

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

RE: 2623617 - GIEBEIG - GARAGE 37-38 MF

MiTek USA, Inc.

6904 Parke East Blvd. Tampa, FL 33610-4115

Site Information:

Customer Info: Giebeig Const. Project Name: Garage Model: Custom

Lot/Block: 37-38 Address: TBD, TBD

City: Columbia Cty

Subdivision: Mayfair

State: FL

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

Name:

Address:

City:

State:

License #:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special

Loading Conditions):

Design Code: FBC2020/TPI2014

Wind Code: N/A Roof Load: 37.0 psf Design Program: MiTek 20/20 8.4

Wind Speed: 130 mph Floor Load: N/A psf

This package includes 2 individual, Truss Design Drawings and 0 Additional Drawings. With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No. Seal# Truss Name Date

T22667914 T01 T22667915 T01G



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

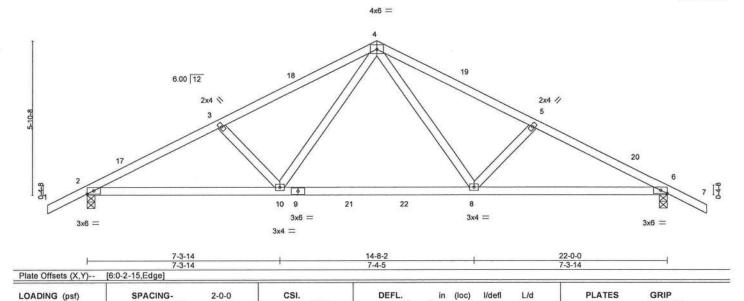
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design co des), 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 TRENC O has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.



Philip J. O'Regan PE No.58126 MiTek USA, Inc. FL Cert 6634 6904 Parke East Blvd. Tampa FL 33610 Date:

Job	Truss	Truss Type		Qty	Ply	GIEBEIG - GARAGE 37-38 MF	
					1 22		T22667914
2623617	T01	Common		11	1		
						Job Reference (optional)	
Builders FirstSource (Ja	icksonville, FL),	Jacksonville, FL - 32244,			8.430 s Nov	30 2020 MiTek Industries, Inc. Sun Jan 31 17:47:3	1 2021 Page 1
Property Co.				ID:fRijugoliQj9	glqT 5CiYo	dzq7NP-g00WgbXi11oKCDKLyKQwUp?ew44vVhOF	CJuyEEzpmFg
, -1-6-0	5-1-2	3	11-0-0		16-10-14	22-0-0	, 23-6-0
1-6-0	5-1-2	5	5-10-14		5-10-14	5-1-2	1-6-0

Scale = 1:41.3



LUMBER-

TCLL

TCDL

BCLL

BCDL

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

20.0

7.0

10.0

0.0 *

BRACING-

Vert(LL)

Vert(CT)

Horz(CT)

-0.19 8-10

-0.37 8-10

0.04

>999

>719

6 n/a

TOP CHORD **BOT CHORD** Structural wood sheathing directly applied or 3-7-11 oc purlins.

MT20

Weight: 103 lb

244/190

FT = 20%

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

240

180

n/a

REACTIONS.

(size) 2=0-3-8, 6=0-3-8 Max Horz 2=93(LC 12)

Max Uplift 2=-261(LC 12), 6=-261(LC 13)

Max Grav 2=1142(LC 2), 6=1142(LC 2)

Plate Grip DOL

Rep Stress Incr

Code FBC2020/TPI2014

Lumber DOL

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

TOP CHORD **BOT CHORD**

2-3=-1993/539, 3-4=-1842/516, 4-5=-1842/516, 5-6=-1993/538 2-10=-417/1772. 8-10=-198/1164. 6-8=-414/1749

WEBS

4-8=-192/818, 5-8=-288/185, 4-10=-192/818, 3-10=-288/185

NOTES-

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

2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior(1) 14-0-0 to 23-6-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

TC

BC

WB 0.31

Matrix-MS

0.60

0.47

- 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.

1.25

1.25

NO

- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=261, 6=261
- 7) 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

Vert: 1-4=-54, 4-7=-54, 10-11=-20, 8-10=-80(F=-60), 8-14=-20



Philip J. O'Regan PE No.58126 MiTek USA, Inc. FL Cert 6634 6904 Parke East Blvd. Tampa FL 33610 Date:

February 1,2021

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

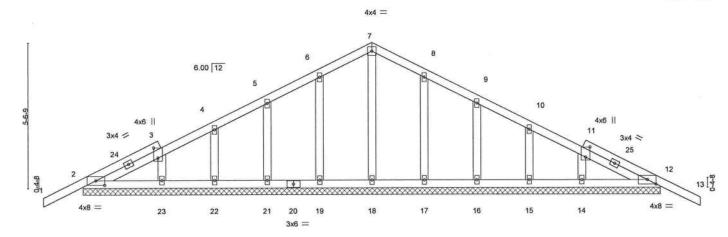
Design valid for use only with MTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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/TPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



6904 Parke East Blvd. Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	GIEBEIG - GARAGE 37-38 MF	
		8				T22667915
2623617	T01G	Common Supported Gable	2	1		
					Job Reference (optional)	
Builders FirstSour	rce (Jacksonville, FL), Jack	sonville, FL - 32244,	1	3.430 s Nov	30 2020 MiTek Industries, Inc. Sun Jan 31 17	:47:32 2021 Page 1
			ID:fRijugoliQj	9qlqT_5CiY	dzq7NP-8CautxYKoLwBqNvYW2x911Yx1UXc	IECcYqzeVmgzpmFf
, -1-6-	-0 ,	11-0-0			22-0-0	23-6-0
1-6-	0	11-0-0			11-0-0	1-6-0

Scale = 1:41.4



		10.0 4 0.0 0.41 10.0 4.40	0.001 (44.0.4	10.0.0.01.11	2010011	22-0-0						
Plate Off	sets (X,Y)	[2:0-4-0,0-2-1], [3:0-4-10	.0-2-0], [11:0-4-	10,0-2-0], [1	2:0-4-0,0-2-1							
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	0.13	Vert(LL)	-0.01	13	n/r	120	MT20	244/190
CDL	7.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	-0.01	13	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code FBC2020/T	PI2014	Matri	x-S	20.000					Weight: 120 lb	FT = 20%

22-0-0

LUMBER-

TOP CHORD 2x4 SP No.2 BOT CHORD 2x4 SP No.2 OTHERS 2x4 SP No.3 BRACING-

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

REACTIONS.

ONS. All bearings 22-0-0.

(lb) - Max Horz 2=88(LC 16)

Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 19, 21, 22, 23, 17, 16, 15, 14

Max Grav All reactions 250 lb or less at joint(s) 2, 12, 18, 19, 21, 22, 23, 17, 16, 15, 14

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

NOTES-

Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-6-0 to 1-6-0, Exterior(2N) 1-6-0 to 11-0-0, Corner(3R) 11-0-0 to 14-0-0, Exterior(2N) 14-0-0 to 23-6-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12, 19, 21, 22, 23, 17, 16, 15, 14.



Philip J. O'Regan PE No.58126 MiTek USA, Inc. FL Cert 6634 6904 Parke East Blvd. Tampa FL 33610 Date:

February 1,2021

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

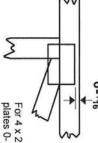


Symbols

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.

PLATE SIZE

4 × 4

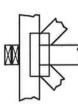
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

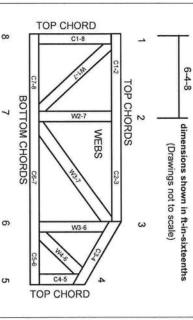
Industry Standards:

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

DSB-89: Des BCSI: Buil

Design Standard for Bracing.
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 tracing 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.

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- 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.

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- 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.
- 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.
- 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



MiTek USA, Inc.

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)

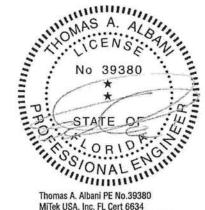
	Brace Size for One-Ply Truss					
	Specified Continuous Rows of Lateral Bracing					
Web Size	1	2				
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace				
2x6	2x6 T-Brace	2x6 I-Brace				
2x8	2x8 T-Brace	2x8 I-Brace				

Nails
SPACING
WEB + +
T-BRACE
Nails Section Detail
T-Brace Web

Nails	
Web	I-Brace
Nails	

	Brace Size for Two-Ply Truss Specified Continuous Rows of Lateral Bracing				
Web Size	1	2			
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace			
2x6	2x6 T-Brace	2x6 I-Brace			
2x8	2x8 T-Brace	2x8 I-Brace			

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



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

SCAB-BRACE DETAIL

MII-SCAB-BRACE

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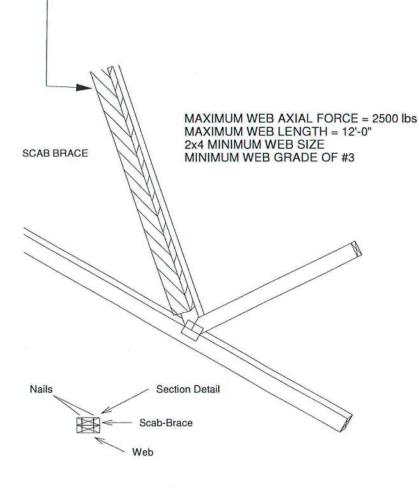
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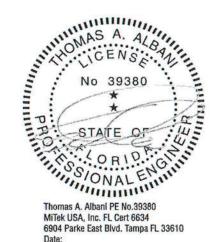
Note: Scab-Bracing to be used when continuous lateral bracing at midpoint (or T-Brace) is impractical. Scab must cover full length of web +/- 6".

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

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.

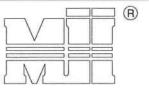


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STANDARD REPAIR TO REMOVE END VERTICAL (RIBBON NOTCH VERTICAL)

MII-REP05

MiTek USA, Inc. Page 1 of 1



MiTek USA, Inc.

ENGINEERED BY

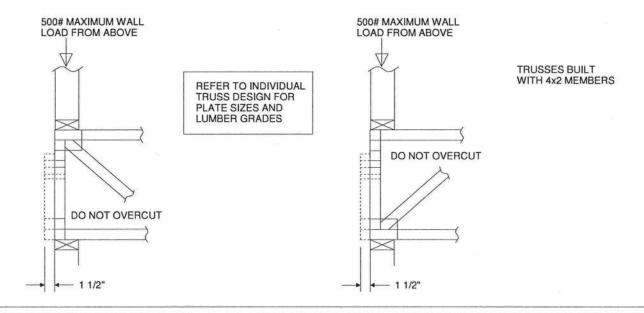
- 1. THIS IS A SPECIFIC REPAIR DETAIL TO BE USED ONLY FOR ITS ORIGINAL INTENTION, THIS REPAIR DOES NOT IMPLY THAT THE REMAINING PORTION OF THE TRUSS IS UNDAMAGED. THE ENTIRE TRUSS SHALL BE INSPECTED TO VERIFY THAT NO FURTHER REPAIRS ARE REQUIRED. WHEN THE REQUIRED REPAIRS ARE PROPERLY APPLIED, THE TRUSS WILL BE CAPABLE OF SUPPORTING THE LOADS INDICATED.
- 2. ALL MEMBERS MUST BE RETURNED TO THEIR ORIGINAL POSITIONS BEFORE APPLYING REPAIR AND HELD IN PLACE DURING APPLICATION OF REPAIR.

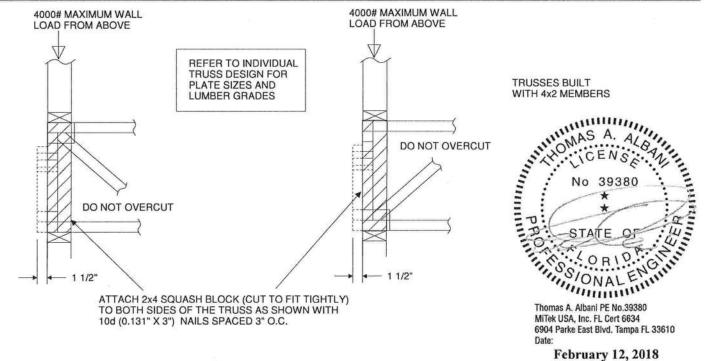
 3. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE
- SUCH AS TO AVOID SPLITTING OF THE WOOD.

 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.

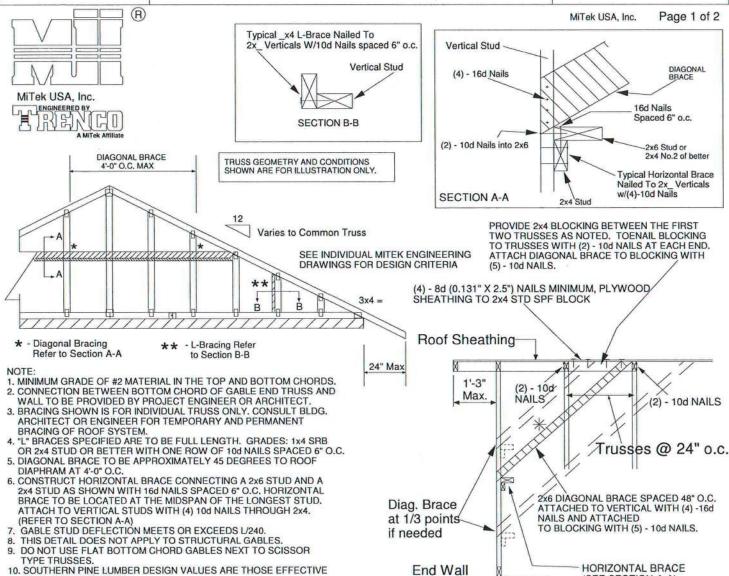
 6. CONNECTOR PLATES MUST BE FULLY IMBEDDED AND UNDISTURBED.





Standard Gable End Detail

MII-GE130-D-SP



TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFE
06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND

NAILS DESIGNATED 100 ARE (0.131" X 3") AND NAILS DESIGNATED 160 ARE (0.131" X 3.5")

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



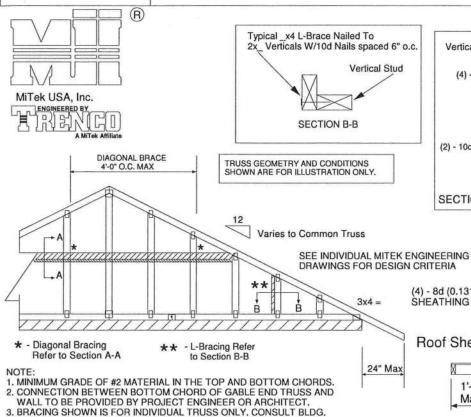
(SEE SECTION A-A)

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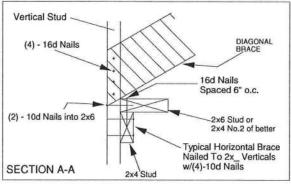
Standard Gable End Detail

MII-GE130-SP



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" X2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

Roof Sheathing

1'-3" - 10d Max. NAILS

(2) - 10d NAILS

Trusses @ 24" o.c.

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. 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.

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")

2x6 DIAGONAL BRACE SPACED 48" O.C. ATTACHED TO VERTICAL WITH (4) -16d NAILS AND ATTACHED

TO BLOCKING WITH (5) - 10d NAILS.

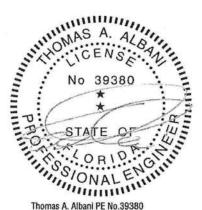
HORIZONTAL BRACE (SEE SECTION A-A)

Minimum Stud Size Species	num Stud Without 1x4 2x4 DIAGONAL BRACES A Spacing Brace L-Brace L-Brace BRACE 1/3 POINT		2 DIAGONAL 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.



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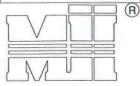
JANUARY 6, 2017

Standard Gable End Detail

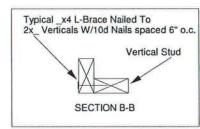
MII-GE140-001

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MiTek USA, Inc.



MiTek USA, Inc. ENGINEERED BY



TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY. Varies to Common Truss

SEE INDIVIDUAL MITEK ENGINEERING

DRAWINGS FOR DESIGN CRITERIA

3x4 =

Vertical Stud DIAGONAL (4) - 16d Nails BRACE 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.

- Diagonal Bracing Refer to Section A-A

DIAGONAL BRACE 4'-0" O.C. MAX

L-Bracing Refer to Section B-B

**

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
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 DEFLECTIÓN 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")

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

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD

SHEATHING TO 2x4 STD DF/SPF BLOCK

Doof Chaathing

Minimum Stud Size	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS		
Species and Grade		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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Standard Gable End Detail

MII-GE170-D-SP

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(2) - 10d NAILS

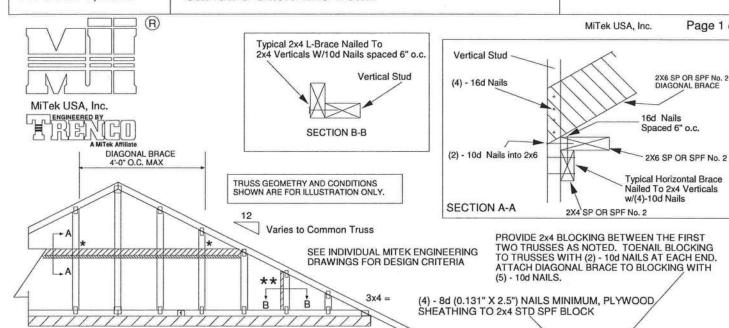
Trusses @ 24" o.c.

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)



Roof Sheathing

1'-0"

Max.

- 10d

NAILS

24" Max

Diag. Brace

at 1/3 points

End Wall

if needed

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. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND

WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT. 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, 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)

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")

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

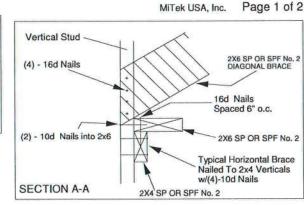
STUD DESIGN IS BASED ON COMPONENTS AND CLADDING. CONNECTION OF BRACING IS BASED ON MWFRS.



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Standard Gable End Detail

MII-GE180-D-SP



MiTek USA, Inc. ENGINEERED BY

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

R

TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

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

Varies to Common Truss

SECTION B-B

Vertical Stud

SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

24" Max

Diag. Brace

at 1/3 points

End Wall

if needed

3x4 =

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.

(2) - 10d NAILS

Trusses @ 24" o.c.

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

(2) - 10d NAILS

Roof Sheathing

1'-0"

Max.

- Diagonal Bracing

L-Bracing Refer to Section B-B

**

Refer to Section A-A

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.

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	MATERIAL TO A STATE OF THE STAT	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.



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)

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(R)

MiTek USA, Inc.

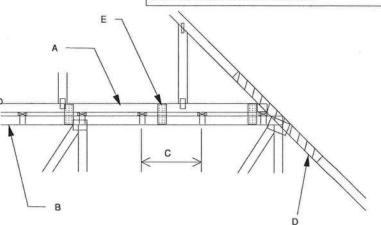
MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E MAX MEAN ROOF HEIGHT = 30 FEET MAX TRUSS SPACING = 24 " O.C. CATEGORY II BUILDING EXPOSURE B or C ASCE 7-10 **DURATION OF LOAD INCREASE: 1.60**

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

A - 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:

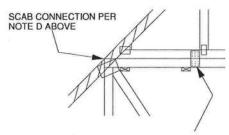
1. WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR 2. WIND SPEED OF 116 MPH TO 160 MPH WITH A MAXIMUM

PIGGYBACK SPAN OF 12 ft. 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 REO. REGARDLESS OF SPAN)

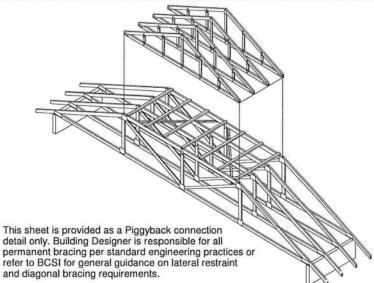


WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

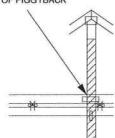
REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH Nail-On PLATES AS SHOWN, AND INSTALL PURLINS TO BOTTOM EDGE OF BASE TRUSS TOP CHORD AT SPECIFIED SPACING SHOWN ON BASE TRUSS MITEK DESIGN DRAWING.



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.



VERTICAL WEB TO EXTEND THROUGH BOTTOM CHORD OF PIGGYBACK



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

VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS MUST MATCH IN SIZE, GRADE, AND MUST LINE UP AS SHOWN IN DETAIL

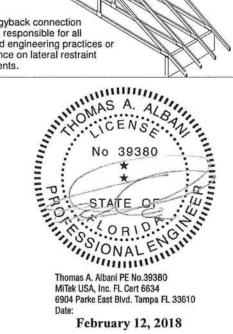
AS SHOWN IN DETAIL.

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.



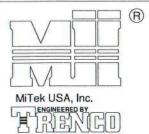
STANDARD PIGGYBACK TRUSS CONNECTION DETAIL

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 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.

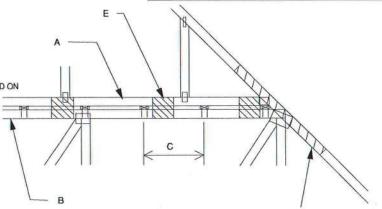


A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) 0(0.131" X.5") TOE-NAILED. B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.

- BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
- 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.
- 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

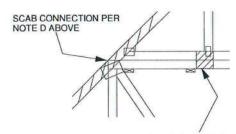
1. WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR 2. WIND SPEED OF 116 MPH TO 160 MPH WITH A MAXIMUM PIGGYBACK SPAN OF 12 ft. E - FOR WIND SPEED IN THE RANGE 126 MPH - 160 MPH

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:

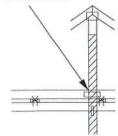
REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH PLYWOOD GUSSETS AS SHOWN, AND INSTALL PURLINS TO BOTTOM EDGE OF BASE TRUSS TOP CHORD AT SPECIFIED SPACING SHOWN ON BASE TRUSS MITEK DESIGN DRAWING.



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.

ATTACH 2 × _ x 4*-0" SCAB TO EACH FACE OF
TRUSS ASSEMBLY WITH 2 ROWS OF 10d (0.131" X 3") NAILS
SPACED 4" O.C. FROM EACH FACE. (SIZE AND GRADE TO MATCH
VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS.)

(MINIMUM 2X4)
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.



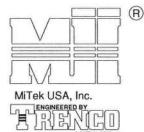
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STANDARD REPAIR DETAIL FOR BROKEN CHORDS, WEBS AND DAMAGED OR MISSING CHORD SPLICE PLATES

MII-REP01A1

MiTek USA, Inc.

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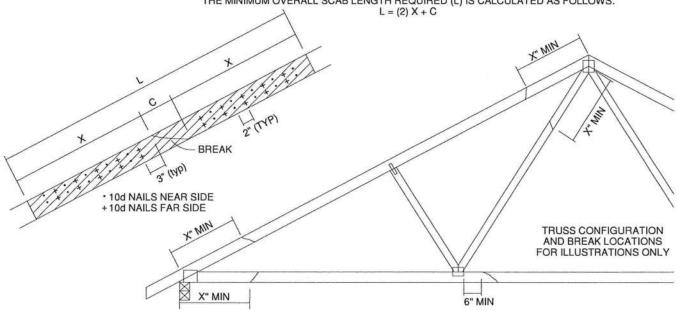


TOTAL NUMBER OF NAILS EACH SIDE OF BREAK *				MAX	IMUM FO	RCE (lbs)	15% LOA	D DURAT	ION	
		X INCHES	SP		DF		SPF		HF	
2x4	2x6		2x4	2x6	2x4	2x6	2x4	2x6	2x4	2x6
20	30	24"	1706	2559	1561	2342	1320	1980	1352	2028
26	39	30"	2194	3291	2007	3011	1697	2546	1738	2608
32	48	36"	2681	4022	2454	3681	2074	3111	2125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

- 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 APPLING REPAIR
- ALL MEMBERS MUST BE RETURNED TO THEIR ORIGINAL POSITIONS BEFORE APPLING HEPA 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.

 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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LATERAL TOE-NAIL DETAIL

MII-TOENAIL SP

MiTek USA, Inc.

Page 1 of 1



MiTek USA, Inc.

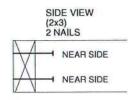
ENGINEERED BY

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



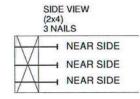
	DIAM.	SP	DF	HF	SPF	SPF-S
O	.131	88.0	80.6	69.9	68.4	59.7
LONG	.135	93.5	85.6	74.2	72.6	63.4
3.5" L	.162	108.8	99.6	86.4	84.5	73.8
3.25" LONG	.128	74.2	67.9	58.9	57.6	50.3
	.131	75.9	69.5	60.3	59.0	51.1
	.148	81.4	74.5	64.6	63.2	52.5

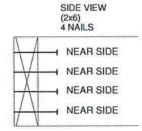
VALUES SHOWN ARE CAPACITY PER TOE-NAIL. APPLICABLE DURATION OF LOAD INCREASES MAY BE APPLIED.

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

For load duration increase of 1.15:

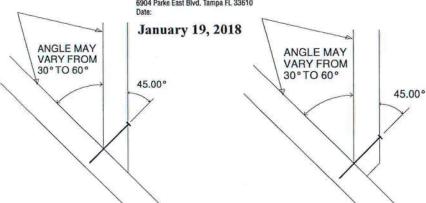
3 (nails) X 84.5 (lb/nail) X 1.15 (DOL) = 291.5 lb Maximum Capacity

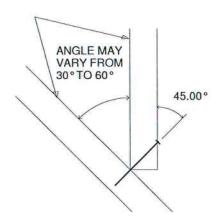






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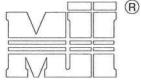


TRUSSED VALLEY SET DETAIL

MII-VALLEY HIGH WIND1

MiTek USA, Inc.

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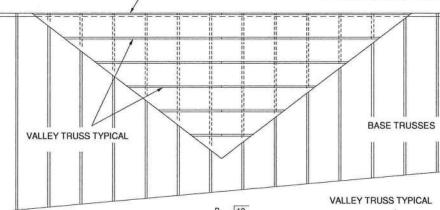
MiTek USA, Inc.

ENGINEERED BY

GABLE END, COMMON TRUSS OR GIRDER TRUSS

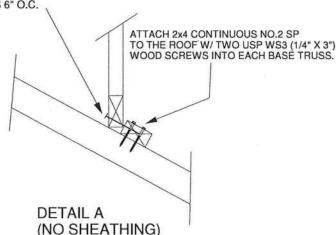
GENERAL SPECIFICATIONS

- 1. NAIL SIZE 10d (0.131" X 3")
 2. WOOD SCREW = 3" WS3 USP OR EQUIVALENT DO NOT USE DRYWALL OR DECKING TYPE SCREW
- 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 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.



GABLE END, COMMON TRUSS 12 OR GIRDER TRUSS P SEE DETAIL A BELOW (TYP.)

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



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

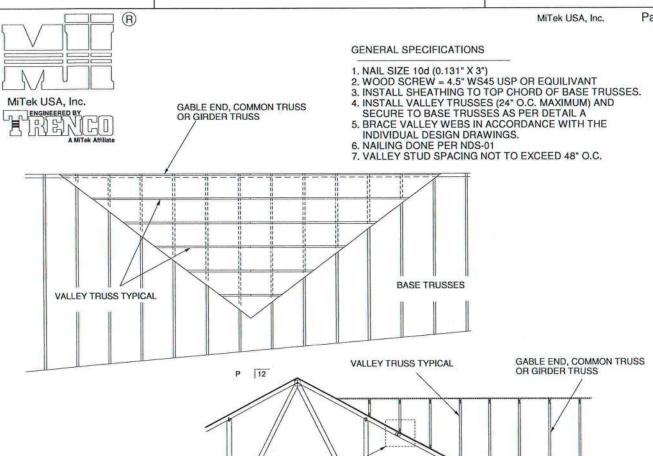


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TRUSSED VALLEY SET DETAIL

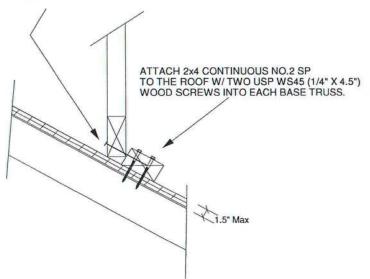
MII-VALLEY HIGH WIND2

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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 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:

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N.T.S.

ENGINEERED BY

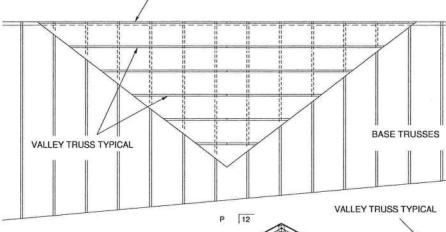
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MiTek USA, Inc.

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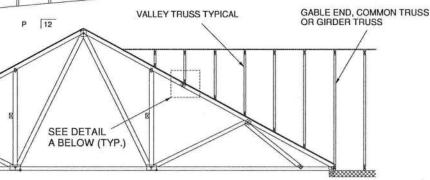
GENERAL SPECIFICATIONS

- NAIL SIZE 16d (0.131" X 3.5")
 INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE PER DETAIL A
- BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS
- 4. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING EQUILIVANT 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.



GABLE END, COMMON TRUSS

OR GIRDER TRUSS



SECURE VALLEY TRUSS W/ ONE ROW OF 16d NAILS 6" O.C. ATTACH 2x4 CONTINUOUS NO.2 SP TO THE ROOF W/TWO 16d NAILS INTO EACH BASE TRUSS. **DETAIL A** (MAXIMUM 1" SHEATHING)

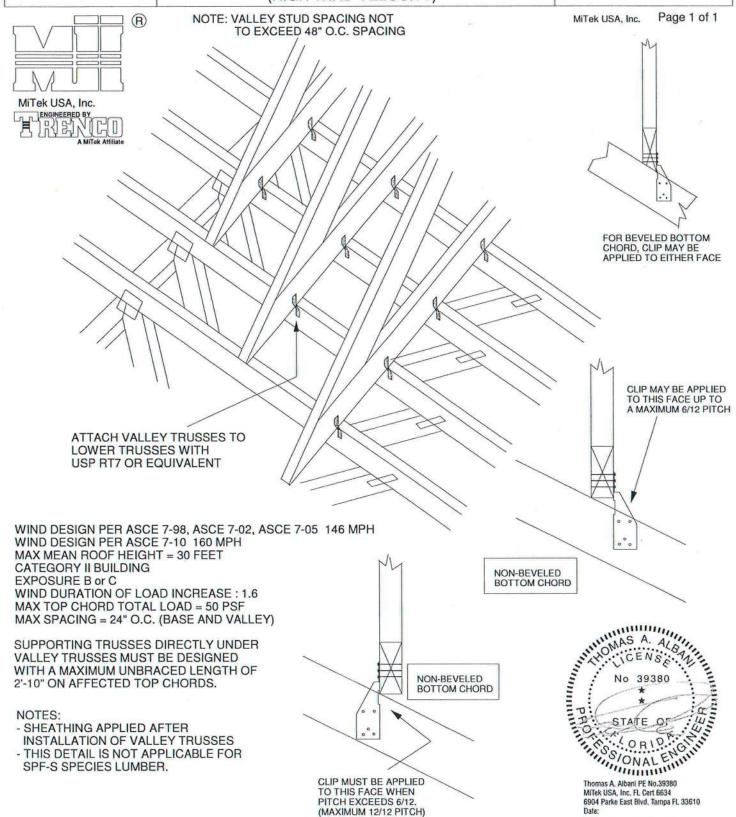
WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 120 MPH WIND DESIGN PER ASCE 7-10 150 MPH MAX MEAN ROOF HEIGHT = 30 FEET ROOF PITCH = MINIMUM 3/12 MAXIMUM 10/12 CATEGORY II BUILDING EXPOSURE C OR B WIND DURATION OF LOAD INCREASE: 1.60 MAX TOP CHORD TOTAL LOAD = 60 PSF MAX SPACING = 24" O.C. (BASE AND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



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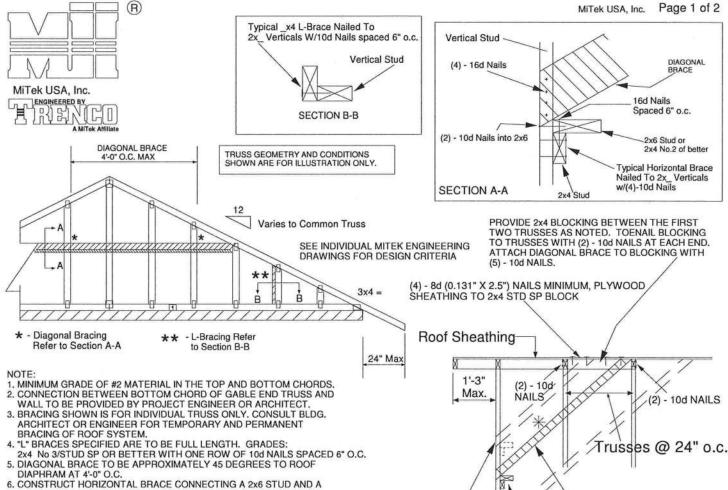
TRUSSED VALLEY SET DETAIL (HIGH WIND VELOCITY)

MII-VALLEY



Standard Gable End Detail

MII-GE146-001



Diag. Brace

at 1/3 points

End Wall

if needed

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.

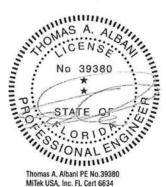
10. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

Minimum Stud Size Species	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS		
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.



2x6 DIAGONAL BRACE SPACED 48" O.C.

ATTACHED TO VERTICAL WITH (4) -16d

HORIZONTAL BRACE

(SEE SECTION A-A)

TO BLOCKING WITH (5) - 10d NAILS.

NAILS AND ATTACHED

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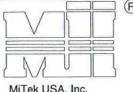
OCTOBER 5, 2016

REPLACE BROKEN OVERHANG

MII-REP13B

MiTek USA, Inc.

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MiTek USA, Inc. ENGINEERED BY 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

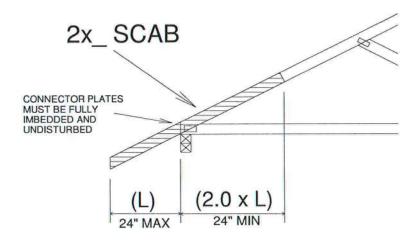
NOTES:

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.

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

MiTek USA, Inc.

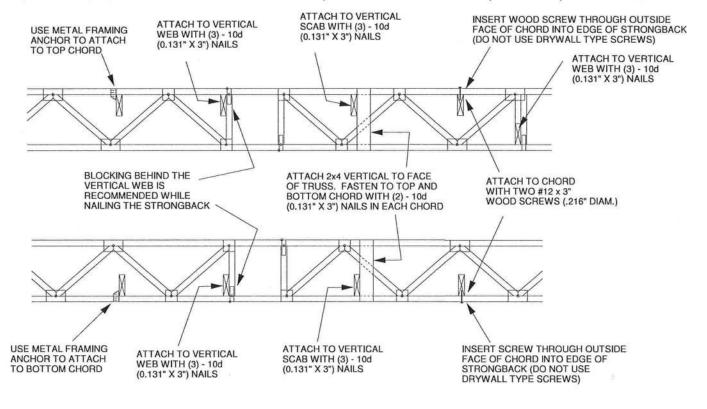
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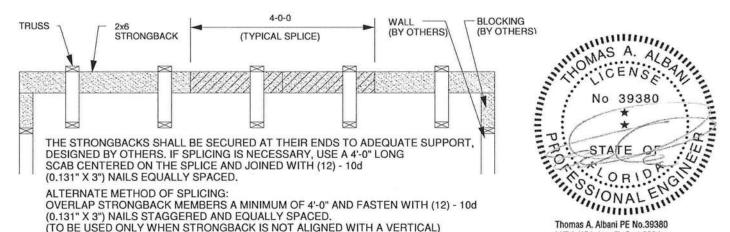


TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

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.

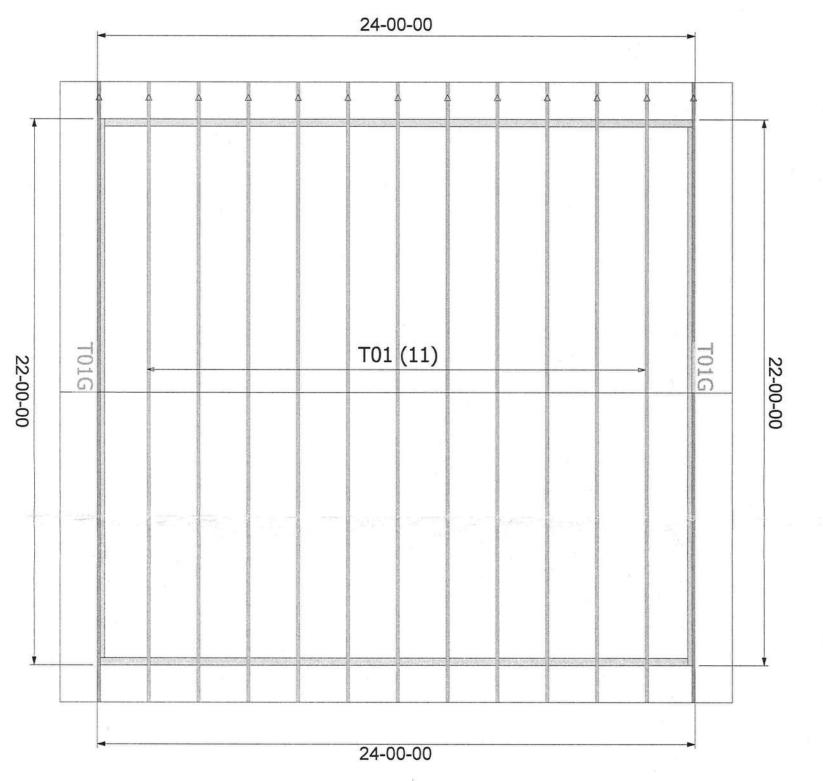




MiTek USA, Inc. FL Cert 6634 6904 Parke East Blvd. Tampa FL 33610 Date:

ite:

6/12 PITCH - 18" 0/H



THE ARROW HEAD AT THE END OF THE TRUSS ON THE TRUSS PLACEMENT PLAN (LAYOUT)
PLAN (LAYO

3

eral Notes:

Per ANSI/IPI 1-2002 all "Truss to Wall" connections are the responsibility of the Building Designer, not the Fruss Manufacturer.

Use Manufacturer's specifications for all hanger connections unless noted otherwise.

Trusses are to be 24° o.c. U.N.O.

All hangers are to be 25mpson or equivalent U.N.O.

Use 10d x 1 1/2" Nails in hanger connections to single ply

irder trusses.

Trusses are not designed to support brick U.N.O.

Dimensions are Feet Inches Sixteenths

No back charges will be accepted by Builders FirstSource unless approved in writing first. 850-835-4541

ACQ lumber is corrisive to truss plates. Any ACQ lumb that comes in contact with truss plates (i.e. scabbed on tails) must have an approved barrier applied first.

Refer to BCSI-B1 Summary Sheet-Guide for handling. Installing and Bracing of Metal Plate Connected Wood Truss prior to and during truss installation.

It is the responsibility of the Contractor to ensure of the proper orientation of the truss placement plans as to the construction documents and field conditions of the structure orientation. If a reversed or flipped layout is required, it will be supplied at no extra cost by Builders FirstSource.

It is the responsibility of the Contractor to make sure the placement of trusses are adjusted for plumbing drops, can lights, ect..., so the trusses do not interfere with these

All common framed roof or floor systems must be designed as to NOT impose any loads on the floor trusses below. The floor trusses have not been designed to carry any additional loads from above.

This truss placement plan was not created by an engineer, but rather by the Builders FirstSource staff and its solely to be used as an installation guide and does not require a seal. Complete truss engineering and analysis can be found on the truss design drawings which may be sealed by the truss design engineer.

Gable end trusses require continuous bottom chord bearing. Refer to local codes for wall framing

Although all attempts have been made to do so, trusses may not be designed symmetrically. Please refer to the individual truss drawings and truss placement plans for proper orientation and placement.

FIRSTSOURCE Builders

Lake City

PHONE: 386-755-6894 FAX: 386-755-7973

Jacksonville PHONE: 904-772-6100 FAX: 904-772-1973

Tallahassee

PHONE: 850-576-5177

GIEBEIG CONST.

Lot 37-38 MF Garage

1 - 30 - 21KLH
Floor 2 Job#:
N/A 2623617 Roof Job #: 2623617 riginal Ref#: