JULIUS LEE PE.

RE 517536 - RONALD CLARK CONST - GARAGE ADDITION

1109 COASTAL BAY BLVD,
BOYNTON BEACH, FL 33435

Site Information:
Project Customer RONADL CLARK CONST Project Name 517536 Model Krychl Addition
Lot/Block Subdivision
Address 20403 NW 113th Way
City Alachua State FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name RONALD W CLARK License # CRC1326560
Address 15816 NW CR 1491
City ALACHUA State FL

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code FBC2010/TPI2007 Design Program: MiTek 20/20 7 3
Wind Code: ASCE 7-10 Wind Speed 130 mph Floor Load: N/A psf
Roof Load. 32 0 psf

This package includes 1 individual, dated 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
This document processed per section 16G15-23 003 of the Florida Board of Professionals Rules

In the event of changes from Builder or E.O.R. additional coversheets and drawings may accompany this coversheet. The latest approval dates supersede and replace the previous drawings.

No	Seal#	Truss Name	Date
1	I7210868	T01	9/5/013

COLUMBIA COUNTY BUILDING DEPARTMENT
Received
for
FILE COPY
Code
Compliance
PLANS EXAMINER

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

Truss Design Engineer's Name Julius Lee

My license renewal date for the state of Florida is February 28, 2015

NOTE: The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI-1 Chapter 2

JULIUS S.K. LEE
LICENSE
No 34869
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

September 5,2013

Julius Lee

Job	Truss	Truss Type	Qty	Ply	RONALD CLARK CONST GARAGE ADDITION	I7210868
517536	T01	Common Truss	13	1	Job Reference (optional)	

Builders FirstSource Lake City FL 32055

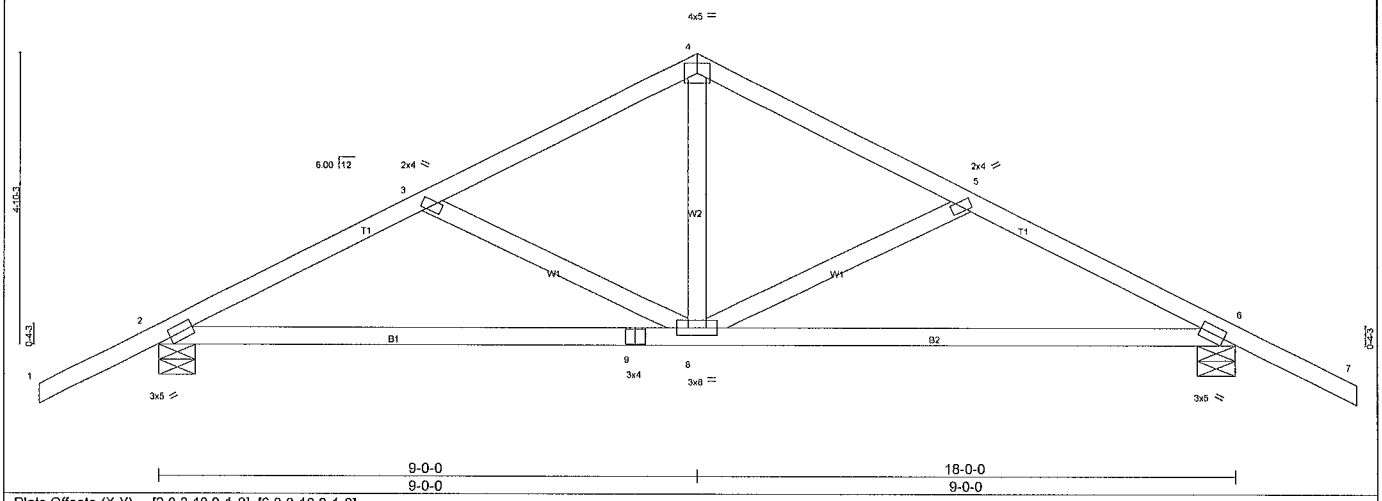
7 350 s Sep 27 2012 MiTek Industries, Inc. Thu Sep 05 10.55.50 2013 Page 1

ID XTc08pmKY__hmuLirEGGyvzcO9Z-n3Eh0Y91aOAs1IweXaudpx2aBoVKpV8h_xsGhqygiLt

2-0-0 4-7 1 9-0-0 13-4-15 18-0-0 20-0-0

2-0-0 4-7 1 4-4-15 4-4-15 4-7 1 2-0-0

Scale = 1:36.2



9-0-0 18-0-0

9-0-0 9-0-0

Plate Offsets (X,Y). [2.0-2-10,0-1-8], [6 0-2-10,0-1-8]

LOADING (psf)	SPACING 2-0-0	CSI	DEFL in (loc) l/defl L/d	PLATES GRIP
TCLL 20 0	Plates Increase 1.25	TC 0 32	Vert(LL) -0 08 8-12 >999 240	MT20 244/190
TCDL 7 0	Lumber Increase 1 25	BC 0.48	Vert(TL) -0 15 8-12 >999 180	
BCLL 0 0 *	Rep Stress Incr YES	WB 0 15	Horz(TL) 0 03 6 n/a n/a	
BCDL 5 0	Code FBC2010/TPI2007	(Matrix-M)		Weight. 84 lb FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-7 oc purlins
BOT CHORD Rigid ceiling directly applied or 9-0-6 oc bracing

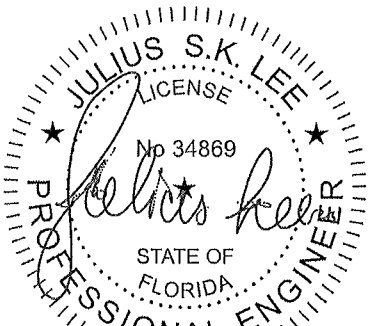
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS (lb/size) 2=574/0-7 10 (min 0-1-8) 6=574/0-7 10 (min 0-1-8)
Max Horz 2=116(LC 12)
Max Uplift2=-318(LC 12) 6=-318(LC 13)
Max Grav 2=684(LC 2), 6=684(LC 2)

FORCES (lb) Max. Comp./Max Ten All forces 250 (lb) or less except when shown
TOP CHORD 2-3=-990/606, 3-4=-727/449 4-5=-727/448, 5-6=-990/606
BOT CHORD 2-9=-416/843, 8-9=-416/843, 6-8=-423/846
WEBS 4-8=-194/354 5-8=-308/288, 3-8=-308/288

NOTES (8-10)
1) Unbalanced roof live loads have been considered for this design
2) Wind ASCE 7 10 Vult=130mph (3-second gust) Vasd=101mph TCDL=4 2psf BCDL=3 0psf h=18ft, Cat. II Exp C Encl GCpi=0 18 MWFRS (envelope) gable end zone and C-C Exterior(2) zone C-C for members and forces & MWFRS for reactions shown Lumber DOL=1 60 plate grip DOL=1 60
3) This truss has been designed for a 10 0 psf bottom chord live load nonconcurrent with any other live loads
4) * This truss has been designed for a live load of 20 0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 318 lb uplift at joint 2 and 318 lb uplift at joint 6
7) Semi-rigid pitchbreaks including heels' Member end fixity model was used in the analysis and design of this truss.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code
9) Note Visually graded lumber designation SPp represents new lumber design values as per SPIB
10) Truss Design Engineer Julius Lee PE Florida P E License No 34869 Address. 1109 Coastal Bay Blvd Boynton Beach FL 33435

LOAD CASE(S) Standard



September 5,2013

WARNING *Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 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 Applicability of design paramenters and proper incorporation of component is responsibility of building designer not truss designer Bracing shown is for lateral support of individual web members only Additional temporary bracing to insure stability during construction is the responsibility of the erector Additional permanent bracing of the overall structure is the responsibility of the building designer For general guidance regarding fabrication quality control, storage delivery erection and bracing, consult **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI1 Building Component Safety Information** available from Truss Plate Institute, 583 D'Onofrio Drive Madison, WI 53719

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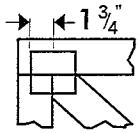
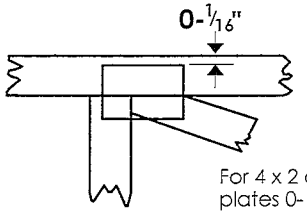
Symbols

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

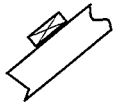
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

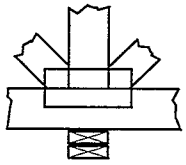
The first dimension is the plate width measured perpendicular to slots Second dimension is the length parallel to slots

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output Use T 1 or Eliminator bracing if indicated

BEARING

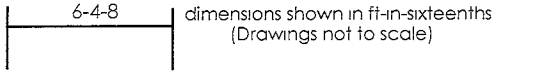


Indicates location where bearings (supports) occur Icons vary but reaction section indicates joint number where bearings occur

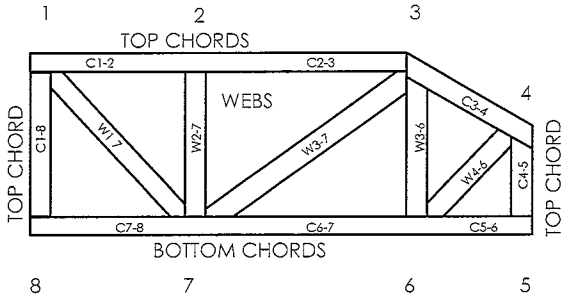
Industry Standards:

ANSI/TPI1 National Design Specification for Metal Plate Connected Wood Truss Construction
DSB-89 Design Standard for Bracing
BCSI1 Building Component Safety Information Guide to Good Practice for Handling Installing & Bracing of Metal Plate Connected Wood Trusses

Numbering System



dimensions shown in ft-in-sixteenths
(Drawings not to scale)



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports

ESR-1311 ESR-1352, ER-5243 9604B
9730 95-43 96-31 9667A
NER-487 NER-561
95110 84-32, 96-67 ER-3907 9432A

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Boynton Beach ,FL 33435

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1 Additional stability bracing for truss system e.g diagonal or X-bracing is always required See BCSI1

2 Truss bracing must be designed by an engineer For wide truss spacing individual lateral braces themselves may require bracing or alternative T 1, or Eliminator bracing should be considered

3 Never exceed the design loading shown and never stack materials on inadequately braced trusses

4 Provide copies of this truss design to the building designer erection supervisor property owner and all other interested parties

5 Cut members to bear tightly against each other

6 Place plates on each face of truss at each joint and embed fully Knots and wane at joint locations are regulated by ANSI/TPI 1

7 Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1

8 Unless otherwise noted moisture content of lumber shall not exceed 19% at time of fabrication

9 Unless expressly noted this design is not applicable for use with fire retardant preservative treated or green lumber

10 Camber is a non-structural consideration and is the responsibility of truss fabricator General practice is to camber for dead load deflection

11 Plate type size orientation and location dimensions indicated are minimum plating requirements

12 Lumber used shall be of the species and size and in all respects equal to or better than that specified

13 Top chords must be sheathed or purlins provided at spacing indicated on design

14 Bottom chords require lateral bracing at 10 ft spacing, or less, if no ceiling is installed unless otherwise noted

15 Connections not shown are the responsibility of others

16 Do not cut or alter truss member or plate without prior approval of an engineer

17 Install and load vertically unless indicated otherwise

18 Use of green or treated lumber may pose unacceptable environmental health or performance risks. Consult with project engineer before use

19 Review all portions of this design (front back, words and pictures) before use Reviewing pictures alone is not sufficient

20 Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria

August 10, 2010	T-BRACE / I-BRACE DETAIL WITH 2X BRACE ONLY	ST - T-BRACE 2

MiTek Industries, 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.

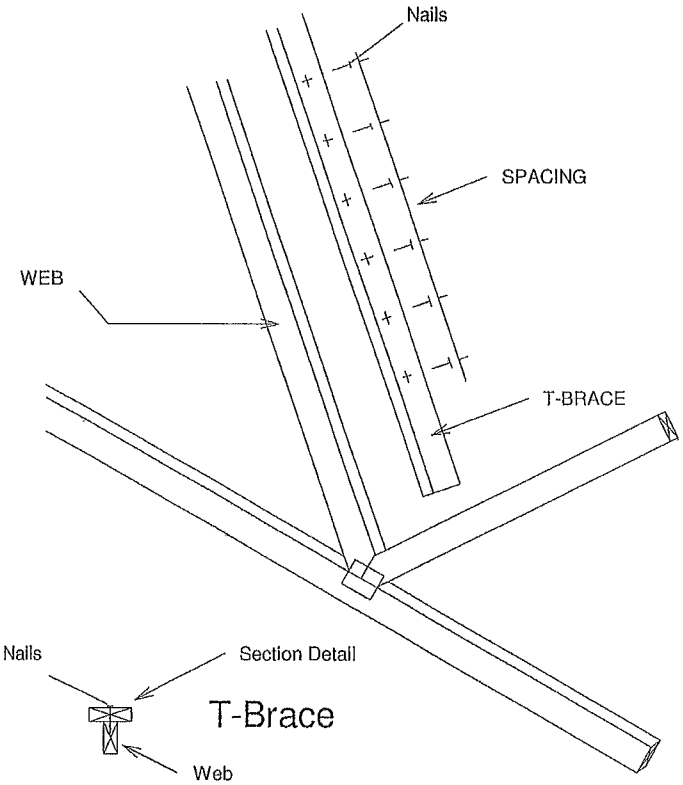
Note: This detail NOT to be used to convert T-Brace / I-Brace webs to continuous lateral braced webs

Nailing Pattern		
T-Brace size	Nail Size	Nail Spacing
2x4 or 2x6 or 2x8	10d	6" o.c.
Note. Nail along entire length of T-Brace / I-Brace (On Two-Ply's Nail to Both Plies)		

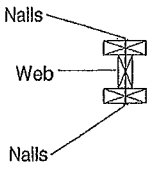
	Brace Size for One-Ply Truss	
	Specified Continuous Rows of Lateral Bracing	
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

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

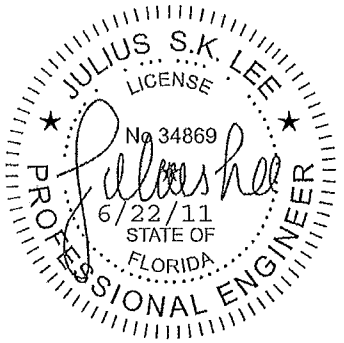
T-Brace / I-Brace must be same species and grade (or better) as web member



T-Brace



I-Brace



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JANUARY 1, 2009	LATERAL TOE-NAIL DETAIL	ST-TOENAIL_SP

MiTek Industries, Inc

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

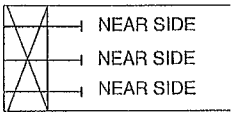
	TOE-NAIL SINGLE SHEAR VALUES PER NDS 2001 (lb/nail)					
	DIAM	SYP	DF	HF	SPF	SPF-S
3.5" LONG	131	88 0	80 6	69.9	68 4	59 7
	135	93 5	85 6	74 2	72.6	63 4
	162	108.8	99 6	86 4	84 5	73 8
3.25" LONG	128	74 2	67.9	58.9	57 6	50 3
	.131	75 9	69 5	60.3	59 0	51 1
	148	81 4	74 5	64.6	63.2	52 5

THIS DETAIL APPLICABLE TO THE THREE END DETAILS SHOWN BELOW

VIEWS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY

SIDE VIEW

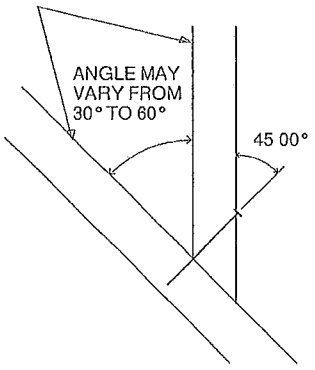
3 NAILS

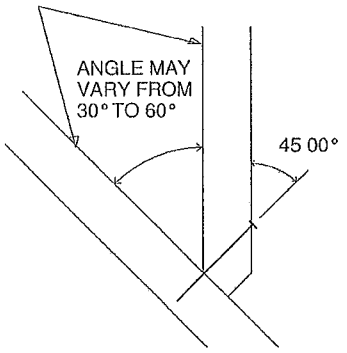


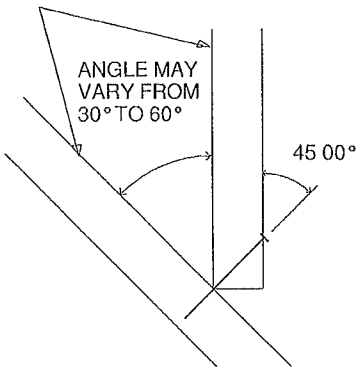
VALUES SHOWN ARE CAPACITY PER TOE-NAIL.
APPLICABLE DURATION OF LOAD INCREASES MAY BE APPLIED

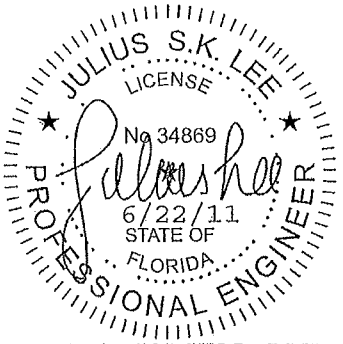
EXAMPLE
(3) 16d NAILS (162" diam x 3 5") WITH SPF SPECIES BOTTOM CHORD

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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FEBRUARY 14, 2012	STANDARD PIGGYBACK TRUSS CONNECTION DETAIL	ST-PIGGY-7-10

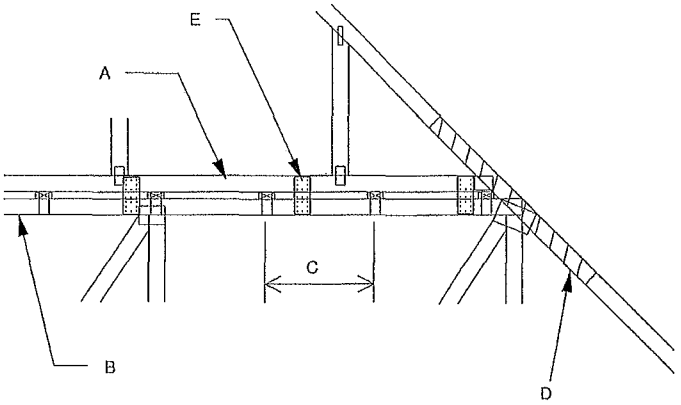
MiTek Industries, Chesterfield, MO

MiTek Industries, 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

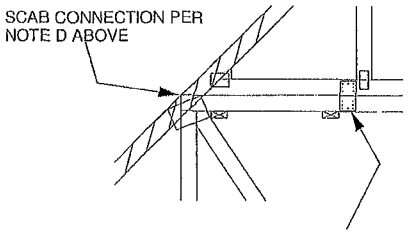
DETAIL IS NOT APPLICABLE FOR TRUSSES TRANSFERING DRAG LOADS (SHEAR TRUSSES) ADDITIONAL CONSIDERATIONS BY BUILDING ENGINEER/DESIGNER ARE REQUIRED

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 AND GRADE TO MATCH TOP CHORD OF PIGGYBACK TRUSS, 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 116 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" PER MEMBER STAGGER NAILS FROM OPPOSING FACES. ENSURE 0.5 EDGE DISTANCE. (MIN 2 PAIRS OF PLATES REQ. REGARDLESS OF SPAN)

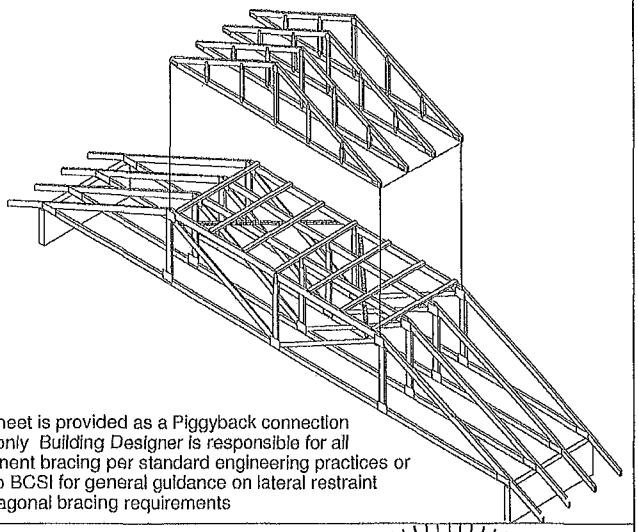


WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS

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

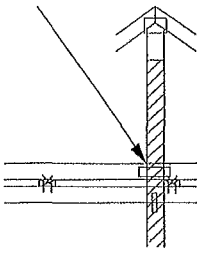


FOR ALL WIND SPEEDS, ATTACH MITEK 3X6 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48' O C W/ (4) 0 131 X 1 5' PER MEMBER STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5 EDGE DISTANCE



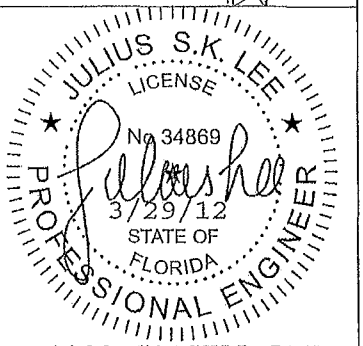
This sheet is provided as a Piggyback connection detail only Building Designer is responsible for all permanent bracing per standard engineering practices or refer to BCSI for general guidance on lateral restraint and diagonal bracing requirements

VERTICAL WEB TO EXTEND THROUGH BOTTOM CHORD OF PIGGYBACK



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

1) VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS MUST MATCH IN SIZE, GRADE, AND MUST LINE UP AS SHOWN IN DETAIL.
2) ATTACH 2 x ___ x 4 0' SCAB TO EACH FACE OF TRUSS ASSEMBLY WITH 2 ROWS OF 10d (0 131 X 3") NAILS SPACED 4 O C. FROM EACH FACE (SIZE AND GRADE TO MATCH VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS) (MINIMUM 2X4)
3) THIS CONNECTION IS ONLY VALID FOR A MAXIMUM CONCENTRATED LOAD OF 4000 LBS (@1 15) REVIEW BY A QUALIFIED ENGINEER IS REQUIRED FOR LOADS GREATER THAN 4000 LBS
4) FOR PIGGYBACK TRUSSES CARRYING GIRDER LOADS, NUMBER OF PLYS OF PIGGYBACK TRUSS TO MATCH BASE TRUSS.
5) CONCENTRATED LOAD MUST BE APPLIED TO BOTH THE PIGGYBACK AND THE BASE TRUSS DESIGN



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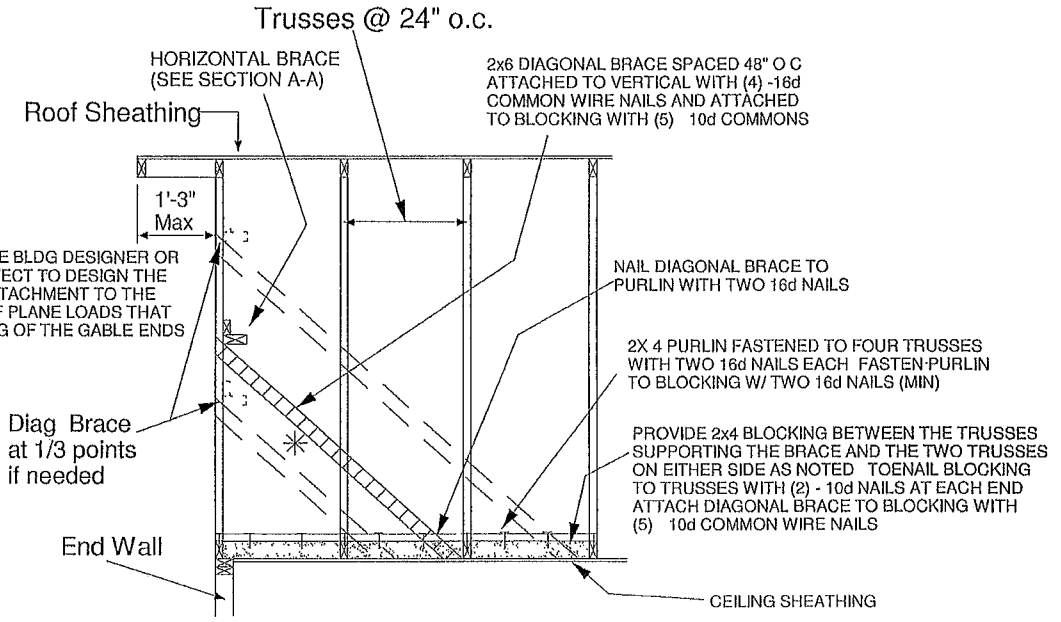
FEBRUARY 14, 2012	Standard Gable End Detail	SHEET 2

MiTek Industries, Inc

ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED

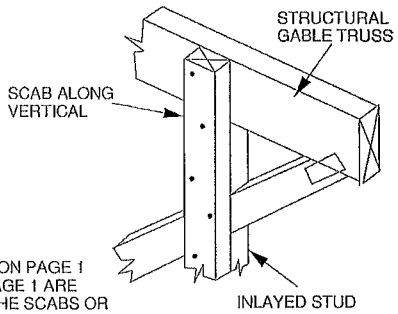
METHOD 1 ATTACH A MATCHING GABLE TRUSS TO THE INSIDE FACE OF THE STRUCTURAL GABLE AND FASTEN PER THE FOLLOWING NAILING SCHEDULE.

METHOD 2 ATTACH 2X_ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE SCABS ARE TO BE OF THE SAME SIZE, GRADE AND SPECIES AS THE TRUSS VERTICALS

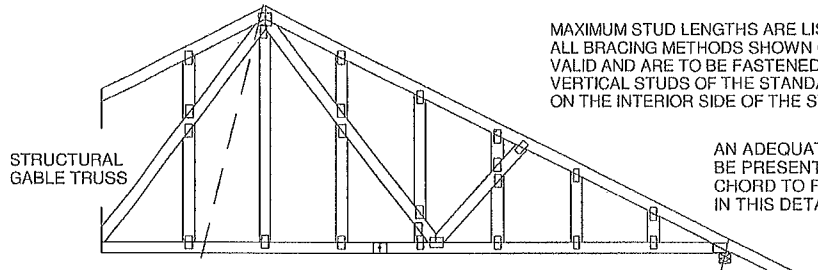
NAILING SCHEDULE

FOR WIND SPEEDS 120 MPH (ASCE 7-98, 02, 05), 150 MPH (ASCE 7 10) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (131 X 3") NAILS SPACED 6 O C

FOR WIND SPEEDS GREATER 120 MPH (ASCE 7-98, 02, 05), 150 MPH (ASCE 7 10) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (131" X 3 ') NAILS SPACED 6 O C (2X 4 STUDS MINIMUM)

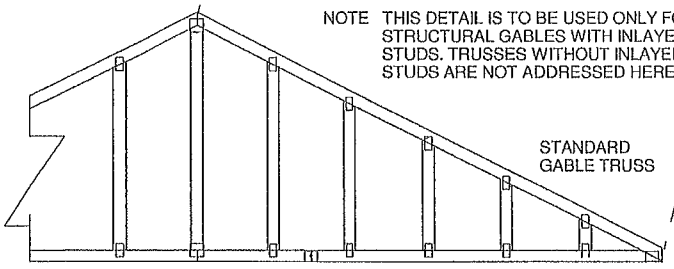


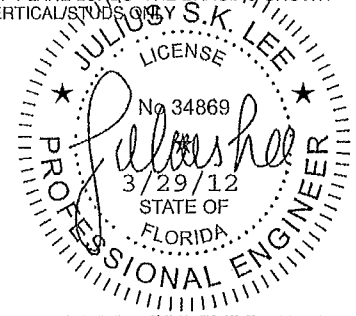
MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1 ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE



AN ADEQUATE DIAPHRAGM OR OTHER METHOD OF BRACING MUST BE PRESENT TO PROVIDE FULL LATERAL SUPPORT OF THE BOTTOM CHORD TO RESIST ALL OUT OF PLANE LOADS THE BRACING SHOWN IN THIS DETAIL IS FOR THE VERTICAL STUDS ONLY

NOTE THIS DETAIL IS TO BE USED ONLY FOR STRUCTURAL GABLES WITH INLAYED STUDS. TRUSSES WITHOUT INLAYED STUDS ARE NOT ADDRESSED HERE





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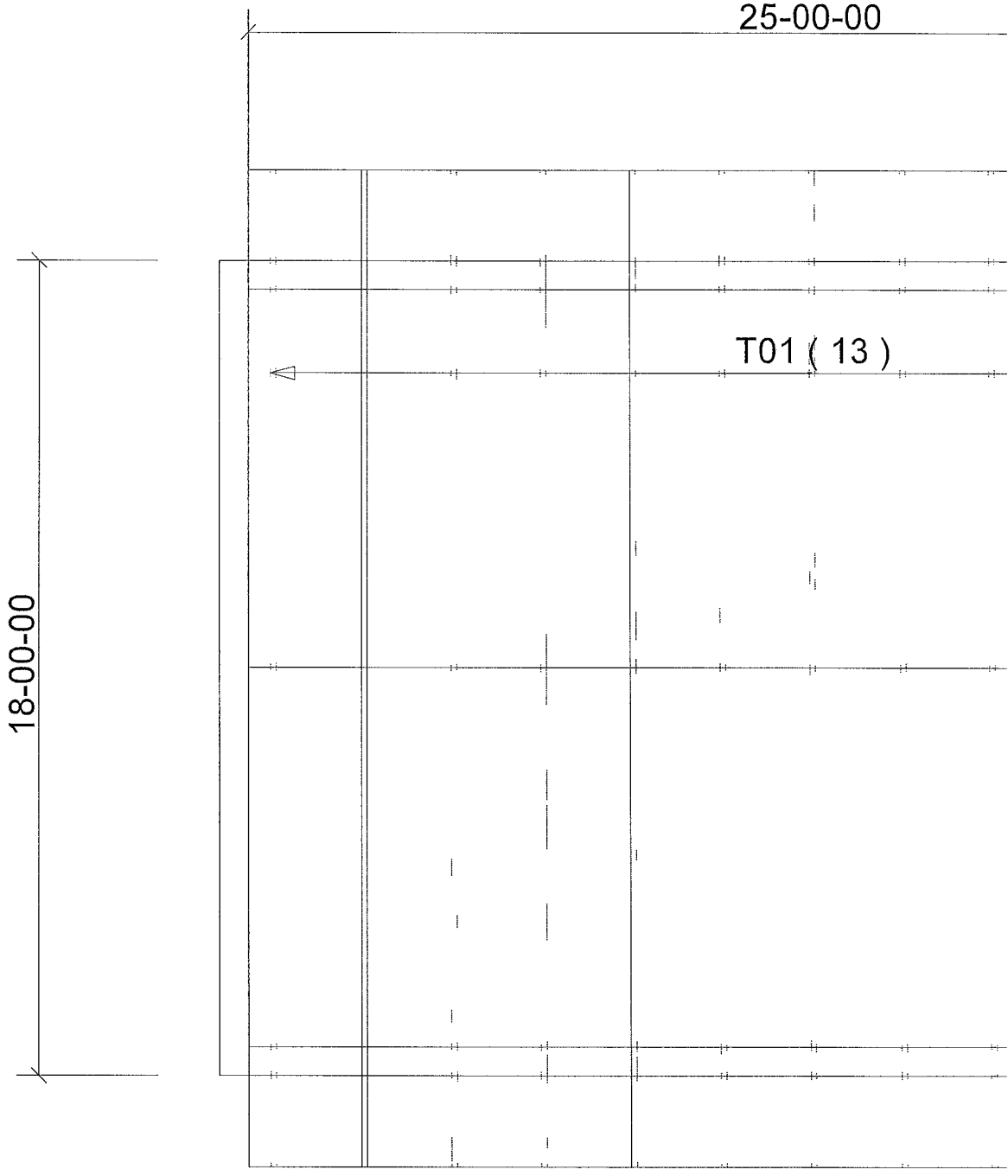
6/12 PITCH - 2



MITEK PLATE APPROVAL #'s 2197.2 - 2197.4, WEYERH