

# Mark Morris, P.E.

#126, 1317-M, Summerville, SC 29483

843 209-5784, Fax (866)-213-4614

The truss drawing(s) listed below have been prepared by **Atlantic Building Components** under my direct supervision based on the parameters provided by the truss designers.

AST #: 26910

JOB: 21-3146-R01

JOB NAME: LOT 1155 CARRIAGE CIRCLE

Wind Code: 37

Wind Speed: Vult= 130mph

Exposure Category: B

Mean Roof Height (feet): 23

## *24 Truss Design(s)*

Trusses:

J09, J10, PB01, PB02, R01, R02, R03, R04, R05, R06, R07, R08, R09, R10, R11, R13, R18, R23, R24, R25, R26, VT01, VT03, VT04



**6/3/2021**

**Mark Morris**

***Warning !—Verify design parameters and read notes before use.***

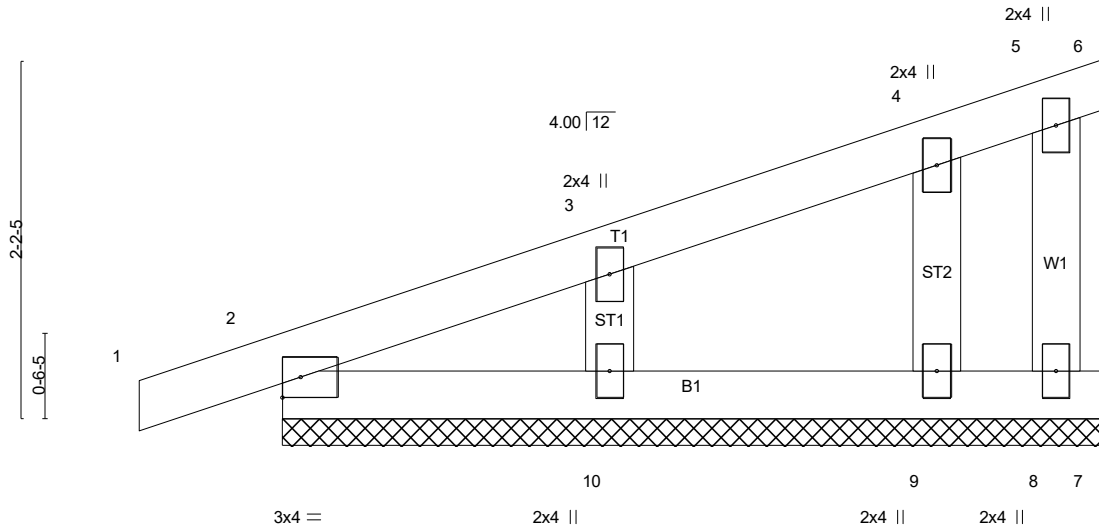
This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for*

|                    |              |                     |          |          |  |         |
|--------------------|--------------|---------------------|----------|----------|--|---------|
| Job<br>21-3146-R01 | Truss<br>J09 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N | # 26910 |
|--------------------|--------------|---------------------|----------|----------|--|---------|

ID:VaeaK7vWB81xgotwpMaLeyLxWJ-FGP\_PCMUBKWLgnah60JZhYq4GLu3bqcSUoP3waz9ZNX  
8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:22 2021 Page 1



Scale = 1:14.1



|                      |                      |             |                          |               |             |
|----------------------|----------------------|-------------|--------------------------|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>             | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof) 20.0     | 2-0-0                | TC 0.08     | in (loc) l/defl L/d      | MT20          | 244/190     |
| Snow (Pf) 20.0       | Plate Grip DOL 1.15  | BC 0.06     | Vert(LL) 0.00 1 n/r 180  |               |             |
| TCDL 10.0            | Lumber DOL 1.15      | WB 0.03     | Vert(CT) -0.00 1 n/r 80  |               |             |
| BCLL 0.0 *           | Rep Stress Incr YES  | Matrix-P    | Horz(CT) -0.00 6 n/a n/a |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014 |             |                          | Weight: 22 lb | FT = 0%     |

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.3  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

**BRACING-**  
TOP CHORD  
BOT CHORD

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

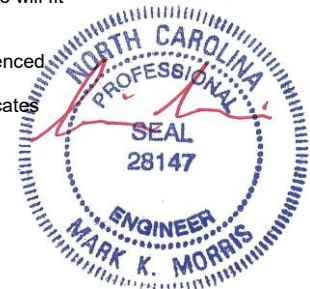
**REACTIONS.** All bearings 5-0-0.  
(lb) - Max Horz 2=71(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 6, 2, 10, 9, 8  
Max Grav All reactions 250 lb or less at joint(s) 6, 2, 7, 10, 9, 8

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

**NOTES-** (12-13)

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 6, 2, 10, 9, 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

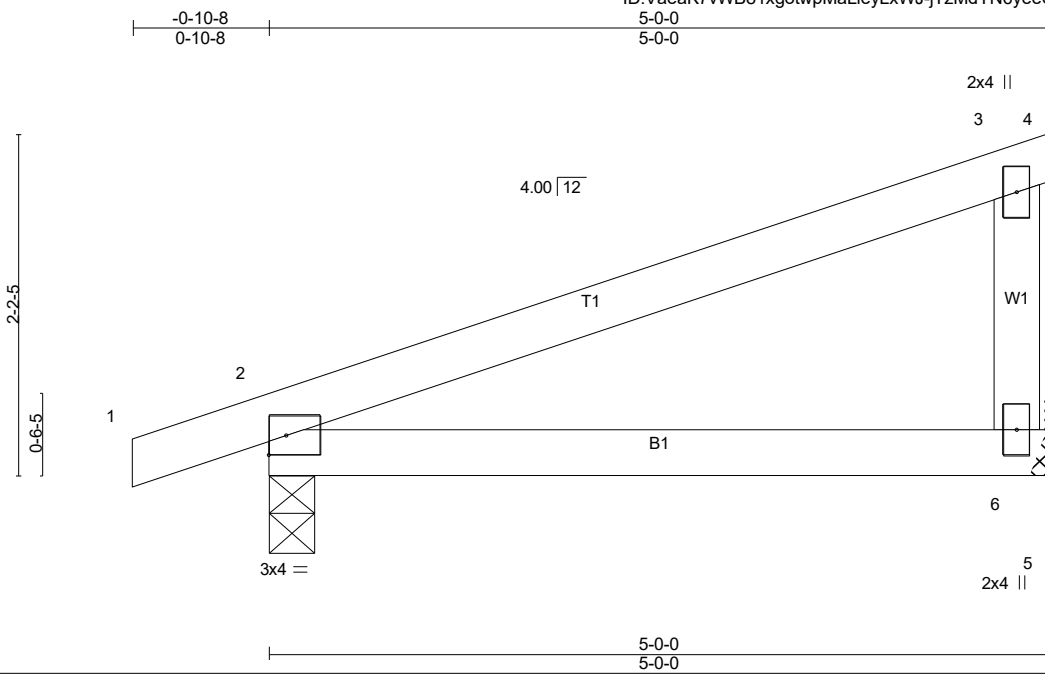


6/3/2021

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|                          |       |            |     |     |  |
|--------------------------|-------|------------|-----|-----|--|
| Job                      | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01              | J10   | Monopitch  | 4   | 1   |  |
| Job Reference (optional) |       |            |     |     | # 26910  |

ID:Vaaek7vWB81xgotwpMaLleyLxWJ-jTzMdYN6yeeC1x9tjgqoDmN8hI95KHObjs8dS0z9ZNY  
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Scale = 1:14.8

|                      |                      |             |                             |               |             |
|----------------------|----------------------|-------------|-----------------------------|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>                | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof) 20.0     | 2-0-0                | TC 0.55     | in (loc) l/defl L/d         | MT20          | 244/190     |
| Snow (Pf) 20.0       | Plate Grip DOL 1.15  | BC 0.26     | Vert(LL) -0.03 2-6 >999 240 |               |             |
| TCDL 10.0            | Lumber DOL 1.15      | WB 0.00     | Vert(CT) -0.06 2-6 >999 180 |               |             |
| BCLL 0.0 *           | Rep Stress Incr YES  | Matrix-P    | Horz(CT) 0.00 n/a n/a       |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014 |             |                             | Weight: 19 lb | FT = 0%     |

**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 5-0-0 oc purlins, except end verticals.  
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.

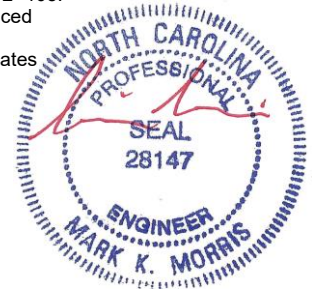
**REACTIONS.** (lb/size) 6=196/Mechanical, 2=253/0-3-8 (min. 0-1-8)  
Max Horz 2=71(LC 10)  
Max Uplift 6=-88(LC 10), 2=-105(LC 10)  
Max Grav 6=262(LC 21), 2=348(LC 21)

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

**NOTES-** (10-11)

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6 except (jt=lb) 2=105.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- 11) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

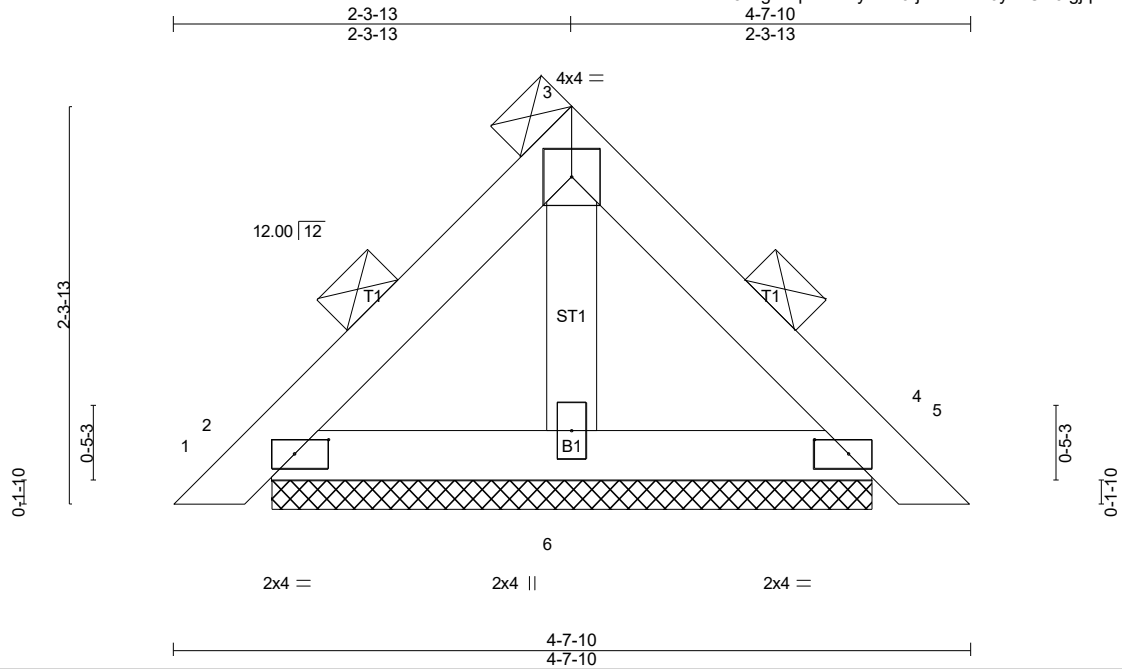


6/3/2021

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|                    |               |                         |          |          |  |
|--------------------|---------------|-------------------------|----------|----------|--|
| Job<br>21-3146-R01 | Truss<br>PB01 | Truss Type<br>PIGGYBACK | Qty<br>1 | Ply<br>2 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N.C. 27081<br># 26910 |
|--------------------|---------------|-------------------------|----------|----------|--|

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ID:VaeaK7vWB81xgotwpMaLleyLxWJ-jTzMdYN6yeeClx9tgjqoDmNGTIDXKHfBjS8dS0z9ZNY



Scale = 1:13.4

Plate Offsets (X,Y)-- [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.         | in (loc) | l/defl | L/d | PLATES        | GRIP    |
|------------------|----------------------|----------|---------------|----------|--------|-----|---------------|---------|
| TCLL (roof) 20.0 | 3-0-0                | TC 0.05  | Vert(LL) 0.00 | 4        | n/r    | 180 | MT20          | 244/190 |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.04  | Vert(CT) 0.00 | 4        | n/r    | 80  |               |         |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.01  | Horz(CT) 0.00 | 4        | n/a    | n/a |               |         |
| BCLL 0.0 *       | Rep Stress Incr NO   | Matrix-P |               |          |        |     |               |         |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |               |          |        |     | Weight: 34 lb | FT = 0% |

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.3  
OTHERS 2x4 SP No.3

**BRACING-**  
TOP CHORD 2-0-0 oc purlins  
(Switched from sheeted: Spacing > 2-0-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=162/3-6-0 (min. 0-1-8), 4=162/3-6-0 (min. 0-1-8), 6=161/3-6-0 (min. 0-1-8)  
Max Horz 2=73(LC 11)  
Max Uplift 2=-39(LC 13), 4=-47(LC 13)  
Max Grav 2=162(LC 1), 4=162(LC 1), 6=163(LC 5)

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

**NOTES-** (14-15)

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDC=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 2, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.



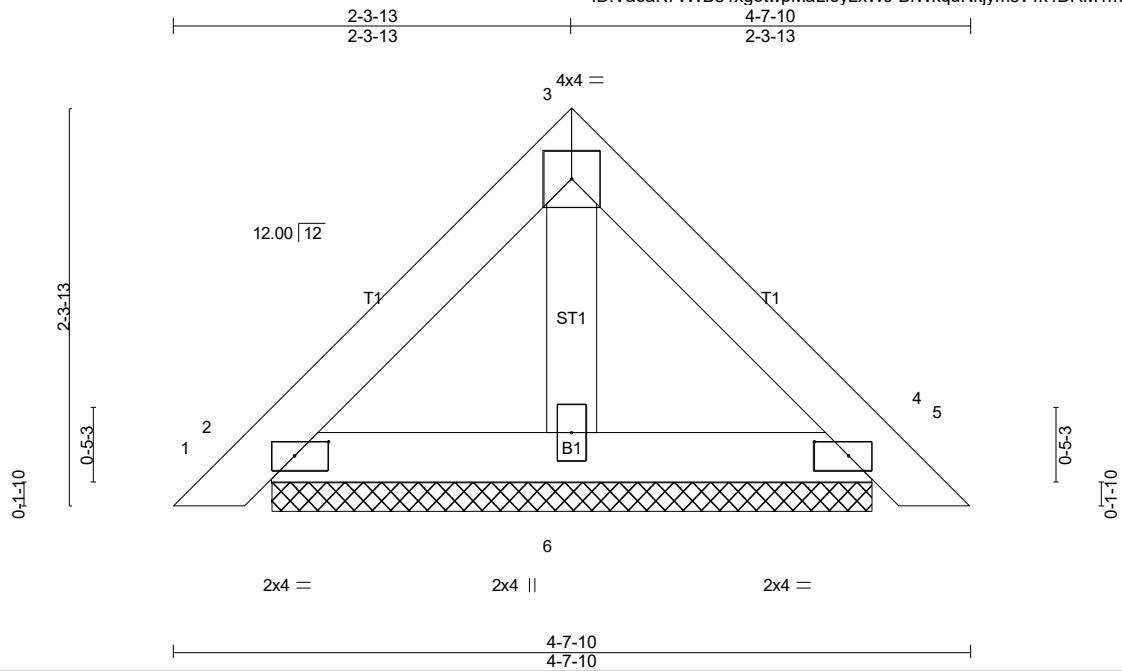
**LOAD CASE(S)** Standard

6/3/2021

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|                    |               |                         |          |          |  |         |
|--------------------|---------------|-------------------------|----------|----------|--|---------|
| Job<br>21-3146-R01 | Truss<br>PB02 | Truss Type<br>Piggyback | Qty<br>8 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N | # 26910 |
|--------------------|---------------|-------------------------|----------|----------|--|---------|

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:24 2021 Page 1  
 ID:VaeaK7vWB81xgotwpMaLleyLxWJ-BfWkquNkijm3v4k4DRM1mzvR49Zd3kRkx6uA\_Tz9ZNX



Scale = 1:13.4

Plate Offsets (X,Y)-- [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP    |
|------------------|----------------------|----------|----------|----------|--------|-----|---------------|---------|
| TCLL (roof) 20.0 | 2-0-0                | TC 0.06  | Vert(LL) | 0.00     | 4      | n/r | MT20          | 244/190 |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.05  | Vert(CT) | 0.00     | 5      | n/r |               |         |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.01  | Horz(CT) | 0.00     | 4      | n/a |               |         |
| BCLL 0.0 *       | Rep Stress Incr YES  | Matrix-P |          |          |        |     |               |         |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |          |          |        |     | Weight: 17 lb | FT = 0% |

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.3  
 OTHERS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-7-10 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

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

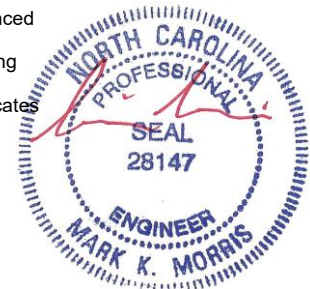
**REACTIONS.** (lb/size) 2=108/3-6-0 (min. 0-1-8), 4=108/3-6-0 (min. 0-1-8), 6=108/3-6-0 (min. 0-1-8)  
 Max Horz2=-48(LC 10)  
 Max Uplift2=-26(LC 13), 4=-31(LC 13)  
 Max Grav2=108(LC 1), 4=108(LC 1), 6=109(LC 5)

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

**NOTES-** (11-12)

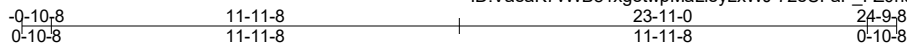
- Unbalanced roof live loads have been considered for this design.
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- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 2, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

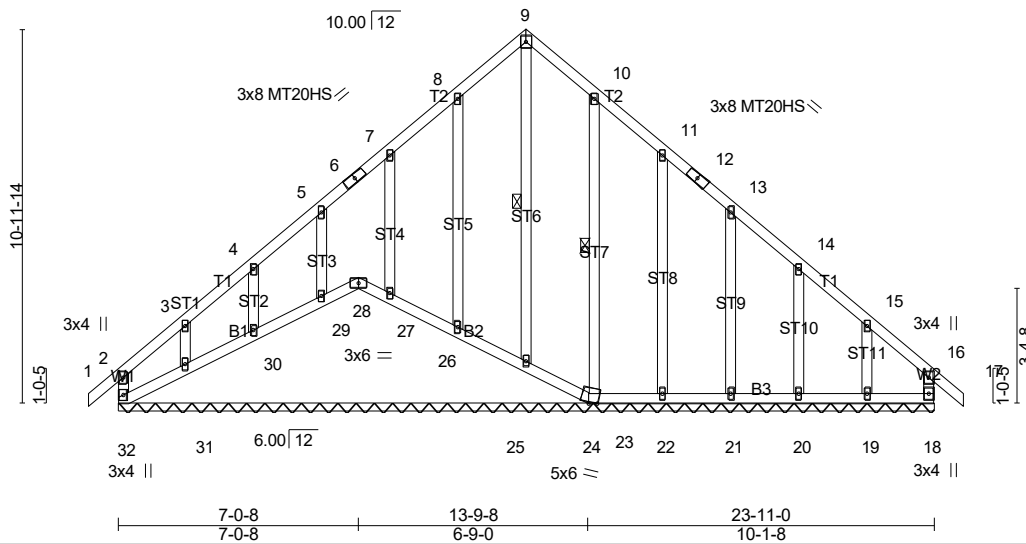


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Scale = 1:67.6



|                      |                      |             |                           |  |               |                        |
|----------------------|----------------------|-------------|---------------------------|--|---------------|------------------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>              |  | <b>PLATES</b> | <b>GRIP</b>            |
| TCLL (roof) 20.0     | Plate Grip DOL 1.15  | TC 0.20     | in (loc) l/defl L/d       |  | MT20          | 244/190                |
| Snow (Pf) 20.0       | Lumber DOL 1.15      | BC 0.11     | Vert(LL) -0.00 17 n/r 180 |  | MT20HS        | 187/143                |
| TCDL 10.0            | Rep Stress Incr YES  | WB 0.14     | Vert(CT) -0.00 17 n/r 80  |  |               |                        |
| BCLL 0.0 *           | Code IRC2018/TPI2014 | Matrix-R    | Horz(CT) 0.01 18 n/a n/a  |  |               |                        |
| BCDL 10.0            |                      |             |                           |  |               | Weight: 170 lb FT = 0% |

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 OTHERS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 9-25, 10-23

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

**REACTIONS.** All bearings 23-11-0.  
 (lb) - Max Horz 32=-274(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 26, 27, 29, 30, 23, 22, 21, 20 except 32=-211(LC 8), 18=-107(LC 9), 28=-115(LC 11), 24=-134(LC 20), 31=-177(LC 12), 19=-163(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 18, 28, 24, 26, 27, 29, 30, 31, 20, 19 except 32=280(LC 21), 25=320(LC 13), 23=314(LC 21), 22=262(LC 21), 21=271(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 8-9=-203/282, 9-10=-203/270  
 WEBS 9-25=-298/160

- NOTES-** (16-17)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 6) All plates are MT20 plates unless otherwise indicated.
  - 7) All plates are 2x4 MT20 unless otherwise indicated.
  - 8) Gable requires continuous bottom chord bearing.
  - 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 10) Gable studs spaced at 2-0-0 oc.
  - 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 12) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 26, 27, 29, 30, 23, 22, 21, 20 except (jt=lb) 32=211, 18=107, 28=115, 24=134, 31=177, 19=163.
  - 14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 28, 25, 26, 27, 29, 30, 31.
  - 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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**Continued on Page 2** Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

| Job         | Truss | Truss Type                   | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
|-------------|-------|------------------------------|-----|-----|--|
| 21-3146-R01 | R01   | Roof Special Supported Gable | 1   | 1   | Job Reference (optional) # 26910                                   |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:26 2021 Page 2  
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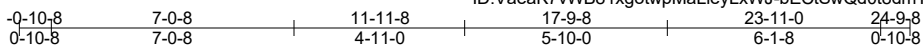
- 16) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.  
 17) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard



6/3/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Scale = 1:66.3

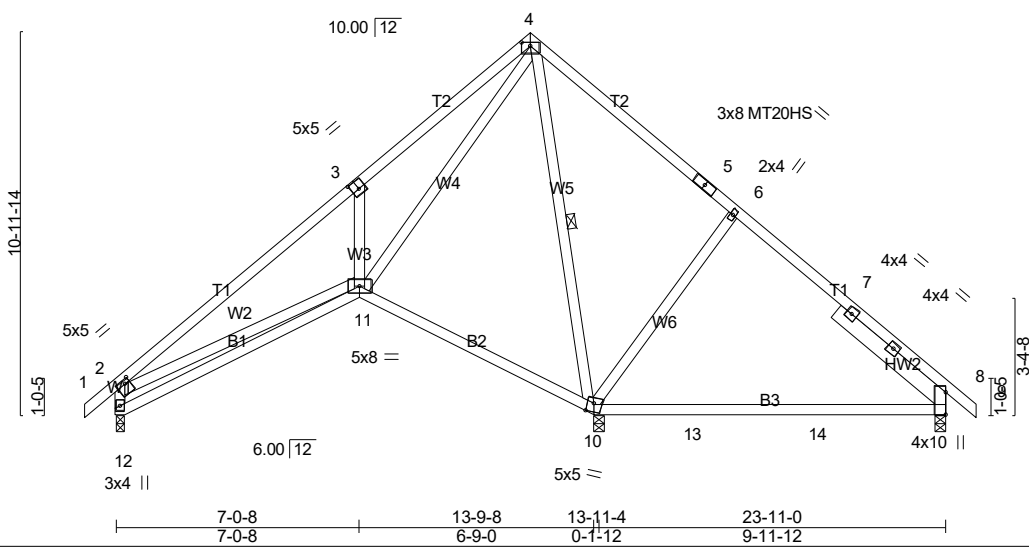


Plate Offsets (X,Y)-- [2:0-1-12,0-1-8], [3:0-2-8,0-3-0], [4:0-3-0,0-1-4], [10:0-2-4,0-3-0]

|                      |                  |                |           |            |           |                      |       |             |         |              |            |        |     |               |                        |
|----------------------|------------------|----------------|-----------|------------|-----------|----------------------|-------|-------------|---------|--------------|------------|--------|-----|---------------|------------------------|
| <b>LOADING</b> (psf) | TCLL (roof) 20.0 | Snow (Pf) 20.0 | TCDL 10.0 | BCLL 0.0 * | BCDL 10.0 | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | TC 0.77 | <b>DEFL.</b> | in (loc)   | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b>            |
|                      |                  |                |           |            |           | Plate Grip DOL       | 1.15  | BC          | 0.87    | Vert(LL)     | -0.41 8-10 | >298   | 240 | MT20          | 244/190                |
|                      |                  |                |           |            |           | Lumber DOL           | 1.15  | WB          | 0.47    | Vert(CT)     | -0.65 8-10 | >190   | 180 | MT20HS        | 187/143                |
|                      |                  |                |           |            |           | Rep Stress Incr      | YES   |             |         | Horz(CT)     | 0.05 8     | n/a    | n/a |               |                        |
|                      |                  |                |           |            |           | Code IRC2018/TPI2014 |       |             |         |              |            |        |     |               | Weight: 153 lb FT = 0% |

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\*  
 B3: 2x4 SP No.1  
 WEBS 2x4 SP No.3  
 SLIDER Right 2x6 SP No.2 - 4-1-11

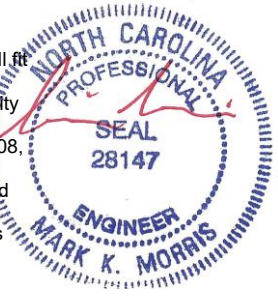
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 4-10

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

**REACTIONS.** (lb/size) 12=483/0-3-8 (min. 0-1-8), 8=305/0-3-8 (min. 0-1-8), 10=1227/0-3-8 (min. 0-1-8)  
 Max Horz 12=-264(LC 10)  
 Max Uplift 12=-108(LC 13), 8=-203(LC 8), 10=-207(LC 12)  
 Max Grav 12=483(LC 1), 8=450(LC 33), 10=1227(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-637/59, 3-4=-651/287, 4-5=-55/351, 2-12=-560/215  
 BOT CHORD 11-12=-338/560  
 WEBS 3-11=-413/319, 4-11=-306/953, 4-10=-841/132, 6-10=-392/250, 2-11=-91/266

- NOTES-** (11-12)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) All plates are MT20 plates unless otherwise indicated.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Bearing at joint(s) 12 considers parallel to grain value using ANSII/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=408, 8=203, 10=207.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSII/TPI 1.
  - 11) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
  - 12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.



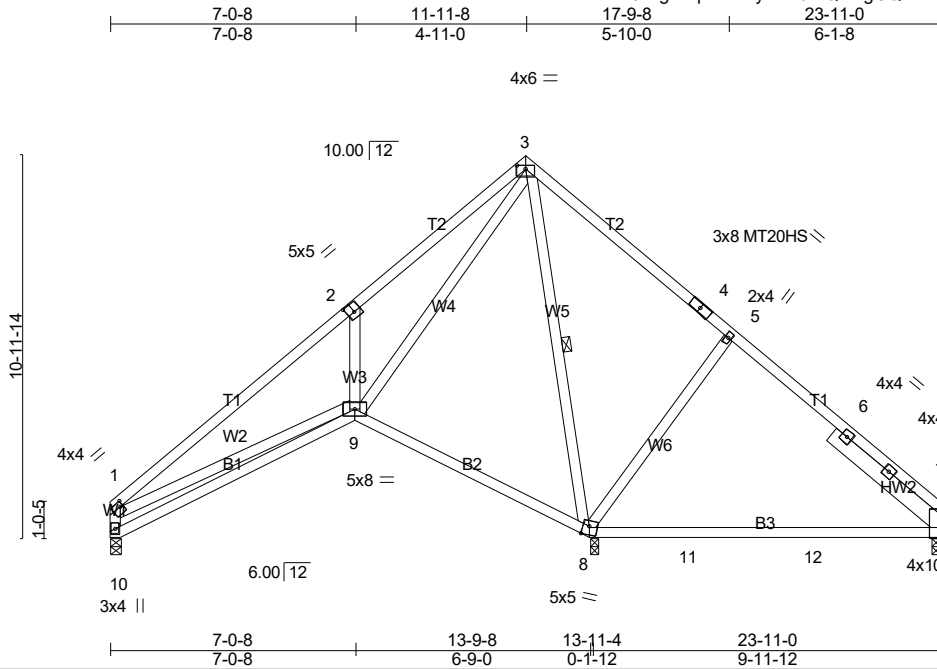
6/3/2021

**LOAD CASE(S)** Standard  
**Warning!** Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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 ANSII/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



|                    |              |                            |          |          |   |         |
|--------------------|--------------|----------------------------|----------|----------|---|---------|
| Job<br>21-3146-R01 | Truss<br>R03 | Truss Type<br>ROOF SPECIAL | Qty<br>3 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, NC | # 26910 |
|--------------------|--------------|----------------------------|----------|----------|---|---------|

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8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:28 2021 Page 1



Scale = 1:66.3

Plate Offsets (X,Y)-- [1:0-1-0,0-1-12], [2:0-2-8,0-3-0], [3:0-3-0,0-1-4], [8:0-2-4,0-3-0]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in (loc) | l/defl | L/d | PLATES | GRIP                   |
|------------------|----------------------|-----------|----------------|----------|--------|-----|--------|------------------------|
| TCLL (roof) 20.0 | 2-0-0                | TC 0.80   | Vert(LL) -0.41 | 7-8      | >298   | 240 | MT20   | 244/190                |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.87   | Vert(CT) -0.65 | 7-8      | >189   | 180 | MT20HS | 187/143                |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.48   | Horz(CT) 0.05  | 7        | n/a    | n/a |        |                        |
| BCLL 0.0 *       | Rep Stress Incr YES  | Matrix-SH |                |          |        |     |        |                        |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     |        | Weight: 150 lb FT = 0% |

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2 \*Except\*  
B3: 2x4 SP No.1  
WEBS 2x4 SP No.3  
SLIDER Right 2x6 SP No.2 - 4-1-11

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-11-12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 3-8

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

**REACTIONS.** (lb/size) 10=414/0-3-8 (min. 0-1-8), 7=244/0-3-8 (min. 0-1-8), 8=1244/0-3-8 (min. 0-1-8)  
Max Horz 10=-257(LC 10)  
Max Uplift 10=-100(LC 13), 7=-200(LC 8), 8=-221(LC 12)  
Max Grav 10=431(LC 20), 7=404(LC 32), 8=1244(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-629/43, 2-3=-653/281, 3-4=-54/362, 1-10=-455/149  
BOT CHORD 9-10=-297/471  
WEBS 2-9=-437/336, 3-9=-307/964, 3-8=-852/142, 5-8=-395/252, 1-9=-38/281

**NOTES-** (10-11)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- All plates are MT20 plates unless otherwise indicated.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 10 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) 10 except (jt=lb) 7=200, 8=221.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard



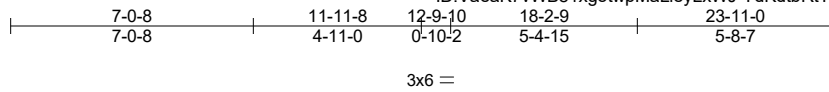
6/3/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|             |       |              |     |     |  |
|-------------|-------|--------------|-----|-----|--|
| Job         | Truss | Truss Type   | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01 | R04   | Roof Special | 1   | 1   |  |

# 26910

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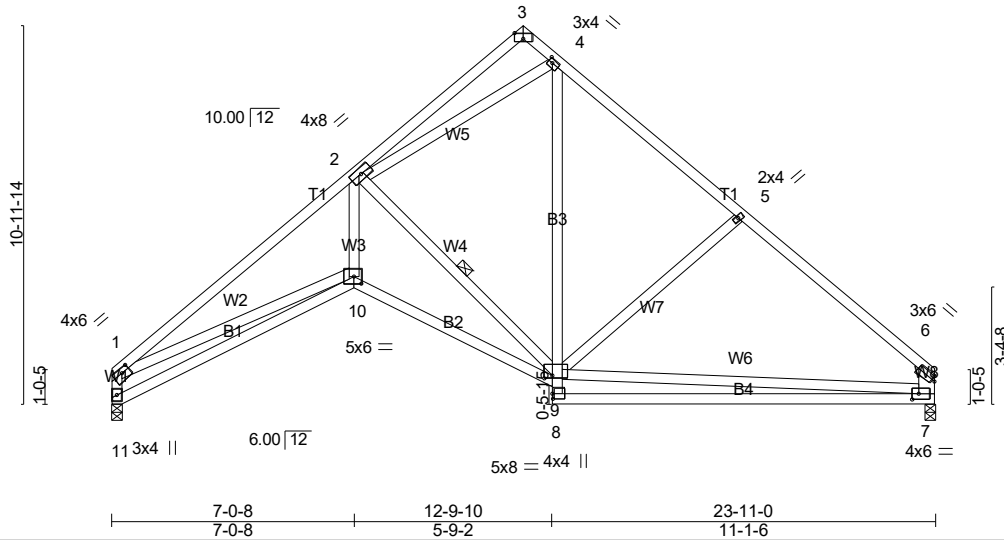


Plate Offsets (X,Y)-- [1:0-2-12,0-1-8], [3:0-3-0,Edge], [4:0-1-8,0-1-8], [7:0-2-4,0-2-0], [8:0-1-12,0-0-4], [9:0-2-12,0-1-0], [10:0-2-8,0-2-8]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in (loc) | l/defl | L/d | PLATES         | GRIP    |
|------------------|----------------------|-----------|----------------|----------|--------|-----|----------------|---------|
| TCLL (roof) 20.0 | 2-0-0                | TC 0.75   | Vert(LL) -0.40 | 7-8      | >701   | 240 | MT20           | 244/190 |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.95   | Vert(CT) -0.78 | 7-8      | >363   | 180 |                |         |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.61   | Horz(CT) 0.17  | 7        | n/a    | n/a |                |         |
| BCLL 0.0 *       | Rep Stress Incr YES  | Matrix-SH |                |          |        |     |                |         |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     |                |         |
|                  |                      |           |                |          |        |     | Weight: 164 lb | FT = 0% |

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.2 \*Except\*  
B3: 2x4 SP No.3  
WEBS 2x4 SP No.3 \*Except\*  
W8: 2x6 SP No.2

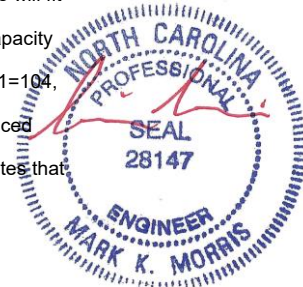
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 7-8.  
WEBS 1 Row at midpt 2-9

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

**REACTIONS.** (lb/size) 11=942/0-3-8 (min. 0-1-8), 7=942/0-3-8 (min. 0-1-8)  
Max Horz 11=255(LC 9)  
Max Uplift 11=104(LC 12), 7=104(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-2108/308, 4-5=-874/209, 5-6=-1106/188, 1-11=-992/249, 6-7=-840/161  
BOT CHORD 10-11=-310/519, 9-10=-303/1836, 4-9=-124/508, 7-8=0/334  
WEBS 2-10=-189/1586, 2-9=-1444/377, 2-4=-685/266, 1-10=-44/1357, 7-9=-121/497

- NOTES-** (9-10)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 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) 11=104, 7=104.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
  - Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.



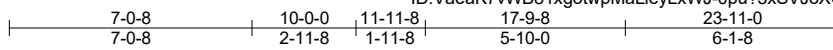
**LOAD CASE(S)** Standard

6/3/2021

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|                          |       |              |     |     |  |
|--------------------------|-------|--------------|-----|-----|--|
| Job                      | Truss | Truss Type   | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01              | R05   | Roof Special | 1   | 1   |  |
| Job Reference (optional) |       |              |     |     | # 26910  |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:30 2021 Page 1



4x6 =

Scale = 1:66.3

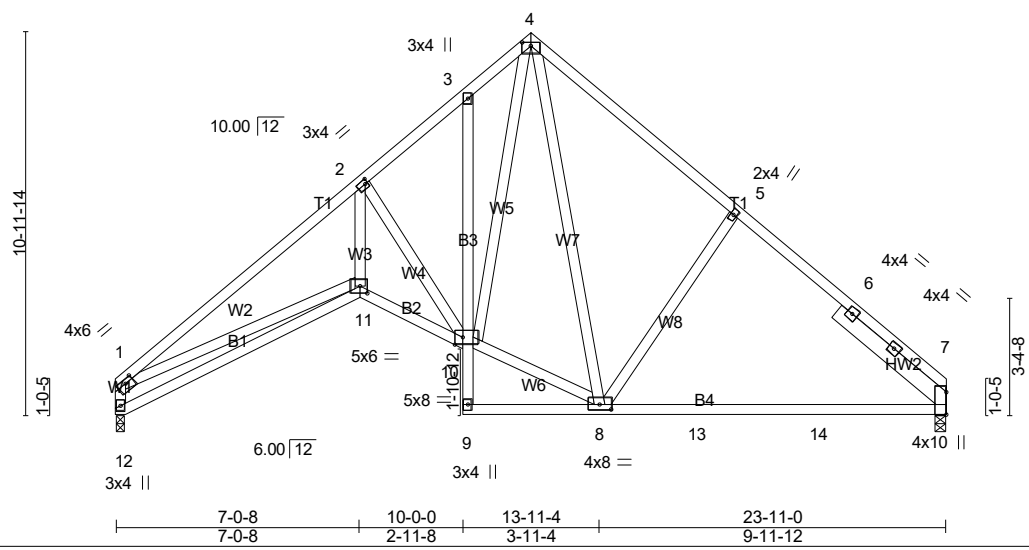


Plate Offsets (X,Y)-- [1:0-2-12,0-1-8], [2:0-1-0,0-1-8], [4:0-3-0,0-1-4], [8:0-4-0,0-1-12], [10:0-2-12,Edge], [11:0-2-8,0-2-8]

|                      |       |                      |       |             |      |              |           |        |     |                |             |
|----------------------|-------|----------------------|-------|-------------|------|--------------|-----------|--------|-----|----------------|-------------|
| <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 (roof)          | 20.0  | Plate Grip DOL       | 1.15  | TC          | 0.78 | Vert(LL)     | -0.28 7-8 | >999   | 240 | MT20           | 244/190     |
| Snow (Pf)            | 20.0  | Lumber DOL           | 1.15  | BC          | 0.74 | Vert(CT)     | -0.45 7-8 | >635   | 180 |                |             |
| TCDL                 | 10.0  | Rep Stress Incr      | YES   | WB          | 0.92 | Horz(CT)     | 0.15 7    | n/a    | n/a |                |             |
| BCLL                 | 0.0 * | Code IRC2018/TPI2014 |       | Matrix-SH   |      |              |           |        |     |                |             |
| BCDL                 | 10.0  |                      |       |             |      |              |           |        |     | Weight: 176 lb | FT = 0%     |

|                |                                  |                 |   |
|----------------|----------------------------------|-----------------|---|
| <b>LUMBER-</b> |                                  | <b>BRACING-</b> |   |
| TOP CHORD      | 2x4 SP No.1                      | TOP CHORD       | Structural wood sheathing directly applied, except end verticals. |
| BOT CHORD      | 2x4 SP No.2 *Except*             | BOT CHORD       | Rigid ceiling directly applied or 6-0-0 oc bracing.               |
|                | B3: 2x4 SP No.3, B4: 2x4 SP No.1 |                 |   |
| WEBS           | 2x4 SP No.3                      |                 |   |
| SLIDER         | Right 2x6 SP No.2 - 4-1-11       |                 |   |

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

**REACTIONS.** (lb/size) 7=951/0-3-8 (min. 0-1-8), 12=951/0-3-8 (min. 0-1-8)  
 Max Horz 12=-255(LC 10)  
 Max Uplift 7=-105(LC 13), 12=-105(LC 12)  
 Max Grav 7=976(LC 20), 12=951(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-2165/306, 2-3=-1093/247, 3-4=-986/272, 4-5=-922/226, 5-6=-981/178, 6-7=-1115/141, 1-12=-1037/249  
 BOT CHORD 11-12=-298/524, 10-11=-287/1929, 8-13=-51/787, 13-14=-51/787, 7-14=-51/787  
 WEBS 2-11=-189/1618, 2-10=-1574/406, 8-10=0/772, 4-10=-221/864, 4-8=-232/332, 5-8=-330/255, 1-11=-40/1366

- NOTES-** (9-10)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Bearing at joint(s) 12 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) 7=105, 12=105.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
  - Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.



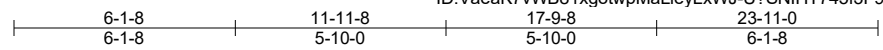
**LOAD CASE(S)** Standard

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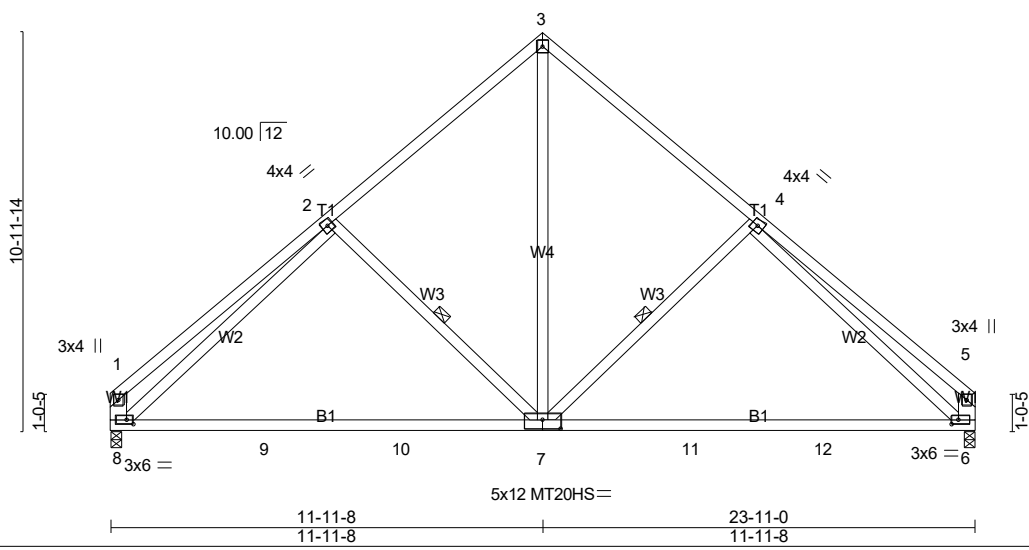
**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D\*Onofrio Drive, Madison, WI 53719.

|                          |       |            |     |     |  |
|--------------------------|-------|------------|-----|-----|--|
| Job                      | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01              | R06   | Common     | 1   | 1   |  |
| Job Reference (optional) |       |            |     |     | # 26910  |

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Scale: 3/16"=1'



|   |                      |             |                             |                |             |
|---|----------------------|-------------|-----------------------------|----------------|-------------|
| Plate Offsets (X,Y)-- [6:0-2-4,0-1-8], [7:0-6-0,0-3-0], [8:0-2-4,0-1-8] |                      |             |                             |                |             |
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>                | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL (roof) 20.0  | 2-0-0                | TC 0.46     | in (loc) l/defl L/d         | MT20           | 244/190     |
| Snow (Pf) 20.0  | Plate Grip DOL 1.15  | BC 0.74     | Vert(LL) -0.44 6-7 >639 240 | MT20HS         | 187/143     |
| TCDL 10.0   | Lumber DOL 1.15      | WB 0.85     | Vert(CT) -0.73 6-7 >388 180 |                |             |
| BCLL 0.0 *  | Rep Stress Incr YES  | Matrix-SH   | Horz(CT) 0.02 6 n/a n/a     |                |             |
| BCDL 10.0   | Code IRC2018/TPI2014 |             |                             | Weight: 148 lb | FT = 0%     |

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP SS  
WEBS 2x4 SP No.3 \*Except\*  
W1: 2x6 SP No.2

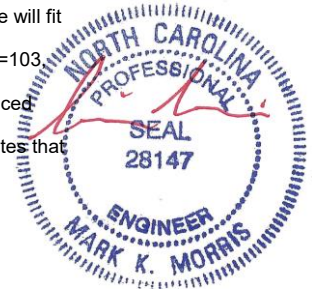
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-9-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 9-6-15 oc bracing.  
WEBS 1 Row at midpt 4-7, 2-7

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

**REACTIONS.** (lb/size) 8=938/0-3-8 (min. 0-1-8), 6=938/0-3-8 (min. 0-1-8)  
Max Horz 8=-254(LC 8)  
Max Uplift 8=-103(LC 12), 6=-103(LC 13)  
Max Grav 8=1007(LC 19), 6=1007(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-591/122, 2-3=-927/207, 3-4=-927/207, 4-5=-590/122, 1-8=-477/129, 5-6=-477/129  
BOT CHORD 8-9=-166/911, 9-10=-166/911, 7-10=-166/911, 7-11=-58/789, 11-12=-58/789, 6-12=-58/789  
WEBS 3-7=-124/754, 4-7=-297/260, 2-7=-297/260, 2-8=-682/121, 4-6=-682/120

- NOTES-** (9-10)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - All plates are MT20 plates unless otherwise indicated.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=103, 6=103.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
  - Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

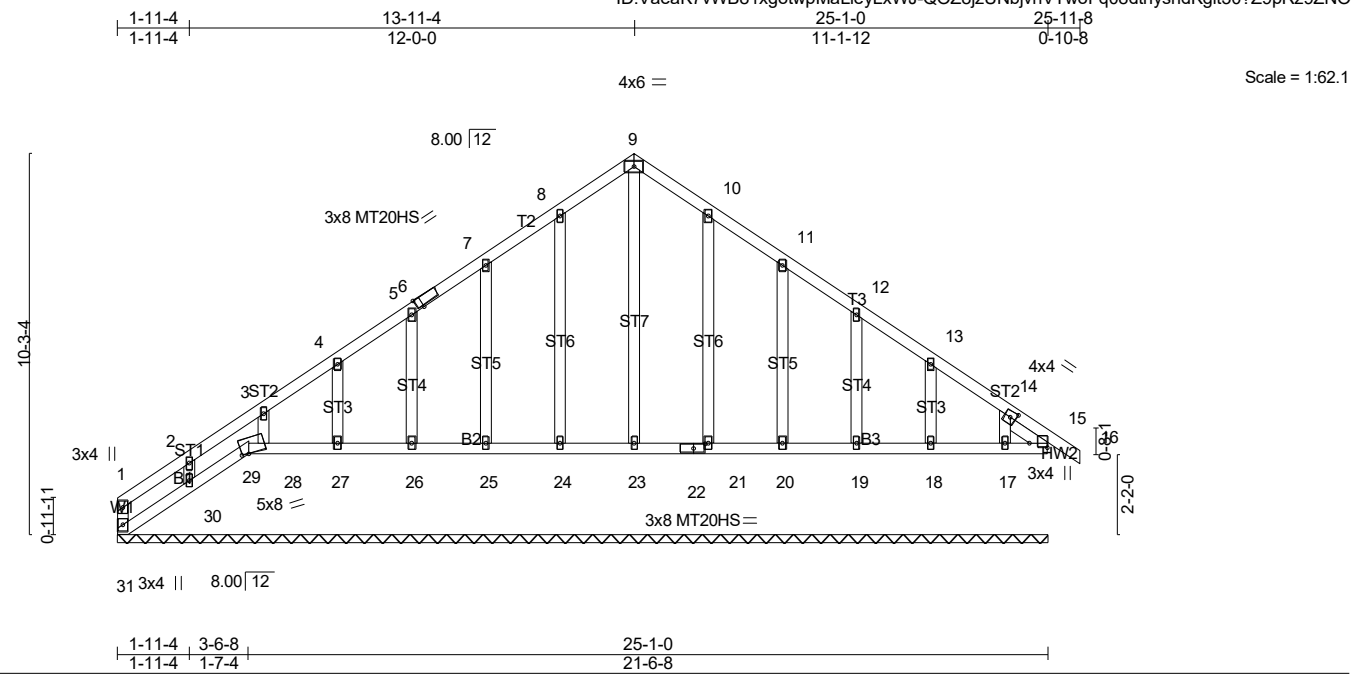


6/3/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|                    |              |                     |          |          |  |
|--------------------|--------------|---------------------|----------|----------|--|
| Job<br>21-3146-R01 | Truss<br>R07 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N.C. 27081<br># 26910 |
|--------------------|--------------|---------------------|----------|----------|--|

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:33 2021 Page 1  
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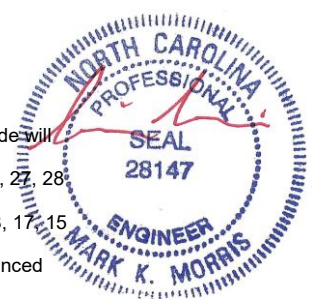
|  |                      |            |                           |               |                        |
|--|----------------------|------------|---------------------------|---------------|------------------------|
| Plate Offsets (X,Y)-- [6:0-2-1,Edge], [14:0-1-14,0-2-0], [15:Edge,0-5-12], [22:0-3-12,0-1-8], [29:0-2-4,0-0-3] |                      |            |                           |               |                        |
| <b>LOADING</b> (psf)   | <b>SPACING</b>       | <b>CSI</b> | <b>DEFL.</b>              | <b>PLATES</b> | <b>GRIP</b>            |
| TCLL (roof) 20.0   | 2-0-0                | TC 0.12    | in (loc) l/defl L/d       | MT20          | 244/190                |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.08    | Vert(LL) -0.00 15 n/r 180 | MT20HS        | 187/143                |
| TCDL 10.0  | Lumber DOL 1.15      | WB 0.26    | Vert(CT) -0.00 16 n/r 80  |               |                        |
| BCLL 0.0 *   | Rep Stress Incr YES  | Matrix-SH  | Horz(CT) 0.01 15 n/a n/a  |               |                        |
| BCDL 10.0  | Code IRC2018/TPI2014 |            |                           |               | Weight: 153 lb FT = 0% |

|                                   |  |
|-----------------------------------|--|
| <b>LUMBER-</b>                    | <b>BRACING-</b>  |
| TOP CHORD 2x4 SP No.2             | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  |
| BOT CHORD 2x4 SP No.2             | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.   |
| WEBS 2x4 SP No.3                  |  |
| OTHERS 2x4 SP No.3                | MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide. |
| SLIDER Right 2x4 SP No.3 - 1-2-10 |  |

**REACTIONS.** All bearings 25-1-0.  
 (lb) - Max Horz 31=-221(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 29, 24, 25, 26, 27, 28, 21, 20, 19, 18, 17 except 31=-136(LC 8), 15=-110(LC 9), 30=-145(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 31, 29, 26, 27, 28, 19, 18, 17, 15, 30 except 23=312(LC 22), 24=262(LC 20), 25=264(LC 20), 21=265(LC 21), 20=262(LC 21)

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

- NOTES-** (15-16)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 29, 24, 25, 26, 27, 28, 21, 20, 19, 18, 17 except (jt=lb) 31=136, 15=110, 30=145.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 29, 23, 24, 25, 26, 27, 28, 21, 20, 19, 18, 17, 15, 30.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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Continued on Page 2 Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|             |       |            |     |     |  |
|-------------|-------|------------|-----|-----|--|
| Job         | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01 | R07   | GABLE      | 1   | 1   | Job Reference (optional) # 26910                                   |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:34 2021 Page 2  
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- 15) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- 16) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

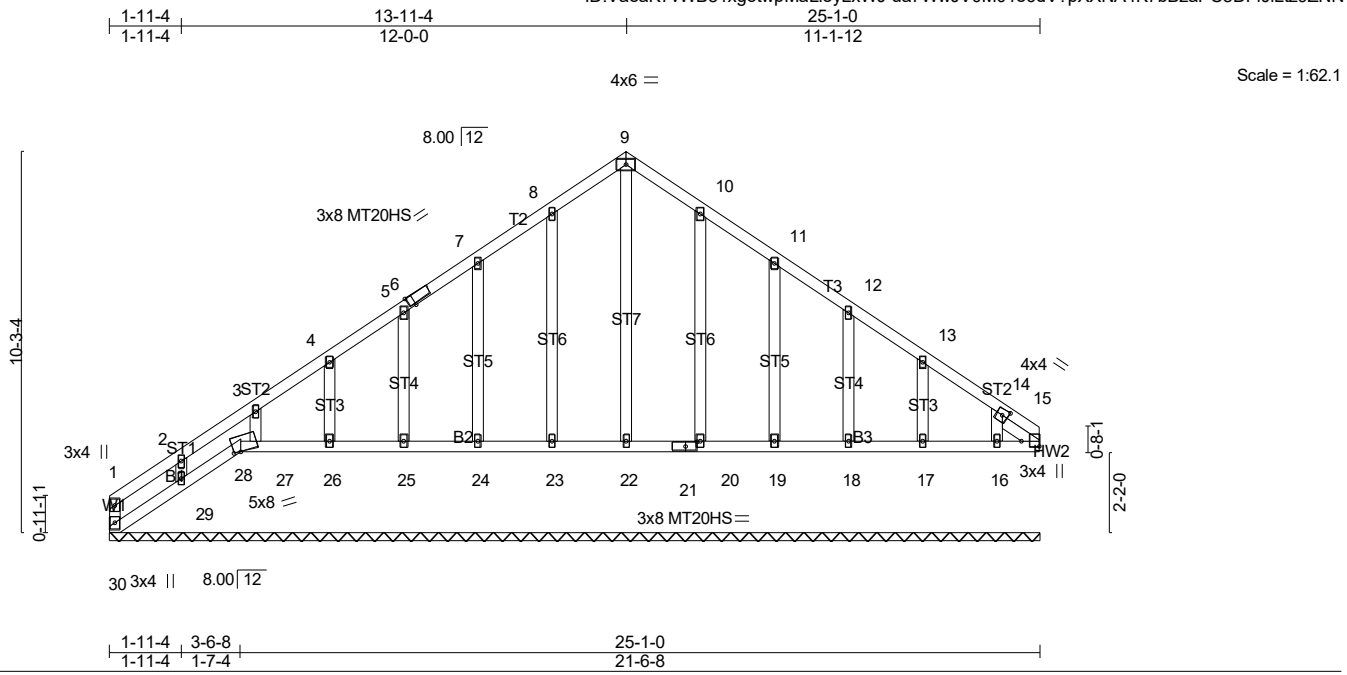


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|                    |              |                     |          |          |   |         |
|--------------------|--------------|---------------------|----------|----------|---|---------|
| Job<br>21-3146-R01 | Truss<br>R08 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, NC | # 26910 |
|--------------------|--------------|---------------------|----------|----------|---|---------|

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:34 2021 Page 1  
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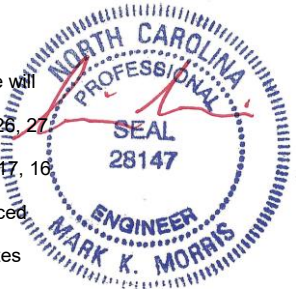
|  |                      |            |                          |                |             |
|--|----------------------|------------|--------------------------|----------------|-------------|
| Plate Offsets (X,Y)-- [6:0-2-1,Edge], [14:0-1-14,0-2-0], [15:Edge,0-5-12], [21:0-3-12,0-1-8], [28:0-2-4,0-0-3] |                      |            |                          |                |             |
| <b>LOADING</b> (psf)   | <b>SPACING</b>       | <b>CSI</b> | <b>DEFL.</b>             | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL (roof) 20.0   | 2-0-0                | TC 0.12    | in (loc) l/defl L/d      | MT20           | 244/190     |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.08    | Vert(LL) n/a - n/a 999   | MT20HS         | 187/143     |
| TCDL 10.0  | Lumber DOL 1.15      | WB 0.25    | Vert(CT) n/a - n/a 999   |                |             |
| BCLL 0.0 *   | Rep Stress Incr YES  | Matrix-SH  | Horz(CT) 0.01 15 n/a n/a |                |             |
| BCDL 10.0  | Code IRC2018/TPI2014 |            |                          | Weight: 152 lb | FT = 0%     |

|                                   |  |
|-----------------------------------|--|
| <b>LUMBER-</b>                    | <b>BRACING-</b>  |
| TOP CHORD 2x4 SP No.2             | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  |
| BOT CHORD 2x4 SP No.2             | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.   |
| WEBS 2x4 SP No.3                  |  |
| OTHERS 2x4 SP No.3                | MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide. |
| SLIDER Right 2x4 SP No.3 - 1-2-10 |  |

**REACTIONS.** All bearings 25-1-0.  
 (lb) - Max Horz 30=223(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 28, 23, 24, 25, 26, 27, 20, 19, 18, 17, 16 except 30=-133(LC 8), 15=-110(LC 9), 29=-146(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 30, 15, 28, 25, 26, 27, 18, 17, 16, 29 except 22=312(LC 25), 23=262(LC 19), 24=264(LC 19), 20=265(LC 20), 19=262(LC 20)

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

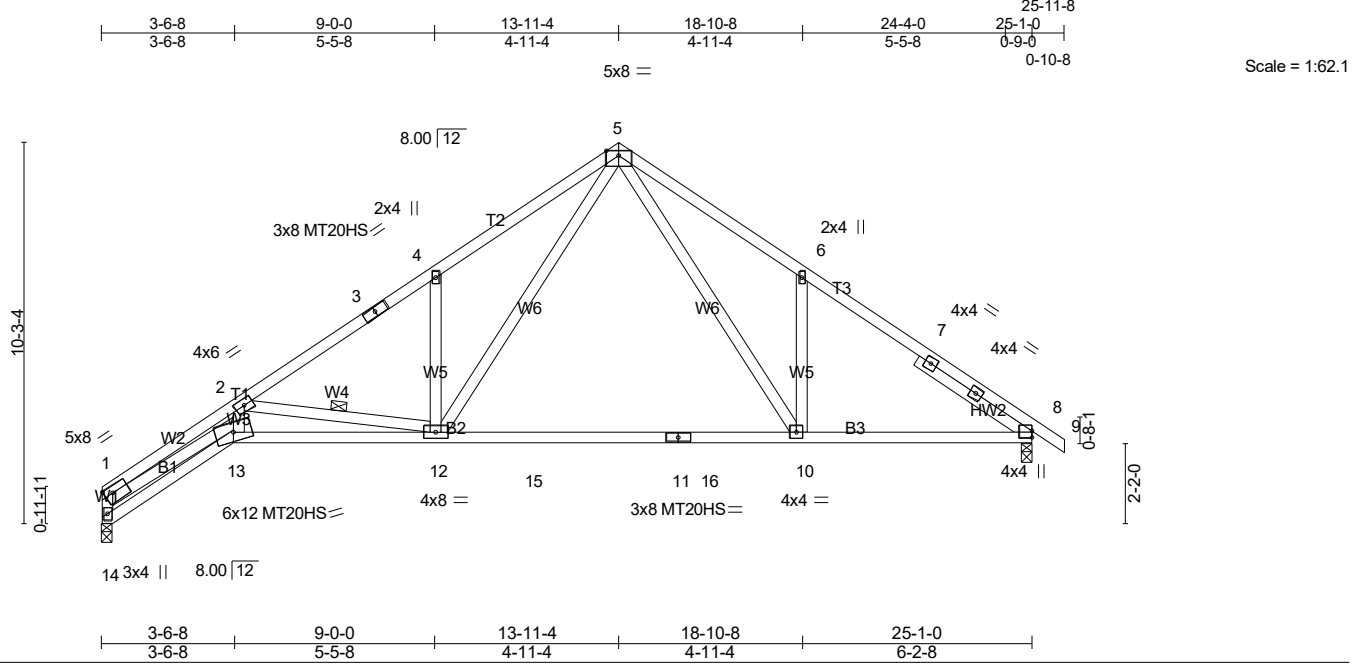
- NOTES-** (14-15)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 28, 23, 24, 25, 26, 27, 20, 19, 18, 17, 16 except (jt=lb) 30=133, 15=110, 29=146.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 15, 28, 22, 23, 24, 25, 26, 27, 20, 19, 18, 17, 16, 29.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
  - Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.



**WARNING - Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|                    |              |                            |          |          |   |         |
|--------------------|--------------|----------------------------|----------|----------|---|---------|
| Job<br>21-3146-R01 | Truss<br>R09 | Truss Type<br>ROOF SPECIAL | Qty<br>3 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N.C. | # 26910 |
|--------------------|--------------|----------------------------|----------|----------|---|---------|

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|  |                               |
|--|-------------------------------|
| Plate Offsets (X,Y)-- [1:0-2-12,0-2-0] |                               |
| <b>LOADING</b> (psf)                   | <b>SPACING</b>                |
| TCLL (roof) 20.0                       | 2-0-0                         |
| Snow (Pf) 20.0                         | Plate Grip DOL 1.15           |
| TCDL 10.0                              | Lumber DOL 1.15               |
| BCLL 0.0 *                             | Rep Stress Incr YES           |
| BCDL 10.0                              | Code IRC2018/TPI2014          |
|  | <b>CSI.</b>                   |
|  | TC 0.46                       |
|  | BC 0.80                       |
|  | WB 0.82                       |
|  | Matrix-SH                     |
|  | <b>DEFL.</b>                  |
|  | in (loc) l/defl L/d           |
|  | Vert(LL) -0.45 10-12 >661 240 |
|  | Vert(CT) -0.72 10-12 >416 180 |
|  | Horz(CT) 0.27 8 n/a n/a       |
|  | <b>PLATES</b>                 |
|  | MT20 244/190                  |
|  | MT20HS 187/143                |
|  | Weight: 146 lb FT = 0%        |

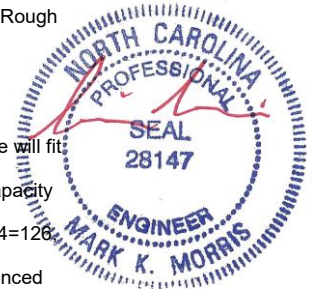
|  |   |
|--|---|
| <b>LUMBER-</b>   | <b>BRACING-</b>   |
| TOP CHORD 2x4 SP No.2  | TOP CHORD Structural wood sheathing directly applied or 2-6-13 oc purlins, except end verticals.    |
| BOT CHORD 2x4 SP No.2 *Except*<br>B2: 2x4 SP SS, B3: 2x4 SP No.1 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:<br>7-3-12 oc bracing: 12-13. |
| WEBS 2x4 SP No.3 *Except*<br>W2: 2x4 SP No.2                     | WEBS 1 Row at midpt 2-12  |
| SLIDER Right 2x4 SP No.3 - 3-7-14                                |   |

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

**REACTIONS.** (lb/size) 14=997/0-3-8 (min. 0-1-8), 8=1051/0-3-8 (min. 0-1-8)  
 Max Horz 14=-221(LC 10)  
 Max Uplift 14=-126(LC 12), 8=-128(LC 13)  
 Max Grav 14=1011(LC 20), 8=1062(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-14=-1151/264, 1-2=-4473/932, 2-3=-1832/247, 3-4=-1714/263, 4-5=-1918/426,  
 5-6=-1498/310, 6-7=-1459/176, 7-8=-1550/155  
 BOT CHORD 13-14=-261/421, 12-13=-838/3557, 12-15=-62/910, 11-15=-62/910, 11-16=-62/910,  
 10-16=-62/910, 8-10=-78/1199  
 WEBS 1-13=-753/3724, 2-13=-377/1626, 2-12=-1983/615, 4-12=-395/244, 5-12=-318/1297,  
 5-10=-216/748, 6-10=-320/259

- NOTES-** (11-12)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) All plates are MT20 plates unless otherwise indicated.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=126, 8=128.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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**Continued on Page 2** Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



|             |       |              |     |     |  |
|-------------|-------|--------------|-----|-----|--|
| Job         | Truss | Truss Type   | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01 | R09   | ROOF SPECIAL | 3   | 1   | Job Reference (optional) # 26910                                   |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:36 2021 Page 2  
 ID:VaeaK7vWB81xgotwpMaLleyLxWJ-rzFGL?XGueHMMweNwyZrFVpNm\_TrtzmVizopQmz9ZNL

- 11) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- 12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

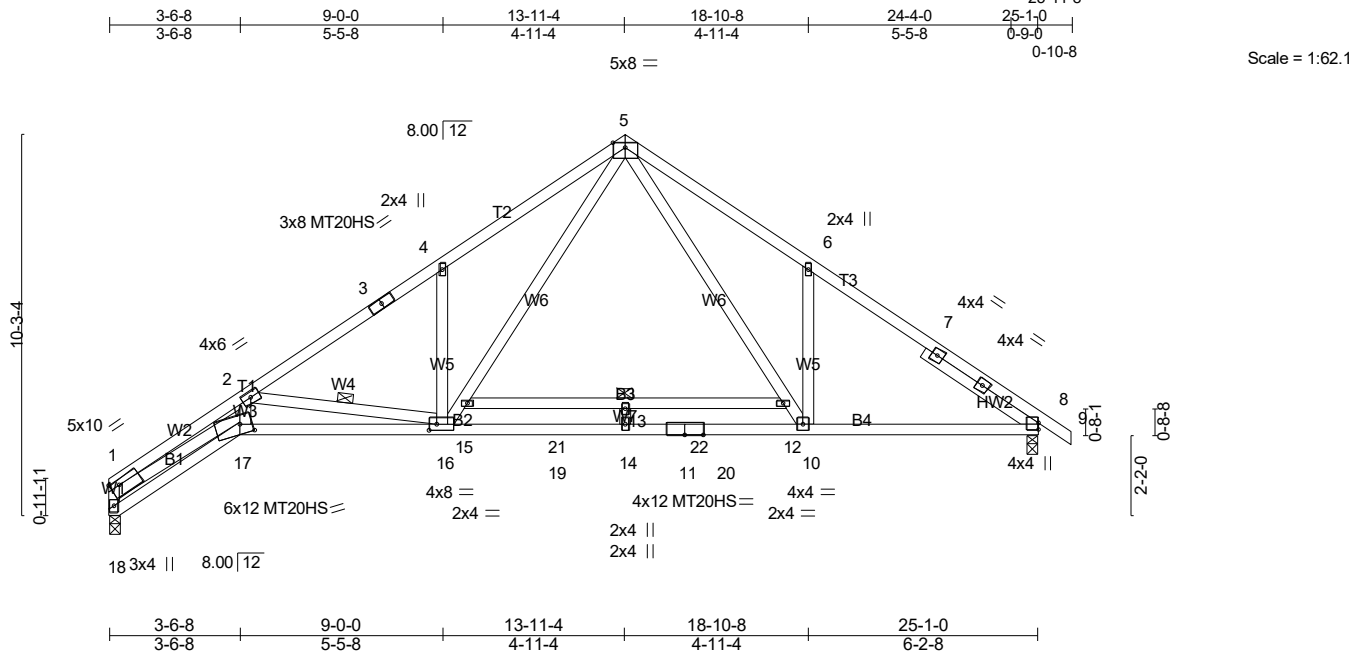


6/3/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|                    |              |                            |          |          |   |         |
|--------------------|--------------|----------------------------|----------|----------|---|---------|
| Job<br>21-3146-R01 | Truss<br>R10 | Truss Type<br>ROOF SPECIAL | Qty<br>1 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N.C. | # 26910 |
|--------------------|--------------|----------------------------|----------|----------|---|---------|

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:37 2021 Page 1  
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|   |                      |             |                            |               |                        |
|---|----------------------|-------------|----------------------------|---------------|------------------------|
| Plate Offsets (X,Y)-- [1:Edge,0-1-12], [16:0-2-8,0-2-0], [17:0-4-0,0-3-4] |                      |             |                            |               |                        |
| <b>LOADING</b> (psf)  | <b>SPACING</b>       | <b>CSI.</b> | <b>DEFL.</b>               | <b>PLATES</b> | <b>GRIP</b>            |
| TCLL (roof) 20.0  | 2-0-0                | TC 0.57     | in (loc) l/defl L/d        | MT20          | 244/190                |
| Snow (Pf) 20.0  | Plate Grip DOL 1.15  | BC 1.00     | Vert(LL) -0.53 13 >560 240 | MT20HS        | 187/143                |
| TCDL 10.0   | Lumber DOL 1.15      | WB 0.92     | Vert(CT) -0.90 13 >332 180 |               |                        |
| BCLL 0.0 *  | Rep Stress Incr YES  | Matrix-SH   | Horz(CT) 0.31 8 n/a n/a    |               |                        |
| BCDL 10.0   | Code IRC2018/TPI2014 |             |                            |               | Weight: 159 lb FT = 0% |

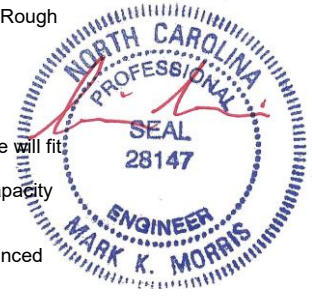
|  |  |
|--|--|
| <b>LUMBER-</b>   | <b>BRACING-</b>  |
| TOP CHORD 2x4 SP No.2  | TOP CHORD Structural wood sheathing directly applied or 2-3-10 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 *Except*<br>B2: 2x4 SP SS, B4: 2x4 SP No.1 | BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except:<br>4-7-0 oc bracing: 12-15 |
| WEBS 2x4 SP No.3 *Except*<br>W2: 2x4 SP No.2                     | WEBS 1 Row at midpt 2-16   |
| SLIDER Right 2x4 SP No.3 - 3-7-14                                |  |

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

**REACTIONS.** (lb/size) 18=1076/0-3-8 (min. 0-1-8), 8=1149/0-3-8 (min. 0-1-8)  
 Max Horz 18=205(LC 9)  
 Max Uplift 18=-87(LC 12), 8=-79(LC 13)  
 Max Grav 18=1149(LC 20), 8=1233(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-18=-1291/225, 1-2=-5072/763, 2-3=-2173/149, 3-4=-2055/165, 4-5=-2261/328,  
 5-6=-1788/226, 6-7=-1760/89, 7-8=-1852/68  
 BOT CHORD 17-18=-245/437, 16-17=-706/4023, 16-19=0/1059, 14-19=0/1059, 11-14=0/1059,  
 11-20=0/1059, 10-20=0/1059, 8-10=-8/1442  
 WEBS 1-17=-605/4239, 2-17=-326/1811, 2-16=-2166/565, 4-16=-398/243, 15-16=-292/1441,  
 5-15=-247/1538, 5-12=-168/909, 10-12=-210/809, 6-10=-306/266

- NOTES-** (11-12)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) All plates are MT20 plates unless otherwise indicated.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 8.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



6/3/2021

Continued on Page 2 Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

| Job         | Truss | Truss Type   | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
|-------------|-------|--------------|-----|-----|--|
| 21-3146-R01 | R10   | ROOF SPECIAL | 1   | 1   | Job Reference (optional) # 26910                                   |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:37 2021 Page 2  
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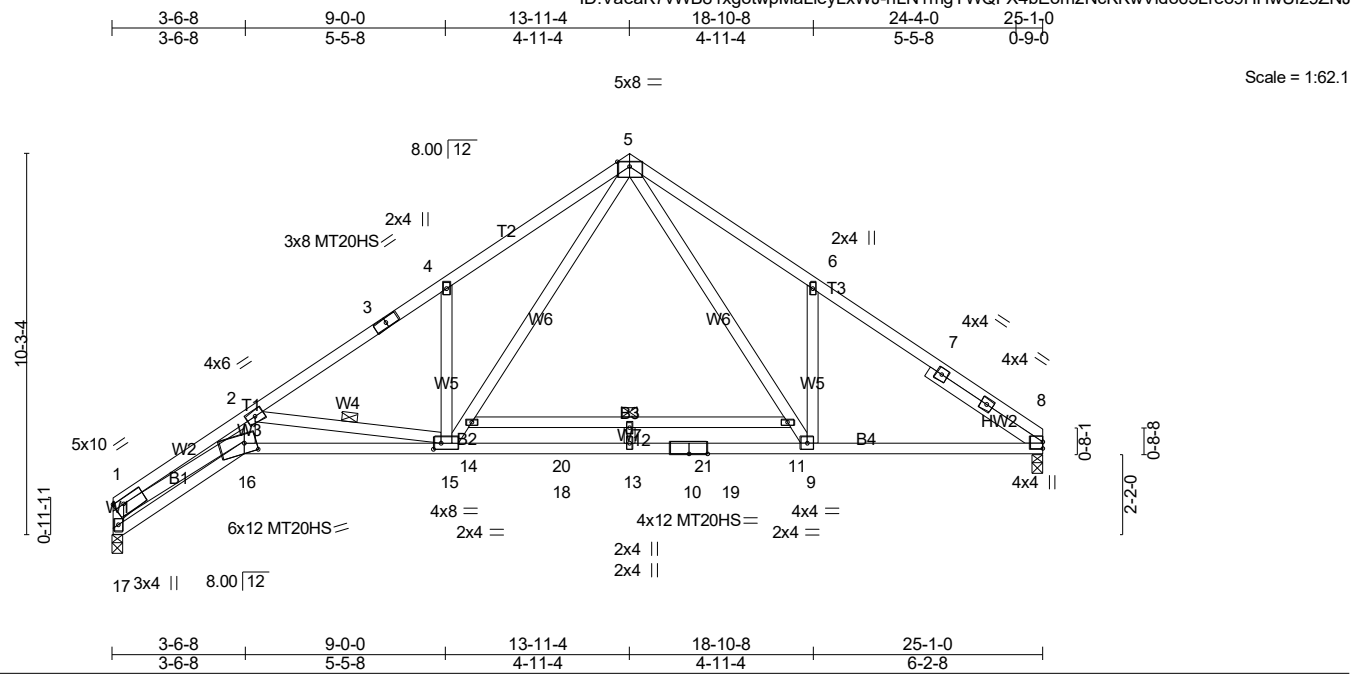
- 11) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- 12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard



6/3/2021

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| LOADING (psf) |       | SPACING-             |      | CSI.      |      | DEFL.    |       |          |    | PLATES |      | GRIP |     |        |                        |
|---------------|-------|----------------------|------|-----------|------|----------|-------|----------|----|--------|------|------|-----|--------|------------------------|
| TCLL (roof)   | 20.0  | Plate Grip DOL       | 1.15 | TC        | 0.57 | Vert(LL) | -0.53 | in (loc) | 12 | l/defl | >560 | L/d  | 240 | MT20   | 244/190                |
| Snow (Pf)     | 20.0  | Lumber DOL           | 1.15 | BC        | 1.00 | Vert(CT) | -0.90 |          | 12 | >332   | 180  |      |     | MT20HS | 187/143                |
| TCDL          | 10.0  | Rep Stress Incr      | YES  | WB        | 0.93 | Horz(CT) | 0.31  |          | 8  | n/a    | n/a  |      |     |        |                        |
| BCLL          | 0.0 * | Code IRC2018/TPI2014 |      | Matrix-SH |      |          |       |          |    |        |      |      |     |        |                        |
| BCDL          | 10.0  |                      |      |           |      |          |       |          |    |        |      |      |     |        | Weight: 158 lb FT = 0% |

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\*  
 B2: 2x4 SP SS, B4: 2x4 SP No.1  
 WEBS 2x4 SP No.3 \*Except\*  
 W2: 2x4 SP No.2  
 SLIDER Right 2x4 SP No.3 - 3-7-14

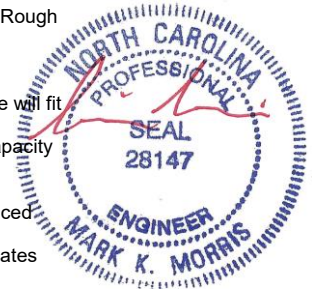
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-3-9 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 4-11-0 oc bracing: 11-14  
 WEBS 1 Row at midpt 2-15

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

**REACTIONS.** (lb/size) 17=1077/0-3-8 (min. 0-1-8), 8=1096/0-3-8 (min. 0-1-8)  
 Max Horz 17=207(LC 9)  
 Max Uplift 17=-86(LC 12), 8=-61(LC 13)  
 Max Grav 17=1150(LC 19), 8=1183(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-17=-1290/228, 1-2=-5068/773, 2-3=-2173/150, 3-4=-2055/167, 4-5=-2262/329,  
 5-6=-1794/230, 6-7=-1763/90, 7-8=-1854/69  
 BOT CHORD 16-17=-248/434, 15-16=-717/4017, 15-18=0/1057, 13-18=0/1057, 10-13=0/1057,  
 10-19=0/1057, 9-19=0/1057, 8-9=-12/1442  
 WEBS 1-16=-613/4236, 2-16=-331/1808, 2-15=-2163/570, 4-15=-399/243, 14-15=-294/1440,  
 5-14=-248/1537, 5-11=-170/914, 9-11=-212/815, 6-9=-310/267

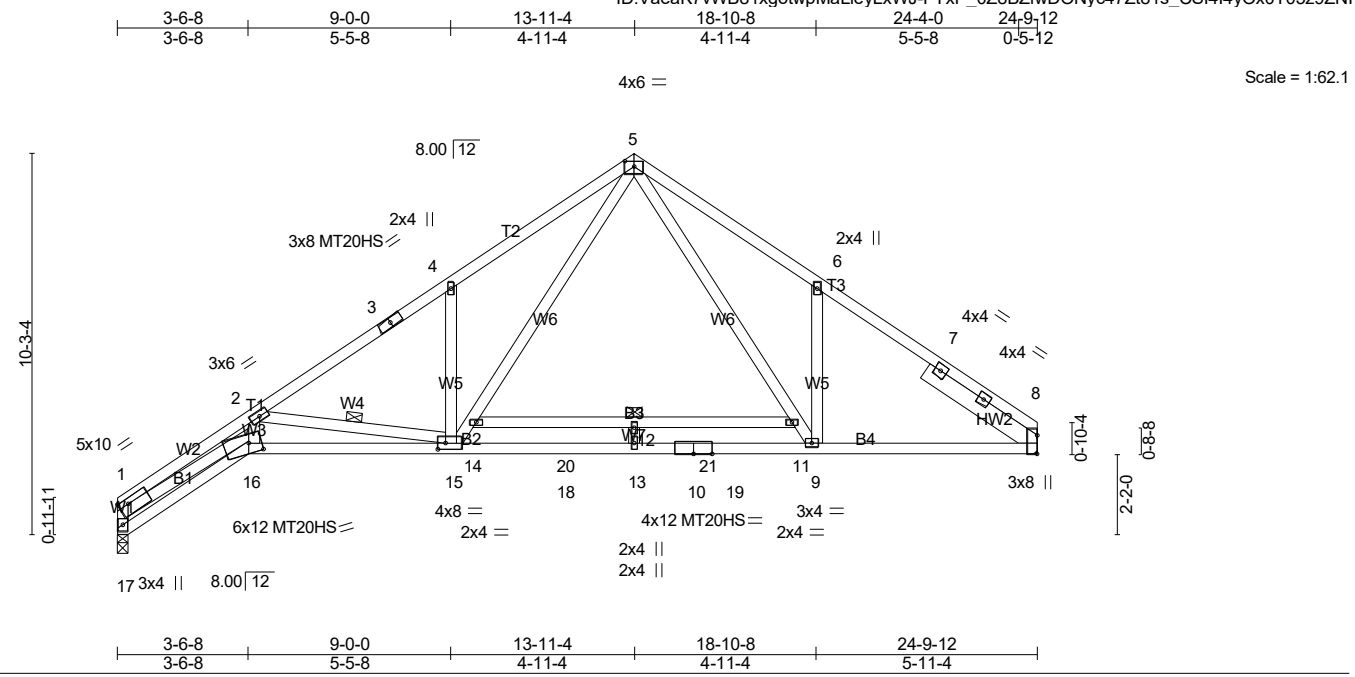
- NOTES-** (10-11)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - All plates are MT20 plates unless otherwise indicated.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Bearing at joint(s) 17 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) 17, 8.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
  - Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.



**WARNING - Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|             |       |              |     |     |  |         |
|-------------|-------|--------------|-----|-----|--|---------|
| Job         | Truss | Truss Type   | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N | # 26910 |
| 21-3146-R01 | R13   | Roof Special | 2   | 1   |  |         |

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8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:39 2021 Page 1



|   |                      |             |                            |                |             |
|---|----------------------|-------------|----------------------------|----------------|-------------|
| Plate Offsets (X,Y)-- [1:Edge,0-1-12], [5:0-3-0,0-1-12], [8:0-6-0,Edge], [15:0-2-8,0-2-0], [16:0-4-0,0-3-4] |                      |             |                            |                |             |
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>               | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL (roof) 20.0  | 2-0-0                | TC 0.59     | in (loc) l/defl L/d        | MT20           | 244/190     |
| Snow (Pf) 20.0  | Plate Grip DOL 1.15  | BC 1.00     | Vert(LL) -0.53 12 >556 240 | MT20HS         | 187/143     |
| TCDL 10.0   | Lumber DOL 1.15      | WB 0.91     | Vert(CT) -0.90 12 >330 180 |                |             |
| BCLL 0.0 *  | Rep Stress Incr YES  | Matrix-SH   | Horz(CT) 0.30 8 n/a n/a    |                |             |
| BCDL 10.0   | Code IRC2018/TPI2014 |             |                            | Weight: 160 lb | FT = 0%     |

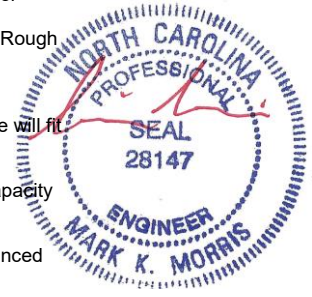
|  |  |
|--|--|
| <b>LUMBER-</b>   | <b>BRACING-</b>  |
| TOP CHORD 2x4 SP No.2  | TOP CHORD Structural wood sheathing directly applied or 2-4-0 oc purlins, except end verticals.                                |
| BOT CHORD 2x4 SP No.2 *Except*<br>B2: 2x4 SP SS, B4: 2x4 SP No.1 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:<br>7-10-9 oc bracing: 15-16.<br>4-7-0 oc bracing: 11-14 |
| WEBS 2x4 SP No.3 *Except*<br>W2: 2x4 SP No.2                     | WEBS 1 Row at midpt 2-15   |
| SLIDER Right 2x6 SP No.2 - 3-7-2                                 |  |

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

**REACTIONS.** (lb/size) 17=1065/0-3-8 (min. 0-1-8), 8=1086/Mechanical  
Max Horz 17=223(LC 9)  
Max Uplift 17=-86(LC 12), 8=-58(LC 13)  
Max Grav 17=1137(LC 19), 8=1174(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-17=-1281/224, 1-2=-5018/766, 2-3=-2144/149, 3-4=-2026/165, 4-5=-2231/327,  
5-6=-1711/224, 6-7=-1711/87, 7-8=-1785/66  
BOT CHORD 16-17=-257/440, 15-16=-711/3979, 15-18=0/1038, 13-18=0/1038, 10-13=0/1038,  
10-19=0/1038, 9-19=0/1038, 8-9=-9/1379  
WEBS 1-16=-612/4186, 2-16=-328/1793, 2-15=-2149/567, 4-15=-396/243, 14-15=-292/1433,  
5-14=-247/1532, 5-11=-164/836, 9-11=-205/734, 6-9=-266/264

- NOTES-** (11-12)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) All plates are MT20 plates unless otherwise indicated.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 8.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



6/3/2021

Continued on Page 2  
Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|             |       |              |     |     |  |
|-------------|-------|--------------|-----|-----|--|
| Job         | Truss | Truss Type   | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01 | R13   | Roof Special | 2   | 1   | Job Reference (optional) # 26910                                   |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:39 2021 Page 2  
 ID:VaeaK7vWB81xgotwpMaLleyLxWJ-FYxP\_0Z8BZfwDONyc47Zt81s\_CSI4I4yOx0T05z9ZNI

- 11) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- 12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard



6/3/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|                          |       |              |     |     |  |
|--------------------------|-------|--------------|-----|-----|--|
| Job                      | Truss | Truss Type   | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01              | R18   | Roof Special | 7   | 1   |  |
| Job Reference (optional) |       |              |     |     | # 26910  |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:40 2021 Page 1  
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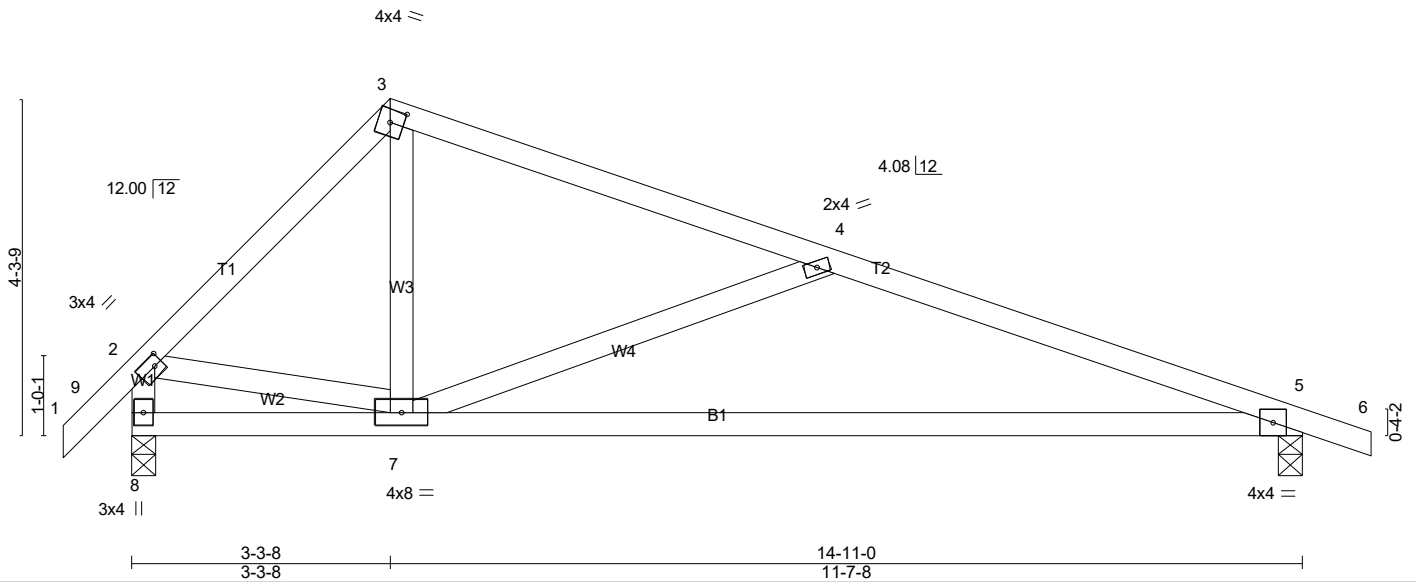


Plate Offsets (X,Y)-- [2:0-1-4,0-1-8], [3:0-2-1,0-2-0]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in (loc) | l/defl | L/d | PLATES        | GRIP    |
|------------------|----------------------|-----------|----------------|----------|--------|-----|---------------|---------|
| TCLL (roof) 20.0 | 2-0-0                | TC 0.64   | Vert(LL) -0.32 | 5-7      | >554   | 240 | MT20          | 244/190 |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.78   | Vert(CT) -0.66 | 5-7      | >266   | 180 |               |         |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.48   | Horz(CT) 0.02  | 5        | n/a    | n/a |               |         |
| BCLL 0.0 *       | Rep Stress Incr YES  | Matrix-SH |                |          |        |     |               |         |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     | Weight: 70 lb | FT = 0% |

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-5-15 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

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

**REACTIONS.** (lb/size) 8=646/0-3-8 (min. 0-1-8), 5=646/0-3-8 (min. 0-1-8)  
 Max Horz 8=-130(LC 12)  
 Max Uplift 8=-85(LC 15), 5=-142(LC 11)  
 Max Grav 8=677(LC 21), 5=696(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-689/90, 3-4=-598/71, 4-5=-1264/251, 2-8=-714/69  
 BOT CHORD 5-7=-180/1165  
 WEBS 3-7=0/441, 4-7=-727/257, 2-7=0/526

**NOTES-** (10-11)

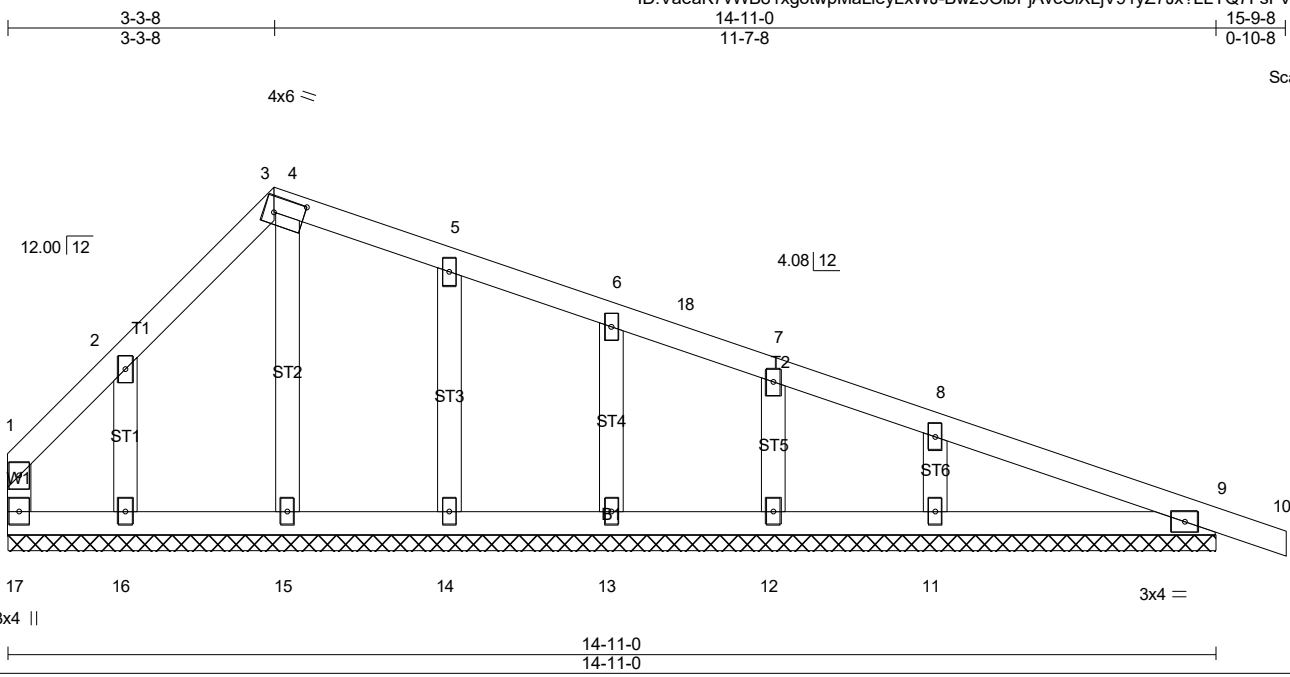
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 8 except (jt=lb) 5=142.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.



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**LOAD CASE(S)** Standard

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Scale = 1:28.5

Plate Offsets (X,Y)-- [3-0-4-6,0-2-4]

| LOADING (psf)    | SPACING-             | 2-0-0 | CSI.      | DEFL.         | in (loc) | l/defl | L/d | PLATES        | GRIP    |
|------------------|----------------------|-------|-----------|---------------|----------|--------|-----|---------------|---------|
| TCLL (roof) 20.0 | Plate Grip DOL 1.15  |       | TC 0.11   | Vert(LL) 0.00 | 10       | n/r    | 180 | MT20          | 244/190 |
| Snow (Pf) 20.0   | Lumber DOL 1.15      |       | BC 0.13   | Vert(CT) 0.01 | 10       | n/r    | 80  |               |         |
| TCDL 10.0        | Rep Stress Incr YES  |       | WB 0.05   | Horz(CT) 0.00 | 9        | n/a    | n/a |               |         |
| BCLL 0.0 *       | Code IRC2018/TPI2014 |       | Matrix-SH |               |          |        |     |               |         |
| BCDL 10.0        |                      |       |           |               |          |        |     | Weight: 70 lb | FT = 0% |

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.3  
 WEBS 2x4 SP No.3  
 OTHERS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 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.** All bearings 14-11-0.  
 (lb) - Max Horz 17=-123(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 17, 9, 13, 14, 12, 11 except 16=-110(LC 14)  
 Max Grav All reactions 250 lb or less at joint(s) 17, 9, 13, 14, 15, 16, 12 except 11=269(LC 35)

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

- NOTES-** (14-15)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 5) Unbalanced snow loads have been considered for this design.
  - 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 7) All plates are 2x4 MT20 unless otherwise indicated.
  - 8) Gable requires continuous bottom chord bearing.
  - 9) Gable studs spaced at 2-0-0 oc.
  - 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 11) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
  - 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 9, 13, 14, 12, 11 except (jt=lb) 16=110.
  - 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 14) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
  - 15) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.



6/3/2021

**LOAD CASE(S)** Standard

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



|                    |              |   |          |          |   |
|--------------------|--------------|---|----------|----------|---|
| Job<br>21-3146-R01 | Truss<br>R24 | Truss Type<br>Monopitch Supported Gable | Qty<br>1 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N.C. 27081<br>Job Reference (optional) # 26910 |
|--------------------|--------------|---|----------|----------|---|

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8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:42 2021 Page 1

0-10-8 8-4-0  
0-10-8 8-4-0

Scale = 1:55.8

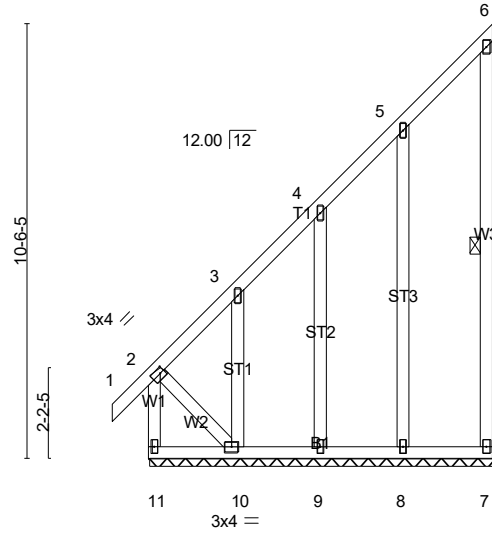


Plate Offsets (X,Y)-- [2:0-1-4,0-1-8]

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.          | in (loc) | l/defl | L/d | PLATES        | GRIP    |
|------------------|----------------------|----------|----------------|----------|--------|-----|---------------|---------|
| TCLL (roof) 20.0 | 2-0-0                | TC 0.15  | Vert(LL) 0.00  | 1        | n/r    | 180 | MT20          | 244/190 |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.11  | Vert(CT) 0.00  | 1        | n/r    | 80  |               |         |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.20  | Horz(CT) -0.00 | 7        | n/a    | n/a |               |         |
| BCLL 0.0 *       | Rep Stress Incr YES  | Matrix-P |                |          |        |     |               |         |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |                |          |        |     | Weight: 79 lb | FT = 0% |

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.3  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

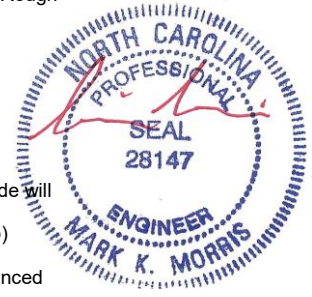
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 6-7

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

**REACTIONS.** All bearings 8-4-0.  
(lb) - Max Horz 11=295(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 7 except 11=145(LC 10), 9=105(LC 12), 10=396(LC 12), 8=114(LC 12)  
Max Grav All reactions 250 lb or less at joint(s) 7 except 11=510(LC 12), 9=268(LC 20), 10=323(LC 20), 8=302(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-11=-502/385, 2-3=-360/296, 3-4=-263/201  
BOT CHORD 10-11=-307/225  
WEBS 2-10=-315/431

- NOTES-** (13-14)
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) All plates are 2x4 MT20 unless otherwise indicated.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 8) Gable studs spaced at 2-0-0 oc.
  - 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 10) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7 except (jt=lb) 11=145, 9=105, 10=396, 8=114.
  - 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



6/3/2021

Continued on page 2  
Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

| Job         | Truss | Truss Type                | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
|-------------|-------|---------------------------|-----|-----|--|
| 21-3146-R01 | R24   | Monopitch Supported Gable | 1   | 1   | Job Reference (optional) # 26910                                   |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:42 2021 Page 2  
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- 13) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.  
 14) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard



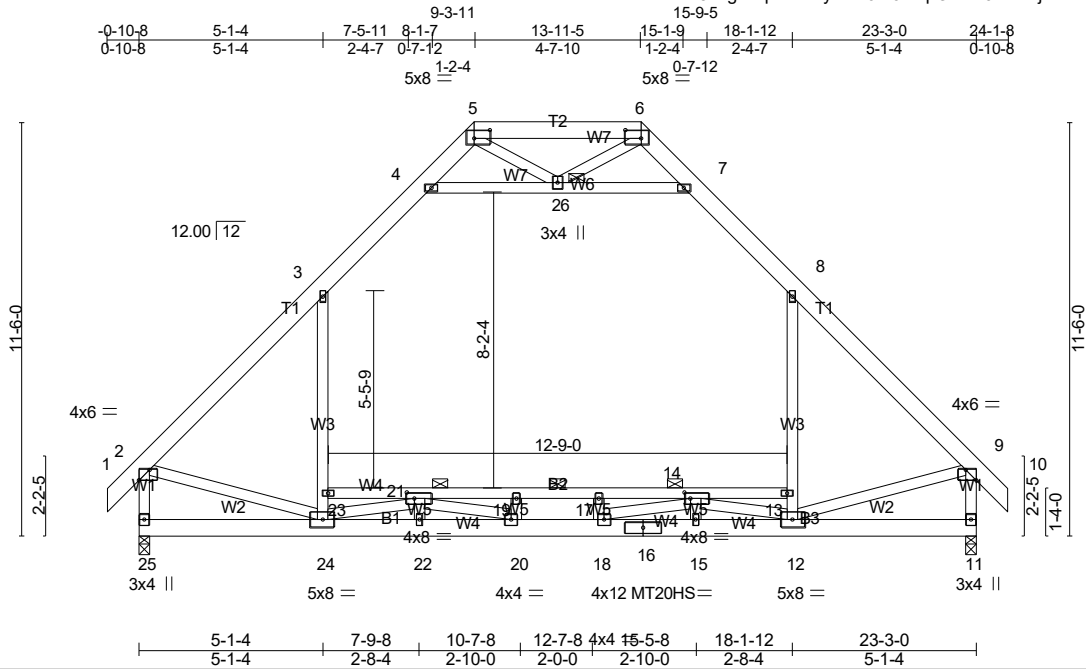
6/3/2021

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|                          |       |            |     |     |   |
|--------------------------|-------|------------|-----|-----|---|
| Job                      | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, NC |
| 21-3146-R01              | R25   | Attic      | 8   | 1   |   |
| Job Reference (optional) |       |            |     |     | # 26910   |

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ID:VaeaK7vWB81xgotwpMaLeyLxWJ-7JAwpOcfFn9Mh?hjrwbV1\_CRVpr70EYXJZ\_g9sz9ZNE



Scale: 3/16"=1'

Plate Offsets (X,Y)-- [2:0-3-8,Edge], [5:0-5-4,0-2-12], [6:0-5-4,0-2-12], [9:0-3-8,Edge], [14:0-2-0,0-2-0], [21:0-2-8,0-2-0]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.    | in (loc)    | l/defl | L/d | PLATES | GRIP                   |
|------------------|----------------------|-----------|----------|-------------|--------|-----|--------|------------------------|
| TCLL (roof) 20.0 | 2-0-0                | TC 0.98   | Vert(LL) | -0.23 17-19 | >999   | 240 | MT20   | 244/190                |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.88   | Vert(CT) | -0.38 17-19 | >732   | 180 | MT20HS | 187/143                |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.44   | Horz(CT) | 0.03 11     | n/a    | n/a |        |                        |
| BCLL 0.0 *       | Rep Stress Incr YES  | Matrix-SH | Attic    | -0.12 13-23 | 1296   | 360 |        |                        |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |          |             |        |     |        | Weight: 228 lb FT = 0% |

**LUMBER-**  
 TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP No.2 \*Except\*  
 B2: 2x4 SP No.2  
 WEBS 2x4 SP No.3 \*Except\*  
 W3,W6: 2x4 SP No.2

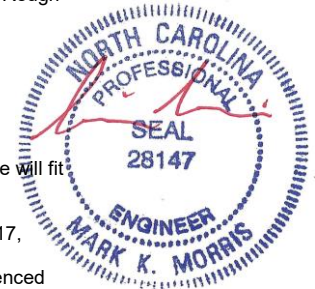
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
 3-7-0 oc bracing: 13-23  
 1 Brace at Jt(s): 26

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

**REACTIONS.** (lb/size) 25=1175/0-3-8 (min. 0-1-11), 11=1175/0-3-8 (min. 0-1-11)  
 Max Horz 25=294(LC 11)  
 Max Grav 25=1442(LC 3), 11=1442(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1357/36, 3-4=-851/123, 4-5=-172/266, 5-6=-35/419, 6-7=-172/266, 7-8=-851/123,  
 8-9=-1358/37, 2-25=-1391/18, 9-11=-1391/19  
 BOT CHORD 24-25=-292/367, 22-24=-39/2418, 20-22=-39/2418, 18-20=0/3052, 16-18=0/2281,  
 15-16=0/2281, 12-15=0/2281, 19-21=-2349/0, 17-19=-2349/0, 14-17=-2349/0  
 WEBS 23-24=0/505, 3-23=0/623, 12-13=0/505, 8-13=0/623, 4-26=-1246/223, 7-26=-1249/225,  
 2-24=-41/834, 9-12=-45/838, 21-24=-1671/0, 20-21=-142/901, 14-18=-160/916,  
 12-14=-1671/0

- NOTES-** (14-15)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
  - Ceiling dead load (5.0 psf) on member(s). 3-4, 7-8, 4-26, 7-26
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 21-23, 19-21, 17-19, 14-17, 13-14
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Attic room checked for L/360 deflection.



6/3/2021

**Continued on Page 2** Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI I-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|             |       |            |     |     |  |
|-------------|-------|------------|-----|-----|--|
| Job         | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01 | R25   | Attic      | 8   | 1   | Job Reference (optional) # 26910                                   |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:44 2021 Page 2  
 ID:VaeaK7vWB81xgotwpMaLleyLxWJ-cVkl1kdH05HDJ9FwOdikaBkcfDBMlhhYDkEilz9ZND

- 14) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- 15) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

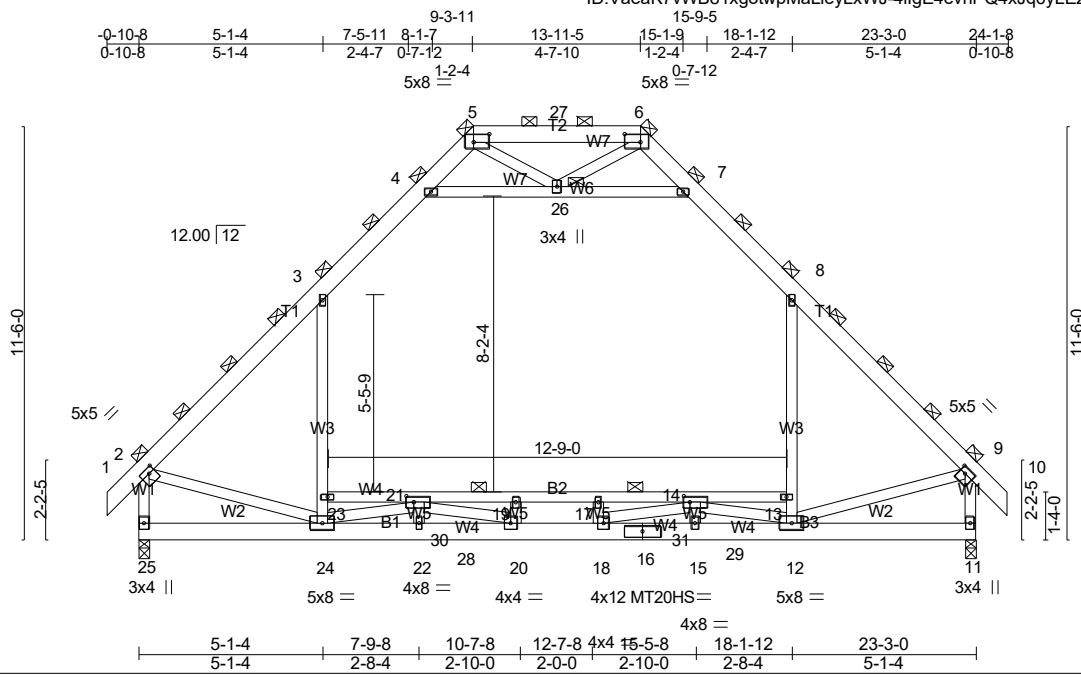


6/3/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|                    |              |                     |          |          |   |         |
|--------------------|--------------|---------------------|----------|----------|---|---------|
| Job<br>21-3146-R01 | Truss<br>R26 | Truss Type<br>ATTIC | Qty<br>1 | Ply<br>2 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N.C. | # 26910 |
|--------------------|--------------|---------------------|----------|----------|---|---------|

ID: Vaaek7vWB81xgotwpmMaLleyLxWJ-4ilgE4evnQ4xJq6yLEz6Phr?dYMU9wqntTnElz9ZNC  
8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:45 2021 Page 1



Scale: 3/16"=1'

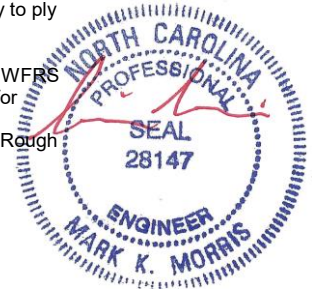
|  |                      |            |                               |               |                        |
|--|----------------------|------------|-------------------------------|---------------|------------------------|
| Plate Offsets (X,Y)-- [2:0-2-0,0-1-12], [5:0-5-4,0-2-12], [6:0-5-4,0-2-12], [9:0-2-0,0-1-12], [14:0-2-0,0-2-0], [21:0-2-8,0-2-0] |                      |            |                               |               |                        |
| <b>LOADING</b> (psf)   | <b>SPACING</b>       | <b>CSI</b> | <b>DEFL.</b>                  | <b>PLATES</b> | <b>GRIP</b>            |
| TCLL (roof) 20.0   | 3-0-0                | TC 0.75    | in (loc) l/defl L/d           | MT20          | 244/190                |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.77    | Vert(LL) -0.16 17-19 >999 240 | MT20HS        | 187/143                |
| TCDL 10.0  | Lumber DOL 1.15      | WB 0.38    | Vert(CT) -0.33 17-19 >840 180 |               |                        |
| BCLL 0.0 *   | Rep Stress Incr NO   | Matrix-SH  | Horz(CT) 0.03 11 n/a n/a      |               |                        |
| BCDL 10.0  | Code IRC2018/TPI2014 |            | Attic -0.09 13-23 1746 360    |               | Weight: 455 lb FT = 0% |

|   |  |
|---|--|
| <b>LUMBER-</b>                                    | <b>BRACING-</b>  |
| TOP CHORD 2x6 SP No.1 *Except*<br>T2: 2x6 SP No.2 | TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals<br>(Switched from sheeted: Spacing > 2-0-0). |
| BOT CHORD 2x6 SP No.2 *Except*<br>B2: 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:<br>5-9-0 oc bracing: 13-23          |
| WEBS 2x4 SP No.3 *Except*<br>W3,W6: 2x4 SP No.2   | JOINTS 1 Brace at Jt(s): 5, 6, 2, 9, 26  |

**REACTIONS.** (lb/size) 25=2157/0-3-8 (min. 0-1-8), 11=2157/0-3-8 (min. 0-1-8)  
Max Horz 25=441(LC 11)  
Max Grav 25=2557(LC 3), 11=2556(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2448/0, 3-4=-1544/0, 4-5=-327/329, 5-27=-38/639, 6-27=-323/333,  
7-8=-1544/0, 8-9=-2450/0, 2-25=-2496/0, 9-11=-2496/0  
BOT CHORD 24-25=-417/562, 22-24=0/4533, 22-28=0/4533, 20-28=0/4533, 18-20=0/5663, 16-18=0/4336,  
16-29=0/4336, 15-29=0/4336, 12-15=0/4336, 21-30=-4335/0, 19-30=-4335/0, 17-19=-4335/0,  
17-31=-4335/0, 14-31=-4335/0  
WEBS 23-24=0/963, 3-23=0/1146, 12-13=0/964, 8-13=0/1147, 4-26=-2156/56, 7-26=-2165/54,  
2-24=0/1530, 9-12=0/1536, 17-18=-352/0, 19-20=-352/0, 21-22=-8/465, 14-15=-31/486,  
21-24=-3213/0, 20-21=-25/1518, 14-18=-50/1542, 12-14=-3212/0

- NOTES-** (19-20)
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDD=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.



6/3/2021

Continued on Page 2 Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|             |       |            |     |     |  |
|-------------|-------|------------|-----|-----|--|
| Job         | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01 | R26   | ATTIC      | 1   | 2   | Job Reference (optional) # 26910                                   |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:46 2021 Page 2  
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**NOTES-** (19-20)

- 12) Ceiling dead load (5.0 psf) on member(s). 3-4, 7-8, 4-26, 7-26
- 13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 21-23, 19-21, 17-19, 14-17, 13-14
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 15) Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 17) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 210 lb down at 11-7-0 on top chord, and 289 lb down at 8-3-4, and 289 lb down at 14-11-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 18) Attic room checked for L/360 deflection.
- 19) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- 20) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-2=-90, 2-3=-90, 3-4=-105, 4-5=-90, 5-6=-90, 6-7=-90, 7-8=-105, 8-9=-90, 9-10=-90, 11-25=-30, 13-23=-30, 4-7=-15  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 2) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-2=-90, 2-3=-90, 3-4=-105, 4-5=-90, 5-6=-90, 6-7=-90, 7-8=-105, 8-9=-90, 9-10=-90, 11-25=-30, 13-23=-30, 4-7=-15  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 3) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-2=-75, 2-3=-75, 3-4=-90, 4-5=-75, 5-6=-75, 6-7=-75, 7-8=-90, 8-9=-75, 9-10=-75, 11-25=-30, 13-23=-120, 4-7=-15  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 4) Dead + 0.75 Snow (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-2=-75, 2-3=-75, 3-4=-90, 4-5=-75, 5-6=-75, 6-7=-75, 7-8=-90, 8-9=-75, 9-10=-75, 11-25=-30, 13-23=-120, 4-7=-15  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 5) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
 Uniform Loads (plf)  
 Vert: 1-2=-30, 2-3=-30, 3-4=-45, 4-5=-30, 5-6=-30, 6-7=-30, 7-8=-45, 8-9=-30, 9-10=-30, 11-25=-60, 13-23=-30, 4-7=-15  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 6) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-15, 2-3=-7, 3-4=-16, 4-5=-7, 5-6=-7, 6-7=-7, 7-8=-16, 8-9=-7, 9-10=-15, 11-25=-15, 13-23=-15, 4-7=-9  
 Horz: 2-5=-8, 6-9=8, 2-25=-45, 9-11=45  
 Drag: 2-25=0, 9-11=0  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-17, 2-3=-51, 3-4=-66, 4-5=-51, 5-6=-51, 6-7=-51, 7-8=-66, 8-9=-51, 9-10=-17, 11-25=-30, 13-23=-30, 4-7=-15  
 Horz: 1-2=-13, 2-5=21, 6-9=-21, 9-10=13, 2-25=41, 9-11=41  
 Drag: 2-25=0, 9-11=0  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-1, 2-3=-19, 3-4=-28, 4-5=-19, 5-6=39, 6-7=16, 7-8=7, 8-9=16, 9-10=8, 11-25=-15, 13-23=-15, 4-7=-9  
 Horz: 1-2=-14, 2-5=4, 6-9=31, 9-10=23, 2-25=22, 9-11=28  
 Drag: 2-25=0, 9-11=-0  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=8, 2-3=16, 3-4=7, 4-5=16, 5-6=39, 6-7=-19, 7-8=-28, 8-9=-19, 9-10=-1, 11-25=-15, 13-23=-15, 4-7=-9  
 Horz: 1-2=-23, 2-5=-31, 6-9=-4, 9-10=14, 2-25=-28, 9-11=-22  
 Drag: 2-25=0, 9-11=0  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-42, 2-3=-49, 3-4=-64, 4-5=-49, 5-6=8, 6-7=-15, 7-8=-30, 8-9=-15, 9-10=-7, 11-25=-30, 13-23=-30, 4-7=-15  
 Horz: 1-2=12, 2-5=19, 6-9=15, 9-10=23, 2-25=37, 9-11=13  
 Drag: 2-25=0, 9-11=0  
 Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60



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Continued on Page 3  
 Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

|             |       |            |     |     |  |
|-------------|-------|------------|-----|-----|--|
| Job         | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01 | R26   | ATTIC      | 1   | 2   | Job Reference (optional) # 26910                                   |

**LOAD CASE(S)** Standard

- Uniform Loads (plf)  
 Vert: 1-2=-7, 2-3=-15, 3-4=-30, 4-5=-15, 5-6=8, 6-7=-49, 7-8=-64, 8-9=-49, 9-10=-42, 11-25=-30, 13-23=-30, 4-7=-15  
 Horz: 1-2=-23, 2-5=-15, 6-9=-19, 9-10=-12, 2-25=-13, 9-11=-37  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
- Uniform Loads (plf)  
 Vert: 1-2=31, 2-3=39, 3-4=30, 4-5=39, 5-6=16, 6-7=16, 7-8=7, 8-9=16, 9-10=8, 11-25=-15, 13-23=-15, 4-7=-9  
 Horz: 1-2=-46, 2-5=-54, 6-9=31, 9-10=23, 2-25=18, 9-11=26  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
- Uniform Loads (plf)  
 Vert: 1-2=8, 2-3=16, 3-4=7, 4-5=16, 5-6=16, 6-7=39, 7-8=30, 8-9=39, 9-10=31, 11-25=-15, 13-23=-15, 4-7=-9  
 Horz: 1-2=-23, 2-5=-31, 6-9=54, 9-10=46, 2-25=-26, 9-11=-18  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
- Uniform Loads (plf)  
 Vert: 1-2=31, 2-3=39, 3-4=30, 4-5=39, 5-6=16, 6-7=16, 7-8=7, 8-9=16, 9-10=8, 11-25=-15, 13-23=-15, 4-7=-9  
 Horz: 1-2=-46, 2-5=-54, 6-9=31, 9-10=23, 2-25=18, 9-11=26  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
- Uniform Loads (plf)  
 Vert: 1-2=8, 2-3=16, 3-4=7, 4-5=16, 5-6=16, 6-7=39, 7-8=30, 8-9=39, 9-10=31, 11-25=-15, 13-23=-15, 4-7=-9  
 Horz: 1-2=-23, 2-5=-31, 6-9=54, 9-10=46, 2-25=-26, 9-11=-18  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
- Uniform Loads (plf)  
 Vert: 1-2=16, 2-3=8, 3-4=-7, 4-5=8, 5-6=-15, 6-7=-15, 7-8=-30, 8-9=-15, 9-10=-7, 11-25=-30, 13-23=-30, 4-7=-15  
 Horz: 1-2=-46, 2-5=-38, 6-9=15, 9-10=23, 2-25=34, 9-11=11  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
- Uniform Loads (plf)  
 Vert: 1-2=-7, 2-3=-15, 3-4=-30, 4-5=-15, 5-6=-15, 6-7=8, 7-8=-7, 8-9=8, 9-10=16, 11-25=-30, 13-23=-30, 4-7=-15  
 Horz: 1-2=-23, 2-5=-15, 6-9=38, 9-10=46, 2-25=-11, 9-11=-34  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 18) Dead + Snow on Overhangs: Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)  
 Vert: 1-2=-150, 2-5=-30, 5-6=-30, 6-9=-30, 9-10=-150, 11-25=-30, 13-23=-30
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 19) Dead + Attic Floor: Lumber Increase=1.00, Plate Increase=1.00
- Uniform Loads (plf)  
 Vert: 1-2=-30, 2-3=-30, 3-4=-45, 4-5=-30, 5-6=-30, 6-7=-30, 7-8=-45, 8-9=-30, 9-10=-30, 11-25=-30, 13-23=-150, 4-7=-15
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 20) Dead: Lumber Increase=1.00, Plate Increase=1.00
- Uniform Loads (plf)  
 Vert: 1-2=-30, 2-3=-30, 3-4=-45, 4-5=-30, 5-6=-30, 6-7=-30, 7-8=-45, 8-9=-30, 9-10=-30, 11-25=-30, 13-23=-150, 4-7=-15
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 21) Dead + 0.75 Snow (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
- Uniform Loads (plf)  
 Vert: 1-2=-84, 2-3=-90, 3-4=-105, 4-5=-90, 5-6=-46, 6-7=-64, 7-8=-79, 8-9=-64, 9-10=-58, 11-25=-30, 13-23=-120, 4-7=-15  
 Horz: 1-2=9, 2-5=15, 6-9=11, 9-10=17, 2-25=28, 9-11=10  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)
- 22) Dead + 0.75 Snow (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
- Uniform Loads (plf)  
 Vert: 1-2=-58, 2-3=-64, 3-4=-79, 4-5=-64, 5-6=-46, 6-7=-90, 7-8=-105, 8-9=-90, 9-10=-84, 11-25=-30, 13-23=-120, 4-7=-15  
 Horz: 1-2=-17, 2-5=-11, 6-9=-15, 9-10=-9, 2-25=-10, 9-11=-28  
 Drag: 2-25=0, 9-11=0
- Concentrated Loads (lb)  
 Vert: 27=-210(F) 28=-289(F) 29=-289(F)



6/3/2021

| Job         | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
|-------------|-------|------------|-----|-----|--|
| 21-3146-R01 | R26   | ATTIC      | 1   | 2   | Job Reference (optional) # 26910                                   |

**LOAD CASE(S)** Standard

23) Dead + 0.75 Snow (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-41, 2-3=-46, 3-4=-61, 4-5=-46, 5-6=-64, 6-7=-64, 7-8=-79, 8-9=-64, 9-10=-58, 11-25=-30, 13-23=-120, 4-7=-15  
 Horz: 1-2=-34, 2-5=-29, 6-9=11, 9-10=17, 2-25=25, 9-11=8  
 Drag: 2-25=0, 9-11=0

Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

24) Dead + 0.75 Snow (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-58, 2-3=-64, 3-4=-79, 4-5=-64, 5-6=-64, 6-7=-46, 7-8=-61, 8-9=-46, 9-10=-41, 11-25=-30, 13-23=-120, 4-7=-15  
 Horz: 1-2=-17, 2-5=-11, 6-9=29, 9-10=34, 2-25=-8, 9-11=-25  
 Drag: 2-25=0, 9-11=0

Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

25) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-84, 2-3=-90, 3-4=-105, 4-5=-90, 5-6=-46, 6-7=-64, 7-8=-79, 8-9=-64, 9-10=-58, 11-25=-30, 13-23=-120, 4-7=-15  
 Horz: 1-2=9, 2-5=15, 6-9=11, 9-10=17, 2-25=28, 9-11=10  
 Drag: 2-25=0, 9-11=0

Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

26) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-58, 2-3=-64, 3-4=-79, 4-5=-64, 5-6=-46, 6-7=-90, 7-8=-105, 8-9=-90, 9-10=-84, 11-25=-30, 13-23=-120, 4-7=-15  
 Horz: 1-2=-17, 2-5=-11, 6-9=-15, 9-10=-9, 2-25=-10, 9-11=-28  
 Drag: 2-25=0, 9-11=0

Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

27) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-41, 2-3=-46, 3-4=-61, 4-5=-46, 5-6=-64, 6-7=-64, 7-8=-79, 8-9=-64, 9-10=-58, 11-25=-30, 13-23=-120, 4-7=-15  
 Horz: 1-2=-34, 2-5=-29, 6-9=11, 9-10=17, 2-25=25, 9-11=8  
 Drag: 2-25=0, 9-11=0

Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

28) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-58, 2-3=-64, 3-4=-79, 4-5=-64, 5-6=-64, 6-7=-46, 7-8=-61, 8-9=-46, 9-10=-41, 11-25=-30, 13-23=-120, 4-7=-15  
 Horz: 1-2=-17, 2-5=-11, 6-9=29, 9-10=34, 2-25=-8, 9-11=-25  
 Drag: 2-25=0, 9-11=0

Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

29) Dead + 0.6 C-C Wind Min. Down: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=9, 2-3=-39, 3-4=-48, 4-5=-39, 5-6=-39, 6-7=-39, 7-8=48, 8-9=-39, 9-10=9, 11-25=-15, 13-23=-15, 4-7=-9  
 Horz: 1-2=-24, 2-5=24, 6-9=-24, 9-10=24, 2-25=24, 9-11=-24  
 Drag: 2-25=0, 9-11=0

Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

30) Dead + 0.6 C-C Wind Min. Upward: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=9, 2-5=9, 5-6=9, 6-9=9, 9-10=9, 11-25=-15, 13-23=-15  
 Horz: 1-2=-24, 2-5=-24, 6-9=24, 9-10=24, 2-25=-24, 9-11=24  
 Drag: 2-25=0, 9-11=0

Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

31) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-2=-90, 2-3=-90, 3-4=-105, 4-5=-90, 5-6=-90, 6-7=-30, 7-8=-45, 8-9=-30, 9-10=-30, 11-25=-30, 13-23=-30, 4-7=-15  
 Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

32) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-2=-30, 2-3=-30, 3-4=-45, 4-5=-30, 5-6=-90, 6-7=-90, 7-8=-105, 8-9=-90, 9-10=-90, 11-25=-30, 13-23=-30, 4-7=-15  
 Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

33) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-2=-75, 2-3=-75, 3-4=-90, 4-5=-75, 5-6=-75, 6-7=-30, 7-8=-45, 8-9=-30, 9-10=-30, 11-25=-30, 13-23=-120, 4-7=-15  
 Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)

34) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-2=-30, 2-3=-30, 3-4=-45, 4-5=-30, 5-6=-75, 6-7=-75, 7-8=-90, 8-9=-75, 9-10=-75, 11-25=-30, 13-23=-120, 4-7=-15  
 Concentrated Loads (lb)

Vert: 27=-210(F) 28=-289(F) 29=-289(F)



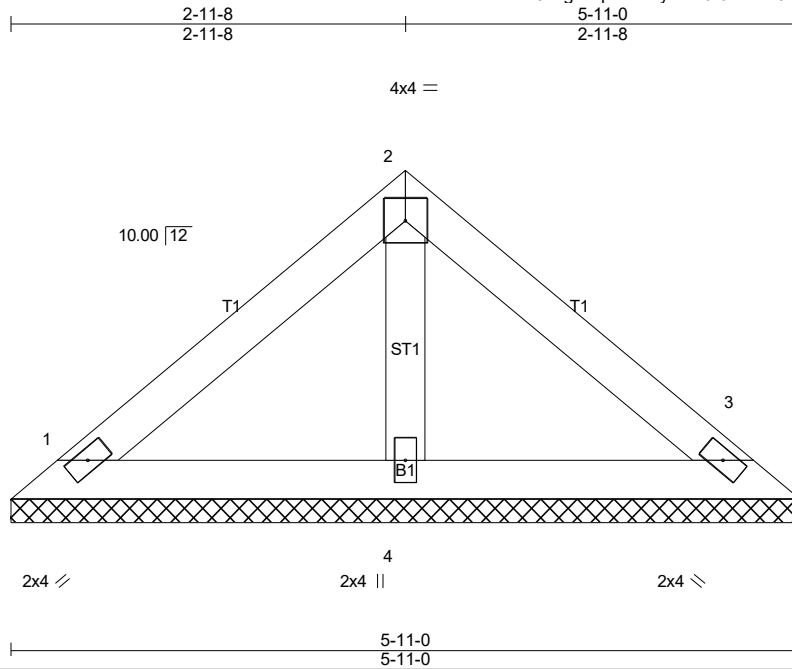
6/3/2021

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|                    |               |                      |          |          |  |         |
|--------------------|---------------|----------------------|----------|----------|--|---------|
| Job<br>21-3146-R01 | Truss<br>VT01 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N | # 26910 |
|--------------------|---------------|----------------------|----------|----------|--|---------|

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:47 2021 Page 1  
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Scale = 1:17.3

|                      |                      |             |                         |               |             |
|----------------------|----------------------|-------------|-------------------------|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>            | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof) 20.0     | 2-0-0                | TC 0.12     | in (loc) l/defl L/d     | MT20          | 244/190     |
| Snow (Pf) 20.0       | Plate Grip DOL 1.15  | BC 0.11     | Vert(LL) n/a - n/a 999  |               |             |
| TCDL 10.0            | Lumber DOL 1.15      | WB 0.02     | Vert(CT) n/a - n/a 999  |               |             |
| BCLL 0.0 *           | Rep Stress Incr YES  | Matrix-P    | Horz(CT) 0.00 3 n/a n/a |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014 |             |                         | Weight: 22 lb | FT = 0%     |

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.3  
 OTHERS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-11-0 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) 1=117/5-11-0 (min. 0-1-8), 3=117/5-11-0 (min. 0-1-8), 4=175/5-11-0 (min. 0-1-8)  
 Max Horz 1=-49(LC 10)  
 Max Uplift1=-26(LC 13), 3=-32(LC 13)

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

**NOTES-** (9-10)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

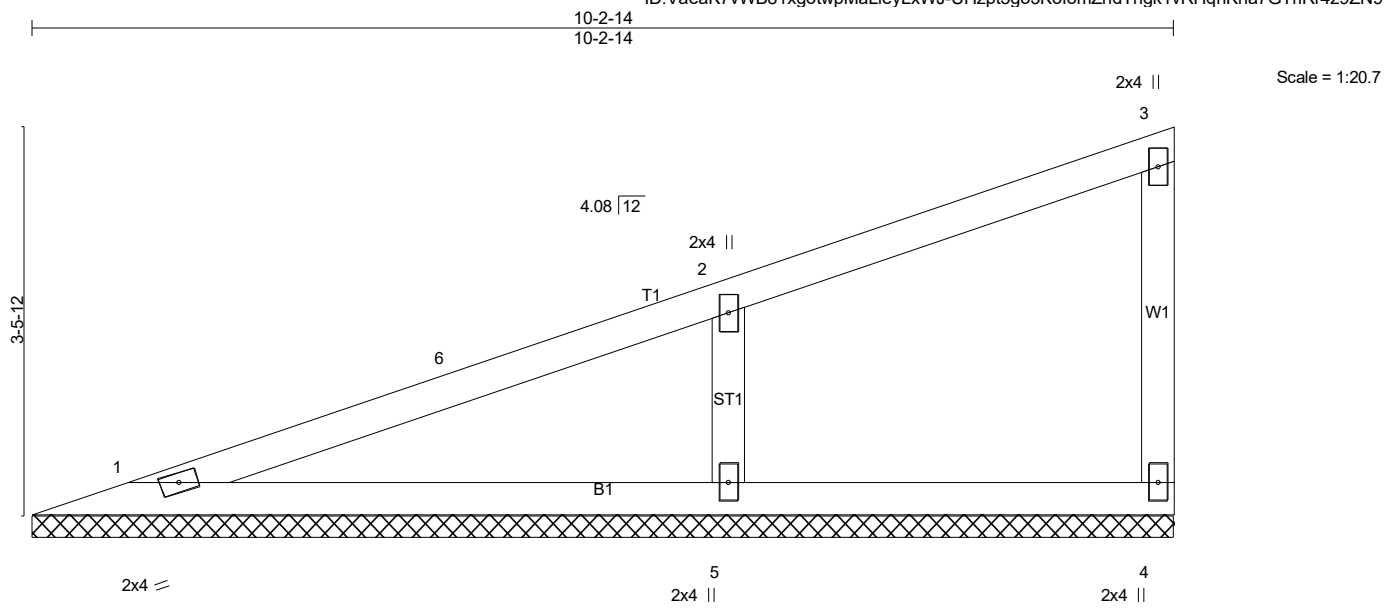


6/3/2021

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|                          |       |            |     |     |  |
|--------------------------|-------|------------|-----|-----|--|
| Job                      | Truss | Truss Type | Qty | Ply | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N |
| 21-3146-R01              | VT03  | Valley     | 1   | 1   |  |
| Job Reference (optional) |       |            |     |     | # 26910  |

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Jun 4 20:47:48 2021 Page 1  
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|                      |                      |             |                         |               |             |
|----------------------|----------------------|-------------|-------------------------|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>            | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof) 20.0     | 2-0-0                | TC 0.43     | in (loc) l/defl L/d     | MT20          | 244/190     |
| Snow (Pf) 20.0       | Plate Grip DOL 1.15  | BC 0.37     | Vert(LL) n/a - n/a 999  |               |             |
| TCDL 10.0            | Lumber DOL 1.15      | WB 0.09     | Vert(CT) n/a - n/a 999  |               |             |
| BCLL 0.0 *           | Rep Stress Incr YES  | Matrix-SH   | Horz(CT) 0.00 4 n/a n/a |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014 |             |                         | Weight: 37 lb | FT = 0%     |

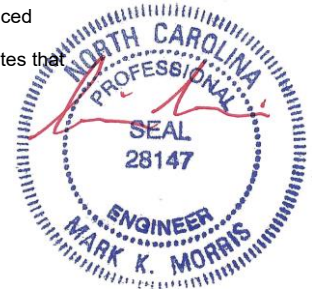
|                       |  |
|-----------------------|--|
| <b>LUMBER-</b>        | <b>BRACING-</b>  |
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  |
| BOT CHORD 2x4 SP No.3 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.   |
| WEBS 2x4 SP No.3      |  |
| OTHERS 2x4 SP No.3    | MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide. |

**REACTIONS.** (lb/size) 1=174/10-2-14 (min. 0-1-8), 4=97/10-2-14 (min. 0-1-8), 5=466/10-2-14 (min. 0-1-8)  
 Max Horz 1=112(LC 10)  
 Max Uplift 1=-5(LC 10), 4=-25(LC 10), 5=-116(LC 10)  
 Max Grav 1=180(LC 20), 4=140(LC 20), 5=588(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-5=-453/158

- NOTES-** (9-10)
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=116.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
  - 10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard

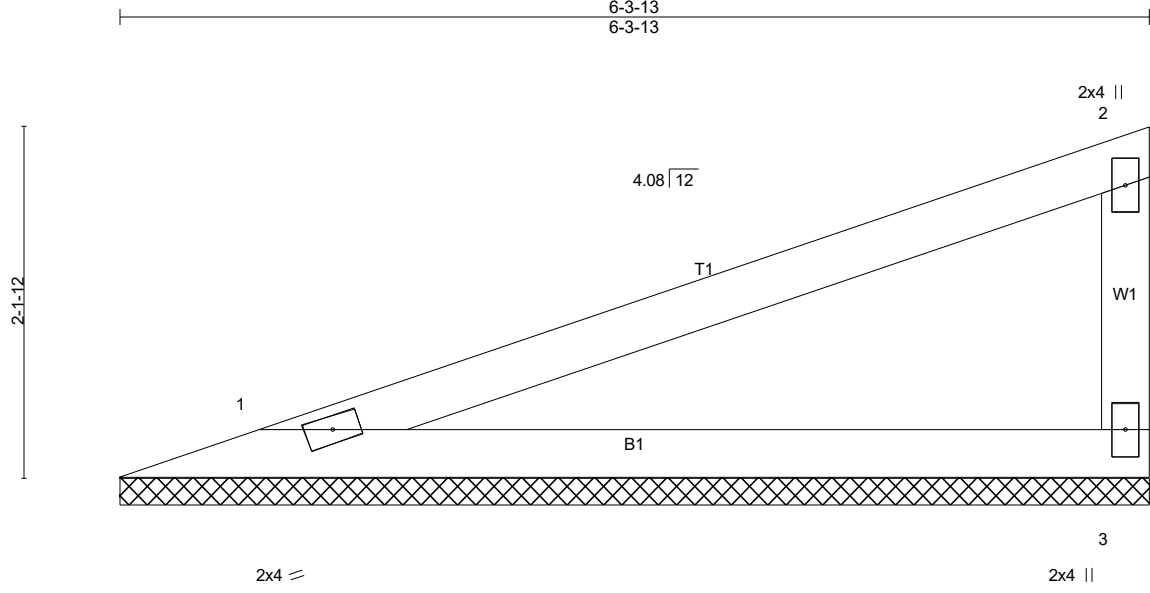


6/3/2021

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|                    |               |                      |          |          |  |         |
|--------------------|---------------|----------------------|----------|----------|--|---------|
| Job<br>21-3146-R01 | Truss<br>VT04 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | LOT 1155 CARRIAGE CIRCLE   142 SPRUCE HOLLOW CIRCLE SPRING LAKE, N | # 26910 |
|--------------------|---------------|----------------------|----------|----------|--|---------|

ID:VaeaK7vWB81xgotwpMaLleyLxWJ-UHzpt5go3KofomZhdTngk1vLKqdmhbaGTriRr4z9ZN9  
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Scale = 1:14.1

|                      |                      |             |                        |               |             |
|----------------------|----------------------|-------------|------------------------|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>           | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof) 20.0     | 2-0-0                | TC 0.81     | in (loc) l/defl L/d    | MT20          | 244/190     |
| Snow (Pf) 20.0       | Plate Grip DOL 1.15  | BC 0.60     | Vert(LL) n/a - n/a 999 |               |             |
| TCDL 10.0            | Lumber DOL 1.15      | WB 0.00     | Vert(CT) n/a - n/a 999 |               |             |
| BCLL 0.0 *           | Rep Stress Incr YES  | Matrix-P    | Horz(CT) 0.00 n/a n/a  |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014 |             |                        | Weight: 20 lb | FT = 0%     |

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-3-13 oc purlins, except end verticals.  
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.

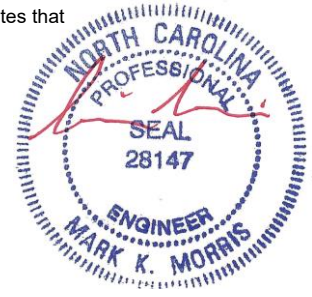
**REACTIONS.** (lb/size) 1=212/6-3-13 (min. 0-1-8), 3=212/6-3-13 (min. 0-1-8)  
Max Horz 1=64(LC 10)  
Max Uplift 1=-31(LC 10), 3=-53(LC 10)  
Max Grav 1=284(LC 20), 3=284(LC 20)

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

**NOTES-** (9-10)

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical web bracing representation does not depict the size, type or the orientation of the brace on the web. Symbol only indicates that the member must be braced.
- 10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.

**LOAD CASE(S)** Standard



6/3/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure 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/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D\*Onofrio Drive, Madison, WI 53719.