

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

RE: 2777223 - WCH - ROACH RES.

MiTek USA, Inc.  
6904 Parke East Blvd.  
Tampa, FL 33610-4115

**Site Information:**

Customer Info: Wade Custom Homes Project Name: Roach Res. Model: Custom  
Lot/Block: N/A Subdivision: N/A  
Address: 409 Buffalo Court, N/A  
City: Columbia Cty State: FL

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

Name: License #:  
Address:  
City: State:

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

Design Code: FBC2020/TPI2014 Design Program: MiTek 20/20 8.4  
Wind Code: ASCE 7-16 Wind Speed: 130 mph  
Roof Load: 37.0 psf Floor Load: N/A psf

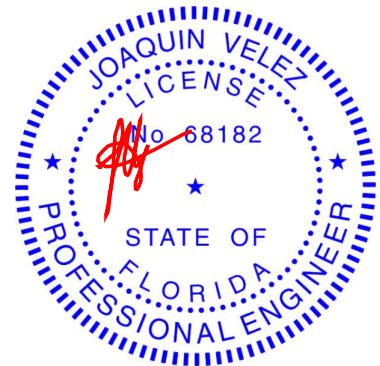
This package includes 12 individual, Truss Design Drawings and 0 Additional Drawings.  
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

| No. | Seal#     | Truss Name | Date    |
|-----|-----------|------------|---------|
| 1   | T24033829 | CJ01       | 5/20/21 |
| 2   | T24033830 | CJ03       | 5/20/21 |
| 3   | T24033831 | CJ05       | 5/20/21 |
| 4   | T24033832 | EJ01       | 5/20/21 |
| 5   | T24033833 | HJ10       | 5/20/21 |
| 6   | T24033834 | T01        | 5/20/21 |
| 7   | T24033835 | T02        | 5/20/21 |
| 8   | T24033836 | T03        | 5/20/21 |
| 9   | T24033837 | T04        | 5/20/21 |
| 10  | T24033838 | T05        | 5/20/21 |
| 11  | T24033839 | T06        | 5/20/21 |
| 12  | T24033840 | T07        | 5/20/21 |

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

Truss Design Engineer's Name: Velez, Joaquin  
My license renewal date for the state of Florida is February 28, 2023.

**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

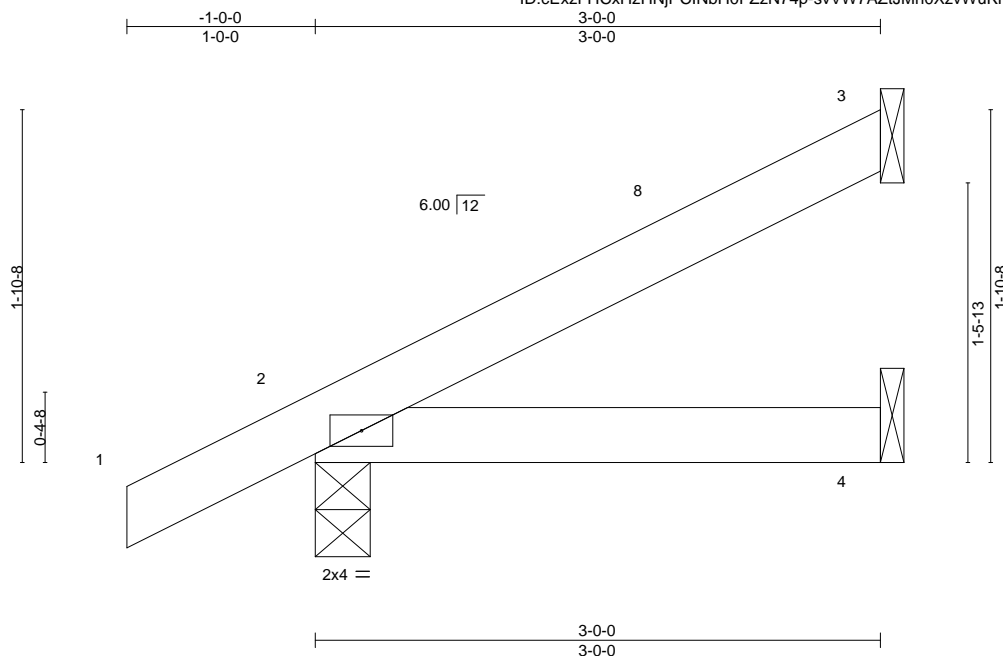


Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021



|  |               |                         |          |          |                               |
|--|---------------|-------------------------|----------|----------|-------------------------------|
| Job<br>2777223   | Truss<br>CJ03 | Truss Type<br>Jack-Open | Qty<br>8 | Ply<br>1 | WCH - ROACH RES.<br>T24033830 |
| Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244,         |               |                         |          |          |                               |
| 8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:32 2021 Page 1 |               |                         |          |          |                               |
| ID:cExzFHCxHzHNjPCINbH0FZzN74p-svVW7AZtJMh0XzvWuKHeallTEwQIzQVRG1?oYbzEz0f |               |                         |          |          |                               |
| Job Reference (optional)   |               |                         |          |          |                               |



Scale = 1:12.2

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc) | I/defl | L/d  | PLATES | GRIP                   |
|---------------|----------------------|-------|-----------|----------|----------|--------|------|--------|------------------------|
| TCLL 20.0     | Plate Grip DOL       | 1.25  | TC 0.08   | Vert(LL) | -0.00    | 4-7    | >999 | 240    | MT20                   |
| TCDL 7.0      | Lumber DOL           | 1.25  | BC 0.07   | Vert(CT) | -0.01    | 4-7    | >999 | 180    | 244/190                |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00     | 3      | n/a  | n/a    |                        |
| BCDL 10.0     | Code FBC2020/TPI2014 |       | Matrix-MP |          |          |        |      |        |                        |
|               |                      |       |           |          |          |        |      |        | Weight: 11 lb FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP 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.

#### REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=65(LC 12)  
Max Uplift 3=38(LC 12), 2=-41(LC 12), 4=-1(LC 12)  
Max Grav 3=65(LC 1), 2=172(LC 1), 4=51(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior(1) 2-0-0 to 2-11-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



6904 Parke East Blvd.  
Tampa, FL 36610

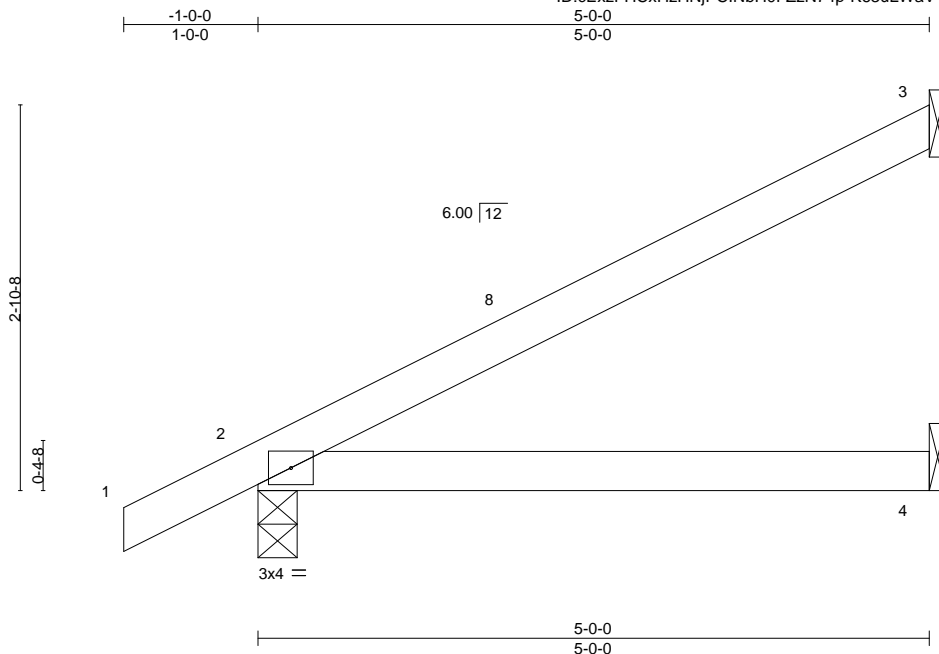
|                          |               |                         |          |          |                               |
|--------------------------|---------------|-------------------------|----------|----------|-------------------------------|
| Job<br>2777223           | Truss<br>CJ05 | Truss Type<br>Jack-Open | Qty<br>8 | Ply<br>1 | WCH - ROACH RES.<br>T24033831 |
| Job Reference (optional) |               |                         |          |          |                               |

Builders FirstSource (Jacksonville, FL),

Jacksonville, FL - 32244,

8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:33 2021 Page 1

ID:cExzFHCxHzHNjPCINbH0FZzN74p-K63uLWav4gpt87UjS1ot7ylbgKkuitlaVhkM41zEz0e



Scale = 1:17.2

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.25  | TC 0.30   | Vert(LL) | 0.04  | 4-7   | >999   | 240 | MT20          | 244/190  |
| TCDL 7.0      | Lumber DOL           | 1.25  | BC 0.24   | Vert(CT) | -0.06 | 4-7   | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00  | 2     | n/a    | n/a |               |          |
| BCDL 10.0     | Code FBC2020/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 18 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP 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.

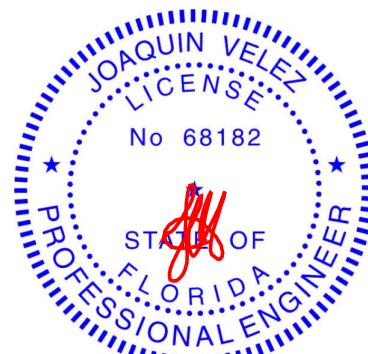
#### REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=100(LC 12)  
Max Uplift 3=68(LC 12), 2=51(LC 12), 4=1(LC 12)  
Max Grav 3=116(LC 1), 2=242(LC 1), 4=89(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior(1) 2-0-0 to 4-11-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



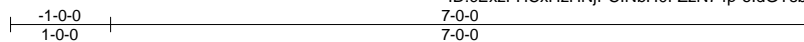
6904 Parke East Blvd.  
Tampa, FL 36610

|  |               |                            |           |          |                               |
|--|---------------|----------------------------|-----------|----------|-------------------------------|
| Job<br>2777223   | Truss<br>EJ01 | Truss Type<br>Jack-Partial | Qty<br>20 | Ply<br>1 | WCH - ROACH RES.<br>T24033832 |
| Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244,         |               |                            |           |          |                               |
| ID:cExzFHCxHzHNjPCINbH0FZzN74p-oldGYsb7qzxkmH3v0UJ6gAqgzj?pRK?kkLUvcUzEz0d |               |                            |           |          |                               |
| Job Reference (optional)   |               |                            |           |          |                               |

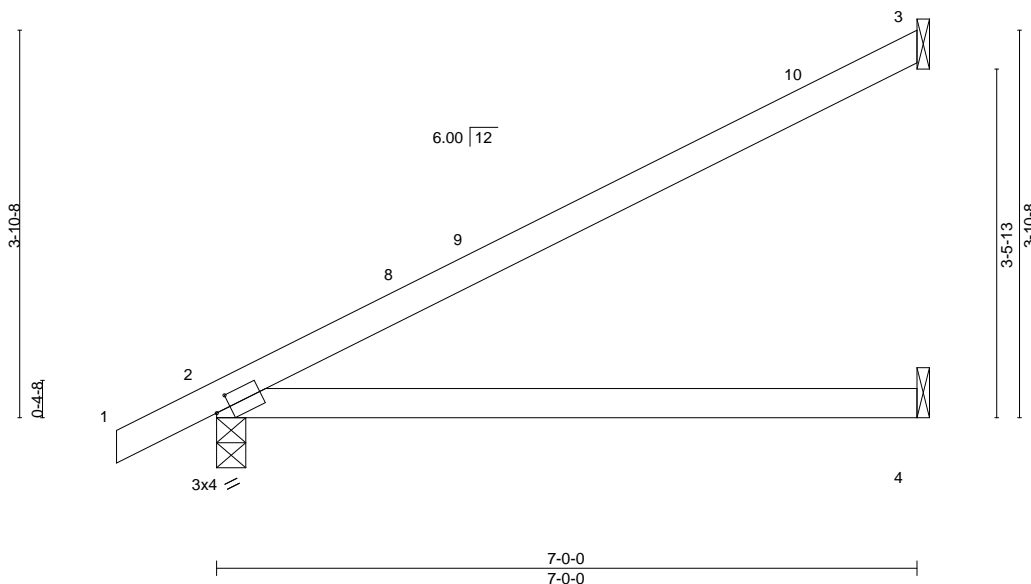
Builders FirstSource (Jacksonville, FL),

Jacksonville, FL - 32244,

8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:34 2021 Page 1



Scale = 1:23.0



|  |       |                       |      |             |      |                                  |       |     |      |               |               |          |
|--|-------|-----------------------|------|-------------|------|----------------------------------|-------|-----|------|---------------|---------------|----------|
| Plate Offsets (X,Y)-- [2:0-1-13,0-1-8] |       |                       |      |             |      |                                  |       |     |      |               |               |          |
| <b>LOADING</b> (psf)                   |       | <b>SPACING-</b> 2-0-0 |      | <b>CSI.</b> |      | <b>DEFL.</b> in (loc) l/defl L/d |       |     |      | <b>PLATES</b> | <b>GRIP</b>   |          |
| TCLL                                   | 20.0  | Plate Grip DOL        | 1.25 | TC          | 0.64 | Vert(LL)                         | 0.11  | 4-7 | >745 | 240           | MT20          | 244/190  |
| TCDL                                   | 7.0   | Lumber DOL            | 1.25 | BC          | 0.52 | Vert(CT)                         | -0.22 | 4-7 | >374 | 180           |               |          |
| BCLL                                   | 0.0 * | Rep Stress Incr       | YES  | WB          | 0.00 | Horz(CT)                         | 0.01  | 2   | n/a  | n/a           |               |          |
| BCDL                                   | 10.0  | Code FBC2020/TPI2014  |      | Matrix-MS   |      |                                  |       |     |      |               | Weight: 24 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2

#### BRACING-

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

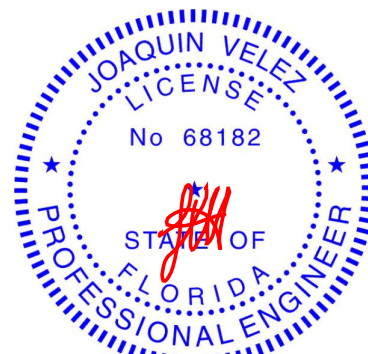
#### REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=129(LC 12)  
Max Uplift 3=87(LC 12), 2=63(LC 12)  
Max Grav 3=166(LC 1), 2=315(LC 1), 4=126(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior(1) 2-0-0 to 6-11-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



6904 Parke East Blvd.  
Tampa, FL 36610

|                |               |                                   |          |          |                               |
|----------------|---------------|-----------------------------------|----------|----------|-------------------------------|
| Job<br>2777223 | Truss<br>HJ10 | Truss Type<br>Diagonal Hip Girder | Qty<br>4 | Ply<br>1 | WCH - ROACH RES.<br>T24033833 |
|----------------|---------------|-----------------------------------|----------|----------|-------------------------------|

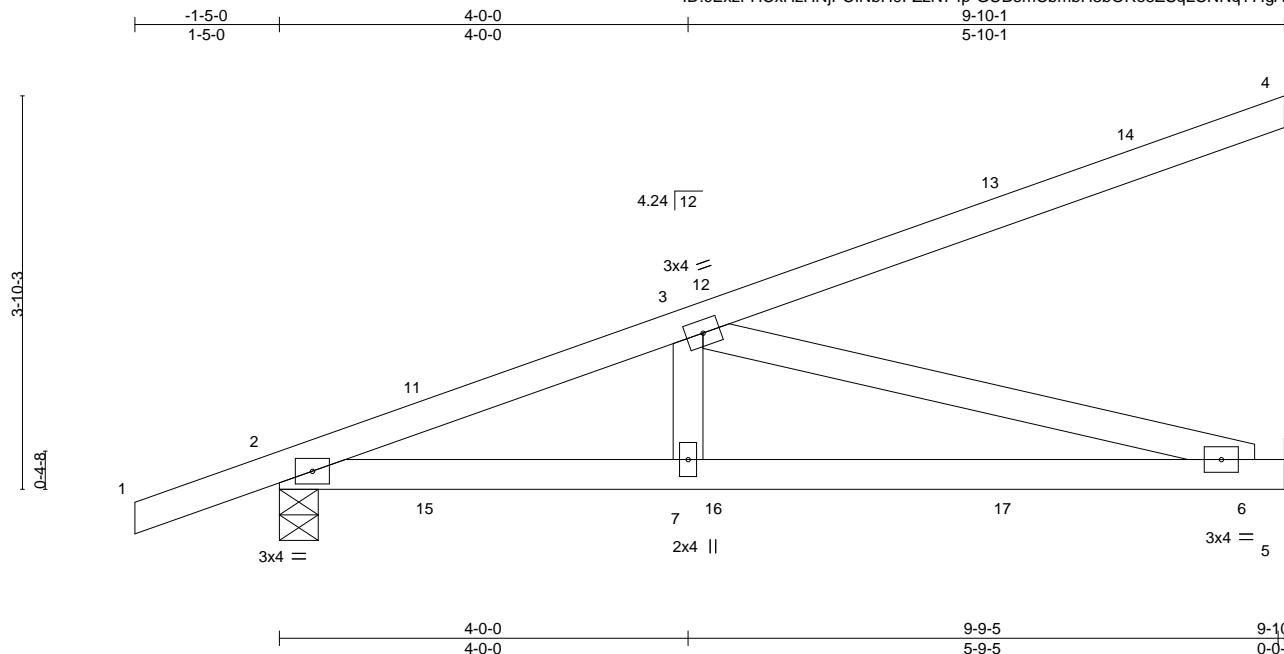
Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244,

8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:35 2021 Page 1

ID:cExzFHCxHzHNjPCINbH0FZzN74p-GUBemCbmbH3bORe5ZSqLCNNqT7lgAe0tz?DT9wzEz0c

Job Reference (optional)

9-10-1  
5-10-1



Scale = 1:22.6

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc) | I/defl | L/d  | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|----------|--------|------|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.25  | TC 0.72   | Vert(LL) | -0.07    | 6-7    | >999 | 240           | MT20     |
| TCDL 7.0      | Lumber DOL           | 1.25  | BC 0.73   | Vert(CT) | -0.16    | 6-7    | >732 | 180           | 244/190  |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.59   | Horz(CT) | 0.01     | 5      | n/a  | n/a           |          |
| BCDL 10.0     | Code FBC2020/TPI2014 |       | Matrix-MS |          |          |        |      |               |          |
|               |                      |       |           |          |          |        |      | Weight: 43 lb | FT = 20% |

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

(size) 4=Mechanical, 2=0-4-9, 5=Mechanical  
Max Horz 2=137(LC 4)  
Max Uplift 4=88(LC 4), 2=-166(LC 4), 5=-84(LC 8)  
Max Grav 4=167(LC 1), 2=485(LC 1), 5=301(LC 1)

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

TOP CHORD 2-3=-926/264  
BOT CHORD 2-7=-342/859, 6-7=-342/859  
WEBS 3-7=0/290, 3-6=-889/354

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5 except (jt=lb) 2=166.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 54 lb down and 9 lb up at 1-6-1, 54 lb down and 9 lb up at 1-6-1, 23 lb down and 41 lb up at 4-4-0, 23 lb down and 41 lb up at 4-4-0, and 43 lb down and 80 lb up at 7-1-15, and 43 lb down and 80 lb up at 7-1-15 on top chord, and 7 lb down and 4 lb up at 1-6-1, 7 lb down and 4 lb up at 1-6-1, 21 lb down and 10 lb up at 4-4-0, 21 lb down and 10 lb up at 4-4-0, and 40 lb down and 16 lb up at 7-1-15, and 40 lb down and 16 lb up at 7-1-15 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-4=-54, 5-8=-20  
Concentrated Loads (lb)  
Vert: 12=-1(F=-1, B=-1) 13=-79(F=-39, B=-39) 15=8(F=4, B=4) 16=-15(F=-8, B=-8) 17=-66(F=-33, B=-33)



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



6904 Parke East Blvd.  
Tampa, FL 36610



|         |       |            |     |     |                  |
|---------|-------|------------|-----|-----|------------------|
| Job     | Truss | Truss Type | Qty | Ply | WCH - ROACH RES. |
| 2777223 | T01   | Hip Girder | 2   | 1   | T24033834        |

Builders FirstSource (Jacksonville, FL),
Jacksonville, FL - 32244,

8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:37 2021 Page 1
ID:cExzFHCxHzHNjPCINbH0FZzN74p-CtJ0B0d07uJdloUhtspHoSDox3teXtAQJiZDpzEz0a

1-0-0

3-10-15

7-0-0

11-3-14

15-6-0

19-8-2

24-0-0

27-1-1

31-0-0

32-0-0

1-0-0

3-10-15

3-1-1

4-3-14

4-2-2

4-2-2

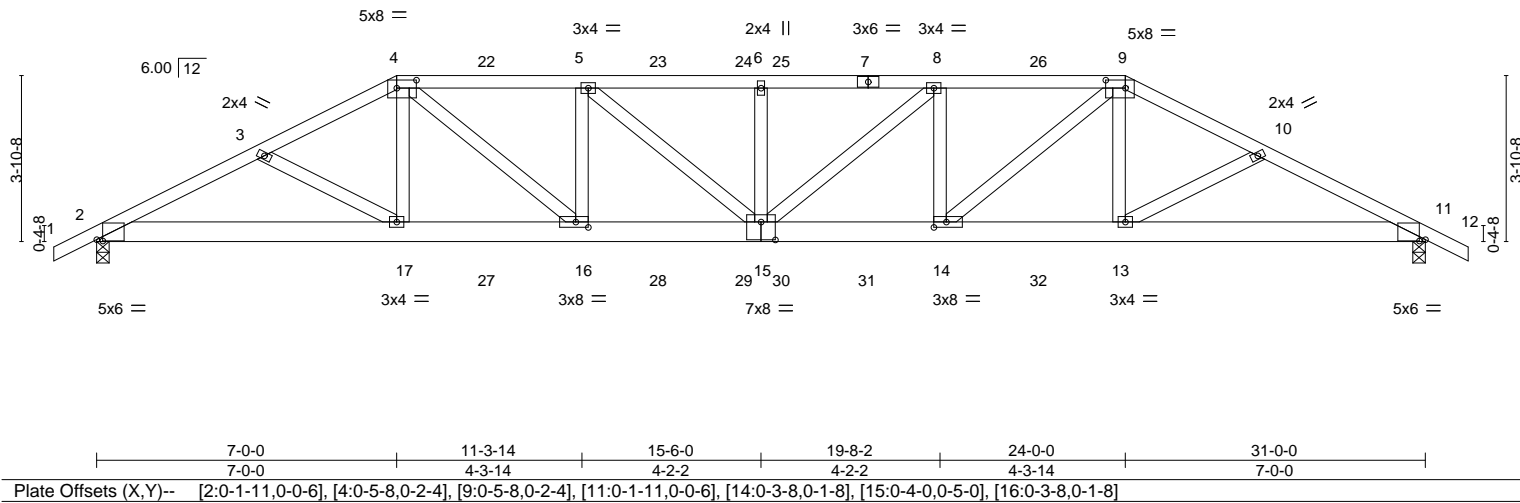
4-3-14

3-1-1

3-10-15

1-0-0

Scale = 1:53.8

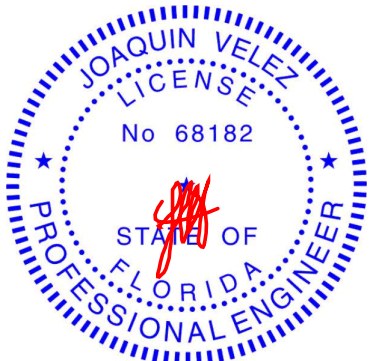


| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc) | l/defl | L/d  | PLATES         | GRIP     |
|---------------|----------------------|-------|-----------|----------|----------|--------|------|----------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.25  | TC 0.48   | Vert(LL) | -0.29    | 15     | >999 | 240            | 244/190  |
| TCDL 7.0      | Lumber DOL           | 1.25  | BC 0.37   | Vert(CT) | -0.53    | 15     | >696 | 180            |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.70   | Horz(CT) | 0.11     | 11     | n/a  | n/a            |          |
| BCDL 10.0     | Code FBC2020/TPI2014 |       | Matrix-MS |          |          |        |      |                |          |
|               |                      |       |           |          |          |        |      | Weight: 188 lb | FT = 20% |

|                                      |  |
|--------------------------------------|--|
| <b>LUMBER-</b>                       | <b>BRACING-</b>  |
| TOP CHORD 2x4 SP No.2 *Except        | TOP CHORD Structural wood sheathing directly applied or 2-4-14 oc purlins. |
| 4-7,7-9: 2x4 SP M 31                 | BOT CHORD Rigid ceiling directly applied or 7-7-2 oc bracing.              |
| BOT CHORD 2x6 SP M 26                |  |
| WEBS 2x4 SP No.3                     |  |
| <b>REACTIONS.</b>                    |  |
| (size) 2=0-3-8, 11=0-3-8             |  |
| Max Horz 2=60(LC 8)                  |  |
| Max Uplift 2=741(LC 8), 11=765(LC 9) |  |
| Max Grav 2=2388(LC 1), 11=2439(LC 1) |  |

|                |   |
|----------------|---|
| <b>FORCES.</b> | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  |
| TOP CHORD      | 2-3=-4856/1538, 3-4=-4684/1488, 4-5=-5569/1800, 5-6=-6032/1920, 6-8=-6032/1920, 8-9=-5620/1813, 9-10=-4794/1540, 10-11=-4967/1590       |
| BOT CHORD      | 2-17=-1374/4307, 16-17=-1283/4187, 15-16=-1726/5569, 14-15=-1741/5620, 13-14=-1282/4286, 11-13=-1360/4405                               |
| WEBS           | 4-17=-125/659, 4-16=-638/1828, 5-16=-912/398, 5-15=-241/644, 6-15=-507/262, 8-15=-197/568, 8-14=-865/369, 9-14=-593/1755, 9-13=-124/658 |

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
  - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
  - 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=741, 11=765.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 131 lb down and 91 lb up at 7-0-0, 112 lb down and 91 lb up at 9-0-12, 112 lb down and 91 lb up at 11-0-12, 112 lb down and 91 lb up at 13-0-12, 112 lb down and 87 lb up at 15-0-12, 112 lb down and 87 lb up at 15-11-4, 112 lb down and 91 lb up at 17-11-4, 112 lb down and 91 lb up at 19-11-4, and 112 lb down and 91 lb up at 21-11-4, and 250 lb down and 185 lb up at 24-0-0 on top chord, and 340 lb down and 133 lb up at 7-0-0, 86 lb down and 20 lb up at 9-0-12, 86 lb down and 20 lb up at 11-0-12, 86 lb down and 20 lb up at 13-0-12, 86 lb down and 20 lb up at 15-0-12, 86 lb down and 20 lb up at 15-11-4, 86 lb down and 20 lb up at 17-11-4, 86 lb down and 20 lb up at 19-11-4, and 86 lb down and 20 lb up at 21-11-4, and 340 lb down and 133 lb up at 23-11-4 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).



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

**LOAD CASE(S)** Standard

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**MiTek**

6904 Parke East Blvd.  
Tampa, FL 36610

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | WCH - ROACH RES.         | T24033834 |
| 2777223 | T01   | Hip Girder | 2   | 1   | Job Reference (optional) |           |

**LOAD CASE(S)**
Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-54, 4-9=-54, 9-12=-54, 2-11=-20
Concentrated Loads (lb)
Vert: 4=-112(F) 7=-112(F) 9=-203(F) 17=-340(F) 16=-67(F) 5=-112(F) 8=-112(F) 14=-67(F) 13=-340(F) 22=-112(F) 23=-112(F) 24=-112(F) 25=-112(F) 26=-112(F) 27=-67(F) 28=-67(F) 29=-67(F) 30=-67(F) 31=-67(F) 32=-67(F)



|                |              |                   |          |          |                               |
|----------------|--------------|-------------------|----------|----------|-------------------------------|
| Job<br>2777223 | Truss<br>T02 | Truss Type<br>Hip | Qty<br>2 | Ply<br>1 | WCH - ROACH RES.<br>T24033835 |
|----------------|--------------|-------------------|----------|----------|-------------------------------|

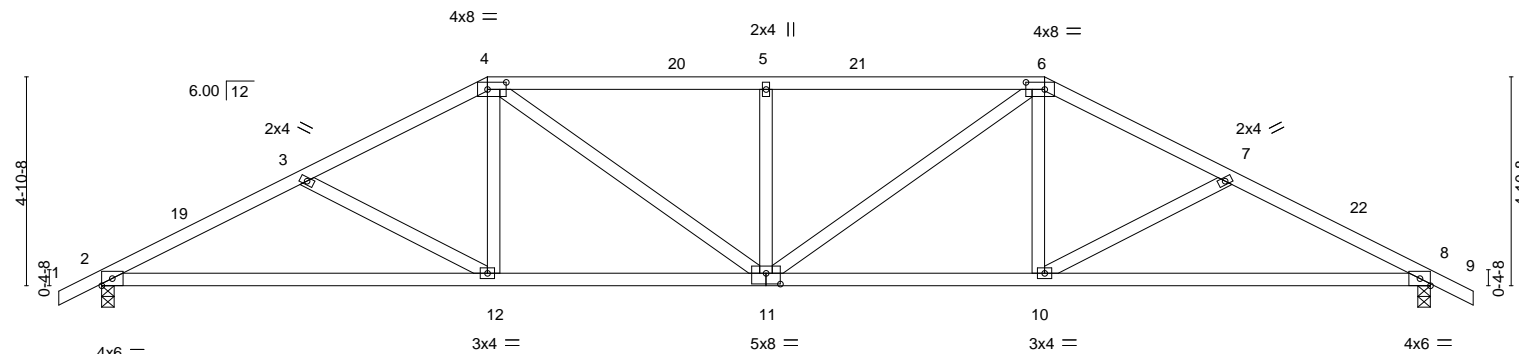
Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244,

8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:38 2021 Page 1

ID:cExzFHCxHzHNjPCINbH0FZzN74p-g3snODEeuCRAFuNgFbO2q0?OQLlaN5qJfzS7IFzEzOZ

|       |       |       |        |        |        |        |        |
|-------|-------|-------|--------|--------|--------|--------|--------|
| 1-0-0 | 4-9-8 | 9-0-0 | 15-6-0 | 22-0-0 | 26-2-8 | 31-0-0 | 32-0-0 |
| 1-0-0 | 4-9-8 | 4-2-8 | 6-6-0  | 6-6-0  | 4-2-8  | 4-9-8  | 1-0-0  |

Scale = 1:53.8



|                       |  |
|-----------------------|--|
| Plate Offsets (X,Y)-- | [4:0-5-4,0-2-0], [6:0-5-4,0-2-0], [11:0-4-0,0-3-0] |
|-----------------------|--|

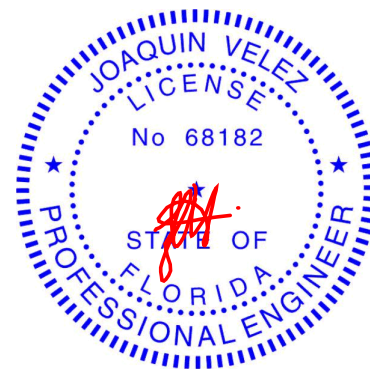
| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.25  | TC 0.49   | Vert(LL) | -0.15 12-15 | >999   | 240 | MT20           | 244/190  |
| TCDL 7.0      | Lumber DOL           | 1.25  | BC 0.79   | Vert(CT) | -0.33 12-15 | >999   | 180 |                |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.20   | Horz(CT) | 0.08 8      | n/a    | n/a |                |          |
| BCDL 10.0     | Code FBC2020/TPI2014 |       | Matrix-MS |          |             |        |     | Weight: 155 lb | FT = 20% |

| LUMBER-               | BRACING-  |
|-----------------------|---|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 3-7-4 oc purlins. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 8-11-2 oc bracing.            |
| WEBS 2x4 SP No.3      |   |

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
Max Horz 2=75(LC 12)  
Max Uplift 2=-269(LC 12), 8=-269(LC 13)  
Max Grav 2=1201(LC 1), 8=1201(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2134/478, 3-4=-1876/399, 4-5=-1993/457, 5-6=-1993/457, 6-7=-1876/400, 7-8=-2134/478  
BOT CHORD 2-12=-436/1883, 11-12=-292/1636, 10-11=-234/1636, 8-10=-361/1883  
WEBS 3-12=-292/163, 4-12=-29/395, 4-11=-174/532, 5-11=-404/196, 6-11=-174/532, 6-10=-29/395, 7-10=-292/163

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCCL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-1-3, Interior(1) 2-1-3 to 9-0-0, Exterior(2R) 9-0-0 to 13-4-10, Interior(1) 13-4-10 to 22-0-0, Exterior(2R) 22-0-0 to 26-4-7, Interior(1) 26-4-7 to 32-0-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
  - 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=269, 8=269.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



6904 Parke East Blvd.  
Tampa, FL 36610

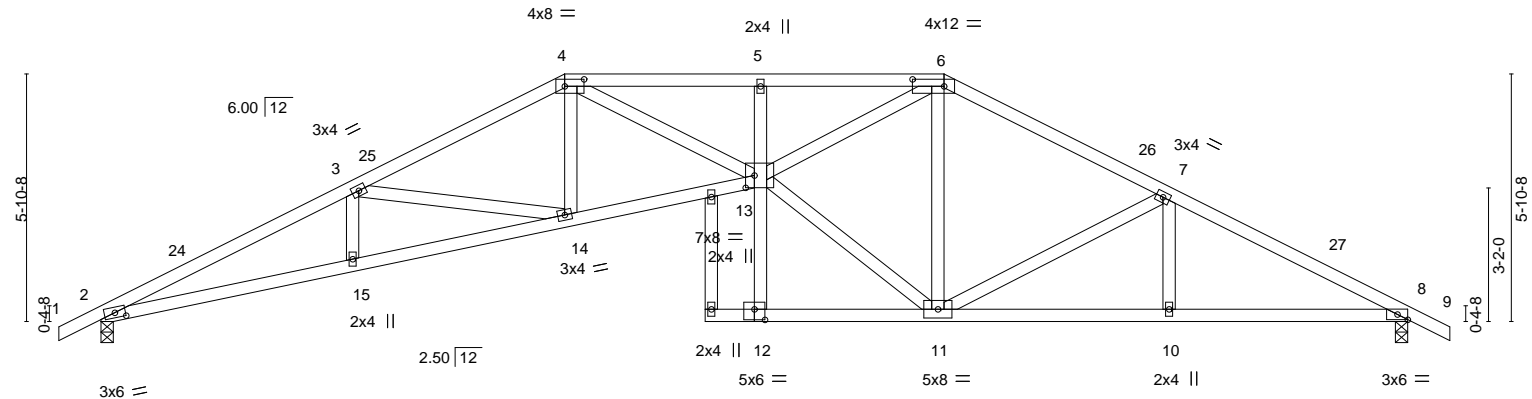
|  |              |                   |          |          |                               |
|--|--------------|-------------------|----------|----------|-------------------------------|
| Job<br>2777223   | Truss<br>T03 | Truss Type<br>Hip | Qty<br>1 | Ply<br>1 | WCH - ROACH RES.<br>T24033836 |
| Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244, |              |                   |          |          |                               |

8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:39 2021 Page 1

ID:cExzFHCxHzHNjPCINbH0FZzN74p-9FQ9cZeGfWZ1t2ysolvHNDYZBket6MDTtdBgIhzEz0Y

|                |                    |                 |                 |                 |                 |                  |                 |
|----------------|--------------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|
| 1-0-0<br>1-0-0 | 5-11-10<br>5-11-10 | 11-0-0<br>5-0-6 | 15-6-0<br>4-6-0 | 20-0-0<br>4-6-0 | 25-4-1<br>5-4-1 | 31-0-0<br>5-7-15 | 32-0-0<br>1-0-0 |
|----------------|--------------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|

Scale = 1:54.7



|                    |                 |                 |                 |                 |                 |                  |
|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 5-11-10<br>5-11-10 | 11-0-0<br>5-0-6 | 14-4-0<br>3-4-0 | 15-6-0<br>1-2-0 | 20-0-0<br>4-6-0 | 25-4-1<br>5-4-1 | 31-0-0<br>5-7-15 |
|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|

Plate Offsets (X,Y)-- [2:0-3-0,0-1-7], [4:0-5-8,0-2-0], [6:0-9-0,0-2-0], [8:0-2-15,Edge], [12:0-3-0,0-3-0], [13:0-2-8,0-3-8]

| LOADING (psf)  | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)    | l/defl | L/d | PLATES | GRIP     |
|----------------|----------------------|-------|-----------|----------|-------------|--------|-----|--------|----------|
| TCLL 20.0      | Plate Grip DOL       | 1.25  | TC 0.49   | Vert(LL) | -0.31 13    | >999   | 240 | MT20   | 244/190  |
| TCDL 7.0       | Lumber DOL           | 1.25  | BC 0.78   | Vert(CT) | -0.58 13-14 | >645   | 180 |        |          |
| BCLL 0.0 *     | Rep Stress Incr      | YES   | WB 0.96   | Horz(CT) | 0.34 8      | n/a    | n/a |        |          |
| BCDL 10.0      | Code FBC2020/TPI2014 |       | Matrix-MS |          |             |        |     |        |          |
| Weight: 170 lb |                      |       |           |          |             |        |     |        | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2 \*Except\*  
5-12,12-16: 2x4 SP No.3  
WEBS 2x4 SP No.3

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-8-9 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 7-1-14 oc bracing. Except:  
10-0-0 oc bracing: 12-13

#### REACTIONS.

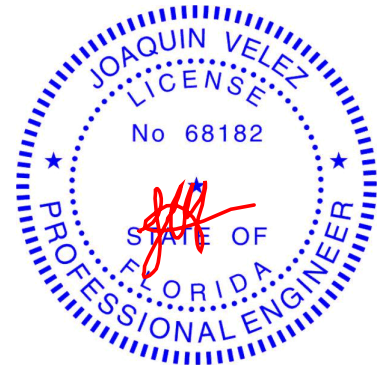
(size) 2=0-3-8, 8=0-3-8  
Max Horz 2=89(LC 16)  
Max Uplift 2=-267(LC 12), 8=-265(LC 13)  
Max Grav 2=1201(LC 1), 8=1201(LC 1)

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

TOP CHORD 2-3=-3397/731, 3-4=-2806/561, 4-5=-3687/706, 5-6=-3655/700, 6-7=-1713/386,  
7-8=-2162/449  
BOT CHORD 2-15=-682/3044, 14-15=-682/3054, 13-14=-431/2519, 10-11=-334/1884, 8-10=-334/1884  
WEBS 3-14=-548/250, 4-14=-64/374, 4-13=-235/1375, 11-13=-244/1768, 6-13=-422/2523,  
6-11=-740/143, 7-11=-476/197

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-1-3, Interior(1) 2-1-3 to 11-0-0, Exterior(2R) 11-0-0 to 15-7-12, Interior(1) 15-7-12 to 20-0-0, Exterior(2R) 20-0-0 to 24-4-10, Interior(1) 24-4-10 to 32-0-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- Bearing at joint(s) 2 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 100 lb uplift at joint(s) except (jt=lb) 2=267, 8=265.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



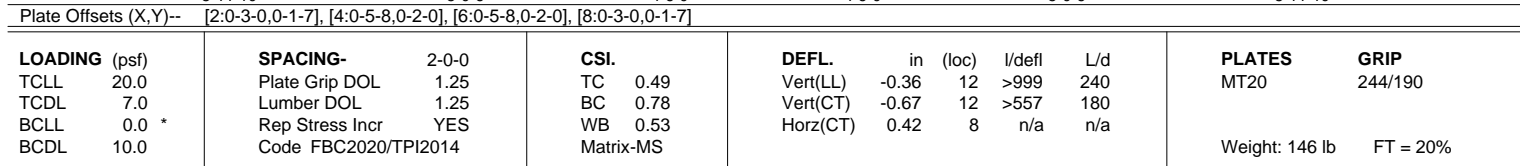
6904 Parke East Blvd.  
Tampa, FL 36610

Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244, 8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:41 2021 Page 1

ID:cExzFHCxHzHNjPCInbH0FZzN74p-5eYv0FgWB7pl6M5FwjxISedvfYKLamSMsLwgnMazEz0W

1-0-0 5-11-10 11-0-0 15-6-0 20-0-0 25-0-6 31-0-0 32-0-0  
 1-0-0 5-11-10 5-0-6 4-6-0 4-6-0 5-0-6 5-11-10 1-0-0

Scale = 1:53.8



**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=89(LC 12)  
 Max Uplift 2=-266(LC 12), 8=-266(LC 13)  
 Max Grav 2=1201(LC 1), 8=1201(LC 1)

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

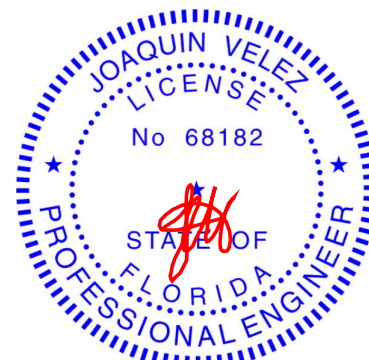
TOP CHORD 2-3=-3398/727, 3-4=-2804/557, 4-5=-3692/703, 5-6=-3692/703, 6-7=-2804/539,  
7-8=-3398/664

BOT CHORD 2-14=-679/3045, 13-14=-679/3054, 12-13=-428/2520, 11-12=-351/2520, 10-11=-536/3054,  
8-10=-535/3045

WEBS 3-13=-550/250, 4-13=-62/355, 4-12=-235/1393, 6-12=-293/1393, 6-11=-63/355,  
7-11=-550/255

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDFL=4.2psf; BCDLF=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCp=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-1-3, Interior(1) 2-1-3 to 11-0-0, Exterior(2R) 11-0-0 to 15-6-0, Interior(1) 15-6-0 to 20-0-0, Interior(2R) 20-0-0 to 24-4-10, Interior(1) 24-4-10 to 32-0-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 4) Provide adequate drainage to prevent water ponding.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* 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.
- 7) Bearing at joint(s) 2, 8 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 100 lb uplift at joint(s) except (jt=lb) 2=266. 8=266.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20, 2021



**WARNING -** Velly design parameters are listed below and included with the key reference to AISC M14-15 16f, 17f, 18f, 19f, 20f, 21f, 22f, 23f, 24f, 25f, 26f, 27f, 28f, 29f, 30f, 31f, 32f, 33f, 34f, 35f, 36f, 37f, 38f, 39f, 40f, 41f, 42f, 43f, 44f, 45f, 46f, 47f, 48f, 49f, 50f, 51f, 52f, 53f, 54f, 55f, 56f, 57f, 58f, 59f, 60f, 61f, 62f, 63f, 64f, 65f, 66f, 67f, 68f, 69f, 70f, 71f, 72f, 73f, 74f, 75f, 76f, 77f, 78f, 79f, 80f, 81f, 82f, 83f, 84f, 85f, 86f, 87f, 88f, 89f, 90f, 91f, 92f, 93f, 94f, 95f, 96f, 97f, 98f, 99f, 100f, 101f, 102f, 103f, 104f, 105f, 106f, 107f, 108f, 109f, 110f, 111f, 112f, 113f, 114f, 115f, 116f, 117f, 118f, 119f, 120f, 121f, 122f, 123f, 124f, 125f, 126f, 127f, 128f, 129f, 130f, 131f, 132f, 133f, 134f, 135f, 136f, 137f, 138f, 139f, 140f, 141f, 142f, 143f, 144f, 145f, 146f, 147f, 148f, 149f, 150f, 151f, 152f, 153f, 154f, 155f, 156f, 157f, 158f, 159f, 160f, 161f, 162f, 163f, 164f, 165f, 166f, 167f, 168f, 169f, 170f, 171f, 172f, 173f, 174f, 175f, 176f, 177f, 178f, 179f, 180f, 181f, 182f, 183f, 184f, 185f, 186f, 187f, 188f, 189f, 190f, 191f, 192f, 193f, 194f, 195f, 196f, 197f, 198f, 199f, 200f, 201f, 202f, 203f, 204f, 205f, 206f, 207f, 208f, 209f, 210f, 211f, 212f, 213f, 214f, 215f, 216f, 217f, 218f, 219f, 220f, 221f, 222f, 223f, 224f, 225f, 226f, 227f, 228f, 229f, 230f, 231f, 232f, 233f, 234f, 235f, 236f, 237f, 238f, 239f, 240f, 241f, 242f, 243f, 244f, 245f, 246f, 247f, 248f, 249f, 250f, 251f, 252f, 253f, 254f, 255f, 256f, 257f, 258f, 259f, 260f, 261f, 262f, 263f, 264f, 265f, 266f, 267f, 268f, 269f, 270f, 271f, 272f, 273f, 274f, 275f, 276f, 277f, 278f, 279f, 280f, 281f, 282f, 283f, 284f, 285f, 286f, 287f, 288f, 289f, 290f, 291f, 292f, 293f, 294f, 295f, 296f, 297f, 298f, 299f, 300f, 301f, 302f, 303f, 304f, 305f, 306f, 307f, 308f, 309f, 310f, 311f, 312f, 313f, 314f, 315f, 316f, 317f, 318f, 319f, 320f, 321f, 322f, 323f, 324f, 325f, 326f, 327f, 328f, 329f, 330f, 331f, 332f, 333f, 334f, 335f, 336f, 337f, 338f, 339f, 340f, 341f, 342f, 343f, 344f, 345f, 346f, 347f, 348f, 349f, 350f, 351f, 352f, 353f, 354f, 355f, 356f, 357f, 358f, 359f, 360f, 361f, 362f, 363f, 364f, 365f, 366f, 367f, 368f, 369f, 370f, 371f, 372f, 373f, 374f, 375f, 376f, 377f, 378f, 379f, 380f, 381f, 382f, 383f, 384f, 385f, 386f, 387f, 388f, 389f, 390f, 391f, 392f, 393f, 394f, 395f, 396f, 397f, 398f, 399f, 400f, 401f, 402f, 403f, 404f, 405f, 406f, 407f, 408f, 409f, 410f, 411f, 412f, 413f, 414f, 415f, 416f, 417f, 418f, 419f, 420f, 421f, 422f, 423f, 424f, 425f, 426f, 427f, 428f, 429f, 430f, 431f, 432f, 433f, 434f, 435f, 436f, 437f, 438f, 439f, 440f, 441f, 442f, 443f, 444f, 445f, 446f, 447f, 448f, 449f, 450f, 451f, 452f, 453f, 454f, 455f, 456f, 457f, 458f, 459f, 460f, 461f, 462f, 463f, 464f, 465f, 466f, 467f, 468f, 469f, 470f, 471f, 472f, 473f, 474f, 475f, 476f, 477f, 478f, 479f, 480f, 481f, 482f, 483f, 484f, 485f, 486f, 487f, 488f, 489f, 490f, 491f, 492f, 493f, 494f, 495f, 496f, 497f, 498f, 499f, 500f, 501f, 502f, 503f, 504f, 505f, 506f, 507f, 508f, 509f, 510f, 511f, 512f, 513f, 514f, 515f, 516f, 517f, 518f, 519f, 520f, 521f, 522f, 523f, 524f, 525f, 526f, 527f, 528f, 529f, 530f, 531f, 532f, 533f, 534f, 535f, 536f, 537f, 538f, 539f, 540f, 541f, 542f, 543f, 544f, 545f, 546f, 547f, 548f, 549f, 550f, 551f, 552f, 553f, 554f, 555f, 556f, 557f, 558f, 559f, 560f, 561f, 562f, 563f, 564f, 565f, 566f, 567f, 568f, 569f, 570f, 571f, 572f, 573f, 574f, 575f, 576f, 577f, 578f, 579f, 580f, 581f, 582f, 583f, 584f, 585f, 586f, 587f, 588f, 589f, 590f, 591f, 592f, 593f, 594f, 595f, 596f, 597f, 598f, 599f, 600f, 601f, 602f, 603f, 604f, 605f, 606f, 607f, 608f, 609f, 610f, 611f, 612f, 613f, 614f, 615f, 616f, 617f, 618f, 619f, 620f, 621f, 622f, 623f, 624f, 625f, 626f, 627f, 628f, 629f, 630f, 631f, 632f, 633f, 634f, 635f, 636f, 637f, 638f, 639f, 640f, 641f, 642f, 643f, 644f, 645f, 646f, 647f, 648f, 649f, 650f, 651f, 652f, 653f, 654f, 655f, 656f, 657f, 658f, 659f, 660f, 661f, 662f, 663f, 664f, 665f, 666f, 667f, 668f, 669f, 670f, 671f, 672f, 673f, 674f, 675f, 676f, 677f, 678f, 679f, 680f, 681f, 682f, 683f, 684f, 685f, 686f, 687f, 688f, 689f, 690f, 691f, 692f, 693f, 694f, 695f, 696f, 697f, 698f, 699f, 700f, 701f, 702f, 703f, 704f, 705f, 706f, 70



6904 Parke East Blvd  
Tampa, FL 36610

|         |       |            |     |     |                  |           |
|---------|-------|------------|-----|-----|------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | WCH - ROACH RES. | T24033838 |
| 2777223 | T05   | Hip        | 2   | 1   |                  |           |

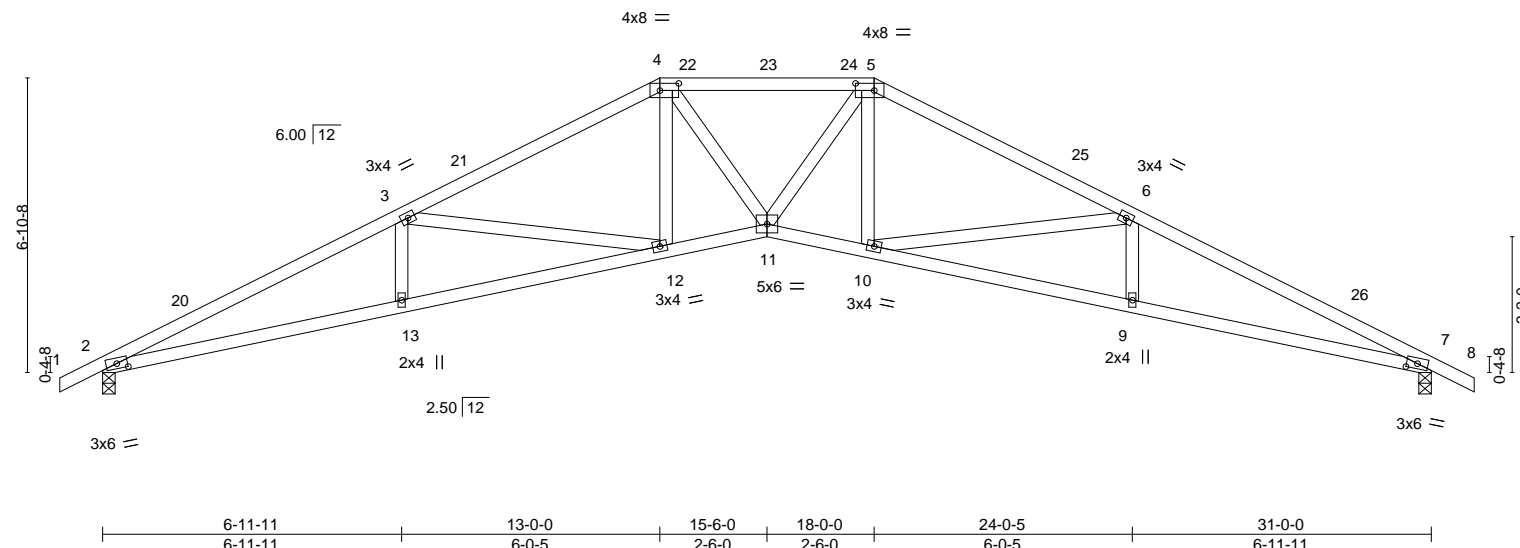
Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244,

8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:42 2021 Page 1

ID:cExzFHCxHzHNjPCINbH0FZzN74p-Zq6HEbh9yRxckWgRUQS\_sA2SyzJpEvaaQKu0zEz0V

|       |         |        |        |        |         |        |
|-------|---------|--------|--------|--------|---------|--------|
| 1-0-0 | 6-11-11 | 13-0-0 | 18-0-0 | 24-0-5 | 31-0-0  | 32-0-0 |
| 1-0-0 | 6-11-11 | 6-0-5  | 5-0-0  | 6-0-5  | 6-11-11 | 1-0-0  |

Scale = 1:53.8



|  |       |                       |      |             |      |                                  |                      |                    |          |
|--|-------|-----------------------|------|-------------|------|----------------------------------|----------------------|--------------------|----------|
| Plate Offsets (X,Y)-- [2:0-3-0,0-1-7], [4:0-5-4,0-2-0], [5:0-5-4,0-2-0], [7:0-3-0,0-1-7] |       |                       |      |             |      |                                  |                      |                    |          |
| <b>LOADING</b> (psf)   |       | <b>SPACING-</b> 2-0-0 |      | <b>CSI.</b> |      | <b>DEFL.</b> in (loc) l/defl L/d |                      | <b>PLATES GRIP</b> |          |
| TCLL   | 20.0  | Plate Grip DOL        | 1.25 | TC          | 0.61 | Vert(LL)                         | -0.29 11 >999 240    | MT20               | 244/190  |
| TCDL   | 7.0   | Lumber DOL            | 1.25 | BC          | 0.78 | Vert(CT)                         | -0.54 12-13 >695 180 |                    |          |
| BCLL   | 0.0 * | Rep Stress Incr       | YES  | WB          | 0.56 | Horz(CT)                         | 0.36 7 n/a n/a       |                    |          |
| BCDL   | 10.0  | Code FBC2020/TPI2014  |      | Matrix-MS   |      |                                  |                      | Weight: 147 lb     | FT = 20% |

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-8-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 7-1-11 oc bracing.

#### REACTIONS.

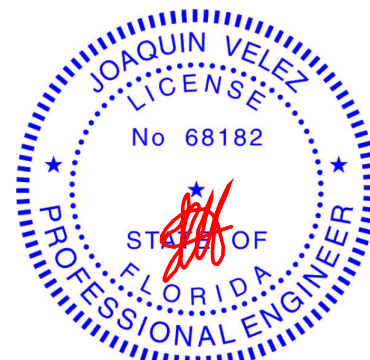
(size) 2=0-3-8, 7=0-3-8  
Max Horz 2=104(LC 12)  
Max Uplift 2=263(LC 12), 7=263(LC 13)  
Max Grav 2=1201(LC 1), 7=1201(LC 1)

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

TOP CHORD 2-3=-3364/712, 3-4=-2563/490, 4-5=-2566/515, 5-6=-2563/497, 6-7=-3364/644  
BOT CHORD 2-13=-672/3015, 12-13=-672/3018, 11-12=-350/2279, 10-11=-291/2279, 9-10=-520/3018,  
7-9=-520/3015  
WEBS 3-12=-747/320, 4-12=-80/405, 4-11=-98/578, 5-11=-143/578, 5-10=-80/405,  
6-10=-747/325

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-1-3, Interior(1) 2-1-3 to 13-0-0, Exterior(2R) 13-0-0 to 17-4-10, Interior(1) 17-4-10 to 18-0-0, Exterior(2R) 18-0-0 to 22-4-10, Interior(1) 22-4-10 to 32-0-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- 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 100 lb uplift at joint(s) except (jt=lb) 2=263, 7=263.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



6904 Parke East Blvd.  
Tampa, FL 36610

|  |              |                   |          |          |                               |
|--|--------------|-------------------|----------|----------|-------------------------------|
| Job<br>2777223   | Truss<br>T06 | Truss Type<br>Hip | Qty<br>2 | Ply<br>1 | WCH - ROACH RES.<br>T24033839 |
| Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244, |              |                   |          |          |                               |

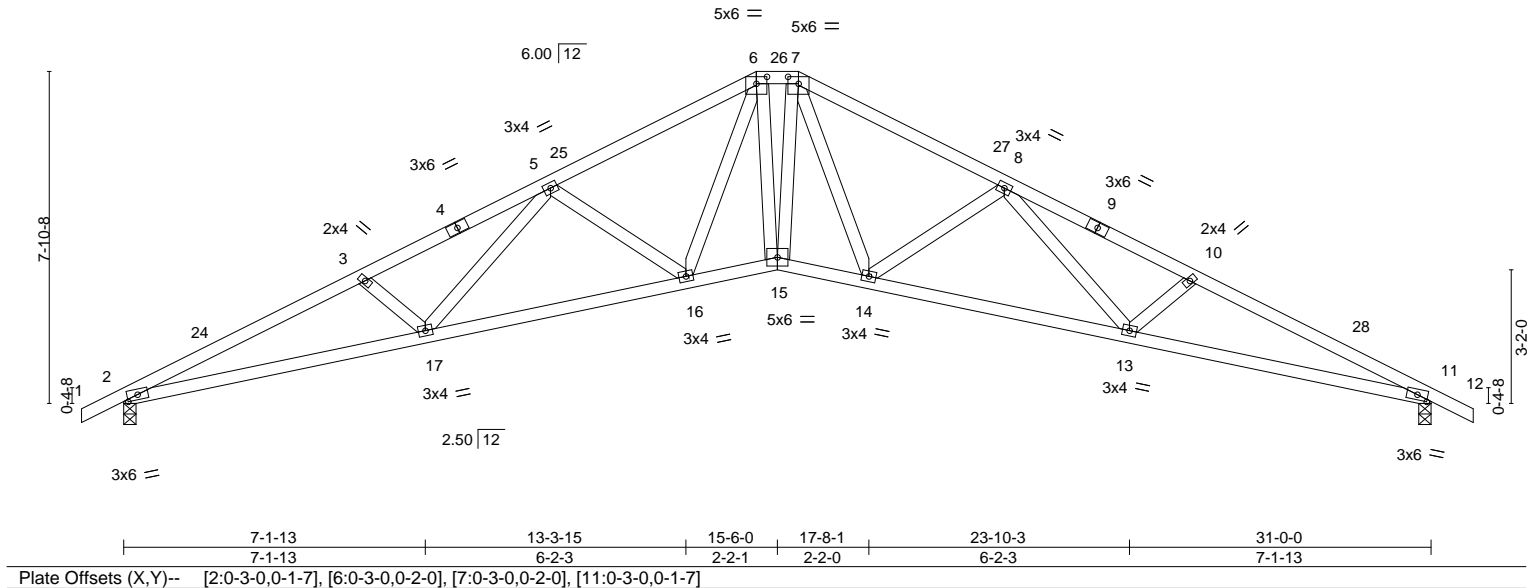
8.430 s Apr 20 2021 MiTek Industries, Inc. Wed May 19 10:31:43 2021 Page 1

ID:cExzFHCxHzHNjPCINbHOFZzN74p-11ggRxhjk4TLgFe18zDX3iHsM0j2Ls2oE9uRSzEz0U

Job Reference (optional)

1-0-0 5-8-11 10-1-7 15-0-0 16-0-0 20-10-9 25-3-5 31-0-0 32-0-0  
1-0-0 5-8-11 4-4-12 4-10-9 1-0-0 4-10-9 4-4-12 5-8-11 1-0-0

Scale = 1:54.6



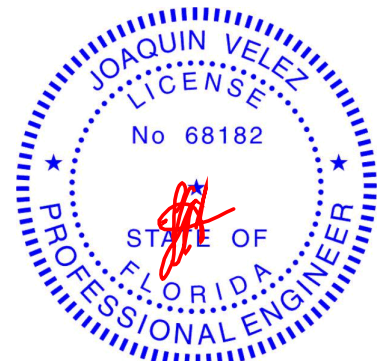
| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.25  | TC 0.38   | Vert(LL) | -0.28 15    | >999   | 240 | MT20           | 244/190  |
| TCDL 7.0      | Lumber DOL           | 1.25  | BC 0.79   | Vert(CT) | -0.54 16-17 | >693   | 180 |                |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.22   | Horz(CT) | 0.35 11     | n/a    | n/a |                |          |
| BCDL 10.0     | Code FBC2020/TPI2014 |       | Matrix-MS |          |             |        |     | Weight: 160 lb | FT = 20% |

|                       |   |
|-----------------------|---|
| <b>LUMBER-</b>        | <b>BRACING-</b>   |
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 2-11-13 oc purlins. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 6-11-13 oc bracing.             |
| WEBS 2x4 SP No.3      |   |

|                   |  |
|-------------------|--|
| <b>REACTIONS.</b> | (size) 2=0-3-8, 11=0-3-8                 |
|                   | Max Horz 2=119(LC 12)                    |
|                   | Max Uplift 2=-260(LC 12), 11=-260(LC 13) |
|                   | Max Grav 2=1201(LC 1), 11=1201(LC 1)     |

|                |   |
|----------------|---|
| <b>FORCES.</b> | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  |
| TOP CHORD      | 2-3=-3395/735, 3-5=-3203/699, 5-6=-2477/493, 6-7=-2016/413, 7-8=-2477/472, 8-10=-3203/612, 10-11=-3395/649            |
| BOT CHORD      | 2-17=-718/3049, 16-17=-522/2620, 15-16=-269/2011, 14-15=-250/2011, 13-14=-380/2620, 11-13=-519/3049                   |
| WEBS           | 5-17=-130/462, 5-16=-503/238, 6-16=-172/568, 6-15=-96/476, 7-15=-137/476, 7-14=-172/568, 8-14=-503/240, 8-13=-136/462 |

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-1-3, Interior(1) 2-1-3 to 15-0-0, Exterior(2E) 15-0-0 to 16-0-0, Exterior(2R) 16-0-0 to 20-4-10, Interior(1) 20-4-10 to 32-0-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
  - 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.
  - Bearing at joint(s) 2, 11 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 100 lb uplift at joint(s) except (jt=lb) 2=260, 11=260.



Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

May 20,2021

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



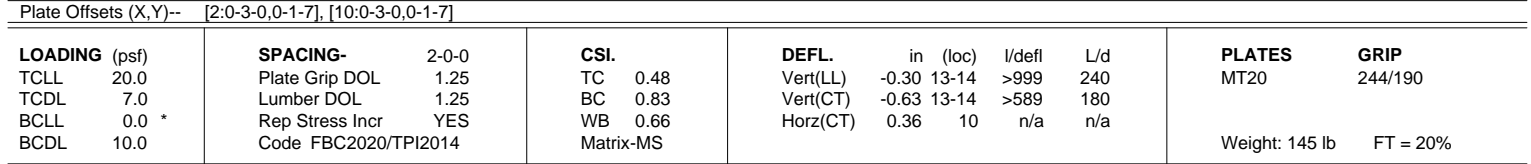
6904 Parke East Blvd.  
Tampa, FL 36610



Builders FirstSource (Jacksonville, FL), Jacksonville, FL - 32244, 8.430 s Apr 20 2021 MitTek Industries, Inc. Wed May 19 10:31:44 2021 Page 1

ID:cExzFHCxHZNjPCINbH0FZn74p-VDE2fHiPU2CJzpqbqrUS4HFQ\_ILInhFC1uvRzvEz0T

Scale = 1:54.1



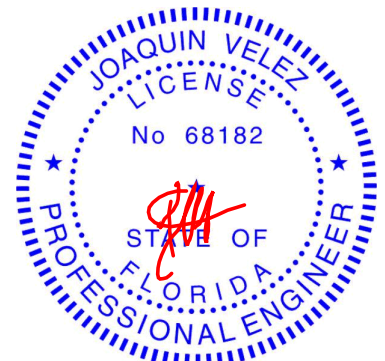
**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
 Max Horz 2=-123(LC 13)  
 Max Uplift 2=-259(LC 12), 10=-259(LC 13)  
 Max Grav 2=1201(LC 1), 10=1201(LC 1)

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

|           |   |
|-----------|---|
| TOP CHORD | 2-3=-3425/753, 3-5=-3152/659, 5-6=-2224/431, 6-7=-2224/427, 7-9=-3152/572,<br>9-10=-3425/664                |
| BOT CHORD | 2-14=-741/3083, 13-14=-496/2531, 12-13=-363/2531, 10-12=-536/3083   |
| WEBS      | 6-13=-296/1720, 7-13=-609/276, 7-12=-116/549, 9-12=-283/196, 5-13=-609/274,<br>5-14=-112/549, 3-14=-283/193 |

- NOTES-**

  - 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TC DL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 2-1-3, Interior(1) 2-1-3 to 15-6-0, Exterior(2R) 15-6-0 to 18-7-3, Interior(1) 18-7-3 to 32-0-0 zone; C/C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 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.
  - 6) Bearing at joint(s) 2, 10 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 100 lb uplift at joint(s) except (jt=lb) 2=259, 10=259.

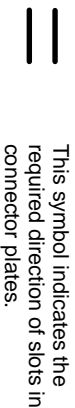
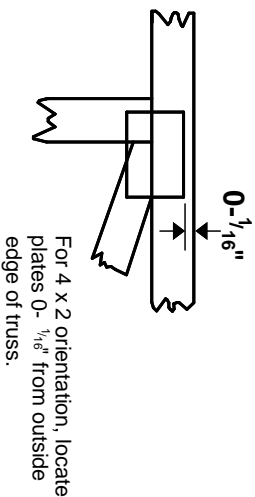
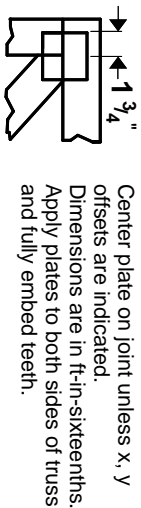


Joaquin Velez PE No.68182  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date: May 20,2021



## Symbols

### PLATE LOCATION AND ORIENTATION



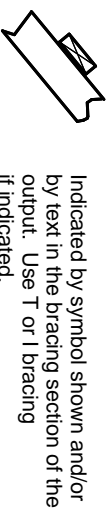
\* Plate location details available in **MiTek 20/20** software or upon request.

### PLATE SIZE

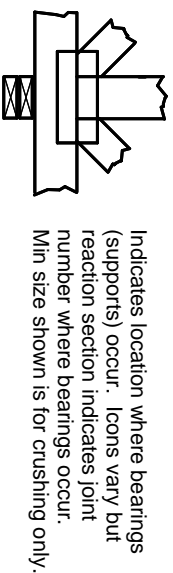
**4 X 4**

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

### LATERAL BRACING LOCATION

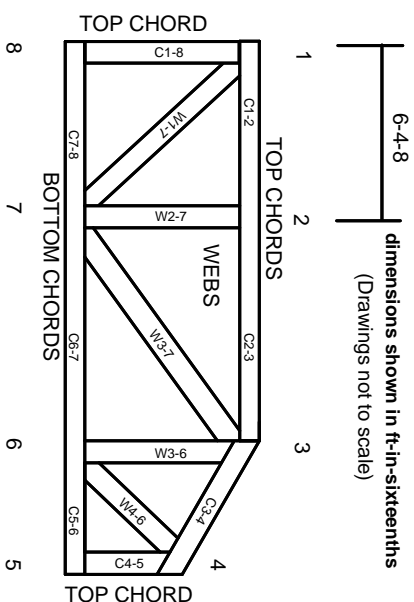


### BEARING



**Industry Standards:**  
ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

## Numbering System



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

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

### PRODUCT CODE APPROVALS

ICC-ES Reports:  
ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

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

© 2012 MiTek® All Rights Reserved



MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020



## 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 BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.