

## Julius Lee Engineering

RE: 313910 - R & M CONST. - ALVAREZ RES.

**1109 Coastal Bay Blvd.  
Boynton Beach, FL 33435**

### Site Information:

Project Customer: R & M CONST. Project Name: 313910 Model: ALVAREZ RES.  
Lot/Block: Subdivision:  
Address: 162 SW NORMANDY DR  
City: COLUMBIA CTY State: FL

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

Name: ROBERT K. CLARK License #: CRC1326557  
Address: 27607 N. CR 1491  
City: ALACHUA State: FL

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

Design Code: FBC2007/TPI2002 Design Program: MiTek 20/20 7.1  
Wind Code: ASCE 7-05 Wind Speed: 110 mph Floor Load: N/A psf  
Roof Load: 32.0 psf

This package includes 21 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	No.	Seal#	Truss Name	Date
1	I4093107	CJ1	8/31/09	18	I4093124	T12G	8/31/09
2	I4093108	CJ3	8/31/09	19	I4093125	T13	8/31/09
3	I4093109	CJ5	8/31/09	20	I4093126	T13G	8/31/09
4	I4093110	EJ7	8/31/09	21	I4093127	T14	8/31/09
5	I4093111	HJ9	8/31/09				
6	I4093112	T01	8/31/09				
7	I4093113	T02	8/31/09				
8	I4093114	T03	8/31/09				
9	I4093115	T04	8/31/09				
10	I4093116	T05	8/31/09				
11	I4093117	T06	8/31/09				
12	I4093118	T07	8/31/09				
13	I4093119	T08	8/31/09				
14	I4093120	T09	8/31/09				
15	I4093121	T10	8/31/09				
16	I4093122	T11	8/31/09				
17	I4093123	T12	8/31/09				

▲ = WEB BRACING



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 (Lake City).

Truss Design Engineer's Name: Julius Lee

My license renewal date for the state of Florida is February 28, 2011.

**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.

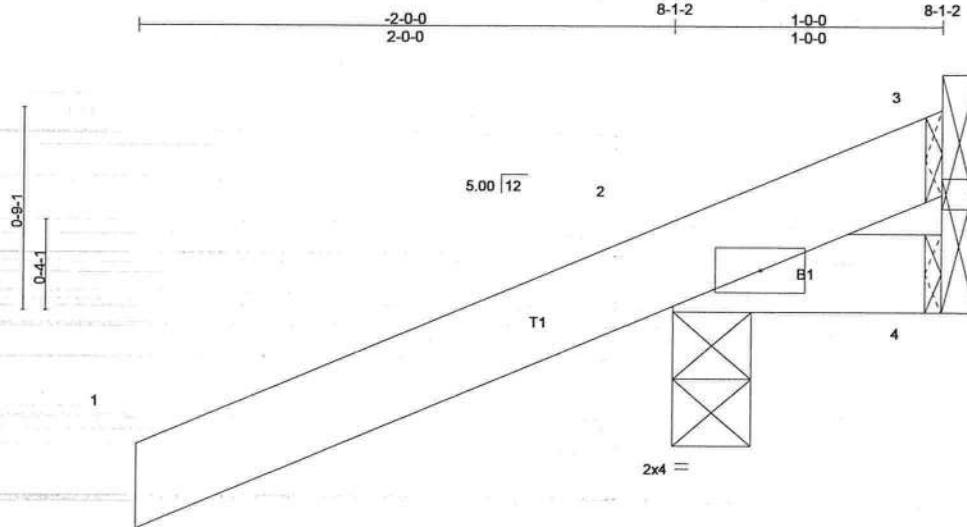




Job 313910	Truss CJ1	Truss Type JACK	Qty 4	Ply 1	R & M CONST. - ALVAREZ RES.	14093107
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Builders FirstSource, Lake City, FL 32055

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Scale = 1:8.3

<b>LOADING (psf)</b>	<b>SPACING</b>	<b>CSI</b>	<b>DEFL</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.32	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Plates Increase 1.25	BC 0.01	Vert(LL) -0.00 2 >999 360		
BCLL 0.0 *	Lumber Increase 1.25	WB 0.00	Vert(TL) -0.00 2 >999 240		
BCDL 5.0	Rep Stress Incr YES	(Matrix)	Horz(TL) 0.00 3 n/a n/a		
	Code FBC2007/TPI2002		Wind(LL) 0.00 2 **** 240		
				Weight: 7 lb	

#### LUMBER

TOP CHORD 2 X 4 SYP No.2  
BOT CHORD 2 X 4 SYP No.2

#### BRACING

TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 1-0-0 oc purlins.  
Rigid ceiling directly applied or 10-0-0 oc bracing.

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

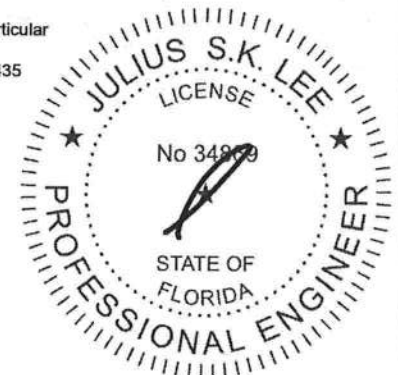
**REACTIONS** (lb/size) 2=256/0-3-8, 4=5/Mechanical, 3=90/Mechanical  
Max Horz 2=87(LC 6)  
Max Uplift 2=332(LC 6), 3=90(LC 1)  
Max Grav 2=256(LC 1), 4=14(LC 2), 3=148(LC 6)

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

#### NOTES (8-9)

- 1) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SYP No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 332 lb uplift at joint 2 and 90 lb uplift at joint 3.
- 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) 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



August 31, 2009

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MII-T473 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 parameters 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, D58-89 and BCS11 Building Component Safety Information** available from Truss Plate Institute, 583 D'Oroville Drive, Madison, WI 53719.

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Boynton, FL 33435



Builders FirstSource, Lake City, FL 32055



**Weight:** 13 lb

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

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

LOAD CASE(S) Standard



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-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.  
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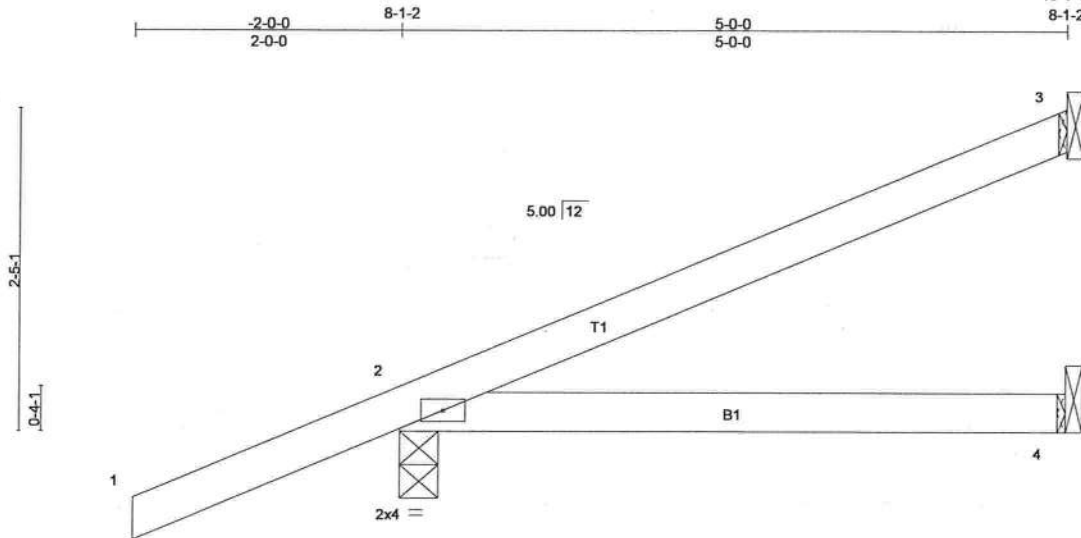


Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.
313910	CJ5	JACK	4	1	

I4093109

Builders FrstSource, Lake City, FL 32055

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Scale = 1:16.6

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.34	Vert(LL)	-0.03	2-4	>999	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.16	Vert(TL)	-0.05	2-4	>999	240		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(TL)	-0.00	3	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.00	2	****	240		
									Weight: 19 lb	

**LUMBER**

TOP CHORD 2 X 4 SYP No.2

BOT CHORD 2 X 4 SYP No.2

**BRACING**

TOP CHORD

Structural wood sheathing directly applied or 5-0-0 oc purlins.

BOT CHORD

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

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

**REACTIONS** (lb/size) 3=103/Mechanical, 2=295/0-3-8, 4=24/Mechanical

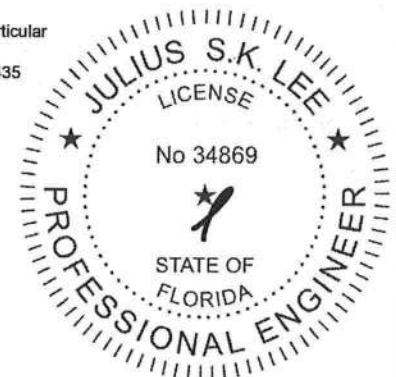
Max Horz 2=179(LC 6)

Max Uplift 3=100(LC 6), 2=263(LC 6)

Max Grav 3=103(LC 1), 2=295(LC 1), 4=72(LC 2)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.**NOTES** (8-9)

- 1) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SYP No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint 3 and 263 lb uplift at joint 2.
- 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) 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

August 31, 2009

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-T473 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 parameters 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, D58-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Oroff Drive, Madison, WI 53719.

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Job 313910	Truss EJ7	Truss Type MONO TRUSS	Qty 21	Ply 1	R & M CONST. - ALVAREZ RES. Job Reference (optional)	I4093110
Builders FrstSource, Lake City, FL 32055					7.140 s Jun 24 2009 MiTek Industries, Inc. Mpt 449, 31 08:05:36 2009 Page 1	

Scale = 1:20.7

Plate Offsets (X,Y): [2-0-2-4-0-1-8]							
LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d
TCLL 20.0	Plates Increase	1.25	TC 0.49	Vert(LL)	-0.09	2-4	>924
TCDL 7.0	Lumber Increase	1.25	BC 0.29	Vert(TL)	-0.17	2-4	>478
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(TL)	-0.00	3	n/a
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.06	2-4	>999
							Weight: 25 lb

**LUMBER**

TOP CHORD 2 X 4 SYP No.2

BOT CHORD 2 X 4 SYP No.2

**REACTIONS** (lb/size) 3=157/Mechanical, 2=352/0-3-8, 4=42/Mechanical

Max Horz 2=163(LC 6)

Max Uplift 3=101(LC 6), 2=193(LC 6)

Max Grav 3=157(LC 1), 2=352(LC 1), 4=96(LC 2)

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

**NOTES** (8-9)

- 1) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SYP No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 101 lb uplift at joint 3 and 193 lb uplift at joint 2.
- 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) 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

**BRACING**

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

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

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

August 31, 2009



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 BEFORE USE.**

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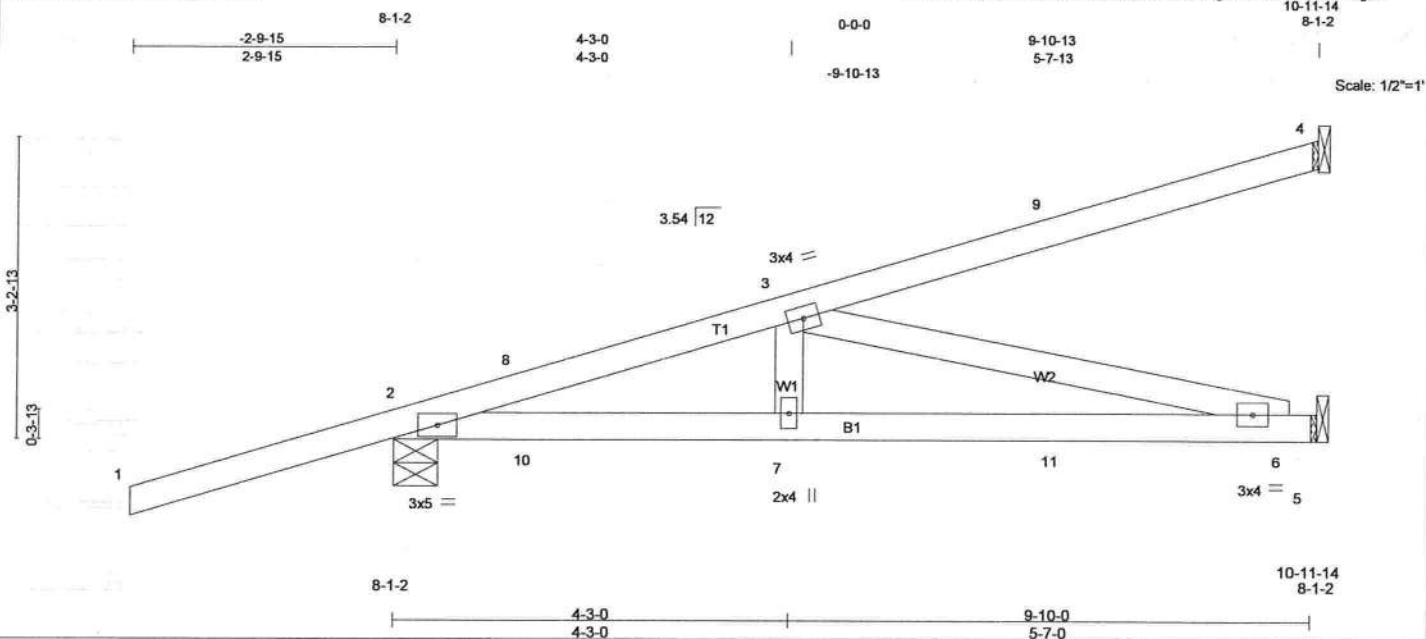
Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.
313910	HJ9	MONO TRUSS	2	1	

14093111

Job Reference (optional)

Builders FrstSource, Lake City, FL 32055

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LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.58	Vert(LL)	-0.08	6-7	>999	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.50	Vert(TL)	-0.14	6-7	>800	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.33	Horz(TL)	0.01	5	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.04	6-7	>999	240		
									Weight: 44 lb	

**LUMBER**

TOP CHORD 2 X 4 SYP No.2  
 BOT CHORD 2 X 4 SYP No.2  
 WEBS 2 X 4 SYP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 9-6-4 oc bracing.

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

**REACTIONS** (lb/size) 4=174/Mechanical, 2=438/0-5-11, 5=171/Mechanical  
 Max Horz 2=227(LC 3)  
 Max Uplift 4=169(LC 3), 2=474(LC 3), 5=81(LC 6)  
 Max Grav 4=174(LC 1), 2=438(LC 1), 5=224(LC 2)

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

TOP CHORD 2-8=617/356, 3-8=580/352  
 BOT CHORD 2-10=430/572, 7-10=430/572, 7-11=430/572, 6-11=430/572  
 WEBS 3-6=588/442

**NOTES** (10-11)

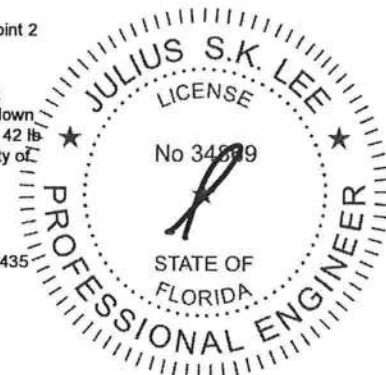
- 1) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SYP No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 169 lb uplift at joint 4, 474 lb uplift at joint 2 and 81 lb uplift at joint 5.
- 7) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 37 lb up at 1-5-12, 37 lb up at 1-5-12, 16 lb down and 23 lb up at 4-3-11, 16 lb down and 23 lb up at 4-3-11, and 49 lb down and 84 lb up at 7-1-10, and 49 lb down and 84 lb up at 7-1-10 on top chord, and 16 lb up at 1-5-12, 16 lb up at 1-5-12, 12 lb down at 4-3-11, 12 lb down at 4-3-11, and 42 lb down at 7-1-10, and 42 lb down at 7-1-10 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- 10) 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.
- 11) 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

- 1) Regular: Lumber Increase=1.25, Plate Increase=1.25  
 Uniform Loads (plf)  
 Vert: 1-4=54, 2-5=10

Continued on page 2

August 31, 2009



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 Boynton, FL 33435



Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	I4093111
313910	HJ9	MONO TRUSS	2	1	Job Reference (optional)	

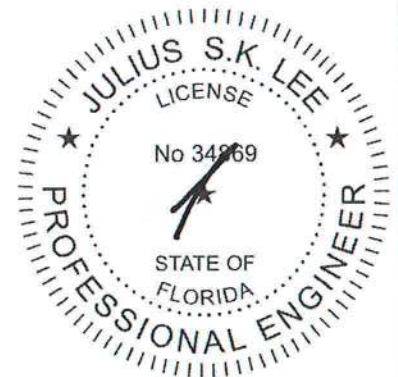
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# LOAD CASE(S) Standard

## Concentrated Loads (lb)

Vert: 3=46(F=23, B=23) 7=-8(F=-4, B=-4) 8=75(F=37, B=37) 9=-99(F=-49, B=-49) 10=10(F=5, B=5) 11=-28(F=-14, B=-14)



August 31, 2009



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Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	I4093112
313910	T01	MONO HIP	1	1	Job Reference (optional)	

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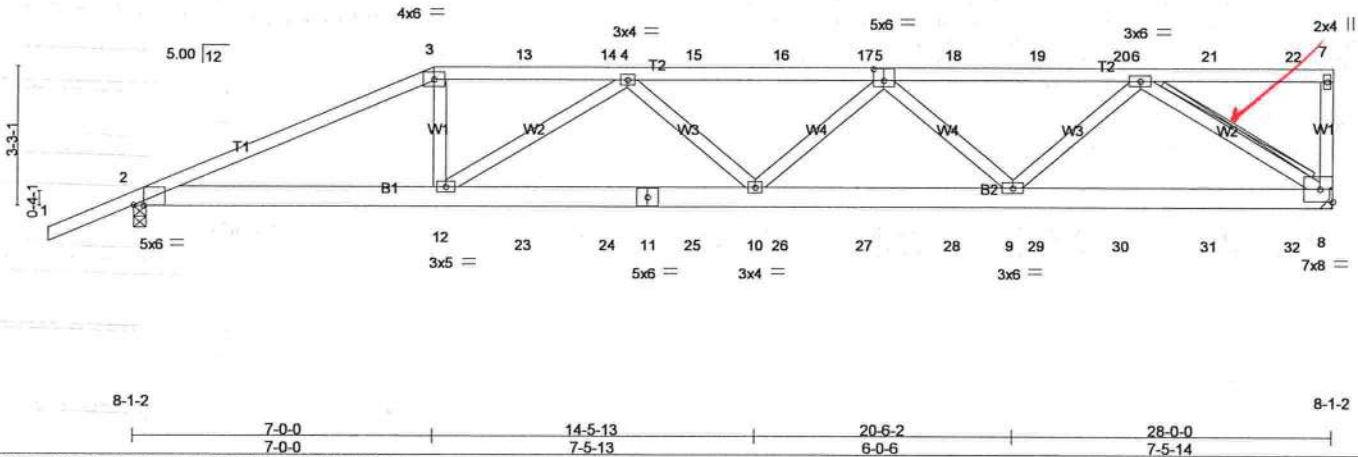
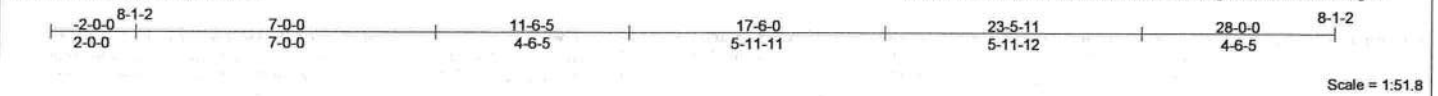


Plate Offsets (X,Y): [2:0-2-13,0-0-2], [5:0-3-0,0-3-4]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.65	Vert(LL)	-0.23 10-12	>999	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.57	Vert(TL)	-0.46 10-12	>717	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.61	Horz(TL)	0.10 8	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.25 10-12	>999	240		Weight: 157 lb

**LUMBER**  
TOP CHORD 2 X 4 SYP No.2  
BOT CHORD 2 X 6 SYP No.1D  
WEBS 2 X 4 SYP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-6-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-7 oc bracing.  
WEBS T-Brace: 2 X 4 SYP No.3 - 6-8  
Fasten T and I braces to narrow edge of web with 10d Common wire nails, 9in o.c., with 4in minimum end distance.  
Brace must cover 90% of web length.

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

**REACTIONS** (lb/size) 8=1859/Mechanical, 2=1796/0-3-8  
Max Horz 2=166(LC 5)  
Max Uplift 8=769(LC 4), 2=823(LC 5)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=3840/1635, 3-13=3514/1550, 13-14=3514/1550, 4-14=3514/1550, 4-15=4428/1840, 15-16=4428/1840, 16-17=4428/1840, 5-17=4428/1840, 5-18=3421/1379, 18-19=3421/1379, 19-20=3421/1379, 6-20=3421/1379  
BOT CHORD 2-12=1537/3468, 12-23=1942/4408, 23-24=1942/4408, 11-24=1942/4408, 11-25=1942/4408, 10-25=1942/4408, 10-26=1823/4268, 26-27=1823/4268, 27-28=1823/4268, 9-28=1823/4268, 9-29=1052/2414, 29-30=1052/2414, 30-31=1052/2414, 31-32=1052/2414, 8-32=1052/2414  
WEBS 3-12=263/919, 4-12=1069/483, 5-10=44/360, 5-9=1171/614, 6-9=457/1404, 6-8=2841/1244

#### NOTES (12-14)

- 1) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise); Lumber DOL=1.60 plate grip DOL=1.60
- 2) Provide adequate drainage to prevent water ponding.
- 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 SYP No.2
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 769 lb uplift at joint 8 and 823 lb uplift at joint 2.
- 8) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.



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Continued on page 2

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE.  
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Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	I4093112
313910	T01	MONO HIP	1	1	Job Reference (optional)	

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#### NOTES (12-14)

- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 223 lb down and 238 lb up at 7-0-0, 103 lb down and 85 lb up at 9-0-12, 103 lb down and 85 lb up at 11-0-12, 103 lb down and 85 lb up at 13-0-12, 103 lb down and 85 lb up at 15-0-12, 103 lb down and 85 lb up at 17-0-12, 103 lb down and 85 lb up at 19-0-12, 103 lb down and 85 lb up at 21-0-12, 103 lb down and 85 lb up at 23-0-12, and 103 lb down and 85 lb up at 25-0-12, and 103 lb down and 85 lb up at 27-0-12 on top chord, and 260 lb down and 72 lb up at 7-0-0, 66 lb down at 9-0-12, 66 lb down at 11-0-12, 66 lb down at 13-0-12, 66 lb down at 15-0-12, 66 lb down at 17-0-12, 66 lb down at 19-0-12, 66 lb down at 21-0-12, 66 lb down at 23-0-12, and 66 lb down at 25-0-12, and 66 lb down at 27-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
- 11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- 12) 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.
- 13) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435
- 14) Use Simpson HTU26 to attach Truss to Carrying member

#### LOAD CASE(S) Standard

- 1) Regular: Lumber Increase=1.25, Plate Increase=1.25

##### Uniform Loads (plf)

Vert: 1-3=-54, 3-7=-54, 2-8=-10

##### Concentrated Loads (lb)

Vert: 3=-223(F) 12=-193(F) 13=-103(F) 14=-103(F) 15=-103(F) 16=-103(F) 17=-103(F) 18=-103(F) 19=-103(F) 20=-103(F) 21=-103(F) 22=-103(F) 23=-32(F) 24=-32(F) 25=-32(F) 26=-32(F) 27=-32(F) 28=-32(F) 29=-32(F) 30=-32(F) 31=-32(F) 32=-32(F)



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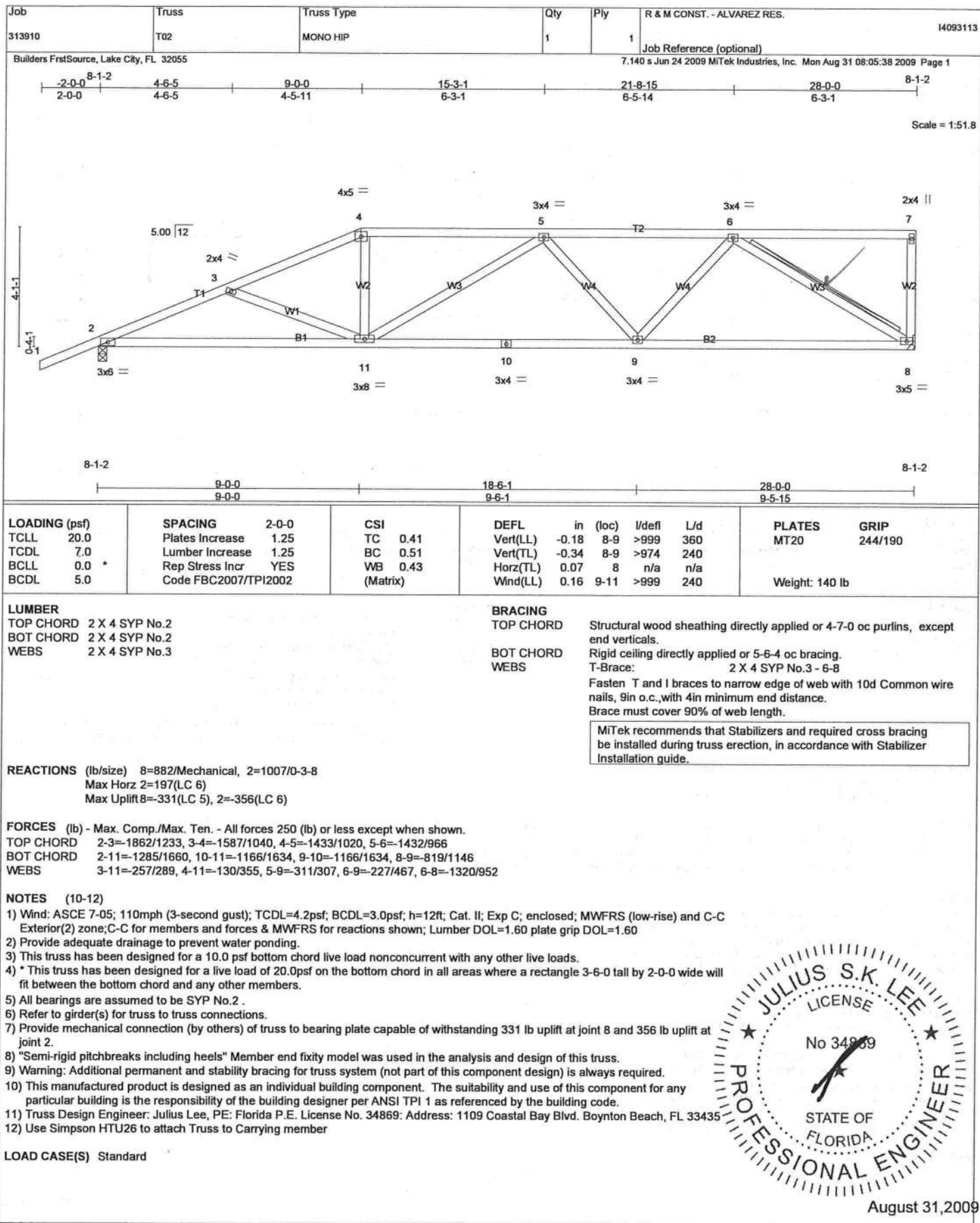


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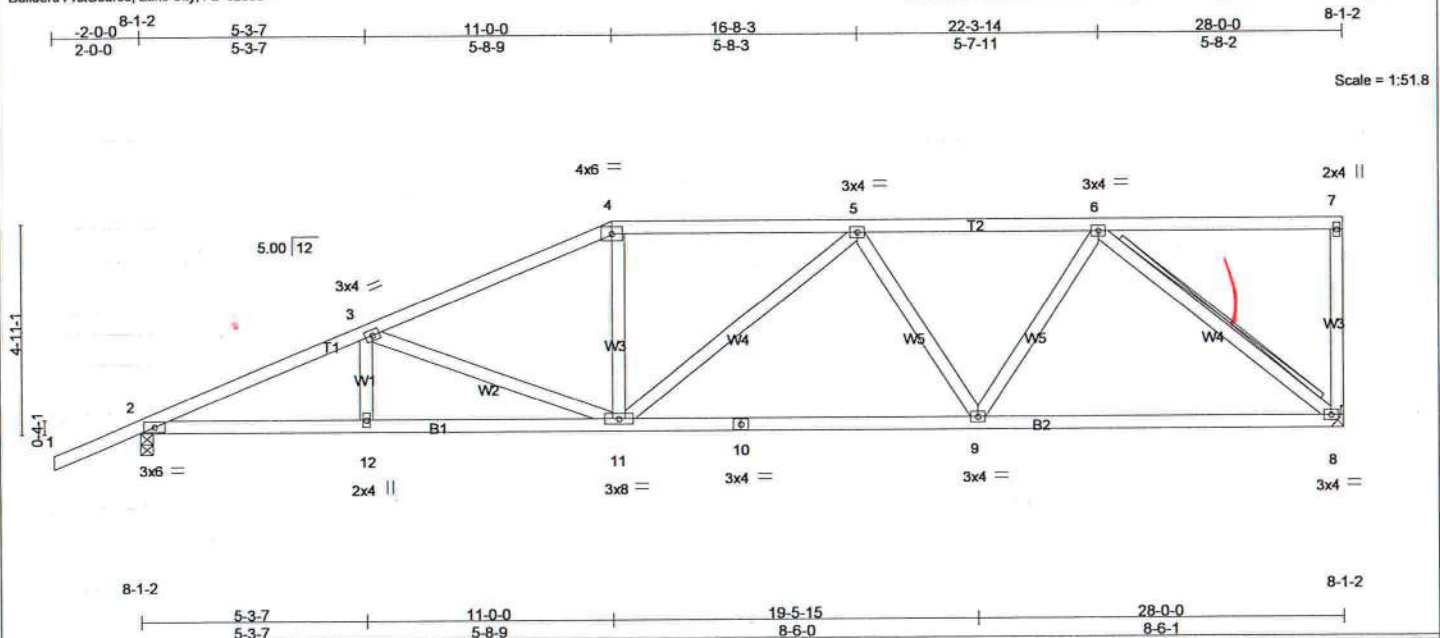




Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	14093114
313910	T03	MONO HIP	1	1	Job Reference (optional)	

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LOADING (psf)	SPACING	CSI	DEFL	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.37	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Plates Increase 1.25	BC 0.43	Vert(LL) -0.12 8-9 >999 360		
BCLL 0.0 *	Lumber Increase 1.25	WB 0.36	Vert(TL) -0.22 8-9 >999 240		
BCDL 5.0	Rep Stress Incr YES	(Matrix)	Horz(TL) 0.06 8 n/a n/a		
	Code FBC2007/TPI2002		Wind(LL) 0.13 11-12 >999 240		
				Weight: 149 lb	

**LUMBER**  
 TOP CHORD 2 X 4 SYP No.2  
 BOT CHORD 2 X 4 SYP No.2  
 WEBS 2 X 4 SYP No.3

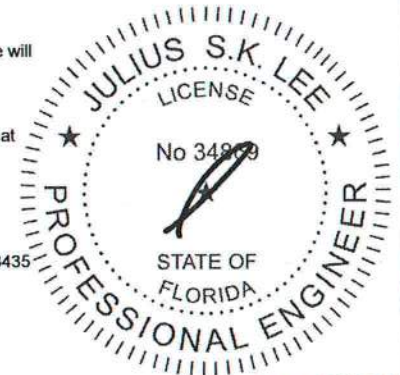
**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 4-6-6 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 5-6-5 oc bracing.  
 WEBS T-Brace: 2 X 4 SYP No.3 - 6-8  
 Fasten T and I braces to narrow edge of web with 10d Common wire nails, 9in o.c., with 4in minimum end distance.  
 Brace must cover 90% of web length.

**REACTIONS** (lb/size) 8=882/Mechanical, 2=1007/0-3-8  
 Max Horz 2=229(LC 6)  
 Max Uplift 8=328(LC 5), 2=369(LC 6)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=1874/1188, 3-4=1441/961, 4-5=1280/951, 5-6=1110/769  
 BOT CHORD 2-12=1294/1669, 11-12=1294/1669, 10-11=944/1294, 9-10=944/1294, 8-9=631/870  
 WEBS 3-11=425/370, 4-11=91/295, 5-9=354/336, 6-9=266/460, 6-8=1115/814

- NOTES** (10-12)
- 1) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 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 SYP No.2.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 328 lb uplift at joint 8 and 369 lb uplift at joint 2.
  - 8) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
  - 9) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
  - 10) 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.
  - 11) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435
  - 12) Use Simpson HTU26 to attach Truss to Carrying member

**LOAD CASE(S)** Standard



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Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.
313910	T04	HIP	1	1	

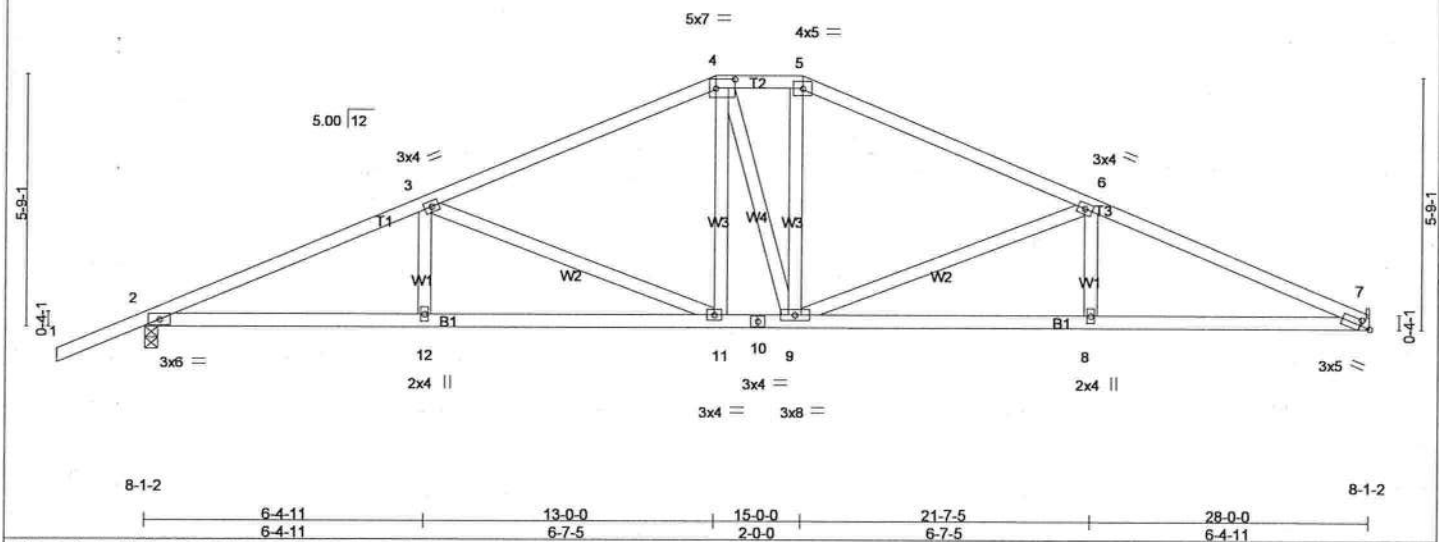
14093115

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8-1-2	6-4-11	13-0-0	15-0-0	21-7-5	28-0-0	8-1-2
2-0-0	6-4-11	6-7-5	2-0-0	6-7-5	6-4-11	

Scale = 1:50.7



LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.46	Vert(LL)	-0.10	11-12	>999	360	MT20
TCDL 7.0	Lumber Increase	1.25	BC 0.39	Vert(TL)	-0.21	11-12	>999	240	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.56	Horz(TL)	0.08	7	n/a	n/a	
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.15	11-12	>999	240	
									Weight: 141 lb

**LUMBER**

TOP CHORD 2 X 4 SYP No.2  
 BOT CHORD 2 X 4 SYP No.2  
 WEBS 2 X 4 SYP No.3

**BRACING**

TOP CHORD  
 BOT CHORD

Structural wood sheathing directly applied or 4-3-14 oc purlins.  
 Rigid ceiling directly applied or 5-10-0 oc bracing.

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

**REACTIONS** (lb/size) 7=882/Mechanical, 2=1007/0-3-8

Max Horz 2=127(LC 6)  
 Max Uplift 7=274(LC 7), 2=393(LC 6)

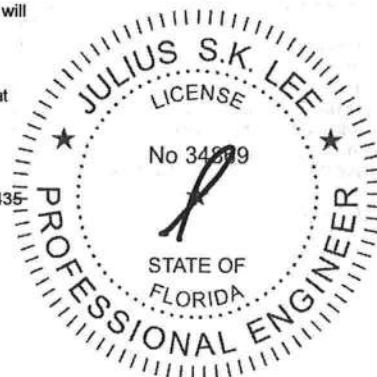
**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=1848/1280, 3-4=1292/982, 4-5=1130/979, 5-6=1294/985, 6-7=1867/1343  
 BOT CHORD 2-12=1083/1640, 11-12=1083/1640, 10-11=641/1128, 9-10=641/1128, 8-9=1154/1676,  
 7-8=1154/1676  
 WEBS 3-11=565/480, 4-11=161/266, 5-9=179/270, 6-9=603/556

**NOTES** (10-12)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SYP No.2.
- Refer to girder(s) for truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 274 lb uplift at joint 7 and 393 lb uplift at joint 2.
- "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
- 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.
- Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435
- Use Simpson HTU26 to attach Truss to Carrying member

LOAD CASE(S) Standard



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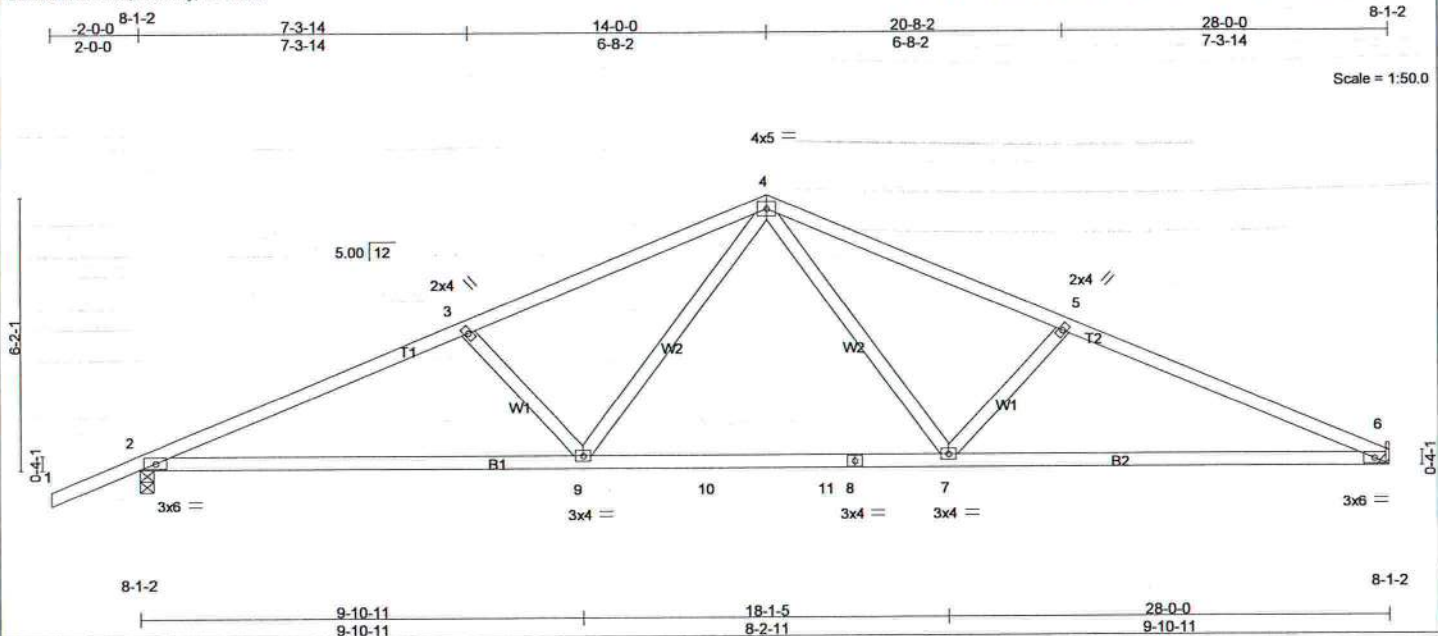
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Job 313910	Truss T05	Truss Type COMMON	Qty 6	Ply 1	R & M CONST. - ALVAREZ RES. Job Reference (optional)	14093116
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LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.50	Vert(LL)	-0.25	6-7	>999	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.56	Vert(TL)	-0.49	6-7	>681	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.35	Horz(TL)	0.07	6	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.16	6-7	>999	240		
									Weight: 122 lb	

#### LUMBER

TOP CHORD 2 X 4 SYP No.2  
BOT CHORD 2 X 4 SYP No.2  
WEBS 2 X 4 SYP No.3

#### BRACING

TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 4-0-7 oc purlins.  
Rigid ceiling directly applied or 5-10-3 oc bracing.

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

**REACTIONS** (lb/size) 6=936/Mechanical, 2=1061/0-3-8  
Max Horz 2=133(LC 6)  
Max Uplift 6=280(LC 7), 2=399(LC 6)

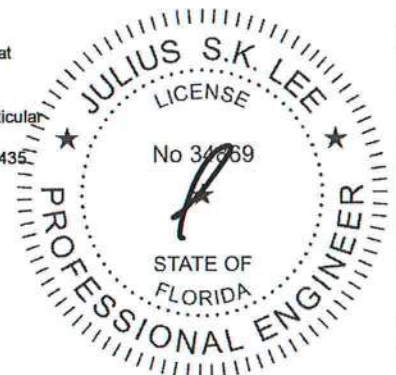
**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=1931/1284, 3-4=1662/1168, 4-5=1679/1201, 5-6=1940/1330  
BOT CHORD 2-9=1076/1711, 9-10=594/1152, 10-11=594/1152, 8-11=594/1152, 7-8=594/1152,  
6-7=1129/1738  
WEBS 4-7=382/577, 5-7=412/479, 4-9=333/552, 3-9=391/441

#### NOTES (9-11)

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
- 5) All bearings are assumed to be SYP No.2 .
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 280 lb uplift at joint 6 and 399 lb uplift at joint 2.
- 8) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
- 9) 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.
- 10) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435
- 11) Use Simpson HTU26 to attach Truss to Carrying member

**LOAD CASE(S)** Standard

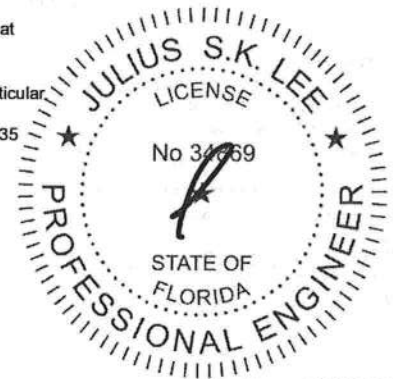
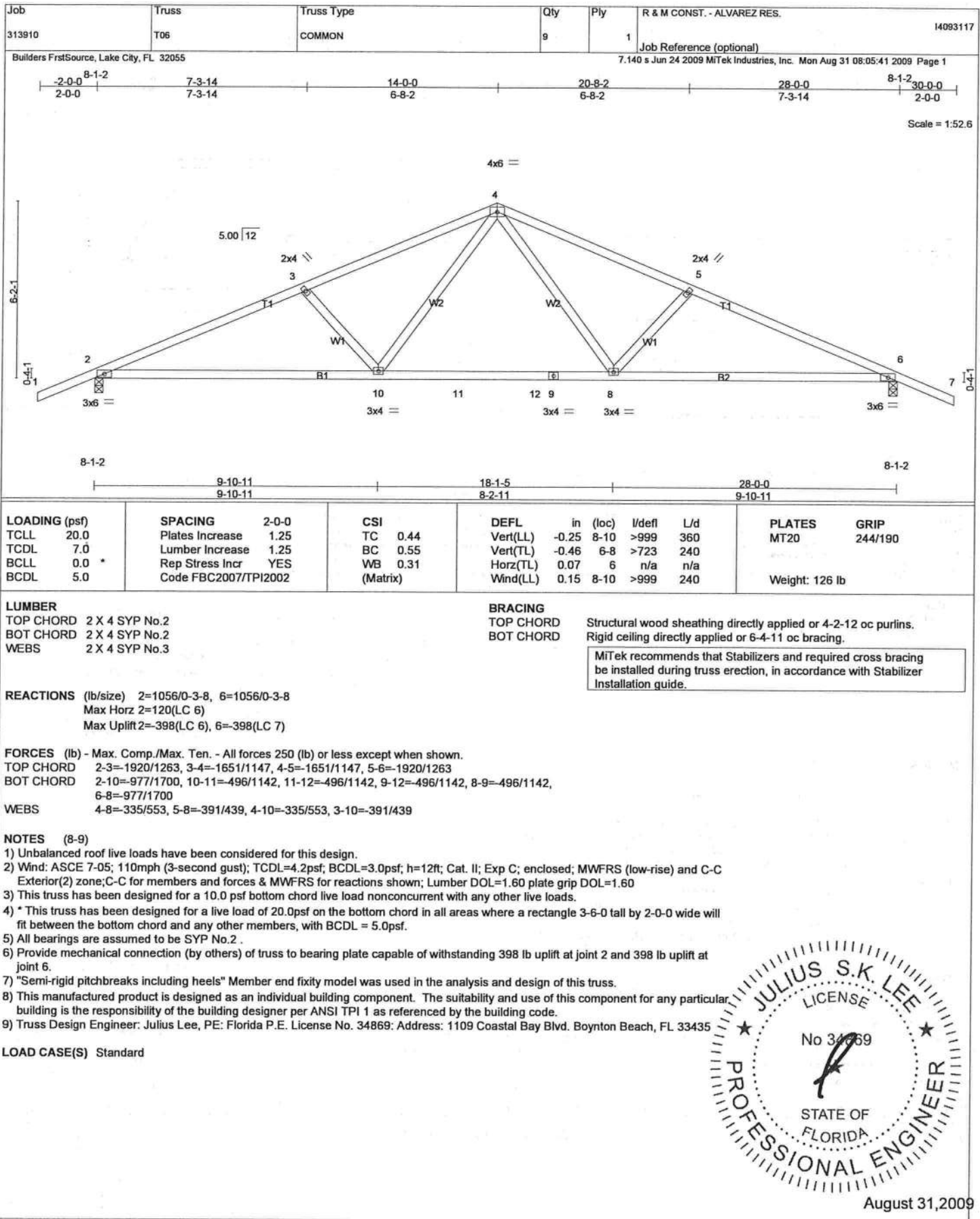


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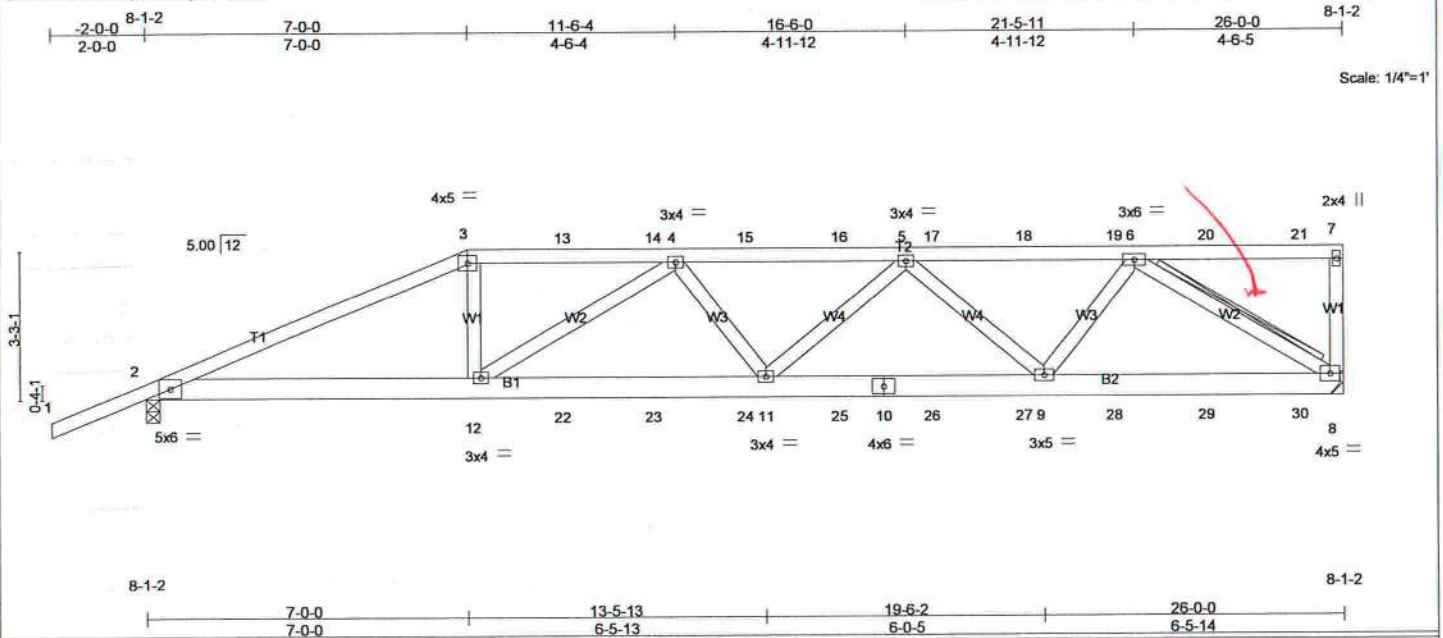
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Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	14093118
313910	T07	MONO HIP	1	1	Job Reference (optional)	

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LOADING (psf)	SPACING	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.56	Vert(LL)	-0.18 11-12	>999	360	MT20	244/190
TCDL 7.0	Plates Increase 1.25	BC 0.49	Vert(TL)	-0.35 11-12	>869	240		
BCLL 0.0 *	Lumber Increase 1.25	WB 0.56	Horz(TL)	0.08 8	n/a	n/a		
BCDL 5.0	Rep Stress Incr NO	(Matrix)	Wind(LL)	0.19 11-12	>999	240		
	Code FBC2007/TPI2002						Weight: 147 lb	

#### LUMBER

TOP CHORD 2 X 4 SYP No.2  
BOT CHORD 2 X 6 SYP No.1D  
WEBS 2 X 4 SYP No.3

#### BRACING

##### TOP CHORD

Structural wood sheathing directly applied or 2-11-6 oc purlins, except end verticals.

##### BOT CHORD

##### WEBS

Rigid ceiling directly applied or 6-5-4 oc bracing.

T-Brace: 2 X 4 SYP No.3 - 6-8

Fasten T and I braces to narrow edge of web with 10d Common wire nails, 9in o.c., with 4in minimum end distance.

Brace must cover 90% of web length.

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

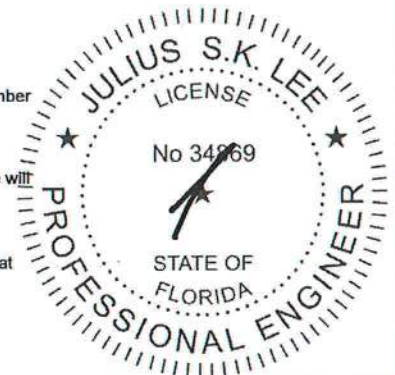
**REACTIONS** (lb/size) 8=1729/Mechanical, 2=1663/0-3-8  
Max Horz 2=166(LC 5)  
Max Uplift 8=718(LC 4), 2=774(LC 5)

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

**TOP CHORD** 2-3=3492/1498, 3-13=3186/1420, 13-14=3186/1420, 4-14=3186/1420, 4-15=3843/1616, 15-16=3843/1616, 5-16=3843/1616, 5-17=2831/1151, 17-18=2831/1151, 18-19=2831/1151, 6-19=2831/1151  
**BOT CHORD** 2-12=1410/3148, 12-22=1708/3881, 22-23=1708/3881, 23-24=1708/3881, 11-24=1708/3881, 11-25=1555/3615, 10-25=1555/3615, 10-26=1555/3615, 26-27=1555/3615, 9-27=1555/3615, 9-28=955/2216, 28-29=955/2216, 29-30=955/2216, 8-30=955/2216  
**WEBS** 3-12=203/812, 4-12=832/359, 5-11=100/392, 5-9=1083/559, 6-9=347/1093, 6-8=2604/1125

#### NOTES (12-14)

- 1) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise); Lumber DOL=1.60 plate grip DOL=1.60
- 2) Provide adequate drainage to prevent water ponding.
- 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 SYP No.2.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 718 lb uplift at joint 8 and 774 lb uplift at joint 2.
- 8) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.



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Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-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 parameters 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, D58-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435



Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	I4093118
313910	T07	MONO HIP	1	1	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055

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#### NOTES (12-14)

- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 223 lb down and 238 lb up at 7-0-0, 103 lb down and 85 lb up at 9-0-12, 103 lb down and 85 lb up at 11-0-12, 103 lb down and 85 lb up at 13-0-12, 103 lb down and 85 lb up at 15-0-12, 103 lb down and 85 lb up at 17-0-12, 103 lb down and 85 lb up at 19-0-12, 103 lb down and 85 lb up at 21-0-12, and 103 lb down and 85 lb up at 23-0-12, and 103 lb down and 85 lb up at 25-0-12 on top chord, and 260 lb down and 72 lb up at 7-0-0, 66 lb down at 9-0-12, 66 lb down at 11-0-12, 66 lb down at 13-0-12, 66 lb down at 15-0-12, 66 lb down at 17-0-12, 66 lb down at 19-0-12, 66 lb down at 21-0-12, and 66 lb down at 23-0-12, and 66 lb down at 25-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
- 11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- 12) 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.
- 13) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435
- 14) Use Simpson HTU26 to attach Truss to Carrying member

#### LOAD CASE(S) Standard

- 1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-3=-54, 3-7=-54, 2-8=-10

Concentrated Loads (lb)

Vert: 3=-223(B) 12=-193(B) 13=-103(B) 14=-103(B) 15=-103(B) 16=-103(B) 17=-103(B) 18=-103(B) 19=-103(B) 20=-103(B) 21=-103(B) 22=-32(B) 23=-32(B) 24=-32(B) 25=-32(B) 26=-32(B) 27=-32(B) 28=-32(B) 29=-32(B) 30=-32(B)



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

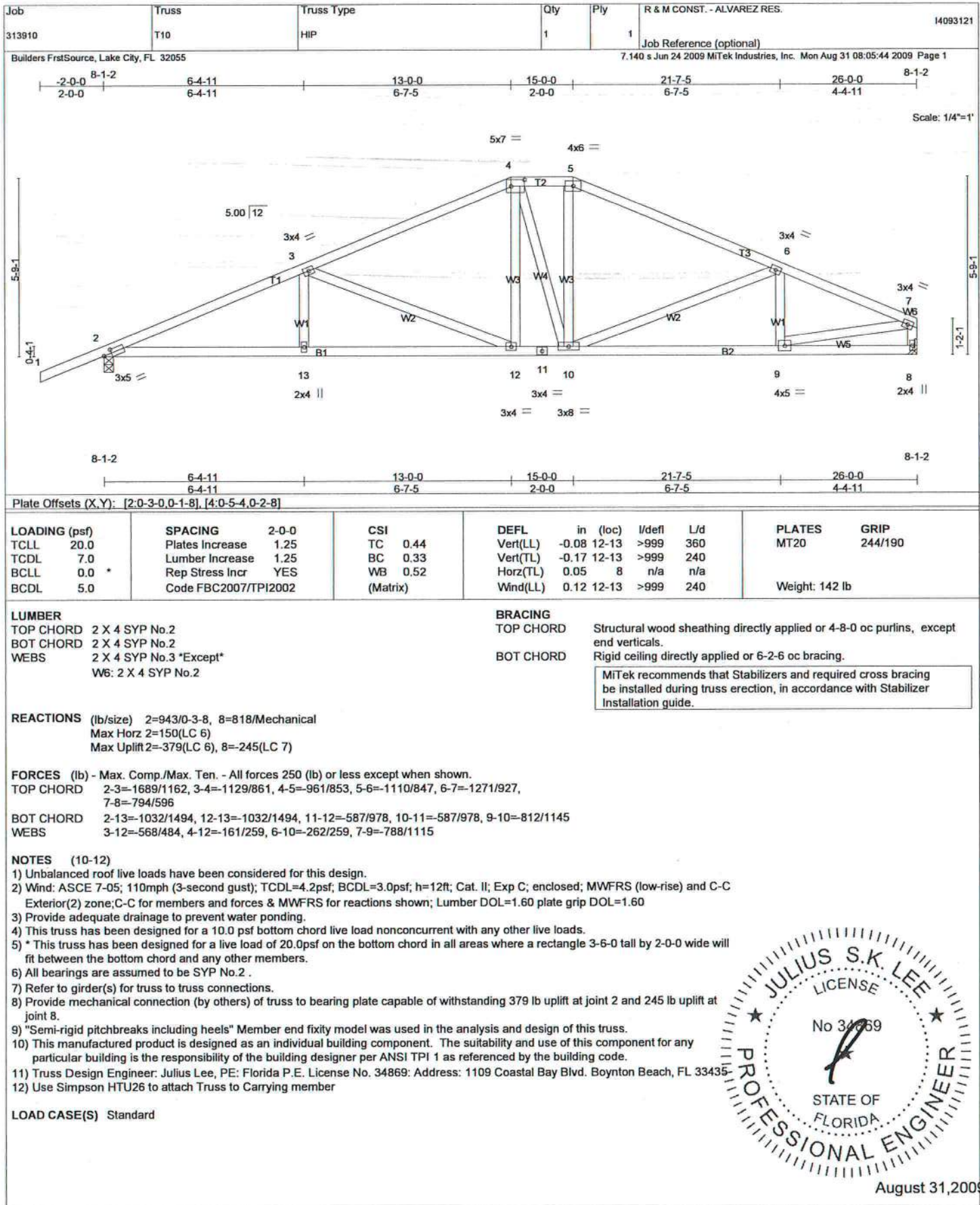
Design valid for use only with Mitek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral 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, D58-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

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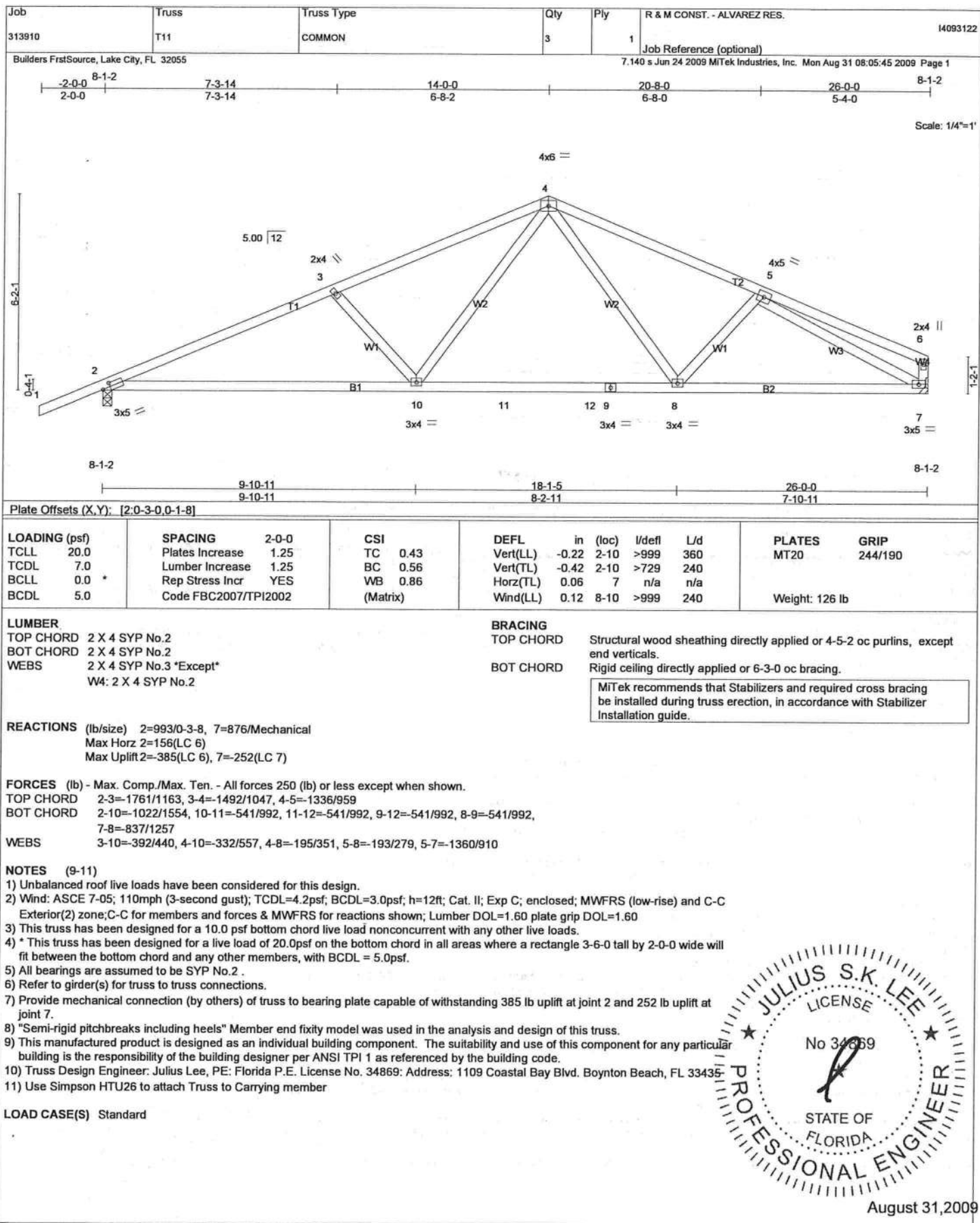
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE.**  
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 erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding  
 fabrication, quality control, storage, delivery, erection and bracing, consult **ANSI/TPI1 Quality Criteria, D58-89 and ECSI1 Building Component**  
**Safety Information** available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



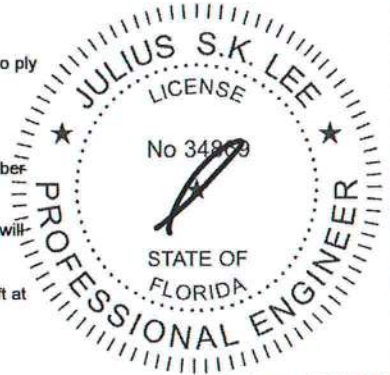
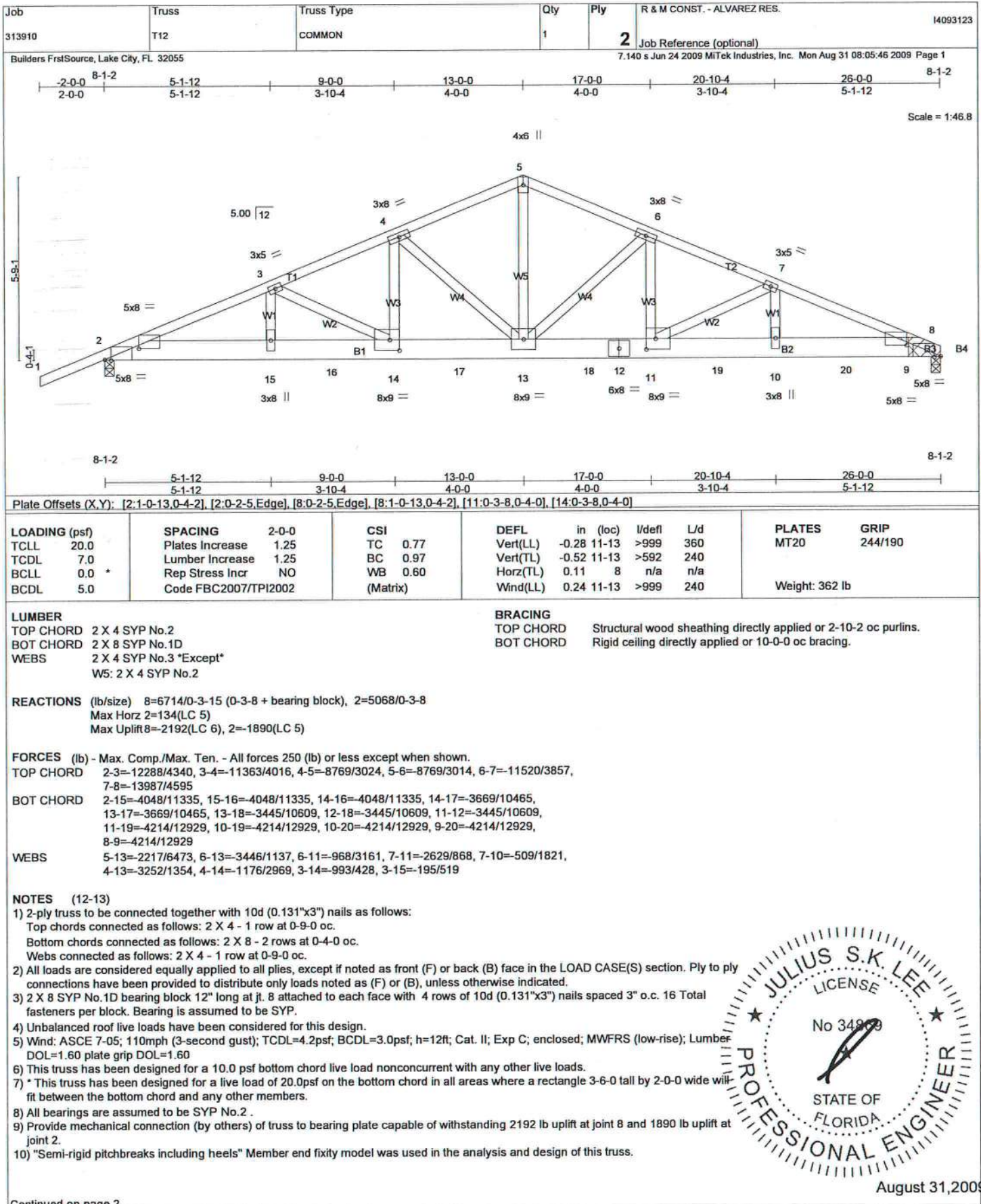




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August 31, 2009

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Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435



Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	I4093123
313910	T12	COMMON	1	2	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055

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#### NOTES (12-13)

- 11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1849 lb down and 775 lb up at 7-0-12, 872 lb down and 337 lb up at 9-0-12, 872 lb down and 334 lb up at 11-0-12, 872 lb down and 280 lb up at 13-0-12, 926 lb down and 286 lb up at 15-0-12, 926 lb down and 286 lb up at 17-0-12, 926 lb down and 286 lb up at 19-0-12, 926 lb down and 286 lb up at 21-0-12, and 926 lb down and 286 lb up at 23-0-12, and 926 lb down and 286 lb up at 25-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 12) 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.
- 13) 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

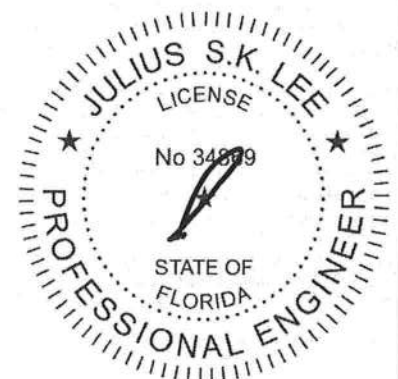
- 1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-5=-54, 5-8=-54, 2-8=-10

Concentrated Loads (lb)

Vert: 13=-872(B) 11=-926(B) 10=-926(B) 14=-872(B) 9=-926(B) 16=-1849(B) 17=-872(B) 18=-926(B) 19=-926(B) 20=-926(B)



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 Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	I4093124
313910	T12G	GABLE	1	1	Job Reference (optional)	

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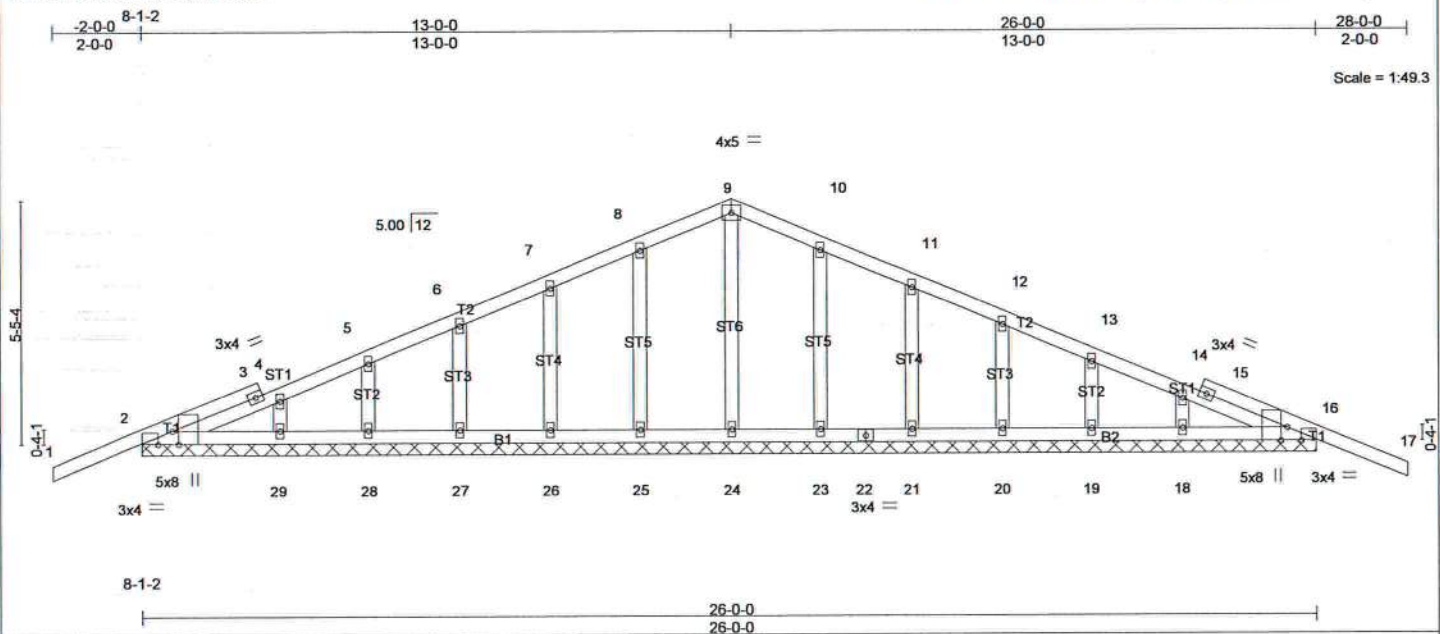


Plate Offsets (X, Y): [2'-0"-3'-8", Edge], [2'-0"-3'-13", Edge], [16'-0"-3'-8", Edge], [16'-0"-3'-13", Edge]

<b>LOADING (psf)</b>	<b>SPACING</b>	<b>CSI</b>	<b>DEFL</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2'-0"-0	TC 0.49	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Plates Increase 1.25	BC 0.05	Vert(LL) -0.04 17 n/r 120		
BCLL 0.0	Lumber Increase 1.25	WB 0.09	Vert(TL) -0.07 17 n/r 90		
BCDL 5.0	Rep Stress Incr NO	(Matrix)	Horz(TL) 0.00 16 n/a n/a		
	Code FBC2007/TP12002			Weight: 136 lb	

**LUMBER**  
 TOP CHORD 2 X 4 SYP No.2  
 BOT CHORD 2 X 4 SYP No.2  
 OTHERS 2 X 4 SYP No.3

**BRACING**  
 TOP CHORD  
 BOT CHORD

Structural wood sheathing directly applied or 6'-0" oc purlins.  
 Rigid ceiling directly applied or 10'-0" oc bracing.

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

**REACTIONS** All bearings 26'-0".

(lb) - Max Horz 2=125(LC 6)  
 Max Uplift All uplift 100 lb or less at joint(s) 24 except 2=386(LC 6), 16=404(LC 7), 25=187(LC 6), 26=181(LC 6), 27=176(LC 6), 28=197(LC 6), 29=132(LC 7), 23=186(LC 7), 21=181(LC 7), 20=176(LC 7), 19=197(LC 7), 18=127(LC 7)  
 Max Grav All reactions 250 lb or less at joint(s) 24, 26, 27, 29, 21, 20, 18 except 2=484(LC 1), 16=484(LC 1), 25=263(LC 10), 28=254(LC 10), 23=263(LC 11), 19=254(LC 11)

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

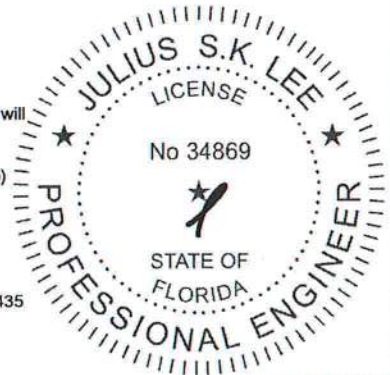
TOP CHORD 8-9=65/273, 9-10=65/273

**NOTES** (13-14)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf, BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) 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
- 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/TP1 1-2002.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2'-0" oc.
- 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" tall by 2'-0" wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SYP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24 except (jt=lb) 2=386, 16=404, 25=187, 26=181, 27=176, 28=197, 29=132, 23=186, 21=181, 20=176, 19=197, 18=127.
- "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- 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 TP1 1 as referenced by the building code.
- 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

Continued on page 2



August 31, 2009

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 Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.
313910	T12G	GABLE	1	1	I4093124
Builders FrstSource, Lake City, FL 32055			Job Reference (optional)		
			7.140 s Jun 24 2009 MITek Industries, Inc. Mon Aug 31 08:05:48 2009 Page 2		

**LOAD CASE(S)** Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-9=-114(F=-60), 9-17=-114(F=-60), 2-16=-10



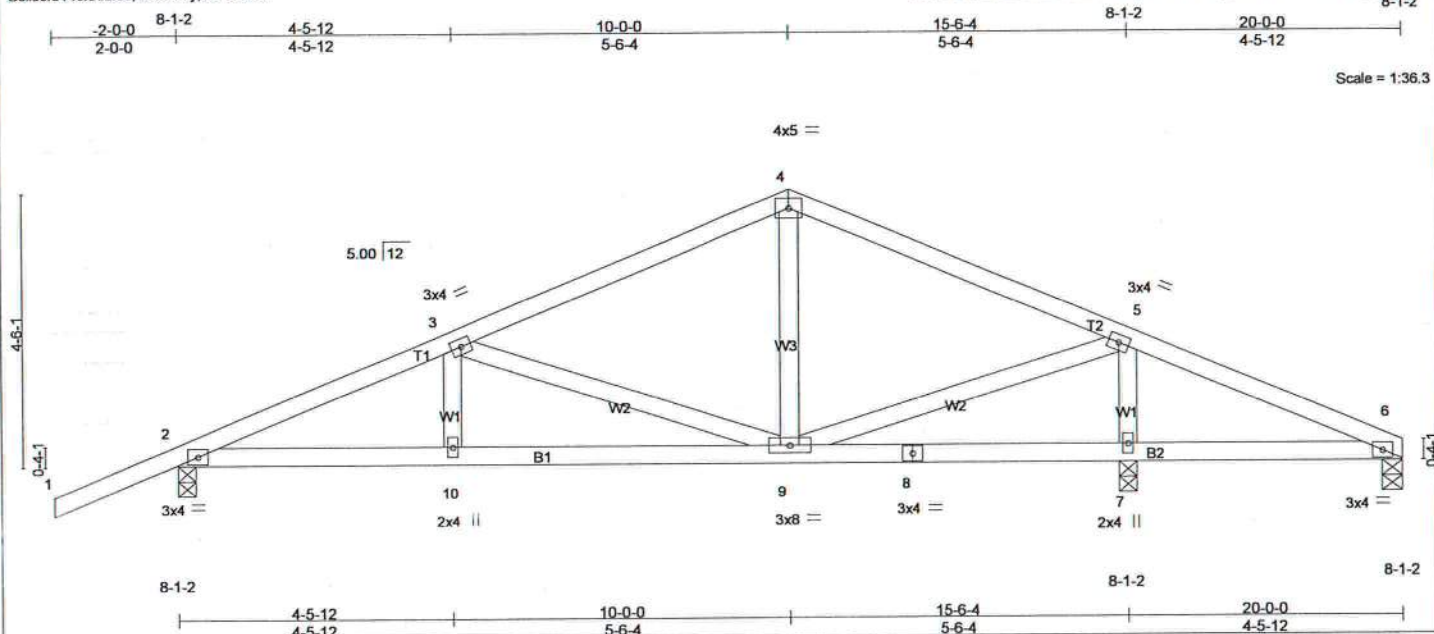
August 31,2009



Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	14093125
313910	T13	COMMON	1	1	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055

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LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.34	Vert(LL)	-0.03	9-10	>999	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.20	Vert(TL)	-0.06	9-10	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.26	Horz(TL)	0.01	7	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.04	9-10	>999	240		
									Weight: 93 lb	

#### LUMBER

TOP CHORD 2 X 4 SYP No.2  
BOT CHORD 2 X 4 SYP No.2  
WEBS 2 X 4 SYP No.3

#### BRACING

TOP CHORD

BOT CHORD

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

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

#### REACTIONS (lb/size)

6=52/0-4-0, 7=732/0-3-8, 2=592/0-3-8  
Max Horz 2=109(LC 6)  
Max Uplift 6=87(LC 7), 7=292(LC 7), 2=280(LC 6)  
Max Grav 6=81(LC 11), 7=732(LC 1), 2=592(LC 1)

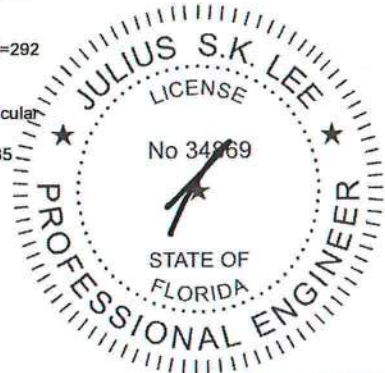
#### FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=880/564, 3-4=463/345, 4-5=466/349  
BOT CHORD 2-10=447/764, 9-10=447/764  
WEBS 5-9=240/497, 5-7=670/551, 3-9=428/345

#### NOTES (8-9)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SYP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6 except (jt=lb) 7=292, 2=280.
- "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
- 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.
- 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



August 31, 2009



#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MII-7473 BEFORE USE.

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Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.
313910	T13G	GABLE	1	1	

I4093126

Builders FrstSource, Lake City, FL 32055

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-2-0-0 2-0-0	8-1-2	10-0-0 10-0-0	20-0-0 10-0-0	22-0-0 2-0-0
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Scale = 1:39.4

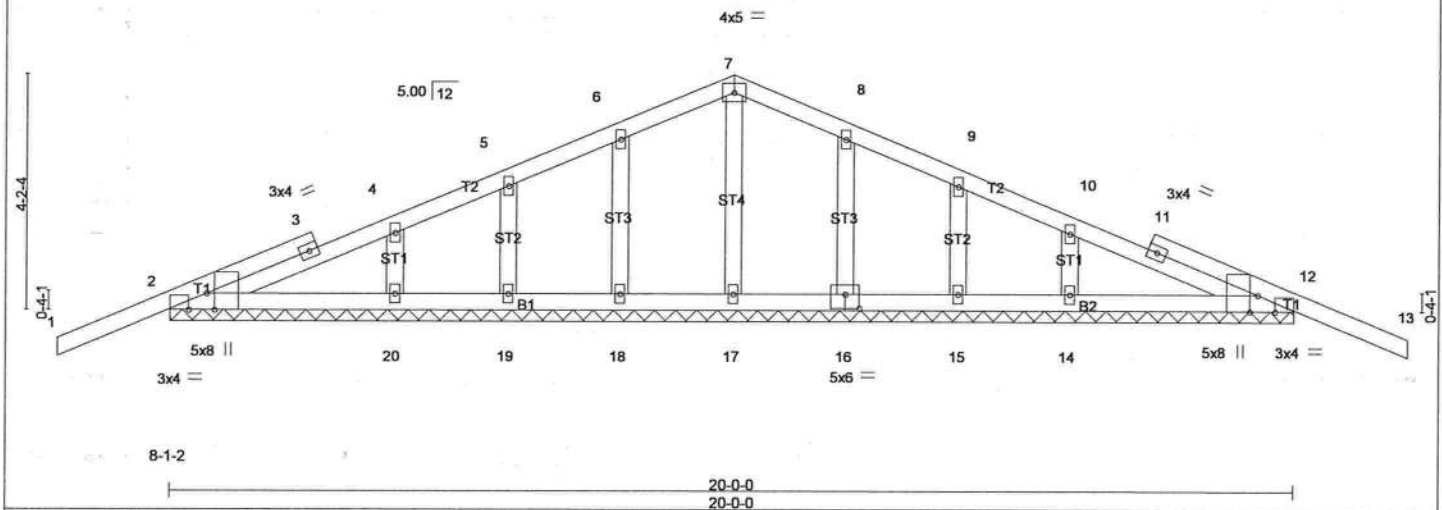


Plate Offsets (X,Y): [2:0-3-8,Edge], [2:0-3-13,Edge], [12:0-3-8,Edge], [12:0-3-13,Edge], [16:0-3-0,0-3-0]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.49	Vert(LL)	-0.03	13	n/r	120	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.08	Vert(TL)	-0.06	13	n/r	90		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.07	Horz(TL)	0.00	12	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)							
									Weight: 98 lb	

**LUMBER**

TOP CHORD 2 X 4 SYP No.2  
 BOT CHORD 2 X 4 SYP No.2  
 OTHERS 2 X 4 SYP No.3

**BRACING**

TOP CHORD  
 BOT CHORD

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

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

**REACTIONS**

All bearings 20-0-0.

(lb) - Max Horz 2=104(LC 7)

Max Uplift All uplift 100 lb or less at joint(s) 17 except 2=407(LC 6), 12=422(LC 7), 18=192(LC 6),  
 19=171(LC 6), 20=218(LC 6), 16=191(LC 7), 15=170(LC 7), 14=223(LC 7)

Max Grav All reactions 250 lb or less at joint(s) 17, 19, 15 except 2=508(LC 10), 12=508(LC 11), 18=273(LC 10),  
 20=366(LC 10), 16=273(LC 11), 14=366(LC 11)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.**WEBS** 6-18=-251/229, 4-20=-329/274, 8-16=-251/229, 10-14=-329/274**NOTES** (13-14)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1-2002.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- 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.
- All bearings are assumed to be SYP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17 except (it=lb) 2=407, 12=422, 18=192, 19=171, 20=218, 16=191, 15=170, 14=223.
- "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- 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.
- 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

August 31, 2009

Continued on page 2

**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 parameters 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 BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Oro Drive, Madison, WI 53719.

Julius Lee Engineering  
 1109 Coastal Bay Blvd.  
 Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	I4093126
313910	T13G	GABLE	1	1	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055

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# LOAD CASE(S) Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-7=114(F=60), 7-13=114(F=60), 2-12=10



August 31, 2009



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIT-7473 BEFORE USE.**

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Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435



Job 313910	Truss T14	Truss Type COMMON	Qty 1	Ply 2	R & M CONST. - ALVAREZ RES.	I4093127
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Builders FirstSource, Lake City, FL 32055

7.140 s Jun 24 2009 Mitek Industries, Inc. Mon Aug 31 08:05:50 2009 Page 1



Scale = 1:36.1

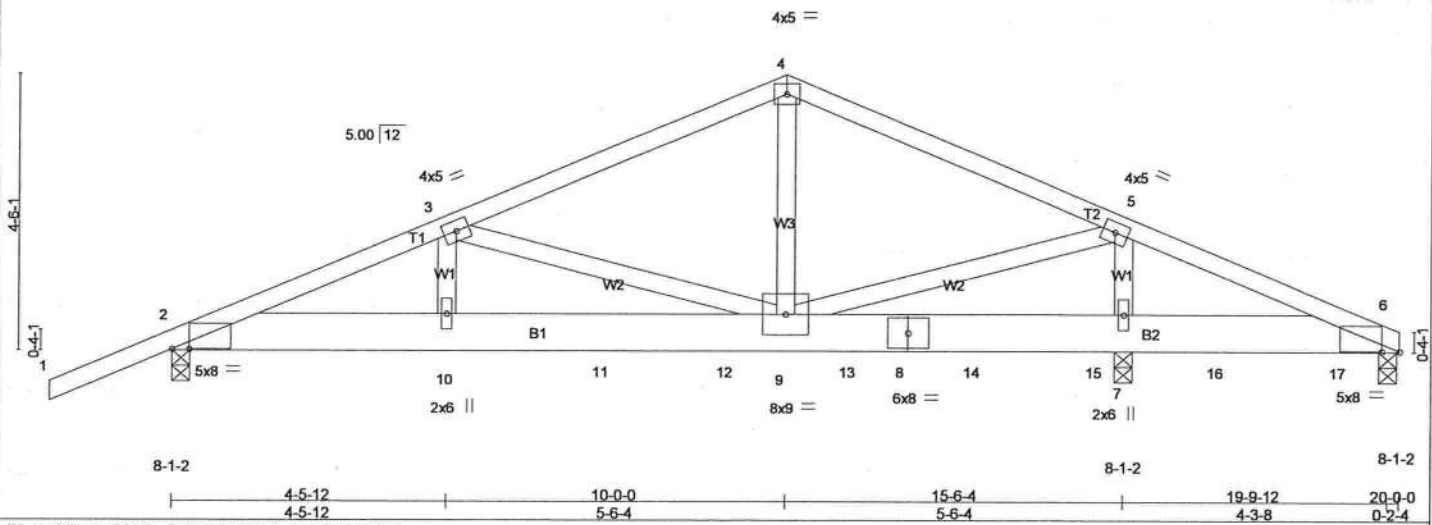


Plate Offsets (X,Y): [2-0-3-6,0-0-0], [6-0-3-6,0-0-0]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.25	Vert(LL)	-0.08	9-10	>999	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.66	Vert(TL)	-0.16	9-10	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.59	Horz(TL)	0.02	7	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.08	9-10	>999	240		
									Weight: 246 lb	

#### LUMBER

TOP CHORD 2 X 4 SYP No.2  
BOT CHORD 2 X 8 SYP No.1D  
WEBS 2 X 4 SYP No.3

#### BRACING

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

#### REACTIONS

(lb/size) 6=557/0-3-8, 7=5437/0-3-8, 2=2122/0-3-8  
Max Horz 2=116(LC 5)  
Max Uplift 6=176(LC 6), 7=1844(LC 6), 2=879(LC 5)  
Max Grav 6=583(LC 10), 7=5437(LC 1), 2=2122(LC 1)

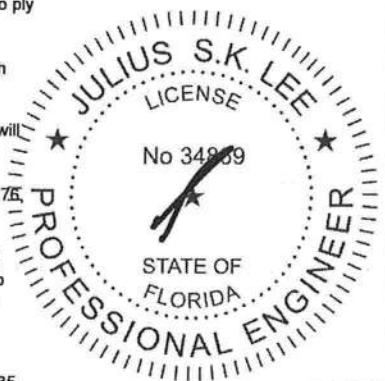
#### FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=5108/1898, 3-4=3294/1195, 4-5=3302/1213, 5-6=241/638  
BOT CHORD 2-10=1778/4696, 10-11=1778/4696, 11-12=1778/4696, 9-12=1778/4696,  
9-13=555/239, 8-13=555/239, 8-14=555/239, 14-15=555/239, 7-15=555/239,  
7-16=555/239, 16-17=555/239, 6-17=555/239  
WEBS 3-10=369/971, 3-9=1800/775, 4-9=798/2240, 5-9=1336/3697, 5-7=2899/1099

#### NOTES (11-12)

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2 X 4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2 X 8 - 2 rows at 0-4-0 oc.  
Webs connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-05; 110mph (3-second gust); TCFL=4.2psf; BCDL=3.0psf; h=12ft; Cat. II; Exp C; enclosed; MWFRS (low-rise); porch right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SYP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=176, 7=1844, 2=879.
- "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1719 lb down and 724 lb up at 7-0-12, 808 lb down and 312 lb up at 9-0-12, 808 lb down and 236 lb up at 11-0-12, 808 lb down and 251 lb up at 13-0-12, 865 lb down and 258 lb up at 15-0-12, and 865 lb down and 227 lb up at 17-0-12, and 865 lb down and 227 lb up at 19-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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.
- Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

Continued on page 2  
LOAD CASE(S) Standard



August 31, 2009

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-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 parameters 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, D58-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	R & M CONST. - ALVAREZ RES.	I4093127
313910	T14	COMMON	1	2	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055

7.140 s Jun 24 2009 MiTek Industries, Inc. Mon Aug 31 08:05:50 2009 Page 2

#### LOAD CASE(S) Standard

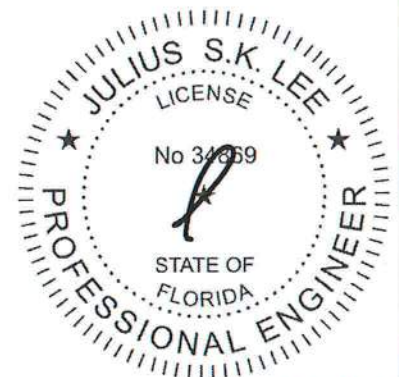
1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-4=-54, 4-6=-54, 2-6=-10

Concentrated Loads (lb)

Vert: 11=-1719(F) 12=-808(F) 13=-808(F) 14=-808(F) 15=-865(F) 16=-865(F) 17=-865(F)



August 31, 2009



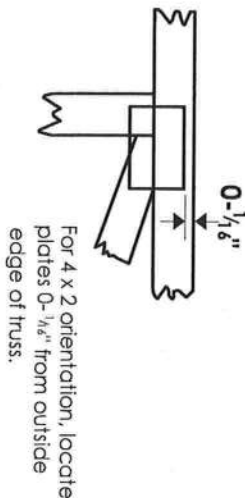
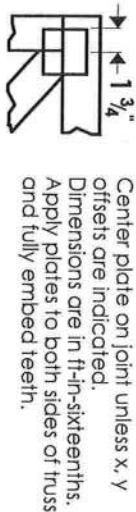
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE.**

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 parameters 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, D58-89 and BCS11 Building Component Safety Information** available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435

# Symbols

## PLATE LOCATION AND ORIENTATION



For 4 x 2 orientation, locate plates 0- $\frac{1}{16}$ " from outside edge of truss.

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

## PLATE SIZE

4 X 4

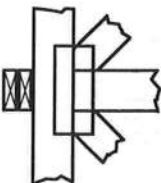
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

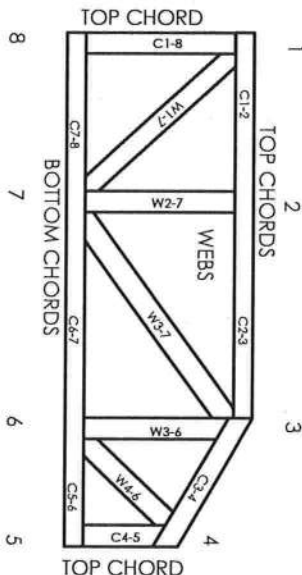


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

## Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCS11: 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, 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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# 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 BCS11.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T, I, 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 piling 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 of 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.

Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435





#2 HIP OR COMMON TRUSS	#1 HIP TRUSS

[illegible]

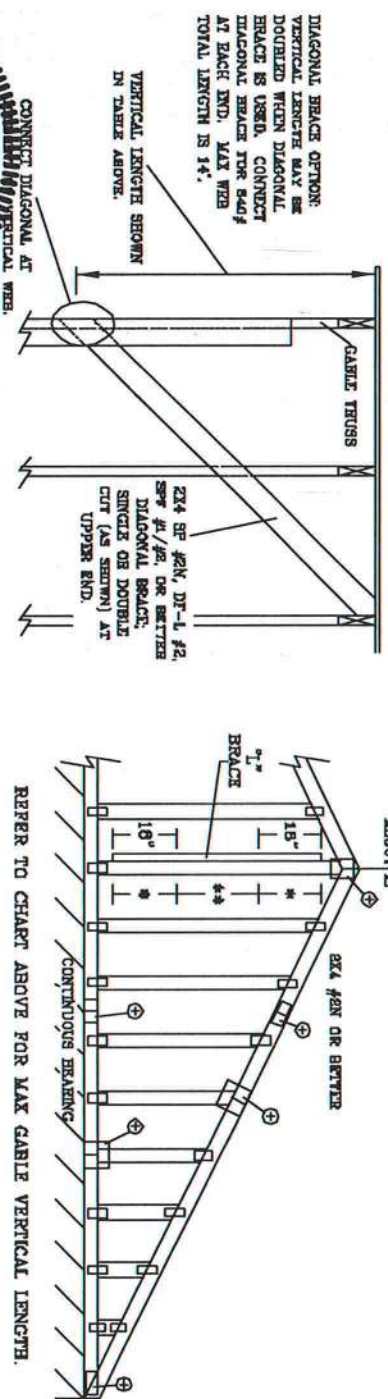
UPLIFT VALUES DO TAKE INTO ACCOUNT PORCHES EXPOSED

SEE FOR FOR THE DOWN

**REVIEWED**  
By Julius Lee at 10:52 am, Jun 27, 2008



MAX GABLE VERTICAL LENGTH															
2x4 GABLE VERTICAL SPACING   SPECIES	BRACE GRADE	NO BRACES	(1) 1x4 "L" BRACE *		(1) 2x4 "L" BRACE *		(2) 2x4 "L" BRACE **		(1) 2x6 "L" BRACE *		(2) 2x8 "L" BRACE *				
			GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B			
24" O.C.	SPF HF	#1 / #2	3' 4"	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 6"	10' 10"	11' 2"	12' 11"	13' 3"		
			#3	3' 3"	4' 11"	4' 11"	6' 6"	6' 6"	8' 3"	8' 3"	10' 1"	10' 1"	12' 11"	12' 11"	
			STUD	3' 3"	4' 11"	4' 11"	6' 5"	6' 6"	8' 3"	8' 3"	10' 0"	10' 0"	12' 11"	12' 11"	
		STANDARD	3' 3"	4' 2"	4' 2"	5' 6"	5' 6"	7' 5"	7' 5"	8' 8"	8' 8"	11' 8"	11' 8"		
			#1	3' 8"	5' 10"	6' 3"	6' 11"	7' 5"	8' 3"	8' 11"	10' 10"	11' 8"	12' 11"	13' 11"	
			#2	3' 7"	6' 10"	6' 3"	6' 11"	7' 5"	8' 3"	8' 11"	10' 10"	11' 8"	12' 11"	13' 11"	
	SP DFL	#3	3' 6"	5' 0"	6' 0"	6' 8"	6' 8"	8' 3"	8' 3"	8' 8"	10' 4"	10' 4"	12' 11"	13' 7"	
			STUD	3' 6"	5' 0"	5' 0"	8' 7"	8' 7"	8' 3"	8' 3"	8' 8"	10' 3"	10' 3"	12' 11"	13' 7"
			STANDARD	3' 4"	4' 3"	4' 3"	5' 8"	5' 8"	7' 8"	7' 8"	8' 10"	8' 10"	12' 0"	12' 0"	
		#1 / #2	3' 10"	6' 8"	6' 8"	7' 11"	8' 1"	9' 5"	9' 5"	9' 8"	12' 6"	12' 6"	14' 0"	14' 0"	
			#3	3' 8"	6' 0"	6' 0"	7' 11"	7' 11"	9' 5"	9' 5"	12' 4"	12' 4"	14' 0"	14' 0"	
			STUD	3' 6"	6' 0"	6' 0"	7' 11"	7' 11"	9' 6"	9' 5"	12' 4"	12' 4"	14' 0"	14' 0"	
16" O.C.	SPF HF	STANDARD	3' 9"	5' 8"	6' 2"	6' 10"	6' 10"	9' 2"	9' 2"	10' 7"	10' 7"	14' 0"	14' 0"		
			#1	4' 3"	6' 8"	7' 2"	7' 11"	8' 6"	9' 5"	10' 2"	12' 5"	13' 5"	14' 0"	14' 0"	
			#2	4' 2"	6' 8"	7' 2"	7' 11"	8' 6"	9' 6"	10' 2"	12' 5"	13' 5"	14' 0"	14' 0"	
		#3	4' 0"	6' 8"	6' 2"	7' 11"	8' 2"	9' 6"	9' 6"	9' 11"	12' 6"	13' 5"	14' 0"	14' 0"	
			STUD	4' 0"	6' 1"	6' 1"	7' 11"	8' 1"	9' 5"	9' 11"	12' 5"	12' 5"	14' 0"	14' 0"	
			STANDARD	3' 10"	5' 3"	5' 3"	6' 11"	6' 11"	9' 4"	9' 4"	10' 10"	10' 10"	14' 0"	14' 0"	
	SPF HF	#1 / #2	4' 8"	6' 11"	7' 7"	8' 9"	8' 11"	10' 6"	10' 8"	13' 8"	14' 0"	14' 0"	14' 0"		
			#3	4' 2"	6' 11"	6' 11"	8' 8"	8' 8"	10' 5"	10' 5"	13' 8"	13' 8"	14' 0"	14' 0"	
			STUD	4' 2"	6' 11"	6' 11"	8' 9"	8' 9"	10' 5"	10' 5"	13' 8"	13' 8"	14' 0"	14' 0"	
		STANDARD	4' 8"	6' 11"	6' 11"	8' 10"	7' 10"	10' 6"	10' 6"	12' 3"	12' 3"	14' 0"	14' 0"		
			#1	4' 8"	6' 11"	6' 11"	8' 8"	8' 8"	10' 5"	10' 5"	13' 8"	13' 8"	14' 0"	14' 0"	
			#2	4' 8"	6' 11"	6' 11"	8' 9"	8' 9"	10' 5"	10' 5"	13' 8"	13' 8"	14' 0"	14' 0"	
SP DFL	STANDARD	4' 8"	6' 11"	6' 11"	8' 9"	8' 9"	10' 5"	10' 5"	13' 8"	13' 8"	14' 0"	14' 0"			
		#1	4' 8"	6' 11"	6' 11"	8' 8"	8' 8"	10' 5"	10' 5"	13' 8"	13' 8"	14' 0"	14' 0"		
		#2	4' 8"	6' 11"	6' 11"	8' 9"	8' 9"	10' 5"	10' 5"	13' 8"	13' 8"	14' 0"	14' 0"		
	#3	4' 8"	6' 11"	6' 11"	8' 9"	8' 9"	10' 5"	10' 5							



BRACING GROUP SPECIES AND GRADES:

GROUP A:

SPRUCE-PIKE-FIR

#1	#2	STANDARD
#3		STD

HICK-FIR

#2	STD
#3	STANDARD

GROUP B:

DOUGLAS FIR-LARCH

#2	
STD	
STANDARD	

SOUTHERN PINE

#3	
STD	
STANDARD	

SCOTCHEN PINE

#1	
#2	

DOUGLAS FIR-LARCH

#1	
#2	

FCM-FIR

#1 & BTR
#1

LIVE LOAD REDUCTION CRITERIA IS  $L/200$ .  
 PROVIDE V-LEAF CONNECTIONS FOR 136 PLF OVER  
 CONTINUOUS BEARING (6 PSF TO DEAD LOAD).  
 CASTLE END SUPPORTS LOAD FROM 4" O"  
 OUTSIDERS WITH 2" O" OVERHANG, OR 12"  
 PLYWOOD OVERHANG.

ATTACH EACH T<sup>1</sup> BRACE WITH 104 NUTS.  
 \* FOR (1) T<sup>1</sup> BRACES, SPACE NUTS AT 8" O.C.  
 IN 18" END ZONES AND 4" O.C. BETWEEN ZONES.  
 \* FOR (2) T<sup>1</sup> BRACES, SPACE NUTS AT 3" O.C.  
 IN 18" END ZONES AND 6" O.C. BETWEEN ZONES.  
 T<sup>1</sup> BRACING MUST BE A MINIMUM OF 80% OF WEB  
 MEMBER LENGTH.

CABLE VERTICAL PLATE SIZES	
VERTICAL LENGTH	NO SPlice
LESS THAN 4' 0"	1X1 OR 2X3
GREATER THAN 4' 0", BUT LESS THAN 11' 0"	2X4
GREATER THAN 11' 0"	2.5X4

+ REFER TO COLUMN THIRDS DESIGN FOR  
PEAK, SPLICE, AND BEEL PLATES.

REFER TO CHART ABOVE FOR MAX GABLE VERTICAL LENGTH.

**Maintenance:** These require extensive care for fabricating, handling, installing and repairing. The following equipment is published by TPI Truss Plate Institute, 3810 Orchard Dr., Suite 200 Wm., WI 53779 and VITA (VITA TRUSS CONSULTING ENGINEERS INC.), Madison, WI 53719 for safety practices prior to performing maintenance functions. Unless otherwise indicated, top chord shall have perfect, attached structural panels and bottom chord shall have a properly attached ceiling.

**JULIUS LEE'S  
CONS. ENGINEERS P.A.**  
1455 SW 4th AVENUE  
MIRALAY BEACH FL 33444-8161

1455 ST 4th AVENUE  
RAY BEACH, FL 33444-2161

MAX. TOT. LD. 60 PST

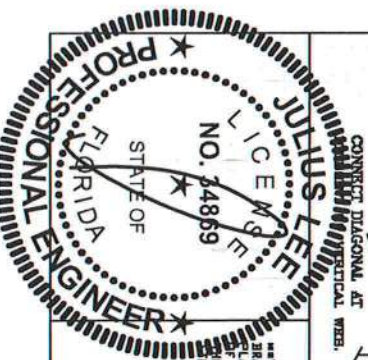
MAX. SPACING 24.0"

REF ASCB7-02-CAB13015

DATE 11/26/03

-ENG

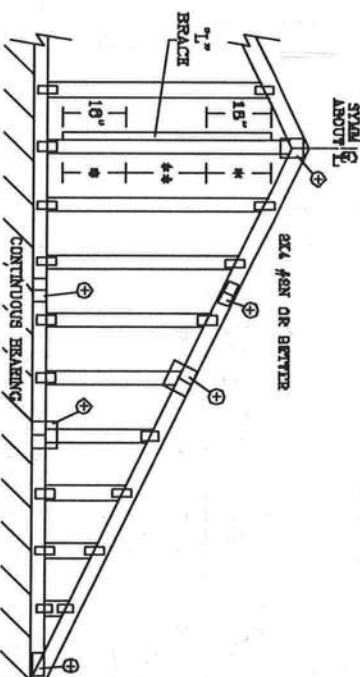
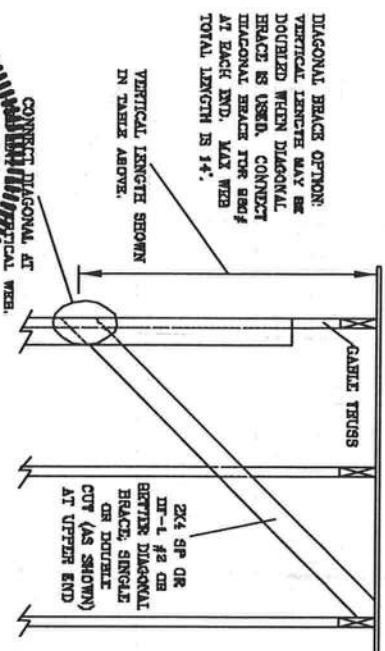
TG



REVIEWED

By Julius Lee at 12:00 pm, Jun 11, 2008





REFER TO CHART ABOVE FOR MAX GABLE VERTICAL LENGTH

BRACING GROUP SPECIES AND GRADERS:	
GROUP A:	
SPRUCE-PINE-YR	RED-FIR
#1 / #2	#12
STANDARD	STUD
#3	#3
STUD	STANDARD
DOUGLAS FIR-LARCH	
#3	SOUTHERN PINE
STUD	#3
STANDARD	STUD
	STANDARD
GROUP B:	
RED-FIR	
#1 & BTR	
#1	
SOUTHERN PINE	
#3	
STUD	
STANDARD	
DOUGLAS FIR-LARCH	
#1	
#3	
STUD	
STANDARD	

CABLE TRUSS DETAIL NOTES:

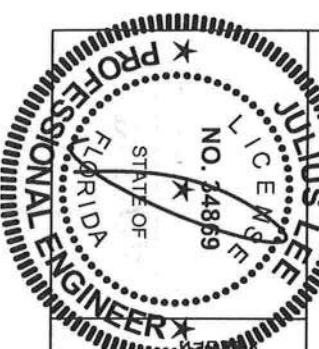
LIVE LOAD DEPLETION CRITERIA IS  $L/240$ .  
PROVIDE UPLIFT CONNECTIONS FOR 180 PLF OVER  
CONTINUOUS BEARING (6 PSF TC DEAD LOAD).

CABLE END SUPPORTS LOAD FROM 4' 0"  
OUTDOORS WITH 2' 0" OVERHANG, OR 12"  
PLYWOOD OVERHANG.

ATTACH EACH T<sup>2</sup> BRACE WITH 104 NAILS.  
# FOR (1) T<sup>2</sup> BRACK: SPACE NAILS AT 3" O.C.  
IN 1<sup>ST</sup> END ZONES AND 4" O.C. BETWEEN ZONES.  
# FOR (2) T<sup>2</sup> BRACKS: SPACE NAILS AT 3" O.C.  
IN 1<sup>ST</sup> END ZONES AND 4" O.C. BETWEEN ZONES.  
T<sup>2</sup> BRACING MUST BE A MINIMUM OF 80% OF WEB  
MEMBER LENGTH.

CABLE VERTICAL PLATE SIZES	
VERTICAL LENGTH	NO. SERVICE
LESS THAN 4' 0"	1X4 OR 2X3
GREATER THAN 4' 0", BUT LESS THAN 11' 8"	2X4
GREATER THAN 11' 8"	2.5X4

+ REFER TO COLUMN TIESS DESIGN FOR  
PEAK, SPLICE, AND BEEL PLATES.

[illegible]

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1456 SW 4th AVENUE  
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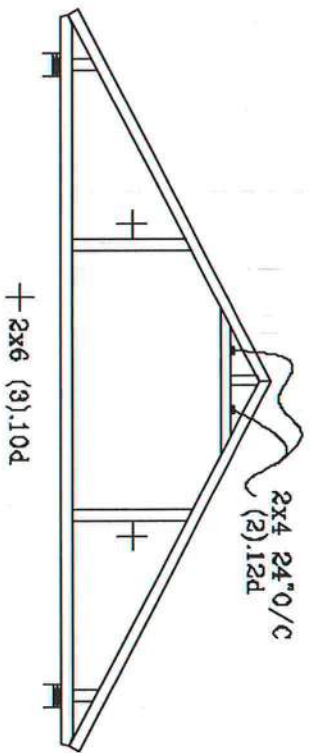
**REVIEWED**  
By Julius Iee at 12:00 pm, Jun 11, 2008

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STATE OF FLORIDA

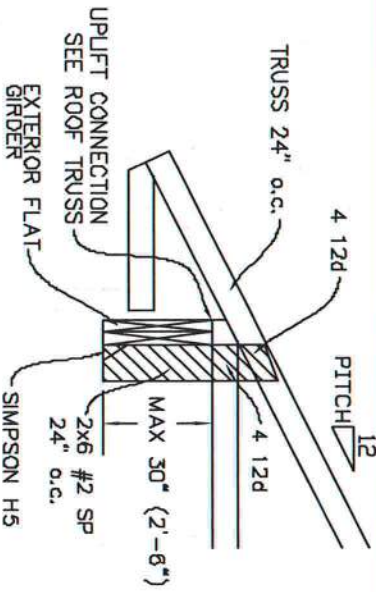
MAX. TOT. LD. 60 PSF
MAX. SPACING 24.0"

REF	ASCEN-02-GAB13030
DATE	11/26/03
DWG	MATEC STD GABLE 30' X 17'
-ENG	

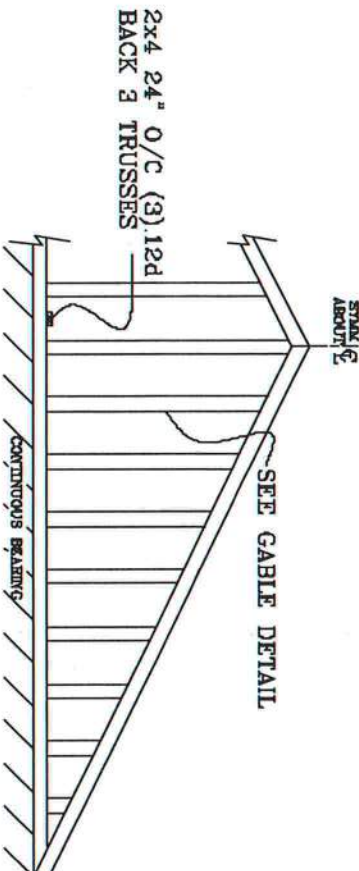
# TYPICAL ATTIC TRUSS BRACING



# TYPICAL ALTERNATE BRACING DETAIL FOR EXTERIOR FLAT GIRDER TRUSS

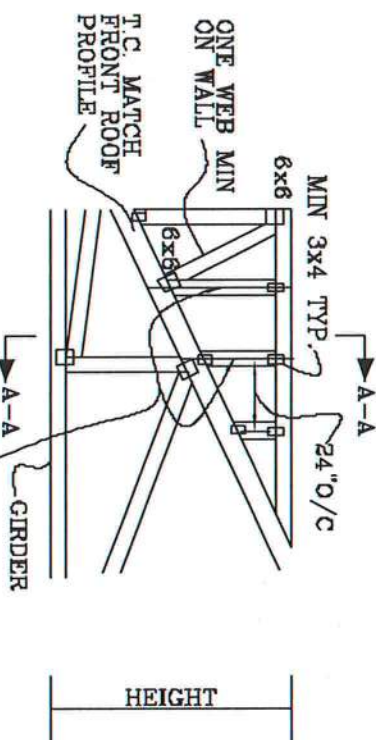


# GABLE END TRUSS DETAIL



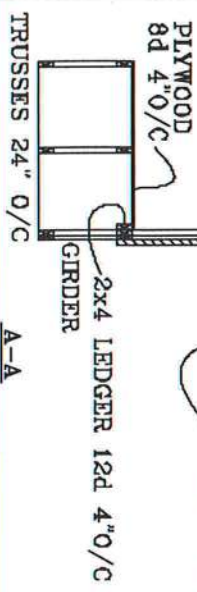
MINIMUM BRACING ON GABLE TRUSS OTHER PERMANENT BRACING DESIGNS BY ARCHITECT OR EOR

# TYPICAL WALL GIRDER VERTICAL WEB BRACING DETAIL



SEE ROOF TRUSSES FOR UPLIFT

SEE GABLE END DETAIL FOR T-BRACE BEHIND EACH VERTICAL



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LICENSE  
NO. 34466  
STATE OF  
FLORIDA  
PROFESSIONAL ENGINEER

REVIEWED  
By Julius Lee at 11:58 am, Jun 11, 2008

TOP CHORD 2X4 #2 OR BETTER  
BOT CHORD 2X4 #2 OR BETTER  
WEBS 2X4 #3 OR BETTER

# PIGGYBACK DETAIL

REFER TO SEALED DESIGN FOR DASHED PLATES.

SPACE PIGGYBACK VERTICALS AT 4' OC MAX.

TOP AND BOTTOM CHORD SPLICES MUST BE STAGGERED SO THAT ONE SPLICE IS NOT DIRECTLY OVER ANOTHER.

PIGGYBACK BOTTOM CHORD MAY BE OMITTED. ATTACH VERTICAL WEBS TO TRUSS TOP CHORD WITH 1.5X3 PLATE.

ATTACH PURLINS TO TOP OF FLAT TOP CHORD. IF PIGGYBACK IS SOLID LUMBER OR THE BOTTOM CHORD IS OMITTED, PURLINS MAY BE APPLIED BENEATH THE TOP CHORD OF SUPPORTING TRUSS.

REFER TO ENGINEER'S SEALED DESIGN FOR REQUIRED PURLIN SPACING.

THIS DETAIL IS APPLICABLE FOR THE FOLLOWING WIND CONDITIONS:

110 MPH WIND, 30' MEAN HGT, ASCE 7-02, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, 1 MI FROM COAST

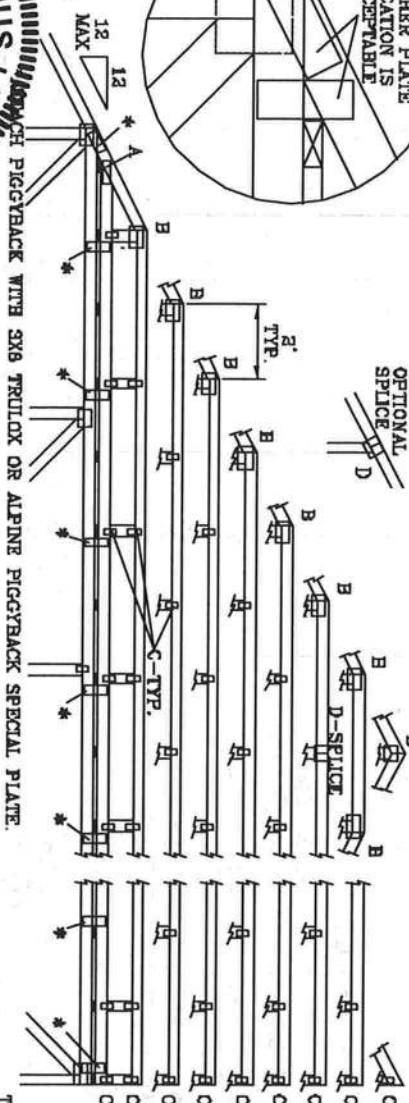
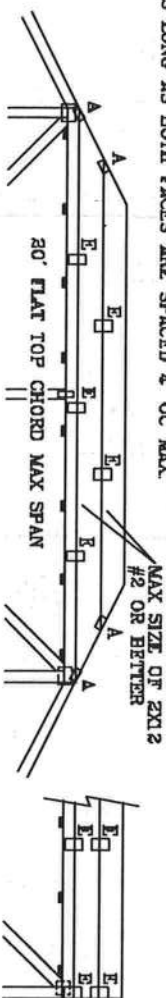
CAT I, EXP C, WIND TC DL=5 PSF, WIND BC DL=5 PSF

110 MPH WIND, 30' MEAN HGT, ENCLOSURE BLDG, LOCATED ANYWHERE IN ROOF

WIND TC DL=5 PSF, WIND BC DL=5 PSF

FRONT FACE (E\*) PLATES MAY BE OFFSET FROM BACK FACE PLATES AS LONG AS BOTH FACES ARE SPACED 4' OC MAX.

130 MPH WIND, 30' MEAN HGT, ASCE 7-02, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, CAT II, EXP. C, WIND TC DL=6 PSF, WIND BC DL=6 PSF

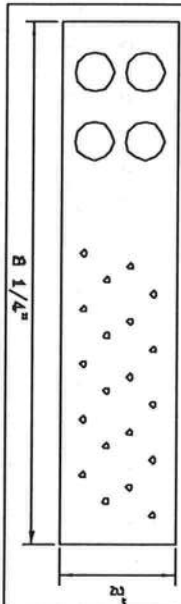


JOINT TYPE	SPANS UP TO		
	30'	34'	62'
A	2X4	2.5X4	3X6
B	4X6	6X8	6X8
C	1.5X3	1.5X4	1.5X4
D	5X4	6X6	6X6
E	4X8 OR 3X6 TRUSS AT 4' OC, ROTATED VERTICALLY		

ATTACH TRUSS PLATES WITH (6) 0.120" X 1.975" NAILS, OR EQUAL, PER FACE PER PLY. (4) NAILS IN EACH MEMBER TO BE CONNECTED. REFER TO DRAWING 160 TL FOR TRUSS INFORMATION.

WEB LENGTH	REQUIRED BRACING
0' TO 7'9"	NO BRACING
7'9" TO 10'	1X4 "T" BRACE, SAME GRADE, SPECIES AS WEB MEMBER, OR BETTER, AND 80% LENGTH OF WEB MEMBER. ATTACH WITH 6d NAILS AT 4' OC.
10' TO 14'	2X4 "T" BRACE, SAME GRADE, SPECIES AS WEB MEMBER, OR BETTER, AND 80% LENGTH OF WEB MEMBER. ATTACH WITH 16d NAILS AT 4' OC.

\* PIGGYBACK SPECIAL PLATE  
ATTACH TEETH TO THE PIGGYBACK AT THE TIME OF FABRICATION. ATTACH TO SUPPORTING TRUSS WITH (4) 0.120" X 1.975" NAILS PER FACE PER PLY. APPLY PIGGYBACK SPECIAL PLATE TO EACH TRUSS FACE AND SPACE 4' OC OR LESS.



THIS DRAWING REPLACES DRAWINGS 634.016 634.017 & 647.045

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MAX LOADING

65 PSF AT  
1.33 DUR. FAC.

60 PSF AT  
1.25 DUR. FAC.

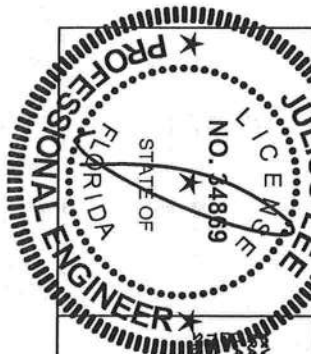
47 PSF AT  
1.15 DUR. FAC.

SPACING 24.0"

REF PIGGYBACK

DATE 09/12/07

DRWG/MIK/STD PIGGY  
-ENG JL



REVIEWED

By Julius Lee at 11:59 am, Jun 11, 2008

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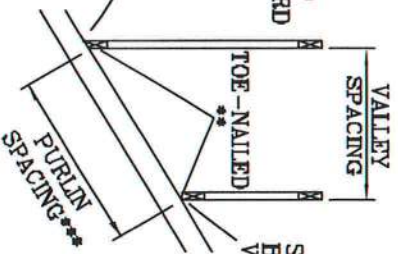
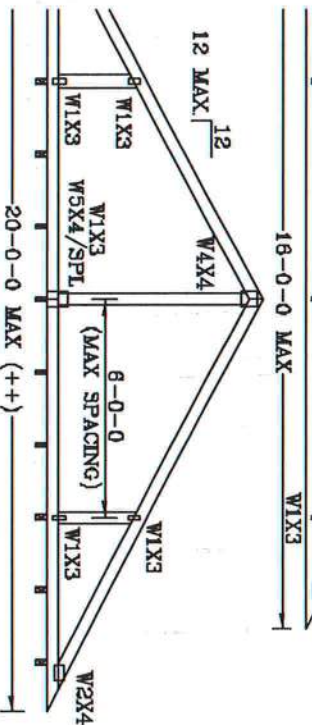
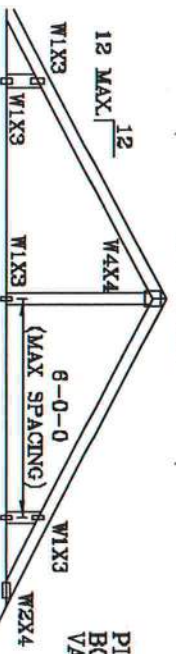
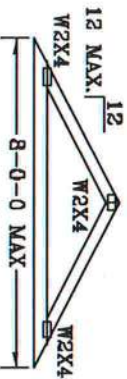
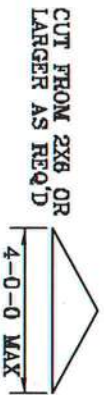
# VALLEY TRUSS DETAIL

TOP CHORD 2X4 SP #2 OR SPF #1/#2 OR BETTER.  
BOT CHORD 2X3(\*) OR 2X4 SP #2/N OR SPF #1/#2 OR BETTER.  
WEBS 2X4 SP #3 OR BETTER.

\* 2X3 MAY BE RIPPED FROM A 2X6 (PITCHED OR SQUARE).

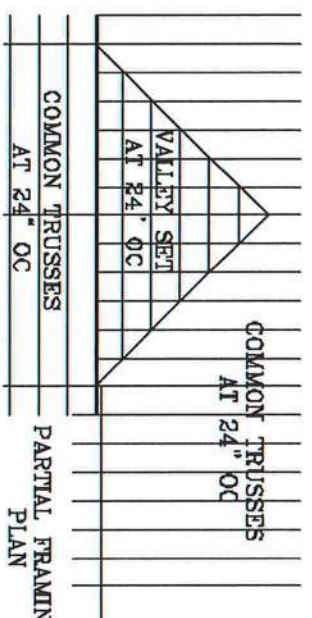
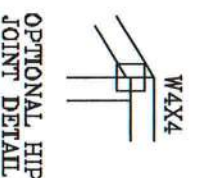
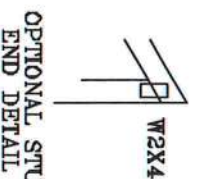
\*\* ATTACH EACH VALLEY TO EVERY SUPPORTING TRUSS WITH:

- (2) 16d BOX (0.135" X 3.5") NAILS TOE-NAILED FOR FBC 2004 110 MPH, ASCE 7-02 110 MPH WIND OR (3) 16d FOR ASCE 7-02 130 MPH WIND. 15' MEAN HEIGHT, ENCLOSED BUILDING, EXP. C. RESIDENTIAL, WIND TC DL-6 PSF.



SQUARE CUT  
BOTTOM CHORD  
VALLEY

\*\*\* NOTE THAT THE PURLIN SPACING FOR BRACING THE TOP CHORD OF THE TRUSS BENEATH THE VALLEY IS MEASURED ALONG THE SLOPE OF THE TOP CHORD.  
++ LARGER SPANS MAY BE BUILT AS LONG AS THE VERTICAL HEIGHT DOES NOT EXCEED 12'0".  
BOTTOM CHORD MAY BE SQUARE OR PITCHED CUT AS SHOWN.



PARTIAL FRAMING  
PLAN

THIS DRAWING REPLACES DRAWING A105

OVERVIEW: TRUSSES REQUIRE EXTENSIVE CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO THE L-80 BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY THE CRANES & RIGGING INSTITUTE, 580 DOWNSIDE DR., SUITE 200, WASHINGTON, VA 22799 AND VITA CYCLO TRUSS COUNCIL, 1000 AMERICA, 6300 ENTERPRISE LN., NATION, VT 57759 FOR SAFETY PRACTICES PRIOR TO PERFORMING TRUSS FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIBBON CEILING.

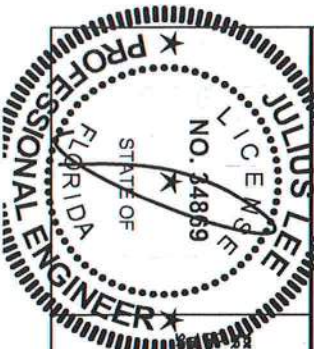
JULIUS LEE'S  
CONS. ENGINEERS P.A.

1455 9TH AVE. APT. 202  
MELBOURNE, FL 32904-9101

TC IL	20	20	PSF	REF	VALLEY DETAIL
TC DL	7	15	PSF	DATE	11/26/03
BC DL	5	5	PSF	DRWG	VALTRUSS1103
BC IL	0	0	PSF	-ENG	JL
TOT. LD.	32	40	PSF		

No. 34866  
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REVIEWED  
By Julius Lee at 11:59 am, Jun 11, 2008



# TOE-NAIL DETAIL

TOE-NAILS TO BE DRIVEN AT AN ANGLE OF APPROXIMATELY THIRTY DEGREES WITH THE PIECE AND STARTED APPROXIMATELY ONE-THIRD THE LENGTH OF THE NAIL FROM THE END OF THE MEMBER.

PER ANSI/AF&PA NDS-2001 SECTION 12.4.1 - EDGE DISTANCE, END DISTANCE, SPACING: "EDGE DISTANCES, END DISTANCES AND SPACINGS FOR NAILS AND SPIKES SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD."

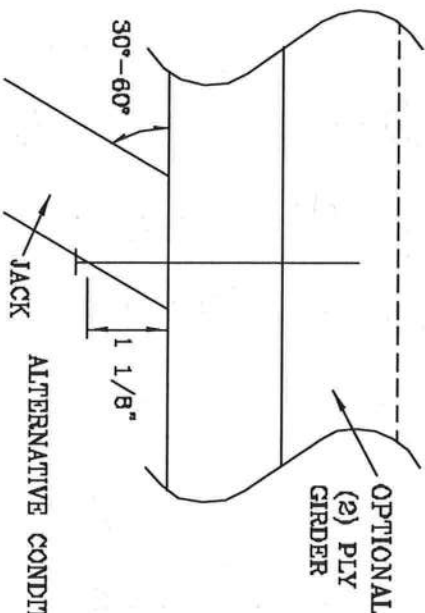
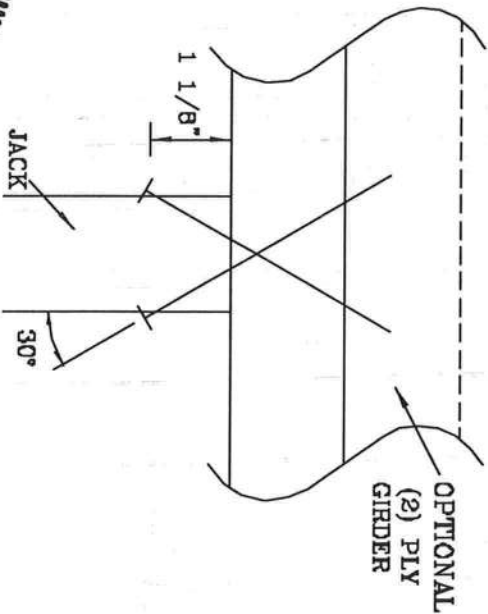
THE NUMBER OF TOE-NAILS TO BE USED IN A SPECIFIC APPLICATION IS DEPENDENT UPON PROPERTIES FOR THE CHORD SIZE, LUMBER SPECIES AND NAIL TYPE. PROPER CONSTRUCTION PRACTICES AS WELL AS GOOD JUDGEMENT SHOULD DETERMINE THE NUMBER OF NAILS TO BE USED.

THIS DETAIL DISPLAYS A TOE-NAILED CONNECTION FOR JACK FRAMING INTO A SINGLE OR DOUBLE PLY SUPPORTING GIRDER.

MAXIMUM VERTICAL RESISTANCE OF 16d (0.162"x3.5") COMMON TOE-NAILS

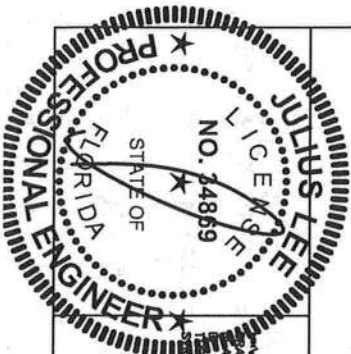
NUMBER OF TOE-NAILS	SOUTHERN PINE		DOUGLAS FIR-LARCH		HEM-FIR		SPRUCE PINE FIR	
	1 PLY	2 PLYS	1 PLY	2 PLYS	1 PLY	2 PLYS	1 PLY	2 PLYS
2	187#	256#	181#	234#	156#	203#	154#	199#
3	286#	383#	271#	351#	234#	304#	230#	298#
4	394#	511#	361#	468#	312#	406#	307#	397#
5	493#	639#	452#	585#	390#	507#	384#	496#

ALL VALUES MAY BE MULTIPLIED BY APPROPRIATE DURATION OF LOAD FACTOR.



THIS DRAWING REPLACES DRAWING 784040

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BEST PRACTICES FOR TRUSS CONSTRUCTION. SAFETY INFORMATION: PUBLISHED BY THE TRUSS ASSOCIATION, 6800 ENTERPRISE LN, MADISON, VA 20133 AND VITCA (VOID TRUSS COUNCIL) 1000 17TH ST NW, WASHINGTON, DC 20036. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED BRACING. ALL OTHERS SHALL HAVE A PROPERLY ATTACHED BRACING.



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By Julius Lee at 11:59 am, Jun 11, 2008

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No. 34686  
STATE OF FLORIDA

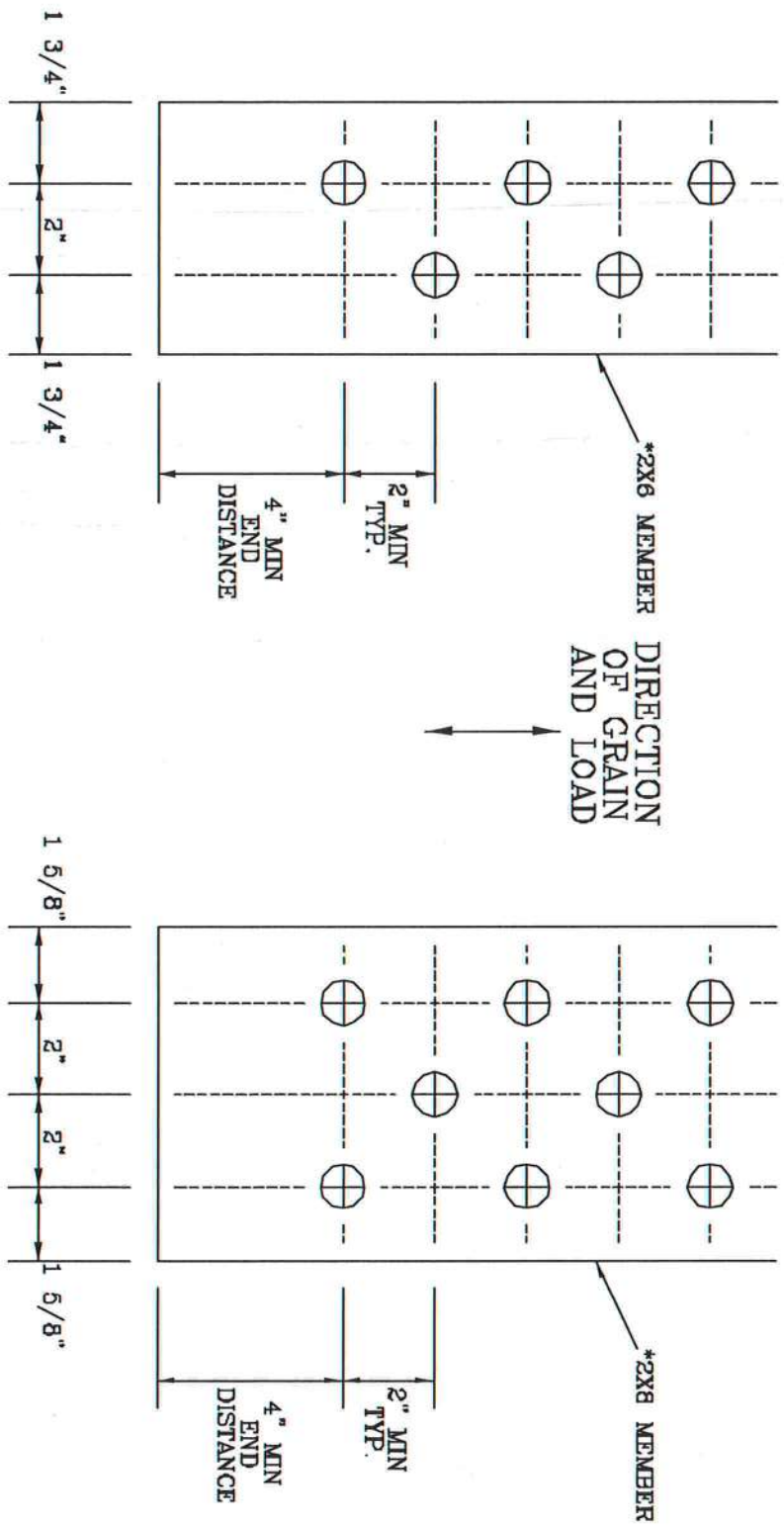
TC LL	PSF	REF	TOE-NAIL
TC DL	PSF	DATE	09/12/07
BC DL	PSF	DRWG	CNTONAIL1103
BC LL	PSF	-ENG	JL
TOT. LD.	PSF		
DUR. FAC.	1.00		
SPACING			



1/2" DIAMETER BOLT SPACING FOR LOAD APPLIED PARALLEL TO GRAIN.

\* GRADE AND SPECIES AS SPECIFIED ON THE ALPINE DESIGN.  
BOLT HOLES SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN BOLT DIAMETER.

TYPICAL LOCATION OF 1/2" DIAMETER THRU BOLTS. BOLT QUANTITIES AS NOTED ON SEALED DESIGN MUST BE APPLIED IN ONE OF THE PATTERNS SHOWN BELOW.  
WASHERS REQUIRED UNDER BOLT HEAD AND NUT

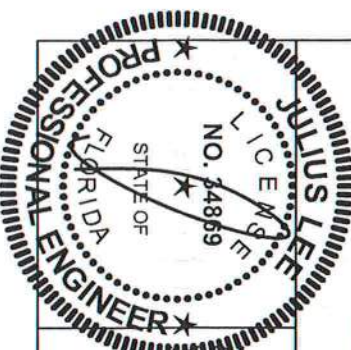


2X6 DETAIL

2X8 DETAIL

THIS DRAWING REPLACES DRAWING A828.016

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND ERECTION. REFER TO 2001 IBC BUILDING DEPARTMENT SAFETY INFORMATION, PUBLISHED BY THE TRUSS ASSOCIATION, 3600 CONVENT RD., SUITE 200, FAIRFAX, VA 22031 AND APPROVED TRUSS COUNCIL. THESE FUNCTIONS, DIMENSIONS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIBBED CEILING.



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By Julius Lee at 11:59 am, Jun 11, 2008

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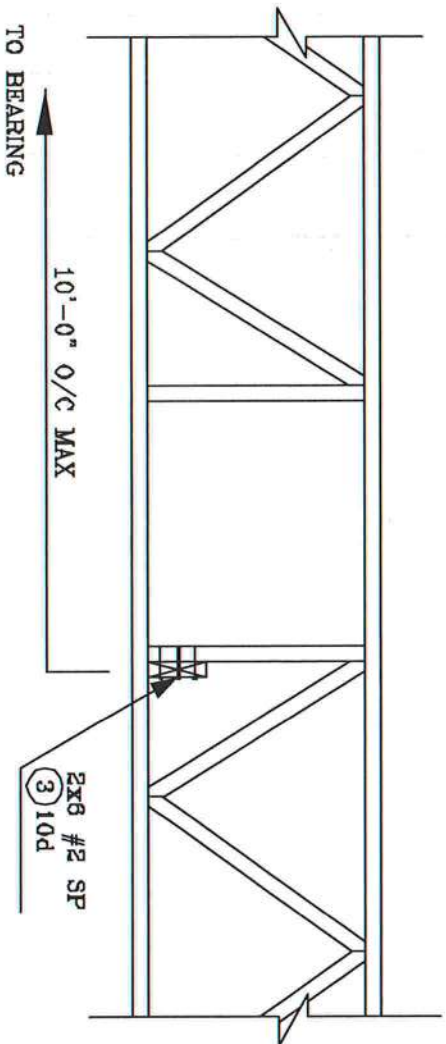
No. 34869  
STATE OF FLORIDA

TC LL	PSF	REF	BOLT SPACING
TC DL	PSF	DATE	11/26/03
BC DL	PSF	DRWG	CNBOLTSPI1103
BC LL	PSF	ENG	JL
TOT. LD.	PSF		
DUR. FAC.			
SPACING			

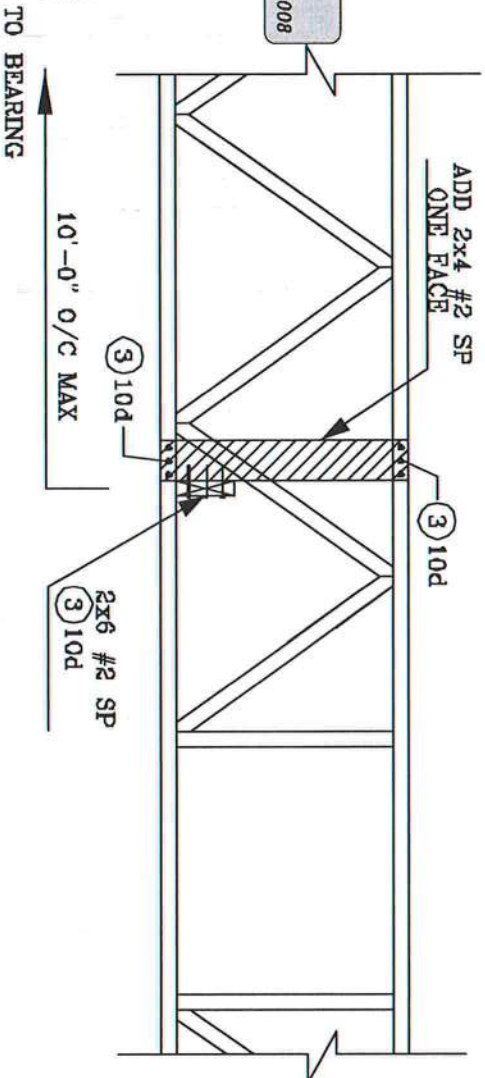




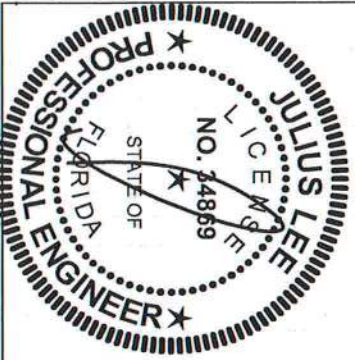
# STRONG BACK DETAIL SYSTEM-42 OR FLAT TRUSS



## ALTERNATE DETAIL FOR STRONG BACK WITH VERTICAL NOT LINING UP



**REVIEWED**  
By Julius Lee at 11:58 am, Jun 11, 2008

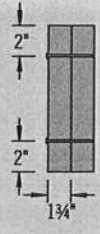
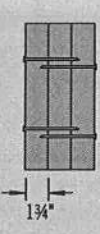
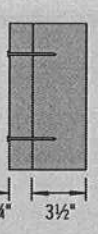

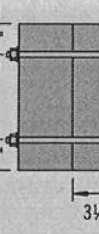



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Doral, FL 33126-2601

No: 34869  
STATE OF FLORIDA

# MULTIPLE-MEMBER CONNECTIONS FOR SIDE-LOADED BEAMS

## Maximum Uniform Load Applied to Either Outside Member (PLF)

Connector Type	Number of Rows	Connector On-Center Spacing	Connector Pattern					
			Assembly A	Assembly B	Assembly C	Assembly D	Assembly E	Assembly F
								
			3 1/2" 2-ply	5 1/4" 3-ply	5 1/4" 2-ply	7" 3-ply	7" 2-ply	7" 4-ply
10d (0.128" x 3") Nail <sup>(1)</sup>	2	12"	370	<b>280</b>	280	<b>245</b>		
	3	12"	555	<b>415</b>	415	<b>370</b>		
1/2" A307 Through Bolts <sup>(2)(4)</sup>	2	24"	505	380	520	465	860	340
		19.2"	635	475	655	580	1,075	425
		16"	760	570	785	695	1,290	505
SDS 1/4" x 3 1/2" <sup>(4)</sup>	2	24"	680	<b>510</b>	510	<b>455</b>		
		19.2"	850	<b>640</b>	640	<b>565</b>		
		16"	1,020	<b>765</b>	765	<b>680</b>		
SDS 1/4" x 6" <sup>(3)(4)</sup>	2	24"				<b>455</b>	<b>465</b>	<b>455</b>
		19.2"				<b>565</b>	<b>580</b>	<b>565</b>
		16"				<b>680</b>	<b>695</b>	<b>680</b>
USP WS35 <sup>(4)</sup>	2	24"	480	<b>360</b>	360	<b>320</b>		
		19.2"	600	<b>450</b>	450	<b>400</b>		
		16"	715	<b>540</b>	540	<b>480</b>		
USP WS6 <sup>(3)(4)</sup>	2	24"				<b>350</b>	<b>525</b>	<b>350</b>
		19.2"				<b>440</b>	<b>660</b>	<b>440</b>
		16"				<b>525</b>	<b>790</b>	<b>525</b>
3 3/4" TrussLok <sup>(4)</sup>	2	24"	635	<b>475</b>	475	<b>425</b>		
		19.2"	795	<b>595</b>	595	<b>530</b>		
		16"	955	<b>715</b>	715	<b>635</b>		
5" TrussLok <sup>(4)</sup>	2	24"		<b>500</b>	500	<b>445</b>	<b>480</b>	<b>445</b>
		19.2"		<b>625</b>	625	<b>555</b>	<b>600</b>	<b>555</b>
		16"		<b>750</b>	750	<b>665</b>	<b>725</b>	<b>665</b>
6 3/4" TrussLok <sup>(4)</sup>	2	24"				445	620	445
		19.2"				555	770	555
		16"				665	925	665

(1) Nailed connection values may be doubled for 6" on-center or tripled for 4" on-center nail spacing.

(2) Washers required. Bolt holes to be 1/16" maximum.

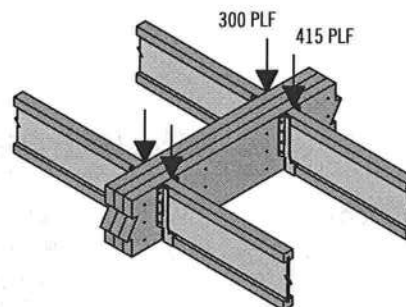
(3) 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

(4) 24" on-center bolted and screwed connection values may be doubled for 12" on-center spacing.

## General Notes

- Connections are based on NDS® 2005 or manufacturer's code report.
- Use specific gravity of 0.5 when designing lateral connections.
- Values listed are for 100% stress level. Increase 15% for snow-loaded roof conditions or 25% for non-snow roof conditions, where code allows.
- Bold Italic** cells indicate **Connector Pattern** must be installed on both sides. Stagger fasteners on opposite side of beam by 1/2 the required **Connector Spacing**.
- Verify adequacy of beam in allowable load tables on pages 16–33.
- 7" wide beams should be side-loaded only when loads are applied to both sides of the members (to minimize rotation).
- Minimum end distance for bolts and screws is 6".
- Beams wider than 7" require special consideration by the design professional.

## Uniform Load Design Example



First, check the allowable load tables on pages 16–33 to verify that three pieces can carry the total load of 715 plf with proper live load deflection criteria. Maximum load applied to either outside member is 415 plf. For a 3-ply 1 3/4" assembly, two rows of 10d (0.128" x 3") nails at 12" on-center is good for only 280 plf. Therefore, use three rows of 10d (0.128" x 3") nails at 12" on-center (good for 415 plf).

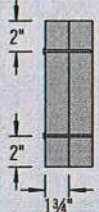





### Alternates:

Two rows of 1/2" bolts or SDS 1/4" x 3 1/2" screws at 19.2" on-center.



# MULTIPLE-MEMBER CONNECTIONS FOR SIDE-LOADED BEAMS

## Point Load—Maximum Point Load Applied to Either Outside Member (lbs)

Connector Type	Number of Connectors	Connector Pattern					
		Assembly A	Assembly B	Assembly C	Assembly D	Assembly E	Assembly F
							
		3 1/2" 2-ply	5 1/4" 3-ply	5 1/4" 2-ply	7" 3-ply	7" 2-ply	7" 4-ply
10d (0.128" x 3") Nail	6	1,110	835	835	740		
	12	2,225	1,670	1,670	1,485		
	18	3,335	2,505	2,505	2,225		
	24	4,450	3,335	3,335	2,965		
SDS Screws 1/4" x 3 1/2" or WS35 1/4" x 6" or WS6 <sup>(1)</sup>	4	1,915	1,435 <sup>(4)</sup>	1,435	1,275	1,860 <sup>(2)</sup>	1,405 <sup>(2)</sup>
	6	2,870	2,150 <sup>(4)</sup>	2,150	1,915	2,785 <sup>(2)</sup>	2,110 <sup>(2)</sup>
	8	3,825	2,870 <sup>(4)</sup>	2,870	2,550	3,715 <sup>(2)</sup>	2,810 <sup>(2)</sup>
3 3/8" or 5" TrussLok™	4	2,545	1,910 <sup>(4)</sup>	1,910	1,695	1,925 <sup>(2)</sup>	1,775 <sup>(2)</sup>
	6	3,815	2,860 <sup>(4)</sup>	2,860	2,545	2,890 <sup>(2)</sup>	2,665 <sup>(2)</sup>
	8	5,090	3,815 <sup>(4)</sup>	3,815	3,390	3,855 <sup>(2)</sup>	3,550 <sup>(2)</sup>

(1) 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

(2) 6" long screws required.

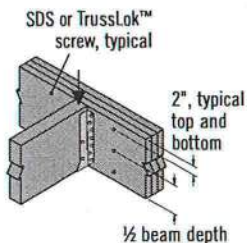
(3) 5" long screws required.

(4) 3 1/2" and 3 3/8" long screws must be installed on both sides.

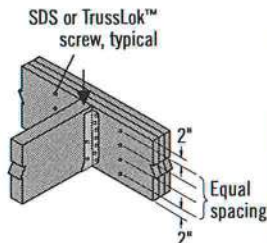
See General Notes on page 38

## Connections

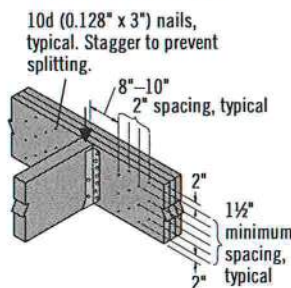
### 4 or 6 or Screw Connection



### 8 Screw Connection

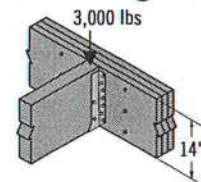


### Nail Connection



There must be an equal number of nails on each side of the connection

## Point Load Design Example



First, verify that a 3-ply 1 3/4" x 14" beam is capable of supporting the 3,000 lb point load as well as all other loads applied. The 3,000 lb point load is being transferred to the beam with a face mount hanger. For a 3-ply 1 3/4" assembly, eight 3 3/8" TrussLok™ screws are good for 3,815 lbs with a face mount hanger.

# MULTIPLE-MEMBER CONNECTIONS FOR TOP-LOADED BEAMS

## 1 3/4" Wide Pieces

- Minimum of three rows of 10d (0.128" x 3") nails at 12" on-center.
- Minimum of four rows of 10d (0.128" x 3") nails at 12" on-center for 14" or deeper.
- If using 12d–16d (0.148"–0.162" diameter) nails, the number of nailing rows may be reduced by one.
- Minimum of two rows of SDS, WS, or TrussLok™ screws at 16" on-center. Use 3 3/8" minimum length with two or three plies; 5" minimum for 4-ply members. 6" SDS and WS screws are not recommended for use with TimberStrand® LSL. For 3- or 4-ply members, connectors must be installed

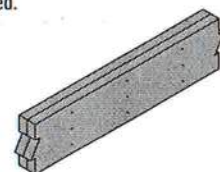
on both sides. Stagger fasteners on opposite side of beam by 1/2 of the required connector spacing.

- Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.

## 3 1/2" Wide Pieces

- Minimum of two rows of SDS, WS, or TrussLok™ screws, 5" minimum length, at 16" on-center. 6" SDS and WS screws are not recommended for use with TimberStrand® LSL. Connectors must be installed on both sides. Stagger fasteners on opposite side of beam by 1/2 of the required connector spacing.

- Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.
- Minimum of two rows of 1/2" bolts at 24" on-center staggered.



**L6** Multiple pieces can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7"