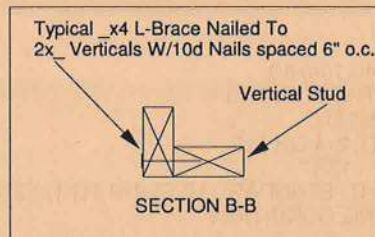
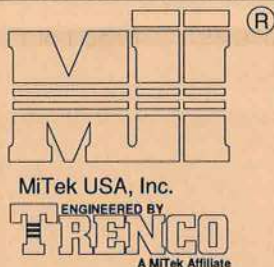


AUGUST 1, 2016

## Standard Gable End Detail

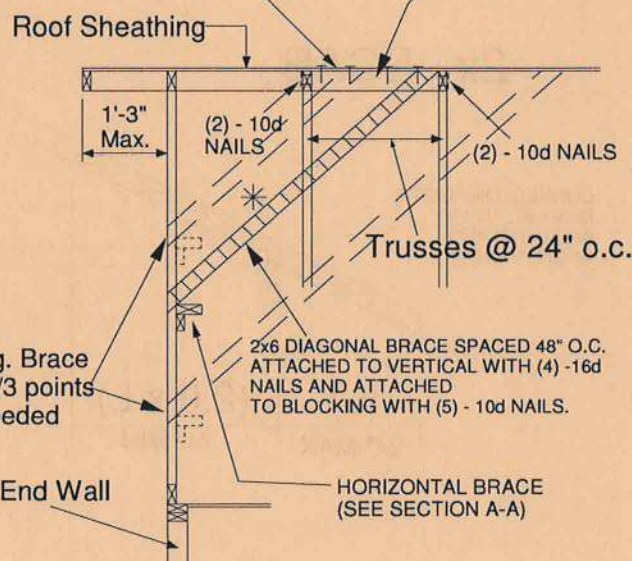
MII-GE146-001

MiTek USA, Inc. Page 1 of 2



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



## NOTE:

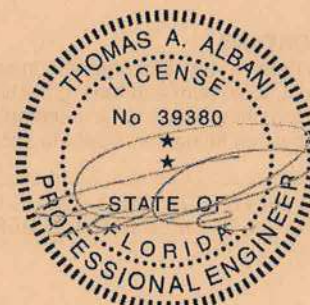
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF 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")

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

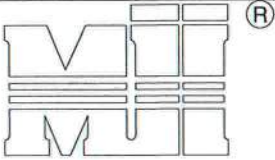
STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.  
CONNECTION OF BRACING IS BASED ON MWFRS.



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Page 1 of 1

## TRUSS CRITERIA:

LOADING: 40-10-0-10

DURATION FACTOR: 1.15

SPACING: 24" O.C.

TOP CHORD: 2x4 OR 2x6

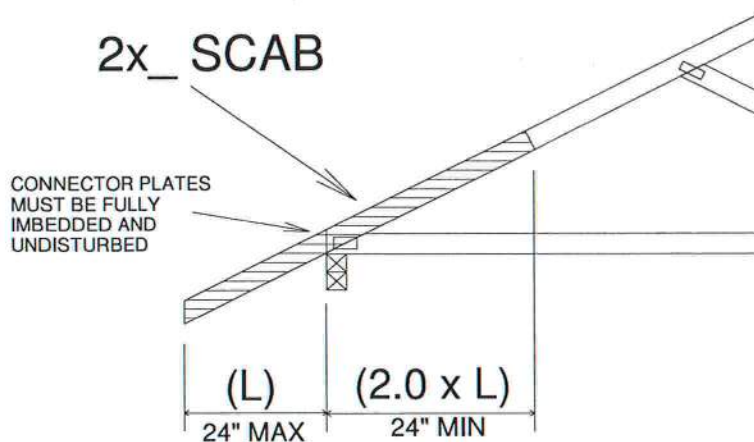
PITCH: 4/12 - 12/12

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.

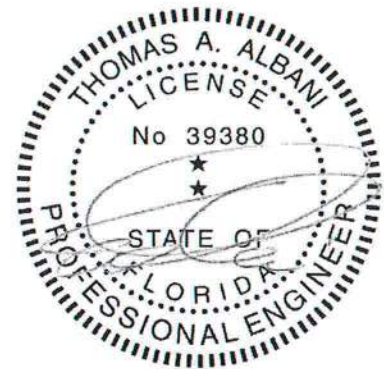


## IMPORTANT

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.

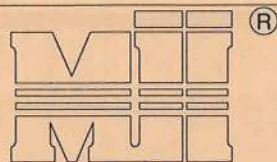
REFER TO INDIVIDUAL TRUSS DESIGN  
FOR PLATE SIZES AND LUMBER GRADES



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February 12, 2018



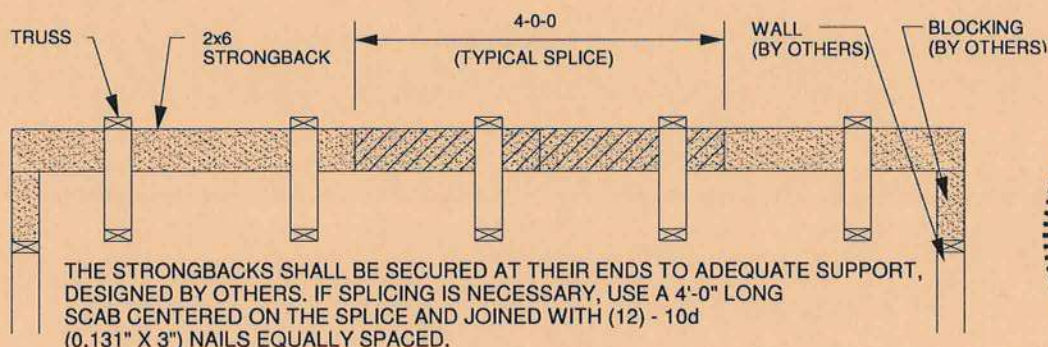
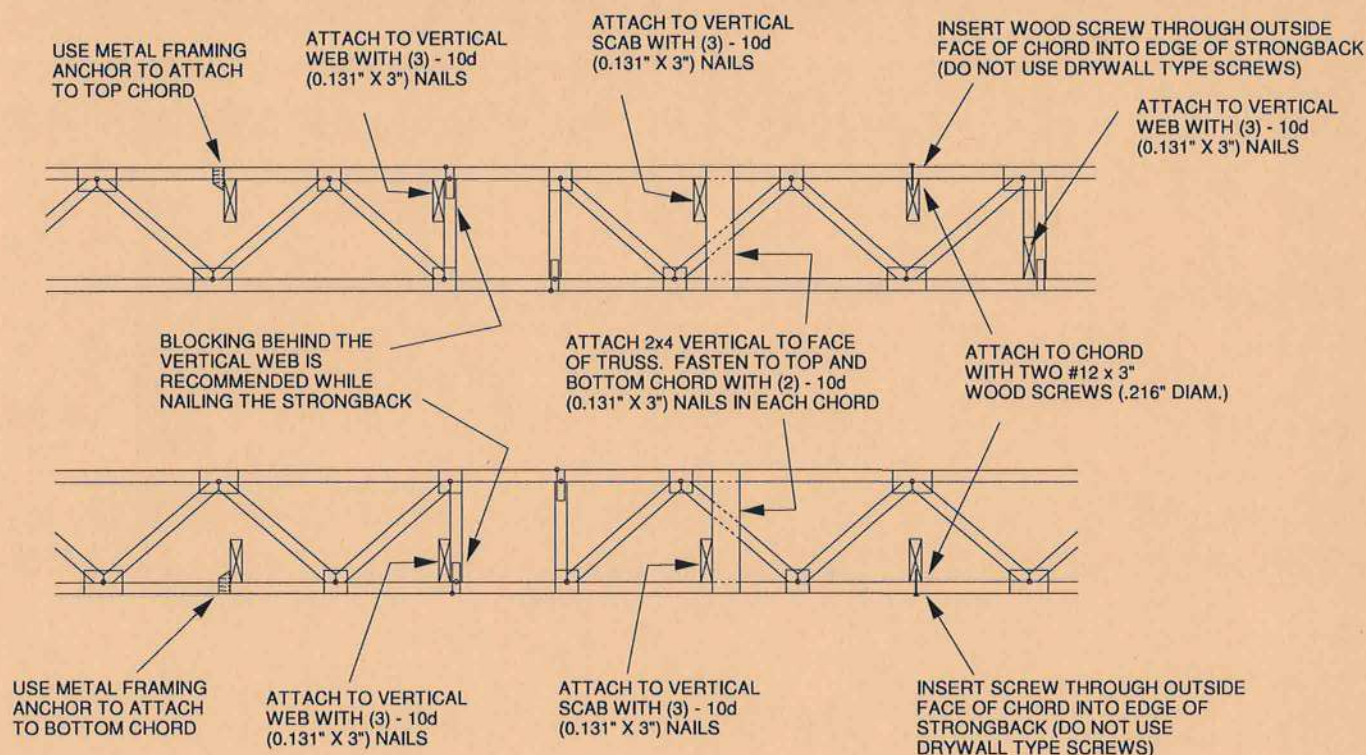


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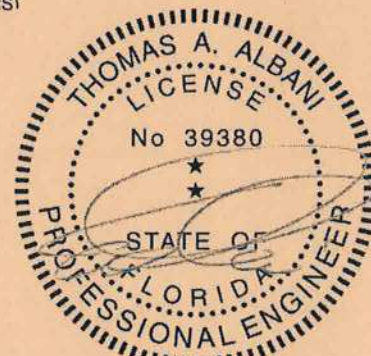
TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

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)



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

February 12, 2018



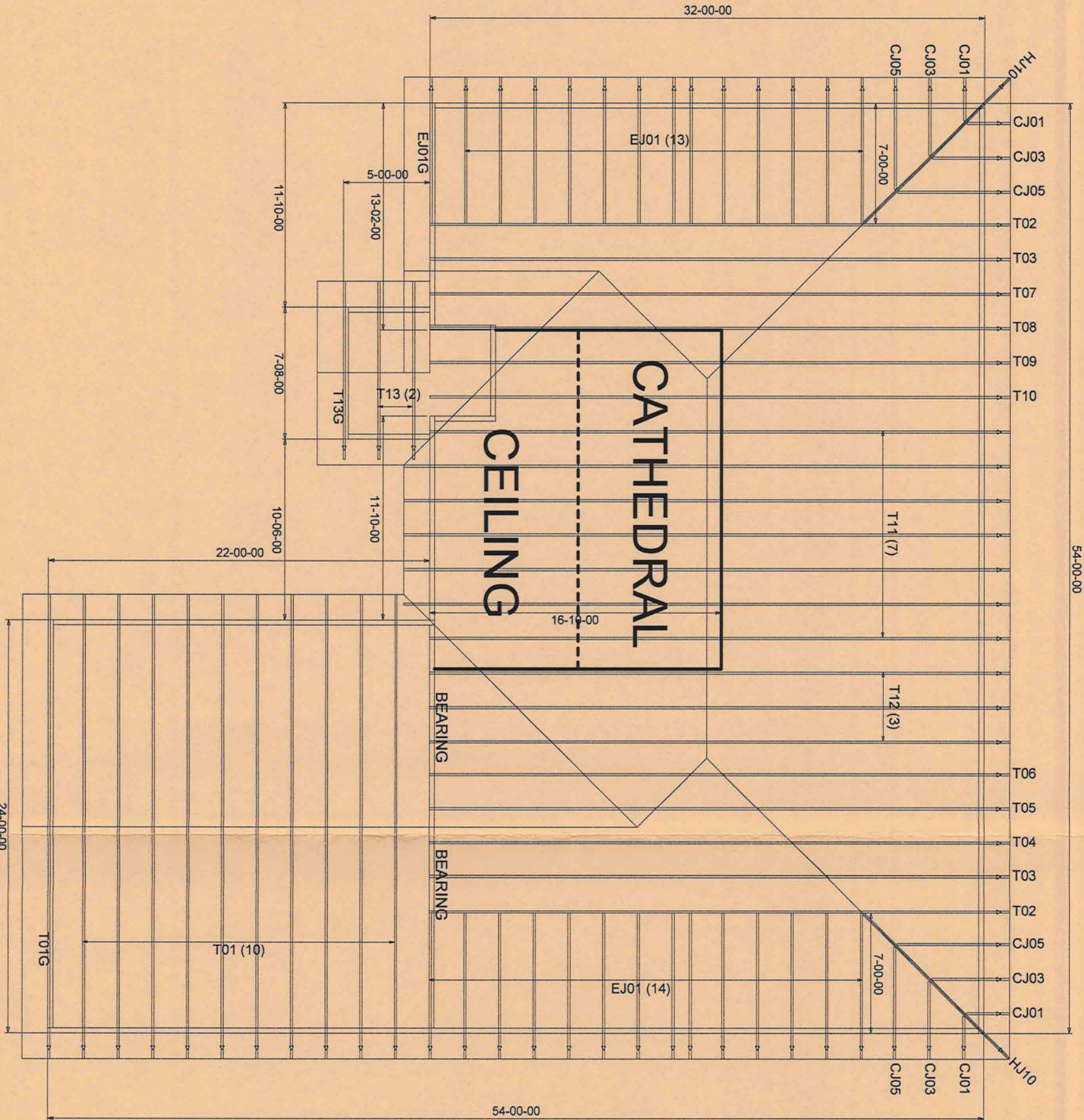




BEARING HEIGHT SCHEDULE

9' 1-1/8"

6/12 PITCH  
18" O/H



NOTES:

- 1) REFER TO HD 91 RECOMMENDATIONS FOR BEARING INSTALLATION AND TEMPORARY BRACING. REFER TO ADJUSTED DRAWINGS FOR PERMANENT BRACING REQUIRED.
- 2) ALL TRUSSES (INCLUDING TRUSSES UNDER VALLEY FRAMING) MUST BE COMPLETELY DECKED OR REFER TO DETAIL V05 FOR ALTERNATE DECKING REQUIREMENTS.
- 3) ALL VALLEYS ARE TO BE CONVENTIONALLY FRAMED BY BUILDER.
- 4) ALL TRUSSES ARE DESIGNED FOR 2' OC MAXIMUM SPACING, UNLESS OTHERWISE NOTED.
- 5) ALL WALLS SHOWN ON PLACEMENT PLAN ARE CONSIDERED TO BE LOAD BEARING, UNLESS OTHERWISE NOTED.
- 6) S142 TRUSSES MUST BE INSTALLED WITH THE TOP BEING UP.
- 7) BEARING JOIST/INTEL (JERO) TO BE FURNISHED BY BUILDER.



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**SIMQUE CONST.**

JOHNS RES.

DATE:	ISSUED BY:	ORIGINAL ISSUE:
3-12-20	KLH	2291251
INTERVAL 001:	INTERVAL 002:	INTERVAL 003:
		2291251

FL Approval Codes - Mitek Plates #'s 2197.2 - 2197.4, Versa-Lam #1644-R4 & BCI Joists #1392-R4



