

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

3277182 - JOHN NORRIS CONST. - J. MOORE RES.

MiTek USA, Inc.

Site Information:

16023 Swingley Ridge Rd

Customer Info: JOHN NORRIS CONST. Project Name: J. Moore Res. Model: Custom

Lot/Block: N/A

Subdivision: N/A

Address: TBD, TBD

State: FL

City: Columbia Cty

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

Name:

License #:

Address:

City:

State:

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

Design Code: FBC2020/TPI2014

Design Program: MiTek 20/20 8.5

Wind Code: ASCE 7-16

Wind Speed: 130 mph

Roof Load: 37.0 psf

Floor Load: N/A psf

This package includes 5 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	T28708377	T01	9/6/22
2	T28708378	T01A	9/6/22
3	T28708379	T01G	9/6/22
4 5	T28708380	T02	9/6/22
5	T28708381	T02G	9/6/22

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

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

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.



Joaquin Velez PE No.68182 MiTek Inc. DBA MiTek USA FL Cert 6634 16023 Swingley Ridge Rd. Chesterfield, MO 63017

September 6,2022

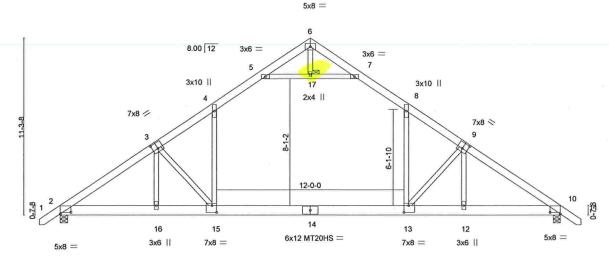
BUILDIN

for

Code ompliand ï

JOHN NORRIS CONST. - J. MOORE RES. Job Truss Type Qty Ply Truss T28708377 T01 Attic 3277182 Job Reference (optional) Builders FirstSource (Lake City,FL), Lake City, FL - 32055. 8.530 s Aug 11 2022 MiTek Industries, Inc. Tue Sep 6 06:06:18 2022 Page 1 ID:7WKr8toudn35dxwKwBAfQtytHta-2JfwNO5IM51TNEm38eboU2\_uwOgPBbB?y38ZJsygRVJ 18-10-2 19-6-15 22-1-12 2-10-2 0-8-13 2-6-13 25-10-0 32-0-0 6-2-0 1-4-0 12-5-1 13-1-14 16-0-0 2-6-13 0-8-13 2-10-2

Scale = 1:70.8



		6-2-0	' 3-8	3-4 '	6-1-12	' 6-	-1-12	3-8-4		6-2-0	
Plate Off	sets (X,Y)-	[2:0-8-0,0-1-3], [3:0-4-0,0	-4-8], [9:0-4-0	,0-4-8], [10:0-	8-0,0-1-3], [1	3:0-3-8,0-5-4], [15	5:0-3-8,0-5-4]				
LOADING	G (psf)	SPACING-	2-0-0	CSI.		DEFL.	in (loc	) I/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.65	Vert(LL)	-0.37 13-15	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.49	Vert(CT)	-0.68 13-1	>567	180	MT20HS	187/143
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.03	n/a	n/a		
BCDL	10.0	Code FBC2020/T	PI2014	Matri	k-MS	Attic	-0.18 13-1	798	360	Weight: 253 lb	FT = 20%

BRACING-

TOP CHORD

BOT CHORD

**JOINTS** 

22-1-12

25-10-0

1 Brace at Jt(s): 17

32-0-0

Structural wood sheathing directly applied or 4-3-10 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

16-0-0

LUMBER-

REACTIONS.

TOP CHORD 2x6 SP M 26 \*Except\*

1-3,9-11: 2x6 SP No.2

2x8 SP 2400F 2.0E **BOT CHORD** 

WEBS 2x4 SP No.3

(size) 2=0-5-8, 10=0-5-8 Max Horz 2=-252(LC 10)

Max Uplift 2=-83(LC 12), 10=-83(LC 13)

Max Grav 2=1756(LC 20), 10=1756(LC 21)

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

6-2-0

TOP CHORD 2-3=-2672/59, 3-4=-2625/18, 4-5=-1782/100, 5-6=0/509, 6-7=0/509, 7-8=-1782/100,

8-9=-2624/18, 9-10=-2673/60

2-16=-108/2377, 15-16=-109/2376, 13-15=0/1975, 12-13=0/2188, 10-12=0/2189 BOT CHORD WEBS

5-17=-2499/50, 7-17=-2499/50, 8-13=0/1292, 9-13=-646/307, 9-12=-387/139,

9-10-4

4-15=0/1292, 3-15=-646/306, 3-16=-387/139

### NOTES-

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-5 to 2-0-2, Interior(1) 2-0-2 to 16-0-0, Exterior(2R) 16-0-0 to 19-2-4, Interior(1) 19-2-4 to 33-2-5 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.

All plates are MT20 plates unless otherwise indicated.

- 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.
- 7) Ceiling dead load (5.0 psf) on member(s). 4-5, 7-8, 5-17, 7-17; Wall dead load (5.0 psf) on member(s).8-13, 4-15
- 8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 13-15 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.
- 10) Attic room checked for L/360 deflection.

This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Joaquin Velez PE No.68182 MiTek Inc. DBA MiTek USA FL Cert 6634 16023 Swingley Ridge Rd. Chesterfield, MO 63017 Date:

September 6,2022

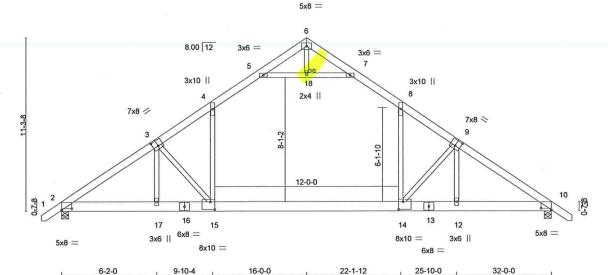
MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and properly damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see \*\*ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information\*\* available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd Chesterfield, MO 63017

JOHN NORRIS CONST. - J. MOORE RES. Truss Type Job Qty Ply Truss T28708378 ATTIC 3277182 T01A Job Reference (optional) Lake City, FL - 32055, 8.530 s Aug 11 2022 MiTek Industries, Inc. Tue Sep 6 06:06:20 2022 Page 1 Builders FirstSource (Lake City,FL), ID:7WKr8toudn35dxwKwBAfQtytHta-?hnho47?uiHBcXwRG3dGZT3BuCJhfRWIPNdfNlygRVH 18-10-2 19-6-15 22-1-12 2-10-2 0-8-13 2-6-13 25-10-0 3-8-4 1-4-0 12-5-1 13-1-14 16-0-0 2-6-13 0-8-13 2-10-2

Scale = 1:72.2



[2:0-8-0,0-1-3], [3:0-4-0,0-4-8], [9:0-4-0,0-4-8], [10:0-8-0,0-1-3], [14:0-3-8,0-6-0], [15:0-3-8,0-6-0] LOADING (psf) SPACING-DEFL. **PLATES** GRIP CSI. 2-4-0 in (loc) I/defl L/d 20.0 Plate Grip DOL TC 0.87 Vert(LL) -0.44 14-15 >880 240 MT20 244/190 1.25 TCLL TCDL -0.79 14-15 180 7.0 Lumber DOL 1.25 BC 0.63 Vert(CT) >486 0.0 WB 0.84 0.04 10 n/a n/a BCLL Rep Stress Inci NO Horz(CT) FT = 20%BCDL 10.0 Code FBC2020/TPI2014 Matrix-MS Attic -0.22 14-15 684 360 Weight: 253 lb

BRACING-

TOP CHORD

**BOT CHORD** 

**JOINTS** 

LUMBER-

2x6 SP M 26 \*Except\* TOP CHORD

1-3,9-11: 2x6 SP No.2

**BOT CHORD** 2x8 SP 2400F 2.0E

2x4 SP No.3 WEBS

REACTIONS.

(size) 2=0-5-8, 10=0-5-8

Max Horz 2=-295(LC 10)

Max Uplift 2=-97(LC 12), 10=-97(LC 13) Max Grav 2=2048(LC 20), 10=2048(LC 21)

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

TOP CHORD 2-3=-3117/69, 3-4=-3062/21, 4-5=-2079/116, 5-6=0/593, 6-7=0/593, 7-8=-2079/116,

8-9=-3062/21, 9-10=-3118/70

2-17=-126/2773, 15-17=-127/2772, 14-15=0/2304, 12-14=0/2552, 10-12=0/2553 5-18=-2916/58, 7-18=-2916/58, 8-14=0/1508, 9-14=-754/358, 9-12=-452/163, 4-15=0/1508, 3-15=-754/357, 3-17=-452/163 **BOT CHORD** WEBS

### NOTES-

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-5 to 2-0-2, Interior(1) 2-0-2 to 16-0-0, Exterior(2R) 16-0-0 to 19-2-4, Interior(1) 19-2-4 to 33-2-5 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* 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) Ceiling dead load (5.0 psf) on member(s). 4-5, 7-8, 5-18, 7-18; Wall dead load (5.0 psf) on member(s).8-14, 4-15
- 7) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 14-15
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.

9) Attic room checked for L/360 deflection.

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September 6,2022

MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MITEKS 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 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 properly damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Date:

Structural wood sheathing directly applied or 3-11-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

1 Brace at Jt(s): 18

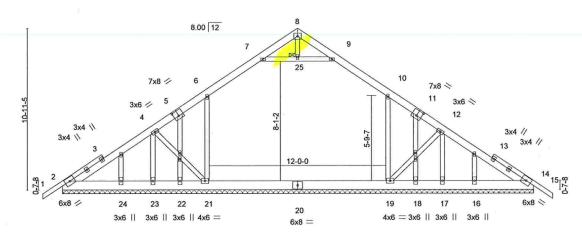
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JOHN NORRIS CONST. - J. MOORE RES Job Truss Truss Type Qty Ply T28708379 T01G GABLE 3277182 Job Reference (optional) Lake City, FL - 32055, 8.530 s Aug 11 2022 MiTek Industries, Inc. Tue Sep 6 06:06:22 2022 Page 1 Builders FirstSource (Lake City,FL), ID:7WKr8toudn35dxwKwBAfQtytHta-x4vRDm8FQKXvrr3qNUfkeu9j806f7VVbsh6mSdygRVF

16-0-0 | 18-3-14 | 2-3-14 | 2-3-14 22-1-12 3-9-14 25-10-0 32-0-0 6-2-0

5x6 =

Scale = 1:75.1



BRACING-

TOP CHORD

BOT CHORD

JOINTS

			5-2-0 5-2-0	9-10-4 3-8-4		22-1-12 12-3-8			25-1		32-0-0 6-2-0	
Plate Offse	ets (X,Y)-	[5:0-4-0,0-4-8], [11:0-4-0	,0-4-8]									
LOADING TCLL TCDL	(psf) 20.0 7.0	SPACING- Plate Grip DOL Lumber DOL	2-0-0 1.25 1.25	CSI. TC BC	0.12 0.15	DEFL. Vert(LL) Vert(CT)	in 0.00 0.00	(loc) 15 15	I/defl n/r n/r	L/d 120 120	PLATES MT20	GRIP 244/190
BCLL BCDL	0.0 *	Rep Stress Incr Code FBC2020/T	YES	WB Matri	0.23	Horz(CT)	0.01	14	n/a	n/a	Weight: 270 lb	FT = 20%

LUMBER-

TOP CHORD 2x6 SP No.2 \*Except\*

1-3,13-15: 2x4 SP No.2

BOT CHORD 2x8 SP 2400F 2.0E 2x4 SP No.3 WEBS

**OTHERS** 2x4 SP No.3

REACTIONS. All bearings 32-0-0.

(lb) -Max Horz 2=-245(LC 10)

Max Uplift All uplift 100 lb or less at joint(s) 2, 21, 19, 23, 17, 14, 16, 24 except 18=-507(LC 18),

22=-507(LC 18)

All reactions 250 lb or less at joint(s) 16, 24 except 2=421(LC 1), 21=983(LC 20), 19=997(LC 21), 23=525(LC 20), 17=497(LC 21), 14=421(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. 2-4=-447/54, 4-6=-527/88, 6-7=-541/156, 9-10=-541/156, 10-12=-527/82,

TOP CHORD

12-14=-442/28

2-24=-43/350, 23-24=-43/350, 22-23=-43/350, 21-22=-43/350, 19-21=-7/418, 18-19=-4/320, 17-18=-4/320, 16-17=-4/320, 14-16=-4/320, 6-21=-328/90, 10-19=-328/85, 4-23=-426/120, 12-17=-426/120 WEBS

### NOTES-

**BOT CHORD** 

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-4-0 to 1-10-6, Exterior(2N) 1-10-6 to 16-0-0, Corner(3R) 16-0-0 to 19-2-6, Exterior(2N) 19-2-6 to 33-4-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) Ceiling dead load (5.0 psf) on member(s). 6-7, 9-10, 7-25, 9-25; Wall dead load (5.0psf) on member(s). 6-21, 10-19
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 21, 19, 23, 17, 14, 16, 24 except (jt=lb) 18=507, 22=507.
  12) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

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Joaquin Velez PE No.68182 Joaquin Velez PE No.68182 MiTek Inc. DBA MiTek USA FL Cert 6634 16023 Swingley Ridge Rd. Chesterfield, MO 63017 Date

September 6,2022

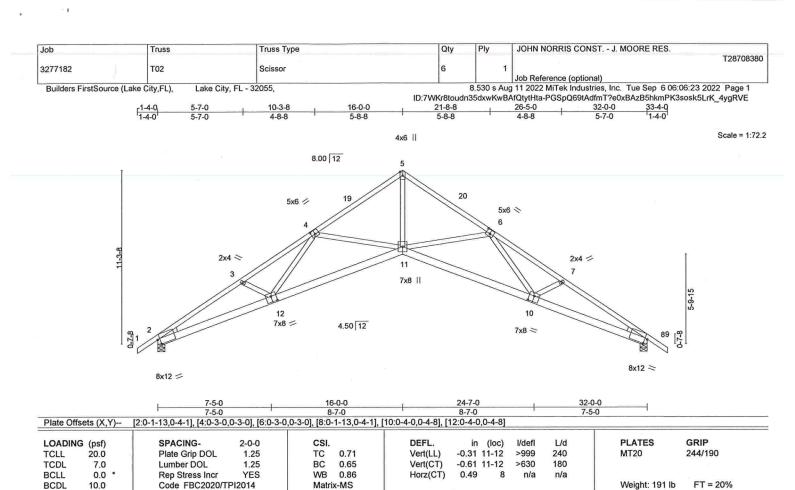


Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

1 Brace at Jt(s): 25

16023 Swingley Ridge Rd Chesterfield, MO 63017



BRACING-

TOP CHORD

**BOT CHORD** 

LUMBER-

TOP CHORD 2x4 SP No.2

**BOT CHORD** 2x6 SP No.2 \*Except\*

2-12,8-10: 2x6 SP M 26

**WEBS** 2x4 SP No.3

WEDGE

Left: 2x4 SP No.3, Right: 2x4 SP No.3

REACTIONS.

(size) 2=0-5-8, 8=0-5-8

Max Horz 2=-255(LC 10) Max Uplift 2=-261(LC 12), 8=-261(LC 13)

Max Grav 2=1256(LC 1), 8=1256(LC 1)

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

TOP CHORD 2-3=-3326/746, 3-4=-3081/695, 4-5=-2387/405, 5-6=-2387/433, 6-7=-3081/498,

7-8=-3326/537

2-12=-732/2907, 11-12=-539/2642, 10-11=-314/2618, 8-10=-380/2840 BOT CHORD WEBS

5-11=-351/2259, 6-11=-579/348, 6-10=-117/377, 4-11=-564/335, 4-12=-90/377

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-0 to 1-10-6, Interior(1) 1-10-6 to 16-0-0, Exterior(2R) 16-0-0 to 19-2-6, Interior(1) 19-2-6 to 33-4-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads
- 5) \*This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Bearing at joint(s) 2, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=261, 8=261.

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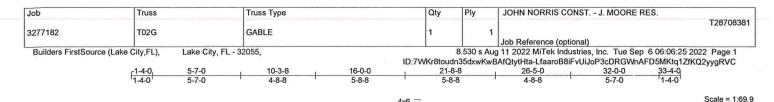
September 6,2022



Structural wood sheathing directly applied or 2-3-2 oc purlins.

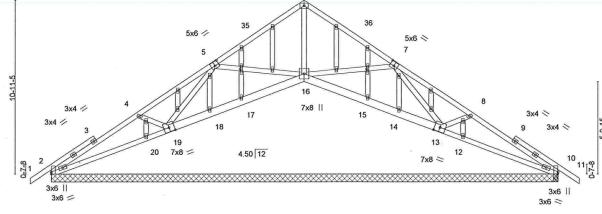
Rigid ceiling directly applied or 9-11-3 oc bracing.

16023 Swingley Ridge Rd Chesterfield, MO 63017



4x6 =

8.00 12 6 36 35 5x6 / 5x6 >



		1	7-5-	.0		16-0-0		24	-7-0			32-0-0	
		1 1	7-5-	0		8-7-0		8-	-7-0			7-5-0	
Plate Off	sets (X,Y)	[2:0-1-8,0	0-0-2], [5:0-3-0,0	-3-0], [7:0-3-0,	,0-3-0], [10:0-	1-8,0-0-2], [	13:0-4-0,0-3-4], [19	9:0-4-0,0	-3-4], [2	23:0-1-8,0	0-1-0], [31:0	-1-8,0-1-0]	
LOADING	G (psf)	SF	PACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defi	L/d	PLATES	GRIP
TCLL	20.0	PI	ate Grip DOL	1.25	TC	0.32	Vert(LL)	-0.03 1	10-12	>999	240	MT20	244/190
TCDL	7.0	Lu	imber DOL	1.25	BC	0.28	Vert(CT)	-0.06 1	10-12	>999	180		
BCLL	0.0 *	Re	ep Stress Incr	YES	WB	0.19	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Co	ode FBC2020/T	PI2014	Matri	x-S						Weight: 214 lb	FT = 20%

BRACING-

TOP CHORD

**BOT CHORD** 

LUMBER-

2x4 SP No.2 TOP CHORD

**BOT CHORD** 2x4 SP No.2 \*Except\*

16-19,13-16: 2x6 SP No.2

WEBS 2x4 SP No.3

2x4 SP No.3 **OTHERS** 

REACTIONS. All bearings 32-0-0.

Max Horz 2=-247(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 16 except 19=-272(LC 12),

13=-248(LC 13), 2=-133(LC 13), 10=-136(LC 13)

All reactions 250 lb or less at joint(s) 17, 18, 15, 14 except 19=432(LC

19), 13=411(LC 24), 16=576(LC 1), 20=265(LC 3), 12=265(LC 3), 2=316(LC 23),

10=316(LC 24), 10=315(LC 1)

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

TOP CHORD

2-4=-294/152, 8-10=-294/140 2-20=-165/316, 19-20=-168/278

BOT CHORD WEBS

6-16=-353/78, 7-13=-383/156, 8-13=-295/210, 5-19=-383/183, 4-19=-298/212

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-0 to 1-10-6, Interior(1) 1-10-6 to 16-0-0, Exterior(2R) 16-0-0 to 19-2-6, Interior(1) 19-2-6 to 33-4-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1
- 4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable 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) 16 except (jt=lb) 19=272, 13=248, 2=133, 10=136.

This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Jonquin Velez PE No.68182 MiTek Inc. DBA MITek USA FL Cert 6634 16023 Swingley Ridge Rd. Chesterfield, MO 63017

September 6,2022

MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and properly damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANS/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

16023 Swingley Ridge Ro Chesterfield, MO 63017

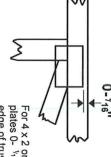
### Symbols

# PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated.

Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- <sup>1</sup>/18" from outside edge of truss.

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ec

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

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

### PLATE SIZE

4 × 4

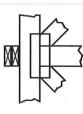
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

### BEARING



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

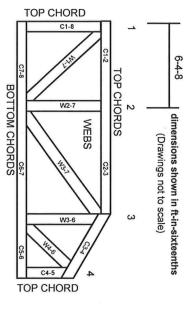
### Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction DSB-89: Design Standard for Bracing.

DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information
Guide to Good Practice for Handling,
Installing & Bracing of Metal Plate

Connected Wood Trusses

## Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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

# **General Safety Notes**

### Failure to Follow Could Cause Property Damage or Personal Injury

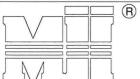
- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
- Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.
- Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing indicated on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of an engineer.
- 17. Install and load vertically unless indicated otherwise.
- Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
- Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
- Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
- 21. The design does not take into account any dynamic or other loads other than those expressly stated.

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

MII-T-BRACE 2

MiTek USA, Inc. Page 1 of 1

**Brace Size** for One-Ply Truss



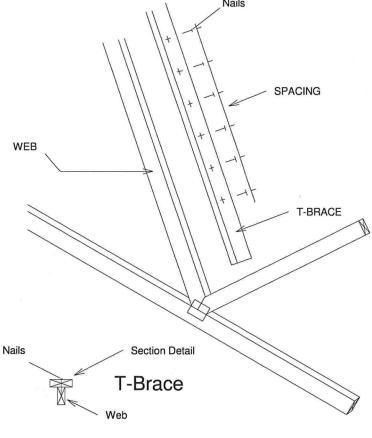
Note: T-Bracing / I-Bracing to be used when continuous lateral bracing is impractical. T-Brace / I-Brace must cover 90% of web length.

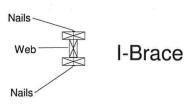
Note: This detail NOT to be used to convert T-Brace / I-Brace webs to continuous lateral braced webs.

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ENGINEERED BY  A MiTek Affiliate

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

ace size	Nail Size	Nail Spacing
or 2x6 or 2x8	10d (0.131" X 3")	6" o.c.
lote: Nail along	entire length of T-B	race / L-Brace
	o-Ply's Nail to Both I	
	N	lails
\ \		





		Brace Size for Two-Ply Truss				
	Specified Rows of La	Continuous teral 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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### SCAB-BRACE DETAIL

### MII-SCAB-BRACE

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Page 1 of 1

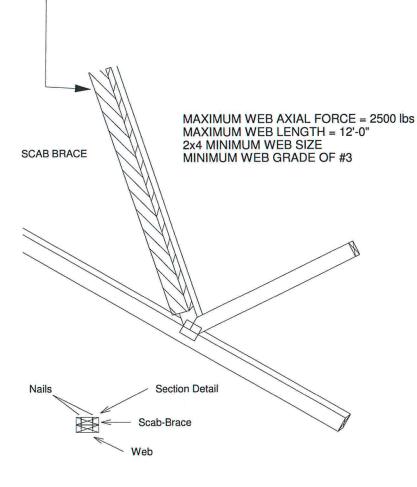


Note: Scab-Bracing to be used when continuous lateral bracing at midpoint (or T-Brace) is impractical.

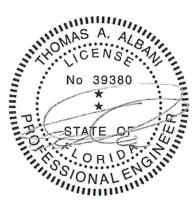
Scab must cover full length of web +/- 6".

\*\*\* THIS DETAIL IS NOT APLICABLE 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.

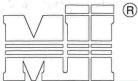


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### STANDARD REPAIR TO REMOVE END VERTICAL (RIBBON NOTCH VERTICAL)

MII-REP05

MiTek USA, Inc. Page 1 of 1



MiTek USA, Inc. ENGINEERED BY

- 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.
- THE LOADS INDICATED.

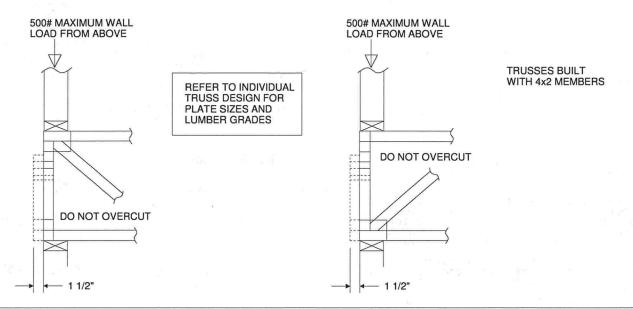
  2. ALL MEMBERS MUST BE RETURNED TO THEIR ORIGINAL POSITIONS BEFORE APPLYING REPAIR AND HELD IN PLACE DURING APPLICATION OF REPAIR.

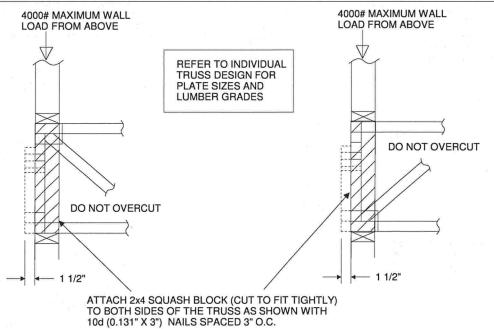
  3. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID SPLITTING OF THE WOOD.

  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.





TRUSSES BUILT WITH 4x2 MEMBERS



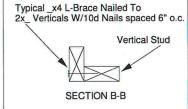
Thomas A. Albani PE No.39380 MiTek USA, Inc. FL Cert 6634 6904 Parke East Blvd. Tampa FL 33610 Date:

### Standard Gable End Detail

### MII-GE130-D-SP



DIAGONAL BRACE



TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY. Varies to Common Truss SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA \*\* 3x4 =B

Page 1 of 2 MiTek USA, Inc. Vertical Stud DIAGONAL BRACE (4) - 16d Nails 16d Nails Spaced 6" o.c. (2) - 10d Nails into 2x6 2x6 Stud or 2x4 No.2 of better Typical Horizontal Brace Nailed To 2x\_ Verticals w/(4)-10d Nails **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

24" Max

Refer to Section A-A NOTE

1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS. 2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.

- L-Bracing Refer

to Section B-B

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

- Diagonal Bracing

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)

GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240

THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
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.

NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

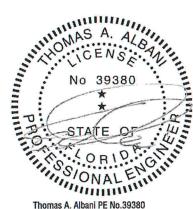
1'-3" Max.	(2) - 10d NAILS (2) - 10d NAILS
A	Trusses @ 24" o.c
Diag. Brace at 1/3 points if needed	2x6 DIAGONAL BRACE SPACED 48" O.C. ATTACHED TO VERTICAL WITH (4) -16d NAILS AND ATTACHED TO BLOCKING WITH (5) - 10d NAILS.
End Wall	HORIZONTAL BRACE (SEE SECTION A-A)
	4 P.

Minimum Stud Size Species	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
and Grade			Maximu	m Stud Le	ngth	
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

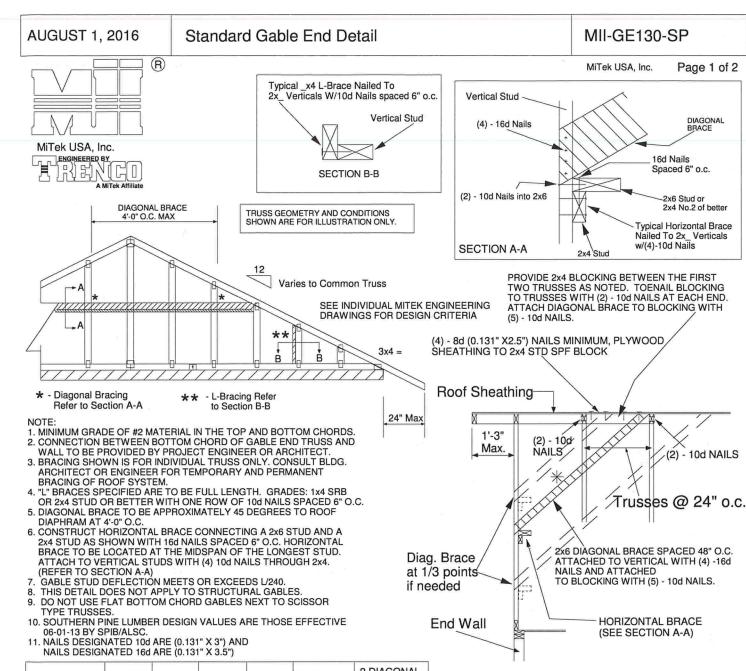
Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of diagonal brace with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

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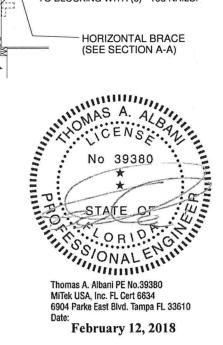
Minimum Stud Size Species	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	BRACES AT 1/3 POINTS
and Grade			Maximu	m Stud Le	ngth	
2x4 SP No. 3 / Stud	12" O.C.	4-0-7	4-5-6	6-3-8	8-0-15	12-1-6
2x4 SP No. 3 / Stud	16" O.C.	3-8-0	3-10-4	5-5-6	7-4-1	11-0-1
2x4 SP No. 3 / Stud	24" O.C.	3-0-10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



MII-GE140-001 Standard Gable End Detail **JANUARY 6, 2017** R MiTek USA, Inc. Typical \_x4 L-Brace Nailed To Verticals W/10d Nails spaced 6" o.c. Vertical Stud Vertical Stud (4) - 16d Nails MiTek USA, Inc. ENGINEERED BY Spaced 6" o.c. SECTION B-B (2) - 10d Nails into 2x6 DIAGONAL BRACE 4'-0" O.C. MAX TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY. Typical Horizontal Brace Nailed To 2x\_ Verticals w/(4)-10d Nails 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 Varies to Common Truss \* SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA (5) - 10d NAILS. \*\* (4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD DF/SPF BLOCK 3x4 =Roof Sheathing - Diagonal Bracing \*\* - L-Bracing Refer Refer to Section A-A to Section B-B 24" Max

1'-3"

Max.

Diag. Brace

at 1/3 points

**End Wall** 

if needed

- 10d

NAILS

- 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.
- "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB
- 4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GHADES: 1X4 SHB
  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) GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
- THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
  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	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
and Grade			Maximu	m Stud Le	ngth	
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.



Page 1 of 2

DIAGONAL BRACE

16d Nails

2x6 Stud or

2x4 No.2 of better

(2) - 10d NAILS

Trusses @ 24" o.c.

2x6 DIAGONAL BRACE SPACED 48" O.C.

ATTACHED TO VERTICAL WITH (4) -16d NAILS AND ATTACHED

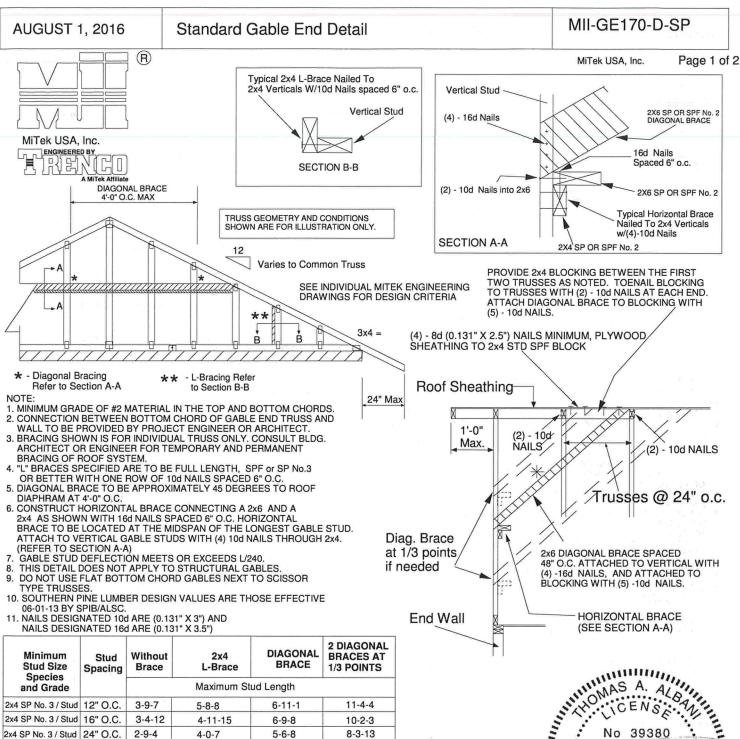
HORIZONTAL BRACE

(SEE SECTION A-A)

TO BLOCKING WITH (5) - 10d NAILS.

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January 19, 2018



and Grade		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		

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** 

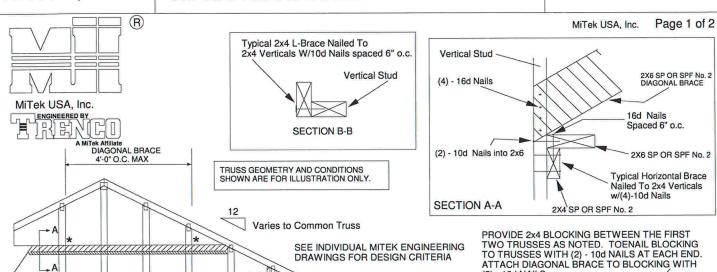
STUD DESIGN IS BASED ON COMPONENTS AND CLADDING. CONNECTION OF BRACING IS BASED ON MWFRS.



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### Standard Gable End Detail

MII-GE180-D-SP



- Diagonal Bracing Refer to Section A-A

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

\*\*

B

Roof Sheathing 24" Max

Diag. Brace

at 1/3 points

End Wall

if needed

(5) - 10d NAILS.

1'-0"

Max.

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

- 1Ó¢∤

NAILS

DRAWINGS FOR DESIGN CRITERIA

3x4 =

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 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)
GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.

THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES

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

Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 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.

No 39380

STATE OF THE STATE OF

2x6 DIAGONAL BRACE SPACED

48" O.C. ATTACHED TO VERTICAL WITH (4) -16d NAILS, AND ATTACHED TO BLOCKING WITH (5) -10d NAILS.

HORIZONTAL BRACE

(SEE SECTION A-A)

(2) - 10d NAILS

Trusses @ 24" o.c.

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

### STANDARD PIGGYBACK TRUSS CONNECTION DETAIL

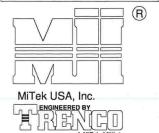
MII-PIGGY-7-10

MiTek USA, Inc. Page 1 of 1

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

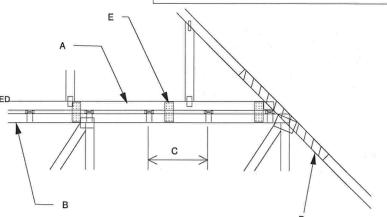


A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
SHALL BE CONNECTED TO EACH PURLIN
WITH (2) (0.131" X 3.5") TOE-NAILED.
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C.
UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING.
CONNECT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

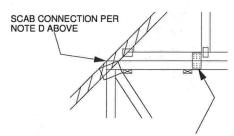
PIGGYBACK SPAN OF 12 ft.

F - 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)

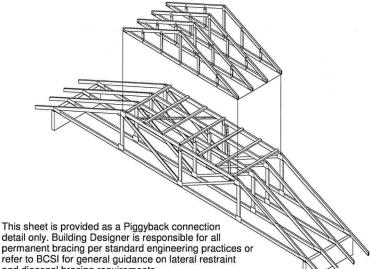


### WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

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

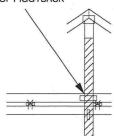


FOR ALL WIND SPEEDS, ATTACH MITEK 3X6 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48" O.C. W/ (4) (0.131" X 1.5") PER MEMBER. STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5" EDGE DISTANCE.



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:

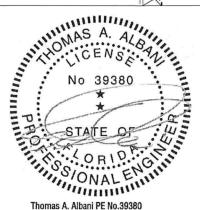
1) VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS

WENTICAL WEBS OF PIGGYBACK AND BASE TRUSS
MUST MATCH IN SIZE, GRADE, AND MUST LINE UP
AS SHOWN IN DETAIL.
ATTACH 2 x \_\_\_ 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)
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.

FOR PIGGYBACK TRUSSES CARRYING GIRDER LOADS NUMBER OF PLYS OF PIGGYBACK TRUSS TO MATCH BASE TRUSS.
CONCENTRATED LOAD MUST BE APPLIED TO BOTH

THE PIGGYBACK AND THE BASE TRUSS DESIGN.



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

### STANDARD PIGGYBACK TRUSS CONNECTION DETAIL

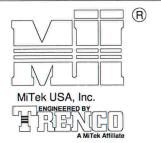
### MII-PIGGY-ALT 7-10

MiTek USA, Inc. Page 1 of 1

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** 

**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.



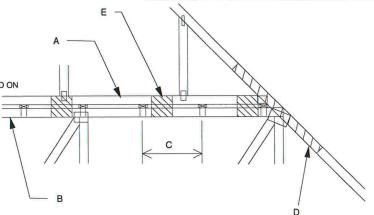
A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
SHALL BE CONNECTED TO EACH PURLIN
WITH (2) 0(0.131" X 3.5") TOE-NAILED.
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C.
UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING.
CONNECT TO BASE TRUSS WITH (2) (0.131" X 3.5") NAILS EACH.
D - 2 X \_ 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 CONTINUIOUS OVER INTERSECTION AT LEAST 1 FT. IN BOTH 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.

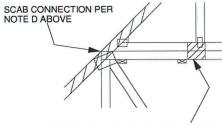
E - FOR WIND SPEED IN THE RANGE 126 MPH - 160 MPH ADD 3" x 9" x 1/2" PLYWOOD (or 7/16" OSB) GUSSET EACH SIDE AT 48" O.C. OR LESS. ATTACH WITH

3 - 6d (0.113" X 2") NAILS INTO EACH CHORD FROM EACH SIDE (TOTAL - 12 NAILS)

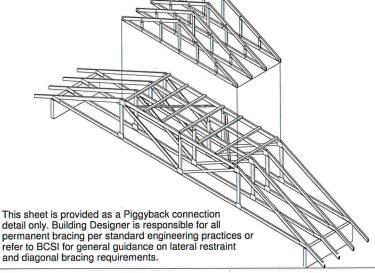


### WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

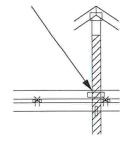
REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH PLYWOOD GUSSETS AS SHOWN, AND INSTALL PURLINS TO BOTTOM EDGE OF BASE TRUSS TOP CHORD AT SPECIFIED SPACING SHOWN ON BASE TRUSS MITEK DESIGN DRAWING.



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)



### VERTICAL WEB TO 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.
- AS SHOWN IN DETAIL.

  ATTACH 2 x \_\_\_ 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)
  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.
  FOR PIGGYBACK TRUSSES CARRYING GIRDER LOADS.
- NUMBER OF PLYS OF PIGGYBACK TRUSS TO MATCH BASE TRUSS. CONCENTRATED LOAD MUST BE APPLIED TO BOTH
- THE PIGGYBACK AND THE BASE TRUSS DESIGN.



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

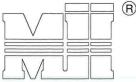
January 19, 2018

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

### MII-REP01A1

MiTek USA, Inc.

Page 1 of 1



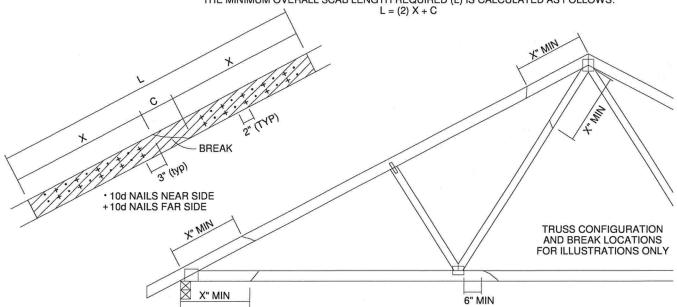
	U	
Tek USA □ ENGINEER		
RIE	M	Affiliate
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TOTAL NUMBER OF			MAXIMUM FORCE (Ibs) 15% LOAD DU							
NAILS EACH SIDE OF BREAK *	X INCHES	SP		DF		SPF		HF		
2x4	2x6	*	2x4	2x6	2x4	2x6	2x4	2x6	2x4	2x6
20	30	24"	1706	2559	1561	2342	1320	1980	1352	2028
26	39	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:



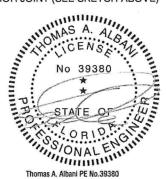
THE LOCATION OF THE BREAK MUST BE GREATER THAN OR EQUAL TO THE REQUIRED X DIMENSION FROM ANY PERIMETER BREAK OR HEEL JOINT AND A MINIMUM OF 6" FROM ANY INTERIOR JOINT (SEE SKETCH ABOVE)

### DO NOT USE REPAIR FOR JOINT SPLICES

### NOTES

- OTES:
  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.
  ALL MEMBERS MUST BE RETURNED TO THEIR ORIGINAL POSITIONS BEFORE APPLING REPAIR
  AND HELD IN PLACE DURING APPLICATION OF REPAIR.
  THE END DISTANCE, EDGE DISTANCE AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID

- UNUSUAL SPLITTING OF THE WOOD.
  WHEN NAILING THE SCABS, THE USE OF A BACKUP WEIGHT IS RECOMMENDED TO AVOID LOOSENING OF THE CONNECTOR PLATES AT THE JOINTS OR SPLICES.
  THIS REPAIR IS TO BE USED FOR SINGLE PLY TRUSSES IN THE 2x\_ ORIENTATION ONLY.
  THIS REPAIR IS LIMITED TO TRUSSES WITH NO MORE THAN THREE BROKEN MEMBERS.



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January 19, 2018

### LATERAL TOE-NAIL DETAIL

### MII-TOENAIL SP

MiTek USA, Inc.

Page 1 of 1



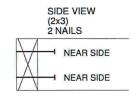
MiTek USA, Inc.

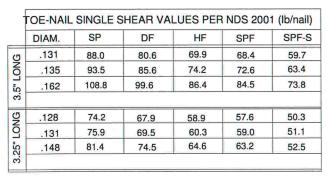
NOTES:

- 1. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 45 DEGREES WITH THE MEMBER 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



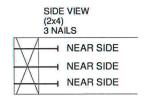


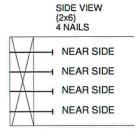
VALUES SHOWN ARE CAPACITY PER TOE-NAIL. APPLICABLE DURATION OF LOAD INCREASES MAY BE APPLIED.

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

For load duration increase of 1.15:

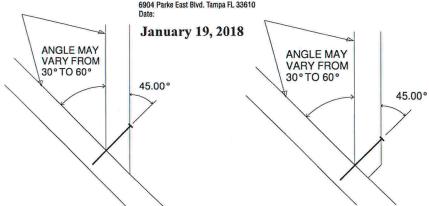
3 (nails) X 84.5 (lb/nail) X 1.15 (DOL) = 291.5 lb Maximum Capacity

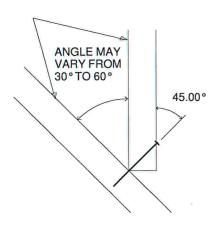






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TRUSSED VALLEY SET DETAIL MII-VALLEY HIGH WIND1 AUGUST 1, 2016 R Page 1 of 1 MiTek USA, Inc. **GENERAL SPECIFICATIONS** 1. NAIL SIZE 10d (0.131" X 3")
2. WOOD SCREW = 3" WS3 USP OR EQUIVALENT DO NOT USE DRYWALL OR DECKING TYPE SCREW
3. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND MiTek USA, Inc. ENGINEERED BY SECURE PER DETAIL A 4. BRACE VALLEY WEBS IN ACCORDANCE WITH THE GABLE END, COMMON TRUSS OR GIRDER TRUSS INDIVIDUAL DESIGN DRAWINGS. 5. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING EQUILIVANT 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. BASE TRUSSES VALLEY TRUSS TYPICAL GABLE END, COMMON TRUSS OR GIRDER TRUSS VALLEY TRUSS TYPICAL 12 SEE DETAIL A BELOW (TYP.) SECURE VALLEY TRUSS W/ ONE ROW OF 10d NAILS 6" O.C. ROOF PITCH = MINIMUM 3/12 MAXIMUM 6/12

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



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

January 19, 2018

TRUSSED VALLEY SET DETAIL MII-VALLEY HIGH WIND2 **AUGUST 1, 2016** MiTek USA, Inc. Page 1 of 1 R **GENERAL SPECIFICATIONS** 1. NAIL SIZE 10d (0.131" X 3") 2. WOOD SCREW = 4.5" WS45 USP OR EQUILIVANT 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 MiTek USA, Inc. GABLE END. COMMON TRUSS ENGINEERED BY OR GIRDER TRUSS 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. **BASE TRUSSES VALLEY TRUSS TYPICAL** GABLE END, COMMON TRUSS **VALLEY TRUSS TYPICAL** OR GIRDER TRUSS 12 P SEE DETAIL A BELOW (TYP.) 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** ATTACH 2x4 CONTINUOUS NO.2 SP WIND DURATION OF LOAD INCREASE: 1.60 TO THE ROOF W/ TWO USP WS45 (1/4" X 4.5") MAX TOP CHORD TOTAL LOAD = 50 PSF MAX SPACING = 24" O.C. (BASE AND VALLEY) MINIMUM REDUCED DEAD LOAD OF 6 PSF WOOD SCREWS INTO EACH BASE TRUSS. No 39380

STATE OF THE ON THE TRUSSES \$\frac{1}{2}\frac{1}{2

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

TRUSSED VALLEY SET DETAIL MII-VALLEY SP AUGUST 1, 2016 MiTek USA, Inc. R GENERAL SPECIFICATIONS NAIL SIZE 16d (0.131" X 3.5")
 INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE PER DETAIL A 3. BRACE VALLEY WEBS IN ACCORDANCE WITH THE MiTek USA, Inc. INDIVIDUAL DESIGN DRAWINGS. 4. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING GABLE END, COMMON TRUSS EQUILIVANT TO THE RAKE DIMENSION OF THE VALLEY TRUSS SPACING. OR GIRDER TRUSS 5. NAILING DONE PER NDS - 01 6. VALLEY STUD SPACING NOT TO EXCEED 48" O.C. 7. ALL LUMBER SPECIES TO BE SP. BASE TRUSSES VALLEY TRUSS TYPICAL GABLE END, COMMON TRUSS OR GIRDER TRUSS VALLEY TRUSS TYPICAL 12 SEE DETAIL A BELOW (TYP.) SECURE VALLEY TRUSS W/ ONE ROW OF 16d NAILS 6" O.C. WIND DESIGN PER ASCE 7-10 150 MPH MAX MEAN ROOF HEIGHT = 30 FEET ROOF PITCH = MINIMUM 3/12 MAXIMUM 10/12 ATTACH 2x4 CONTINUOUS NO.2 SP TO THE ROOF W/ TWO 16d NAILS INTO EACH BASE TRUSS. CATEGORY II BUILDING EXPOSURE C OR B WIND DURATION OF LOAD INCREASE : 1.60

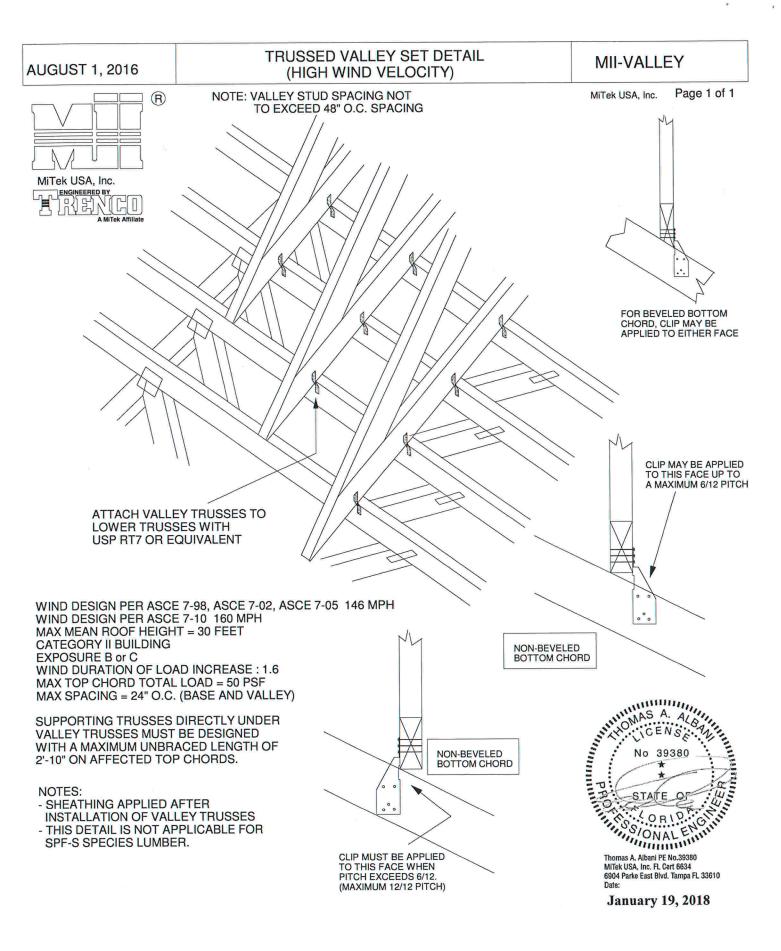
(MAXIMUM 1" SHEATHING) N.T.S.

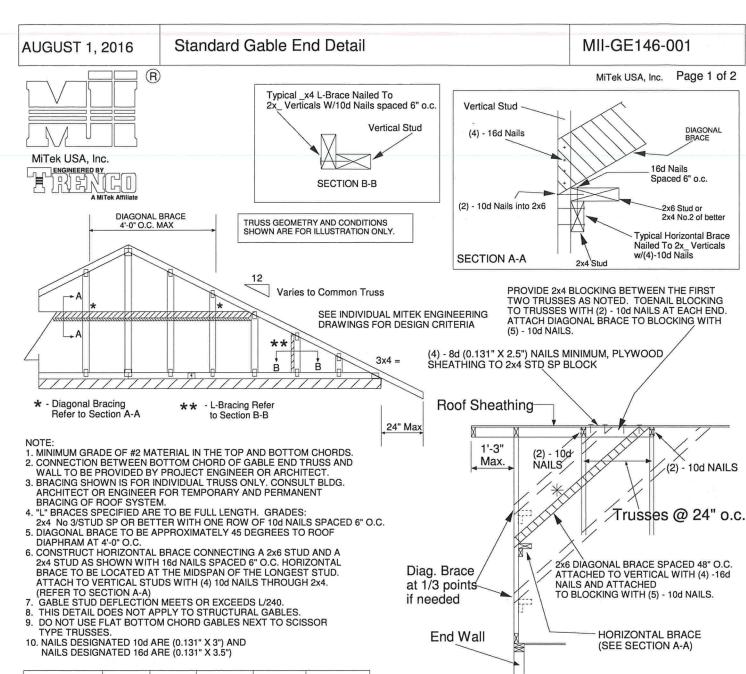
WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 120 MPH MAX TOP CHORD TOTAL LOAD = 60 PSF MAX SPACING = 24" O.C. (BASE AND VALLEY) MINIMUM REDUCED DEAD LOAD OF 4.2 PSF ON THE TRUSSES



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





Minimum Stud Size	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS			
Species and Grade		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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January 19, 2018

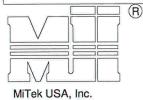
**OCTOBER 5, 2016** 

### REPLACE BROKEN OVERHANG

MII-REP13B

MiTek USA, Inc.

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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

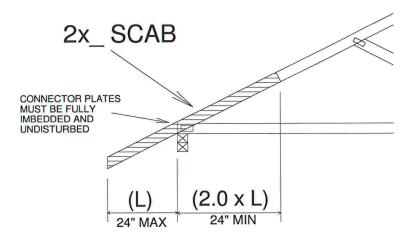
**END BEARING CONDITION** 

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.

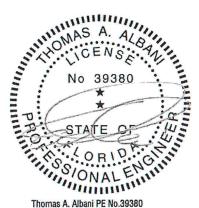


### **IMPORTANT**

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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### LATERAL BRACING RECOMMENDATIONS

MII-STRGBCK

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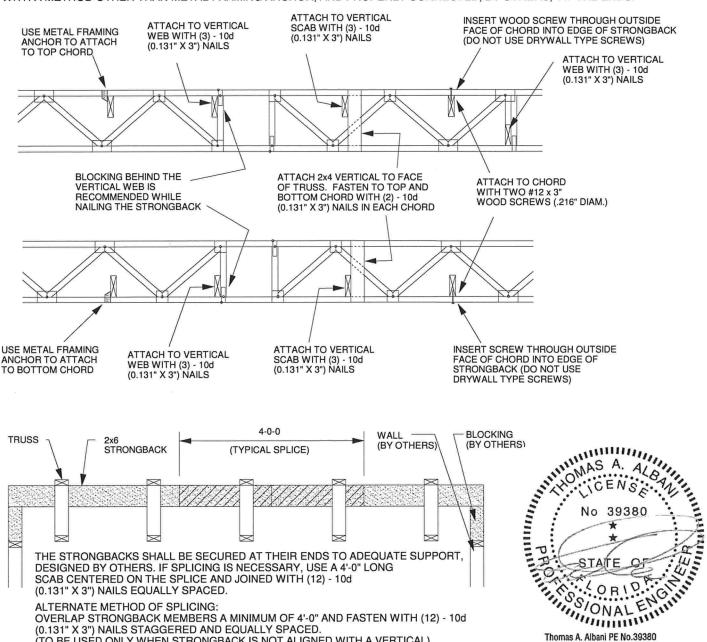
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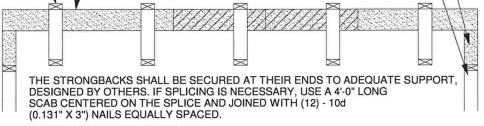


TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

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

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

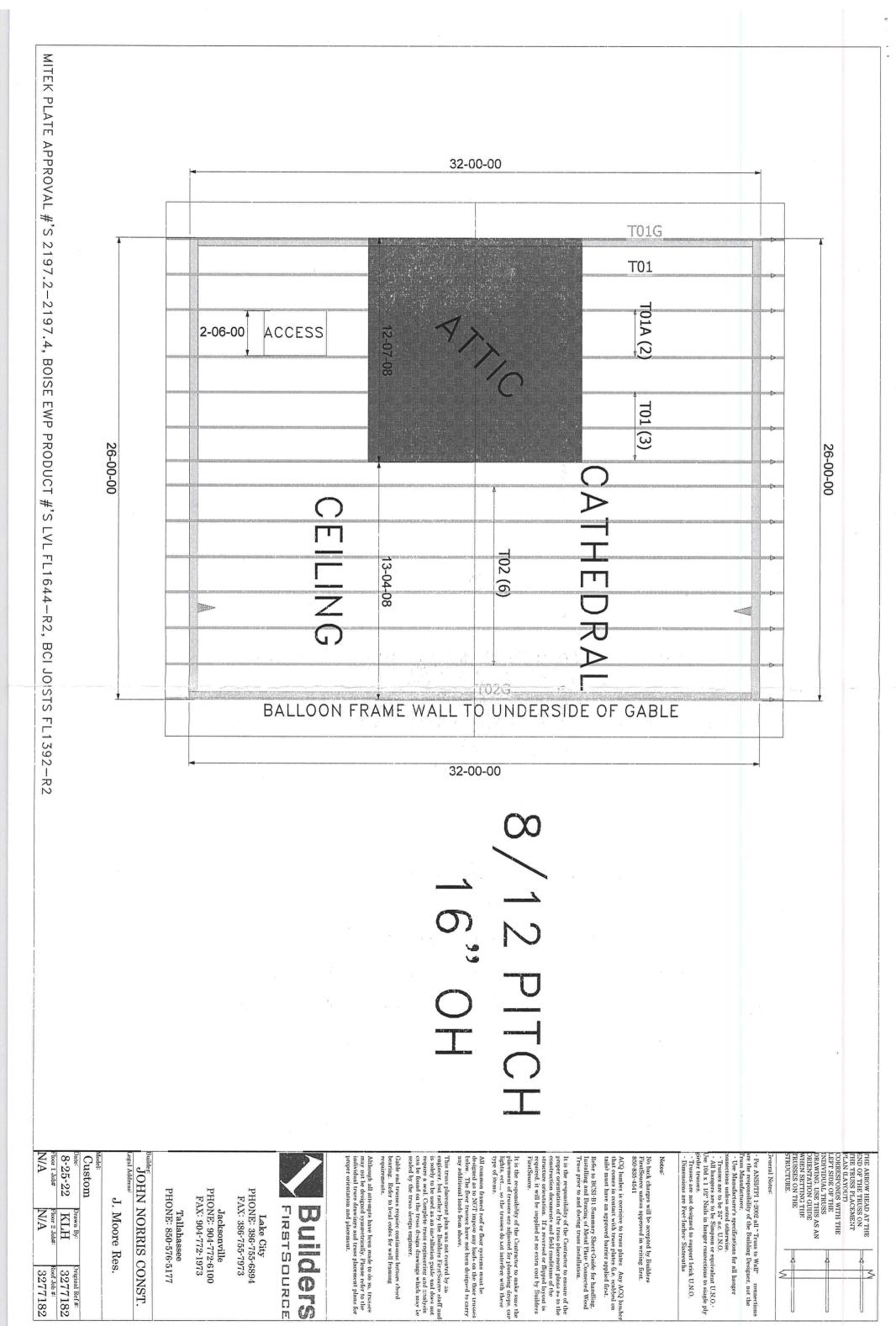




ALTERNATE METHOD OF SPLICING: OVERLAP STRONGBACK MEMBERS A MINIMUM OF 4'-0" AND FASTEN WITH (12) - 10d (0.131" X 3") NAILS STAGGERED AND EQUALLY SPACED. (TO BE USÉD ONLY WHEN STRONGBACK IS NOT ALIGNED WITH A VERTICAL)

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Original Ref #: 3277182 Roof Job #: