

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 22358A  
148.1869.C.8x26'8cp

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I38940013 thru I38940040

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844



October 17, 2019

Sevier, Scott

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

|               |             |                                    |          |          |                     |           |
|---------------|-------------|------------------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>AE | Truss Type<br>COMMON SUPPORTED GAB | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940013 |
|---------------|-------------|------------------------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

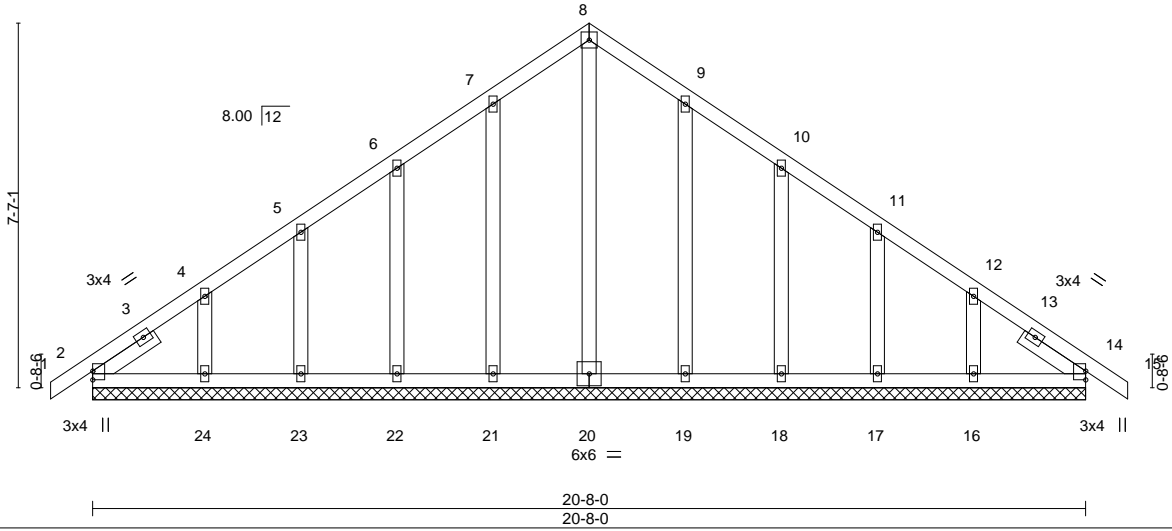
8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:14 2019 Page 1

ID:0ckUA53Thu5GUjfqQCaouPyZBFs-6uOMbi8OfbVSYMorWLnL0rVQ5KSOjZncHyI?OKySo27



4x4 =

Scale: 1/4"=1'



|                      |                      |       |             |              |          |        |     |                |             |
|----------------------|----------------------|-------|-------------|--------------|----------|--------|-----|----------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL 20.0            | Plate Grip DOL       | 1.15  | TC 0.07     | Vert(LL)     | -0.00 14 | n/r    | 120 | MT20           | 244/190     |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.04     | Vert(CT)     | 0.00 14  | n/r    | 120 |                |             |
| BCLL 0.0 *           | Rep Stress Incr      | YES   | WB 0.14     | Horz(CT)     | 0.00 14  | n/a    | n/a |                |             |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-S    |              |          |        |     |                |             |
|                      |                      |       |             |              |          |        |     | Weight: 130 lb | FT = 20%    |

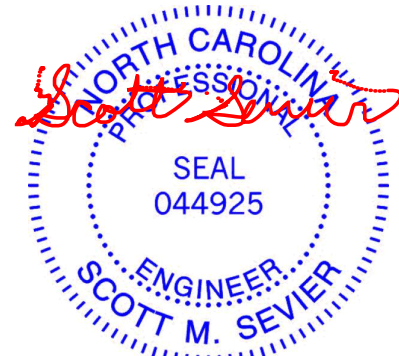
**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -H 1-6-10, Right 2x4 SP No.3 -H 1-6-10

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

**REACTIONS.** All bearings 20-8-0.  
 (lb) - Max Horz 2=185(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 21, 22, 23, 19, 18, 17, 16 except 24=-107(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 20, 21, 22, 23, 24, 19, 18, 17, 16, 14

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-10-8 to 2-4-0, Exterior(2) 2-4-0 to 10-4-0, Corner(3) 10-4-0 to 13-4-0, Exterior(2) 13-4-0 to 21-6-8 zone; cantilever left and right exposed; 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.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.



October 17, 2019

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 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



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|               |             |                             |          |          |                     |           |
|---------------|-------------|-----------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>AG | Truss Type<br>Common Girder | Qty<br>1 | Ply<br>3 | 148.1869.C.8x26'8cp | I38940014 |
|---------------|-------------|-----------------------------|----------|----------|---------------------|-----------|

84 Components (Dunn),

Dunn, NC - 28334,

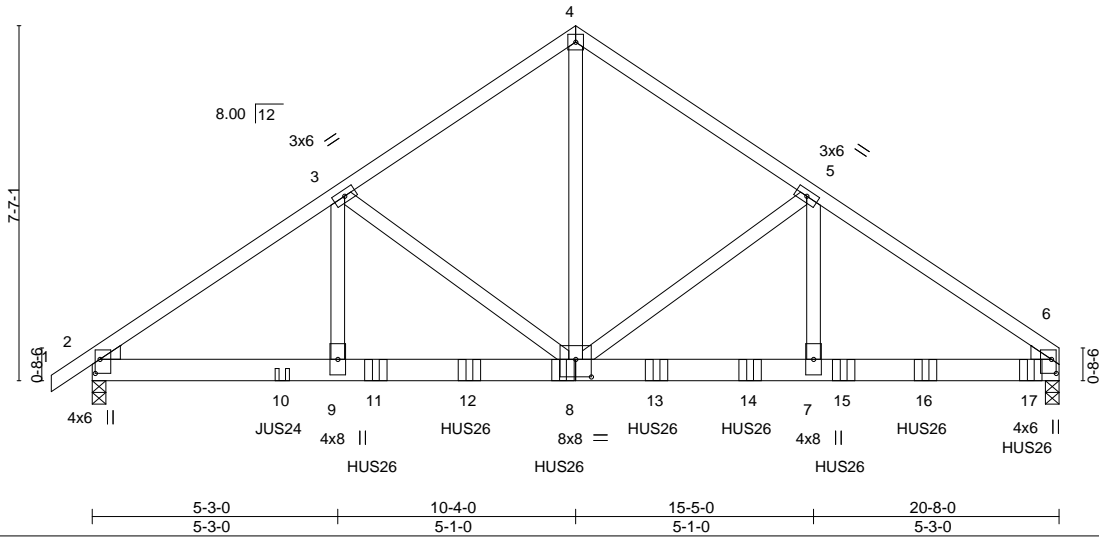
8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:16 2019 Page 1

ID:0ckUA53Thu5GUJfQqCaouPyZBFs-2GW60AfBCIAngyEempp5GadG8wLBLRukGE6SDySo25



4x4 =

Scale = 1:49.3



|                       |   |
|-----------------------|---|
| Plate Offsets (X,Y)-- | [2:0-0-10,0-1-0], [2:0-1-5,0-5-7], [2:0-3-10,0-1-3], [6:0-3-10,0-1-3], [6:0-1-5,0-5-7], [6:0-0-10,0-1-0], [8:0-4-0,0-4-8] |
|-----------------------|---|

|                      |                      |       |             |              |          |        |      |                |             |
|----------------------|----------------------|-------|-------------|--------------|----------|--------|------|----------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d  | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL 20.0            | Plate Grip DOL       | 1.15  | TC 0.67     | Vert(LL)     | -0.06    | 8-9    | >999 | MT20           | 244/190     |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.94     | Vert(CT)     | -0.12    | 8-9    | >999 |                |             |
| BCLL 0.0 *           | Rep Stress Incr      | NO    | WB 0.64     | Horz(CT)     | 0.04     | 6      | n/a  |                |             |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-S    |              |          |        |      |                |             |
|                      |                      |       |             |              |          |        |      | Weight: 380 lb | FT = 20%    |

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3  
WEDGE  
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

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

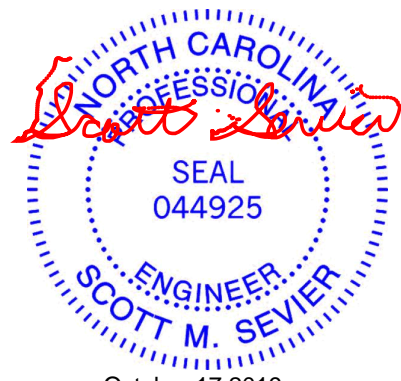
**REACTIONS.** (lb/size) 2=4047/0-3-8, 6=5325/0-3-8  
Max Horz 2=182(LC 26)  
Max Uplift 2=-459(LC 8), 6=-425(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-6334/657, 3-4=-4543/470, 4-5=-4546/469, 5-6=-6838/569  
BOT CHORD 2-9=-564/5013, 8-9=-564/5013, 7-8=-387/5445, 6-7=-387/5445  
WEBS 4-8=-409/4651, 5-8=-2183/302, 5-7=-113/2526, 3-8=-1645/386, 3-9=-222/1913

**NOTES-**

- 3-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: 2x6 - 2 rows staggered at 0-6-0 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 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
- Use USP JUS24 (With 4-10d nails into Girder & 2-10d nails into Truss) or equivalent at 4-0-12 from the left end to connect truss(es) to back face of bottom chord.
- Use USP HUS26 (With 14-16d nails into Girder & 6-16d nails into Truss) or equivalent spaced at 2-3-0 oc max. starting at 6-0-12 from the left end to 20-0-12 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard



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Continued on page 2

|   |  |
|---|--|
| <p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p> | <p>ENGINEERING BY<br/> <b>TRENCO</b><br/> A MiTek Affiliate</p> <p>818 Soundside Road<br/> Edenton, NC 27932</p> |
|---|--|

|               |             |                             |          |                 |   |           |
|---------------|-------------|-----------------------------|----------|-----------------|---|-----------|
| Job<br>22358A | Truss<br>AG | Truss Type<br>Common Girder | Qty<br>1 | Ply<br><b>3</b> | 148.1869.C.8x26'8cp<br>Job Reference (optional) | I38940014 |
|---------------|-------------|-----------------------------|----------|-----------------|---|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:16 2019 Page 2  
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**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-4=-60, 4-6=-60, 2-6=-20

Concentrated Loads (lb)

Vert: 8=-857(B) 10=-817(B) 11=-857(B) 12=-857(B) 13=-857(B) 14=-857(B) 15=-857(B) 16=-857(B) 17=-863(B)

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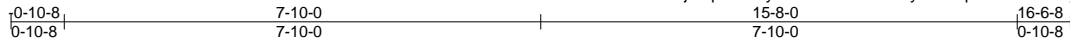
|               |             |                                    |          |          |                     |           |
|---------------|-------------|------------------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>BE | Truss Type<br>COMMON SUPPORTED GAB | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940015 |
|---------------|-------------|------------------------------------|----------|----------|---------------------|-----------|

84 Components (Dunn),

Dunn, NC - 28334,

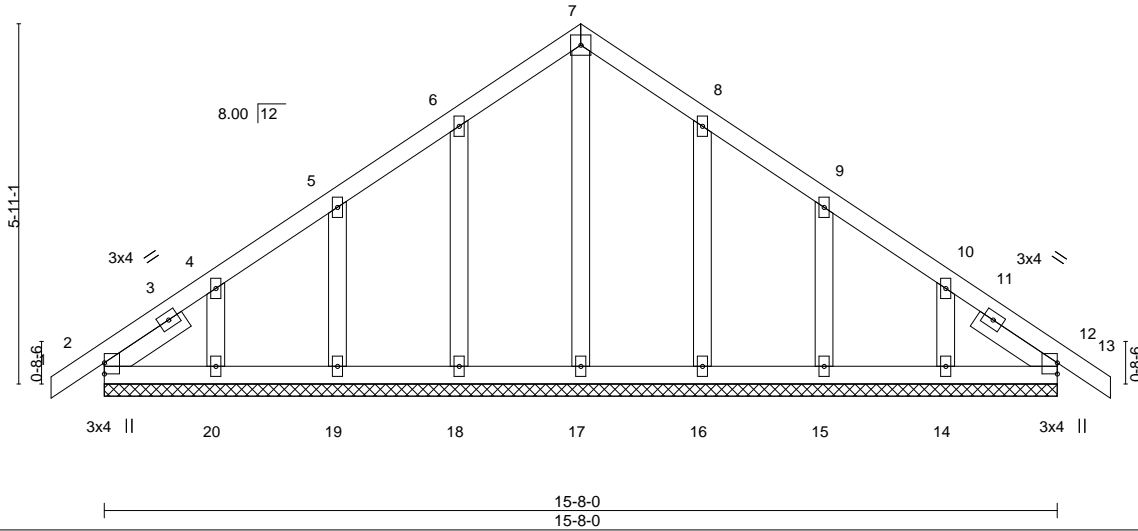
8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:17 2019 Page 1

ID:0ckUA53Thu5GUjfQqCaouPyZBFs-WT4UEkBHw1PqWQCTK2dT7yhXUuwxf2zvzf\_fySo24



4x4 =

Scale = 1:37.9



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES | GRIP          |          |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|--------|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.05  | Vert(LL) | -0.00    | 12     | n/r | 120    | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.03  | Vert(CT) | -0.00    | 12     | n/r | 120    |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.07  | Horz(CT) | 0.00     | 12     | n/a | n/a    |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-S |          |          |        |     |        | Weight: 92 lb | FT = 20% |

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -H 1-6-11, Right 2x4 SP No.3 -H 1-6-11

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

**REACTIONS.** All bearings 15-8-0.  
 (lb) - Max Horz 2=144(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 18, 19, 20, 16, 15, 14  
 Max Grav All reactions 250 lb or less at joint(s) 2, 12, 17, 18, 19, 20, 16, 15, 14

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-10-8 to 1-10-0, Exterior(2) 1-10-0 to 7-10-0, Corner(3) 7-10-0 to 10-10-0, Exterior(2) 10-10-0 to 16-6-8 zone; cantilever left and right exposed; 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- n/a
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.



October 17, 2019

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|               |             |                             |          |          |                     |           |
|---------------|-------------|-----------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>BG | Truss Type<br>Common Girder | Qty<br>1 | Ply<br>3 | 148.1869.C.8x26'8cp | 138940016 |
|---------------|-------------|-----------------------------|----------|----------|---------------------|-----------|

84 Components (Dunn),

Dunn, NC - 28334,

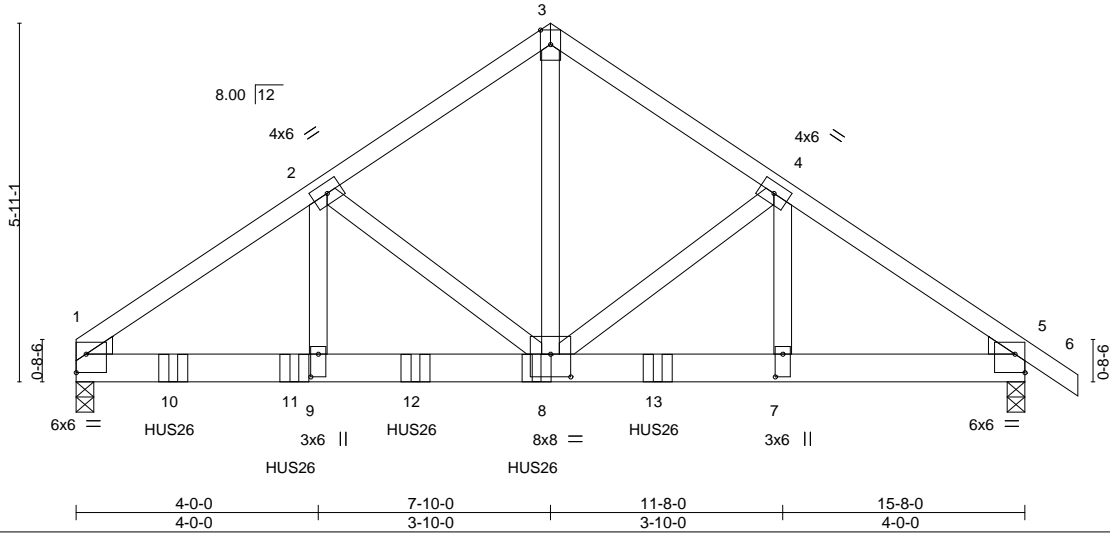
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4x6 ||

Scale = 1:38.0



|                       |   |
|-----------------------|---|
| Plate Offsets (X,Y)-- | [1:Edge,0-3-10], [1:0-5-7,0-1-5], [1:0-1-0,0-0-10], [5:Edge,0-3-10], [5:0-5-7,0-1-5], [5:0-1-0,0-0-10], [7:0-4-8,0-1-8], [8:0-4-0,0-4-8], [9:0-4-8,0-1-8] |
|-----------------------|---|

|                      |                      |       |             |              |          |        |      |                |             |
|----------------------|----------------------|-------|-------------|--------------|----------|--------|------|----------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d  | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL 20.0            | Plate Grip DOL       | 1.15  | TC 0.82     | Vert(LL)     | -0.07    | 7-8    | >999 | MT20           | 244/190     |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.59     | Vert(CT)     | -0.14    | 7-8    | >999 |                |             |
| BCLL 0.0 *           | Rep Stress Incr      | NO    | WB 0.67     | Horz(CT)     | 0.03     | 5      | n/a  |                |             |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-S    |              |          |        |      |                |             |
|                      |                      |       |             |              |          |        |      | Weight: 290 lb | FT = 20%    |

|   |   |
|---|---|
| <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. |
| BOT CHORD 2x6 SP DSS                          | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.            |
| WEBS 2x4 SP No.3 *Except*<br>3-8: 2x4 SP No.2 |   |

PLY-TO-PLY CONNECTION REQUIRES THAT AN APPROVED FACE MOUNT HANGER (SPECIFIED BY OTHERS) IS REQUIRED FOR LOADS REPORTED IN NOTES. FACE MOUNT HANGER SHALL BE ATTACHED WITH A MINIMUM OF 0.148"x 3" NAILS PER HANGER MANUFACTURER SPECIFICATIONS.

**WEDGE**  
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

**REACTIONS.** (lb/size) 5=7010/0-3-8, 1=8052/0-3-8  
Max Horz 1=-141(LC 23)  
Max Uplift 5=-1309(LC 9), 1=-1015(LC 8)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-10921/1424, 2-3=-7642/1169, 3-4=-7636/1168, 4-5=-11111/2044  
BOT CHORD 1-9=-1154/8625, 8-9=-1154/8625, 7-8=-1563/8744, 5-7=-1563/8744  
WEBS 3-8=-1205/8152, 4-8=-3071/979, 4-7=-1099/4194, 2-8=-2921/364, 2-9=-335/3958

- NOTES-**
- n/a
  - 3-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: 2x6 - 3 rows staggered at 0-4-0 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 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=1309, 1=1015.
  - Use USP HUS26 (With 14-16d nails into Girder & 6-16d nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-7-4 from the left end to 9-7-4 to connect truss(es) to back face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 3582 lb down and 1144 lb up at 11-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard  
Continued on page 2



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

|               |             |                             |          |                 |   |           |
|---------------|-------------|-----------------------------|----------|-----------------|---|-----------|
| Job<br>22358A | Truss<br>BG | Truss Type<br>Common Girder | Qty<br>1 | Ply<br><b>3</b> | 148.1869.C.8x26'8cp<br>Job Reference (optional) | I38940016 |
|---------------|-------------|-----------------------------|----------|-----------------|---|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:18 2019 Page 2  
ID:0ckUA53Thu5GUjfQqCaouPyZBFs-?fesR4Cvjq0u1z5clArHAhfxKxhNfYBCZjDX5ySo23

**LOAD CASE(S)** Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-3=-60, 3-6=-60, 1-5=-20  
 Concentrated Loads (lb)  
 Vert: 8=-2038(B) 7=-3582(B) 10=-2038(B) 11=-2038(B) 12=-2038(B) 13=-2038(B)

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|               |             |                         |           |          |                     |           |
|---------------|-------------|-------------------------|-----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>J1 | Truss Type<br>Jack-Open | Qty<br>42 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940017 |
|---------------|-------------|-------------------------|-----------|----------|---------------------|-----------|

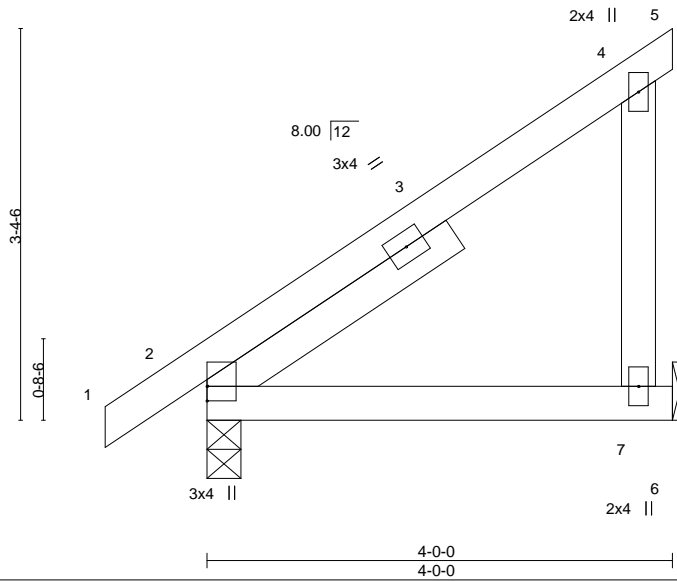
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:19 2019 Page 1

ID:0ckUA53Thu5GUjQqCaouPyZBFs-TrCFtQCXU78le7gpJuMWjuCFzL8IOsFLQDSm3YySo22



Scale = 1:19.8



|                      |                      |       |             |              |           |        |     |               |             |
|----------------------|----------------------|-------|-------------|--------------|-----------|--------|-----|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in (loc)  | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL 20.0            | Plate Grip DOL       | 1.15  | TC 0.26     | Vert(LL)     | -0.01 2-7 | >999   | 240 | MT20          | 244/190     |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.16     | Vert(CT)     | -0.02 2-7 | >999   | 180 |               |             |
| BCLL 0.0 *           | Rep Stress Incr      | YES   | WB 0.03     | Horz(CT)     | 0.00      | n/a    | n/a |               |             |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-P    |              |           |        |     | Weight: 23 lb | FT = 20%    |

**LUMBER-**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -H 2-6-0

**BRACING-**

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

**REACTIONS.** (lb/size) 2=207/0-3-8, 7=154/Mechanical  
 Max Horz 2=123(LC 12)  
 Max Uplift 7=-75(LC 12)  
 Max Grav 2=207(LC 1), 7=170(LC 19)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-0-0 zone; cantilever left and right exposed; 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
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 7. This connection is for uplift only and does not consider lateral forces.



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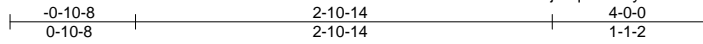


|               |             |                         |          |          |                     |           |
|---------------|-------------|-------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>J2 | Truss Type<br>Jack-Open | Qty<br>2 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940018 |
|---------------|-------------|-------------------------|----------|----------|---------------------|-----------|

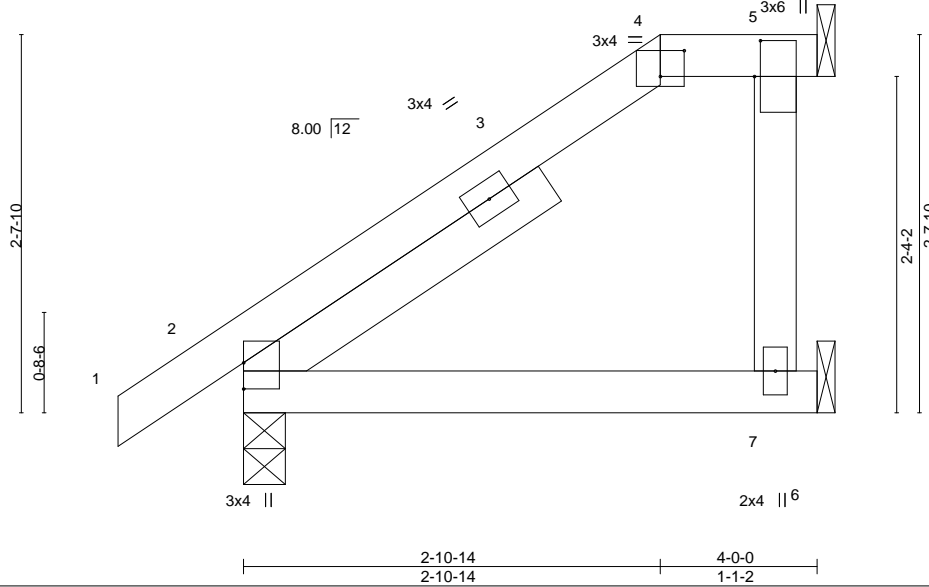
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:20 2019 Page 1

ID:0ckUA53Thu5GUjJfQqCaouPyZBFs-x1mdsmD9FRGcGHF?tbluF6lQJUIB7JRUfCKb\_ySo21



Scale: 3/4"=1'



| LOADING (psf) | SPACING-             | CSL      | DEFL.                       | PLATES        | GRIP     |
|---------------|----------------------|----------|-----------------------------|---------------|----------|
| TCLL 20.0     | 2-0-0                | TC 0.22  | in (loc) l/defl L/d         | MT20          | 244/190  |
| TCDL 10.0     | Plate Grip DOL 1.15  | BC 0.12  | Vert(LL) -0.01 2-7 >999 240 |               |          |
| BCLL 0.0 *    | Lumber DOL 1.15      | WB 0.00  | Vert(CT) -0.01 2-7 >999 180 |               |          |
| BCDL 10.0     | Rep Stress Incr YES  | Matrix-P | Horz(CT) 0.01 5 n/a n/a     |               |          |
|               | Code IRC2015/TPI2014 |          |                             | Weight: 21 lb | FT = 20% |

| LUMBER-                          | BRACING-   |
|----------------------------------|--|
| TOP CHORD 2x4 SP No.2            | TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except |
| BOT CHORD 2x4 SP No.2            | 2-0-0 oc purlins: 4-5.   |
| WEBS 2x4 SP No.3                 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                   |
| SLIDER Left 2x4 SP No.3 -H 2-6-0 |  |

**REACTIONS.** (lb/size) 2=207/0-3-8, 5=103/Mechanical, 7=45/Mechanical  
 Max Horz 2=97(LC 12)  
 Max Uplift 2=-18(LC 12), 5=-52(LC 12)  
 Max Grav 2=207(LC 1), 5=103(LC 1), 7=76(LC 3)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-10-14, Exterior(2) 2-10-14 to 3-8-8 zone; cantilever left and right exposed ; 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) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5.
  - 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 7. This connection is for uplift only and does not consider lateral forces.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 10) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.



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|               |             |                         |          |          |                     |           |
|---------------|-------------|-------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>J3 | Truss Type<br>Jack-Open | Qty<br>2 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940019 |
|---------------|-------------|-------------------------|----------|----------|---------------------|-----------|

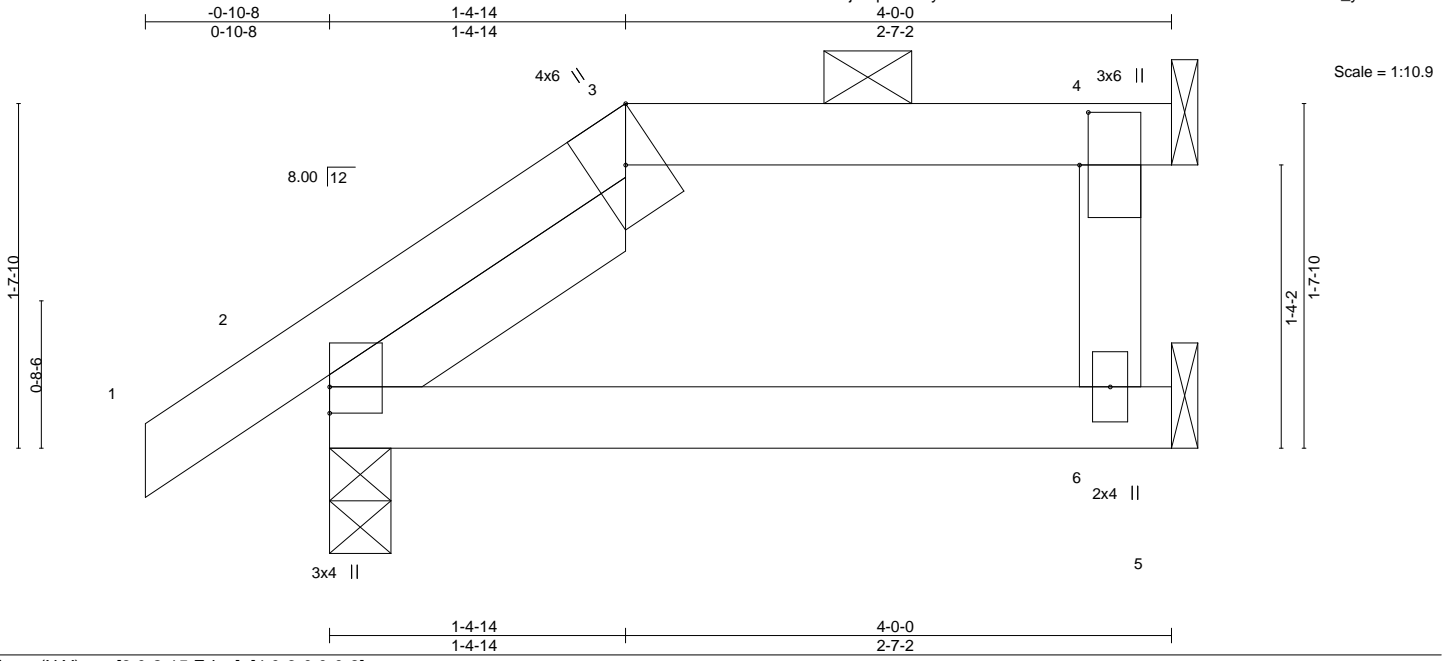
84 Components (Dunn),

Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:20 2019 Page 1

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Job Reference (optional)



|                       |                                  |
|-----------------------|----------------------------------|
| Plate Offsets (X,Y)-- | [3:0-2-15,Edge], [4:0-3-0,0-0-8] |
|-----------------------|----------------------------------|

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.20  | Vert(LL) | -0.01 | 2-6   | >999   | 240 | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.12  | Vert(CT) | -0.02 | 2-6   | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | 0.02  | 4     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-P |          |       |       |        |     | Weight: 18 lb | FT = 20% |

| LUMBER-                           | BRACING-   |
|-----------------------------------|--|
| TOP CHORD 2x4 SP No.2             | TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except |
| BOT CHORD 2x4 SP No.2             | 2-0-0 oc purlins: 3-4.   |
| WEBS 2x4 SP No.3                  | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                   |
| SLIDER Left 2x4 SP No.3 -H 1-8-11 |  |

**REACTIONS.** (lb/size) 2=207/0-3-8, 4=101/Mechanical, 6=47/Mechanical  
 Max Horz 2=59(LC 12)  
 Max Uplift 2=-27(LC 12), 4=-40(LC 9)  
 Max Grav 2=207(LC 1), 4=101(LC 1), 6=77(LC 3)

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; 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) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4.
- 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 10) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.



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|               |             |                         |          |          |                     |           |
|---------------|-------------|-------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>J4 | Truss Type<br>Jack-Open | Qty<br>2 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940020 |
|---------------|-------------|-------------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

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Scale = 1:14.7

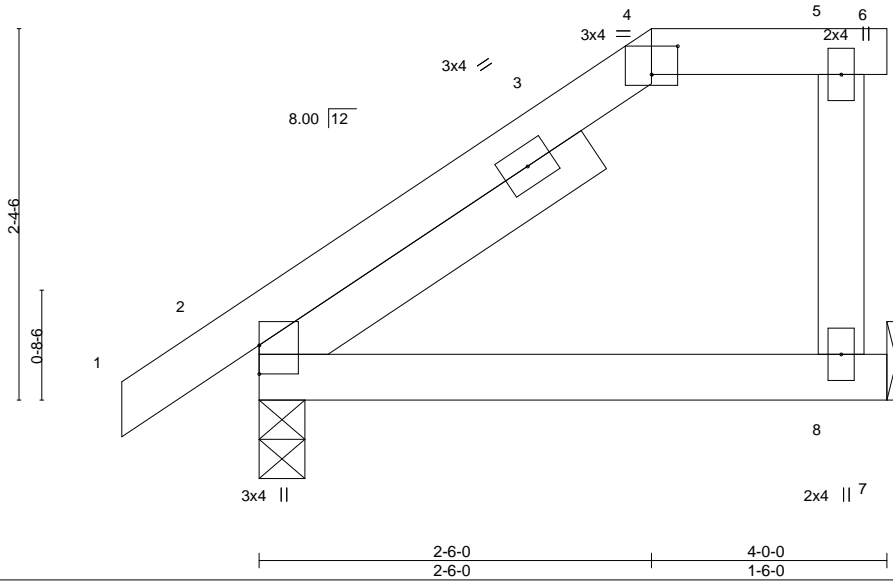


Plate Offsets (X,Y)-- [4:0-2-0,0-2-3]

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d  | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|------|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.21  | Vert(LL) | -0.01    | 2-8    | >999 | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.10  | Vert(CT) | -0.01    | 2-8    | >999 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | 0.00     | 8      | n/a  |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-R |          |          |        |      |               |          |
|               |                      |       |          |          |          |        |      | Weight: 21 lb | FT = 20% |

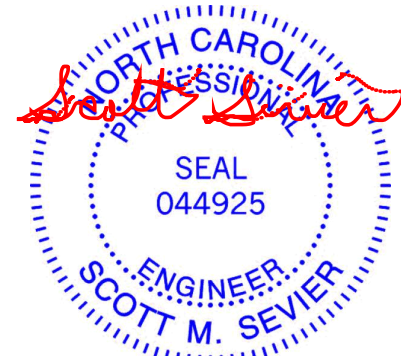
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -H 2-6-0

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 8=154/Mechanical, 2=207/0-3-8  
Max Horz 2=82(LC 9)  
Max Uplift 8=-37(LC 9), 2=-33(LC 12)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-6-0, Exterior(2) 2-6-0 to 4-0-0 zone; cantilever left and right exposed; 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
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Refer to girder(s) for truss to truss connections.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 2. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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|               |             |                         |          |          |                     |           |
|---------------|-------------|-------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>J5 | Truss Type<br>Jack-Open | Qty<br>4 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940021 |
|---------------|-------------|-------------------------|----------|----------|---------------------|-----------|

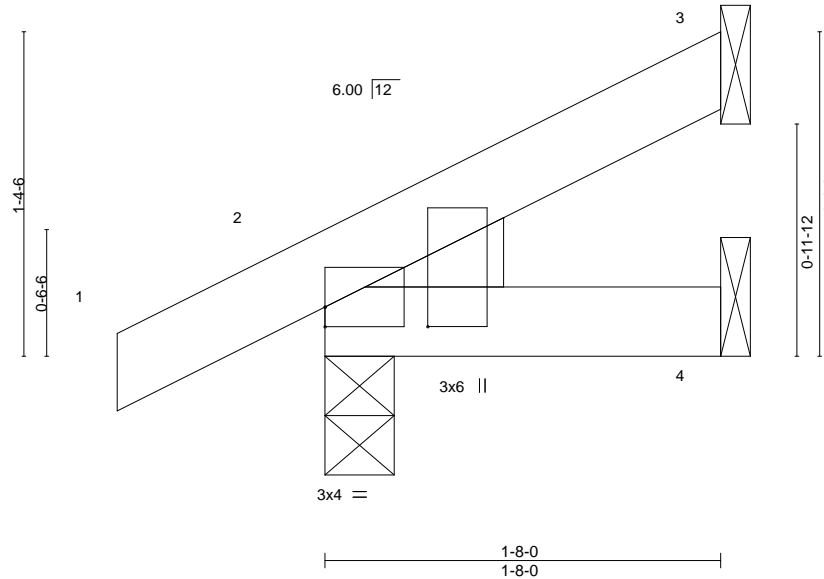
84 Components (Dunn), Dunn, NC - 28334,

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Scale = 1:9.7



|                       |                                  |
|-----------------------|----------------------------------|
| Plate Offsets (X,Y)-- | [2:0-0-0,0-1-0], [2:0-1-0,0-5-3] |
|-----------------------|----------------------------------|

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d  | PLATES       | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|------|--------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.05  | Vert(LL) | -0.00    | 2      | >999 | MT20         | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.03  | Vert(CT) | -0.00    | 2      | >999 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | -0.00    | 3      | n/a  |              |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-P |          |          |        |      | Weight: 8 lb | FT = 20% |

| LUMBER-               | BRACING-  |
|-----------------------|---|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 1-8-0 oc purlins. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.            |
| WEDGE                 |   |
| Left: 2x4 SP No.3     |   |

**REACTIONS.** (lb/size) 3=34/Mechanical, 2=134/0-3-8, 4=16/Mechanical  
 Max Horz 2=48(LC 12)  
 Max Uplift 3=-29(LC 12), 2=-24(LC 12)  
 Max Grav 3=34(LC 1), 2=134(LC 1), 4=33(LC 3)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; 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
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3.
  - 6) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.



October 17, 2019

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

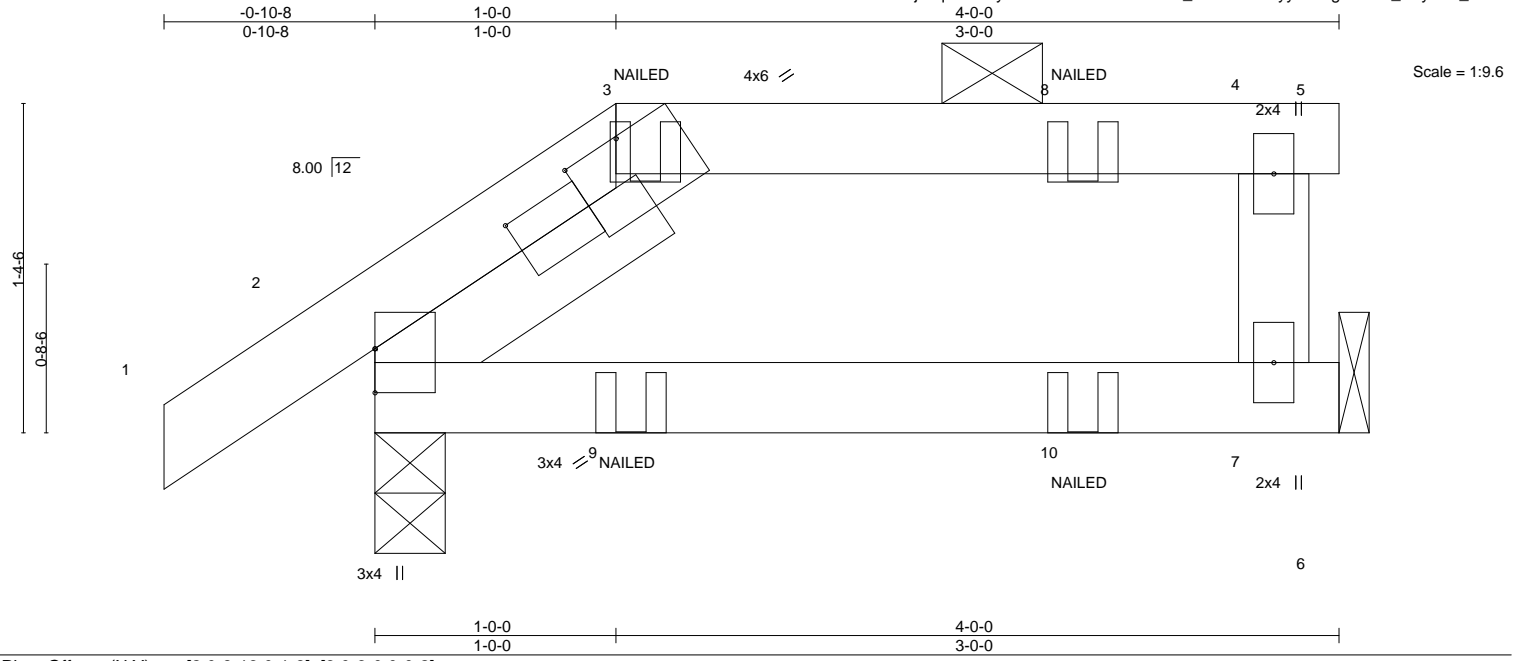
818 Soundside Road  
 Edenton, NC 27932

|               |             |                                |          |          |                     |           |
|---------------|-------------|--------------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>JG | Truss Type<br>Jack-Open Girder | Qty<br>2 | Ply<br>1 | 148.1869.C.8x26'8cp | I38940022 |
|---------------|-------------|--------------------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:23 2019 Page 1

ID:0ckUA53Thu5GUjfqQCaouPyZBFs-LcRIUnF2YMeB7l\_aYkRStkNxyW3KgBwLrQ\_CJySo2\_



|                       |                                   |
|-----------------------|-----------------------------------|
| Plate Offsets (X,Y)-- | [2:0-8-13,0-1-8], [3:0-3-0,0-0-2] |
|-----------------------|-----------------------------------|

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.19  | Vert(LL) | -0.01 | 2-7   | >999   | 240 | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.11  | Vert(CT) | -0.01 | 2-7   | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.00  | Horz(CT) | 0.00  | 7     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-R |          |       |       |        |     | Weight: 17 lb | FT = 20% |

| LUMBER-                          | BRACING-   |
|----------------------------------|--|
| TOP CHORD 2x4 SP No.2            | TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-5. |
| BOT CHORD 2x4 SP No.2            | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.   |
| WEBS 2x4 SP No.3                 |  |
| SLIDER Left 2x4 SP No.3 -H 1-4-0 |  |

**REACTIONS.** (lb/size) 7=154/Mechanical, 2=207/0-3-8  
 Max Horz 2=44(LC 5)  
 Max Uplift 7=-35(LC 5), 2=-36(LC 8)

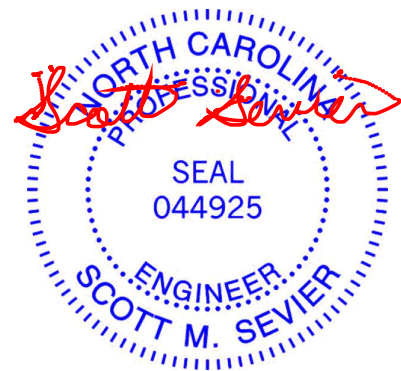
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 2. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-3=-60, 3-4=-60, 4-5=-20, 2-6=-20



October 17, 2019

|               |             |                         |           |          |                     |           |
|---------------|-------------|-------------------------|-----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>P1 | Truss Type<br>Piggyback | Qty<br>19 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940023 |
|---------------|-------------|-------------------------|-----------|----------|---------------------|-----------|

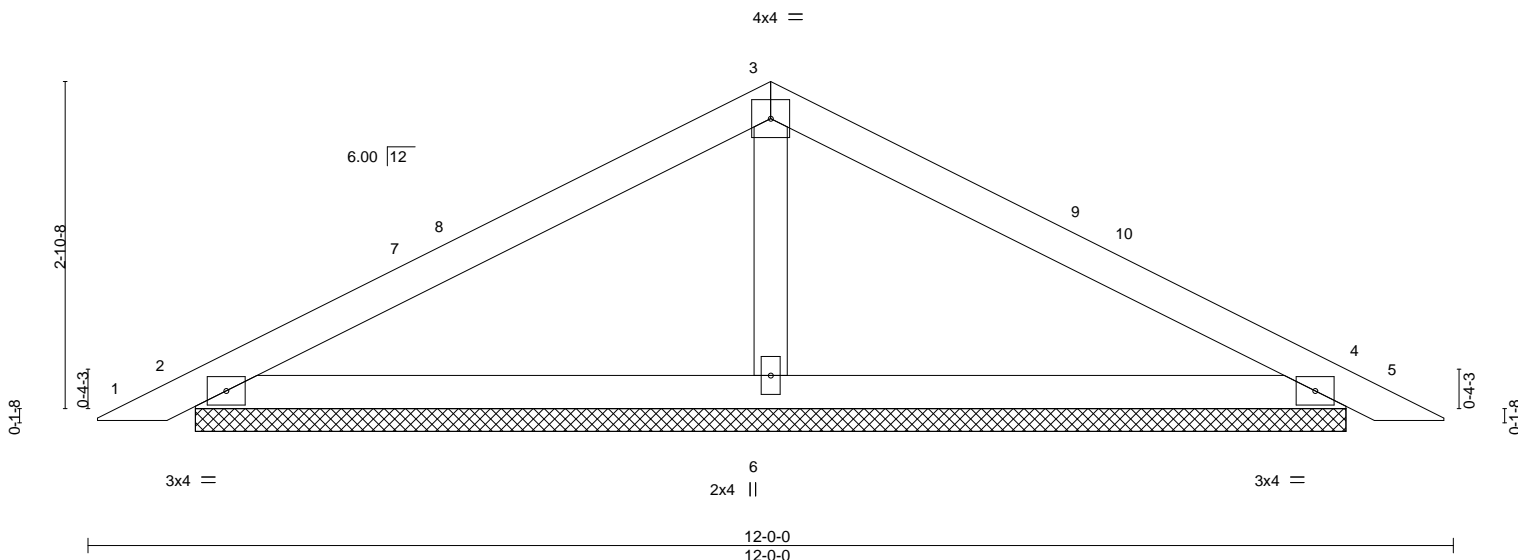
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:23 2019 Page 1

ID:0ckUA53Thu5GUjfqCaouPyZBFs-LcRIUnF2YMeB71\_aYkRStkNvUyUpKfBwLrQ\_CJySo2\_



Scale = 1:20.3



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES | GRIP          |          |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|--------|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.35  | Vert(LL) | 0.01     | 5      | n/r | 120    | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.25  | Vert(CT) | 0.02     | 5      | n/r | 120    |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.06  | Horz(CT) | 0.00     | 4      | n/a | n/a    |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-S |          |          |        |     |        | Weight: 38 lb | FT = 20% |

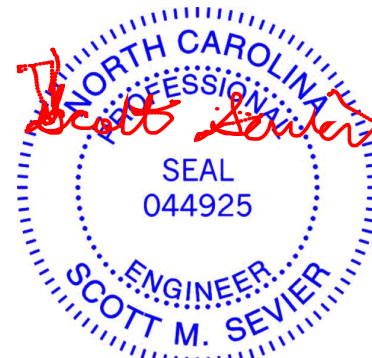
**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.3

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

**REACTIONS.** (lb/size) 2=219/10-1-6, 4=219/10-1-6, 6=437/10-1-6  
 Max Horz 2=47(LC 16)  
 Max Uplift 2=-50(LC 12), 4=-59(LC 13), 6=-19(LC 12)  
 Max Grav 2=221(LC 23), 4=221(LC 24), 6=437(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-6=-284/111

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-4-11 to 3-4-11, Interior(1) 3-4-11 to 6-0-0, Exterior(2) 6-0-0 to 9-0-0, Interior(1) 9-0-0 to 11-7-5 zone; cantilever left and right exposed; 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
  - 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - n/a
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



October 17, 2019

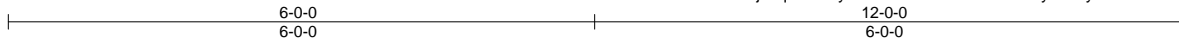
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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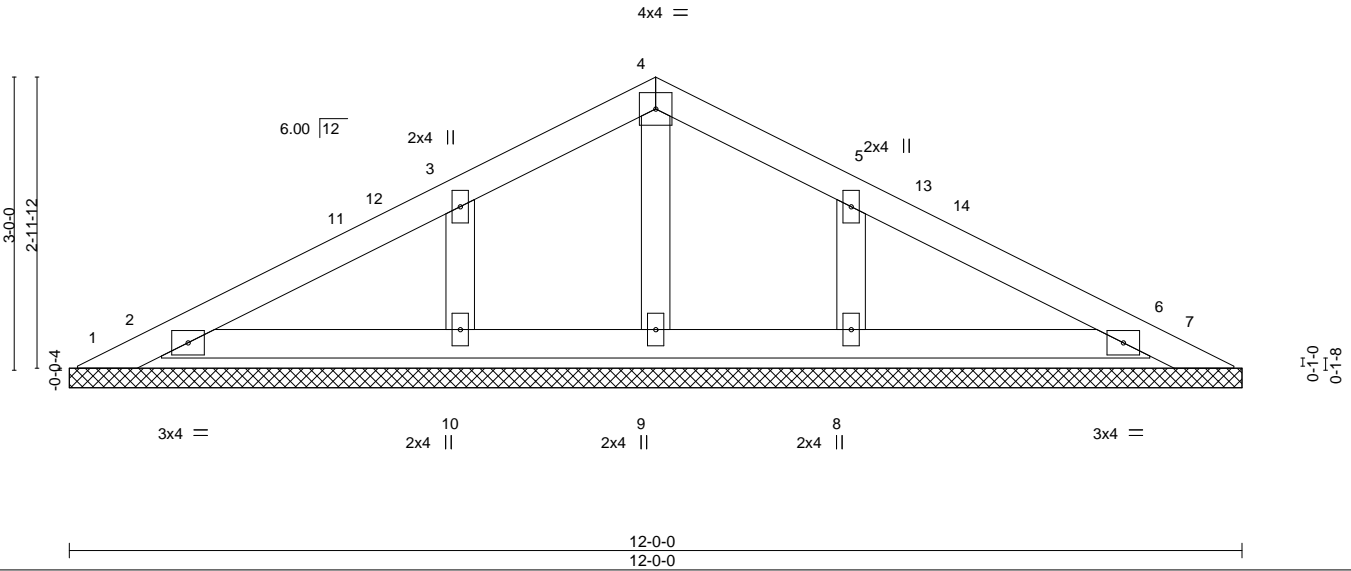


818 Soundside Road  
 Edenton, NC 27932

|   |             |                     |          |          |   |           |
|---|-------------|---------------------|----------|----------|---|-----------|
| Job<br>22358A                           | Truss<br>PE | Truss Type<br>GABLE | Qty<br>2 | Ply<br>1 | 148.1869.C.8x26'8cp   | 138940024 |
| 84 Components (Dunn), Dunn, NC - 28334, |             |                     |          |          | 8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:25 2019 Page 1 |           |
|   |             |                     |          |          | Job Reference (optional)  |           |
|   |             |                     |          |          | ID:0ckUA53Thu5GUjQqCaouPyZBFs-H?ZWVTHI3zuvN28yf9Twy9SInmDFoa7Dp9v5FBySo1y |           |



Scale = 1:23.6



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.11  | Vert(LL) | n/a      | -      | n/a | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.06  | Vert(CT) | n/a      | -      | n/a |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.04  | Horz(CT) | 0.00     | 6      | n/a |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-S |          |          |        |     | Weight: 42 lb | FT = 20% |

| LUMBER-               | BRACING-  |
|-----------------------|---|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.            |
| OTHERS 2x4 SP No.3    |   |

**REACTIONS.** All bearings 12-0-0.  
 (lb) - Max Horz 1=-47(LC 17)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 2, 6, 10, 8  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7, 2, 6, 9, 10, 8

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-4-11 to 3-4-11, Interior(1) 3-4-11 to 6-0-0, Exterior(2) 6-0-0 to 9-0-0, Interior(1) 9-0-0 to 11-7-5 zone; cantilever left and right exposed; 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) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.
- 9) n/a
- 10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



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|               |             |                          |          |          |                     |           |
|---------------|-------------|--------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>T2 | Truss Type<br>ROOF TRUSS | Qty<br>8 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940025 |
|---------------|-------------|--------------------------|----------|----------|---------------------|-----------|

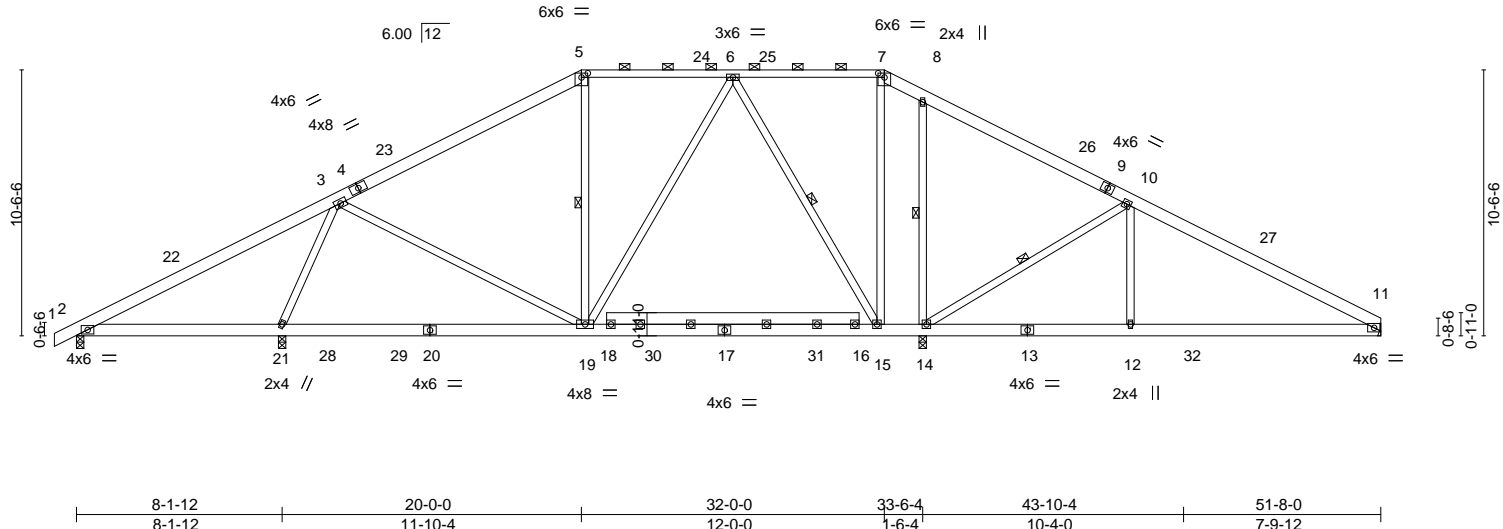
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:26 2019 Page 1

ID:0ckUA53Thu5GUjfQqCaouPyZBFs-mB7u7plwqHOL\_Ci9Ds\_9VN?KgAOIXqxN1pfeoySo1x



Scale = 1:91.3



|                       |                                  |
|-----------------------|----------------------------------|
| Plate Offsets (X,Y)-- | [5:0-3-0,0-2-0], [7:0-3-0,0-2-0] |
|-----------------------|----------------------------------|

|                      |                      |       |             |              |          |        |      |               |                |          |
|----------------------|----------------------|-------|-------------|--------------|----------|--------|------|---------------|----------------|----------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d  | <b>PLATES</b> | <b>GRIP</b>    |          |
| TCLL 20.0            | Plate Grip DOL       | 1.15  | TC 0.67     | Vert(LL)     | -0.10    | 15-19  | >999 | 240           | MT20           | 244/190  |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.65     | Vert(CT)     | -0.19    | 19-21  | >999 | 180           |                |          |
| BCLL 0.0 *           | Rep Stress Incr      | YES   | WB 0.90     | Horz(CT)     | 0.03     | 11     | n/a  | n/a           |                |          |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-S    |              |          |        |      |               |                |          |
|                      |                      |       |             |              |          |        |      |               | Weight: 390 lb | FT = 20% |

|  |  |
|--|--|
| <b>LUMBER-</b>                                     | <b>BRACING-</b>  |
| TOP CHORD 2x6 SP No.2 *Except*<br>5-7: 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins, except<br>2-0-0 oc purlins (6-0-0 max.); 5-7. |
| BOT CHORD 2x6 SP No.2                              | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:<br>6-0-0 oc bracing: 2-21.                        |
| WEBS 2x4 SP No.3                                   | WEBS 1 Row at midpt 5-19, 6-15, 8-14, 10-14  |

**REACTIONS.** All bearings 0-3-8 except (jt=length) 11=Mechanical.  
 (lb) - Max Horz 2=182(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 11 except 21=-195(LC 12), 14=-259(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2 except 21=1669(LC 26), 14=1433(LC 1), 11=877(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-131/434, 3-5=-1057/236, 5-6=-831/278, 6-7=-546/193, 7-8=-700/219,  
 8-10=-633/151, 10-11=-1304/147  
 BOT CHORD 19-21=-120/425, 15-19=-92/829, 14-15=-33/612, 12-14=-10/1088, 11-12=-10/1088  
 WEBS 3-21=-1528/357, 3-19=0/534, 6-15=-591/176, 7-15=-63/325, 8-14=-530/266,  
 10-12=0/384, 10-14=-793/289

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-3-8, Interior(1) 4-3-8 to 20-0-0, Exterior(2) 20-0-0 to 27-3-11, Interior(1) 27-3-11 to 32-0-0, Exterior(2) 32-0-0 to 39-3-11, Interior(1) 39-3-11 to 51-7-4 zone; cantilever left and right exposed; 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
  - Provide adequate drainage to prevent water ponding.
  - All plates are 4x4 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 21, and 14. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



October 17, 2019

|  |  |
|--|--|
| <p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p> | <p>ENGINEERING BY<br/> <b>TRENCO</b><br/>         A MiTek Affiliate</p> <p>818 Soundside Road<br/>         Edenton, NC 27932</p> |
|--|--|



|               |             |                              |          |          |                     |           |
|---------------|-------------|------------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>T3 | Truss Type<br>Piggyback Base | Qty<br>3 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940026 |
|---------------|-------------|------------------------------|----------|----------|---------------------|-----------|

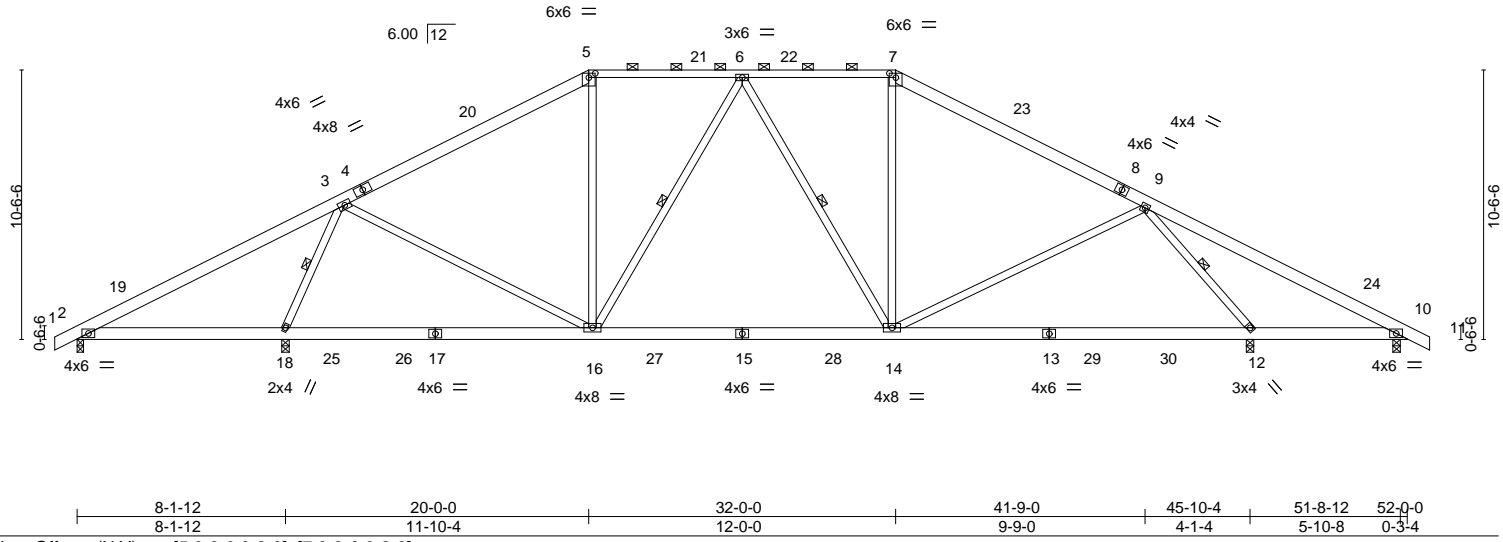
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:27 2019 Page 1

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|         |       |        |        |        |        |        |        |        |        |         |
|---------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| -0-10-8 | 7-0-0 | 10-3-0 | 20-0-0 | 26-0-0 | 32-0-0 | 41-9-0 | 45-0-0 | 47-0-0 | 52-0-0 | 52-10-8 |
| 0-10-8  | 7-0-0 | 3-3-0  | 9-9-0  | 6-0-0  | 6-0-0  | 9-9-0  | 3-3-0  | 2-0-0  | 5-0-0  | 0-10-8  |

Scale = 1:90.1



|                       |                                  |
|-----------------------|----------------------------------|
| Plate Offsets (X,Y)-- | [5:0-3-0,0-2-0], [7:0-3-0,0-2-0] |
|-----------------------|----------------------------------|

|                      |                      |       |             |              |          |        |      |                |             |
|----------------------|----------------------|-------|-------------|--------------|----------|--------|------|----------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d  | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL 20.0            | Plate Grip DOL       | 1.15  | TC 0.68     | Vert(LL)     | -0.21    | 14-16  | >999 | MT20           | 244/190     |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.71     | Vert(CT)     | -0.41    | 12-14  | >999 |                |             |
| BCLL 0.0 *           | Rep Stress Incr      | YES   | WB 0.56     | Horz(CT)     | 0.04     | 12     | n/a  |                |             |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-S    |              |          |        |      |                |             |
|                      |                      |       |             |              |          |        |      | Weight: 362 lb | FT = 20%    |

|  |  |
|--|--|
| <b>LUMBER-</b>                                     | <b>BRACING-</b>  |
| TOP CHORD 2x6 SP No.2 *Except*<br>5-7: 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 5-0-2 oc purlins, except 2-0-0 oc purlins (4-9-4 max.): 5-7. |
| BOT CHORD 2x6 SP No.2                              | BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  |
| WEBS 2x4 SP No.3                                   | WEBS 1 Row at midpt 3-18, 6-16, 6-14, 9-12   |

**REACTIONS.** All bearings 0-3-8 except (jt=length) 2=0-3-0.  
 (lb) - Max Horz 2=175(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 10 except 18=223(LC 12), 12=142(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 10 except 18=2006(LC 1), 12=1819(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-140/421, 3-5=-1465/305, 5-6=-1195/329, 6-7=-1319/344, 7-9=-1605/317, 9-10=-54/324  
 BOT CHORD 16-18=-120/539, 14-16=-54/1340, 12-14=-145/1105  
 WEBS 3-18=-1903/380, 3-16=0/806, 5-16=0/306, 6-16=-428/145, 7-14=0/341, 9-14=0/434, 9-12=-1966/387

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 20-0-0, Exterior(2) 20-0-0 to 24-2-15, Interior(1) 24-2-15 to 32-0-0, Exterior(2) 32-0-0 to 36-2-15, Interior(1) 36-2-15 to 52-10-8 zone; cantilever left and right exposed; 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
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 18, 12, and 10. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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|   |   |
|---|---|
| <p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p> | <p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road<br/>Edenton, NC 27932</p> |
|---|---|

|               |             |                              |          |          |                     |           |
|---------------|-------------|------------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>T4 | Truss Type<br>Piggyback Base | Qty<br>3 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940027 |
|---------------|-------------|------------------------------|----------|----------|---------------------|-----------|

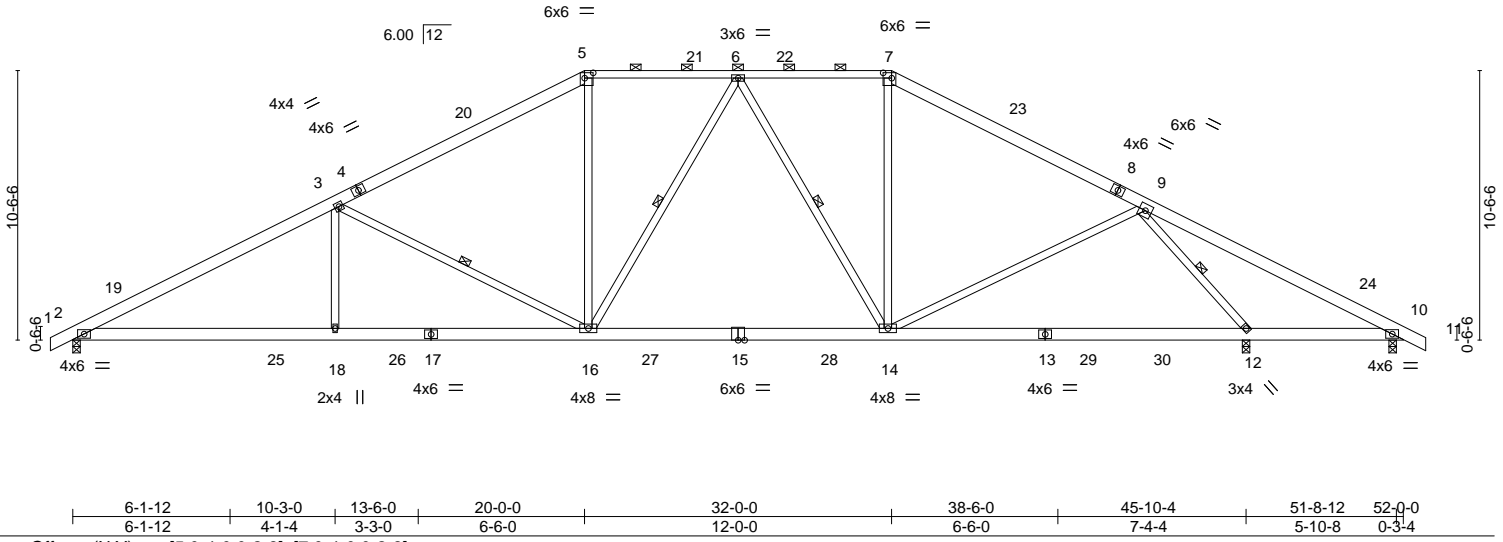
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:28 2019 Page 1

ID:OckUA53Thu5GUJfQqCaouPyZBFs-iaFeXVJAMuGTEWsxLH1dao4fOz21?mcfV78lsWySo1v

|        |       |        |        |        |        |        |        |        |         |
|--------|-------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0-10-8 | 7-0-0 | 13-6-0 | 20-0-0 | 26-0-0 | 32-0-0 | 38-6-0 | 41-9-0 | 52-0-0 | 52-10-8 |
| 0-10-8 | 7-0-0 | 6-6-0  | 6-6-0  | 6-0-0  | 6-0-0  | 6-6-0  | 3-3-0  | 10-3-0 | 0-10-8  |

Scale = 1:90.0



|        |        |        |        |        |        |         |         |        |
|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 6-1-12 | 10-3-0 | 13-6-0 | 20-0-0 | 32-0-0 | 38-6-0 | 45-10-4 | 51-8-12 | 52-0-0 |
| 6-1-12 | 4-1-4  | 3-3-0  | 6-6-0  | 12-0-0 | 6-6-0  | 7-4-4   | 5-10-8  | 0-3-4  |

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

|                      |                      |       |             |              |             |        |     |                |             |
|----------------------|----------------------|-------|-------------|--------------|-------------|--------|-----|----------------|-------------|
| <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 20.0            | Plate Grip DOL       | 1.15  | TC 0.72     | Vert(LL)     | -0.28 14-16 | >999   | 240 | MT20           | 244/190     |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.82     | Vert(CT)     | -0.44 14-16 | >999   | 180 |                |             |
| BCLL 0.0 *           | Rep Stress Incr      | YES   | WB 0.76     | Horz(CT)     | 0.10 12     | n/a    | n/a |                |             |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-S    |              |             |        |     | Weight: 361 lb | FT = 20%    |

|  |  |
|--|--|
| <b>LUMBER-</b>                                     | <b>BRACING-</b>  |
| TOP CHORD 2x6 SP No.2 *Except*<br>5-7: 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 3-2-7 oc purlins, except 2-0-0 oc purlins (3-9-2 max.): 5-7. |
| BOT CHORD 2x6 SP No.2                              | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:   |
| WEBS 2x4 SP No.3                                   | 6-0-0 oc bracing: 10-12.<br>1 Row at midpt 3-16, 6-16, 6-14, 9-12  |

**REACTIONS.** (lb/size) 2=1856/0-3-8, 12=2440/0-3-8, 10=-36/0-3-8  
 Max Horz 2=-175(LC 13)  
 Max Uplift 2=-216(LC 12), 12=-142(LC 13), 10=-212(LC 25)  
 Max Grav 2=1856(LC 1), 12=2440(LC 1), 10=40(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3332/422, 3-5=-2388/407, 5-6=-2029/426, 6-7=-1717/383, 7-9=-2044/362,  
 9-10=-115/834  
 BOT CHORD 2-18=-351/2887, 16-18=-351/2887, 14-16=-89/1951, 12-14=-141/1101, 10-12=-614/171  
 WEBS 3-16=-993/334, 5-16=-14/654, 6-14=-615/168, 7-14=0/523, 9-14=-7/844,  
 9-12=-2731/473, 3-18=0/430

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 20-0-0, Exterior(2) 20-0-0 to 24-2-15, Interior(1) 24-2-15 to 32-0-0, Exterior(2) 32-0-0 to 36-2-15, Interior(1) 36-2-15 to 52-10-8 zone; cantilever left and right exposed; 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
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 12, and 10. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



October 17, 2019

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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

|               |             |                          |          |          |                     |           |
|---------------|-------------|--------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>T5 | Truss Type<br>ROOF TRUSS | Qty<br>5 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940028 |
|---------------|-------------|--------------------------|----------|----------|---------------------|-----------|

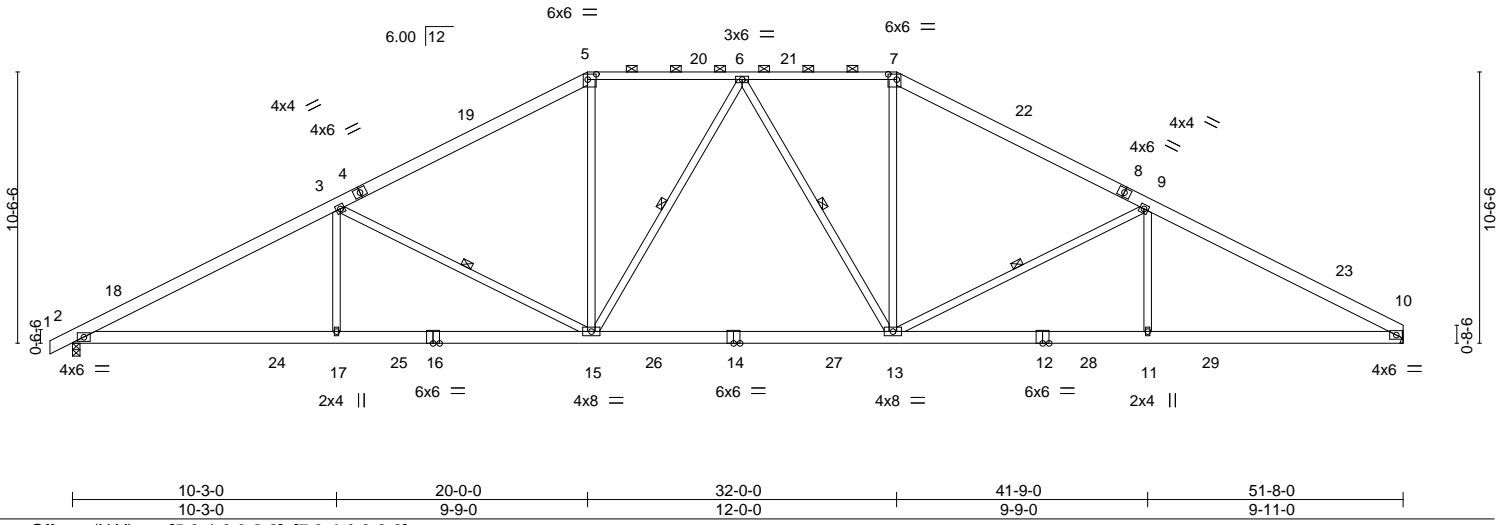
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:29 2019 Page 1

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Scale = 1:89.5



|                      |                      |       |            |              |          |        |      |                |             |
|----------------------|----------------------|-------|------------|--------------|----------|--------|------|----------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING</b>       | 2-0-0 | <b>CSI</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d  | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL 20.0            | Plate Grip DOL       | 1.15  | TC 0.88    | Vert(LL)     | -0.37    | 13-15  | >999 | MT20           | 244/190     |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.93    | Vert(CT)     | -0.65    | 13-15  | >943 |                |             |
| BCLL 0.0 *           | Rep Stress Incr      | YES   | WB 0.62    | Horz(CT)     | 0.17     | 10     | n/a  |                |             |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-S   |              |          |        |      |                |             |
|                      |                      |       |            |              |          |        |      | Weight: 354 lb | FT = 20%    |

|  |  |
|--|--|
| <b>LUMBER-</b>   | <b>BRACING-</b>  |
| TOP CHORD 2x6 SP No.2 *Except*<br>5-7: 2x4 SP No.2   | TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-3-3 max.): 5-7. |
| BOT CHORD 2x6 SP No.2  | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:   |
| WEBS 2x4 SP No.3   | WEBS 2-2-0 oc bracing: 13-15.<br>1 Row at midpt 3-15, 6-15, 6-13, 9-13   |
| <b>REACTIONS.</b> (lb/size) 2=2120/0-3-8, 10=2058/Mechanical<br>Max Horz 2=182(LC 16)<br>Max Uplift 2=220(LC 12), 10=-196(LC 13) |  |

|  |
|--|
| <b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.                            |
| TOP CHORD 2-3=-3912/480, 3-5=-2995/461, 5-6=-2574/476, 6-7=-2564/472, 7-9=-2983/463,<br>9-10=-3861/472                 |
| BOT CHORD 2-17=-367/3417, 15-17=-367/3417, 13-15=-177/2643, 11-13=-324/3356, 10-11=-324/3356                           |
| WEBS 3-15=-983/337, 5-15=-39/921, 6-15=-372/172, 6-13=-389/171, 7-13=-42/915,<br>9-13=-931/334, 3-17=0/419, 9-11=0/415 |

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 20-0-0, Exterior(2) 20-0-0 to 24-2-15, Interior(1) 24-2-15 to 32-0-0, Exterior(2) 32-0-0 to 36-2-15, Interior(1) 36-2-15 to 51-7-4 zone; cantilever left and right exposed; 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) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=196.
  - 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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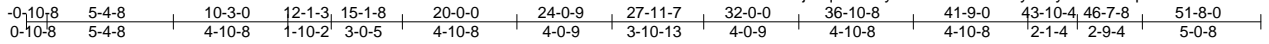
818 Soundside Road  
Edenton, NC 27932

|               |              |                                    |          |          |                     |           |
|---------------|--------------|------------------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>TG1 | Truss Type<br>PIGGYBACK BASE GIRDE | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940029 |
|---------------|--------------|------------------------------------|----------|----------|---------------------|-----------|

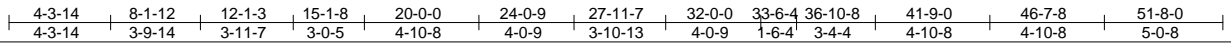
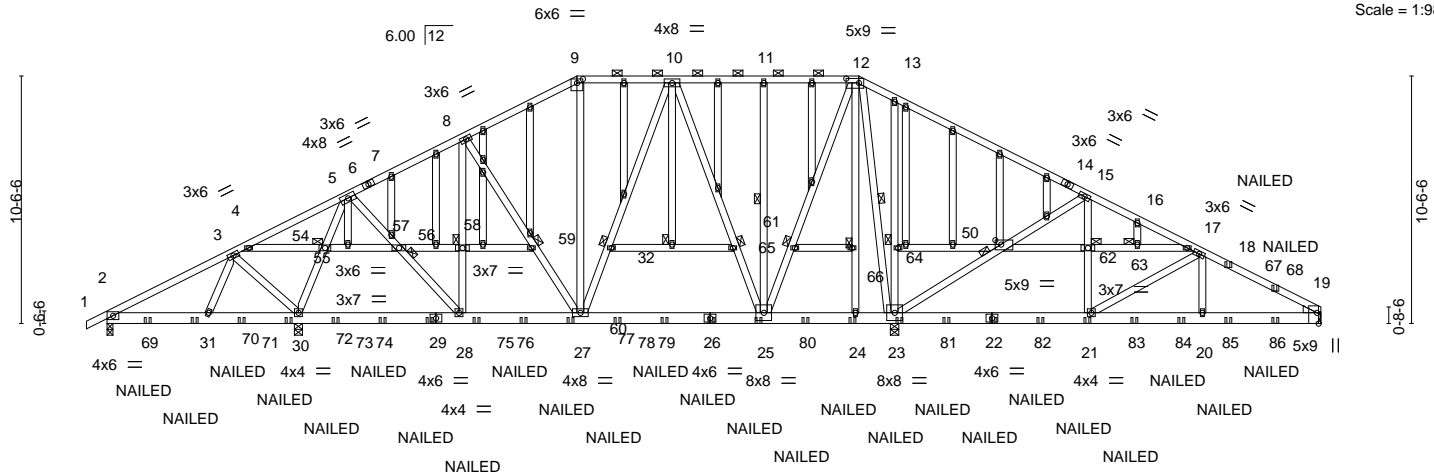
84 Components (Dunn), Dunn, NC - 28334,

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Scale = 1:98.1



|                        |  |
|------------------------|--|
| Plate Offsets (X, Y)-- | [9:0-3-0,0-2-0], [12:0-6-8,0-2-4], [19:0-0-8,0-1-0], [19:0-1-0,0-6-11], [19:0-5-8,Edge], [50:0-0-8,0-1-12], [50:0-3-0,0-2-4] |
|------------------------|--|

| LOADING (psf) | SPACING-             | CSI.     | DEFL.                         | PLATES         | GRIP     |
|---------------|----------------------|----------|-------------------------------|----------------|----------|
| TCLL 20.0     | Plate Grip DOL 1.15  | TC 0.76  | in (loc) l/defl L/d           | MT20           | 244/190  |
| TCDL 10.0     | Lumber DOL 1.15      | BC 0.70  | Vert(LL) 0.11 25-27 >999 240  |                |          |
| BCLL 0.0 *    | Rep Stress Incr NO   | WB 1.00  | Vert(CT) -0.16 25-27 >999 180 |                |          |
| BCDL 10.0     | Code IRC2015/TPI2014 | Matrix-S | Horz(CT) 0.02 19 n/a n/a      |                |          |
|               |                      |          |                               | Weight: 543 lb | FT = 20% |

| LUMBER-  | BRACING-  |
|--|---|
| TOP CHORD 2x4 SP No.2 *Except*<br>6-9,12-14: 2x4 SP No.1 | TOP CHORD Structural wood sheathing directly applied or 4-3-14 oc purlins, except<br>2-0-0 oc purlins (6-0-0 max.): 9-12. |
| BOT CHORD 2x6 SP No.2                                    | BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.   |
| WEBS 2x4 SP No.3   | WEBS 1 Row at midpt 11-25, 12-23  |
| OTHERS 2x4 SP No.3                                       | JOINTS 1 Brace at Jt(s): 32, 50, 54, 56, 58, 59, 60, 61, 62, 63, 64, 65, 66   |
| WEDGE  |   |
| Right: 2x4 SP No.3                                       |   |

**REACTIONS.** All bearings 0-3-0 except (jt=length) 30=0-4-2 (input: 0-4-2), 23=0-4-5 (input: 0-4-5), 19=Mechanical.  
 (lb) - Max Horz 2=179(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 2 except 30=-970(LC 8), 23=-1250(LC 9), 19=-208(LC 9)  
 Max Grav All reactions 250 lb or less at joint(s) except 2=342(LC 19), 30=2632(LC 19), 23=3655(LC 1), 19=837(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 3-4=-202/438, 4-5=-244/666, 5-7=-1075/384, 7-8=-1033/411, 8-9=-1054/436,  
 9-10=-881/419, 10-11=-454/272, 11-12=-454/272, 12-13=-41/519, 13-15=-176/715,  
 15-16=-672/288, 16-17=-751/284, 17-18=-717/250, 18-19=-1341/369  
 BOT CHORD 28-30=-93/307, 27-28=-304/909, 25-27=-245/726, 24-25=-308/369, 23-24=-313/371,  
 21-23=-86/581, 20-21=-266/1092, 19-20=-266/1092  
 WEBS 3-31=-75/345, 3-30=-491/219, 30-54=-1848/654, 5-54=-1856/656, 5-57=-333/1048,  
 56-57=-327/1023, 28-56=-311/973, 27-60=-236/545, 10-60=-237/546, 10-61=-784/272,  
 25-61=-785/272, 25-65=-610/1747, 12-65=-612/1752, 24-66=-297/94, 12-66=-297/94,  
 23-50=-1318/594, 15-50=-1360/613, 21-62=-336/889, 15-62=-325/873, 18-21=-588/215,  
 18-20=-15/325, 11-25=-259/112, 23-64=-525/315, 13-64=-525/315, 12-23=-1542/536

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.



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**TRENCO** ENGINEERING BY  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

|               |              |                                    |          |          |   |           |
|---------------|--------------|------------------------------------|----------|----------|---|-----------|
| Job<br>22358A | Truss<br>TG1 | Truss Type<br>PIGGYBACK BASE GIRDE | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp<br><br>Job Reference (optional) | I38940029 |
|---------------|--------------|------------------------------------|----------|----------|---|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:34 2019 Page 2  
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**NOTES-**

- 9) Bearings are assumed to be: , Joint 30 User Defined crushing capacity of 425 psi, Joint 19 User Defined crushing capacity of 425 psi.
- 10) Refer to girder(s) for truss to truss connections.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 30=970, 23=1250, 19=208.
- 12) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-9=-60, 9-12=-60, 12-19=-60, 2-19=-20

Concentrated Loads (lb)

Vert: 29=-134(F) 25=-134(F) 24=-134(F) 23=-134(F) 21=-134(F) 22=-134(F) 26=-134(F) 67=-43(F) 68=-41(F) 69=-134(F) 70=-134(F) 71=-134(F) 72=-134(F)

73=-134(F) 74=-134(F) 75=-134(F) 76=-134(F) 77=-134(F) 78=-134(F) 79=-134(F) 80=-134(F) 81=-134(F) 82=-134(F) 83=-134(F) 84=-134(F) 85=-25(F) 86=-27(F)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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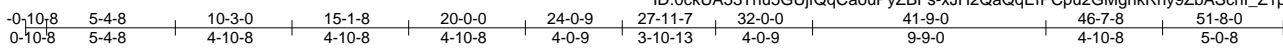


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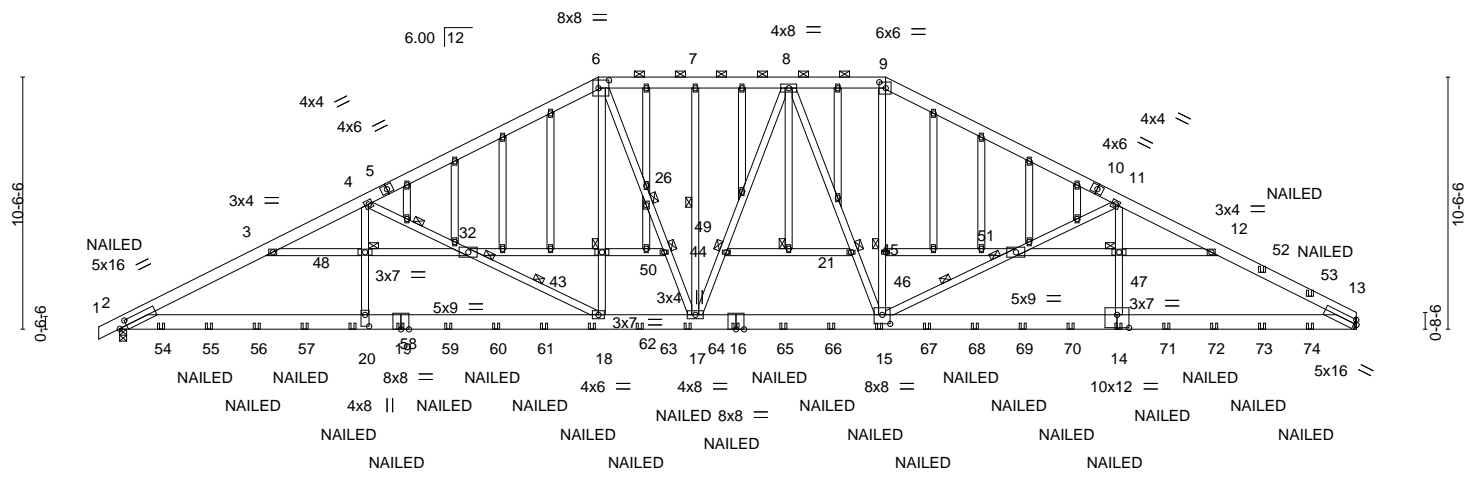
|               |              |                                     |          |          |                     |           |
|---------------|--------------|-------------------------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>TG6 | Truss Type<br>Piggyback Base Girder | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940030 |
|---------------|--------------|-------------------------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:37 2019 Page 1



Scale: 1/8"=1'



|                       |  |
|-----------------------|--|
| Plate Offsets (X,Y)-- | [2:0-3-14,0-2-12], [6:0-5-4,0-4-0], [9:0-3-4,0-3-0], [13:0-1-4,0-2-4], [14:0-6-0,0-6-8], [15:0-4-0,0-4-8], [20:0-5-12,0-2-0] |
|-----------------------|--|

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d  | PLATES         | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|------|----------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.95  | Vert(LL) | 0.38     | 18-20  | >999 | MT20           | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.61  | Vert(CT) | -0.59    | 18-20  | >999 |                |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.92  | Horz(CT) | 0.17     | 13     | n/a  |                |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-S |          |          |        |      |                |          |
|               |                      |       |          |          |          |        |      | Weight: 559 lb | FT = 20% |

| LUMBER-   | BRACING-   |
|---|--|
| TOP CHORD 2x6 SP No.2 *Except<br>5-6,9-10: 2x6 SP DSS | TOP CHORD Structural wood sheathing directly applied or 1-9-4 oc purlins, except<br>2-0-0 oc purlins (3-1-12 max.): 6-9. |
| BOT CHORD 2x8 SP DSS                                  | BOT CHORD Rigid ceiling directly applied or 6-6-5 oc bracing.  |
| WEBS 2x4 SP No.3                                      | WEBS 1 Row at midpt 4-32, 18-32, 7-17, 15-51   |
| OTHERS 2x4 SP No.3                                    | JOINTS 1 Brace at Jt(s): 21, 26, 32, 43, 44, 45, 46, 47, 48, 49, 51  |

**REACTIONS.** (lb/size) 2=3800/0-3-8 (req. 0-3-13), 13=3602/Mechanical  
 Max Horz 2=182(LC 34)  
 Max Uplift 2=-1234(LC 8), 13=-1124(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-7144/2354, 3-4=-6849/2307, 4-6=-5320/1772, 6-7=-4842/1672, 7-8=-4841/1672,  
 8-9=-4678/1661, 9-11=-5321/1768, 11-12=-6679/2221, 12-13=-6939/2248  
 BOT CHORD 2-20=-2182/6282, 18-20=-2162/6247, 17-18=-1461/4707, 15-17=-1432/4788,  
 14-15=-1897/6032, 13-14=-1908/6033  
 WEBS 20-48=-330/962, 4-48=-332/964, 4-32=-1743/783, 18-32=-1728/781, 18-43=-599/1456,  
 6-43=-587/1440, 6-26=-251/637, 26-49=-254/631, 17-49=-249/624, 17-44=-132/291,  
 8-44=-131/292, 8-45=-507/211, 15-45=-507/211, 15-46=-662/1841, 9-46=-663/1842,  
 15-51=-1528/693, 11-51=-1549/694, 14-47=-261/848, 11-47=-262/849

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - WARNING: Required bearing size at joint(s) 2 greater than input bearing size.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=1234, 13=1124.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).



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Continued on page 2

**LOAD CASE(S)** Standard

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**TRENCO**  
ENGINEERING BY  
A MiTek Affiliate

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|               |              |                                     |          |          |   |           |
|---------------|--------------|-------------------------------------|----------|----------|---|-----------|
| Job<br>22358A | Truss<br>TG6 | Truss Type<br>Piggyback Base Girder | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp<br><br>Job Reference (optional) | I38940030 |
|---------------|--------------|-------------------------------------|----------|----------|---|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:38 2019 Page 2  
ID:0ckUA53Thu5GUjfQqCaouPyZBFs-PVrQewRS?zX2Q2dSwNCz\_vUKJ?WhLEY8ohZHDxySo1l

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-6=-60, 6-9=-60, 9-13=-60, 2-13=-20

Concentrated Loads (lb)

Vert: 19=-134(B) 15=-134(B) 14=-134(B) 16=-134(B) 52=-43(B) 53=-41(B) 54=-134(B) 55=-134(B) 56=-134(B) 57=-134(B) 58=-134(B) 59=-134(B) 60=-134(B)  
61=-134(B) 62=-134(B) 63=-134(B) 64=-134(B) 65=-134(B) 66=-134(B) 67=-134(B) 68=-134(B) 69=-134(B) 70=-134(B) 71=-134(B) 72=-134(B) 73=-25(B)  
74=-27(B)

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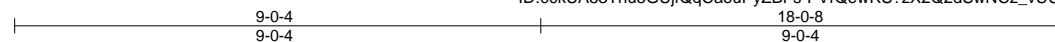
|               |             |                     |          |          |                     |           |
|---------------|-------------|---------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>V1 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | I38940031 |
|---------------|-------------|---------------------|----------|----------|---------------------|-----------|

84 Components (Dunn),

Dunn, NC - 28334,

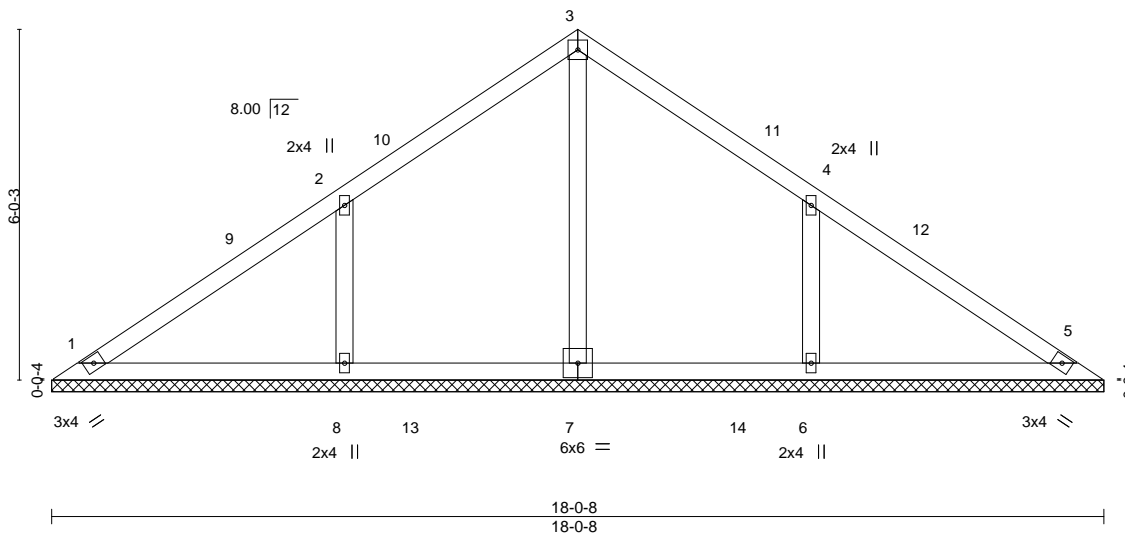
8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:38 2019 Page 1

ID:0ckUA53Thu5GUjfqQCaouPyZBFs-PVrQewRS?zX2Q2dSwNCz\_vUUq?dglLRM8ohZHDxySo1l



4x4 =

Scale = 1:39.5



|                      |                      |       |             |              |          |        |     |               |             |
|----------------------|----------------------|-------|-------------|--------------|----------|--------|-----|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL 20.0            | Plate Grip DOL       | 1.15  | TC 0.28     | Vert(LL)     | n/a      | -      | n/a | MT20          | 244/190     |
| TCDL 10.0            | Lumber DOL           | 1.15  | BC 0.16     | Vert(CT)     | n/a      | -      | n/a |               |             |
| BCLL 0.0 *           | Rep Stress Incr      | YES   | WB 0.10     | Horz(CT)     | 0.00     | 5      | n/a |               |             |
| BCDL 10.0            | Code IRC2015/TPI2014 |       | Matrix-S    |              |          |        |     | Weight: 74 lb | FT = 20%    |

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

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

**REACTIONS.** All bearings 18-0-8.  
 (lb) - Max Horz 1=141(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=168(LC 12), 6=168(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=344(LC 22), 8=462(LC 19), 6=462(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-8=-329/218, 4-6=-329/218

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 9-0-4, Exterior(2) 9-0-4 to 12-0-4, Interior(1) 12-0-4 to 17-6-12 zone; cantilever left and right exposed; 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
  - 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1.



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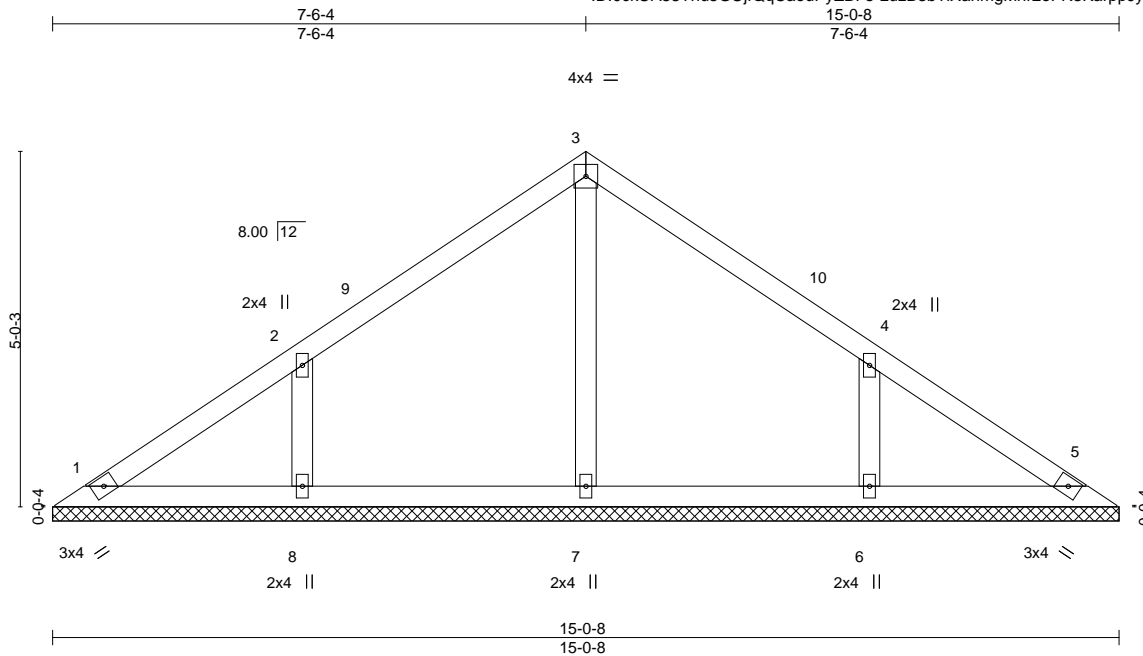


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|   |             |                     |          |          |                          |           |
|---|-------------|---------------------|----------|----------|--------------------------|-----------|
| Job<br>22358A                           | Truss<br>V2 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp      | 138940032 |
| 84 Components (Dunn), Dunn, NC - 28334, |             |                     |          |          | Job Reference (optional) |           |

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:40 2019 Page 1  
 ID:0ckUA53Thu5GUJfQqCaouPyZBFs-LuzB3bTiXanmgMnr2oFR3KarpjyLAQF\_2NHqySo1j



Scale = 1:32.5

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.18  | Vert(LL) | n/a      | -      | n/a | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.11  | Vert(CT) | n/a      | -      | n/a |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.08  | Horz(CT) | 0.00     | 5      | n/a |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-S |          |          |        |     | Weight: 59 lb | FT = 20% |

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

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

**REACTIONS.** All bearings 15-0-8.  
 (lb) - Max Horz 1=-116(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-139(LC 12), 6=-139(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=257(LC 1), 8=353(LC 19), 6=353(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-8=-272/181, 4-6=-271/181

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-6-4, Interior(1) 3-6-4 to 7-6-4, Exterior(2) 7-6-4 to 10-6-4, Interior(1) 10-6-4 to 14-6-12 zone; cantilever left and right exposed; 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
  - 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1.



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|               |             |                     |          |          |                     |           |
|---------------|-------------|---------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>V3 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940033 |
|---------------|-------------|---------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

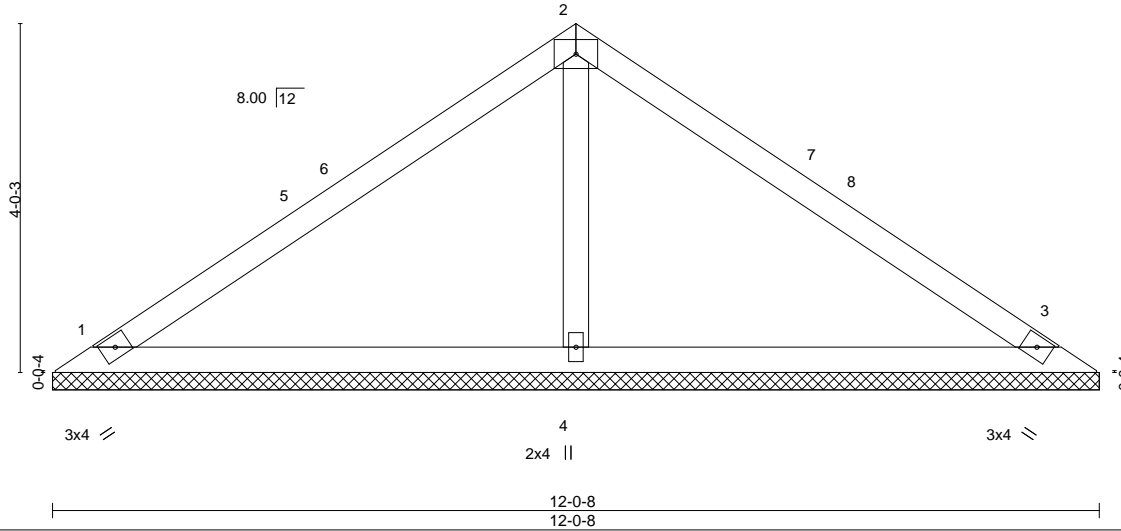
8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:41 2019 Page 1

ID:0ckUA53Thu5GUjfQqCaouPyZBFs-q4XZGxTKIuvdHWM1bWmgcX6xPCc9YoGaUenxqGySo1i



4x6 =

Scale = 1:26.5



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.45  | Vert(LL) | n/a      | -      | n/a | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.31  | Vert(CT) | n/a      | -      | n/a |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.09  | Horz(CT) | 0.00     | 3      | n/a |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-S |          |          |        |     | Weight: 43 lb | FT = 20% |

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

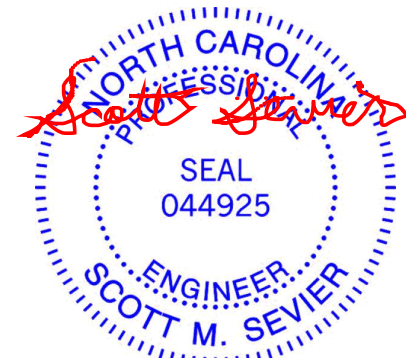
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=218/12-0-8, 3=218/12-0-8, 4=450/12-0-8  
 Max Horz 1=-91(LC 8)  
 Max Uplift 1=-41(LC 12), 3=-53(LC 13), 4=-14(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-286/87

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 6-0-4, Exterior(2) 6-0-4 to 9-0-4, Interior(1) 9-0-4 to 11-6-12 zone; cantilever left and right exposed; 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) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



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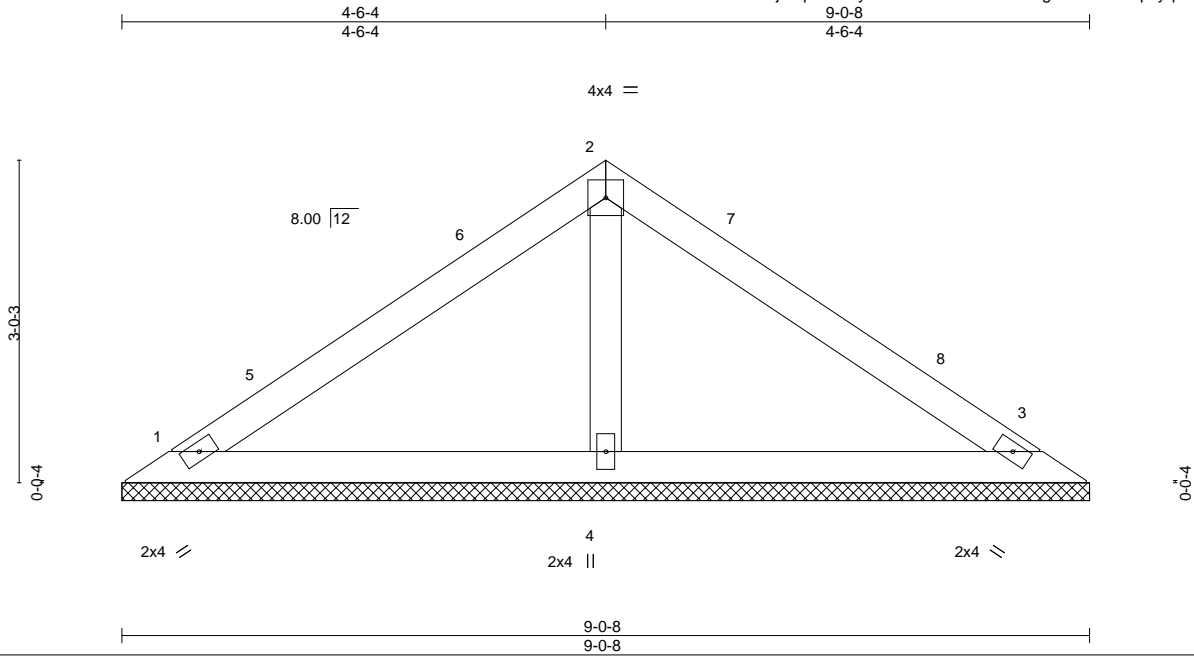


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|               |             |                     |          |          |                     |           |
|---------------|-------------|---------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>V4 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940034 |
|---------------|-------------|---------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:42 2019 Page 1  
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| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES | GRIP          |          |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|--------|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.53  | Vert(LL) | n/a      | -      | n/a | 999    | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.28  | Vert(CT) | n/a      | -      | n/a | 999    |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.05  | Horz(CT) | 0.00     | 3      | n/a | n/a    |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-P |          |          |        |     |        | Weight: 31 lb | FT = 20% |

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

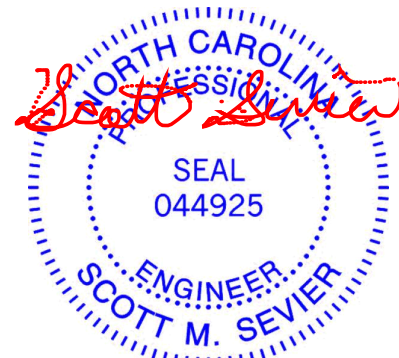
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=173/9-0-8, 3=173/9-0-8, 4=300/9-0-8  
 Max Horz 1=-67(LC 8)  
 Max Uplift 1=-38(LC 12), 3=-47(LC 13)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 4-6-4, Exterior(2) 4-6-4 to 7-6-4, Interior(1) 7-6-4 to 8-6-12 zone; cantilever left and right exposed; 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
- 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



October 17, 2019

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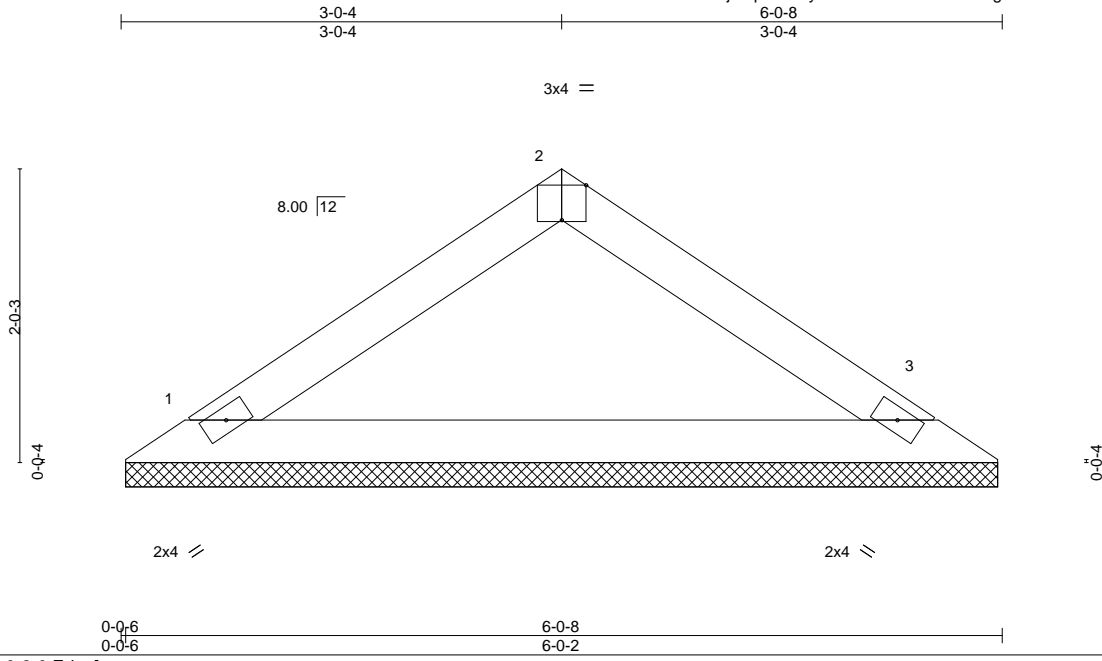


818 Soundside Road  
 Edenton, NC 27932

|               |             |                      |          |          |                     |           |
|---------------|-------------|----------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>V5 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | I38940035 |
|---------------|-------------|----------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:42 2019 Page 1  
ID:0ckUA53Thu5GUjfQqCaouPyZBFs-IG5xUHUz3B1UvgxE9DHv8lfCMcx1HGujjXUMiySo1h



Scale = 1:15.8

|                       |                      |          |             |              |          |        |     |               |             |
|-----------------------|----------------------|----------|-------------|--------------|----------|--------|-----|---------------|-------------|
| Plate Offsets (X,Y)-- | [2'-0"-2'-0",Edge]   |          |             |              |          |        |     |               |             |
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | 2'-0"-0" | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL 20.0             | Plate Grip DOL       | 1.15     | TC 0.12     | Vert(LL)     | n/a      | -      | n/a | MT20          | 244/190     |
| TCDL 10.0             | Lumber DOL           | 1.15     | BC 0.33     | Vert(CT)     | n/a      | -      | n/a |               |             |
| BCLL 0.0 *            | Rep Stress Incr      | YES      | WB 0.00     | Horz(CT)     | 0.00     | 3      | n/a |               |             |
| BCDL 10.0             | Code IRC2015/TPI2014 |          | Matrix-P    |              |          |        |     | Weight: 18 lb | FT = 20%    |

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

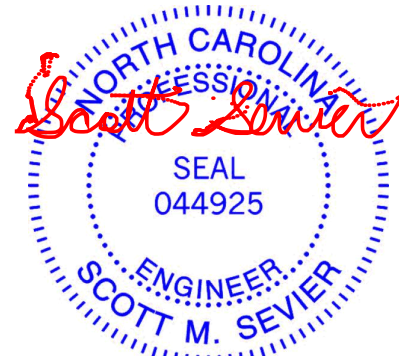
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6'-0" oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.

**REACTIONS.** (lb/size) 1=203/5-11-12, 3=203/5-11-12  
Max Horz 1=-42(LC 8)  
Max Uplift 1=-22(LC 12), 3=-22(LC 13)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; 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
- 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 20.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 2'-0" wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



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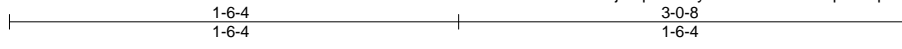
818 Soundside Road  
Edenton, NC 27932

|               |             |                      |          |          |                     |           |
|---------------|-------------|----------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>V6 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940036 |
|---------------|-------------|----------------------|----------|----------|---------------------|-----------|

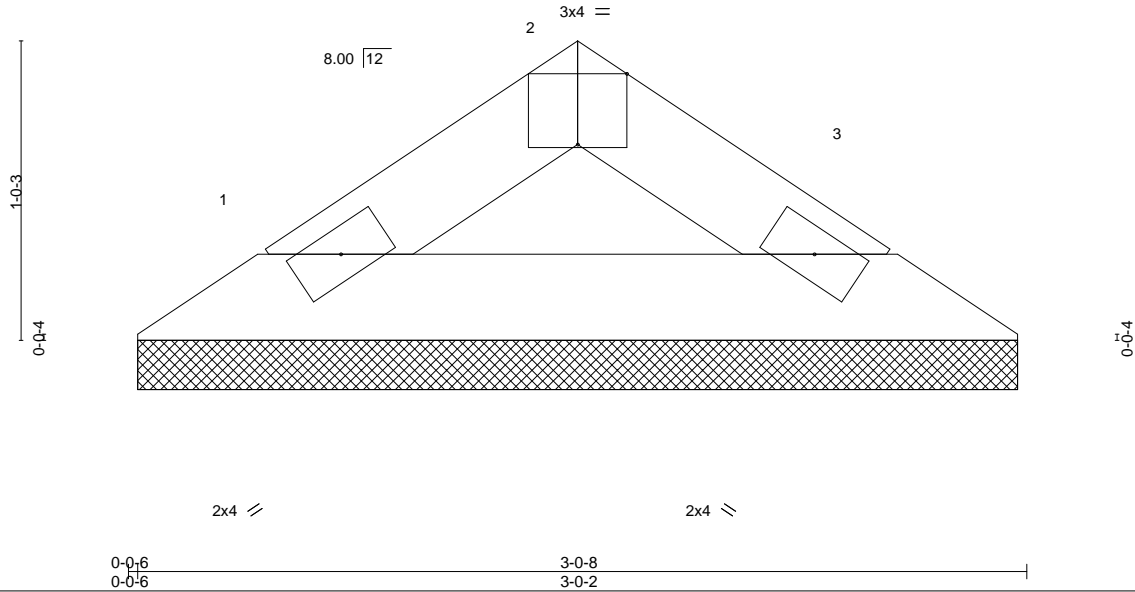
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:43 2019 Page 1

ID:0ckUA53Thu5GUjQCaouPyZBFs-mTfJhdVbqV9LXpWQjwo8hyCOT0L50j8tyyG1u9ySo1g



Scale = 1:7.8



| Plate Offsets (X,Y)-- | [2-0-2-0,Edge]       |       |             |              |      |       |        |     |               |             |
|-----------------------|----------------------|-------|-------------|--------------|------|-------|--------|-----|---------------|-------------|
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in   | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL 20.0             | Plate Grip DOL       | 1.15  | TC 0.03     | Vert(LL)     | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| TCDL 10.0             | Lumber DOL           | 1.15  | BC 0.08     | Vert(CT)     | n/a  | -     | n/a    | 999 |               |             |
| BCLL 0.0 *            | Rep Stress Incr      | YES   | WB 0.00     | Horz(CT)     | 0.00 | 3     | n/a    | n/a |               |             |
| BCDL 10.0             | Code IRC2015/TPI2014 |       | Matrix-P    |              |      |       |        |     | Weight: 8 lb  | FT = 20%    |

| <b>LUMBER-</b> |             | <b>BRACING-</b> |   |
|----------------|-------------|-----------------|---|
| TOP CHORD      | 2x4 SP No.3 | TOP CHORD       | Structural wood sheathing directly applied or 3-0-8 oc purlins. |
| BOT CHORD      | 2x4 SP No.3 | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.            |

**REACTIONS.** (lb/size) 1=83/2-11-12, 3=83/2-11-12  
 Max Horz 1=-17(LC 8)  
 Max Uplift 1=-9(LC 12), 3=-9(LC 13)

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; 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) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



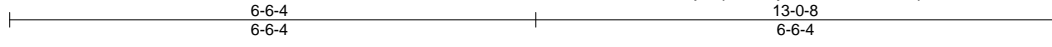
October 17, 2019

|               |             |                     |          |          |                          |           |
|---------------|-------------|---------------------|----------|----------|--------------------------|-----------|
| Job<br>22358A | Truss<br>V7 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp      | 138940037 |
|               |             |                     |          |          | Job Reference (optional) |           |

84 Components (Dunn), Dunn, NC - 28334,

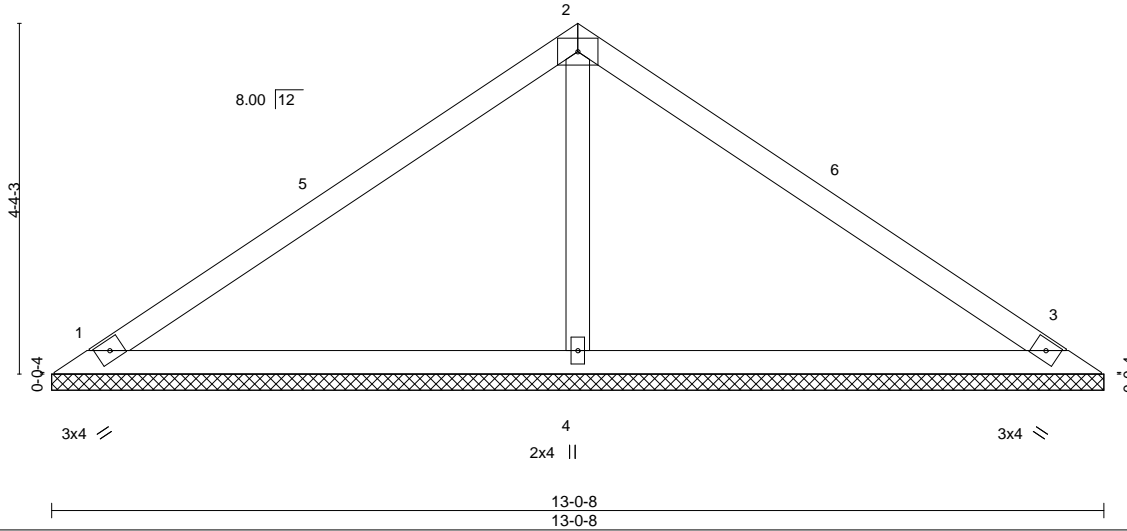
8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:44 2019 Page 1

ID:0ckUA53Thu5GUjfQqCaouPyZBFs-EfCiuzWDbpHC8z5cHeJNDakR3QdyI9i0Ac0bQbySo1f



4x6 =

Scale = 1:28.6



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.55  | Vert(LL) | n/a      | -      | n/a | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.36  | Vert(CT) | n/a      | -      | n/a |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.11  | Horz(CT) | 0.00     | 3      | n/a |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-S |          |          |        |     | Weight: 46 lb | FT = 20% |

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

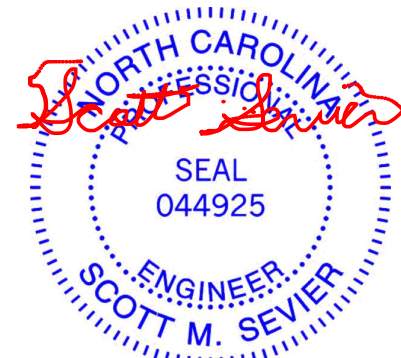
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=238/13-0-8, 3=238/13-0-8, 4=491/13-0-8  
 Max Horz 1=-100(LC 8)  
 Max Uplift 1=-44(LC 12), 3=-57(LC 13), 4=-16(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-312/92

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 6-6-4, Exterior(2) 6-6-4 to 9-6-4, Interior(1) 9-6-4 to 12-6-12 zone; cantilever left and right exposed; 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) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



October 17, 2019

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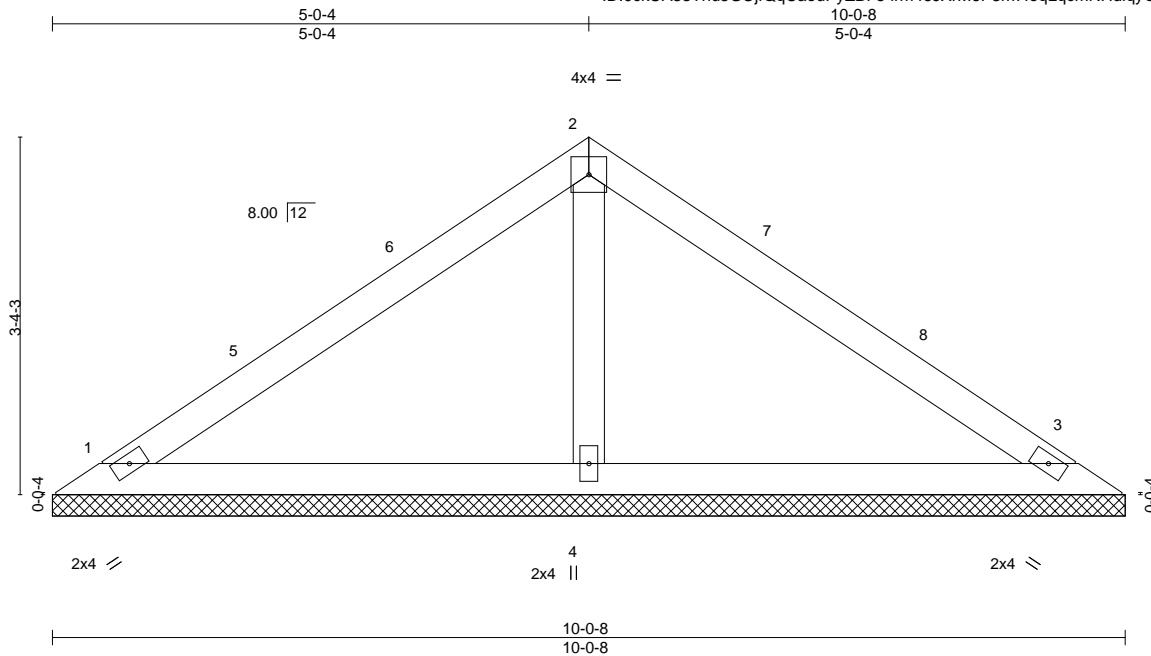


818 Soundside Road  
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|               |             |                     |          |          |                     |           |
|---------------|-------------|---------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>V8 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940038 |
|---------------|-------------|---------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:45 2019 Page 1  
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| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES | GRIP          |          |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|--------|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.49  | Vert(LL) | n/a      | -      | n/a | 999    | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.35  | Vert(CT) | n/a      | -      | n/a | 999    |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.06  | Horz(CT) | 0.00     | 3      | n/a | n/a    |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-S |          |          |        |     |        | Weight: 35 lb | FT = 20% |

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

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

**REACTIONS.** (lb/size) 1=177/10-0-8, 3=177/10-0-8, 4=372/10-0-8  
 Max Horz 1=-75(LC 8)  
 Max Uplift 1=-33(LC 12), 3=-43(LC 13), 4=-13(LC 12)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 5-0-4, Exterior(2) 5-0-4 to 8-0-4, Interior(1) 8-0-4 to 9-6-12 zone; cantilever left and right exposed; 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
- 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



October 17, 2019

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|               |             |                      |          |          |                     |           |
|---------------|-------------|----------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>V9 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | 138940039 |
|---------------|-------------|----------------------|----------|----------|---------------------|-----------|

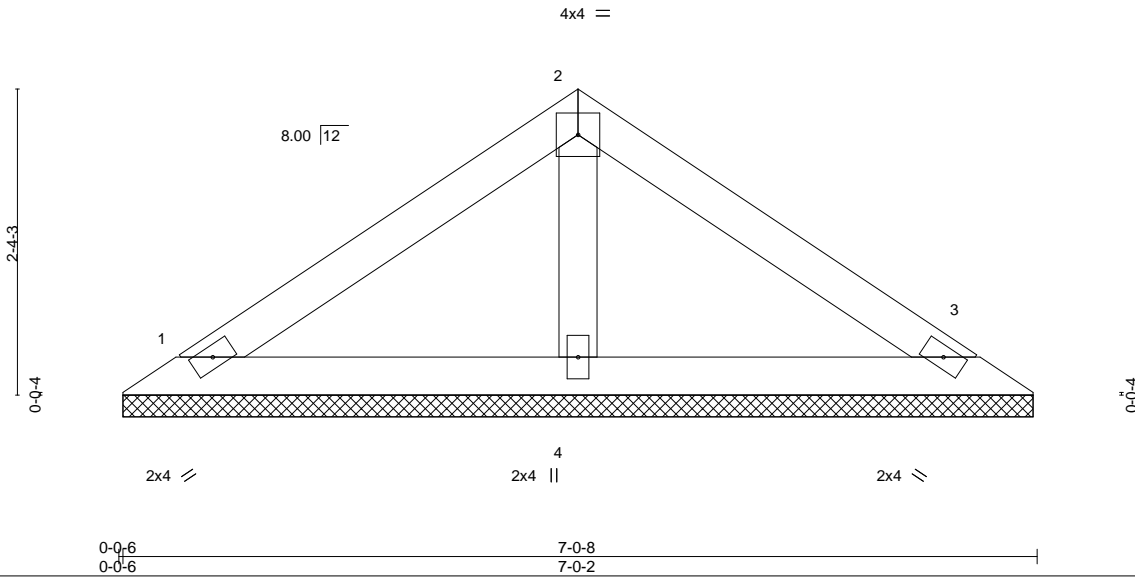
84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:46 2019 Page 1

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Scale = 1:17.7



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES | GRIP          |          |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|--------|---------------|----------|
| TCLL 20.0     | Plate Grip DOL       | 1.15  | TC 0.29  | Vert(LL) | n/a      | -      | n/a | 999    | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL           | 1.15  | BC 0.16  | Vert(CT) | n/a      | -      | n/a | 999    |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.03  | Horz(CT) | 0.00     | 3      | n/a | n/a    |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 |       | Matrix-P |          |          |        |     |        | Weight: 24 lb | FT = 20% |

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

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

**REACTIONS.** (lb/size) 1=130/6-11-12, 3=130/6-11-12, 4=226/6-11-12  
 Max Horz 1=-50(LC 8)  
 Max Uplift 1=-29(LC 12), 3=-36(LC 13)

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; 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) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



October 17, 2019

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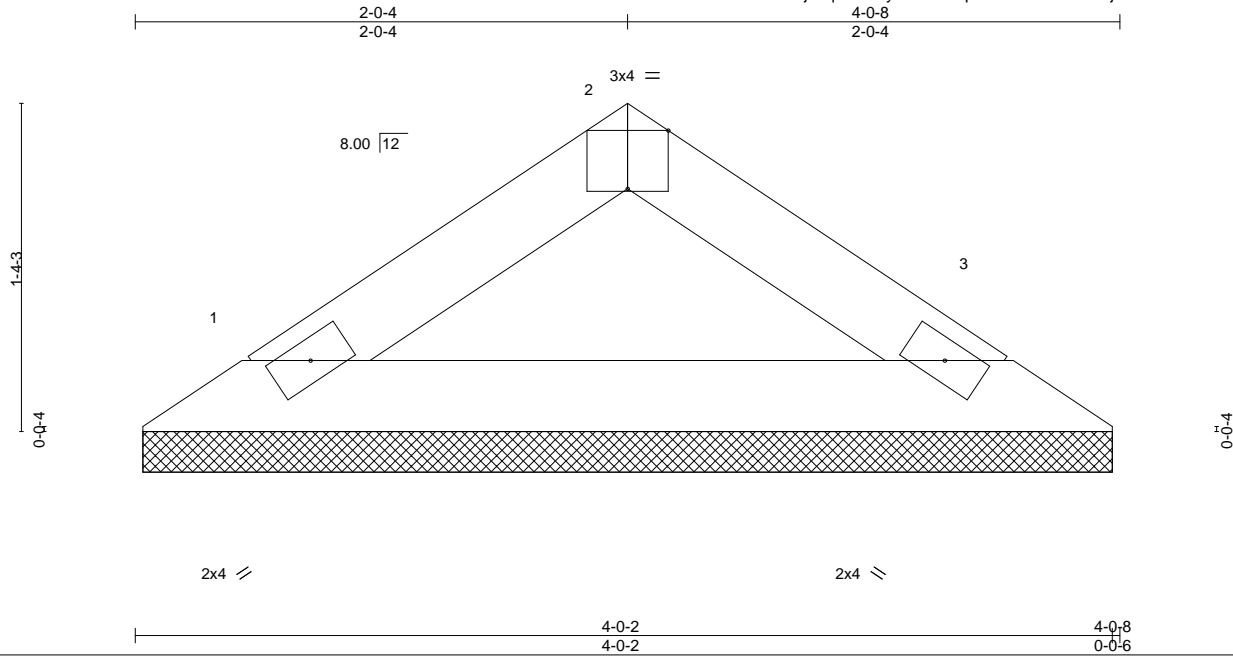
818 Soundside Road  
 Edenton, NC 27932



|               |              |                      |          |          |                     |           |
|---------------|--------------|----------------------|----------|----------|---------------------|-----------|
| Job<br>22358A | Truss<br>V10 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | 148.1869.C.8x26'8cp | I38940040 |
|---------------|--------------|----------------------|----------|----------|---------------------|-----------|

84 Components (Dunn), Dunn, NC - 28334,

8.320 s Oct 9 2019 MiTek Industries, Inc. Wed Oct 16 15:54:39 2019 Page 1  
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Scale = 1:9.5

| LOADING (psf) | SPACING-             | CSI.     | DEFL.                   | PLATES        | GRIP     |
|---------------|----------------------|----------|-------------------------|---------------|----------|
| TCLL 20.0     | Plate Grip DOL 2-0-0 | TC 0.07  | in (loc) l/defl L/d     | MT20          | 244/190  |
| TCDL 10.0     | Lumber DOL 1.15      | BC 0.19  | Vert(LL) n/a - n/a 999  |               |          |
| BCLL 0.0 *    | Rep Stress Incr YES  | WB 0.00  | Vert(CT) n/a - n/a 999  |               |          |
| BCDL 10.0     | Code IRC2015/TPI2014 | Matrix-P | Horz(CT) 0.00 3 n/a n/a |               |          |
|               |                      |          |                         | Weight: 11 lb | FT = 20% |

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-0-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=123/3-11-12, 3=123/3-11-12  
Max Horz 1=-25(LC 8)  
Max Uplift 1=-13(LC 12), 3=-13(LC 13)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; 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
- 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



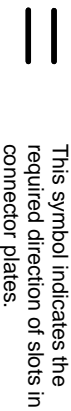
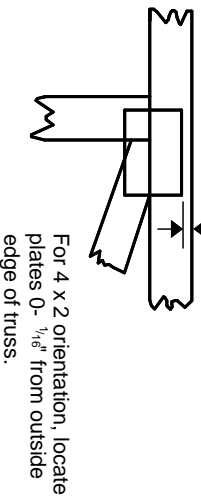
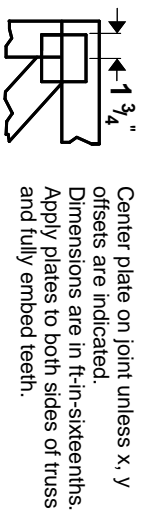
October 17, 2019

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

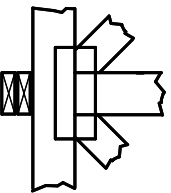
4 X 4

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

## LATERAL BRACING LOCATION



## BEARING

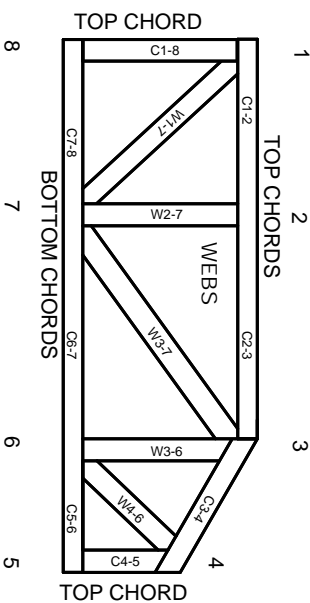


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

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

# Numbering System



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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MITek Engineering Reference Sheet: MII-7473 rev. 10/03/2015



# General Safety Notes

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

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