

## Julius Lee Engineering

RE: 310209 - HOUSECRAFT - BUENO RES.

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

### Site Information:

Project Customer: HOUSECRAFT HOMES Project Name: BUENO RES. Model: CUSTOM  
Lot/Block: 15 Subdivision: LITTLE PINE FARMS  
Address:  
City: COLUMBIA CTY State: FL

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

Name: JOHN D. HARRINGTON License #: CGC038861  
Address: 24113 NW OLD BELLAMY RD  
City: HIGH SPRINGS, 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 23 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.**

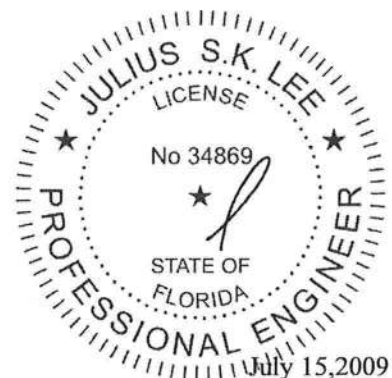
No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I4057023	CJ1	7/15/09	18	I4057040	T06	7/15/09
2	I4057024	CJ1A	7/15/09	19	I4057041	T07	7/15/09
3	I4057025	CJ3	7/15/09	20	I4057042	T08	7/15/09
4	I4057026	CJ3A	7/15/09	21	I4057043	T09	7/15/09
5	I4057027	CJ5	7/15/09	22	I4057044	T10	7/15/09
6	I4057028	CJ5A	7/15/09	23	I4057045	T11	7/15/09
7	I4057029	EJ3	7/15/09				
8	I4057030	EJ7	7/15/09				
9	I4057031	EJ7A	7/15/09				
10	I4057032	HJ4	7/15/09				
11	I4057033	HJ9	7/15/09				
12	I4057034	HJ9A	7/15/09				
13	I4057035	T01	7/15/09				
14	I4057036	T02	7/15/09				
15	I4057037	T03	7/15/09				
16	I4057038	T04	7/15/09				
17	I4057039	T05	7/15/09				

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

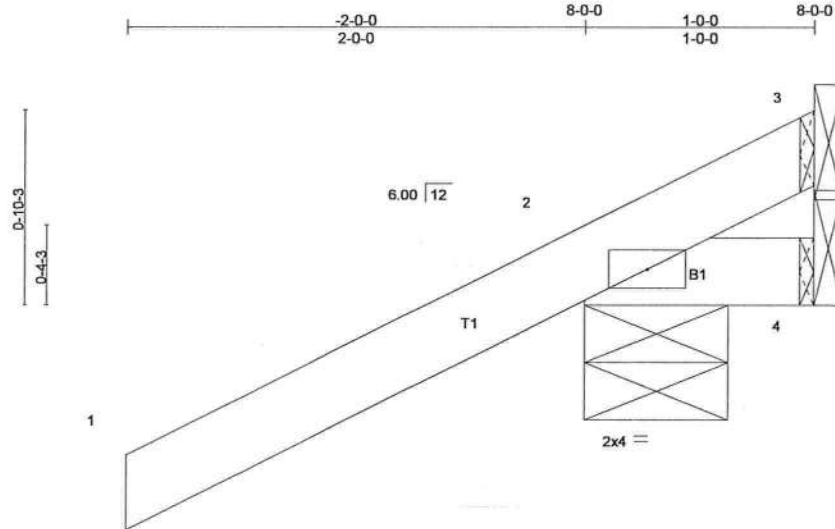
**NOTE:** The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown. The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI-1 Chapter 2.



Job 310209	Truss CJ1	Truss Type JACK	Qty 8	Ply 1	HOUSECRAFT - BUENO RES. Job Reference (optional)	14057023
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Builders FirstSource, Lake City, FL 32055

7.140 s Jun 24 2009 Mitek Industries, Inc. Wed Jul 15 15:57:22 2009 Page 1



Scale = 1:9.6

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.35	Vert(LL)	-0.00	2	>999	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.01	Vert(TL)	-0.00	2	>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: 7 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 1-0-0 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.

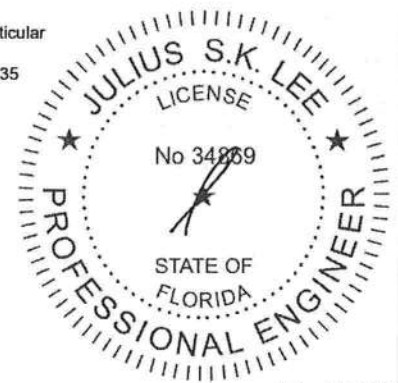
**REACTIONS** (lb/size) 2=265/0-7-8, 4=5/Mechanical, 3=99/Mechanical  
Max Horz 2=106(LC 6)  
Max Uplift 2=360(LC 6), 3=99(LC 1)  
Max Grav 2=265(LC 1), 4=14(LC 2), 3=172(LC 6)

**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=16ft; 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 360 lb uplift at joint 2 and 99 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

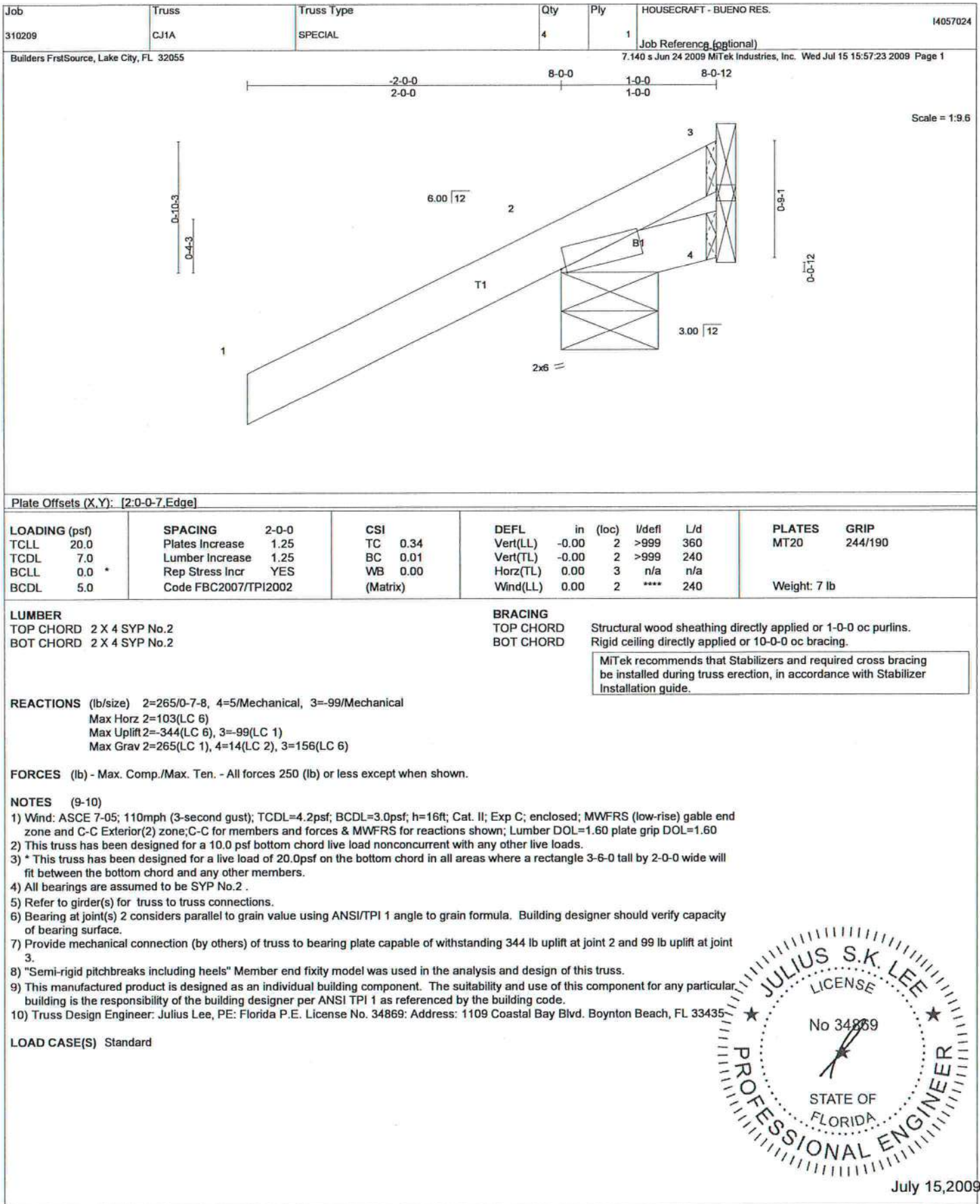
**LOAD CASE(S)** Standard



July 15, 2009

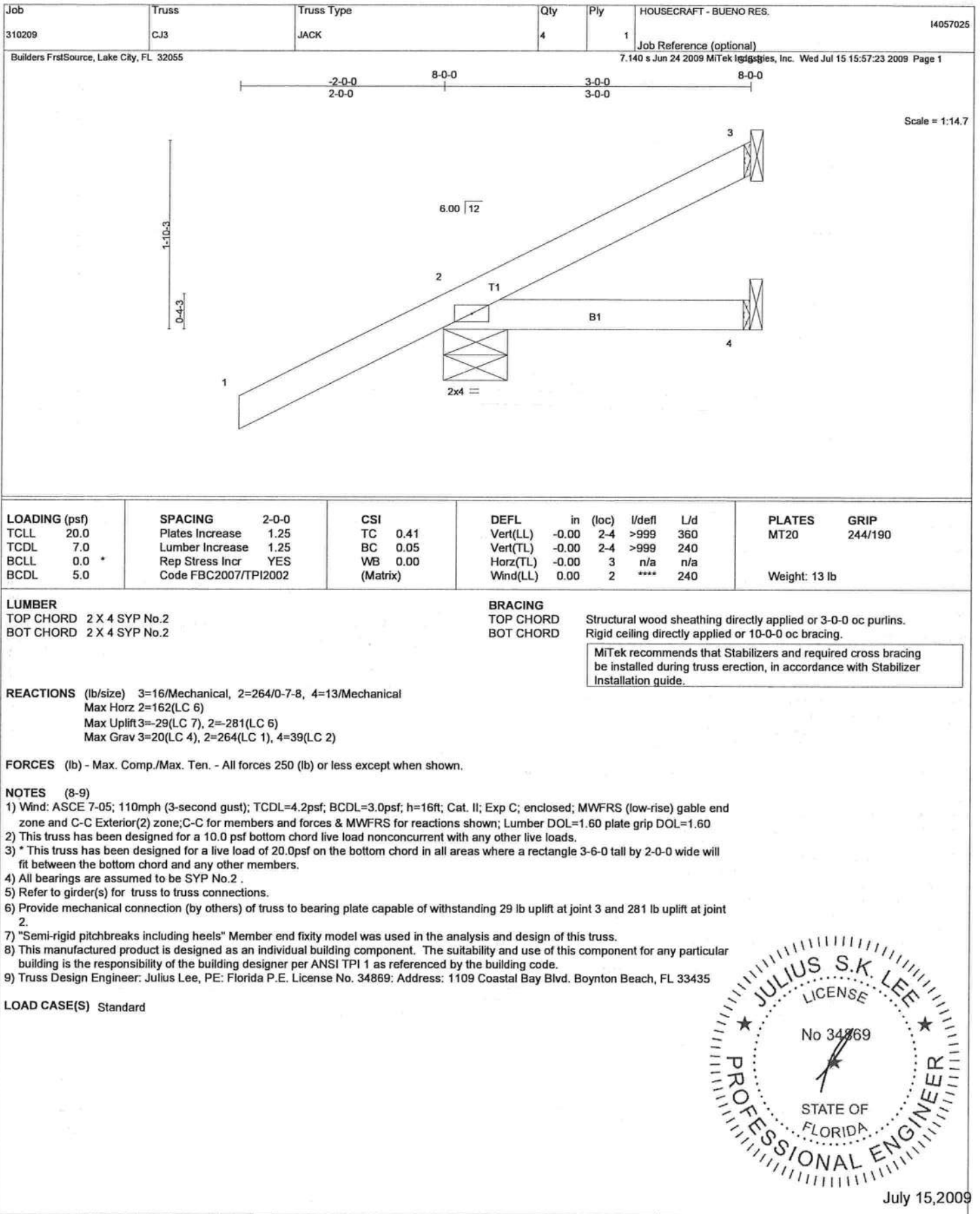
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 BEFORE USE.**  
Design valid for use only with Mitek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper 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 BC311 Building Component Safety Information** available from Truss Plate Institute, 583 D'Oroff Drive, Madison, WI 53719.

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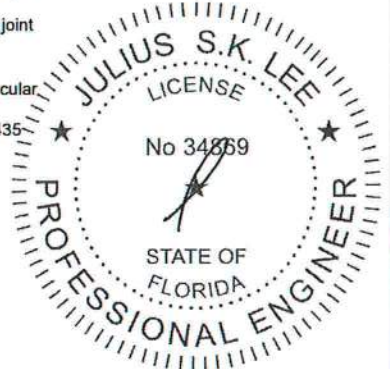
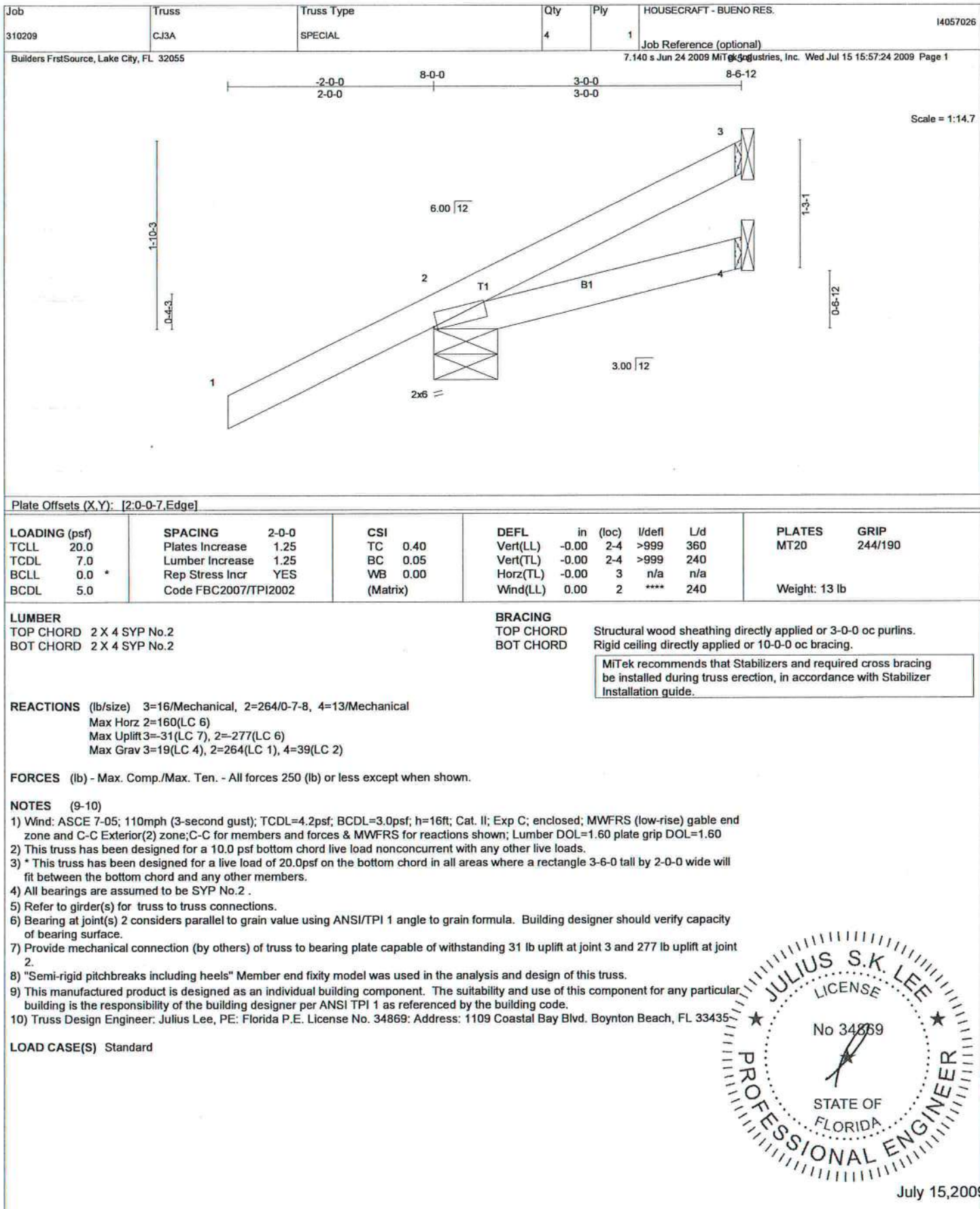


**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 BEFORE USE.**  
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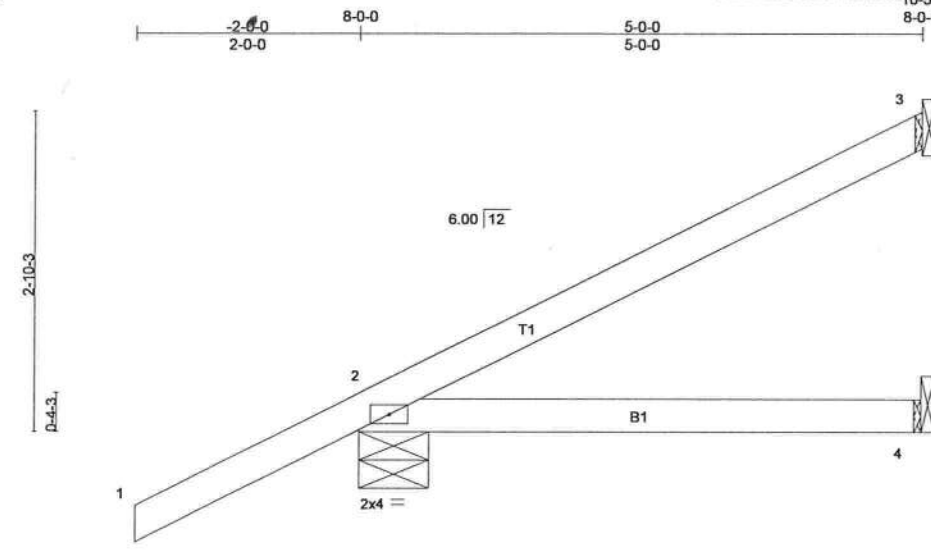
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Job 310209	Truss CJ5	Truss Type JACK	Qty 4	Ply 1	HOUSECRAFT - BUENO RES.  Job Reference (optional) 7.140 s Jun 24 2009 MiTek Industries, Inc. Wed Jul 15 15:57:25 2009 Page 1
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14057027

Builders FirstSource, Lake City, FL 32055



Scale = 1:19.7

<b>LOADING (psf)</b> TCLL 20.0 TCDL 7.0 BCLL 0.0 * BCDL 5.0	<b>SPACING</b> 2-0-0 Plates Increase 1.25 Lumber Increase 1.25 Rep Stress Incr YES Code FBC2007/TPI2002	<b>CSI</b> TC 0.41 BC 0.15 WB 0.00 (Matrix)	<b>DEFL</b> in (loc) l/defl L/d Vert(LL) -0.02 2-4 >999 360 Vert(TL) -0.04 2-4 >999 240 Horz(TL) -0.00 3 n/a n/a Wind(LL) 0.00 2 **** 240	<b>PLATES</b> MT20 <b>GRIP</b> 244/190 Weight: 19 lb
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**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.

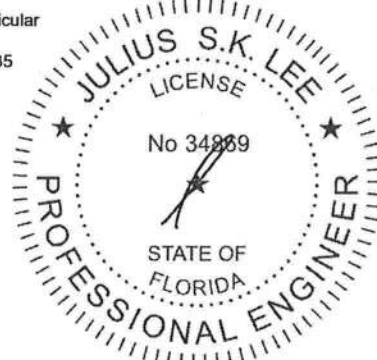
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS** (lb/size) 3=94/Mechanical, 2=304/0-7-8, 4=23/Mechanical  
 Max Horz 2=218(LC 6)  
 Max Uplift 3=101(LC 6), 2=272(LC 6)  
 Max Grav 3=94(LC 1), 2=304(LC 1), 4=69(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=16ft; 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 101 lb uplift at joint 3 and 272 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

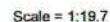
**LOAD CASE(S)** Standard



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Weight: 20 lb

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

LOAD CASE(S) Standard



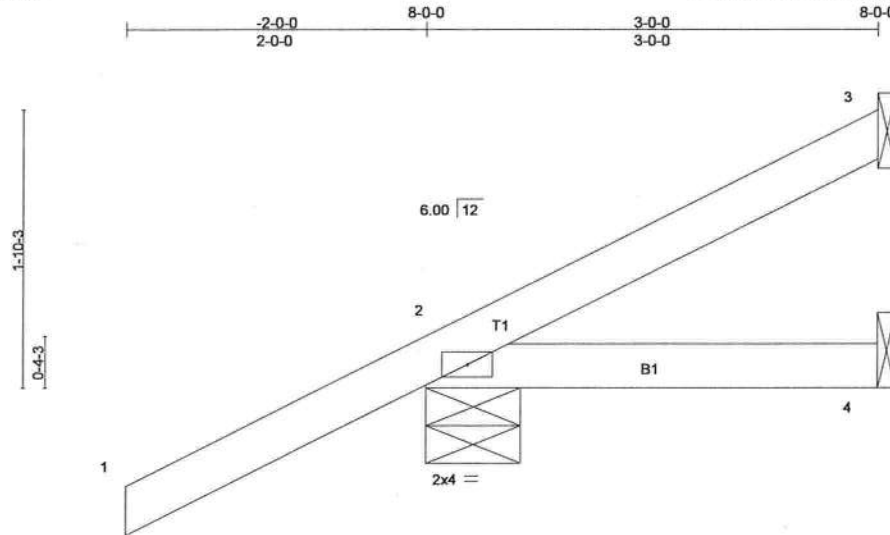
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MU-7473 BEFORE USE.**  
Design valid for use only with Mitek connectors. This design is based only upon parameters shown, and is for an individual building component.  
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Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.	I4057029
310209	EJ3	JACK	1	1	Job Reference (optional)	

Builders FirstSource, Lake City, FL 32055

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Scale = 1:14.7

<b>LOADING (psf)</b>	<b>SPACING</b>	<b>2-0-0</b>	<b>CSI</b>	<b>DEFL</b>	<b>in</b>	<b>(loc)</b>	<b>l/defl</b>	<b>L/d</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plates Increase	1.25	TC 0.41	Vert(LL)	-0.00	2-4	>999	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.09	Vert(TL)	-0.00	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/TP12002		(Matrix)	Wind(LL)	0.01	2-4	>999	240	Weight: 13 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 3-0-0 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=16/Mechanical, 2=264/0-7-8, 4=13/Mechanical  
Max Horz 2=162(LC 6)  
Max Uplift 3=29(LC 7), 2=322(LC 6), 4=33(LC 4)  
Max Grav 3=20(LC 4), 2=264(LC 1), 4=39(LC 2)

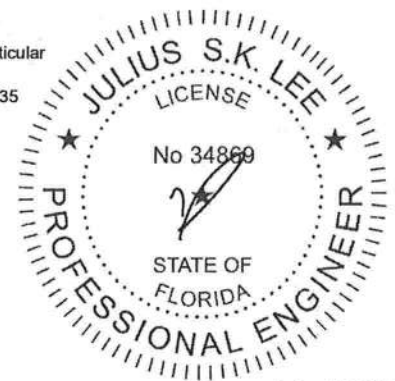
## FORCES

(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=16ft; 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
- 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 29 lb uplift at joint 3, 322 lb uplift at joint 2 and 33 lb uplift at joint 4.
- 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



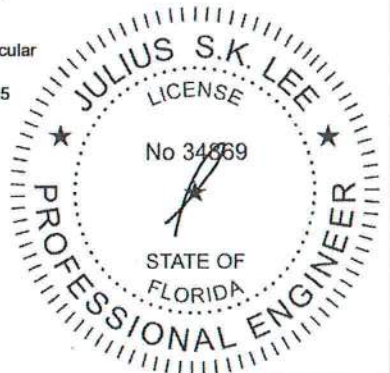
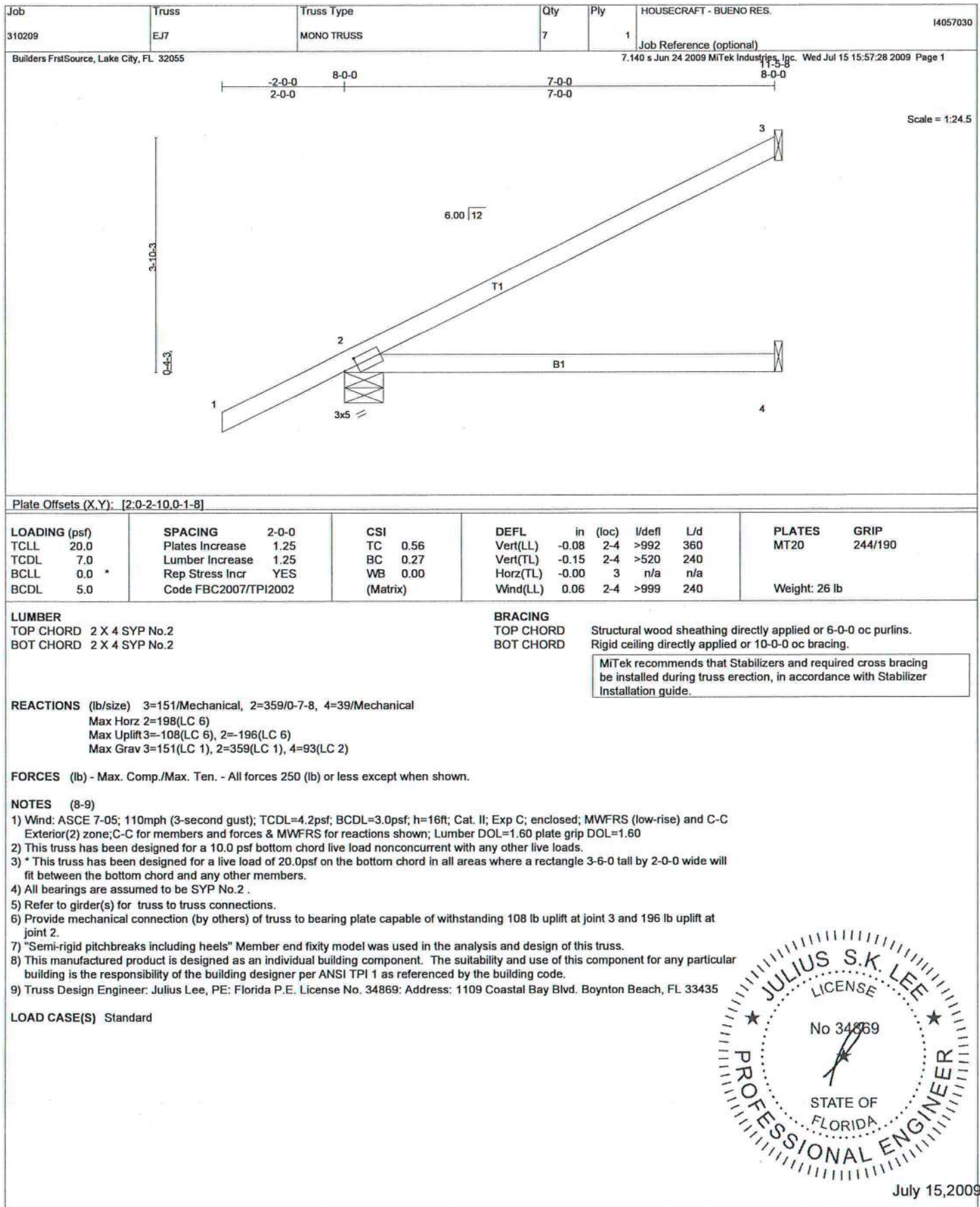
July 15, 2009



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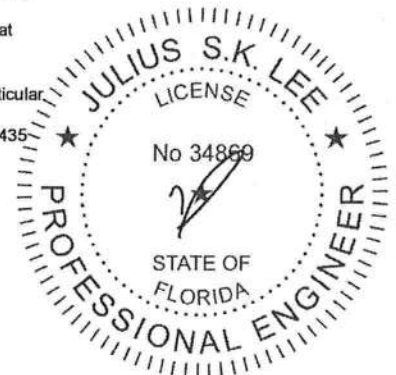
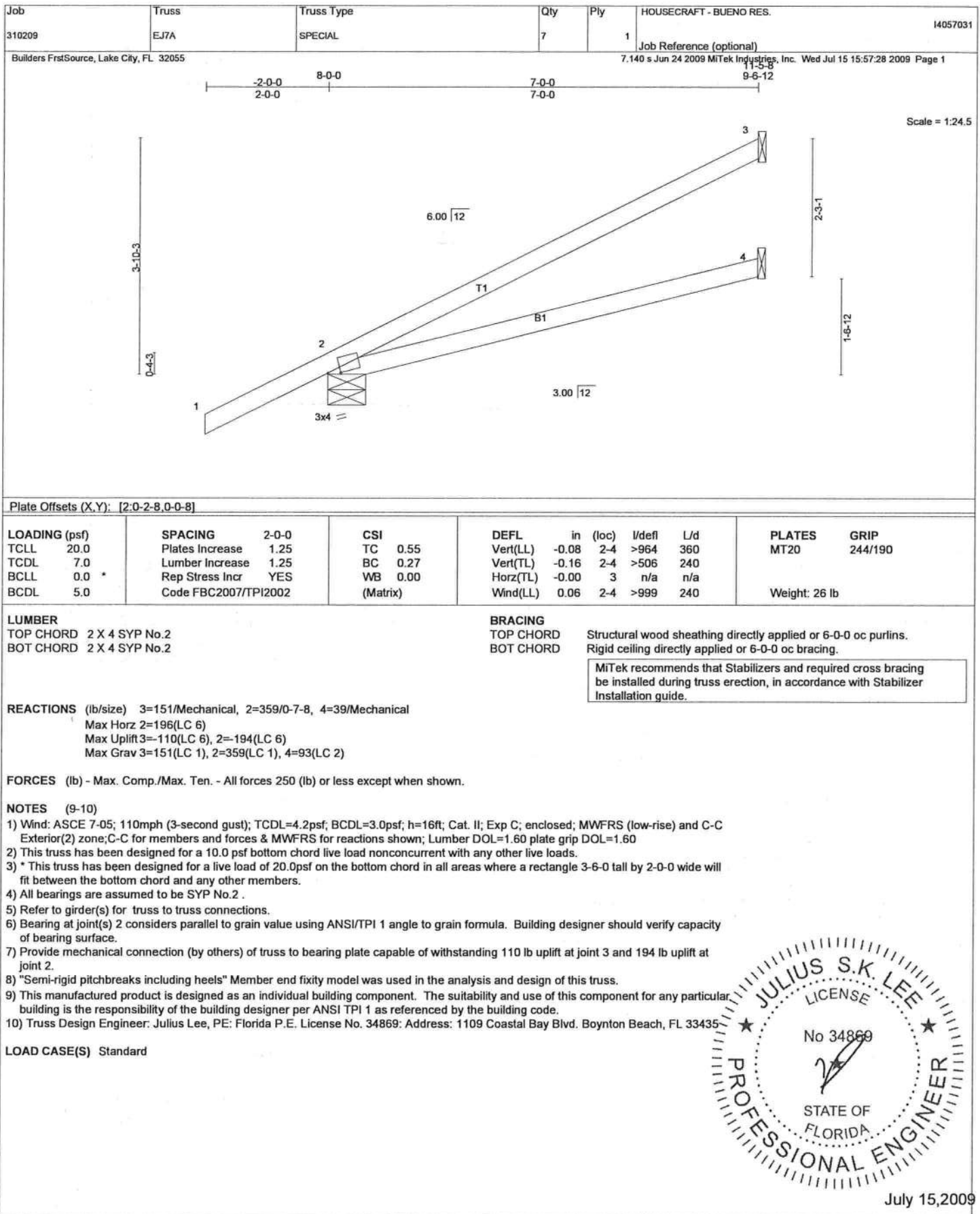




July 15, 2009

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Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.	14057033
310209	HJ9	MONO TRUSS	2	1	Job Reference (optional)	
Builders FrstSource, Lake City, FL 32055			7.140 s Jun 24 2009 MITek Industries, Inc. Wed Jul 15 15:57:32 2009 Page 1			

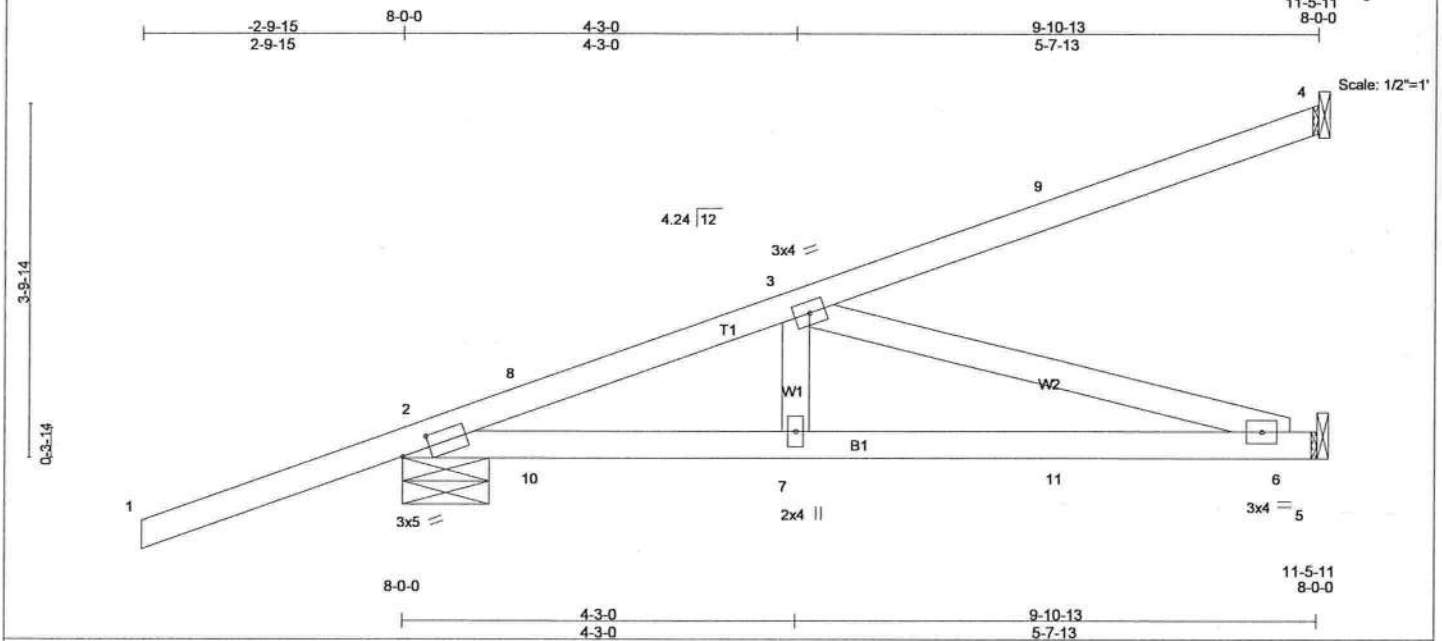


Plate Offsets (X,Y): [2-0-3-12-0-1-8]							
<b>LOADING</b> (psf)	<b>SPACING</b>	2-0-0	<b>CSI</b>	<b>DEFL</b>	in (loc)	l/defl	L/d
TCLL 20.0	Plates Increase	1.25	TC 0.64	Vert(LL)	-0.07	6-7	>999
TCDL 7.0	Lumber Increase	1.25	BC 0.46	Vert(TL)	-0.13	6-7	>870
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.24	Horz(TL)	0.01	5	n/a
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.04	6-7	>999
							Weight: 45 lb

<b>LUMBER</b>	<b>BRACING</b>	
TOP CHORD 2 X 4 SYP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2 X 4 SYP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2 X 4 SYP No.3		

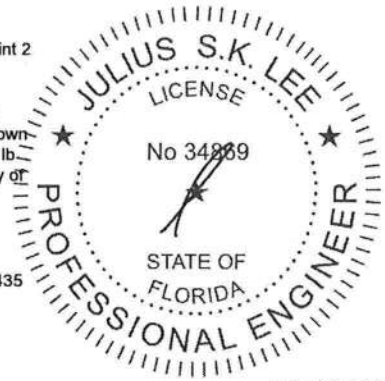
**REACTIONS** (lb/size) 4=165/Mechanical, 2=413/0-11-6, 5=147/Mechanical  
 Max Horz 2=276(LC 3)  
 Max Uplift 4=176(LC 3), 2=478(LC 3), 5=83(LC 6)  
 Max Grav 4=165(LC 1), 2=413(LC 1), 5=212(LC 2)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-8=-442/279, 3-8=-449/272  
 BOT CHORD 2-10=-367/397, 7-10=-367/397, 7-11=-367/397, 6-11=-367/397  
 WEBS 3-6=-413/382

- NOTES** (10-11)
- 1) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=16ft; 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 176 lb uplift at joint 4, 478 lb uplift at joint 2 and 83 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) 40 lb up at 1-5-12, 40 lb up at 1-5-12, 19 lb down and 38 lb up at 4-3-11, 19 lb down and 38 lb up at 4-3-11, and 40 lb down and 85 lb up at 7-1-10, and 40 lb down and 85 lb up at 7-1-10 on top chord, and 16 lb up at 1-5-12, 16 lb up at 1-5-12, 9 lb down at 4-3-11, 9 lb down at 4-3-11, and 39 lb down at 7-1-10, and 39 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

Continued on page 2 July 15, 2009





Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.	14057033
310209	HJ9	MONO TRUSS	2	1	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055

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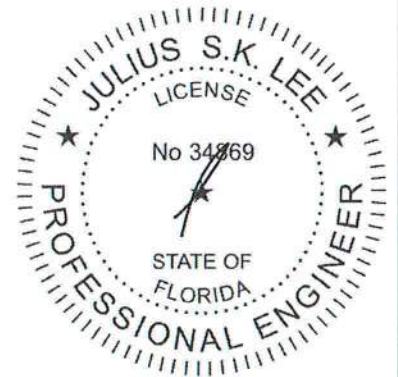
**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-4=-54, 2-5=-10

Concentrated Loads (lb)

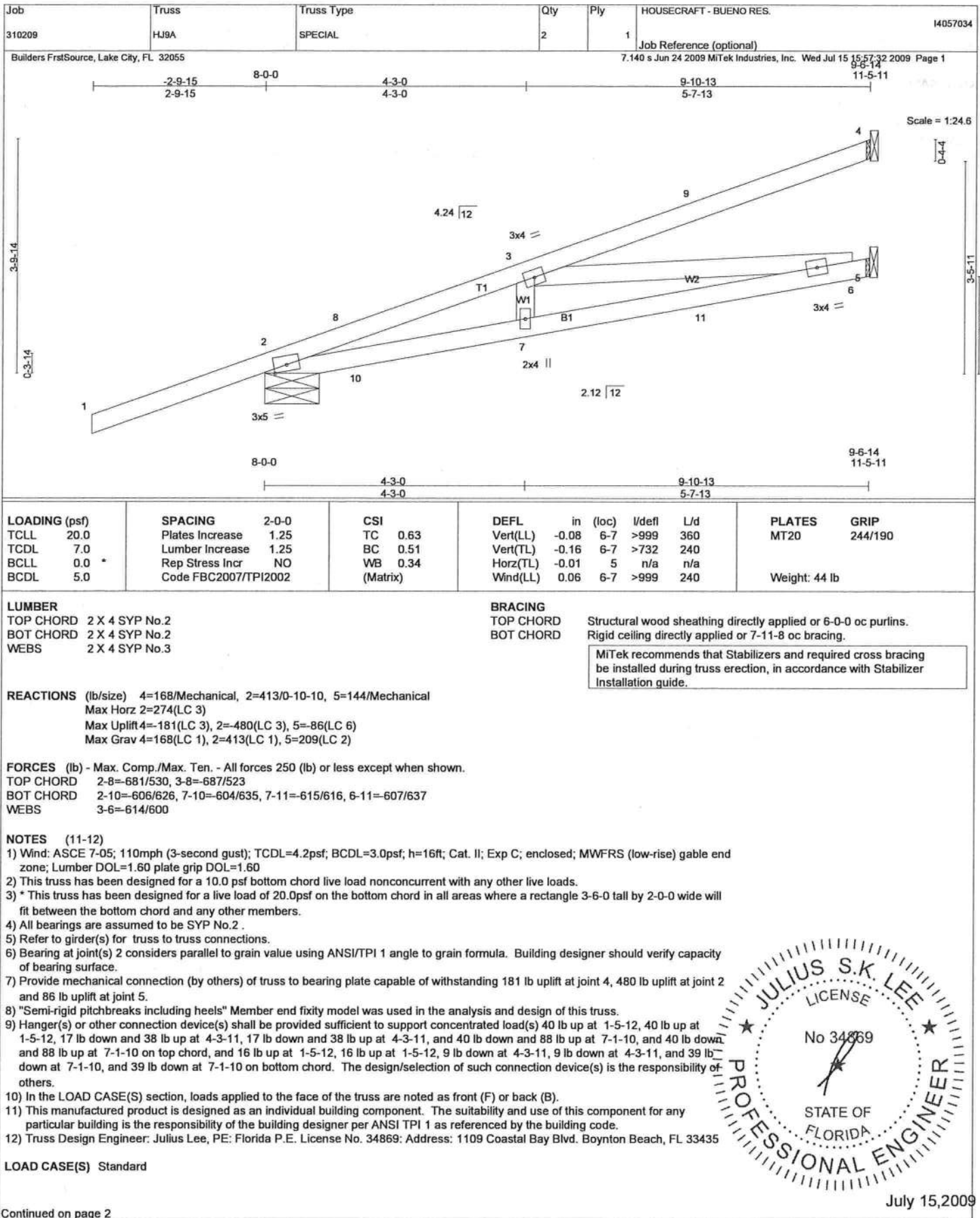
Vert: 3=76(F=38, B=38) 7=6(F=-3, B=-3) 8=79(F=40, B=40) 9=79(F=-40, B=-40) 10=11(F=5, B=5) 11=-26(F=-13, B=-13)



July 15, 2009

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 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, D5B-89 and BCS11 Building Component**  
**Safety Information** available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

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Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.	I4057034
310209	HJ9A	SPECIAL	2	1	Job Reference (optional)	

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# LOAD CASE(S) Standard

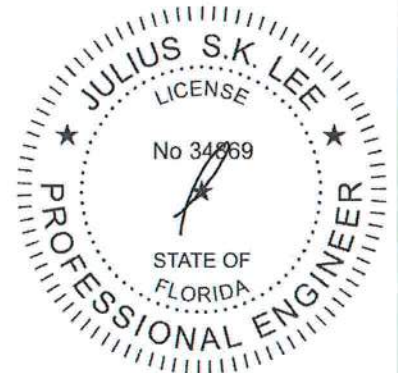
1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-4=-54, 2-5=-10

Concentrated Loads (lb)

Vert: 3=76(F=38, B=38) 7=6(F=-3, B=-3) 8=79(F=40, B=40) 9=79(F=-40, B=-40) 10=11(F=5, B=5) 11=26(F=-13, B=-13)



July 15, 2009



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Job 310209	Truss T01	Truss Type HIP	Qty 1	Ply 1	HOUSECRAFT - BUENO RES. Job Reference (optional)	14057035
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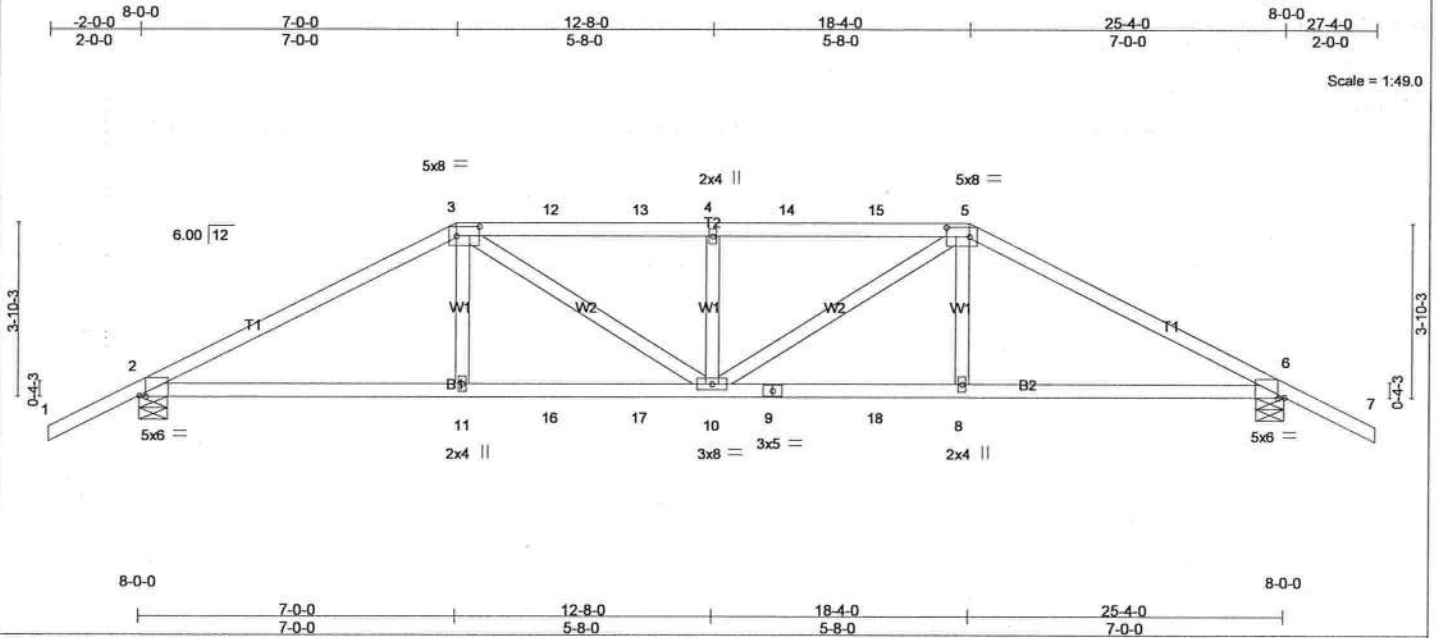


Plate Offsets (X,Y): [2.0-1-11,Edge], [3.0-6-0.0-2-8], [5.0-6-0.0-2-8], [6.0-1-11,Edge]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.76	Vert(LL)	-0.15	10	>999	360	MT20
TCDL 7.0	Lumber Increase	1.25	BC 0.55	Vert(TL)	-0.30	10-11	>994	240	244/190
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.31	Horz(TL)	0.10	6	n/a	n/a	
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.18	10	>999	240	
								Weight: 118 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 2-10-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 5-10-8 oc bracing.

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

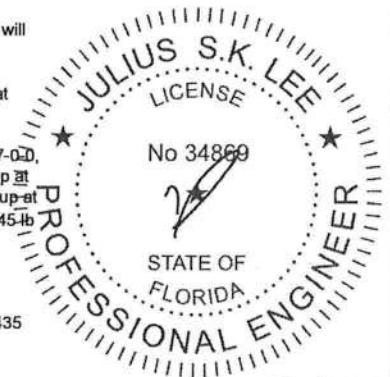
**REACTIONS** (lb/size) 2=1605/0-7-8, 6=1605/0-7-8  
Max Horz 2=95(LC 5)  
Max Uplift 2=861(LC 5), 6=862(LC 6)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=2796/1374, 3-12=3055/1522, 12-13=3055/1522, 4-13=3055/1522,  
4-14=3055/1522, 14-15=3055/1522, 5-15=3055/1522, 5-6=2794/1375  
BOT CHORD 2-11=1160/2392, 11-16=1161/2403, 16-17=1161/2403, 10-17=1161/2403,  
9-10=1124/2401, 9-18=1124/2401, 8-18=1124/2401, 6-8=1123/2390  
WEBS 3-11=27/507, 3-10=424/855, 4-10=686/477, 5-10=424/857, 5-8=28/503

- NOTES** (11-12)
- 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=16ft; Cat. II; Exp C; enclosed; MWFRS (low-rise); 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 861 lb uplift at joint 2 and 862 lb uplift at joint 6.
  - "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) 208 lb down and 251 lb up at 7-0-0, 97 lb down and 92 lb up at 9-0-12, 97 lb down and 92 lb up at 11-0-12, 97 lb down and 92 lb up at 12-8-0, 97 lb down and 92 lb up at 14-3-4, and 97 lb down and 92 lb up at 16-3-4, and 208 lb down and 251 lb up at 18-4-0 on top chord, and 245 lb down and 75 lb up at 7-0-0, 63 lb down at 9-0-12, 63 lb down at 11-0-12, 63 lb down at 12-8-0, 63 lb down at 14-3-4, and 63 lb down at 16-3-4, and 245 lb down and 75 lb up at 18-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
  - 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

Continued on page 2



July 15, 2009

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Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.	I4057035
310209	T01	HIP	1	1	Job Reference (optional)	

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# **LOAD CASE(S) Standard**

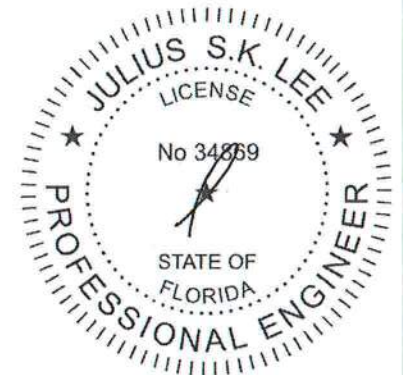
1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-3=-54, 3-5=-54, 5-7=-54, 2-6=-10

Concentrated Loads (lb)

Vert: 3=-208(B) 5=-208(B) 9=-29(B) 11=-166(B) 10=-29(B) 4=-97(B) 8=-166(B) 12=-97(B) 13=-97(B) 14=-97(B) 15=-97(B) 16=-29(B) 17=-29(B) 18=-29(B)



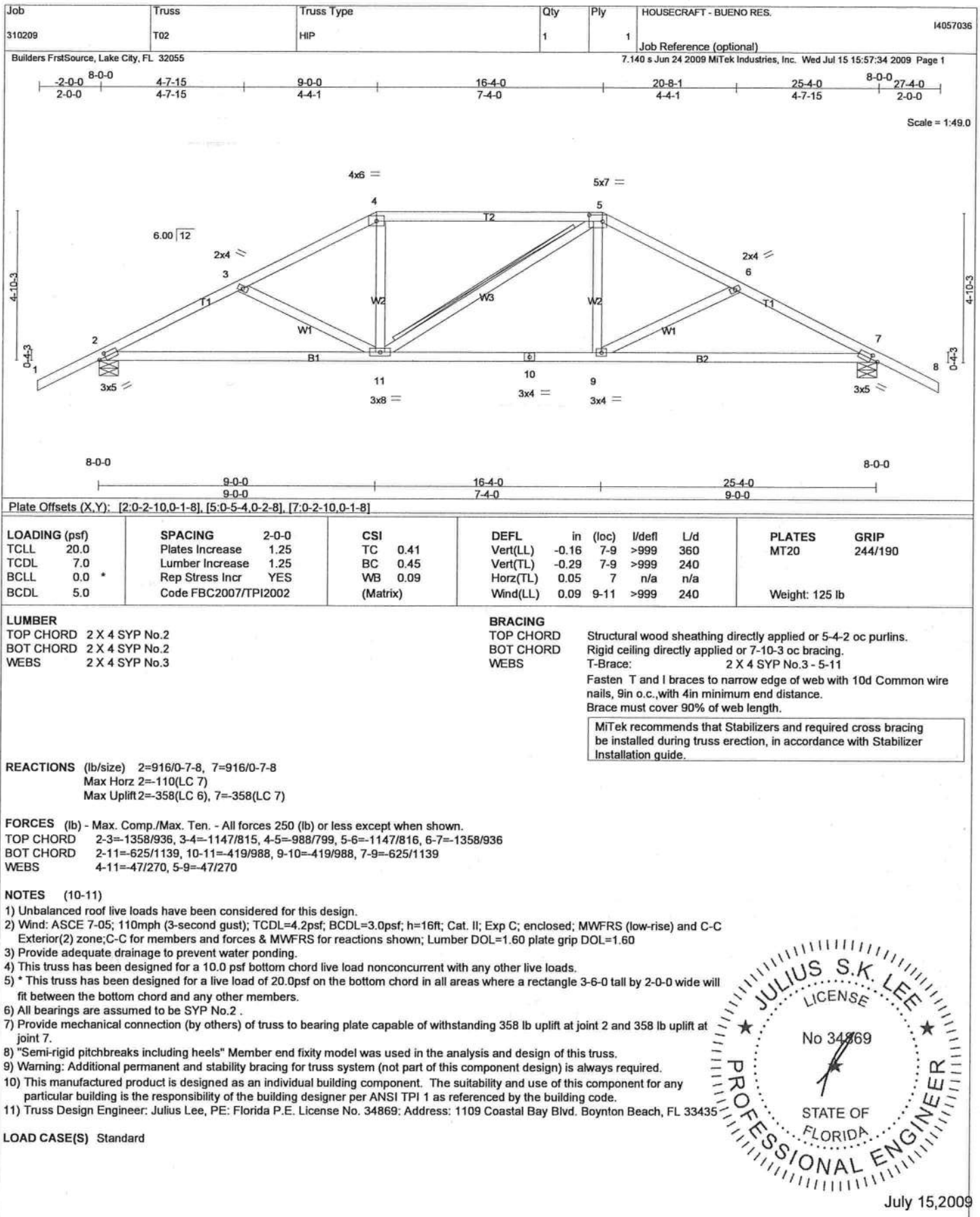
July 15, 2009



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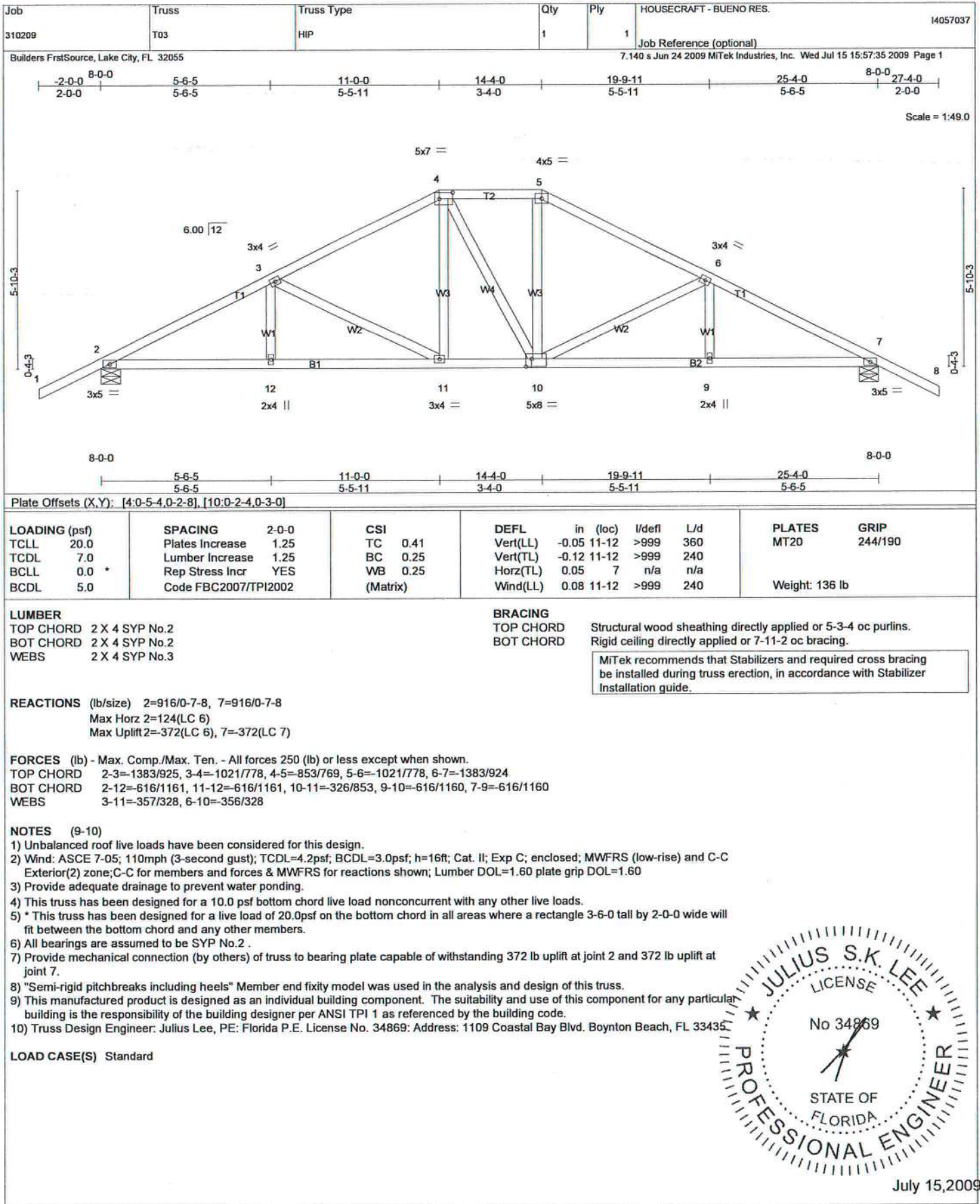
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Boynton, FL 33435

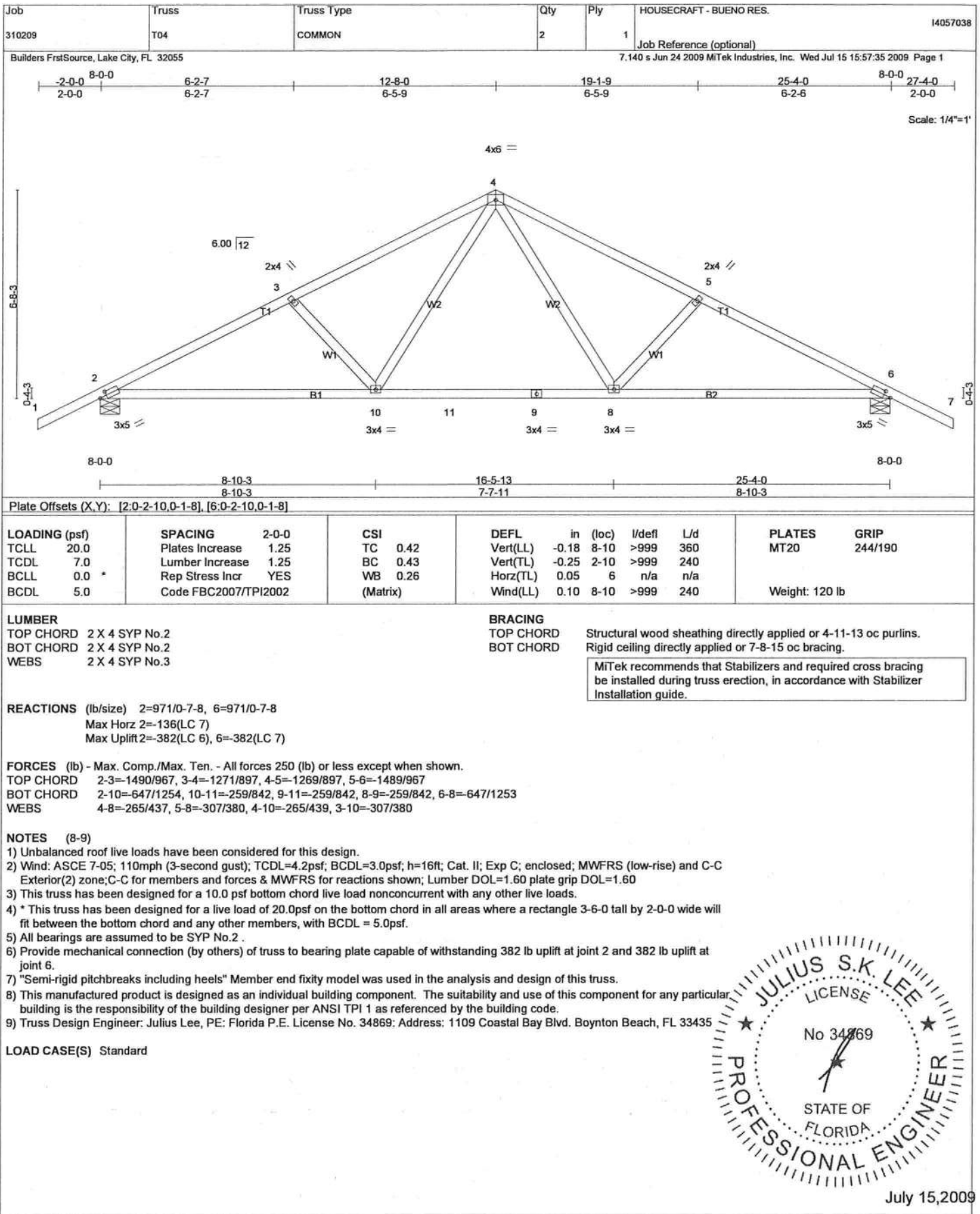


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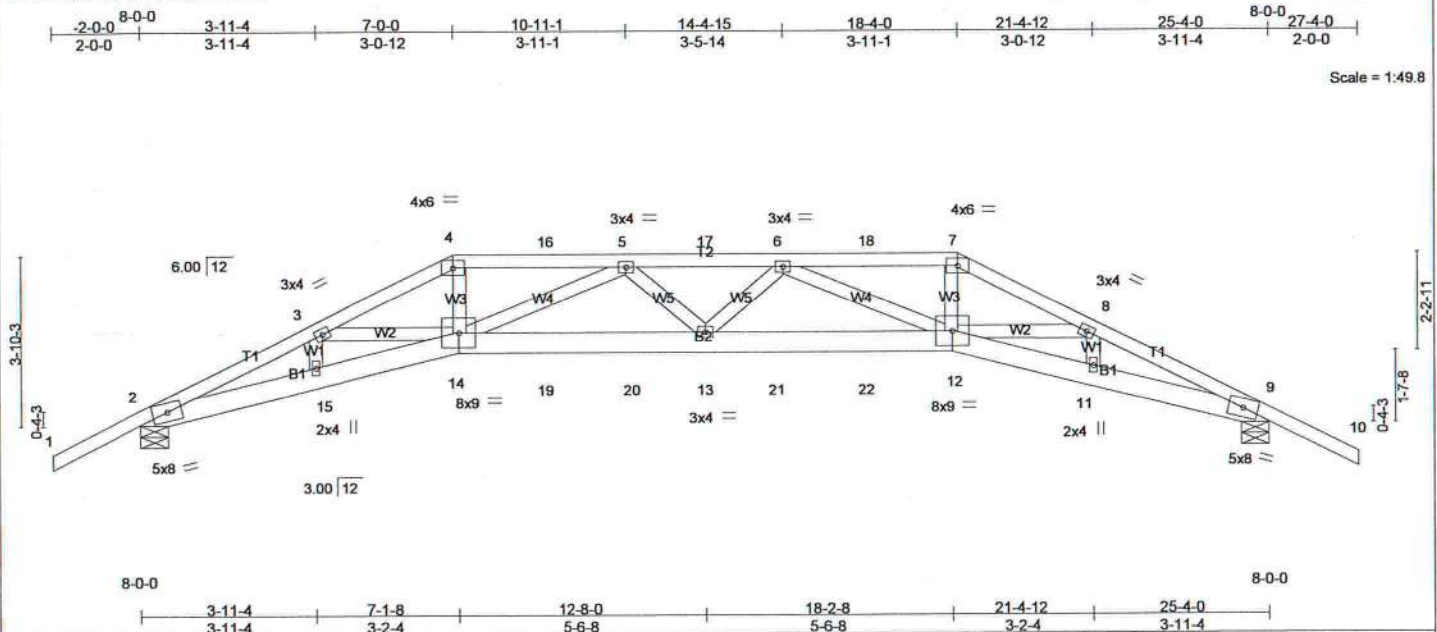
Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435



Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.	14057039
310209	T05	SPECIAL	1	1	Job Reference (optional)	

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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 0.46	Vert(LL)	-0.39	13	>764	360	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.74	Vert(TL)	-0.76	13	>390	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.57	Horz(TL)	0.43	9	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.46	13	>643	240		
									Weight: 142 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  
BOT CHORD

Structural wood sheathing directly applied or 2-5-6 oc purlins.  
Rigid ceiling directly applied or 5-1-3 oc bracing.

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

**REACTIONS** (lb/size) 2=1605/0-7-8, 9=1605/0-7-8  
Max Horz 2=95(LC 5)  
Max Uplift 2=876(LC 5), 9=876(LC 6)

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

TOP CHORD 2-3=4590/2254, 3-4=5022/2583, 4-16=4565/2379, 5-16=4565/2378, 5-17=5562/2703, 6-17=5562/2703, 6-18=4565/2309, 7-18=4565/2310, 7-8=5022/2518, 8-9=4590/2201

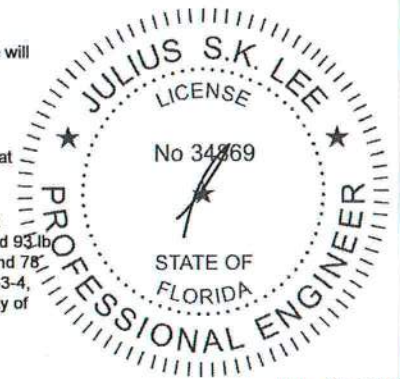
BOT CHORD 2-15=1995/4058, 14-15=2032/4121, 14-19=2676/5507, 19-20=2676/5507, 13-20=2676/5507, 13-21=2640/5507, 21-22=2640/5507, 12-22=2640/5507, 11-12=1949/4121, 9-11=1922/4058

WEBS 3-14=392/612, 4-14=773/1776, 5-14=1129/566, 5-13=0/263, 6-13=0/263, 6-12=1129/566, 7-12=761/1776, 8-12=400/612

#### NOTES (12-13)

- 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=16ft; Cat. II; Exp C; enclosed; MWFRS (low-rise); 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
- Bearing at joint(s) 2, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 876 lb uplift at joint 2 and 876 lb uplift at joint 9.
- "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) 211 lb down and 258 lb up at 7-0-0, 97 lb down and 93 lb up at 9-0-12, 97 lb down and 93 lb up at 11-0-12, 97 lb down and 93 lb up at 12-8-0, 97 lb down and 93 lb up at 14-3-4, and 97 lb down and 93 lb up at 16-3-4, and 211 lb down and 258 lb up at 18-4-0 on top chord, and 242 lb down and 78 lb up at 7-1-5, 63 lb down at 9-0-12, 63 lb down at 11-0-12, 63 lb down at 12-8-0, 63 lb down at 14-3-4, and 63 lb down at 16-3-4, and 242 lb down and 78 lb up at 18-2-11 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- 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 Designer: Julius Lee, PE: Florida P.E. License No. 34869; Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435



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Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.	14057039
310209	T05	SPECIAL	1	1	Job Reference (optional)	

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#### LOAD CASE(S) Standard

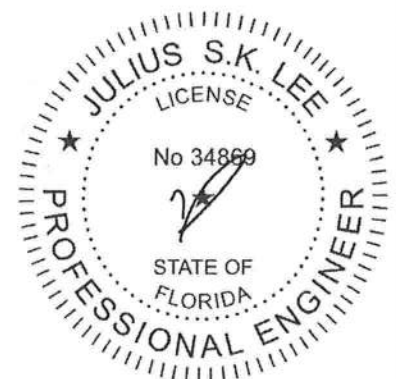
1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-4=-54, 4-7=-54, 7-10=-54, 2-14=-10, 12-14=-10, 9-12=-10

Concentrated Loads (lb)

Vert: 4=-211(F) 7=-211(F) 14=-163(F) 5=-97(F) 13=-29(F) 6=-97(F) 12=-163(F) 16=-97(F) 17=-97(F) 18=-97(F) 19=-29(F) 20=-29(F) 21=-29(F) 22=-29(F)

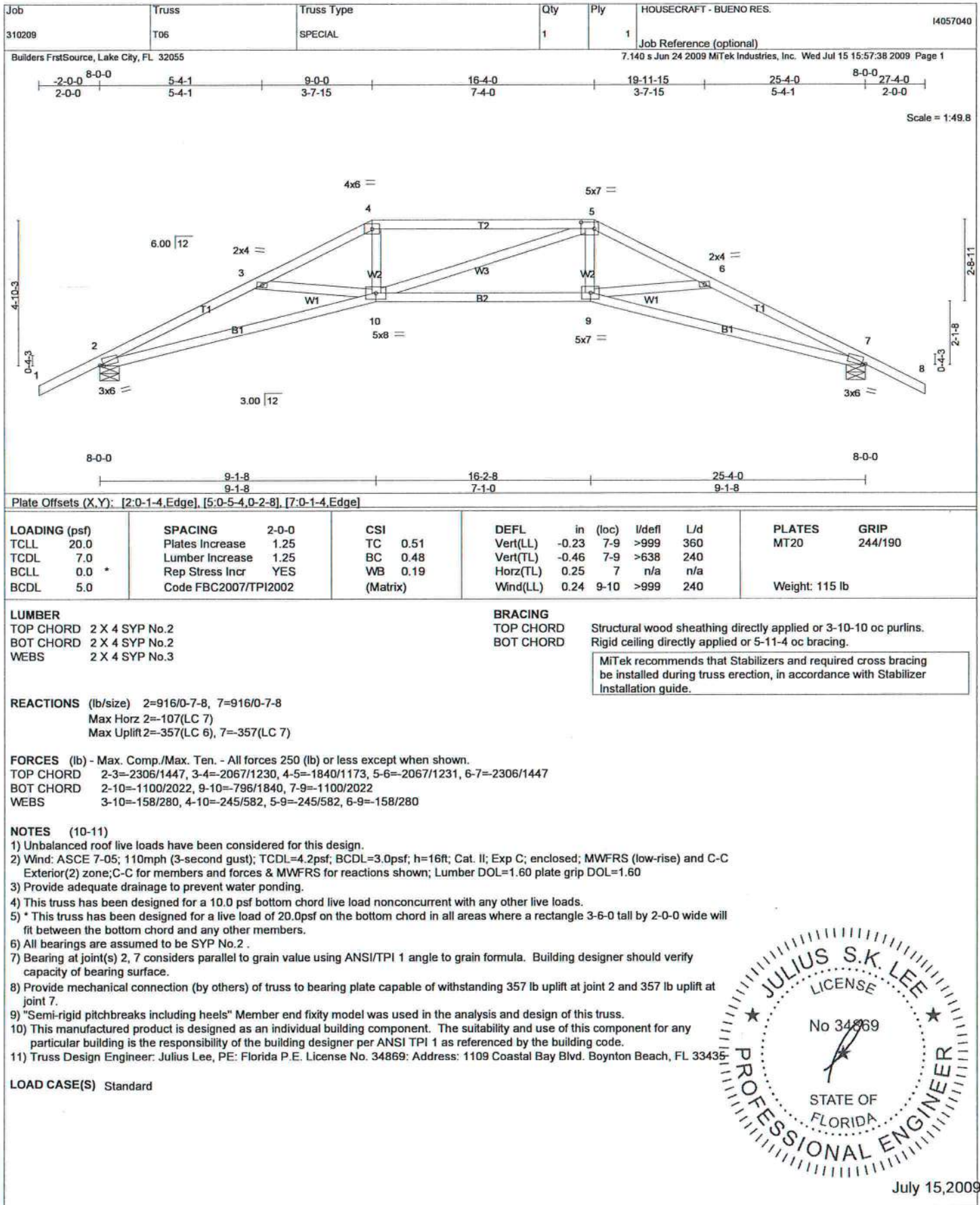


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**Safety Information** available from Truss Plate Institute, 583 D'Oroffio Drive, Madison, WI 53719.

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Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.
310209	T07	SPECIAL	1	1	

I4057041

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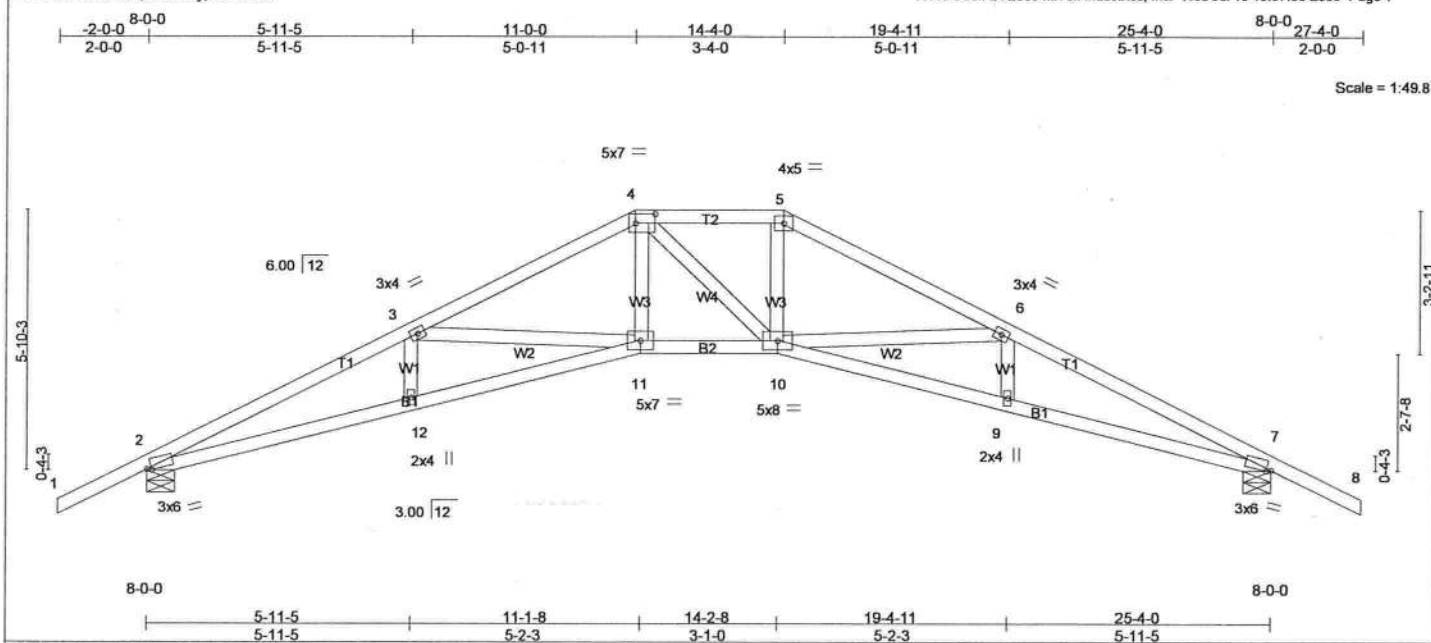


Plate Offsets (X,Y): [2:0-1-4,Edge], [4:0-5-4,0-2-8], [7:0-1-4,Edge]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.44	Vert(LL)	-0.18	11	>999	MT20	244/190
TCDL 7.0	Lumber Increase	1.25	BC 0.43	Vert(TL)	-0.35	11-12	>846		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.22	Horz(TL)	0.26	7	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.23	11-12	>999		Weight: 120 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 3-11-2 oc purlins.  
 Rigid ceiling directly applied or 5-11-9 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=916/0-7-8, 7=916/0-7-8  
 Max Horz 2=-122(LC 7)  
 Max Uplift 2=-372(LC 6), 7=-372(LC 7)

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

TOP CHORD 2-3=-2374/1443, 3-4=-1845/1104, 4-5=-1613/1061, 5-6=-1847/1104, 6-7=-2374/1442  
 BOT CHORD 2-12=-1095/2082, 11-12=-1102/2086, 10-11=-620/1612, 9-10=-1102/2085,  
 7-9=-1095/2082  
 WEBS 3-11=-456/454, 4-11=-286/582, 5-10=-286/582, 6-10=-455/454

**NOTES** (10-11)

- 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=16ft; 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.
- Bearing at joint(s) 2, 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 372 lb uplift at joint 2 and 372 lb uplift at joint 7.
- "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

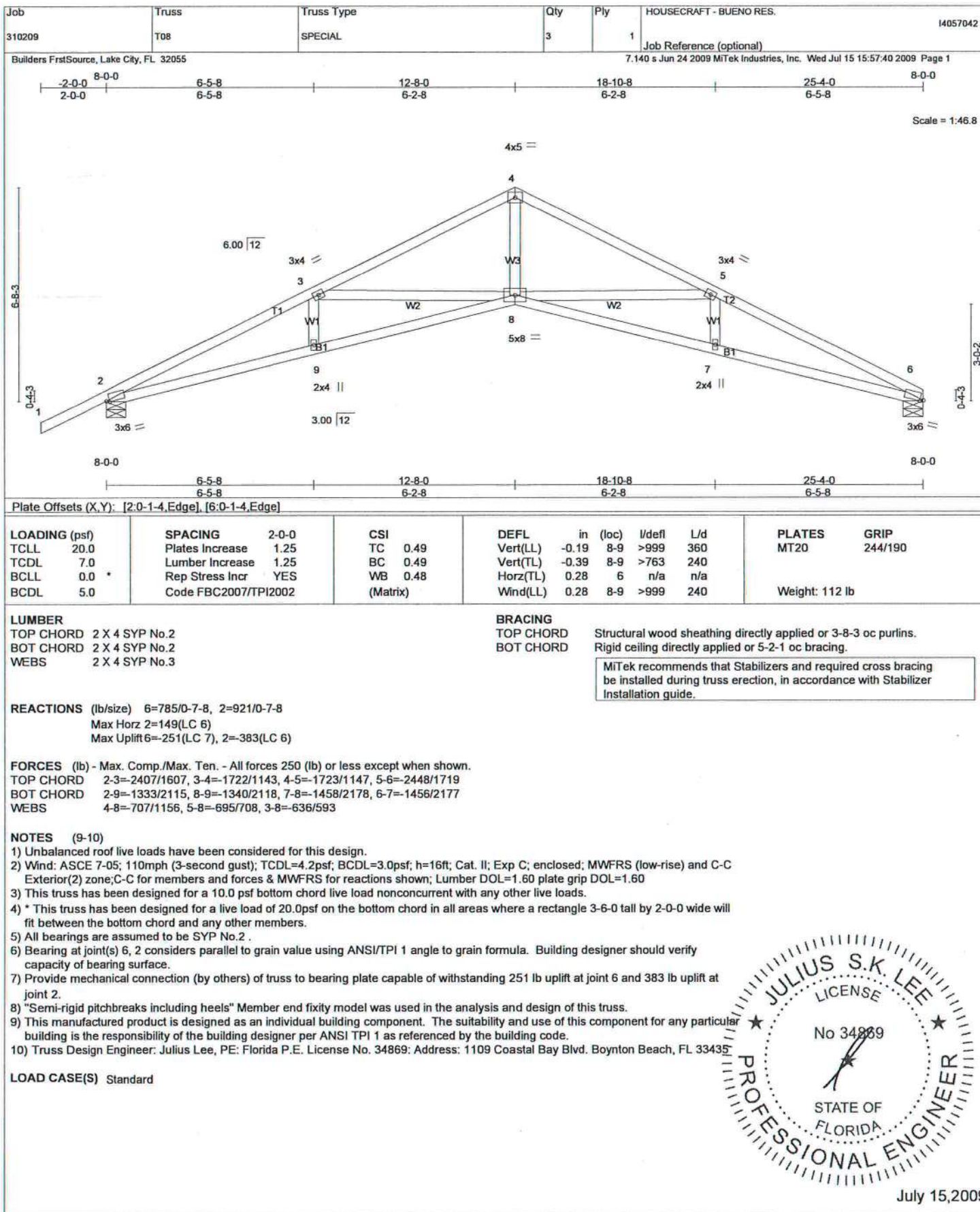


July 15, 2009

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

Design valid for use only with Mittek 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'Oroff Drive, Madison, WI 53719.

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

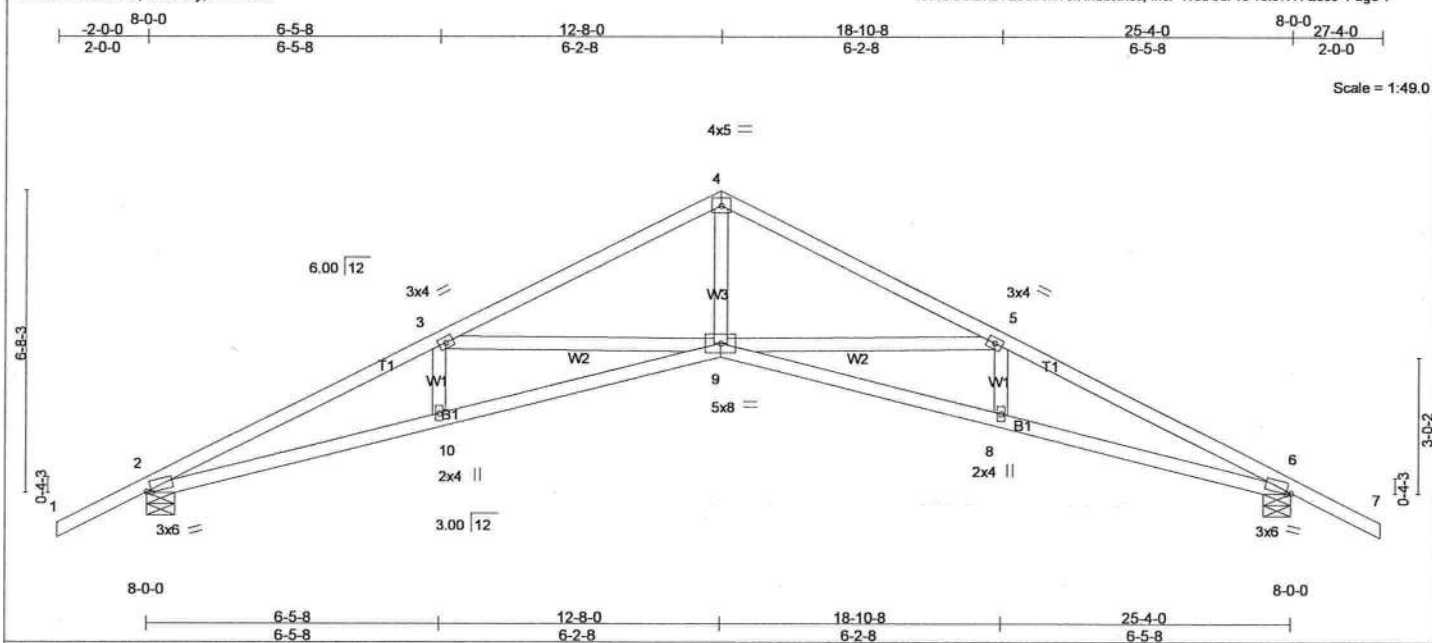


Job	Truss	Truss Type	Qty	Ply	HOUSECRAFT - BUENO RES.
310209	T09	SPECIAL	6	1	

I4057043

Builders FrstSource, Lake City, FL 32055

7.140 s Jun 24 2009 Mitek Industries, Inc. Wed Jul 15 15:57:41 2009 Page 1



Scale = 1:49.0

Plate Offsets (X,Y): [2.0-1.4,Edge], [6.0-1.4,Edge]

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)	-0.19	9-10	>999	360	MT20
TCDL 7.0	Lumber Increase	1.25	BC 0.44	Vert(TL)	-0.38	9-10	>777	240	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.44	Horz(TL)	0.27	6	n/a	n/a	
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.25	9-10	>999	240	Weight: 115 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 3-10-9 oc purlins.  
 Rigid ceiling directly applied or 5-10-8 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=916/0-7-8, 6=916/0-7-8  
 Max Horz 2=-134(LC 7)  
 Max Uplift 2=-382(LC 6), 6=-382(LC 7)

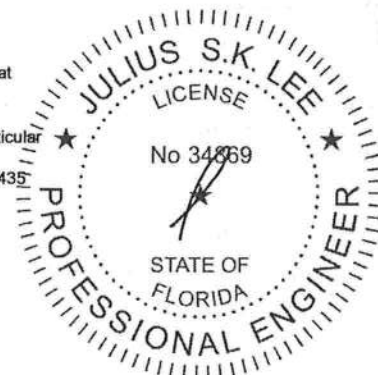
**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-2384/1479, 3-4=-1699/1008, 4-5=-1699/1008, 5-6=-2384/1479  
 BOT CHORD 2-10=-1126/2094, 9-10=-1133/2097, 8-9=-1133/2097, 6-8=-1126/2094  
 WEBS 4-9=-577/1131, 5-9=-636/602, 3-9=-636/602

**NOTES** (9-10)

- 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=16ft; 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.
- 5) All bearings are assumed to be SYP No.2.
- 6) Bearing at joint(s) 2, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 382 lb uplift at joint 2 and 382 lb uplift at joint 6.
- 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

LOAD CASE(S) Standard



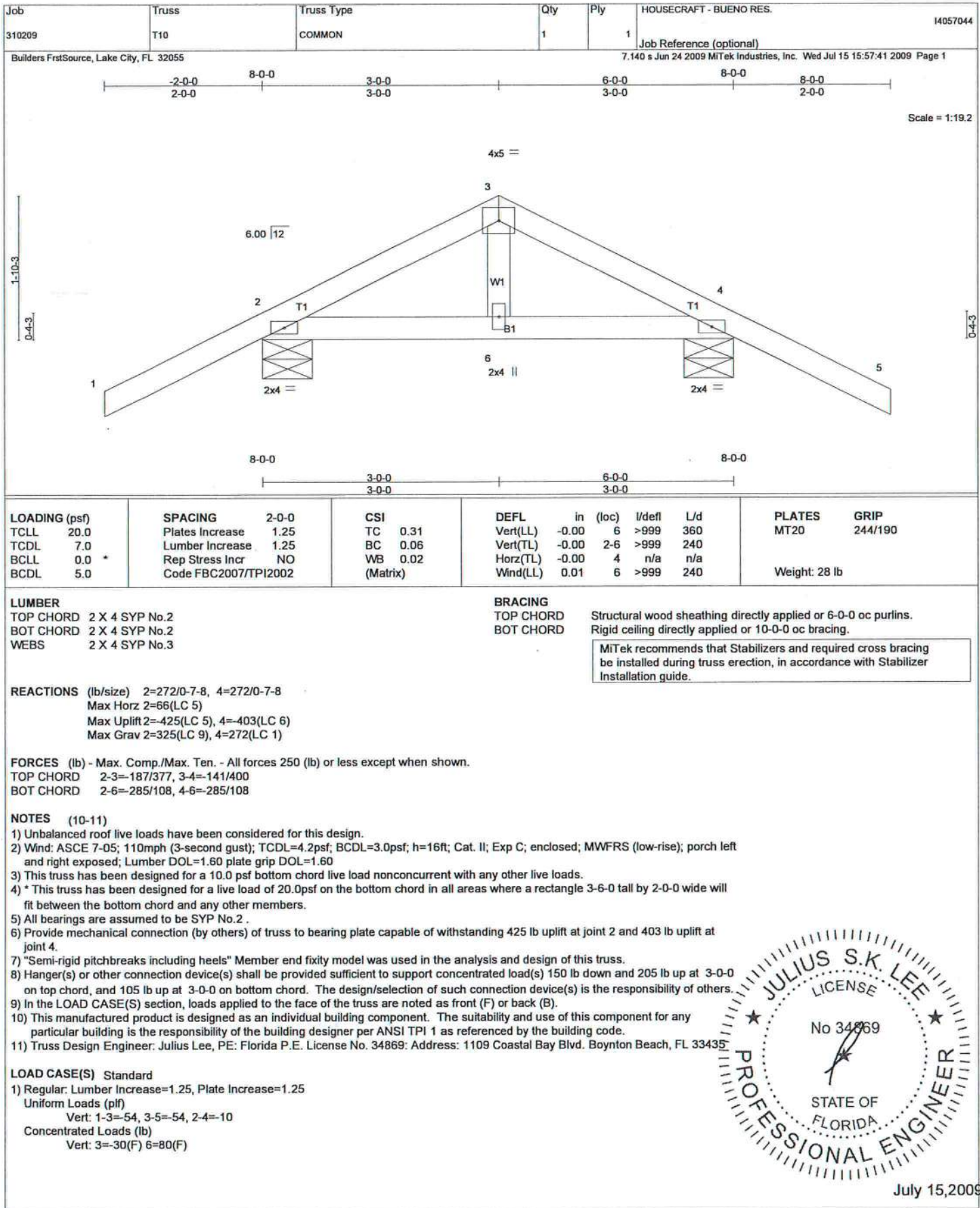
July 15, 2009

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MH-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'Onofrio Drive, Madison, WI 53719.

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





# 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.

See General Notes on page 38

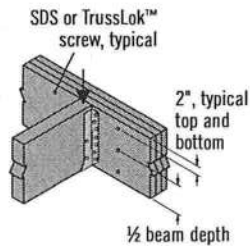
(2) 6" long screws required.

(3) 5" long screws required.

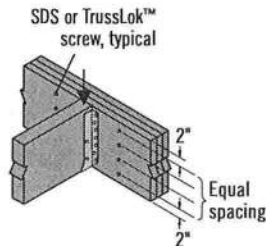
(4) 3 1/2" and 3 3/8" long screws must be installed on both sides.

## Connections

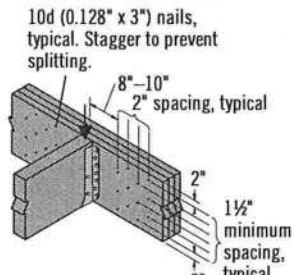
### 4 or 6 or Screw Connection



### 8 Screw Connection

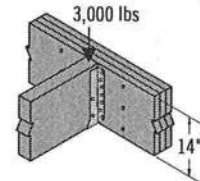


### Nail Connection



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

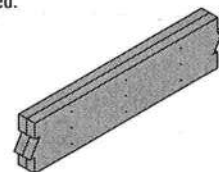
on both sides. Stagger fasteners on opposite side of beam by 1/2 of the required connector spacing.

- 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.


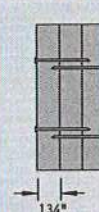

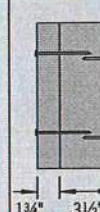




Multiple pieces can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7"



# 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	280	280	245		
	3	12"	555	415	415	370		
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
		24"	680	510	510	455		
SDS 1/4" x 3 1/2" <sup>(4)</sup>	2	19.2"	850	640	640	565		
		16"	1,020	765	765	680		
		24"				455	465	455
		19.2"				565	580	565
SDS 1/4" x 6" <sup>(3)(4)</sup>	2	16"				680	695	680
		24"	480	360	360	320		
		19.2"	600	450	450	400		
		16"	715	540	540	480		
USP WS35 <sup>(4)</sup>	2	24"				350	525	350
		19.2"				440	660	440
		16"				525	790	525
		24"	635	475	475	425		
3 3/8" TrussLok <sup>(4)</sup>	2	19.2"	795	595	595	530		
		16"	955	715	715	635		
		24"		500	500	445	480	445
		19.2"		625	625	555	600	555
5" TrussLok <sup>(4)</sup>	2	16"		750	750	665	725	665
		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.

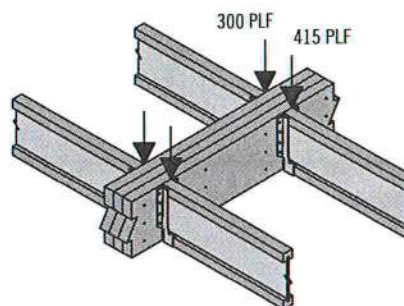
(3) 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

(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



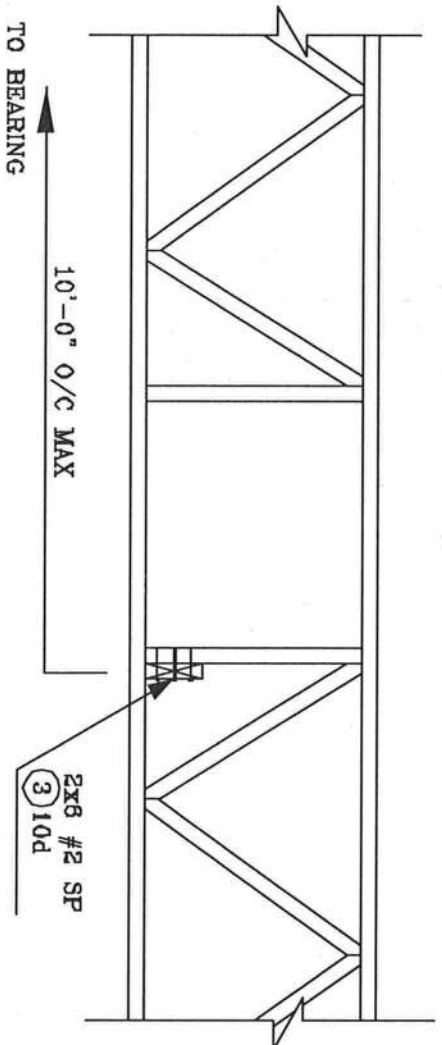
First, check the allowable load tables on pages 16–33 to verify that three pieces can carry the total load of 715 plf with proper live load deflection criteria. Maximum load applied to either outside member is 415 plf. For a 3-ply 1 3/4" assembly, two rows of 10d (0.128" x 3") nails at 12" on-center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

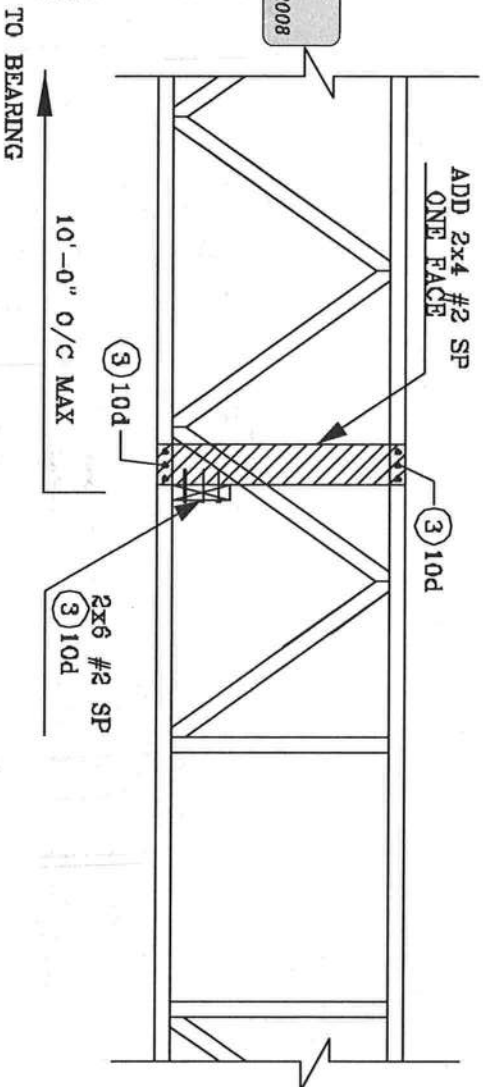
Two rows of 1/2" bolts or SDS 1/4" x 3 1/2" screws at 19.2" on-center.



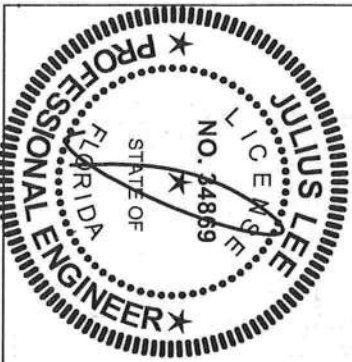
# STRONG BACK DETAIL SYSTEM-42 OR FLAT TRUSS



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



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



**JULIUS LEE'S**  
CONS. ENGINEERS P.A.  
1456 SW 4th Avenue  
Dixie Beach, FL 33444-2691

No. 34869  
STATE OF FLORIDA

# TRULOX CONNECTION DETAIL

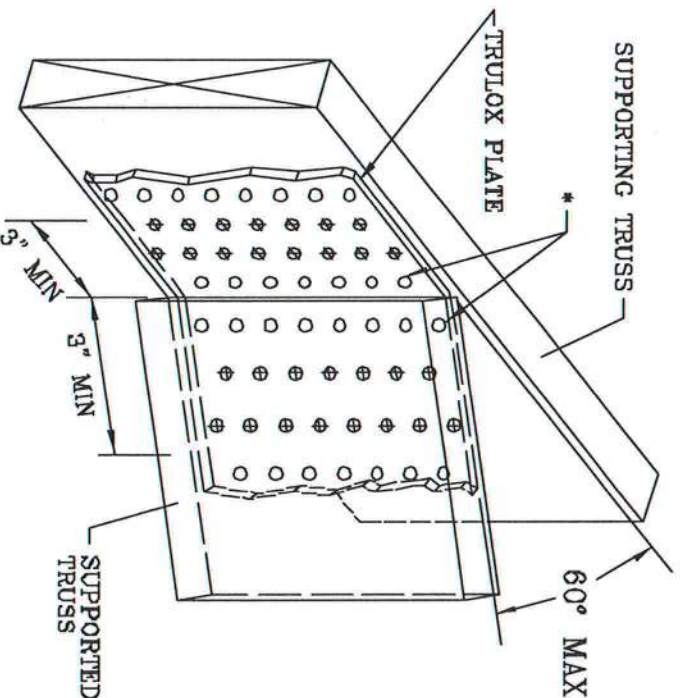
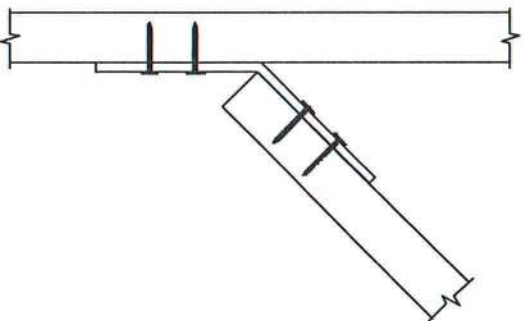
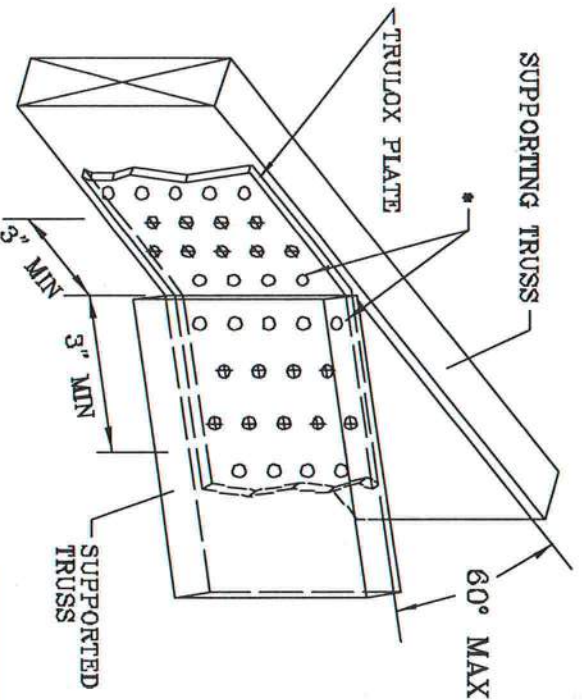
11 GAUGE (0.120" X 1.375") NAILS REQUIRED FOR TRULOX PLATE ATTACHMENT. FILL ROWS COMPLETELY WHERE SHOWN (Φ).

\* NAILS MAY BE OMITTED FROM THESE ROWS.

THIS DETAIL MAY BE USED WITH SO. PINE, DOUGLAS-FIR OR HEM-FIR CHORDS WITH A MINIMUM 1.00 DURATION OF LOAD OR SPRUCE-PINE-FIR CHORDS WITH A MINIMUM 1.15 DURATION OF LOAD. CHORD SIZE OF BOTH TRUSSES MUST EXCEED THE TRULOX PLATE WIDTH.

TRULOX PLATE IS CENTERED ON THE CHORDS AND BENT BETWEEN NAIL ROWS.

REFER TO ENGINEER'S SEALED DESIGN REFERENCING THIS DETAIL FOR LUMBER, PLATES, AND OTHER INFORMATION NOT SHOWN.



MINIMUM 3X6 TRULOX PLATE

MINIMUM 5X6 TRULOX PLATE

REVIEWED

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

TRULOX PLATE SIZE	REQUIRED NAILS PER TRUSS	MAXIMUM LOAD UP OR DOWN
3X6	9	350#
5X6	15	990#

THIS DRAWING REPLACES DRAWINGS 1,158,969 1,158,989/R  
1,154,944 1,152,217 1,152,017 1,159,154 & 1,151,524

JULIUS LEE'S

CONS. ENGINEERS P.A.

1455 SW 4th AVENUE  
DELRAY BEACH, FL 33444-2881

REF	TRULOX
DATE	11/26/03
DRWG	CNTRULOX1103
-ENG	JL

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BC31 1-93 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY THE TRUSS MANUFACTURERS ASSOCIATION OF AMERICA, 6500 ENTERPRISE LN, MARSHN, VA 22079 FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, THE CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED ROOF CEILING.

NO. 34869

STATE OF

FLORIDA

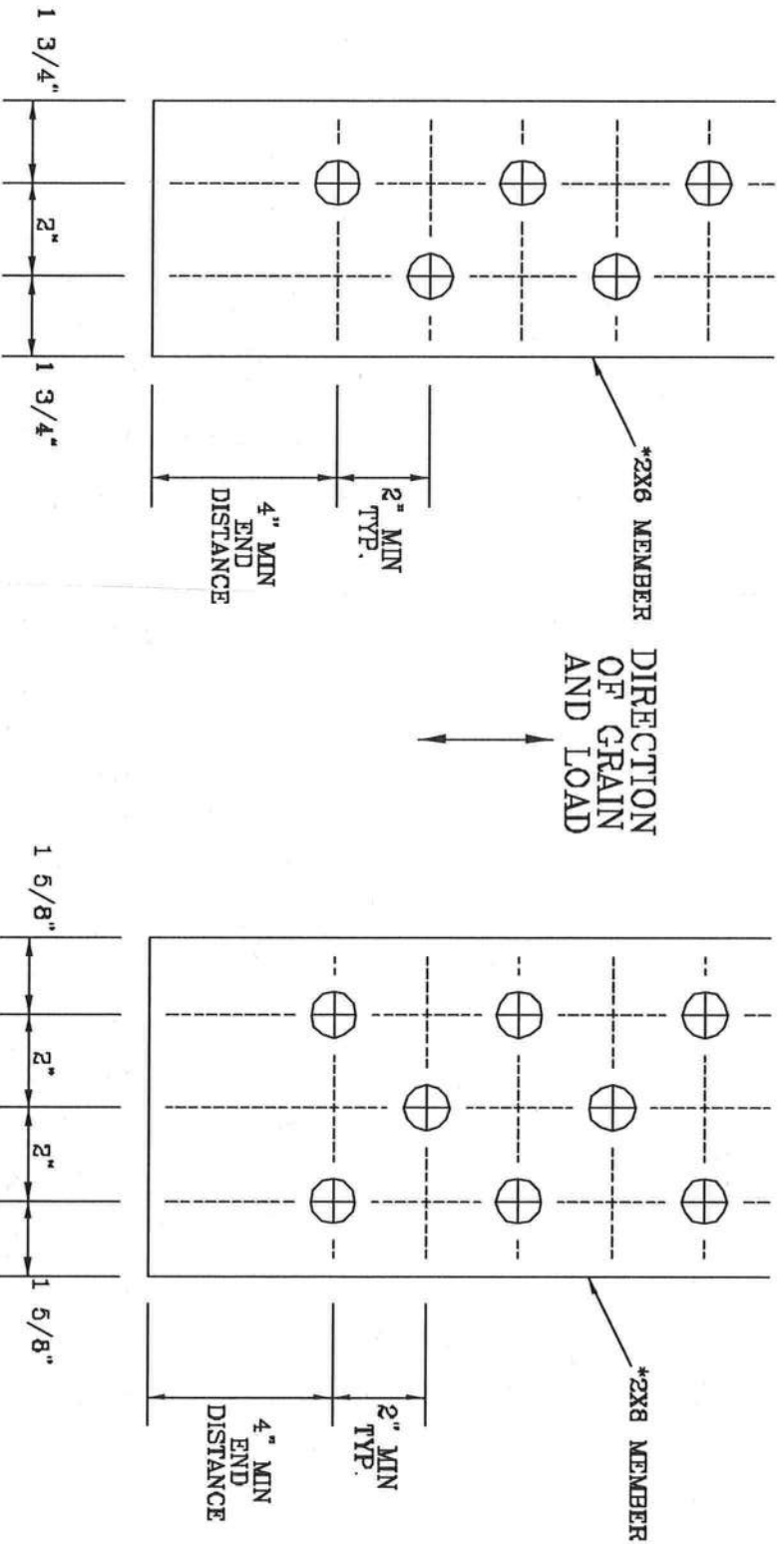
PROFESSIONAL ENGINEER

No. 34869  
STATE OF FLORIDA

# 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 A628.016

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST-1-80 GUIDING COMPONENT SAFETY INFORMATION, PUBLISHED BY THE TRUSS ASSOCIATION, 5801 DOWNEY DR., SUITE 200, WOODBRIDGE, VA 22191 AND AISC/CESG TRUSS COUNCIL DESIGN GUIDE 1, 2003. ALL TRUSSES SHALL BE DESIGNED TO PERFORM THEIR FUNCTIONS UNLESS OTHERWISE INDICATED. THIS DRAWING SHALL BE USED ONLY FOR THE STRUCTURAL PANELS AND SECTION CHORD SHALL HAVE A PROPERLY ATTACHED RIBB CEILING.

JULIUS LEE'S  
CONS. ENGINEERS P.A.  
1400 ST. ANDREW AVE  
DELRAY BEACH, FL 33444-2161

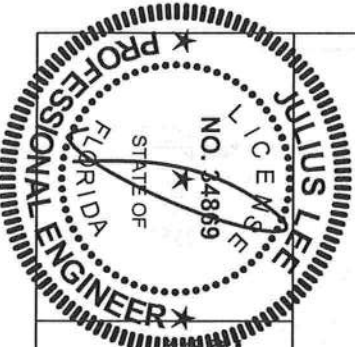
TC LL	PSF	REF	BOLT SPACING
TC DL	PSF	DATE	11/26/03
BC DL	PSF	DRWG	CNBOLTS P1103
BC LL	PSF	-ENG	JL
TOT. LD.	PSF		

REVIEWED

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

No: 34960  
STATE OF FLORIDA

DUR. FAC.  
SPACING





# 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/AP&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."

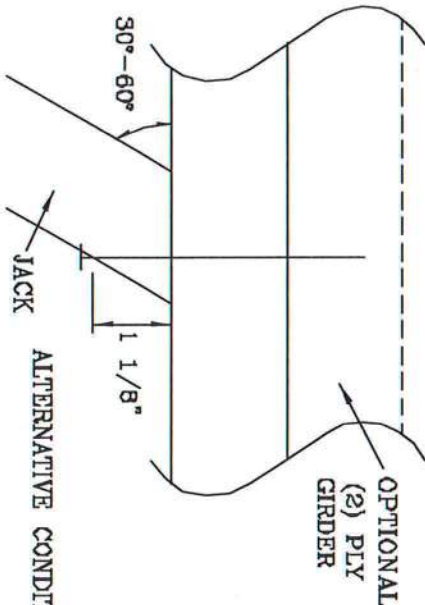
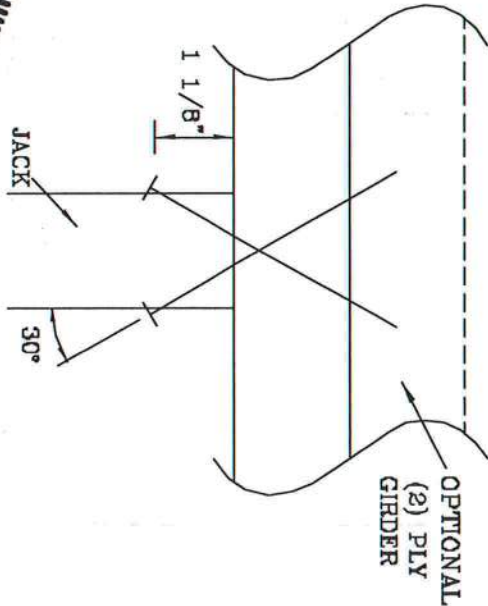
THE NUMBER OF TOE-NAILS TO BE USED IN A SPECIFIC APPLICATION IS DEPENDENT UPON PROPERTIES FOR THE CHORD SIZE, LUMBER SPECIES, AND NAIL TYPE. PROPER CONSTRUCTION PRACTICES AS WELL AS GOOD JUDGEMENT SHOULD DETERMINE THE NUMBER OF NAILS TO BE USED.

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 PILES	1 PLY	2 PILES	1 PLY	2 PILES	1 PLY	2 PILES
2	197#	256#	181#	234#	156#	203#	154#	199#
3	296#	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.



ALTERNATIVE CONDITION

THIS DRAWING REPLACES DRAWING 784040

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND ERECTING. REFER TO BCST 1-93 CHAIRING COMPONENT SAFETY INFORMATION, PUBLISHED BY THE TRUSS SOCIETY OF AMERICA, 388 DOWNTOWN DR., SUITE 200, NATION, VA 20719 AND VTOA (WOOD) TRUSS COUNCIL, 6500 ENTERPRISE LN, NATION, VA 20719 FOR SAFETY PRACTICES PRIOR TO PERFORMING TRUSS FUNCTIONS. UNLESS OTHERWISE INDICATED, THE CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED ROOF CEILING.

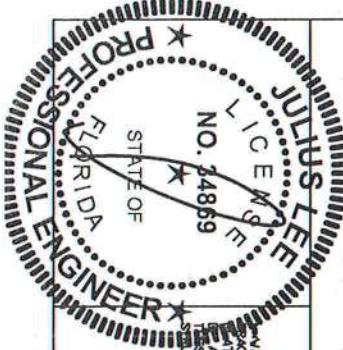
JULIUS LEE'S  
CONS. ENGINEERS P.A.  
1493 ST 4TH AVENUE  
DELRAY BEACH, FL 33444-2161

TC LL	PSF	REF	TOE-NAIL
TC DL	PSF	DATE	09/12/07
BC DL	PSF	DRWG	CYNONALL103
BC LL	PSF	-ENG	JL

TOT. LD. PSF

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

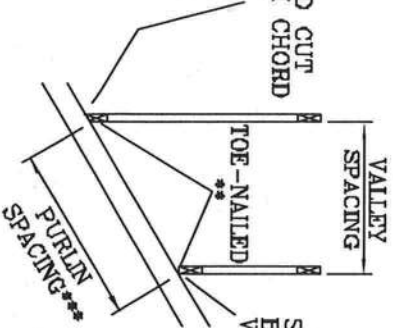
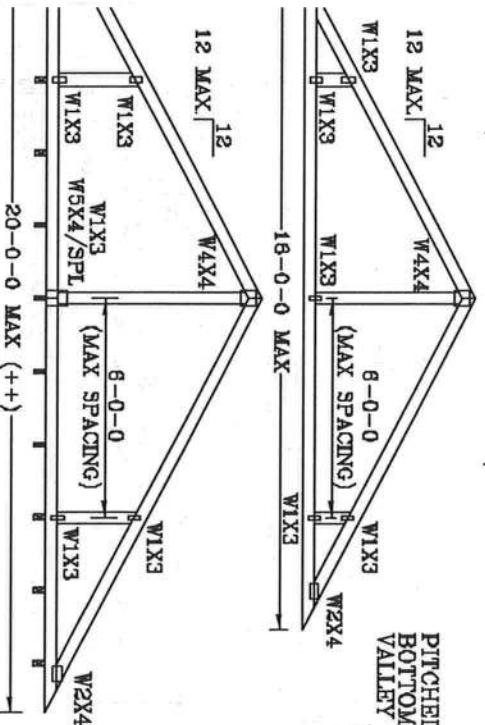
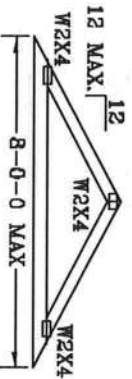
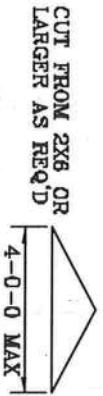
No. 34669  
STATE OF FLORIDA



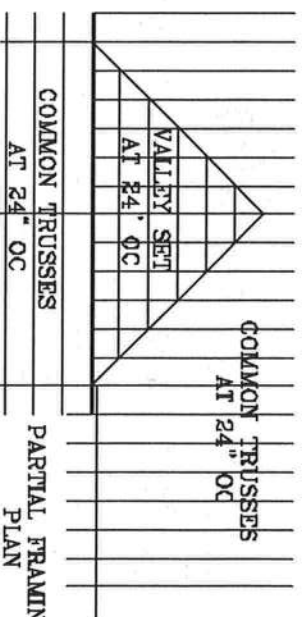
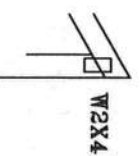
# VALLEY TRUSS DETAIL

TOP CHORD 2X4 SP #2 OR SPF #1/#2 OR BETTER.  
BOT CHORD 2X3(\*) OR 2X4 SP #2N 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=5 PSF.

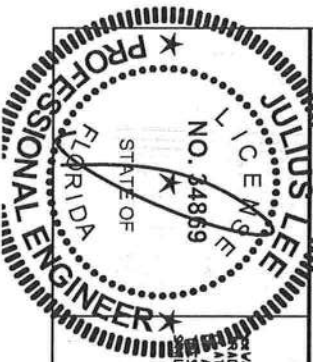


\*\*\* NOTE THAT THE PURLIN SPACING FOR BRACING THE TOP CHORD OF THE TRUSS BENEATH THE VALLEY IS MEASURED ALONG THE SLOPE OF THE TOP CHORD.  
++ LARGER SPANS MAY BE BUILT AS LONG AS THE VERTICAL HEIGHT DOES NOT EXCEED 12'-0".  
BOTTOM CHORD MAY BE SQUARE OR PITCHED CUT AS SHOWN.



COMMON TRUSSES AT 24" OC  
PARTIAL FRAMING PLAN

THIS DRAWING REPLACES DRAWING A105



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

VARIOUS TRUSSES REQUIRE EXTENSIVE CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE PROPER BRACING OF THE TRUSS. THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE PROPER BRACING OF THE TRUSS. THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE PROPER BRACING OF THE TRUSS.

JULIUS LEE'S  
CONS. ENGINEERS P.A.

1655 SW 4th Avenue  
Deerfield Beach, FL 33442-8101

No. 34869  
STATE OF FLORIDA

TC LL	20	20	PSF	REF	VALLEY DETAIL
TC DL	7	15	PSF	DATE	11/26/03
BC DL	5	5	PSF	DRWG	VALTRUSS1103
BC LL	0	0	PSF	-ENG	JL
TOT. LD.	32	40	PSF		
DUR.FAC. 1.25	1.25				
SPACING	24"				



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 SPICES MUST BE STAGGERED SO THAT ONE SPICE 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

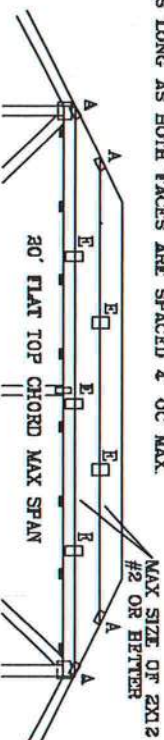
CAT I, EXP C, WIND TC DL=5 PSF, WIND BC DL=5 PSF

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

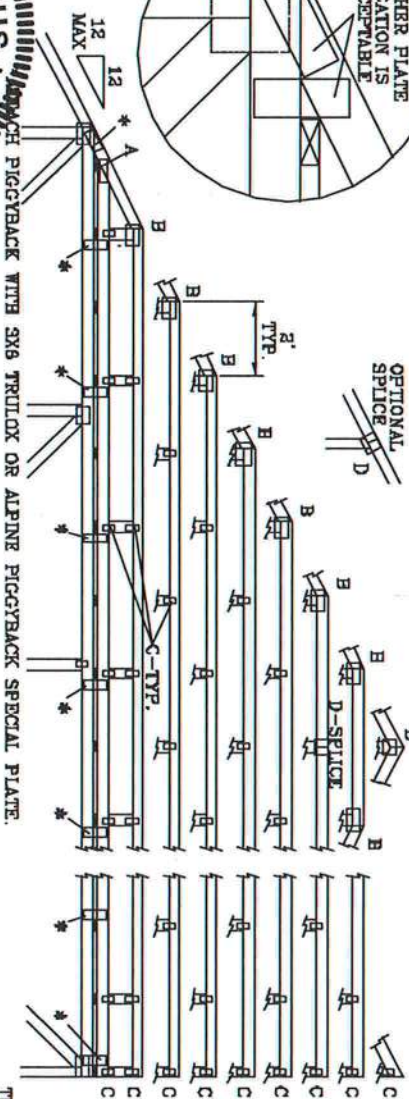
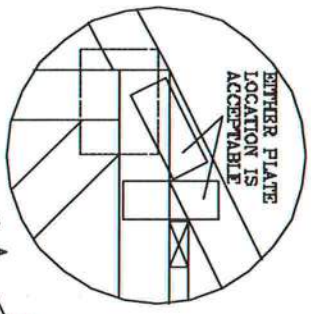
WIND TC DL=5 PSF, WIND BC DL=5 PSF

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



OPTIONAL  
SPICE  
D



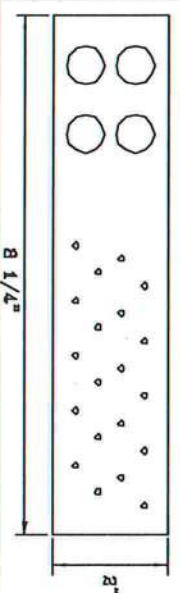
JOINT TYPE	SPANS UP TO			
	30'	34'	36'	52'
A	2X4	2.5X4	2.5X4	3X5
B	4X6	6X6	6X6	5X6
C	1.5X3	1.5X4	1.5X4	1.5X4
D	5X4	6X6	6X6	5X6
E	4X6 OR 3X6 TRUSS AT 4' OC, ROTATED VERTICALLY			

ATTACH TRUSS PLATES WITH (B) 0.120" X 1.875" 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 1.875" 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

**JULIUS LEE'S**  
CONS. ENGINEERS P.A.  
1400 SW 4th AVENUE  
DUNBAR PLACE, FL 33444-2661

CAUTION: TRUSSES BEARING EXTERIOR LOADS IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND MAINTAINING. REFER TO SECT 1-83 GUIDING CONCEPT SAFETY REQUIREMENTS, RULES GOVERNED BY THE TRUSS MANUFACTURING ASSOCIATION, 2000 ENTERPRISE LN, NATION, VT 35759 FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

**JULIUS LEE**  
LICENSED  
NO. 34869  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

**REVIEWED**

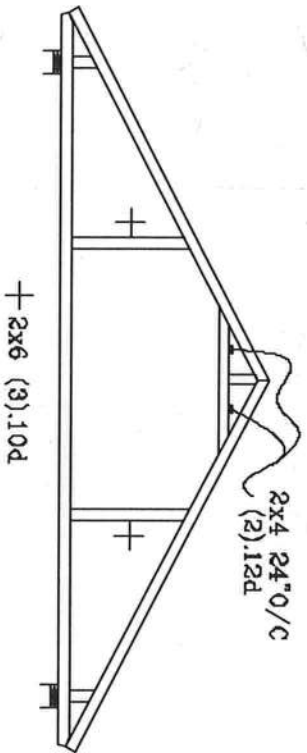
By Julius Lee at 11:59 am, Jun 11, 2008

No. 34869  
STATE OF FLORIDA

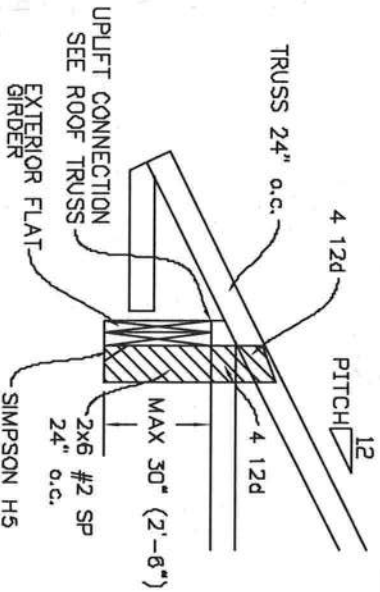
MAX LOADING		REF PIGGYBACK	
55 PSF AT	DATE 09/12/07	DRWG/ITER STD PIGGY	-ENG JL
1.33 DUR. FAC.			
50 PSF AT			
1.25 DUR. FAC.			
47 PSF AT			
1.15 DUR. FAC.			
SPACING 24.0"			



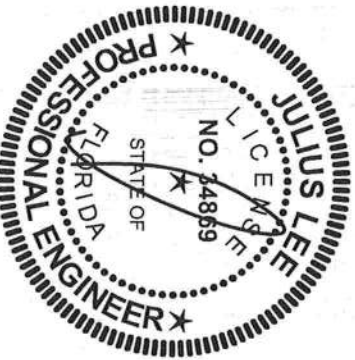
# TYPICAL ATTIC TRUSS BRACING



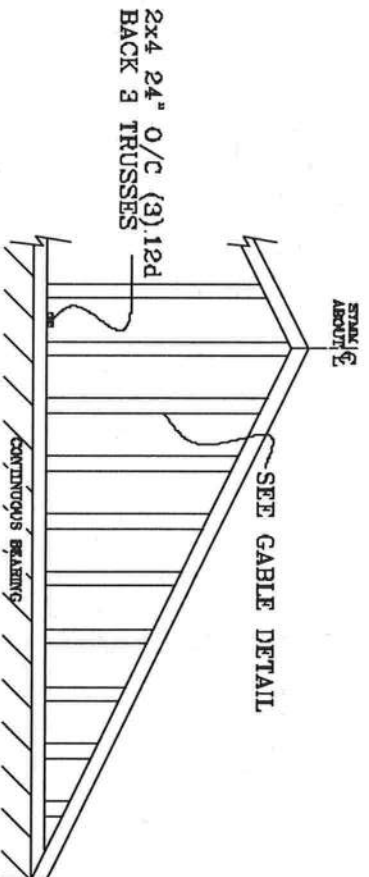
## TYPICAL ALTERNATE BRACING DETAIL FOR EXTERIOR FLAT GIRDER TRUSS



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

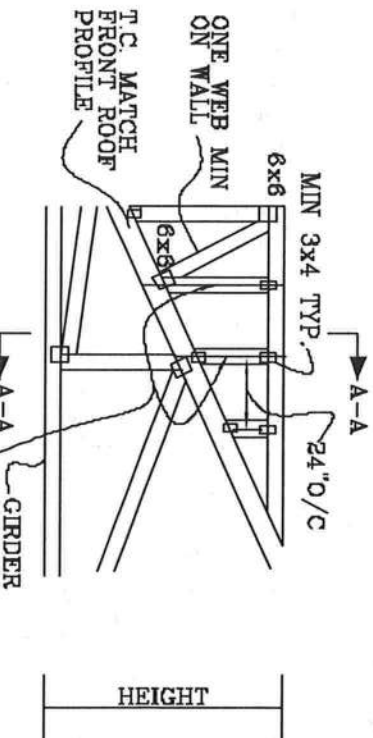


# GABLE END TRUSS DETAIL



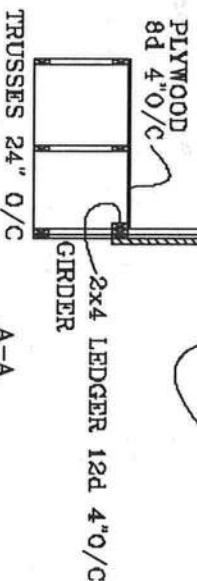
MINIMUM BC BRACING ON GABLE TRUSSES. OTHER PERMANENT BRACING DESIGNS BY ARCHITECT OR EOR

## TYPICAL WALL GIRDER VERTICAL WEB BRACING DETAIL



SEE ROOF TRUSSES FOR UPLIFT  
ROOF 24" O/C

SEE GABLE END DETAIL FOR T-BRACE BEHIND EACH VERTICAL

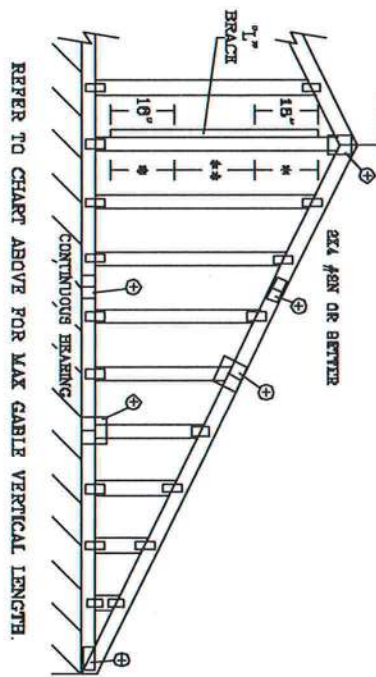
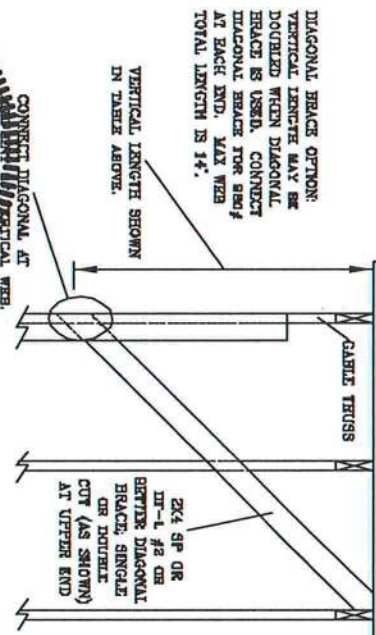


JULIUS LEE'S  
CONS. ENGINEERS P.A.  
1425 SW 4TH AVENUE  
DEERBAY BEACH, FL 33444-2161

No: 34869  
STATE OF FLORIDA

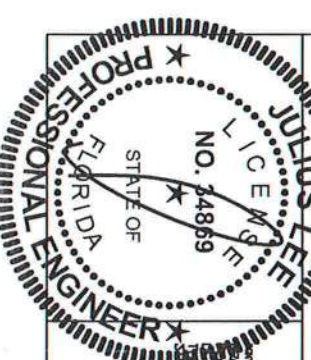
ASCE 7-02: 130 MPH WIND SPEED, 30' MEAN HEIGHT, ENCLOSED, I = 1.00, EXPOSURE C

MAX GABLE VERTICAL LENGTH		BRACE		NO. BRACES		(1) 1X4 T <sup>1</sup> BRACE *		(1) 2X4 T <sup>1</sup> BRACE *		(2) 2X4 T <sup>1</sup> BRACE **		(1) 2X6 T <sup>1</sup> BRACE *		(2) 2X6 T <sup>1</sup> BRACE *	
GABLE VERTICAL SPACING	SPECIES	GRADE	BRACE	NO. BRACES	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP B
12" O.C.	SPF	#1 / #2	STUD	3' 2"	5' 6"	6' 8"	6' 8"	6' 9"	7' 10"	8' 0"	9' 1"	10' 3"	10' 7"	12' 3"	12' 7"
		#3	STUD	3' 1"	4' 5"	4' 5"	6' 10"	5' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"	12' 3"
		STANDARD	STUD	3' 1"	4' 6"	4' 5"	5' 10"	6' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"	12' 3"
		STANDARD	STUD	2' 11"	3' 6"	3' 9"	6' 0"	5' 0"	6' 9"	6' 9"	7' 10"	7' 10"	10' 7"	10' 7"	12' 3"
16" O.C.	SPF	#1 / #2	STUD	3' 2"	5' 6"	6' 8"	6' 8"	6' 9"	7' 10"	8' 0"	9' 1"	10' 3"	10' 7"	12' 3"	12' 7"
		#3	STUD	3' 1"	4' 5"	4' 5"	6' 10"	5' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"	12' 3"
		STANDARD	STUD	3' 1"	4' 6"	4' 5"	5' 10"	6' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"	12' 3"
		STANDARD	STUD	2' 11"	3' 6"	3' 9"	6' 0"	5' 0"	6' 9"	6' 9"	7' 10"	7' 10"	10' 7"	10' 7"	12' 3"
24" O.C.	SPF	#1 / #2	STUD	3' 2"	5' 6"	6' 8"	6' 8"	6' 9"	7' 10"	8' 0"	9' 1"	10' 3"	10' 7"	12' 3"	12' 7"
		#3	STUD	3' 1"	4' 5"	4' 5"	6' 10"	5' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"	12' 3"
		STANDARD	STUD	3' 1"	4' 6"	4' 5"	5' 10"	6' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"	12' 3"
		STANDARD	STUD	2' 11"	3' 6"	3' 9"	6' 0"	5' 0"	6' 9"	6' 9"	7' 10"	7' 10"	10' 7"	10' 7"	12' 3"



CABLE TRUSS DETAIL NOTES:	
LIVE LOAD DEPLETION CRITERIA IS 1/240.	
PROVIDE VERTICAL CONNECTIONS FOR 160 PSF OVER CONTINUOUS BRACING (6 PSF VC DEAD LOAD).	
CABLE END SUPPORTS LOAD FROM 4" O" OUTLIMBERS WITH 2" O" OVERHANG, OR 12" PLYWOOD OVERHANG.	
ATTACH EACH T <sup>1</sup> BRACE WITH 10d NAILS.	
* FOR (1) T <sup>1</sup> BRACE, SPACE NAILS AT 8" O.C.	
* FOR (2) T <sup>1</sup> BRACES, SPACE NAILS AT 4" O.C. BETWEEN ZONES.	
* FOR (3) T <sup>1</sup> BRACES, SPACE NAILS AT 3" O.C. BETWEEN ZONES.	
T <sup>1</sup> BRACING MUST BE A MINIMUM OF 80K OR WEB MEMBER LENGTH.	

CABLE VERTICAL PLATE SIZES	
VERTICAL LENGTH	NO. SPICES
LESS THAN 2' 0"	1X4 OR 2X3
GREATER THAN 4' 0" BUT	2X4
LESS THAN 11' 8"	2X6
GREATER THAN 11' 8"	2X8



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

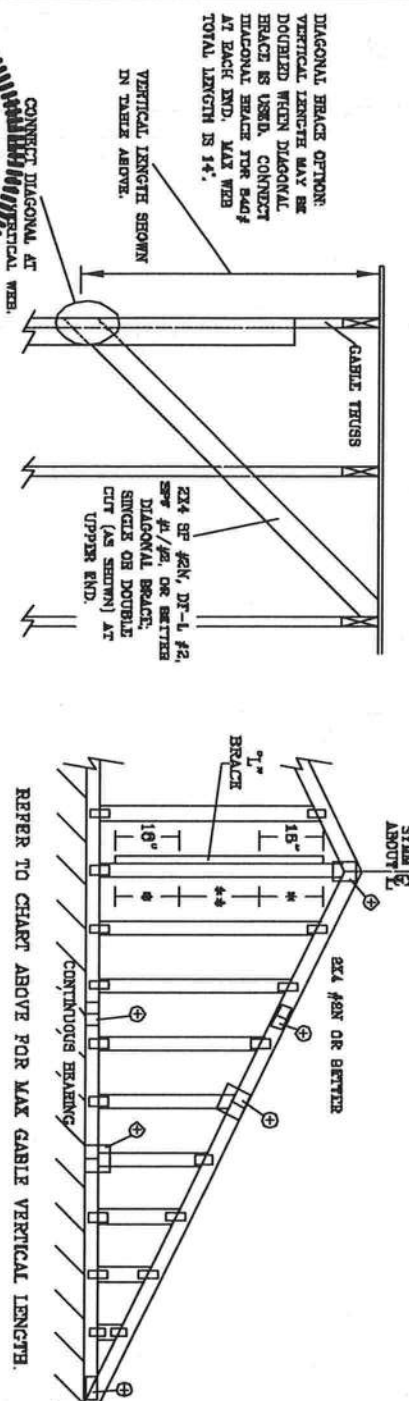
JULIUS LEE'S  
CONS. ENGINEERS P.A.  
1455 SW 4th AVE  
DEALING BRIDGE, FL 33444-2611

REF	ASCE 7-02-CAB10030
DATE	11/26/03
DWG	WEEK 5TH GABLE 30' x 17'
ENG	
MAX. TOT. LD.	60 PSF
MAX. SPACING	24.0"

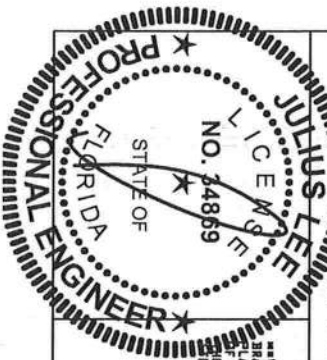


ASCE 7-02: 130 MPH WIND SPEED, 15' MEAN HEIGHT, ENCLOSED, I = 1.00, EXPOSURE C

MAX GABLE VERTICAL LENGTH		BRACE		NO		(1) 1X4 "L" BRACE *		(1) 2X4 "L" BRACE *		(2) 2X4 "L" BRACE **		(1) 2X6 "L" BRACE *		(2) 2X8 "L" BRACE **	
CABLE VERTICAL SPACING   SPECIES   GRADE	2X4	BRACE	NO	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B
12" O.C.	SPF	#1 / #2	3' 4"	6' 10"	6' 0"	6' 11"	7' 1"	6' 3"	6' 3"	10' 10"	11' 2"	12' 11"	13' 3"	12' 11"	13' 3"
			3' 3"	4' 11"	4' 11"	6' 6"	6' 6"	8' 3"	8' 3"	10' 1"	10' 1"	12' 11"	12' 11"	12' 11"	12' 11"
			3' 3"	4' 11"	4' 11"	6' 5"	6' 5"	8' 3"	8' 3"	10' 0"	10' 0"	12' 11"	12' 11"	12' 11"	12' 11"
			3' 3"	4' 2"	4' 2"	5' 6"	5' 6"	7' 5"	7' 5"	9' 8"	9' 8"	11' 8"	11' 8"	13' 11"	13' 11"
			3' 3"	5' 10"	5' 10"	6' 11"	7' 5"	8' 3"	8' 3"	10' 11"	11' 8"	12' 11"	12' 11"	13' 11"	13' 11"
			3' 3"	6' 10"	6' 10"	6' 11"	7' 6"	8' 3"	8' 3"	10' 10"	11' 6"	12' 11"	12' 11"	13' 11"	13' 11"
16" O.C.	SPF	#1 / #2	3' 4"	5' 0"	5' 0"	6' 8"	6' 8"	8' 3"	8' 3"	10' 4"	10' 4"	12' 11"	13' 7"	12' 11"	13' 7"
			3' 4"	5' 0"	5' 0"	6' 7"	6' 7"	8' 3"	8' 3"	10' 3"	10' 3"	12' 11"	13' 7"	12' 11"	13' 7"
			3' 4"	4' 3"	4' 3"	6' 8"	6' 8"	8' 3"	8' 3"	10' 3"	10' 3"	12' 11"	13' 7"	12' 11"	13' 7"
			3' 4"	4' 3"	4' 3"	6' 8"	6' 8"	8' 3"	8' 3"	10' 3"	10' 3"	12' 11"	13' 7"	12' 11"	13' 7"
			3' 4"	4' 3"	4' 3"	6' 8"	6' 8"	8' 3"	8' 3"	10' 3"	10' 3"	12' 11"	13' 7"	12' 11"	13' 7"
			3' 4"	4' 3"	4' 3"	6' 8"	6' 8"	8' 3"	8' 3"	10' 3"	10' 3"	12' 11"	13' 7"	12' 11"	13' 7"
24" O.C.	SPF	#1 / #2	3' 4"	4' 0"	4' 0"	6' 11"	6' 11"	8' 3"	8' 3"	10' 5"	10' 5"	12' 11"	14' 0"	14' 0"	14' 0"
			3' 4"	4' 0"	4' 0"	6' 11"	6' 11"	8' 3"	8' 3"	10' 5"	10' 5"	12' 11"	14' 0"	14' 0"	14' 0"
			3' 4"	4' 0"	4' 0"	6' 11"	6' 11"	8' 3"	8' 3"	10' 5"	10' 5"	12' 11"	14' 0"	14' 0"	14' 0"
			3' 4"	4' 0"	4' 0"	6' 11"	6' 11"	8' 3"	8' 3"	10' 5"	10' 5"	12' 11"	14' 0"	14' 0"	14' 0"
			3' 4"	4' 0"	4' 0"	6' 11"	6' 11"	8' 3"	8' 3"	10' 5"	10' 5"	12' 11"	14' 0"	14' 0"	14' 0"
			3' 4"	4' 0"	4' 0"	6' 11"	6' 11"	8' 3"	8' 3"	10' 5"	10' 5"	12' 11"	14' 0"	14' 0"	14' 0"



CABLE TRUSS DETAIL NOTES:	
LIVE LOAD DEFLECTION CRITERIA IS L/240.	
PROVIDE UPLIFT CONNECTIONS FOR 136 PLF OVER CONTINUOUS BEAMING (6 PSF TO DEAD LOAD).	
CABLE END SUPPORTS LOAD FROM 4' 0" OUTLOOKERS WITH 2' 0" OVERHANG, OR 12" PLYWOOD OVERHANG.	
ATTACH EACH "L" BRACE WITH 104 NAILS.	
* FOR (1) "L" BRACE, SPACE NAILS AT 8" O.C.	
** FOR (2) "L" BRACES, SPACE NAILS AT 8" O.C.	
IN 18" END ZONES AND 4" O.C. BETWEEN ZONES.	
"L" BRACING MUST BE A MINIMUM OF 80% OF WEB MEMBER LENGTH.	



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

**JULIUS LEE'S**  
CONS. ENGINEERS P.A.  
1455 ST. 4th AVENUE  
DELRAY BEACH, FL 33444-8161

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

REF ASCE 7-02-CAB3015  
DATE 11/26/03  
DRWG WITH STD CABLE IS E BT  
-ENG



# STEPPDOWN CORNER SET

TOP CHORD 2X4 SO. PINE #2 or Better  
BOT CHORD 2X4 SO. PINE #2 or Better  
WEBS 2X4 SO. PINE #3 or Better

**120 MPH MAX**

Setback 7' or Less

PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED.

UPLIFT: 400# or Less  
BRG LOC: \*  
UPLIFT BASED ON 7.2 PSF TOTAL DEAD LOAD. WIND  
SPEED=120 "C" MPH. MEAN HGT=28 FT. ENCLOSED. (ASCE 7-02)

PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED. TILE  
UPLIFT: 400# or Less  
BRG LOC: \*  
UPLIFT BASED ON 15.0 PSF TOTAL DEAD LOAD. WIND  
SPEED=120 "C" MPH. MEAN HGT (of jacks)=28 FT. ENCLOSED. (ASCE 7-02)

PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED.

UPLIFT: 400# or Less  
BRG LOC: \*  
UPLIFT BASED ON 7.2 PSF TOTAL DEAD LOAD. WIND  
SPEED=120 "B" MPH. MEAN HGT (of jacks)=28 FT. ENCLOSED. (ASCE 7-02)

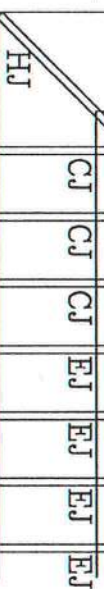
#2 HIP OR COMMON TRUSS

#1 HIP TRUSS

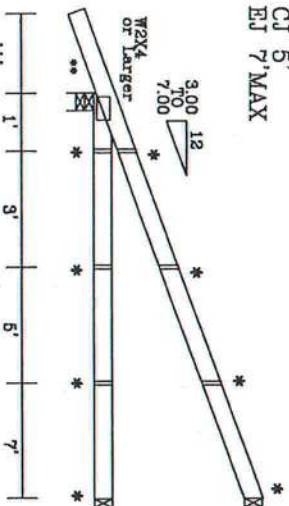
2' TYP.  
MAX  
CJ's  
2' TYP.  
MAX

1'

2' O.H. 1'  
MAX  
CJ's  
2' TYP.  
MAX

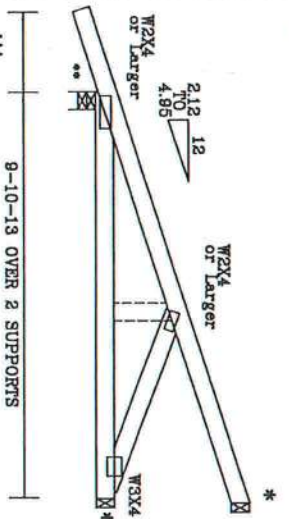


CJ 1'  
CJ 3'  
CJ 5'  
EJ 7' MAX  
ALL HEELS TO BE STANDEAR WITH NO CANTILEVER



END AND CORNER JACKS

HJ ALL HEELS TO BE STANDEAR WITH NO CANTILEVER



HIPJACK

UPLIFT VALUES DO TAKE INTO ACCOUNT PORCHES EXPOSED  
BC LIVE LOAD IS NON CONCURRENT 10\*

\* (3) 16d TOENAILS  
\*\* SEE FOR FOR TIE DOWN

CORNER SET  
SETBACK

7'0" MAX

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BC31-1-03 BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY THE TRUSS  
INSTITUTE, 963 DINGLEDY DR., SUITE 200, FAIRFAX, VA 22031 AND/OR CONTACT THE TRUSS COUNCIL  
FOR MORE INFORMATION. ENGINEERS OTHERWISE INDICATED TOP CHORD SHALL HAVE PROPERLY ATTACHED  
STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.  
IMPORTANT: FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR. ALPINE ENGINEERED  
PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO  
BUILD THE TRUSS IN CONFORMANCE WITH THE FABRICATING, HANDLING, SHIPPING, INSTALLATION  
INSTRUCTIONS OR THE TRUSS DESIGNER'S SPECIFICATIONS SHALL BE THE RESPONSIBILITY OF THE  
CONTRACTOR. THE TRUSS DESIGNER'S SPECIFICATIONS ARE MADE OF 80/18/16GA (VJ/SX) ASTM A653 GRADE  
40/60 (VJ/SX) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED  
ON THIS DESIGN, POSITION PER DRAWINGS 1604-2. ANY INSPECTION OF PLATES FOLLOWED BY CD SHALL  
BE PER ANNEK A3 OF TPI 1-2002 SEC. 3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF THE  
PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE  
DESIGNER, PER ANS/TP1 1 SEC. 2.

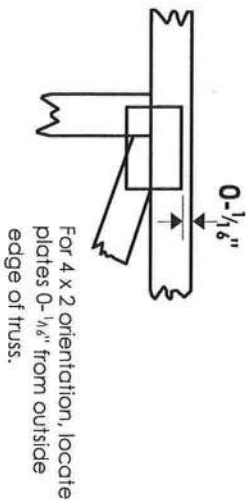
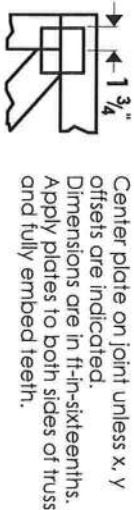


BRIDGE	SPACING	2' MAX
11	20	MAX PSF
12	20	MAX PSF
13	10*	MAX PSF
14	5	MAX PSF
15	5	MAX PSF
16	5	MAX PSF
17	5	MAX PSF
18	5	MAX PSF
19	5	MAX PSF
20	5	MAX PSF
21	5	MAX PSF
22	5	MAX PSF
23	5	MAX PSF
24	5	MAX PSF
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93	5	MAX PSF
94	5	MAX PSF
95	5	MAX PSF
96	5	MAX PSF
97	5	MAX PSF
98	5	MAX PSF
99	5	MAX PSF
100	5	MAX PSF

REF	7' MAX STBK CS
DATE	Jun./27/2008
DRWG	
ENG	
REVIEWED	
By	Julius Lee at 10:52 am, Jun 27, 2008

# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

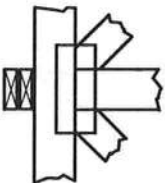
4 X 4

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

## LATERAL BRACING LOCATION



## BEARING

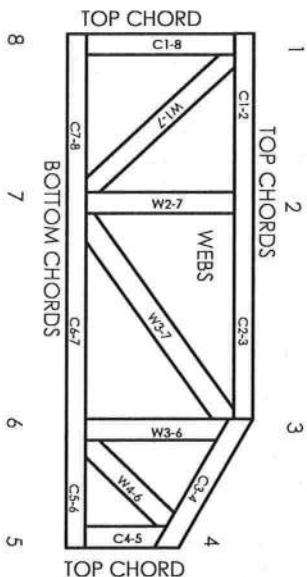


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

## Industry Standards:

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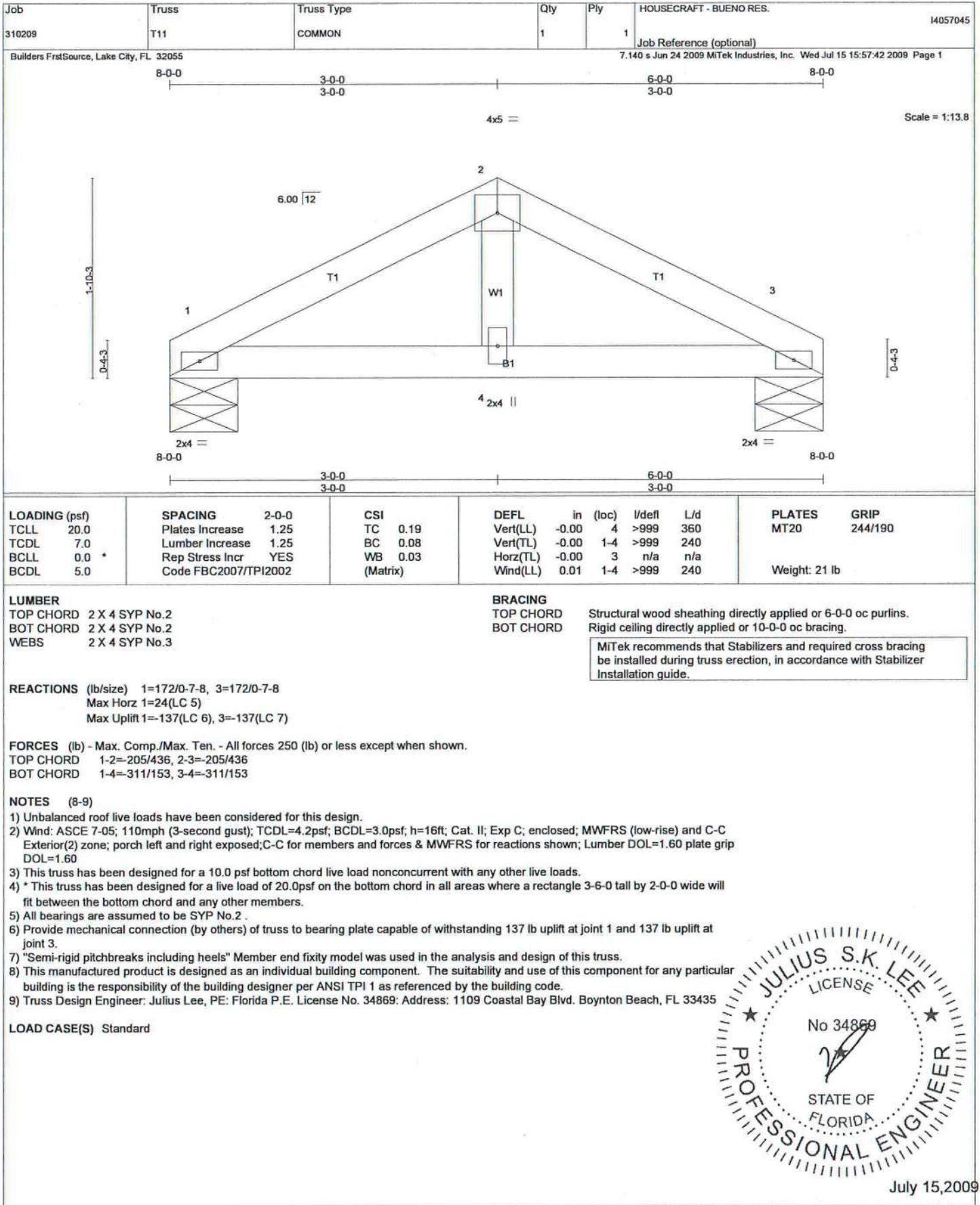
# General Safety Notes

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 stock materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

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

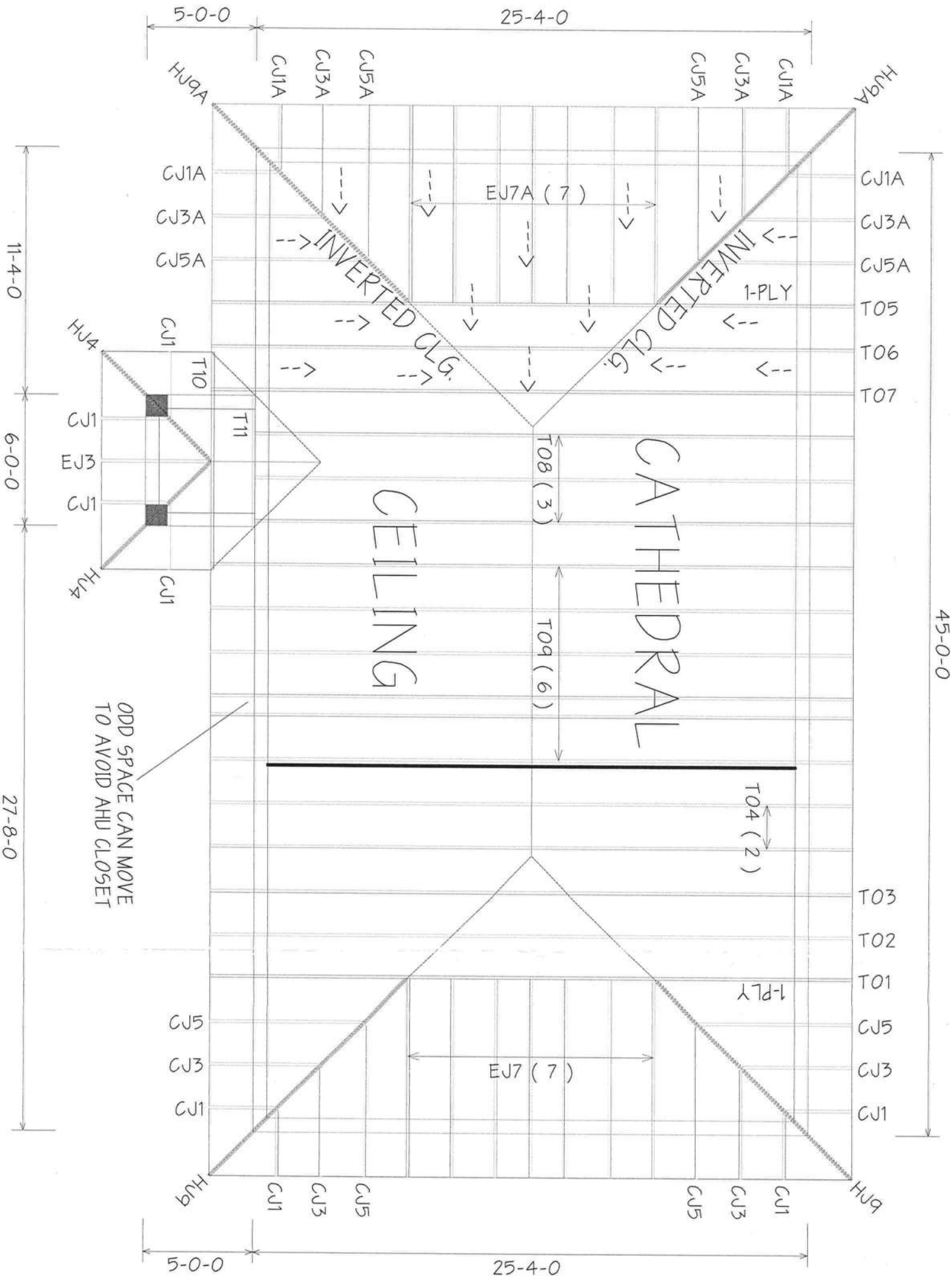
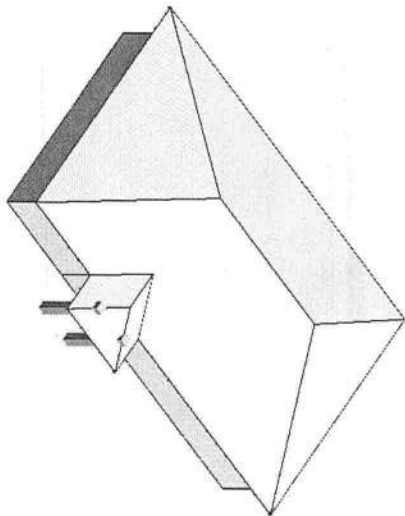






8'-0"

6/12 PITCH - 2'0" O/H



NOTES:

- 1) REFER TO HIB 91 (RECOMMENDATIONS FOR TRUSS AND JOIST INSTALLATION AND TEMPORARY BRACING) FOR REQUIRED BRACING AND TEMPORARY BRACING REQUIREMENTS.
- 2) ALL TRUSSES (INCLUDING TRUSSES UNDER VALLEY FRAMING) MUST BE COMPLETELY DECKED OR REFER TO DETAIL V05 FOR ALTERNATE BRACING REQUIREMENTS.
- 3) ALL VALLEYS ARE TO BE CONVENTIONALLY FRAMED BY BUILDER.
- 4) ALL TRUSSES ARE DESIGNED FOR 2' o.c. MAXIMUM SPACING, UNLESS OTHERWISE NOTED.
- 5) ALL WALLS SHOWN ON FLECEMENT PLAN ARE CONSIDERED TO BE LOAD BEARING, UNLESS OTHERWISE NOTED.
- 6) S742 TRUSSES MUST BE INSTALLED WITH THE TOP BEING UP.
- 7) ALL ROOF TRUSSES HANGERS TO BE SAMPSON HT126 UNLESS OTHERWISE NOTED. ALL FLOOR TRUSSES HANGERS TO BE SAMPSON TH4422 UNLESS OTHERWISE NOTED.
- 8) BEAM/HEADER/INTEL (H93) TO BE FURNISHED BY BUILDER.

SHOP DRAWING APPROVAL

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND JOISTS. ALL REVISIONS, ARCHITECTURAL OR OTHER TRUSS LAYOUTS, REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

Engineered Drawing Size: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



**Bunnell**  
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Sanford  
PHONE: 407-322-0094 FAX: 407-322-9933

**HOUSECRAFT HOMES**  
BUENO RES.

**CUSTOM**  
DATE: 7-15-09 K.L.H. 310209