### **JULIUS LEE PE.**

RE: 545372 - RONALD CLARK - REED RES.

"1109 COASTAL BAY BLVD, BOYNTON BEACH, FL 33435

Site Information:

Project Customer: Ronald Clark Const. Project Name. 545372 Model: Reed Res

Lot/Block:

Subdivision:

Address: CR18

City Columbia Cty State FL

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

Name: RONALD W CLARK License # CRC1326560

Address: 15816 NW CR 1491

City: ALACHUA

State: FL

for

Code Compliance

EXAM

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

Design Code: FBC2010/TPI2007

Design Program: MiTek 20/20 7.3

Wind Code: ASCE 7-10 Wind Speed: 130 mph

Floor Load: N/A psf

Roof Load: 32.0 psf

17699789

This package includes 32 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	17699773	CJ01	1/10/014	18	17699790	T09	1/10/014
2	17699774	CJ02	1/10/014	19	17699791	T10	1/10/014
3	17699775	CJ03	1/10/014	20	17699792	T11	1/10/014
4	17699776	CJ04	1/10/014	21	17699793	T12	1/10/014
5	17699777	EJ01	1/10/014	22	17699794	T13	1/10/014
6	17699778	EJ02	1/10/014	23	17699795	T14	1/10/014
7	17699779	EJ03	1/10/014	24	17699796	T15	1/10/014
8	17699780	HJ01	1/10/014	25	17699797	T16	1/10/014
9	17699781	HJ02	1/10/014	26	17699798	T17	1/10/014
10	17699782	T01	1/10/014	27	17699799	T18	1/10/014
11	17699783	T02	1/10/014	28	17699800	T19	1/10/014
12	17699784	T03	1/10/014	29	17699801	T20	1/10/014
13	17699785	T04	1/10/014	30	17699802	T21	1/10/014
14	17699786	T05	1/10/014	31	17699803	T22	1/10/014
15	17699787	T06	1/10/014	32	17699804	T23	1/10/014
16	17699788	T07	1/10/014				

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

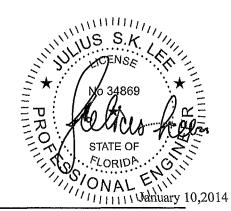
1/10/014

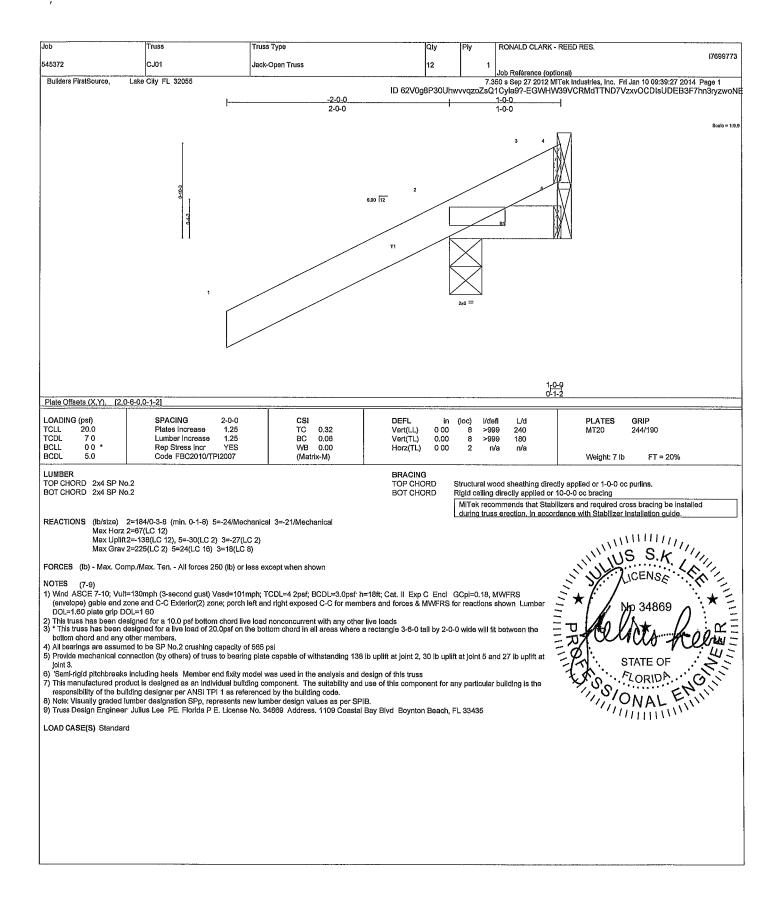
Truss Design Engineer's Name: Julius Lee

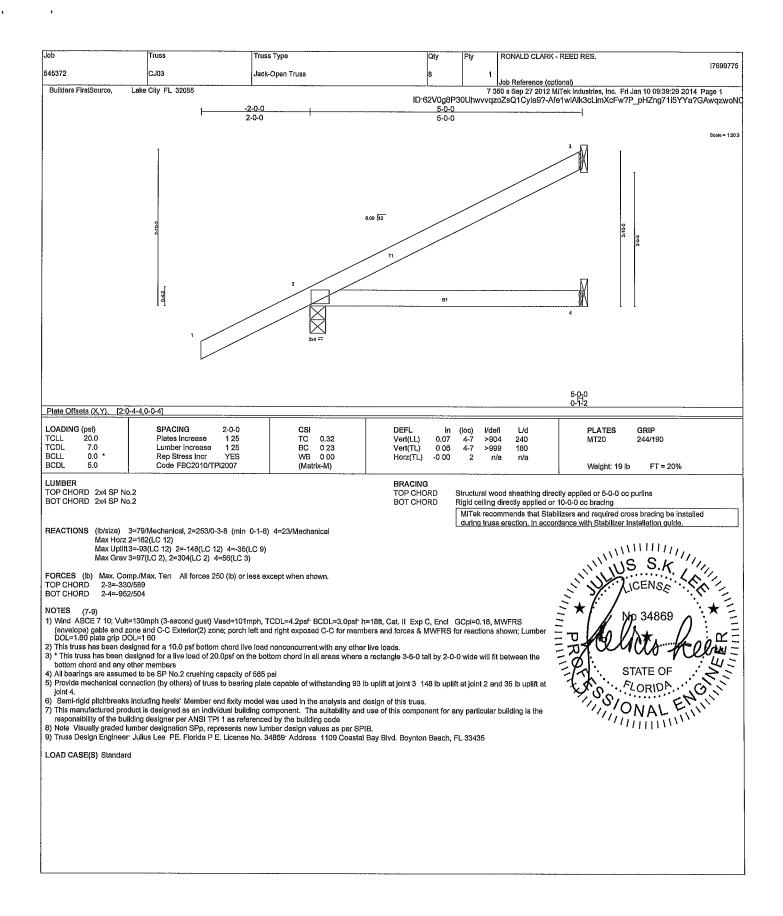
T08

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

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







Job Truss Truss Type RONALD CLARK REED RES 17699777 545372 EJ01 Jack-Partial Truss 30 Job Reference (optional) Builders FirstSource. Lake City FL 32055 7 350 s Sep 27 2012 MiTek Industries, Inc. Frl Jan 10 09;39:31 2014 Page 1 ID 62V0g8P30UhwvvqzoZsQ1Cyla97-72moLRC?Ggs3y4h\_ML1t3EMqqTlsA?2r1JlG\_izwoN. -2-0-0 2-0-0 7-0-0 Scale = 1:25.3 6.00 12 1 Plate Offsets (X,Y). [2:0-6-0,0-0-10] LOADING (psf) SPACING DEFL **PLATES** GRIP (loc) L/d TCLL TC BC 0.24 4-7 4-7 240 180 244/190 20.0 Plates Increase 1.25 0.61 Vert(LL) >346 MT20 TCDL Lumber Increase >401 0,46 Vert(TL) **BCLL** 0.0 Rep Stress Incr YES WB იიი Horz(TL) -0.01 Code FBC2010/TPI2007 (Matrix-M) Weight: 26 lb FT = 20% LUMBER BRACING TOP CHORD 2x4 SP No.2 BOT CHORD 2x4 SP No.2 TOP CHORD BOT CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing MITek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide REACTIONS (lb/size) 3=113/Mechanical 2=318/0-3-8 (min 0-1-8) 4=32/Mechanical Max Horz 2=144(LC 12) Max Uplift3=-86(LC 12) 2=-141(LC 9) 4=-48(LC 9) Max Grav 3=139(LC 2) 2=380(LC 2) 4=79(LC 3) FORCES (lb) - Max. Comp./Max. Ten. All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-739/1501 BOT CHORD 2-4=-2264/1148 NOTES NOTES (7-9)

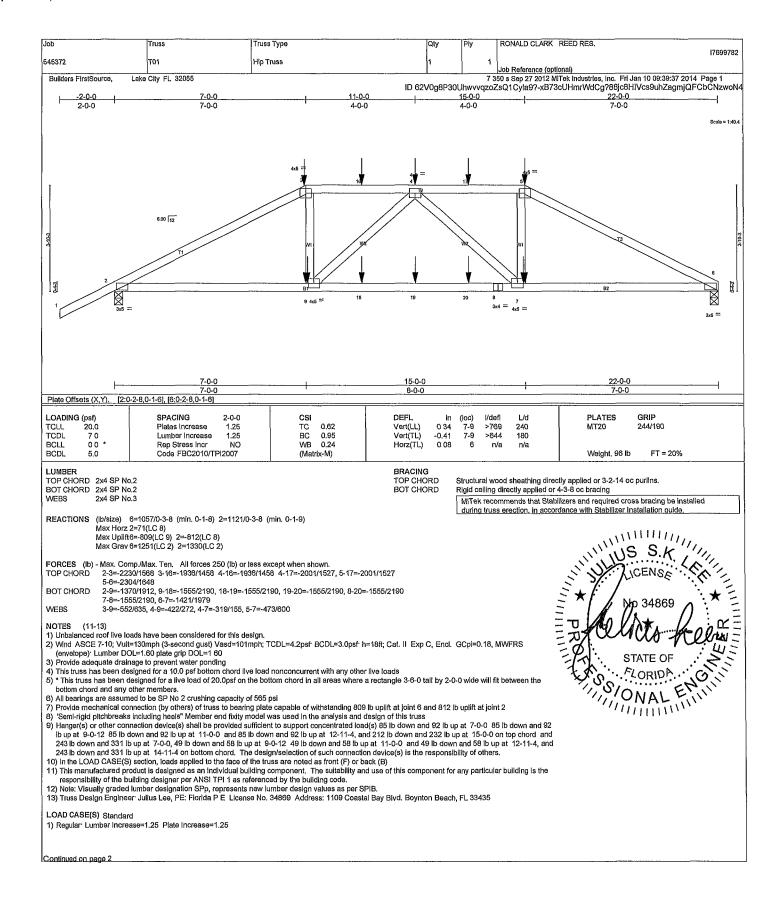
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4,2psf: BCDL=3,0psf: h=18ft; Cat. II Exp C Encl. GCpl=0 18, MWFRS ...... составления досторных учествовить учествовым учествов в MWFRS (envelope) and C-C Exterior(2) zone porch left and right exposed; C-C for members and forces & MWFRS 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 SP No 2 crushing capacity of 565 psi
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 86 lb uplift at joint 3, 141 lb uplift at joint 2 and 48 lb uplift at joint 4. 'Seml-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss. 7) 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. 8) Note: Visually graded lumber designation SPp, represents new lumber design values as per SPIB.
9) Truss Design Engineer: Julius Lee, PE: Fiorida P E. License No. 34869. Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435. LOAD CASE(S) Standard

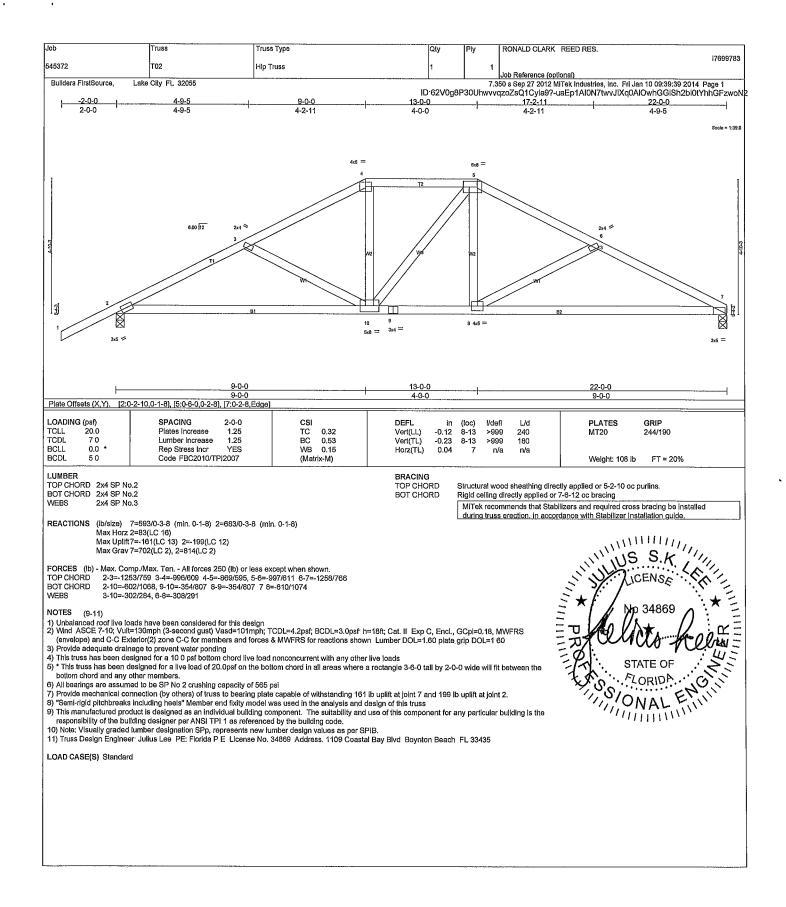
Job Truss Truss Type RONALD CLARK REED RES. 17699779 545372 EJ03 Jack-Partial Truss Job Reference (optional) Builders FirstSource 7 350 s Sep 27 2012 MITek Industries, Inc. Fri Jan 10 09:39:33 2014 Page 1
ID 62V0g8P30UhwvvqzoZsQ1Cyla9?-3QtYm7EGoH6nBOrNUm3L8fREnHVWevY8VdEN3czwoN8 Lake City, FL 32055 2-0-0 Scale = 1:20.3 6.00 12 Plate Offsets (X,Y). [2:0-4-4,0-0-4] LOADING (psf) SPACING DEFL **PLATES** GRIP (loc) I/defl L/d TC BC Vert(LL) Vert(TL) 0.02 4-7 4-7 240 180 TCLL 20.0 Plates Increase 1.25 0.32 >999 MT20 244/190 TCDL 1.25 0.02 Lumber Increase >999 BCLL 0.0 Rep Stress Incr YES W. 0.00 Horz(TĹ) 0 00 2 BCDL Code FBC2010/TPI2007 (Matrix-M) Weight: 19 lb FT = 20% LUMBER BRACING TOP CHORD 2x4 SP No.2 BOT CHORD 2x4 SP No.2 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=79/Mechanical, 2=253/0-3-8 (min. 0-1-8) 4=23/Mechanical Max Horz 2=162(LC 12) Max Uplift3=-93(LC 12) 2=-147(LC 12) Max Grav 3=97(LC 2) 2=304(LC 2) 4=56(LC 3) FORCES (lb) - Max. Comp./Max. Ten - All forces 250 (lb) or less except when shown. TOP CHORD 2-4=-352/610 BOT CHORD NOTES NOTES (7-9)

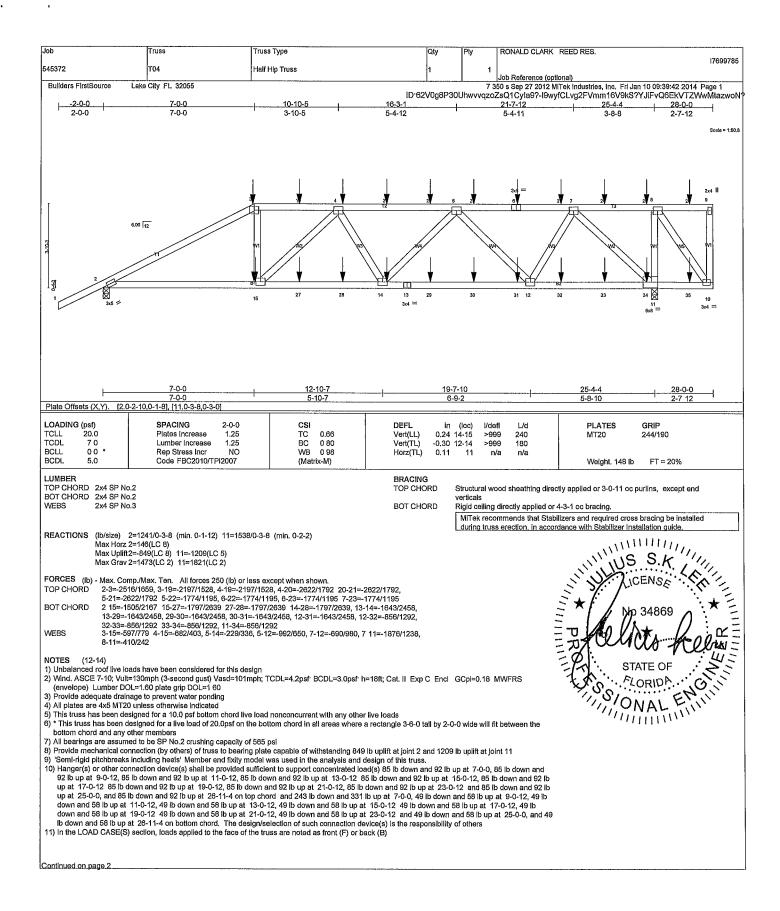
1) Wind: ASCE 7 10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf: BCDL=3.0psf: h=18ft; Cat. II Exp C, Encl GCpi=0 18 MWFRS (envelope) gable and zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 pole=1.60 2) This truss has been designed for a 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 N bottom chord and any other members STATE OF All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 3 and 147 lb uplift at joint 2. 6) 'Semi-rigid pitchbreaks including heels' Member end fixity model was used in the analysis and design of this truss
7) 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.

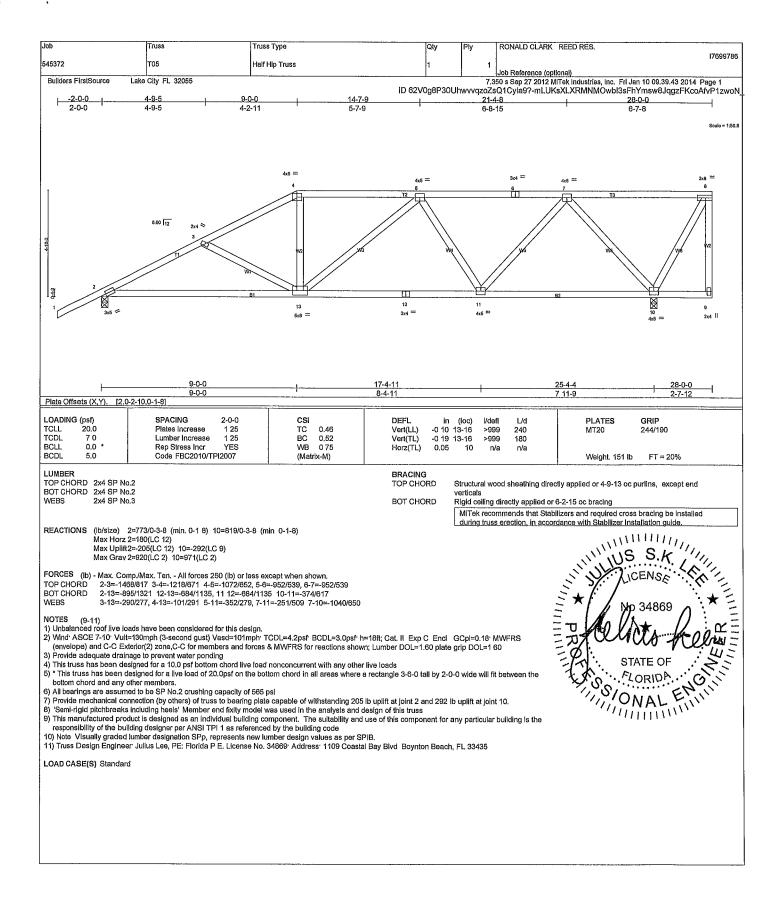
8) Note Visually graded lumber designation SPp, represents new lumber design values as per SPIB. 9) Truss Design Engineer Julius Lee PE. Florida P E License No 34869: Address. 1109 Coastal Bay Blvd. Boynton Beach, FL 33435 LOAD CASE(S) Standard

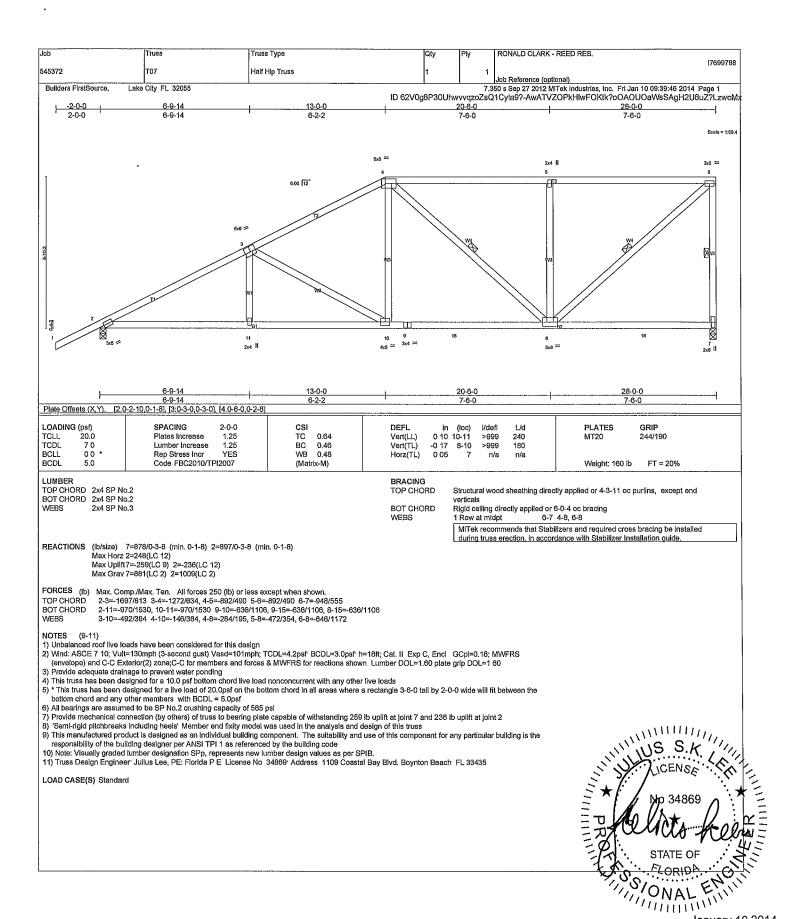
ob	Truss	Truss Type	Qty	Ply	RONALD CLARK REED RES.	
45372	HJ01	Diagonal Hip Girder	1	.		17699780
Builders FirstSource	Lake City FL 32055			7.	Job Reference (optional) 350 s Sep 27 2012 MiTek Industries, Inc. Fri Jan ZsQ1Cyla9?-XdRw_TEuZbEdpYPZ1Tbahs	10 09:39·34 2014 Page 2
DAD CASE(S) Standar	d	-70(F=-35, B=-35) 14=31(F=15, B=15) 15			.ZsQ1Cyla9?-XdRw_TEuZbEdpYPZ1Tbahs	_MuhnANI4HkH_xb2zwot







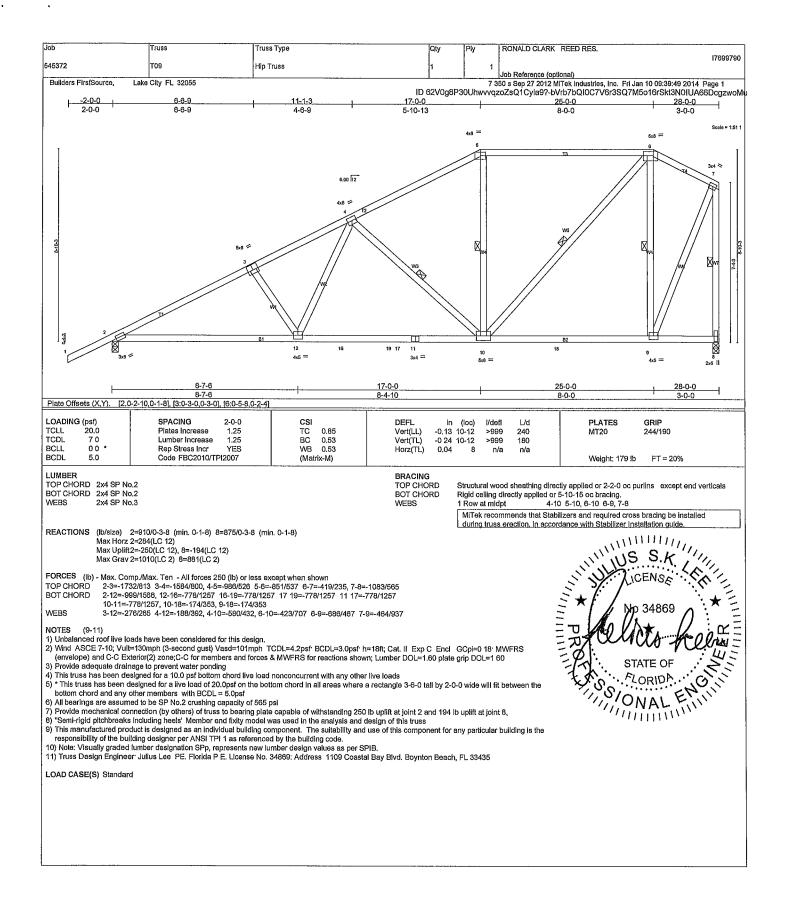


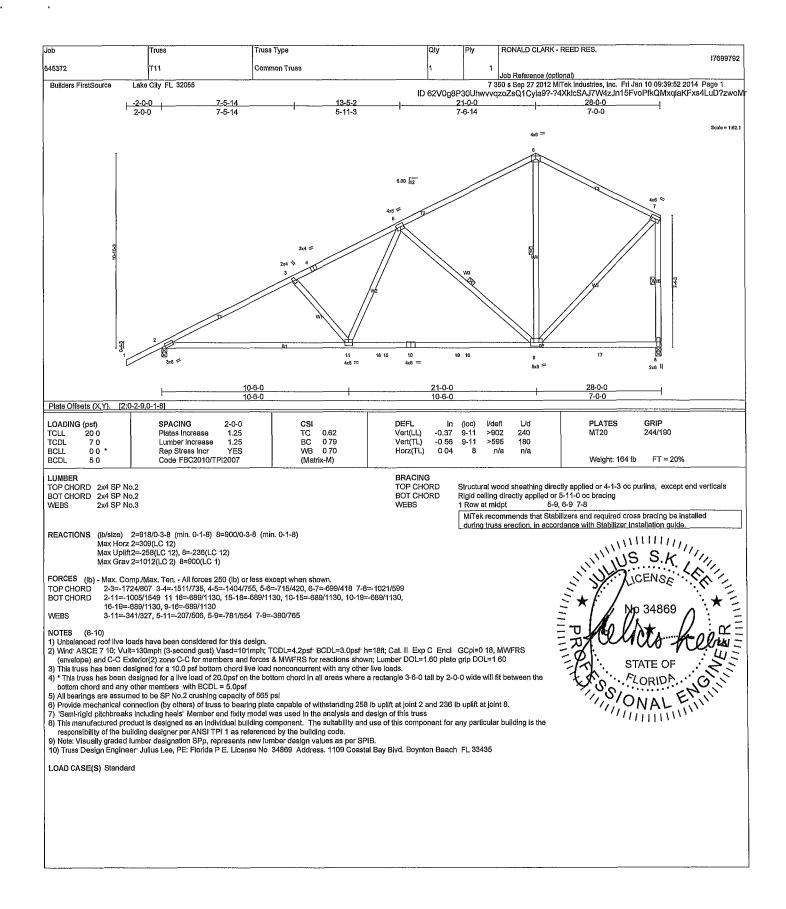


WARNING Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE.

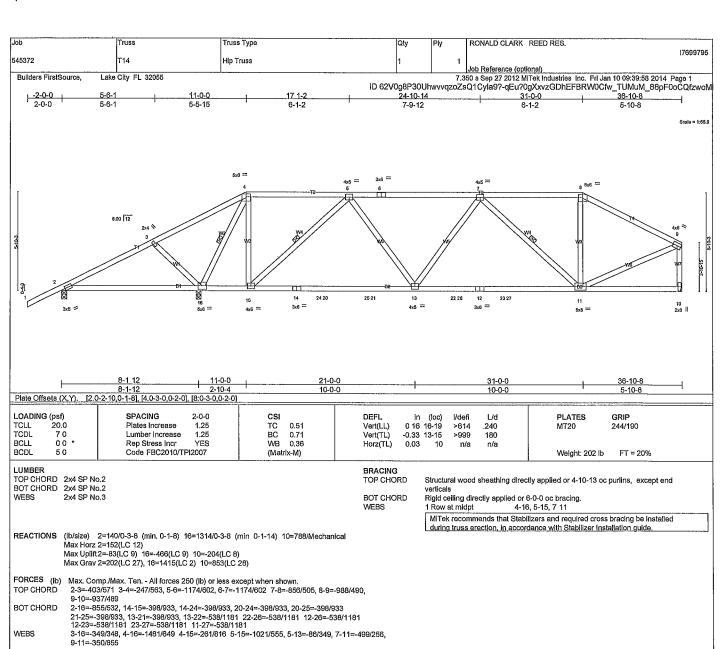
Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component Applicability of design parameters and proper incorporation of component is responsibility of building designer not truss designer is fracing shown is for lateral 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/TI Quality Criteria, DSB-89 and BCSI1 Building Component Safety Information.

Julius Lee PE 1109 Coastal Bay Boynton Beach FL 33435





lioh	Faice	Truce Truc	los.	lpr.	LDOUGLD OLADY, DEED DEO	
Job	Truss	Truss Type	Qty	Ply	RONALD CLARK REED RES.	17699793
545372	T12	Hlp Truss	1	1	Job Reference (optional)	
NOTES (13-16) 11) Hanger(s) or other connect 11-0-12, 85 lb down and 92 down and 92 lb up at 23-0- 92 lb up at 33-0-12, and 12 down and 58 lb up at 13-0- lb up at 23-0-12, 49 lb down 33-0-12 and 49 lb down at 12) In the LOAD CASE(S) sect 13) This manufactured product TPI 1 as referenced by the 14) Note Visually graded lumb	2 lb up at 13-0-12, 85 lb down an 122 85 lb down and 92 lb up at 1 25 lb down and 103 lb up at 35-0 12 49 lb down and 58 lb up at 1-12 49 lb down and 58 lb up at 1-12, 49 lb down and 58 lb up at 1-12, 49 lb down and 15-0 lb up at 1-12, 49 lb down and 15-0 lb up at 1-12, 49 lb down and 15-0 lb up at 15 designed as an individual buil building code er designation SPp, represents re true Lee, PE: Florida P E. License	ufficient to support concentrated load(s) 85 lb down and 92 lb up at 15-0-12. 85 lb down and 92 lb up at 25-0-12. 85 lb down and 92 lb up at 27-0-12, 85 lb c-0 on top chord and 243 lb down and 331 lb up at 15-0-12, 49 lb down and 58 lb up at 17-0-12, 49 lb down and 58 lb up at 47-0-12, 49 lb down and 58 lb down and 58 lb down and 58 lb up at 27-0-12, 49 lb down and 58 lb down and 58 lb up at 27-0-12, 49 lb down and 58 lb u	and 92 lb up 7-0-12, 85 lb lown and 92 7-0-0, 49 lb c lown and 58 o up at 29-0- responsibility ponent for ar	Uhwvvqzc at 7-0-0, 8 o down and ib up at 29 down and 5 lb up at 19 -12, 49 lb d y of others	.60 s Sep 27 2012 MITek Industries, Inc. Fri Jan 10 09:39:55 2014 in ZsQ1Cyla9?-QfCtOeV3c2ufqmWcmOTV1HMsi8xinfrNZ22 bib down and 92 lb up at 9-0-12, 85 lb down and 92 lb up at 992 lb up at 19-0-12 85 lb down and 92 lb up at 21-0-12, 85 lb b-0-12, 85 lb down and 92 lb up at 21-0-12, 85 lb b-0-12, 85 lb down and 92 lb up at 31-0-12 and 85 lb down and 8 lb up at 9-0-12, 49 lb down and 58 lb up at 11-0-12 49 lb -0-12 49 lb down and 58 lb up at 21-0-12, 49 lb down and 58 lb up at 21-0-12, 49 lb down and 58 lb up at 21-0-12, 49 lb down and 58 lb up at 21-0-12, 49 lb down and 58 lb up at 31 0-12, and 49 lb down and 31 0-12, and 4	YpKzwoMo
Concentrated Loads (lb) Vert. 3≕-69(B) 6≕-69	44, 9-10=-44, 2-11=-10 9(B) 9=-69(B) 21=-210(B) 5=-69(	B) 13=-22(B) 8=-69(B) 12=-22(B) 14=-22(B) 24=-69 ) 38=-22(B) 39=-22(B) 40=-22(B) 41=-22(B) 42=-22	(B) 25=-69(B B) 43=-22(B	8) 26=-69(B ) 44=-22(B)	9) 27=-69(B) 28=-69(B) 29=-69(B) 30=-69(B) 31=-69(B) 32=-69( )	B)



(9-12)

- 1) Unbalanced roof live loads have been considered for this design
  2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II Exp C Encl GCpi=0.18, MWFRS (envelope) and C-C Exterior(2) zone; porch left exposed C-C for members and forces & MWFRS for reactions shown Lumber DOL=1.60 plate grip
- 3) Provide adequate drainage to prevent water ponding
- 4) This truss has been designed for a 10 0 psf bottom chord live load nonconcurrent with any other live loads.
  5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf 6) All bearings are assumed to be SP No 2 crushing capacity of 565 psi
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 83 lb uplift at joint 2, 466 lb uplift at joint 16 and 204 lb uplift at joint 10. "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) Note Visually graded lumber designation SPp, represents new lumber design values as per SPIB.

  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

DR SAR WIND IN THE

January 10,2014

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 of Applicability of design paramenters and proper incorporation of component is responsibility of building designer - not truss designer Bracing shown is for lateral support of individual web members only Additional temporary bracing to insure stability during construction is the responsibility of the erector Additional permanent bracing of the overall structure is the responsibility of the building designer for general guidance regarding fabrication, quality control, storage, delivery erection and bracing, consult ANIS/TPI Quality Criteria, DSB-89 and BCSI1 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719

Julius Lee PF 1109 Coastal Bay Boynton Beach FL 33435 Job Truss Truss Type RONALD CLARK REED RES 17699797 545372 T16 Hip Truss Builders FirstSource. Lake City FL 32055 4-11-9 4-11-9 15-0-0 6-8-8 21-0-0 6-0-0 Scale = 1:78.1 6x6 = 6.00 12 3x6 = 5x8 = 2x4 || 5x8 = 15 14 2x4 ]] 28-6-14 10-3-8 21-0-0 6-0-0 28-0-0 1-0-0 [2.0-2-10,0-1-8], [6:0-3-0,0-2-0], [8:0-3-0,0-2-0], [10:0-3-0,0-3-4], [11.0-5-4,0-0-4], [13.0-3-8,0-3-0], [22.0-2-8,0-2-8] Plate Offsets (X,Y). LOADING (psf) SPACING PLATES **GRIP** Ľ∕d TC -0 08 22-28 -0 15 22-28 240 180 TCLL 20.0 Plates Increase 1.25 0.58 Vert(LL) >999 MT20 244/190 TCDL 1.25 BC 0.36 Vert(TL) Lumber Increase >663 BCLL 00 Rep Stress Incr YES WB 0.61 Horz(TL) 0.02 13 n/a n/a BCDL Code FBC2010/TP12007 (Matrix-M) Weight: 261 lb FT = 20% LUMBER BRACING TOP CHORD 2x4 SP No.2 BOT CHORD 2x4 SP No.2 \*Except\* Structural wood sheathing directly applied or 5-5-13 oc purlins. Rigid celling directly applied or 6-0-0 oc bracing. Except: 5-6-0 oc bracing 21-22 TOP CHORD BOT CHORD B2,B6,F1 2x4 SP No.3 WEBS 2x4 SP No.3 10-0-0 oc bracing 14-16 WEBS 1 Row at midpt 7-20 7-17 MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide. REACTIONS (lb/slze) 2=306/0-3-8 (min. 0-1-8) 13=1320/0-3-8 (min. 0-1-15) 22=970/0-3-8 (min. 0-1-8) Max Horz 2=-115(LC 10)
Max Uplift2=-106(LC 13), 13=-381(LC 13) 22=-243(LC 12)
Max Grav 2=370(LC 27), 13=1487(LC 2) 22=1058(LC 27) FORCES (lb) Max. Comp./Max. Ten. All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-497/300 5-6=-897/531 6-7=-757/546, 7-8=-716/465, 8-9=-828/518, 9-10=-782/393 10-11=-625/770 BOT CHORD 11-13=-660/726 WEBS 5-20=-128/712, 7-20=-341/105, 7-17=-418/258, 13-16=-609/631 10-16=-654/1224, 10-13=-1439/945 NOTES 1) Unbalanced roof live loads have been considered for this design.
2) Wind ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf: BCDL=3.0psf: h=18ft; Cat. II Exp C, Encl , GCpi=0.18; MWFRS (envelope) 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) Provide adequate drainage to prevent water ponding. 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads,
5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf 6) All bearings are assumed to be SP No.2 crushing capacity of 565 psl
7) Bearing are assumed to be SP No.2 crushing capacity of 565 psl
7) Bearing at joint(s) 22 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing

surface. 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 106 lb uplift at joint 2, 381 lb uplift at joint 13 and 243 lb uplift

at joint 22

9) "Semi-rigid pltchbreaks including heels' Member end fixity model was used in the analysis and design of this truss.

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) Note Visually graded lumber designation SPp, represents new lumber design values as per SPIB.

12) Truss Design Engineer Julius Lee PE: Florida P E. License No. 34869 Address 1109 Coastal Bay Blvd Boynton Beach FL 33435

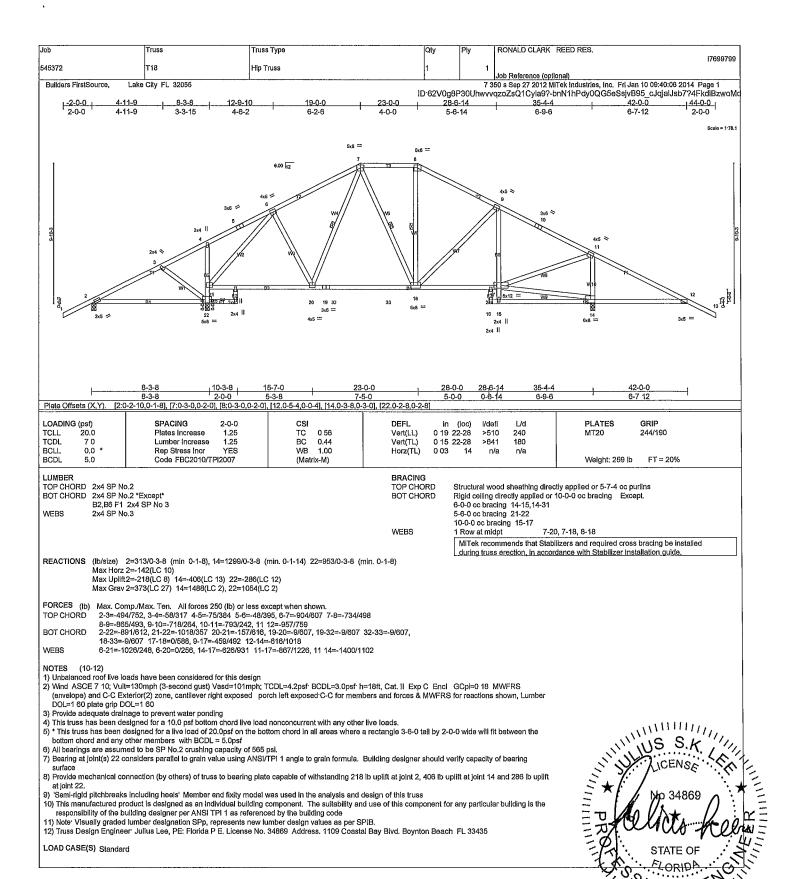
LOAD CASE(S) Standard

TO SOLUTION OF THE PROPERTY OF MANATAN

January 10,2014

MARNING Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE. Design valid for use only with Milek connectors. This design is based only upon parameters shown, and is for an individual building component Applicability of design paramenters and proper incorporation of component is responsibility of building designer not truss designer Bracing shown is for lateral support of individual web members only. Additional temporary bracing to fusure 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/TP11 Quality Criteria, DSB-89 and BCS11 Building Component Salety Information.

Julius Lee PE. 1109 Coastal Bay Boynton Beach FL 33435

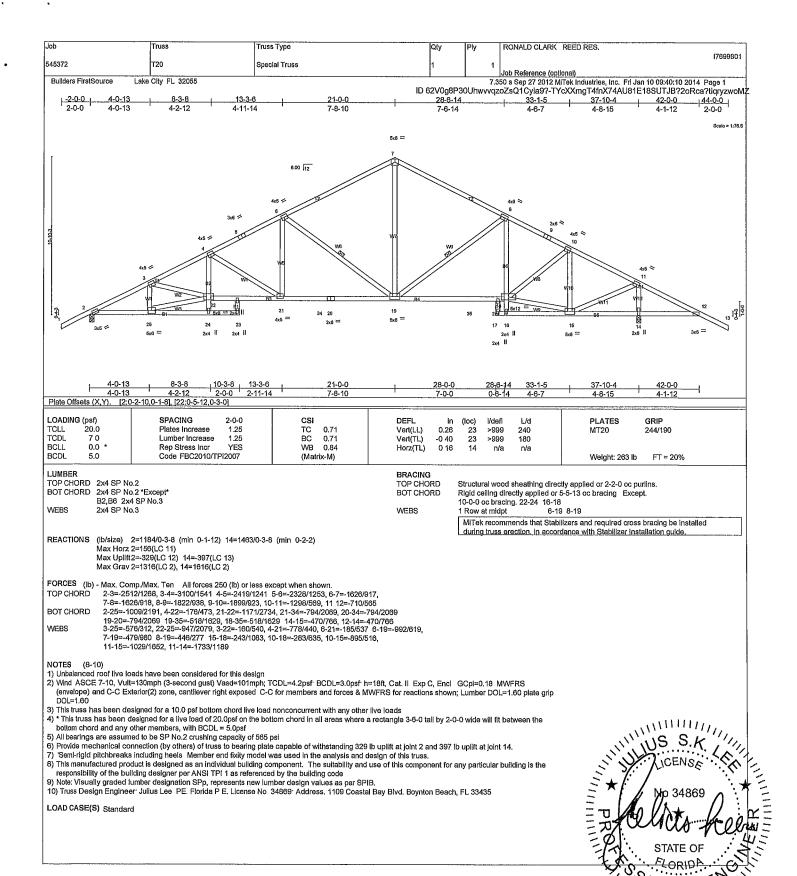


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MARNING Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE. Design valid for use only with Miltek connectors. This design is bosed only upon parameters shown, and is for an individual building component Applicability of design parameters and proper incorporation of component is responsibility of the building designer. For truss designer Braching 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 braching of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery erection and braching, consult. ANS/IPTI Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719

LOAD CASE(S) Standard

Julius Lee PE 1109 Coastal Bay Boynton Beach FL 33435

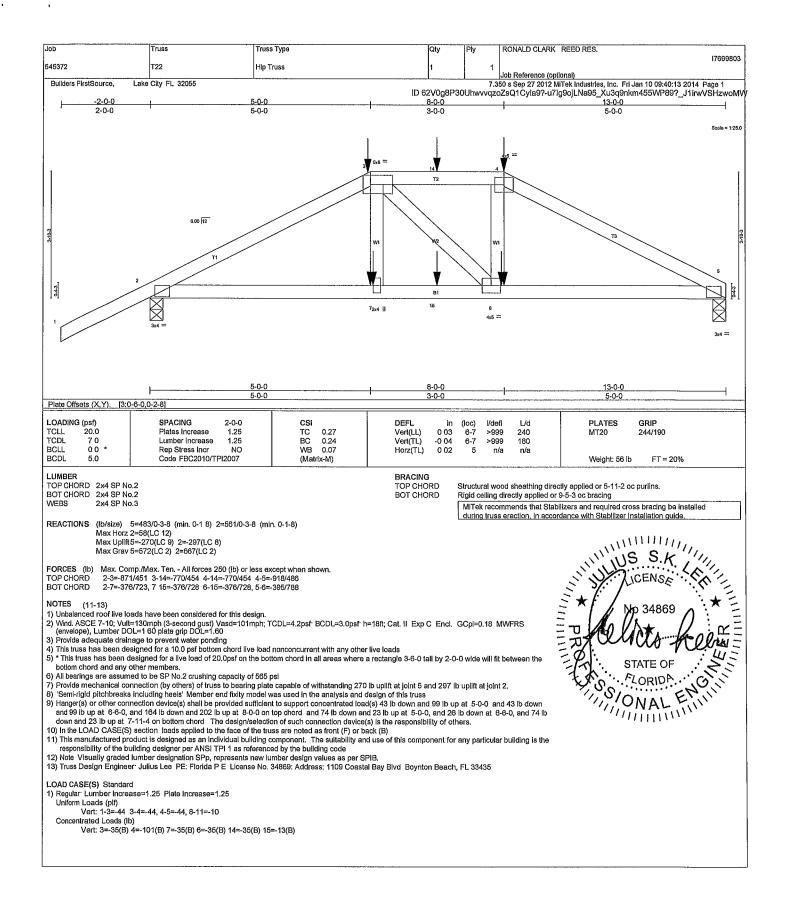


WARNING Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIL-7473 BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component Applicability of design paramenters and proper incorporation of component is responsibility of building designer - not truss designer Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector Additional permanent bracing of the overall structure is the responsibility of the building designer for general guidance regarding fabrication, qualify control, storage, delivery erection and bracing, consult. ANSI/TH Qualify Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719

Julius Lee PE. 1109 Coastal Bay Boynton Beach FL 33435

**Trailinin** 

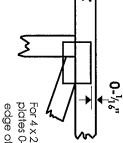


### Symbols

# PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated.
Dimensions are in ft-in-sixteenths.
Apply plates to both sides of truss and fully embed teeth.



For  $4 \times 2$  orientation, locate plates  $0^{-1}h_{\delta}^{2}$  from outside edge of truss.

This symbol indicates the required direction of slots in connector plates

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

### **PLATE SIZE**



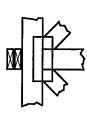
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots

## 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 loons vary but reaction section indicates joint number where bearings occur.

### Industry Standards: ANSI/TPII: Nationa

National Design Specification for Metal Plate Connected Wood Truss Construction Design Standard for Bracing.

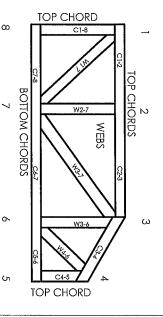
Building Component Safety Information

DSB-89

Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses

# Numbering System

6-4-8 dimensions shown in ft-ın-sıxteeniths (Drawings not to scale)



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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### Julius Lee PE 1109 Coastal Bay , Boynton Beach ,FL 33435



# General Safety Notes

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

- Additional stability bracing for truss system, e.g. diagonal or X-bracing is always required. See BCS11
- Truss bracing must be designed by an engineer For wide huss spacing, individual lateral braces themselves may require bracing or afternative T. I, or Eliminator bracing should be considered
- Never exceed the design loading shown and never stack materials on inadequately braced trusses

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

4

Cut members to bear fightly against each other

Ġ

- Place plates on each face of truss at each joint and embed fully Knots and wane at joint locations are regulated by ANSI/TPI 1
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication
- Unless expressly noted this design is not applicable for use with fire retardant, preservative treated, or green lumber

9

- 10 Camber is a non-structural consideration and is the responsibility of truss fabricator General practice is to camber for dead load deflection.
- Plate type size orientation and location dimensions indicated are minimum plating requirements.
- 12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified
- Top chords must be sheathed or purlins provided at spacing indicated on design
- 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 after 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
- Review all portions of this design (front, back, words and pictures) before use Reviewing pictures alone is not sufficient
- 20 Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria

### August 10, 2010

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

ST - T-BRACE 2



MiTek Industries, Chesterfield, MO

Page 1 of 1

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

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

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

Note: Nail along entire length of T-Brace / I-Brace (On Two-Ply's Nail to Both Plies)

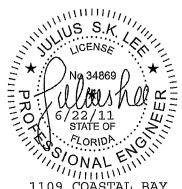
		Brace Size for One-Ply Truss			
	Specified Continuo Rows of Lateral Bra				
Web Size	1	1 2			
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace			
2x6	2x6 T-Brace	2x6 I-Brace			
2x8	2x8 T-Brace	2x8 T-Brace 2x8 I-Brace			

Nails
SPACING
WEB T-BRACE
Nalls Section Detail
T-Brace Web
Nails ————

	446D
Nails	
Web	I-Brace
Nalls	

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

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



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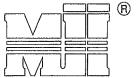
### **JANUARY 1, 2009**

### LATERAL TOE-NAIL DETAIL

ST-TOENAIL SP

MiTek Industries, Chesterfield, MO

Page 1 of 1



MiTek Industries, Inc.

NOTES

- 1. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 45 DEGREES WITH THE MEMBER AND MUST HAVE FULL WOOD SUPPORT. (NAIL MUST BE DRIVEN THROUGH AND EXIT AT THE BACK CORNER OF THE MEMBER END AS SHOWN.

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

  3. ALLOWABLE VALUE SHALL BE THE LESSER VALUE OF THE TWO SPECIES FOR MEMBERS OF DIFFERENT SPECIES.

	TOE-NAIL SINGLE SHEAR VALUES PER NDS 2001 (lb/nail)						
	DIAM.	SYP	DF	HF	SPF	SPF-S	
ග	.131	88 0	80 6	69.9	68.4	59.7	
LONG	135	93.5	85 6	74.2	72.6	63.4	
5,	162	108 8	99 6	86.4	84.5	73.8	
6,							
ONG	.128	74.2	67.9	58.9	57.6	50.3	
25" LOI	.131	75.9	69.5	60.3	59.0	51.1	
	.148	81.4	74.5	64.6	63.2	52.5	
ကို							

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

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

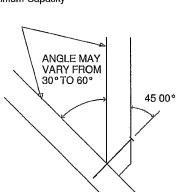
For load duration increase of 1,15:

ANGLE MAY

VARY FROM 30° TO 60°

3 (nails) X 84.5 (lb/nail) X 1 15 (DOL) = 291 5 lb Maximum Capacity

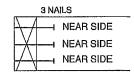
45.00°





VIEWS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY

SIDE VIEW



ANGLE MAY

VARY FROM

30° TO 60°

45.00° No 34869

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1109 COASTAL

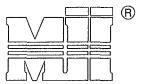
1109 COASTAL BAY BOYNTON BC, FL 33435

### FEBRUARY 14, 2012

### STANDARD PIGGYBACK TRUSS CONNECTION DETAIL

ST-PIGGY-7-10

MITek Industries, Chesterfield, MO



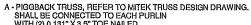
MiTek Industries, Inc.

MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E MAX MEAN ROOF HEIGHT = 30 FEET MAX TRUSS SPACING = 24 " O.C. CATEGORY II BUILDING

EXPOSURE B or C ASCE 7-10

DURATION OF LOAD INCREASE: 1,60

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



A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
SHALL BE CONNECTED TO EACH PURLIN
WITH (2) 0.131" X3.5" TOE NAILED
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C.
UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING.
CONNECT TO BASE TRUSS WITH (2) 0.131" X 3.5" NAILS EACH.
D - 2 X \_ X 4"0" SCAB, SIZE AND GRADE TO MATCH TOP CHORD OF
PIGGYBACK TRUSS, ATTACHED TO ONE FACE, CENTERED ON
INTERSECTION, WITH (2) ROWS OF 0.131" X 3" NAILS @ 4" O.C.
SCAB MAY BE OMITTED PROVIDED THE TOP CHORD SHEATHING
IS CONTINUOUS OVER INTERSECTION AT LEAST 1 FT IN BOTH
DIRECTIONS AND
1 WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN.

DIRECTIONS AND

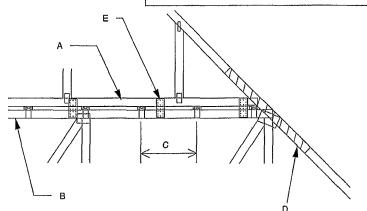
1 WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR

2. WIND SPEED OF 116 MPH TO 160 MPH WITH A MAXIMUM
PIGGYBACK SPAN OF 12 ft.

- FOR WIND SPEEDS BETWEEN 126 AND 160 MPH, ATTACH
MITEK 3X8 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT

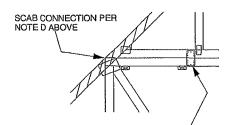
72' O.C. W (4) 0.131" X 1.5" PER MEMBER, STAGGER NAILS FROM
OPPOSING FÁCES ENSURE 0.6" EDGE DISTANCE.

(MIN. 2 PAIRS OF PLATES REQ. REGARDLESS OF SPAN)

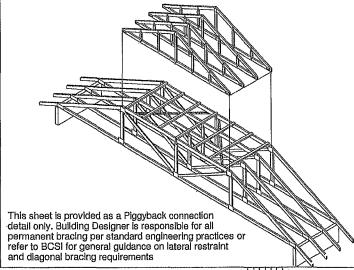


### WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS

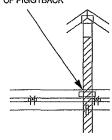
REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH Nail-On PLATES AS SHOWN, AND INSTALL PURLINS TO BOTTOM EDGE OF BASE TRUSS TOP CHORD AT SPECIFIED SPACING SHOWN ON BASE TRUSS MITEK DESIGN DRAWING



FOR ALL WIND SPEEDS, ATTACH MITEK 3X6 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48" O C  $\,$  W/ (4) 0.131" X 1 5" PER MEMBER. STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5" EDGE DISTANCE.



### VERTICAL WEB TO EXTEND THROUGH BOTTOM CHORD OF PIGGYBACK



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

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

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

VEH TIOAL WEBS OF PIGGYBACK AND BASE THOSS.)
((MINMUM 2X4)
THIS CONNECTION IS ONLY VALID FOR A MAXIMUM
CONCENTRATED LOAD OF 4000 LBS (@1.15). REVIEW
BY A QUALIFIED ENGINEER IS REQUIRED FOR LOADS
GREATER THAN 4000 LBS.

GRIEATER THAN 4000 LBS. FOR PIGGYBACK TRUSSES CARRYING GIRDER LOADS, NUMBER OF PLYS OF PIGGYBACK TRUSS TO MATCH BASE TRUSS. CONCENTRATED LOAD MUST BE APPLIED TO BOTH THE PIGGYBACK AND THE BASE TRUSS DESIGN.

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