



RE: W1 18  
Lot 18 W1

**MiTek USA, Inc.**

16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314-434-1200

**Site Information:**

Customer: Project Name: W1 18  
Lot/Block:  
Address:  
City:

Model:  
Subdivision:  
State:



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

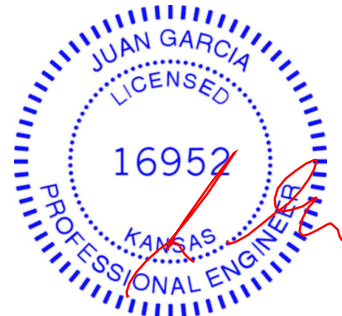
Design Code: IRC2018/TPI2014  
Wind Code: N/A  
Roof Load: 55.0 psf

Design Program: MiTek 20/20 8.4  
Wind Speed: 115 mph  
Floor Load: N/A psf

This package includes 56 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal#     | Truss Name | Date       | No. | Seal#     | Truss Name | Date       |
|-----|-----------|------------|------------|-----|-----------|------------|------------|
| 1   | I43793712 | A1         | 11/30/2020 | 21  | I43793732 | D1         | 11/30/2020 |
| 2   | I43793713 | A2         | 11/30/2020 | 22  | I43793733 | D2         | 11/30/2020 |
| 3   | I43793714 | A3         | 11/30/2020 | 23  | I43793734 | D3         | 11/30/2020 |
| 4   | I43793715 | A4         | 11/30/2020 | 24  | I43793735 | D4         | 11/30/2020 |
| 5   | I43793716 | A5         | 11/30/2020 | 25  | I43793736 | D5         | 11/30/2020 |
| 6   | I43793717 | A6         | 11/30/2020 | 26  | I43793737 | D6         | 11/30/2020 |
| 7   | I43793718 | A7         | 11/30/2020 | 27  | I43793738 | D7         | 11/30/2020 |
| 8   | I43793719 | A8         | 11/30/2020 | 28  | I43793739 | D8         | 11/30/2020 |
| 9   | I43793720 | B1         | 11/30/2020 | 29  | I43793740 | D9         | 11/30/2020 |
| 10  | I43793721 | B2         | 11/30/2020 | 30  | I43793741 | D10        | 11/30/2020 |
| 11  | I43793722 | B3         | 11/30/2020 | 31  | I43793742 | J1         | 11/30/2020 |
| 12  | I43793723 | B4         | 11/30/2020 | 32  | I43793743 | J2         | 11/30/2020 |
| 13  | I43793724 | B5         | 11/30/2020 | 33  | I43793744 | J3         | 11/30/2020 |
| 14  | I43793725 | B6         | 11/30/2020 | 34  | I43793745 | J5         | 11/30/2020 |
| 15  | I43793726 | B7         | 11/30/2020 | 35  | I43793746 | J6         | 11/30/2020 |
| 16  | I43793727 | B8         | 11/30/2020 | 36  | I43793747 | J7         | 11/30/2020 |
| 17  | I43793728 | B9         | 11/30/2020 | 37  | I43793748 | J8         | 11/30/2020 |
| 18  | I43793729 | C1         | 11/30/2020 | 38  | I43793749 | J9         | 11/30/2020 |
| 19  | I43793730 | C2         | 11/30/2020 | 39  | I43793750 | J10        | 11/30/2020 |
| 20  | I43793731 | C3         | 11/30/2020 | 40  | I43793751 | J11        | 11/30/2020 |

The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Wheeler - Waverly.  
Truss Design Engineer's Name: Garcia, Juan  
My license renewal date for the state of Kansas is April 30, 2022.  
Kansas COA: E-943



**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. Any project specific information included is for MiTek customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek 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.

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314-434-1200

### Site Information:

Project Customer:      Project Name: W1 18

Lot/Block:

Subdivision:

Address:

State:

City, County:

| No. | Seal#     | Truss Name | Date       |
|-----|-----------|------------|------------|
| 41  | I43793752 | J12        | 11/30/2020 |
| 42  | I43793753 | J13        | 11/30/2020 |
| 43  | I43793754 | J14        | 11/30/2020 |
| 44  | I43793755 | J15        | 11/30/2020 |
| 45  | I43793756 | LAY1       | 11/30/2020 |
| 46  | I43793757 | LAY2       | 11/30/2020 |
| 47  | I43793758 | LAY3       | 11/30/2020 |
| 48  | I43793759 | LAY4       | 11/30/2020 |
| 49  | I43793760 | LAY5       | 11/30/2020 |
| 50  | I43793761 | LAY6       | 11/30/2020 |
| 51  | I43793762 | V1         | 11/30/2020 |
| 52  | I43793763 | V2         | 11/30/2020 |
| 53  | I43793764 | V3         | 11/30/2020 |
| 54  | I43793765 | V4         | 11/30/2020 |
| 55  | I43793766 | V5         | 11/30/2020 |
| 56  | I43793767 | V6         | 11/30/2020 |



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

Design Code: IRC2018/TPI2014  
Wind Code: N/A  
Roof Load: 55.0 psf

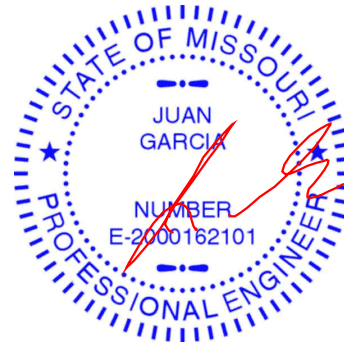
Design Program: MiTek 20/20 8.4  
Wind Speed: 115 mph  
Floor Load: N/A psf

This package includes 56 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal#     | Truss Name | Date       | No. | Seal#     | Truss Name | Date       |
|-----|-----------|------------|------------|-----|-----------|------------|------------|
| 1   | I43793712 | A1         | 11/30/2020 | 21  | I43793732 | D1         | 11/30/2020 |
| 2   | I43793713 | A2         | 11/30/2020 | 22  | I43793733 | D2         | 11/30/2020 |
| 3   | I43793714 | A3         | 11/30/2020 | 23  | I43793734 | D3         | 11/30/2020 |
| 4   | I43793715 | A4         | 11/30/2020 | 24  | I43793735 | D4         | 11/30/2020 |
| 5   | I43793716 | A5         | 11/30/2020 | 25  | I43793736 | D5         | 11/30/2020 |
| 6   | I43793717 | A6         | 11/30/2020 | 26  | I43793737 | D6         | 11/30/2020 |
| 7   | I43793718 | A7         | 11/30/2020 | 27  | I43793738 | D7         | 11/30/2020 |
| 8   | I43793719 | A8         | 11/30/2020 | 28  | I43793739 | D8         | 11/30/2020 |
| 9   | I43793720 | B1         | 11/30/2020 | 29  | I43793740 | D9         | 11/30/2020 |
| 10  | I43793721 | B2         | 11/30/2020 | 30  | I43793741 | D10        | 11/30/2020 |
| 11  | I43793722 | B3         | 11/30/2020 | 31  | I43793742 | J1         | 11/30/2020 |
| 12  | I43793723 | B4         | 11/30/2020 | 32  | I43793743 | J2         | 11/30/2020 |
| 13  | I43793724 | B5         | 11/30/2020 | 33  | I43793744 | J3         | 11/30/2020 |
| 14  | I43793725 | B6         | 11/30/2020 | 34  | I43793745 | J5         | 11/30/2020 |
| 15  | I43793726 | B7         | 11/30/2020 | 35  | I43793746 | J6         | 11/30/2020 |
| 16  | I43793727 | B8         | 11/30/2020 | 36  | I43793747 | J7         | 11/30/2020 |
| 17  | I43793728 | B9         | 11/30/2020 | 37  | I43793748 | J8         | 11/30/2020 |
| 18  | I43793729 | C1         | 11/30/2020 | 38  | I43793749 | J9         | 11/30/2020 |
| 19  | I43793730 | C2         | 11/30/2020 | 39  | I43793750 | J10        | 11/30/2020 |
| 20  | I43793731 | C3         | 11/30/2020 | 40  | I43793751 | J11        | 11/30/2020 |

The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Wheeler - Waverly.  
Truss Design Engineer's Name: Garcia, Juan  
My license renewal date for the state of Missouri is December 31, 2020.  
Missouri COA: 001193

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. Any project specific information included is for MiTek customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek 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.



November 30, 2020

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| No. | Seal#     | Truss Name | Date       |
|-----|-----------|------------|------------|
| 41  | I43793752 | J12        | 11/30/2020 |
| 42  | I43793753 | J13        | 11/30/2020 |
| 43  | I43793754 | J14        | 11/30/2020 |
| 44  | I43793755 | J15        | 11/30/2020 |
| 45  | I43793756 | LAY1       | 11/30/2020 |
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| 47  | I43793758 | LAY3       | 11/30/2020 |
| 48  | I43793759 | LAY4       | 11/30/2020 |
| 49  | I43793760 | LAY5       | 11/30/2020 |
| 50  | I43793761 | LAY6       | 11/30/2020 |
| 51  | I43793762 | V1         | 11/30/2020 |
| 52  | I43793763 | V2         | 11/30/2020 |
| 53  | I43793764 | V3         | 11/30/2020 |
| 54  | I43793765 | V4         | 11/30/2020 |
| 55  | I43793766 | V5         | 11/30/2020 |
| 56  | I43793767 | V6         | 11/30/2020 |

|                          |       |            |     |     |           |           |
|--------------------------|-------|------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | A1    | HIP GIRDER | 1   | 3   |           | I43793712 |
| Job Reference (optional) |       |            |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

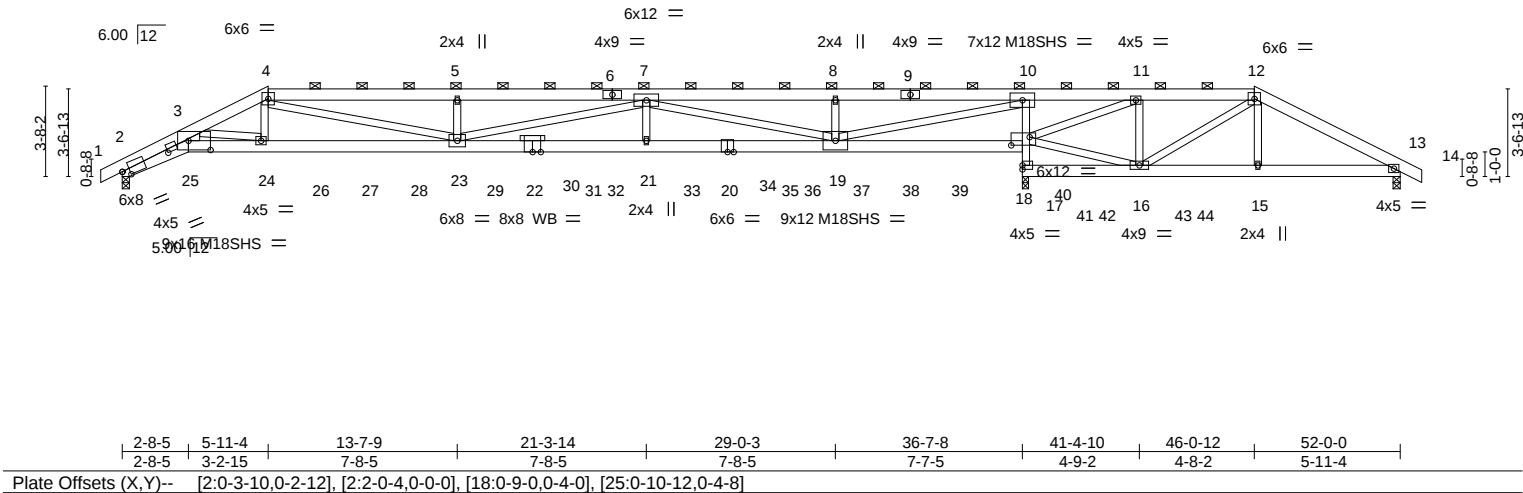
8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:31:48 2020 Page 1

ID:ehbCchA60Xzxp2EXV2Vt?1yyWkt-SYc4OgmYbtGxd2J\_lxAsp5eAPdfursrPXJrYqyyE?nv

0-10-8 2-8-5 5-11-4 13-7-9 21-3-14 29-0-3 36-7-8 41-4-10 46-0-12 52-0-0 52-10-8

0-10-8 2-8-5 3-2-15 7-8-5 7-8-5 7-8-5 7-7-5 4-9-2 4-8-2 5-11-4 0-10-8

Scale = 1:93.7



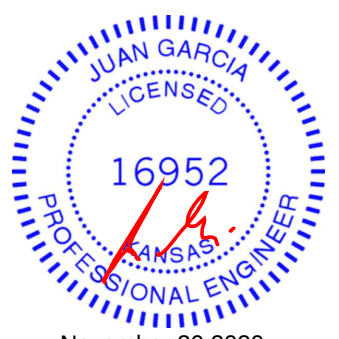
| LOADING (psf) |       | SPACING-             |      | CSI.     |      | DEFL.    |                  | PLATES |  | GRIP           |          |
|---------------|-------|----------------------|------|----------|------|----------|------------------|--------|--|----------------|----------|
| TCLL          | 25.0  | Plate Grip DOL       | 1.15 | TC       | 0.68 | Vert(LL) | -0.44 21-23 >999 | MT20   |  | 197/144        |          |
| TCDL          | 20.0  | Lumber DOL           | 1.15 | BC       | 0.83 | Vert(CT) | -0.93 21-23 >472 | M18SHS |  | 197/144        |          |
| BCLL          | 0.0 * | Rep Stress Incr      | NO   | WB       | 0.71 | Horz(CT) | 0.17 17 n/a n/a  |        |  |                |          |
| BCDL          | 10.0  | Code IRC2018/TPI2014 |      | Matrix-S |      | Wind(LL) | 0.28 21-23 >999  |        |  | Weight: 883 lb | FT = 10% |

|                |                                                                        |                 |                                                                                                             |
|----------------|------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b> |                                                                        | <b>BRACING-</b> |                                                                                                             |
| TOP CHORD      | 2x6 SPF No.2 *Except*<br>4-6,9-12: 2x6 SPF 1650F 1.4E                  | TOP CHORD       | Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-12. |
| BOT CHORD      | 2x6 SP 2400F 2.0E *Except*<br>10-17: 2x4 SPF No.2                      | BOT CHORD       | Rigid ceiling directly applied or 5-8-12 oc bracing.                                                        |
| WEBS           | 2x4 SPF No.2 *Except*<br>3-25: 2x6 SPF No.2, 10-19: 2x4 SPF 2100F 1.8E |                 |                                                                                                             |
| OTHERS         | 2x3 SPF No.2                                                           |                 |                                                                                                             |

|                   |                                             |
|-------------------|---------------------------------------------|
| <b>REACTIONS.</b> |                                             |
| (size)            | 2=0-3-8, 17=0-3-0 (req. 0-3-2), 13=0-3-8    |
| Max Horz          | 2=38(LC 26)                                 |
| Max Uplift        | 2=-347(LC 5), 17=-814(LC 5), 13=-99(LC 28)  |
| Max Grav          | 2=3832(LC 19), 17=8702(LC 1), 13=268(LC 14) |

|                                                                              |                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FORCES.</b>                                                               |                                                                                                                                                                                                                                                  |
| (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. |                                                                                                                                                                                                                                                  |
| TOP CHORD                                                                    | 2-3=-14148/1403, 3-4=-10928/1131, 4-5=-15037/1479, 5-7=-15037/1479, 7-8=-5297/517, 8-10=-5297/517, 10-11=-1033/10998, 11-12=-267/2979, 12-13=-67/630                                                                                             |
| BOT CHORD                                                                    | 2-25=-1254/12475, 24-25=-1063/10550, 23-24=-1007/9909, 21-23=-1304/13893, 19-21=-1304/13893, 18-19=-10873/1054, 17-18=-8479/814, 10-18=-5393/558, 16-17=-960/86, 15-16=-548/69, 13-15=-503/64                                                    |
| WEBS                                                                         | 3-25=-349/3708, 3-24=-504/92, 4-24=-231/2215, 4-23=-502/5436, 5-23=-609/187, 7-23=-148/1188, 7-21=-59/1288, 7-19=-8916/866, 8-19=-513/210, 10-19=-1576/16722, 16-18=-2092/222, 11-18=-8713/824, 11-16=-264/3168, 12-16=-3058/300, 12-15=-114/996 |

- NOTES-**
- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-7-0 oc.  
Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); 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.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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) 17 greater than input bearing size.
  - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify connection on bearing surface.



November 30, 2020

|       |       |            |     |     |                          |
|-------|-------|------------|-----|-----|--------------------------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                |
| W1 18 | A1    | HIP GIRDER | 1   | 3   | I43793712                |
|       |       |            |     |     | Job Reference (optional) |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:31:48 2020 Page 2  
ID:ehbCcHA60Xzxp2EXV2Vt?1yyWkt-SYc4OgmYbtGxd2J\_lxASp5eAPdfursrPXJrYgyyE?nv

- NOTES-**
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13 except (jt=lb) 2=347, 17=814.
  - 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 732 lb down and 182 lb up at 5-11-4, 285 lb down and 46 lb up at 8-0-0, 285 lb down and 46 lb up at 10-0-0, 285 lb down and 46 lb up at 12-0-0, 285 lb down and 46 lb up at 14-0-0, 285 lb down and 46 lb up at 16-0-0, 285 lb down and 46 lb up at 18-0-0, 285 lb down and 46 lb up at 20-0-0, 285 lb down and 46 lb up at 22-0-0, 285 lb down and 46 lb up at 24-0-0, 285 lb down and 46 lb up at 26-0-0, 285 lb down and 46 lb up at 28-0-0, 285 lb down and 46 lb up at 30-0-0, 285 lb down and 46 lb up at 32-0-0, 285 lb down and 46 lb up at 34-0-0, 285 lb down and 46 lb up at 36-0-0, 285 lb down and 44 lb up at 38-0-0, 285 lb down and 44 lb up at 40-0-0, 285 lb down and 44 lb up at 42-0-0, and 285 lb down and 44 lb up at 44-0-0, and 723 lb down and 175 lb up at 46-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

- LOAD CASE(S)** Standard
- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-4=-90, 4-12=-90, 12-14=-90, 2-25=-20, 18-25=-20, 13-17=-20
  - Concentrated Loads (lb)
    - Vert: 24=-732(F) 15=-723(F) 26=-285(F) 27=-285(F) 28=-285(F) 29=-285(F) 30=-285(F) 31=-285(F) 32=-285(F) 33=-285(F) 34=-285(F) 35=-285(F) 36=-285(F) 37=-285(F) 38=-285(F) 39=-285(F) 40=-285(F) 41=-285(F) 42=-285(F) 43=-285(F) 44=-285(F)

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | 143793713 |
| W1 18 | A2    | HIP        | 1   | 1   |           |           |

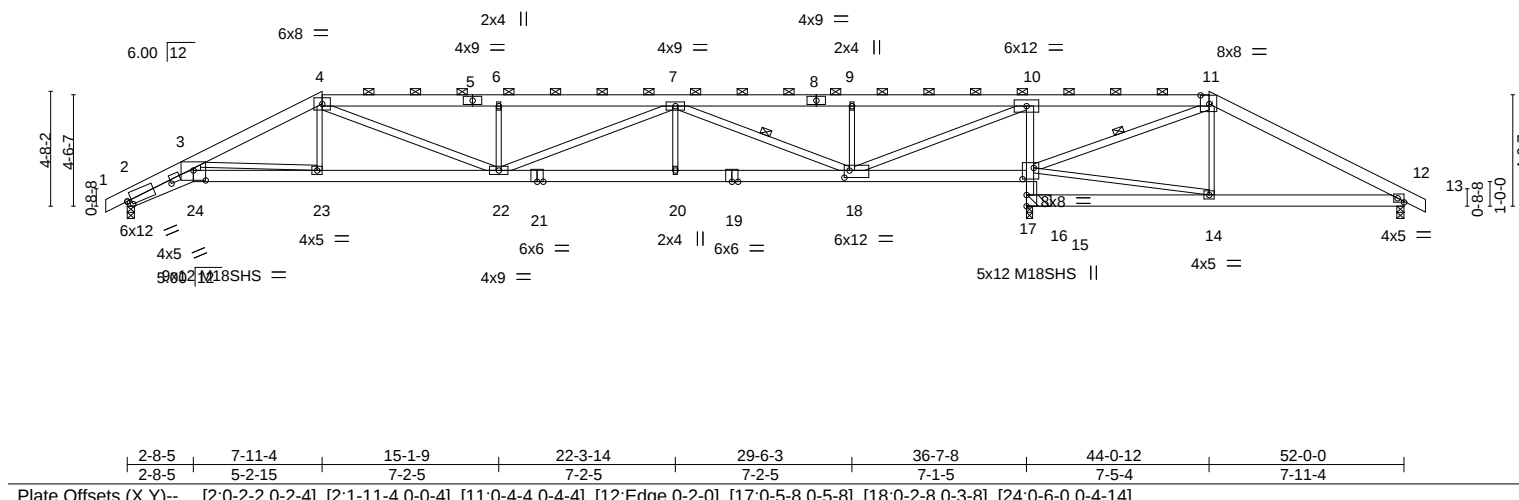
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:31:56 2020 Page 1

ID:ehbCcHA60Xzxp2EXV2Vt?1yyWkt-D4553PsZiKGobGwWDCJK7nzUhrOQjRxaNZn6UyE?nn

|              |        |        |         |        |        |         |        |         |
|--------------|--------|--------|---------|--------|--------|---------|--------|---------|
| 0-10-8 2-8-5 | 7-11-4 | 15-1-9 | 22-3-14 | 29-6-3 | 36-7-8 | 44-0-12 | 52-0-0 | 52-10-8 |
| 0-10-8 2-8-5 | 5-2-15 | 7-2-5  | 7-2-5   | 7-2-5  | 7-1-5  | 7-5-4   | 7-11-4 | 0-10-8  |

Scale = 1:93.8



|               |                      |       |          |          |             |        |     |                |          |
|---------------|----------------------|-------|----------|----------|-------------|--------|-----|----------------|----------|
| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.88  | Vert(LL) | -0.33 20-22 | >999   | 360 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.85  | Vert(CT) | -0.72 20-22 | >607   | 240 | M18SHS         | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.96  | Horz(CT) | 0.26 16     | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.25 20-22  | >999   | 240 | Weight: 274 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x6 SPF No.2 \*Except\*  
8-11: 2x6 SPF 1650F 1.4E  
BOT CHORD 2x6 SPF No.2 \*Except\*  
2-24,21-24: 2x6 SPF 1650F 1.4E, 10-16: 2x4 SPF No.2  
12-16: 2x6 SP DSS  
WEBS 2x3 SPF No.2 \*Except\*  
3-24,4-22,11-17: 2x4 SPF No.2, 7-22,7-18,10-18: 2x4 SPF 2100F 1.8E

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-1-8 oc purlins, except  
2-0-0 oc purlins (2-11-10 max.): 4-11.  
BOT CHORD Rigid ceiling directly applied or 2-5-1 oc bracing.  
WEBS 1 Row at midpt 7-18, 11-17

#### REACTIONS.

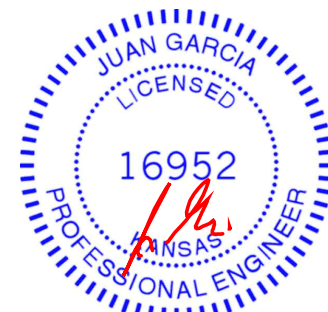
(size) 2=0-3-8, 16=(0-3-0 + bearing block) (req. 0-4-1), 12=0-3-8  
Max Horz 2=77(LC 8)  
Max Uplift 2=163(LC 5), 16=499(LC 5), 12=136(LC 9)  
Max Grav 2=1822(LC 21), 16=3821(LC 1), 12=286(LC 16)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-6309/656, 3-4=-3770/456, 4-6=-4490/656, 6-7=-4490/655, 7-9=-1236/263,  
9-10=-1236/263, 10-11=-418/3394, 11-12=-222/825  
BOT CHORD 2-24=-609/5539, 23-24=-532/4760, 22-23=-384/3371, 20-22=-528/3784, 18-20=-528/3784,  
17-18=-3407/483, 16-17=-3772/537, 10-17=-2689/507, 12-14=-662/207  
WEBS 3-24=-160/1910, 3-23=-1385/272, 4-23=0/503, 4-22=-309/1391, 6-22=-696/226,  
7-22=-80/769, 7-20=0/291, 7-18=-2839/403, 9-18=-597/199, 10-18=-695/4969,  
14-17=-455/168, 11-17=-3145/298, 11-14=0/406

#### NOTES-

- 1) 2x6 SP DSS bearing block 12" long at jt. 16 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be DF No.2.
- 2) Unbalanced roof live loads have been considered for this design.
- 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=163, 16=499, 12=136.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | 143793714 |
| W1 18 | A3    | HIP        | 1   | 1   |           |           |

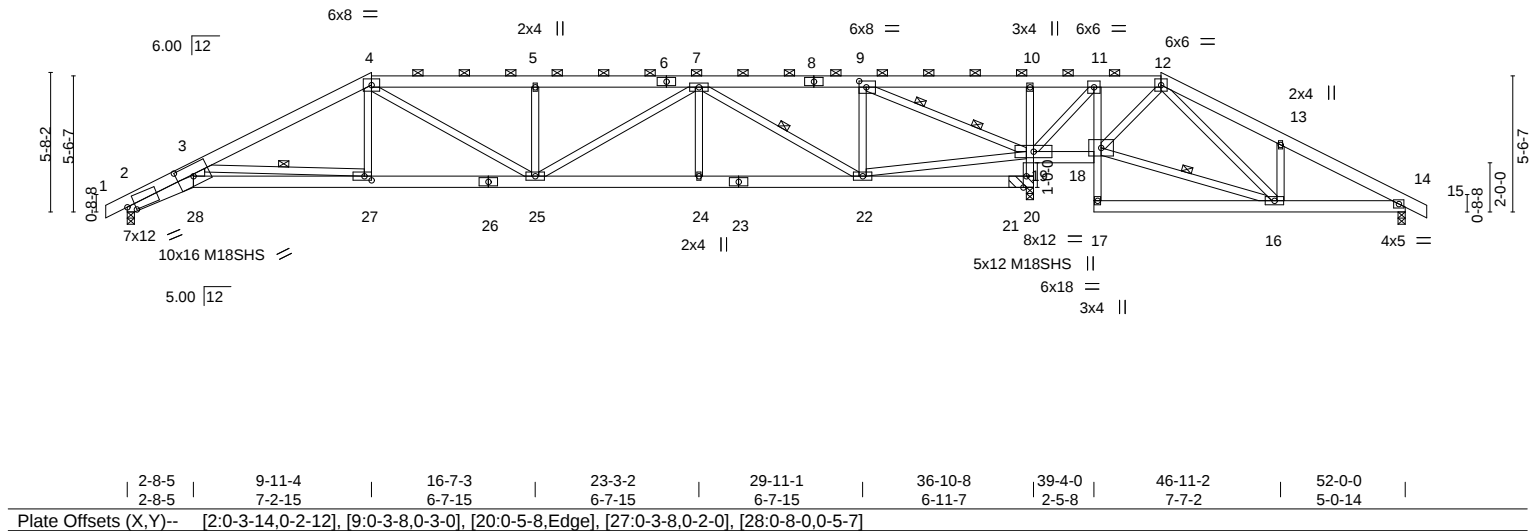
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:31:59 2020 Page 1

ID:ehbCcHA60Xzxp2EXV2Vt?1yyWkt-dfmEhRvS?FfNskf5vks1lQbz93PFwoe03X?djpyE?nk

0-10-8 2-8-5 9-11-4 16-7-3 23-3-2 29-11-1 36-10-8 39-4-0 42-0-12 46-11-2 52-0-0 52-10-8  
0-10-8 2-8-5 7-2-15 6-7-15 6-7-15 6-7-15 6-11-7 2-5-8 2-8-12 4-10-6 5-0-14 0-10-8

Scale = 1:93.7



|                      |                       |             |                                  |                |             |
|----------------------|-----------------------|-------------|----------------------------------|----------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b> 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> in (loc) l/defl L/d | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL 25.0            | Plate Grip DOL 1.15   | TC 0.97     | Vert(LL) -0.27 27-28 >999 360    | MT20           | 197/144     |
| TCDL 20.0            | Lumber DOL 1.15       | BC 0.91     | Vert(CT) -0.60 27-28 >728 240    | M18SHS         | 197/144     |
| BCLL 0.0 *           | Rep Stress Incr YES   | WB 0.90     | Horz(CT) 0.30 20 n/a n/a         |                |             |
| BCDL 10.0            | Code IRC2018/TPI2014  | Matrix-S    | Wind(LL) 0.19 27-28 >999 240     | Weight: 311 lb | FT = 10%    |

#### LUMBER-

TOP CHORD 2x6 SPF No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\*  
2-28,26-28: 2x6 SPF 1650F 1.4E, 10-20,11-17: 2x4 SPF No.2  
18-19,14-17: 2x6 SPF No.2  
WEBS 2x4 SPF No.2 \*Except\*  
3-28: 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except  
2-0-0 oc purlins (3-8-2 max.): 4-12.  
BOT CHORD Rigid ceiling directly applied or 2-8-14 oc bracing.  
WEBS 1 Row at midpt 3-27, 7-22, 16-18  
2 Rows at 1/3 pts 9-19

#### REACTIONS.

(size) 2=0-3-8, 20=(0-3-8 + bearing block) (req. 0-5-13), 14=0-3-8  
Max Horz 2=95(LC 8)  
Max Uplift 2=-149(LC 5), 20=-420(LC 5), 14=-150(LC 9)  
Max Grav 2=1857(LC 21), 20=3718(LC 1), 14=371(LC 22)

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

TOP CHORD 2-3=-6995/668, 3-4=-3454/403, 4-5=-3515/525, 5-7=-3513/524, 7-9=-1021/279,  
9-10=-280/2860, 10-11=-287/2881, 11-12=-266/2101, 12-13=-225/506, 13-14=-256/500  
BOT CHORD 2-28=-642/6220, 27-28=-549/5090, 25-27=-327/3028, 24-25=-403/2874, 22-24=-403/2874,  
19-20=-3645/452, 10-19=-605/169, 18-19=-2141/339, 11-18=-6/876, 14-16=-390/210  
WEBS 3-28=-158/2282, 3-27=-2055/431, 4-27=0/533, 4-25=-241/774, 5-25=-635/211,  
7-25=-65/764, 7-24=0/273, 7-22=-2222/288, 9-22=-32/1138, 19-22=-173/1082,  
11-19=-1218/55, 16-18=-1070/216, 12-18=-1753/167, 12-16=-143/1182, 13-16=-462/192,  
9-19=-4162/551

#### NOTES-

- 1) 2x6 SP 2400F 2.0E bearing block 12" long at jt. 20 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF No.2.
- 2) Unbalanced roof live loads have been considered for this design.
- 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCdL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) All plates are 4x9 MT20 unless otherwise indicated.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* 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.
- 9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=149, 20=420, 14=150.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and Contr to standard ANSI/TPI 1.



November 30,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793714 |
| W1 18 | A3    | HIP        | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber,      Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:31:59 2020 Page 2  
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**NOTES-**  
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

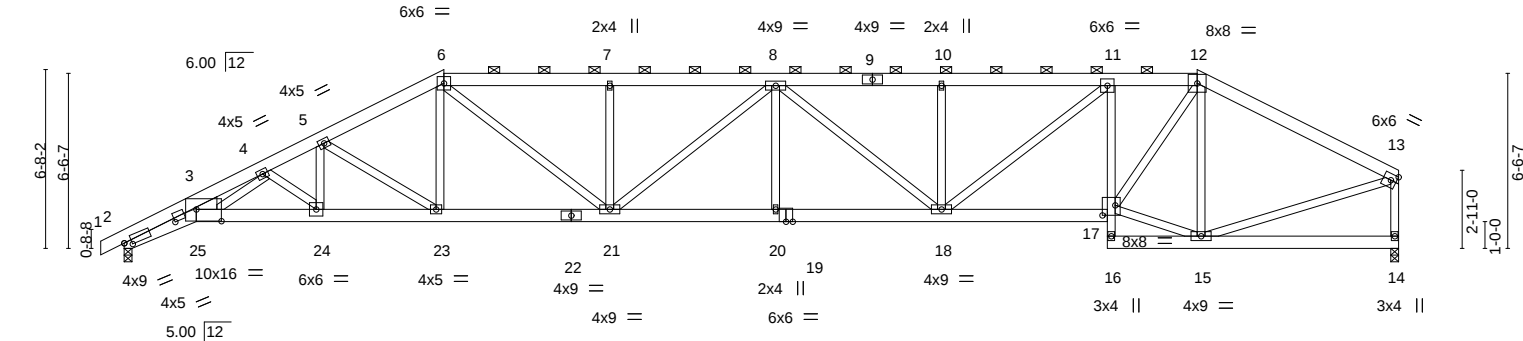
|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793715 |
| W1 18 | A4    | HIP        | 1   | 2   |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:01 2020 Page 1  
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|               |        |        |         |        |         |        |        |         |        |
|---------------|--------|--------|---------|--------|---------|--------|--------|---------|--------|
| -0-10-8 2-8-5 | 5-3-13 | 7-3-12 | 11-11-4 | 18-1-9 | 24-3-14 | 30-6-3 | 36-8-8 | 40-0-12 | 47-7-0 |
| 0-10-8 2-8-5  | 2-7-8  | 2-0-0  | 4-7-8   | 6-2-5  | 6-2-5   | 6-2-5  | 6-2-5  | 3-4-4   | 7-6-4  |

Scale = 1:86.0



THIS TRUSS IS DESIGNED TO SUPPORT ONLY 2'-0" OF UNIFORM LOAD AS SHOWN.

|                       |                                                                                            |        |             |              |             |        |        |                |             |
|-----------------------|--------------------------------------------------------------------------------------------|--------|-------------|--------------|-------------|--------|--------|----------------|-------------|
|                       | 2-8-5                                                                                      | 7-3-12 | 11-11-4     | 18-1-9       | 24-3-14     | 30-6-3 | 36-8-8 | 40-0-12        | 47-7-0      |
|                       | 2-8-5                                                                                      | 4-7-8  | 4-7-8       | 6-2-5        | 6-2-5       | 6-2-5  | 6-2-5  | 3-4-4          | 7-6-4       |
| Plate Offsets (X,Y)-- | [2:0-3-6,0-1-12], [2:2-0-12,0-0-0], [13:Edge,0-2-12], [17:0-5-12,0-4-8], [25:0-11-4,0-5-4] |        |             |              |             |        |        |                |             |
| <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 25.0             | Plate Grip DOL                                                                             | 1.15   | TC 0.38     | Vert(LL)     | -0.19 20-21 | >999   | 360    | MT20           | 197/144     |
| TCDL 20.0             | Lumber DOL                                                                                 | 1.15   | BC 0.37     | Vert(CT)     | -0.42 20-21 | >999   | 240    |                |             |
| BCLL 0.0 *            | Rep Stress Incr                                                                            | YES    | WB 0.38     | Horz(CT)     | 0.20 14     | n/a    | n/a    |                |             |
| BCDL 10.0             | Code IRC2018/TPI2014                                                                       |        | Matrix-S    | Wind(LL)     | 0.14 20-21  | >999   | 240    | Weight: 633 lb | FT = 10%    |

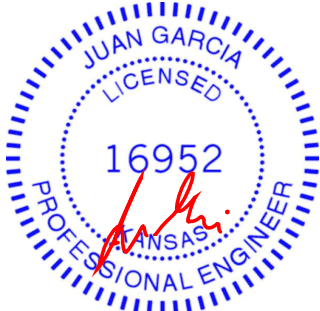
|                                                             |                                                                                                                                          |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                              | <b>BRACING-</b>                                                                                                                          |
| TOP CHORD 2x6 SPF No.2 *Except*<br>1-6: 2x6 SP 2400F 2.0E   | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-12. |
| BOT CHORD 2x6 SP 2400F 2.0E *Except*<br>11-16: 2x4 SPF No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                                                           |
| WEBS 2x4 SPF No.2 *Except*<br>3-25: 2x10 SP DSS             |                                                                                                                                          |

**REACTIONS.** (size) 2=0-3-8, 14=0-3-8  
Max Horz 2=155(LC 5)  
Max Uplift 2=-218(LC 5), 14=-242(LC 4)  
Max Grav 2=2694(LC 1), 14=2600(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-9962/1029, 3-4=-7291/799, 4-5=-6228/661, 5-6=-5108/607, 6-7=-5749/753,  
7-8=-5746/752, 8-10=-5616/728, 10-11=-5616/728, 11-12=-4437/567, 12-13=-3112/367,  
13-14=-2524/279  
BOT CHORD 2-25=-1045/8789, 24-25=-770/6414, 23-24=-650/5487, 21-23=-564/4522,  
20-21=-806/6101, 18-20=-806/6101, 17-18=-555/4471, 11-17=-1448/299  
WEBS 3-25=-293/3078, 5-24=-57/981, 5-23=-1123/210, 6-23=-49/734, 6-21=-305/1707,  
7-21=-623/195, 8-21=-570/131, 8-18=-674/100, 10-18=-585/186, 11-18=-225/1526,  
15-17=-274/2699, 12-17=-466/3137, 12-15=-1755/281, 13-15=-280/2714, 4-24=-1186/157,  
4-25=-149/490

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Webs connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
  - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

Continued on page 2



November 30,2020

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Chesterfield, MO 63017

|       |       |            |     |     |           |
|-------|-------|------------|-----|-----|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 |
| W1 18 | A4    | HIP        | 1   | 2   | I43793715 |

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8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:01 2020 Page 2  
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- NOTES-**
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=218, 14=242.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 11) 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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Chesterfield, MO 63017

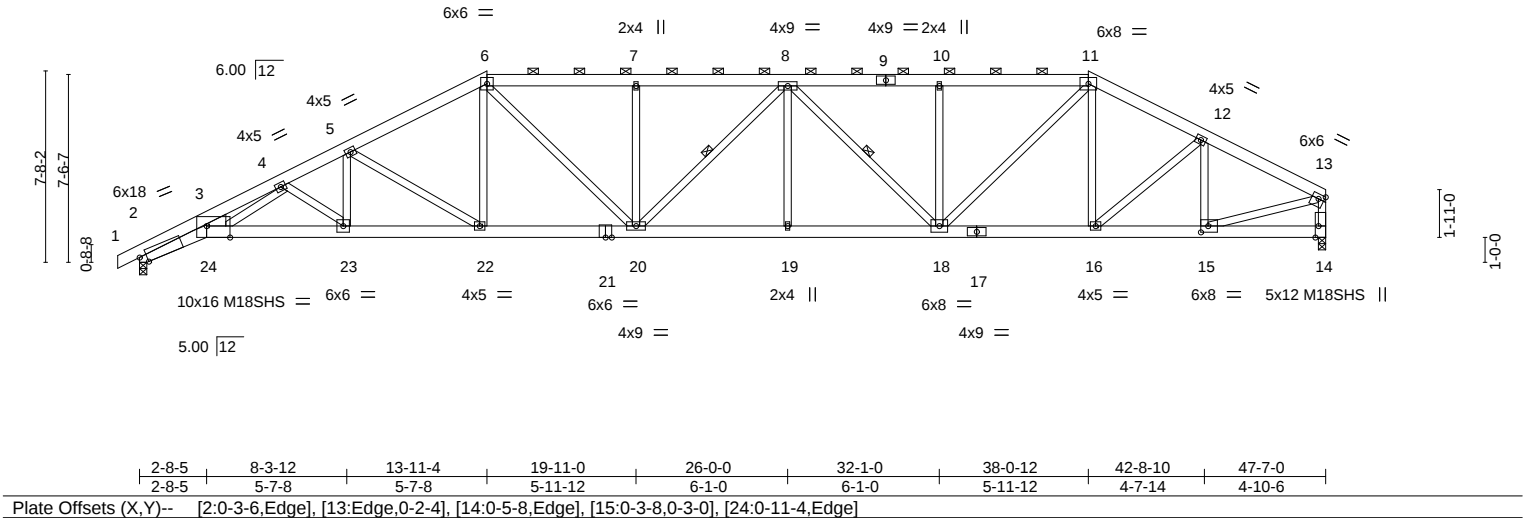
|                          |       |            |     |     |           |           |
|--------------------------|-------|------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | A5    | HIP        | 1   | 1   |           | I43793716 |
| Job Reference (optional) |       |            |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:04 2020 Page 1  
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|               |        |        |         |         |        |        |         |         |        |
|---------------|--------|--------|---------|---------|--------|--------|---------|---------|--------|
| -0-10-8 2-8-5 | 5-9-13 | 8-3-12 | 13-11-4 | 19-11-0 | 26-0-0 | 32-1-0 | 38-0-12 | 42-8-10 | 47-7-0 |
| 0-10-8 2-8-5  | 3-1-8  | 2-6-0  | 5-7-8   | 5-11-12 | 6-1-0  | 6-1-0  | 5-11-12 | 4-7-14  | 4-10-6 |

Scale = 1:92.4



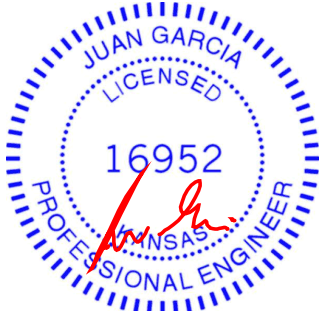
| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.88  | Vert(LL) | -0.34 | 20    | >999   | 360 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.97  | Vert(CT) | -0.75 | 20    | >753   | 240 | M18SHS         | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.85  | Horz(CT) | 0.41  | 14    | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.25  | 20    | >999   | 240 | Weight: 294 lb | FT = 10% |

|                                                                                |                                                                                                                                           |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                                                 | <b>BRACING-</b>                                                                                                                           |
| TOP CHORD 2x6 SPF No.2 *Except*<br>1-6: 2x6 SP 2400F 2.0E                      | TOP CHORD Structural wood sheathing directly applied or 2-1-13 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-3 max.): 6-11. |
| BOT CHORD 2x6 SPF No.2 *Except*<br>2-24: 2x6 SP DSS, 21-24: 2x6 SPF 1650F 1.4E | BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.                                                                             |
| WEBS 2x4 SPF No.2 *Except*<br>3-24: 2x10 SP DSS                                | WEBS 1 Row at midpt 8-20, 8-18                                                                                                            |

|                   |                                                                                                                                                            |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REACTIONS.</b> | (size) 2=0-3-8 (req. 0-4-4), 14=0-3-8 (req. 0-4-1)<br>Max Horz 2=162(LC 8)<br>Max Uplift 2=202(LC 8), 14=199(LC 4)<br>Max Grav 2=2694(LC 1), 14=2600(LC 1) |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.                                                                                                                                                   |  |
| TOP CHORD 2-3=-10174/894, 3-4=-7566/720, 4-5=-5935/543, 5-6=-4744/511, 6-7=-4965/599, 7-8=-4963/598, 8-10=-4479/519, 10-11=-4482/521, 11-12=-3666/397, 12-13=-3308/301, 13-14=-2523/221                                                       |  |
| BOT CHORD 2-24=-921/8991, 23-24=-645/6182, 22-23=-534/5228, 20-22=-450/4171, 19-20=-580/5056, 18-19=-580/5056, 16-18=-289/3217, 15-16=-199/2875                                                                                               |  |
| WEBS 3-24=-226/2995, 4-23=-1186/184, 5-23=-49/928, 5-22=-1221/248, 6-22=-61/753, 6-20=-246/1278, 7-20=-606/190, 8-20=-271/91, 8-18=-879/130, 10-18=-610/191, 11-18=-285/1877, 12-16=-114/582, 12-15=-842/128, 13-15=-215/2886, 4-24=-218/1002 |  |

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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, 14 greater than input bearing size.
  - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (it=lb) 2=202, 14=199.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793717 |
| W1 18 | A6    | HIP        | 1   | 1   |           |           |

Wheeler Lumber, Waverly, KS - 66871,

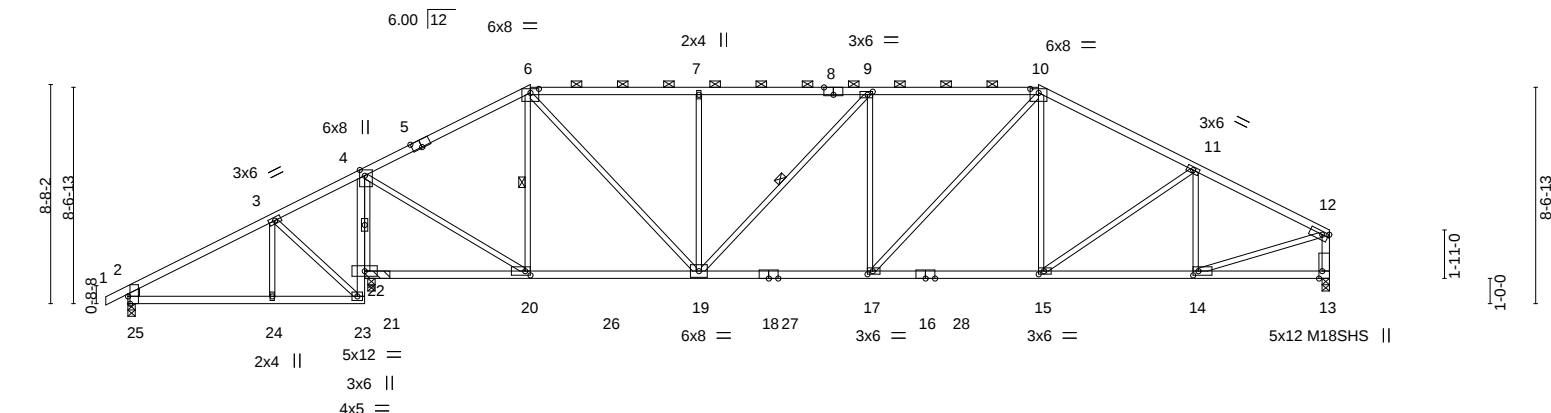
8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:07 2020 Page 1

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Job Reference (optional)

|         |       |        |         |        |         |         |        |        |
|---------|-------|--------|---------|--------|---------|---------|--------|--------|
| -0-10-8 | 5-8-9 | 9-4-8  | 15-11-4 | 22-7-5 | 29-4-11 | 36-0-12 | 42-3-7 | 47-7-0 |
| 0-10-8  | 5-8-9 | 3-7-15 | 6-6-12  | 6-8-1  | 6-9-5   | 6-8-1   | 6-2-11 | 5-3-9  |

Scale = 1:91.2



|                        |                                                                                                                                                                                                                                   |        |       |         |        |         |         |        |        |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|---------|--------|---------|---------|--------|--------|
| Plate Offsets (X, Y)-- | 5-8-9                                                                                                                                                                                                                             | 9-4-8  | 9-6-0 | 15-11-4 | 22-7-5 | 29-4-11 | 36-0-12 | 42-3-7 | 47-7-0 |
|                        | 5-8-9                                                                                                                                                                                                                             | 3-7-15 | 0-1-8 | 6-5-4   | 6-8-1  | 6-9-5   | 6-8-1   | 6-2-11 | 5-3-9  |
|                        | [4:0-2-12,Edge], [5:0-4-8,Edge], [6:0-4-0-0-1-15], [8:0-4-8,Edge], [9:0-2-8-0-1-8], [10:0-4-0-0-1-15], [12:0-3-0-0-1-8], [13:0-3-8,Edge], [14:0-2-8-0-2-0], [15:0-2-8-0-1-8], [17:0-2-8-0-1-8], [20:0-2-8-0-2-0], [25:0-3-8,Edge] |        |       |         |        |         |         |        |        |

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.82  | Vert(LL) | -0.18 17-19 | >999   | 360 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.94  | Vert(CT) | -0.36 17-19 | >999   | 240 | M18SHS         | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.87  | Horz(CT) | 0.08 13     | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.09 17-19  | >999   | 240 |                |          |
|               |                      |       |          |          |             |        |     | Weight: 197 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
6-8,8-10: 2x4 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
2-25: 2x6 SPF No.2, 12-13: 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-0-8 max.); 6-10.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 20-22 2-2-0 oc bracing: 17-19.  
WEBS 1 Row at midpt 6-20, 9-19

#### REACTIONS.

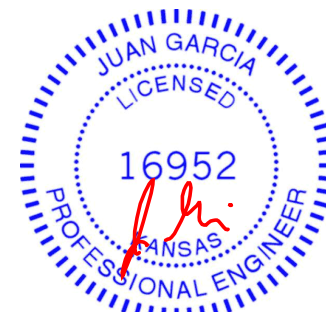
(size) 25=0-3-8, 22=(0-3-8 + bearing block) (req. 0-4-9), 13=0-3-8  
Max Horz 25=176(LC 5)  
Max Uplift 25=-87(LC 8), 22=-212(LC 5), 13=-152(LC 9)  
Max Grav 25=494(LC 21), 22=2892(LC 2), 13=2184(LC 2)

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

TOP CHORD 2-3=-351/84, 3-4=-29/324, 4-6=-1902/237, 6-7=-2638/368, 7-9=-2636/366, 9-10=-2932/397, 10-11=-2834/323, 11-12=-2720/235, 2-25=-455/125, 12-13=-2095/176  
BOT CHORD 22-23=-69/390, 4-22=-2399/231, 20-22=-267/62, 19-20=-180/1603, 17-19=-285/2930, 15-17=-163/2437, 14-15=-142/2366  
WEBS 3-23=-541/124, 4-20=-141/2121, 6-20=-867/157, 6-19=-219/1574, 7-19=-661/211, 9-19=-458/43, 9-17=-463/216, 10-17=-180/828, 10-15=-7/271, 11-14=-603/120, 12-14=-154/2399

#### NOTES-

- 2x4 SPF No.2 bearing block 12" long at jt. 22 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are MT20 plates unless otherwise indicated.
- All plates are 4x9 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25 except (jt=lb) 22=212, 13=152.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793718 |
| W1 18 | A7    | HIP        | 1   | 1   |           |           |

Wheeler Lumber, Waverly, KS - 66871,

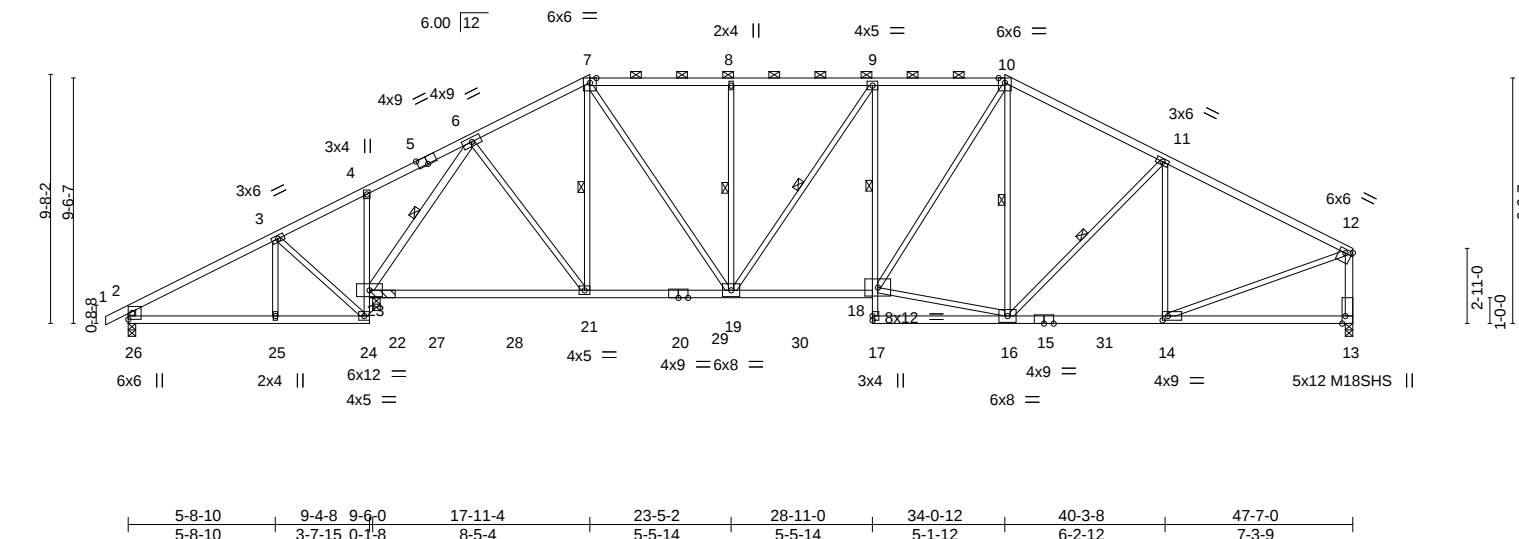
8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:09 2020 Page 1

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Job Reference (optional)

|         |        |        |         |         |        |         |         |        |        |
|---------|--------|--------|---------|---------|--------|---------|---------|--------|--------|
| -0-10-8 | 5-8-10 | 9-4-8  | 13-4-3  | 17-11-4 | 23-5-2 | 28-11-0 | 34-0-12 | 40-3-8 | 47-7-0 |
| 0-10-8  | 5-8-10 | 3-7-15 | 3-11-11 | 4-7-1   | 5-5-14 | 5-5-14  | 5-1-12  | 6-2-12 | 7-3-9  |

Scale = 1:89.5



|                                                                                           |       |                       |      |             |      |                                  |                      |                    |          |
|-------------------------------------------------------------------------------------------|-------|-----------------------|------|-------------|------|----------------------------------|----------------------|--------------------|----------|
| Plate Offsets (X,Y)-- [5:0-4-8,Edge], [12:Edge,0-1-12], [13:0-3-8,Edge], [14:0-2-8,0-2-0] |       |                       |      |             |      |                                  |                      |                    |          |
| <b>LOADING</b> (psf)                                                                      |       | <b>SPACING-</b> 2-0-0 |      | <b>CSI.</b> |      | <b>DEFL.</b> in (loc) l/defl L/d |                      | <b>PLATES GRIP</b> |          |
| TCLL                                                                                      | 25.0  | Plate Grip DOL        | 1.15 | TC          | 0.54 | Vert(LL)                         | -0.22 21-23 >999 360 | MT20               | 197/144  |
| TCDL                                                                                      | 20.0  | Lumber DOL            | 1.15 | BC          | 0.86 | Vert(CT)                         | -0.39 21-23 >999 240 | M18SHS             | 197/144  |
| BCLL                                                                                      | 0.0 * | Rep Stress Incr       | YES  | WB          | 0.75 | Horz(CT)                         | 0.09 13 n/a n/a      |                    |          |
| BCDL                                                                                      | 10.0  | Code IRC2018/TPI2014  |      | Matrix-S    |      | Wind(LL)                         | 0.08 18-19 >999 240  | Weight: 215 lb     | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
10-12: 2x4 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF No.2 \*Except\*  
4-24,9-17: 2x3 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
6-23,2-26,12-13: 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-10-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-3-11 max.): 7-10.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
1 Row at midpt 9-18  
WEBS 1 Row at midpt 6-23, 7-21, 8-19, 9-19, 10-16, 11-16

#### REACTIONS.

(size) 26=0-3-8, 23=(0-3-8 + bearing block) (req. 0-4-9), 13=0-3-8  
Max Horz 26=205(LC 7)  
Max Uplift 26=-80(LC 8), 23=-201(LC 8), 13=-175(LC 9)  
Max Grav 26=512(LC 21), 23=2913(LC 2), 13=2184(LC 2)

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

TOP CHORD 2-3=-407/109, 3-4=-61/348, 4-6=-36/367, 6-7=-2020/247, 7-8=-2375/319, 8-9=-2372/317, 9-10=-2596/337, 10-11=-2421/289, 11-12=-2478/208, 2-26=-470/118, 12-13=-2068/212  
BOT CHORD 25-26=-143/260, 24-25=-143/260, 23-24=-82/416, 4-23=-309/116, 21-23=-148/1177, 19-21=-158/1749, 18-19=-210/2601, 9-18=-339/180, 14-16=-141/2118  
WEBS 3-24=-586/144, 6-23=-2491/185, 6-21=-14/983, 7-21=-537/106, 7-19=-166/1176, 8-19=-561/176, 9-19=-438/53, 16-18=-109/2076, 10-18=-180/1053, 10-16=-340/149, 11-14=-583/130, 12-14=-113/2170

#### NOTES-

- 2x4 SPF No.2 bearing block 12" long at jt. 23 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 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) 26 except (jt=lb) 23=201, 13=175.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | 143793719 |
| W1 18 | A8    | HIP        | 1   | 1   |           |           |

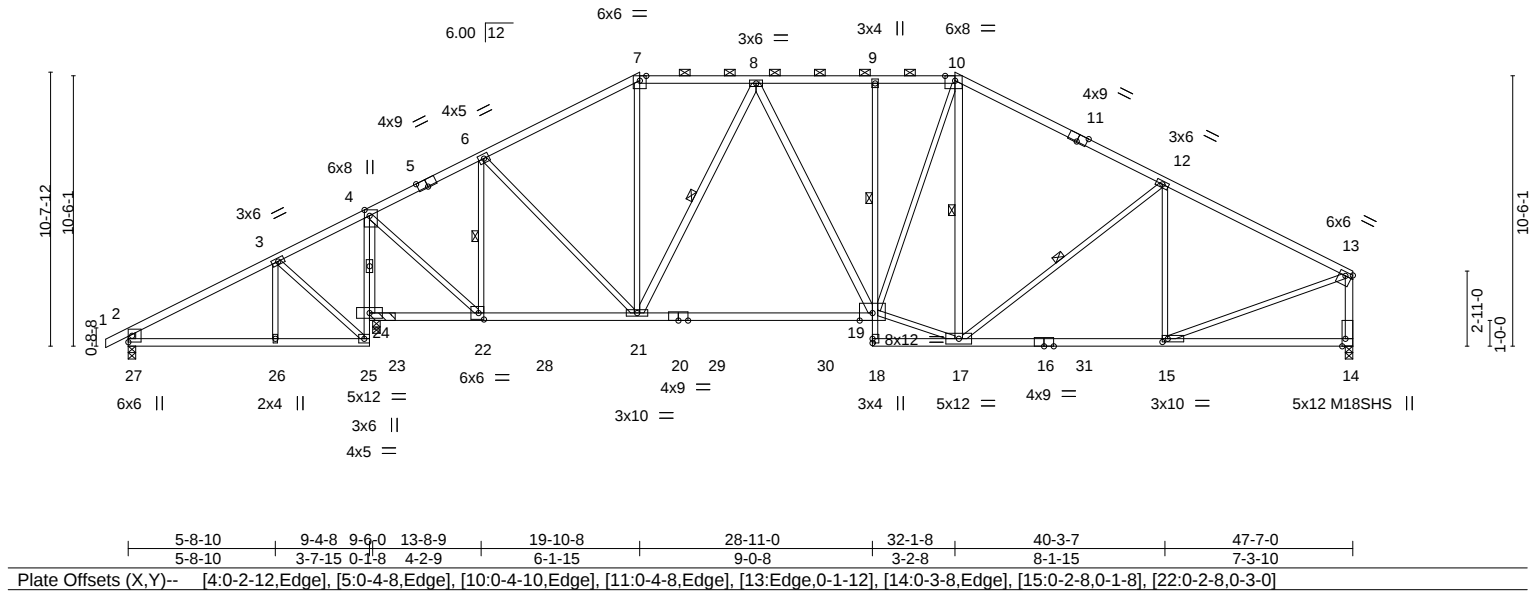
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:11 2020 Page 1

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|        |        |        |        |         |         |         |        |        |        |
|--------|--------|--------|--------|---------|---------|---------|--------|--------|--------|
| 0-10-8 | 5-8-10 | 9-4-8  | 13-8-9 | 19-10-8 | 24-4-12 | 28-11-0 | 32-1-8 | 40-3-7 | 47-7-0 |
| 0-10-8 | 5-8-10 | 3-7-15 | 4-4-1  | 6-1-15  | 4-6-4   | 4-6-4   | 3-2-8  | 8-1-15 | 7-3-10 |

Scale = 1:89.5



|                       |                      |                                                                                                                                           |                               |
|-----------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Plate Offsets (X,Y)-- |                      | [4:0-2-12,Edge], [5:0-4-8,Edge], [10:0-4-10,Edge], [11:0-4-8,Edge], [13:Edge,0-1-12], [14:0-3-8,Edge], [15:0-2-8,0-1-8], [22:0-2-8,0-3-0] |                               |
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | <b>CSI.</b>                                                                                                                               | <b>DEFL.</b>                  |
| TCLL 25.0             | 2-0-0                | TC 0.72                                                                                                                                   | in (loc) l/defl L/d           |
| TCDL 20.0             | Plate Grip DOL 1.15  | BC 0.79                                                                                                                                   | Vert(LL) -0.32 19-21 >999 360 |
| BCLL 0.0 *            | Lumber DOL 1.15      | WB 0.77                                                                                                                                   | Vert(CT) -0.58 19-21 >787 240 |
| BCDL 10.0             | Rep Stress Incr YES  | Matrix-S                                                                                                                                  | Horz(CT) 0.07 14 n/a n/a      |
|                       | Code IRC2018/TPI2014 |                                                                                                                                           | Wind(LL) 0.06 9 >999 240      |
|                       |                      |                                                                                                                                           | <b>PLATES</b> <b>GRIP</b>     |
|                       |                      |                                                                                                                                           | MT20 197/144                  |
|                       |                      |                                                                                                                                           | M18SHS 197/144                |
|                       |                      |                                                                                                                                           | Weight: 227 lb FT = 10%       |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
10-11,11-13: 2x4 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF 2100F 1.8E \*Except\*  
25-27,16-18: 2x4 SPF No.2, 4-25,9-18: 2x3 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
8-21,8-19,10-17,2-27,13-14: 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-15 max.): 7-10.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 22-24,17-18.  
1 Row at midpt 9-19  
WEBS 1 Row at midpt 6-22, 8-21, 10-17, 12-17

#### REACTIONS.

(size) 27=0-3-8, 24=(0-3-8 + bearing block) (req. 0-4-8), 14=0-3-8  
Max Horz 27=217(LC 5)  
Max Uplift 27=-67(LC 8), 24=-239(LC 8), 14=-190(LC 9)  
Max Grav 27=529(LC 21), 24=2855(LC 2), 14=2199(LC 2)

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

TOP CHORD 2-3=-467/97, 3-4=-88/276, 4-6=-1560/163, 6-7=-2156/199, 7-8=-1831/215, 8-9=-2297/257, 9-10=-2293/258, 10-12=-2386/260, 12-13=-2519/230, 2-27=-484/106, 13-14=-2093/224  
BOT CHORD 26-27=-139/314, 25-26=-139/314, 24-25=-86/416, 4-24=-2357/178, 21-22=-115/1337, 19-21=-150/2164, 9-19=-367/119, 15-17=-165/2161  
WEBS 3-25=-578/149, 4-22=-91/2047, 6-22=-1206/113, 6-21=-16/758, 7-21=-28/567, 8-21=-854/163, 8-19=-38/352, 17-19=-20/2205, 10-19=-149/976, 10-17=-370/130, 12-17=-269/191, 12-15=-576/153, 13-15=-140/2230

#### NOTES-

- 2x4 SPF 2100F 1.8E bearing block 12" long at jt. 24 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCdL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 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) 27 except (jt=lb) 24=239, 14=190.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | 143793720 |
| W1 18 | B1    | Hip        | 1   | 1   |           |           |

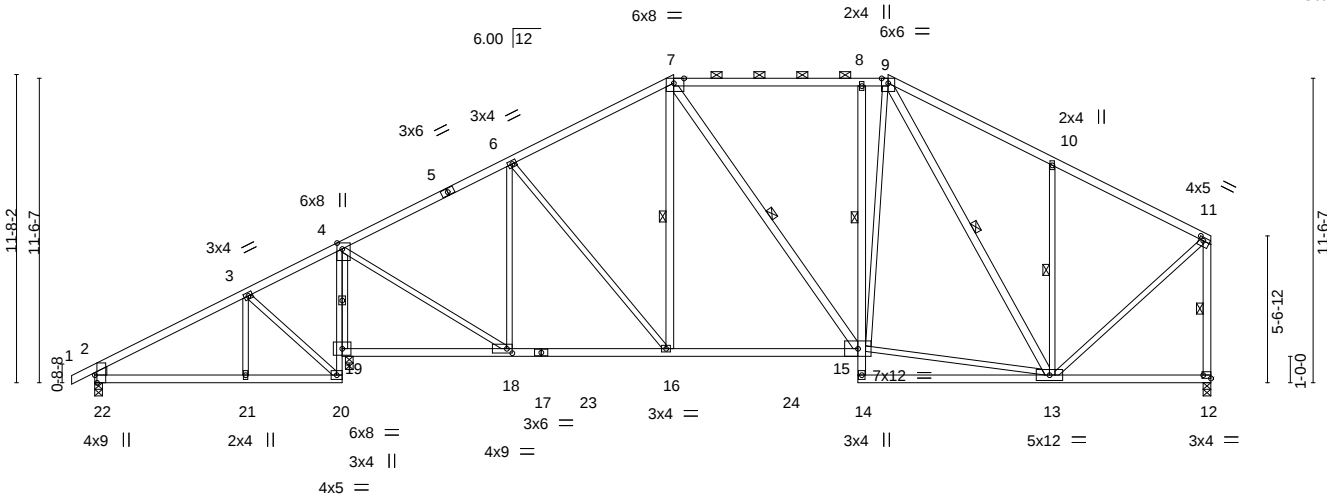
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:13 2020 Page 1

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|         |        |        |        |         |         |         |        |        |
|---------|--------|--------|--------|---------|---------|---------|--------|--------|
| -0-10-8 | 5-8-10 | 9-4-8  | 15-8-9 | 21-11-4 | 28-11-0 | 30-0-12 | 36-3-6 | 42-3-8 |
| 0-10-8  | 5-8-10 | 3-7-15 | 6-4-1  | 6-2-11  | 6-11-12 | 1-1-12  | 6-2-10 | 6-0-2  |

Scale = 1:87.3



|  |        |        |       |        |         |         |         |        |
|--|--------|--------|-------|--------|---------|---------|---------|--------|
|  | 5-8-10 | 9-4-8  | 9-6-0 | 15-8-9 | 21-11-4 | 28-11-0 | 36-0-14 | 42-3-8 |
|  | 5-8-10 | 3-7-15 | 0-1-8 | 6-2-9  | 6-2-11  | 6-11-12 | 7-1-14  | 6-2-10 |

Plate Offsets (X,Y)-- [4:0-2-12,Edge], [7:0-4-10,Edge], [11:0-2-0,0-1-8], [12:Edge,0-1-8], [18:0-2-8,0-2-0], [22:0-3-8,Edge]

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.88  | Vert(LL) | -0.16 15-16 | >999   | 360 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.74  | Vert(CT) | -0.31 15-16 | >999   | 240 |                |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.92  | Horz(CT) | 0.05 12     | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.04 15-16  | >999   | 240 | Weight: 220 lb | FT = 10% |

|                                                                                   |                                                                                                                                         |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                                                    | <b>BRACING-</b>                                                                                                                         |
| TOP CHORD 2x4 SPF No.2                                                            | TOP CHORD Structural wood sheathing directly applied or 3-9-5 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 7-9. |
| BOT CHORD 2x4 SPF No.2 *Except* 4-20: 2x3 SPF No.2                                | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 18-19.                                         |
| WEBS 2x3 SPF No.2 *Except* 7-16,7-15,9-13,11-12: 2x4 SPF No.2, 2-22: 2x6 SPF No.2 | WEBS 1 Row at midpt 8-15 7-16, 7-15, 9-13, 10-13, 11-12                                                                                 |

**REACTIONS.** (size) 22=0-3-8, 19=0-3-8 (req. 0-3-15), 12=0-3-8  
Max Horz 22=306(LC 5)  
Max Uplift 22=-59(LC 8), 19=-261(LC 8), 12=-148(LC 9)  
Max Grav 22=567(LC 16), 19=2498(LC 2), 12=1874(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-554/103, 4-6=-1651/180, 6-7=-1749/218, 7-8=-1494/212, 8-9=-1479/211, 9-10=-1396/262, 10-11=-1379/121, 2-22=-511/100, 11-12=-1789/171  
BOT CHORD 21-22=-148/342, 20-21=-148/342, 19-20=-77/391, 4-19=-2007/220, 16-18=-142/1378, 15-16=-131/1465, 8-15=-629/233  
WEBS 3-20=-530/136, 4-18=-61/1713, 6-18=-713/107, 7-16=-44/286, 13-15=-84/1321, 9-15=-187/977, 9-13=-564/101, 10-13=-600/269, 11-13=-93/1530

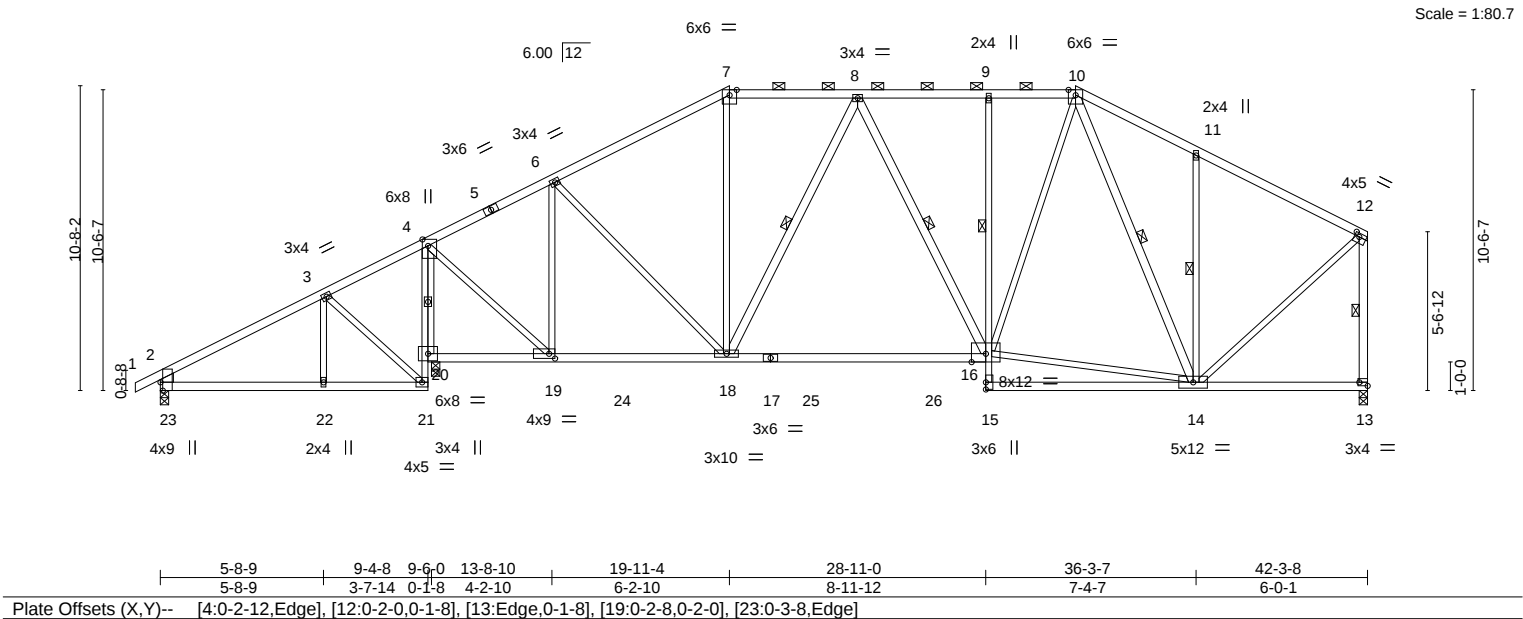
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; 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, with BCDL = 10.0psf.
  - WARNING: Required bearing size at joint(s) 19 greater than input bearing size.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22 except (jt=lb) 19=261, 12=148.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

|                          |       |            |     |     |           |           |
|--------------------------|-------|------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | B2    | Hip        | 1   | 1   |           | I43793721 |
| Job Reference (optional) |       |            |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:15 2020 Page 1  
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| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.65  | Vert(LL) | -0.29 16-18 | >999   | 360 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.53  | Vert(CT) | -0.51 16-18 | >769   | 240 |                |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.96  | Horz(CT) | 0.05 13     | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.05 16-18  | >999   | 240 | Weight: 214 lb | FT = 10% |

|                                                                                                              |                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                                                                               | <b>BRACING-</b>                                                                                                                          |
| TOP CHORD 2x4 SPF No.2                                                                                       | TOP CHORD Structural wood sheathing directly applied or 3-1-9 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-9 max.): 7-10. |
| BOT CHORD 2x4 SPF No.2 *Except* 4-21,9-15: 2x3 SPF No.2, 17-20: 2x4 SPF 2400F 2.0E 16-17: 2x4 SPF 2100F 1.8E | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 19-20,14-15.                                    |
| WEBS 2x3 SPF No.2 *Except* 8-18,8-16,10-14,12-13: 2x4 SPF No.2, 2-23: 2x6 SPF No.2                           | WEBS 1 Row at midpt 9-16 1 Row at midpt 8-18, 8-16, 10-14, 11-14, 12-13                                                                  |

|                   |                                                       |
|-------------------|-------------------------------------------------------|
| <b>REACTIONS.</b> | (size) 23=0-3-8, 20=0-3-8 (req. 0-3-15), 13=0-3-8     |
|                   | Max Horz 23=295(LC 5)                                 |
|                   | Max Uplift 23=-65(LC 8), 20=-236(LC 8), 13=-127(LC 9) |
|                   | Max Grav 23=560(LC 16), 20=2503(LC 2), 13=1875(LC 2)  |

|                |                                                                                                                                                                          |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FORCES.</b> | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.                                                                                             |
| TOP CHORD      | 2-3=-545/79, 4-6=-1354/153, 6-7=-1786/185, 7-8=-1499/209, 8-9=-1637/219, 9-10=-1635/221, 10-11=-1365/219, 11-12=-1374/150, 2-23=-507/105, 12-13=-1792/150                |
| BOT CHORD      | 22-23=-143/343, 21-22=-143/343, 20-21=-85/407, 4-20=-2016/177, 18-19=-161/1154, 16-18=-205/1663, 9-16=-383/119                                                           |
| WEBS           | 3-21=-554/148, 4-19=-116/1713, 6-19=-992/128, 6-18=-10/545, 7-18=-18/403, 8-18=-524/148, 14-16=-111/1379, 10-16=-124/954, 10-14=-608/136, 11-14=-520/235, 12-14=-65/1517 |

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
  - 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) WARNING: Required bearing size at joint(s) 20 greater than input bearing size.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23 except (jt=lb) 20=236, 13=127.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793722 |
| W1 18 | B3    | Hip        | 1   | 1   |           |           |

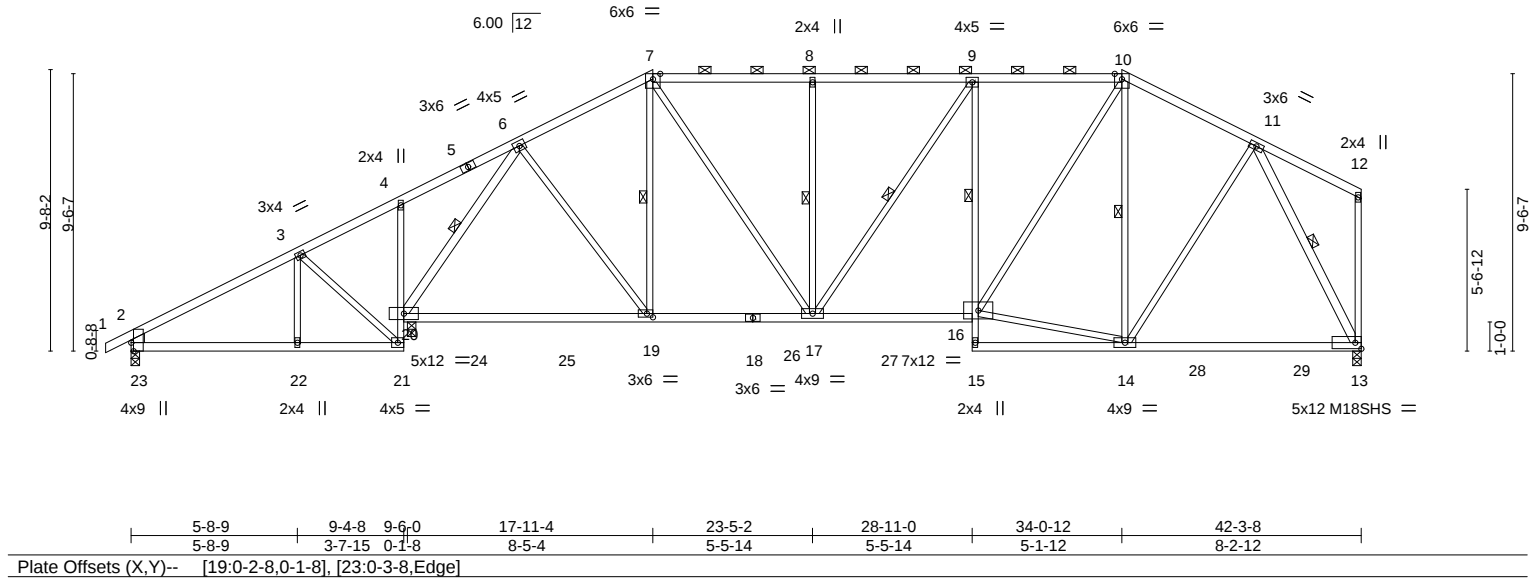
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:17 2020 Page 1

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|         |       |        |         |         |        |         |         |        |        |
|---------|-------|--------|---------|---------|--------|---------|---------|--------|--------|
| -0-10-8 | 5-8-9 | 9-4-8  | 13-4-3  | 17-11-4 | 23-5-2 | 28-11-0 | 34-0-12 | 38-7-1 | 42-3-8 |
| 0-10-8  | 5-8-9 | 3-7-15 | 3-11-11 | 4-7-1   | 5-5-14 | 5-5-14  | 5-1-12  | 4-6-5  | 3-8-7  |

Scale = 1:79.2



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.50  | Vert(LL) | -0.23 13-14 | >999   | 360 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.75  | Vert(CT) | -0.38 19-20 | >999   | 240 | M18SHS         | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.57  | Horz(CT) | 0.08 13     | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.06 16-17  | >999   | 240 | Weight: 200 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2 \*Except\*  
 4-21,9-15: 2x3 SPF No.2  
 WEBS 2x3 SPF No.2 \*Except\*  
 6-20,11-13: 2x4 SPF No.2, 2-23: 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-3-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-15 max.): 7-10.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 6-0-0 oc bracing: 14-15.  
 1 Row at midpt 9-16  
 WEBS 1 Row at midpt 6-20, 7-19, 8-17, 9-17, 10-14, 11-13

#### REACTIONS.

(size) 23=0-3-8, 20=0-3-8 (req. 0-4-1), 13=0-3-8  
 Max Horz 23=281(LC 7)  
 Max Uplift 23=-78(LC 8), 20=-212(LC 5), 13=-135(LC 4)  
 Max Grav 23=531(LC 21), 20=2582(LC 2), 13=1916(LC 2)

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

TOP CHORD 2-3=-480/100, 3-4=-145/301, 4-6=-121/315, 6-7=-1696/222, 7-8=-1876/283,  
 8-9=-1874/282, 9-10=-1879/289, 10-11=-1504/227, 2-23=-488/116  
 BOT CHORD 22-23=-145/276, 21-22=-145/276, 20-21=-81/409, 4-20=-312/118, 19-20=-184/1006,  
 17-19=-202/1456, 16-17=-249/1884, 9-16=-572/183, 13-14=-103/841  
 WEBS 3-21=-565/142, 6-20=-2100/216, 6-19=-29/785, 7-19=-384/117, 7-17=-142/810,  
 8-17=-554/176, 14-16=-129/1322, 10-16=-202/1146, 10-14=-708/190, 11-14=-68/829,  
 11-13=-1853/140

#### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are MT20 plates unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 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.
- 7) WARNING: Required bearing size at joint(s) 20 greater than input bearing size.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23 except (jt=lb) 20=212, 13=135.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30, 2020

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

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



16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793723 |
| W1 18 | B4    | HIP        | 1   | 1   |           |           |

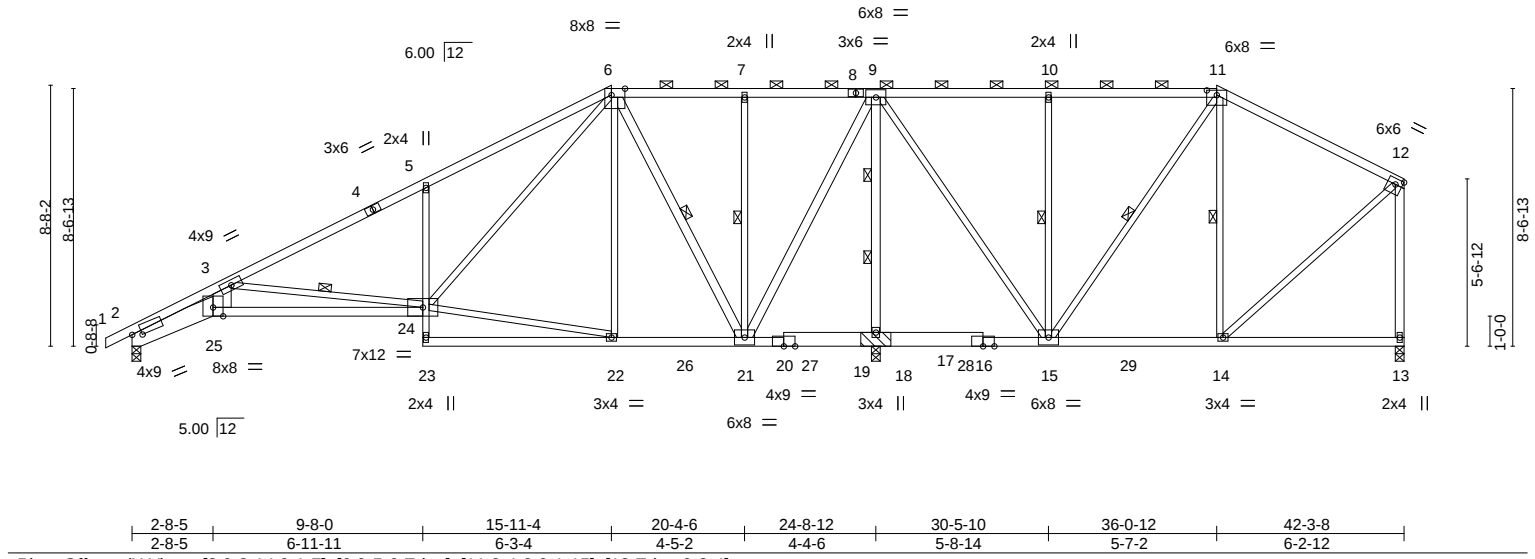
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:20 2020 Page 1

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|         |       |         |         |        |         |         |         |        |
|---------|-------|---------|---------|--------|---------|---------|---------|--------|
| -0-10-8 | 2-8-5 | 9-8-0   | 15-11-4 | 20-4-6 | 24-8-12 | 30-5-10 | 36-0-12 | 42-3-8 |
| 0-10-8  | 2-8-5 | 6-11-11 | 6-3-4   | 4-5-2  | 4-4-6   | 5-8-14  | 5-7-2   | 6-2-12 |

Scale = 1:76.6



|                       |                       |                                                                      |                                  |                |             |
|-----------------------|-----------------------|----------------------------------------------------------------------|----------------------------------|----------------|-------------|
| Plate Offsets (X,Y)-- |                       | [2:0-3-14,0-1-7], [6:0-5-6,Edge], [11:0-4-0,0-1-15], [12:Edge,0-2-4] |                                  |                |             |
| <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 25.0             | Plate Grip DOL 1.15   | TC 0.75                                                              | Vert(LL) -0.21 24-25 >999 360    | MT20           | 197/144     |
| TCDL 20.0             | Lumber DOL 1.15       | BC 0.56                                                              | Vert(CT) -0.45 24-25 >651 240    |                |             |
| BCLL 0.0 *            | Rep Stress Incr YES   | WB 0.81                                                              | Horz(CT) 0.15 18 n/a n/a         |                |             |
| BCDL 10.0             | Code IRC2018/TPI2014  | Matrix-S                                                             | Wind(LL) 0.13 24-25 >999 240     | Weight: 225 lb | FT = 10%    |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF 2100F 1.8E \*Except\*  
 2-25: 2x8 SP DSS, 5-23: 2x3 SPF No.2, 13-16: 2x4 SPF No.2  
 16-20: 2x6 SP DSS  
 WEBS 2x3 SPF No.2 \*Except\*  
 3-25: 2x8 SP DSS, 9-21,9-18,12-13,6-21: 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-10-1 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 6-11.  
 BOT CHORD Rigid ceiling directly applied or 5-1-12 oc bracing.  
 WEBS 1 Row at midpt 3-24, 10-15, 11-15, 11-14, 7-21, 6-21  
 2 Rows at 1/3 pts 9-18

#### REACTIONS.

(size) 2=0-3-8, 18=(0-3-8 + bearing block) (req. 0-5-10), 13=0-3-8  
 Max Horz 2=262(LC 7)  
 Max Uplift 2=-102(LC 8), 18=-377(LC 5), 13=-125(LC 4)  
 Max Grav 2=1022(LC 23), 18=3575(LC 2), 13=582(LC 22)

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

TOP CHORD 2-3=-3825/483, 3-5=-1218/95, 5-6=-1217/253, 6-7=-38/565, 7-9=-38/562, 9-10=-63/509, 10-11=-63/511, 11-12=-349/182, 12-13=-529/159  
 BOT CHORD 2-25=-572/3445, 24-25=-496/2706, 5-24=-654/283, 18-21=-1295/308, 15-18=-1295/308  
 WEBS 3-25=-126/1465, 3-24=-1728/408, 6-24=-315/1330, 6-22=0/276, 9-21=-204/1736, 9-18=-3239/432, 9-15=-156/1574, 10-15=-544/180, 11-15=-812/127, 11-14=-30/288, 7-21=-389/132, 6-21=-1301/212

#### NOTES-

- 2x6 SP DSS bearing block 12" long at jt. 18 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF No.2.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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, with BCDL = 10.0psf.
- Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=102, 18=377, 13=125.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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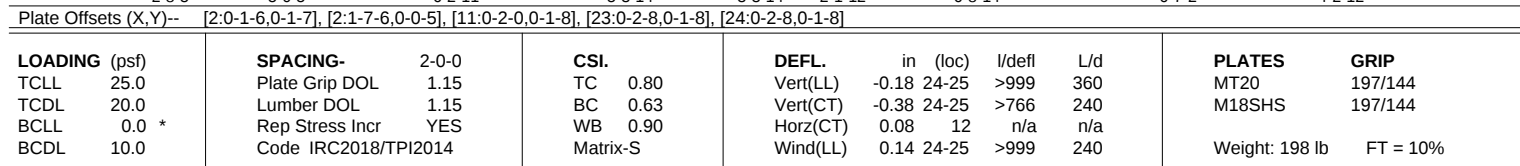
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:22 2020 Page 1

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0-10-8 2-8-5 7-8-9 13-11-4 19-3-2 22-7-0 24-8-12 31-5-10 38-0-12 42-3-8  
0-10-8 2-8-5 5-0-5 6-2-11 5-3-14 3-3-14 2-1-12 6-8-14 6-7-2 4-2-12

Scale = 1:76.4



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

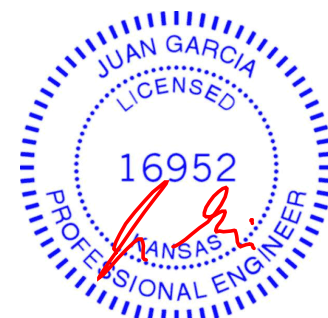
**TOP CHORD**  
2-3=-5201/747, 3-4=-2493/329, 4-5=-1499/213, 5-6=-780/176, 6-7=-777/174,  
7-9=-518/213, 9-10=-520/215, 10-11=-522/149, 11-12=-892/142

**BOT CHORD**  
2-25=-780/4637, 24-25=-643/3692, 23-24=-314/2203, 21-23=-159/1229, 13-14=-74/427

**WEBS**  
3-25=-244/1845, 3-24=-1514/334, 4-24=0/477, 4-23=-1090/263, 5-23=-527/739,  
7-21=-194/1512, 16-18=-2390/423, 7-18=-2351/428, 7-14=-147/994, 9-14=-655/213,  
10-13=-392/117, 11-13=-71/693, 6-21=-501/165, 5-21=-716/100

- 1) 2x4 SPF No.2 bearing block 12" long at jt. 16 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 total fasteners. Bearing is assumed to be SPF No.2.
- 2) Unbalanced roof live loads have been considered for this design.
- 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCFLD=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) All plates are 2x4 MT20 unless otherwise indicated.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* 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.
- 9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=179, 12=118, 16=358.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

|                  |                                                                                                                                |
|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>BRACING-</b>  |                                                                                                                                |
| <b>TOP CHORD</b> | Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-10. |
| <b>BOT CHORD</b> | Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 10-0-0 oc bracing: 23-24                                           |
| <b>WEBS</b>      | 1 Row at midpt 4-23, 5-21<br>2 Rows at 1/3 pts 7-16                                                                            |



November 30, 2020

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | 143793725 |
| W1 18 | B6    | HIP        | 1   | 1   |           |           |

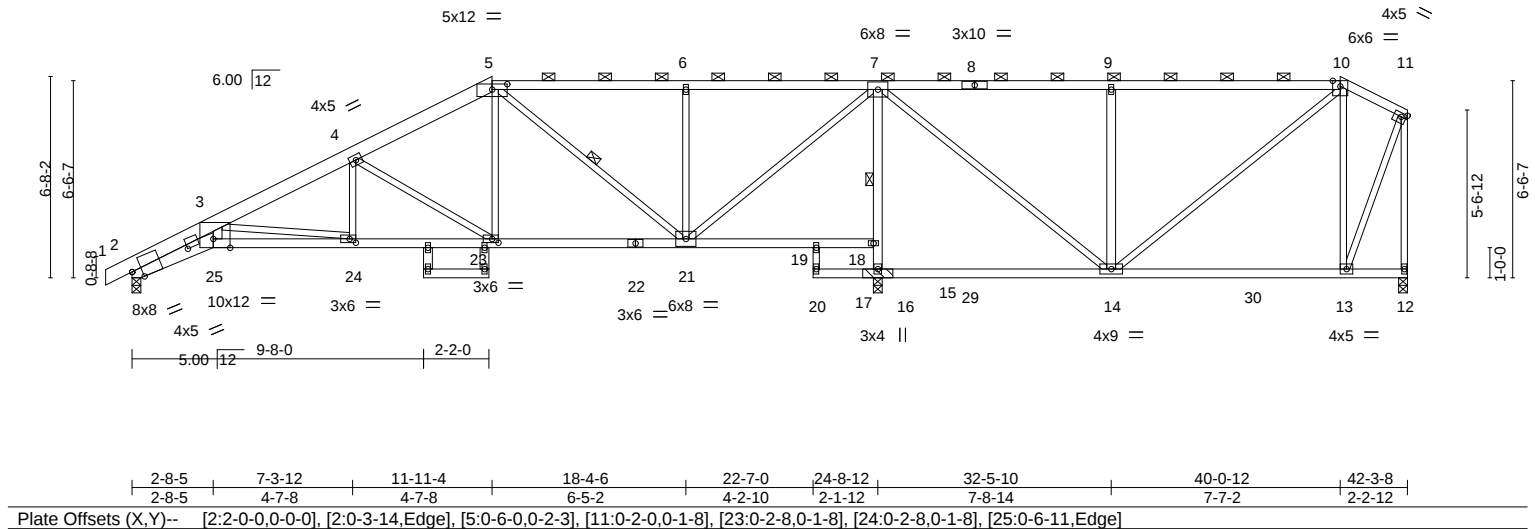
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:24 2020 Page 1

ID:ehbCcHA60Xzxp2EXV2Vt?1yyWkt-OTnhx\_C76woqxa3vsUpvGh7Ft8x0H8UipwZS5syE?nL

|         |       |        |         |        |        |         |         |         |        |
|---------|-------|--------|---------|--------|--------|---------|---------|---------|--------|
| -0-10-8 | 2-8-5 | 7-3-12 | 11-11-4 | 18-4-6 | 22-7-0 | 24-8-12 | 32-5-10 | 40-0-12 | 42-3-8 |
| 0-10-8  | 2-8-5 | 4-7-8  | 4-7-8   | 6-5-2  | 4-2-10 | 2-1-12  | 7-8-14  | 7-7-2   | 2-2-12 |

Scale = 1:76.4



|                      |                       |             |                                  |                |             |
|----------------------|-----------------------|-------------|----------------------------------|----------------|-------------|
| <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 25.0            | Plate Grip DOL 1.15   | TC 0.97     | Vert(LL) -0.16 24-25 >999 360    | MT20           | 197/144     |
| TCDL 20.0            | Lumber DOL 1.15       | BC 0.92     | Vert(CT) -0.34 24-25 >877 240    |                |             |
| BCLL 0.0 *           | Rep Stress Incr YES   | WB 0.79     | Horz(CT) 0.09 12 n/a n/a         |                |             |
| BCDL 10.0            | Code IRC2018/TPI2014  | Matrix-S    | Wind(LL) 0.11 24-25 >999 240     | Weight: 194 lb | FT = 10%    |

|                                                                                  |                                                                                                                                           |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                                                   | <b>BRACING-</b>                                                                                                                           |
| TOP CHORD 2x4 SPF No.2 *Except*<br>1-5: 2x6 SPF No.2                             | TOP CHORD Structural wood sheathing directly applied or 2-7-11 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-10. |
| BOT CHORD 2x4 SPF No.2 *Except*<br>2-25: 2x6 SPF No.2, 22-25: 2x4 SPF 2100F 1.8E | BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:<br>10-0-0 oc bracing: 23-24                                         |
| WEBS 2x3 SPF No.2 *Except*<br>3-25,7-16,9-14,26-28,23-27: 2x4 SPF No.2           | WEBS 1 Row at midpt 5-21, 7-16                                                                                                            |

|                   |                                                                                                                                                                                                         |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REACTIONS.</b> | (size) 2=0-3-8, 12=0-3-8, 16=(0-3-8 + bearing block) (req. 0-4-2)<br>Max Horz 2=237(LC 7)<br>Max Uplift 2=164(LC 8), 12=133(LC 4), 16=378(LC 5)<br>Max Grav 2=1395(LC 23), 12=937(LC 24), 16=2611(LC 2) |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.                                                                                                                                                    |
| TOP CHORD 2-3=-4736/603, 3-4=-2578/297, 4-5=-1750/207, 5-6=-1073/190, 6-7=-1073/189,<br>7-9=-662/211, 9-10=-665/213, 10-11=-373/115, 11-12=-980/139                                                                                            |
| BOT CHORD 2-25=-629/4154, 24-25=-545/3517, 23-24=-290/2309, 21-23=-215/1500, 13-14=-77/322                                                                                                                                                     |
| WEBS 3-25=-183/1633, 3-24=-1224/268, 4-24=0/374, 4-23=-971/229, 5-23=-53/708,<br>5-21=-572/82, 6-21=-593/191, 7-21=-239/1672, 16-18=-2301/455, 7-18=-2309/460,<br>7-14=-172/1060, 9-14=-756/244, 10-14=-124/446, 10-13=-619/171, 11-13=-94/878 |

- NOTES-**
- 2x4 SPF No.2 bearing block 12" long at jt. 16 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=164, 12=133, 16=378.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Wheeler Lumber, Waverly, KS - 66871, 8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:27 2020 Page 1

ID:ehbCcHA60Xx2p2EXV2Vt?1yyWkt-p2SpZ0E0PrAOp1oTYdMcuJlqlL1PUTa8Vto6iByE?nl

0-10-8 5-8-8 9-11-4 11-10-0 18-2-12 22-7-0 24-8-12 30-5-12 36-4-0 42-3-8

0-10-8 5-8-8 4-2-11 1-10-12 6-4-12 4-4-4 2-1-12 5-9-0 5-10-4 5-11-8

Scale = 1:75.2

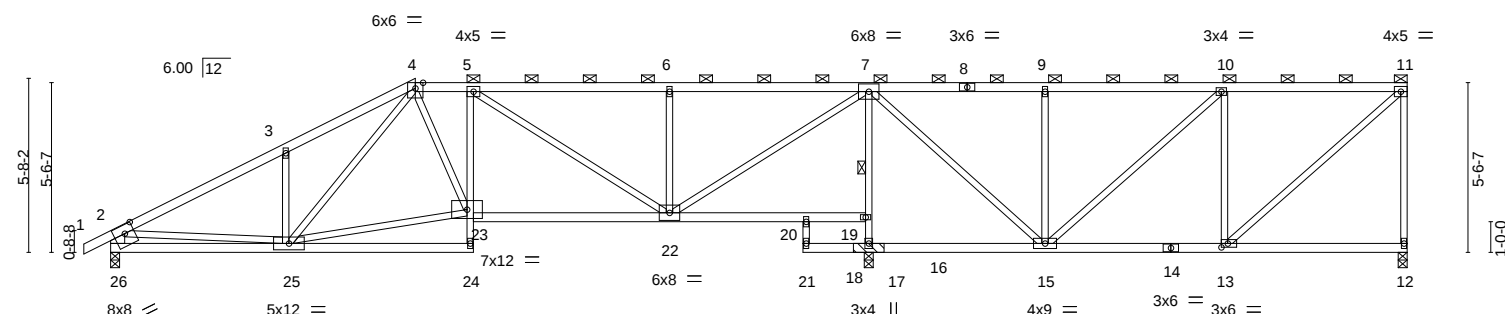


Plate Offsets (X,Y)-- [13:0-2-8-0-1-8] [26:0-3-12-0-3-4]

|                      |  |                       |             |                       |        |     |                |             |
|----------------------|--|-----------------------|-------------|-----------------------|--------|-----|----------------|-------------|
| <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 25.0            |  | Plate Grip DOL 1.15   | TC 0.70     | Vert(LL) -0.09 22-23  | >999   | 360 | MT20           | 197/144     |
| TCDL 20.0            |  | Lumber DOL 1.15       | BC 0.62     | Vert(CT) -0.24 22-23  | >999   | 240 |                |             |
| BCLL 0.0 *           |  | Rep Stress Incr YES   | WB 0.90     | Horz(CT) -0.01 12     | n/a    | n/a |                |             |
| BCDL 10.0            |  | Code IRC2018/TPI2014  | Matrix-S    | Wind(LL) 0.07 22-23   | >999   | 240 | Weight: 178 lb | FT = 10%    |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
5-24: 2x3 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
2-26: 2x6 SPF No.2

|                  |                                                                                                                                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>BRACING-</b>  |                                                                                                                                 |
| <b>TOP CHORD</b> | Structural wood sheathing directly applied or 3-7-4 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-11 max.): 4-11. |
| <b>BOT CHORD</b> | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 20-22,15-17.                                     |
| <b>WEBS</b>      | 1 Row at midpt. 7-17                                                                                                            |

**REACTIONS.** (size) 12=0-3-8, 26=0-3-8, 17=(0-3-8 + bearing block) (req. 0-3-12)  
 Max Horiz 26=226(LC 5)  
 Max Uplift 12=-157(LC 4), 26=-151(LC 8), 17=-376(LC 5)  
 Max Grav 12=920(LC 22), 26=1419(LC 1), 17=2378(LC 1)

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

**TOP CHORD**  
2-3=-209/188, 3-4=-203/287, 4-5=-1970/231, 5-6=-1474/225, 6-7=-1474/225,  
7-9=-662/195, 9-10=-662/195, 10-11=-740/188, 11-12=-869/191, 2-26=-1358/180

**BOT CHORD**  
25-26=-244/573, 5-23=-295/186, 22-23=-319/1983, 13-15=-143/740

**WEBS**  
3-25=-409/196, 23-25=-264/1637, 4-23=-140/775, 5-22=-606/103, 6-22=-598/193,  
7-22=-283/1845, 17-19=-226/436, 7-19=-2230/445, 7-15=-165/966, 9-15=-486/159,  
10-13=-521/188, 11-13=-174/977, 2-25=-34/1195

NOTES-

- 1) 2x4 SPF No.2 bearing block 12" long at jt. 17 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
- 2) Unbalanced roof live loads have been considered for this design.
- 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 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) except (jt=lb) 12=157, 26=151, 17=376.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30, 2020



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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |           |           |
|--------------------------|-------|------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Lot 18 W1 | i43793727 |
| W1 18                    | B8    | HALF HIP   | 1   | 1   |           |           |
| Job Reference (optional) |       |            |     |     |           |           |

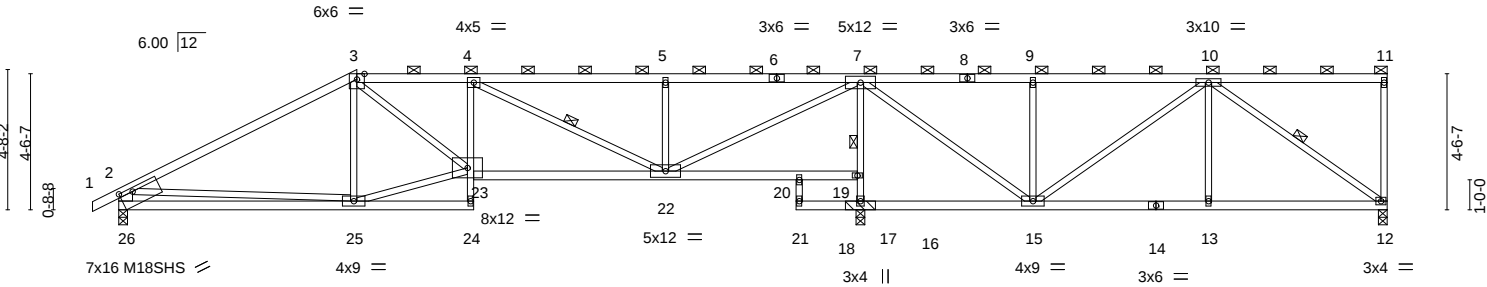
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:28 2020 Page 1

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|         |        |         |         |        |         |         |        |        |
|---------|--------|---------|---------|--------|---------|---------|--------|--------|
| -0-10-8 | 7-11-4 | 11-10-0 | 18-2-12 | 22-7-0 | 24-8-12 | 30-5-12 | 36-4-0 | 42-3-8 |
| 0-10-8  | 7-11-4 | 3-10-12 | 6-4-12  | 4-4-4  | 2-1-12  | 5-9-0   | 5-10-4 | 5-11-8 |

Scale = 1:76.8



|                       |                  |         |         |        |         |         |        |        |
|-----------------------|------------------|---------|---------|--------|---------|---------|--------|--------|
|                       | 7-11-4           | 11-10-0 | 18-2-12 | 22-7-0 | 24-8-12 | 30-5-12 | 36-4-0 | 42-3-8 |
|                       | 7-11-4           | 3-10-12 | 6-4-12  | 4-4-4  | 2-1-12  | 5-9-0   | 5-10-4 | 5-11-8 |
| Plate Offsets (X,Y)-- | [26:0-5-6,0-1-8] |         |         |        |         |         |        |        |

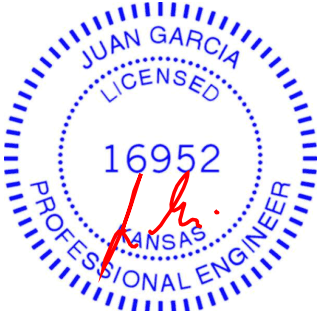
| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.66  | Vert(LL) | -0.12 22-23 | >999   | 360 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.77  | Vert(CT) | -0.30 22-23 | >965   | 240 | M18SHS         | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.77  | Horz(CT) | 0.04 12     | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.10 22-23  | >999   | 240 | Weight: 166 lb | FT = 10% |

|                                                            |                                                                                                                                          |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                             | <b>BRACING-</b>                                                                                                                          |
| TOP CHORD 2x4 SPF No.2 *Except*<br>1-3: 2x4 SPF 2100F 1.8E | TOP CHORD Structural wood sheathing directly applied or 4-5-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-4-3 max.): 3-11. |
| BOT CHORD 2x4 SPF No.2 *Except*<br>4-24: 2x3 SPF No.2      | BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.                                                                            |
| WEBS 2x3 SPF No.2 *Except*<br>2-26: 2x6 SP DSS             | WEBS 1 Row at midpt<br>4-22, 7-17, 10-12                                                                                                 |

|                   |                                                                                                                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REACTIONS.</b> | (size) 12=0-3-8, 26=0-3-8, 17=(0-3-8 + bearing block) (req. 0-3-12)<br>Max Horz 26=184(LC 7)<br>Max Uplift 12=-151(LC 4), 26=-129(LC 8), 17=-374(LC 5)<br>Max Grav 12=915(LC 22), 26=1416(LC 1), 17=2386(LC 1) |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.                                                                                                                          |
| TOP CHORD 2-3=-2004/173, 3-4=-2589/345, 4-5=-1906/287, 5-7=-1906/287, 7-9=-801/198,<br>9-10=-801/198, 2-26=-1343/176                                                                                                 |
| BOT CHORD 25-26=-356/1092, 22-23=-419/2620, 13-15=-163/905, 12-13=-163/905                                                                                                                                           |
| WEBS 3-25=-384/151, 23-25=-236/1670, 3-23=-209/1234, 4-22=-796/134, 5-22=-597/193,<br>7-22=-346/2251, 17-19=-2224/432, 7-19=-2231/442, 7-15=-180/1093, 9-15=-482/158,<br>10-13=0/262, 10-12=-1097/187, 2-25=-107/760 |

|                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NOTES-</b>                                                                                                                                                                                                                                                         |
| 1) 2x4 SPF No.2 bearing block 12" long at jt. 17 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.                                                                                     |
| 2) Unbalanced roof live loads have been considered for this design.                                                                                                                                                                                                   |
| 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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 |
| 4) Provide adequate drainage to prevent water ponding.                                                                                                                                                                                                                |
| 5) All plates are MT20 plates unless otherwise indicated.                                                                                                                                                                                                             |
| 6) All plates are 2x4 MT20 unless otherwise indicated.                                                                                                                                                                                                                |
| 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.                                                                                                                                                        |
| 8) * 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.                                                                     |
| 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=151, 26=129, 17=374.                                                                                                       |
| 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.                                                                                                            |
| 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.                                                                                                                                      |



November 30,2020

|                          |       |                 |     |     |           |           |
|--------------------------|-------|-----------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type      | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | B9    | HALF HIP GIRDER | 1   | 2   |           | I43793728 |
| Job Reference (optional) |       |                 |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

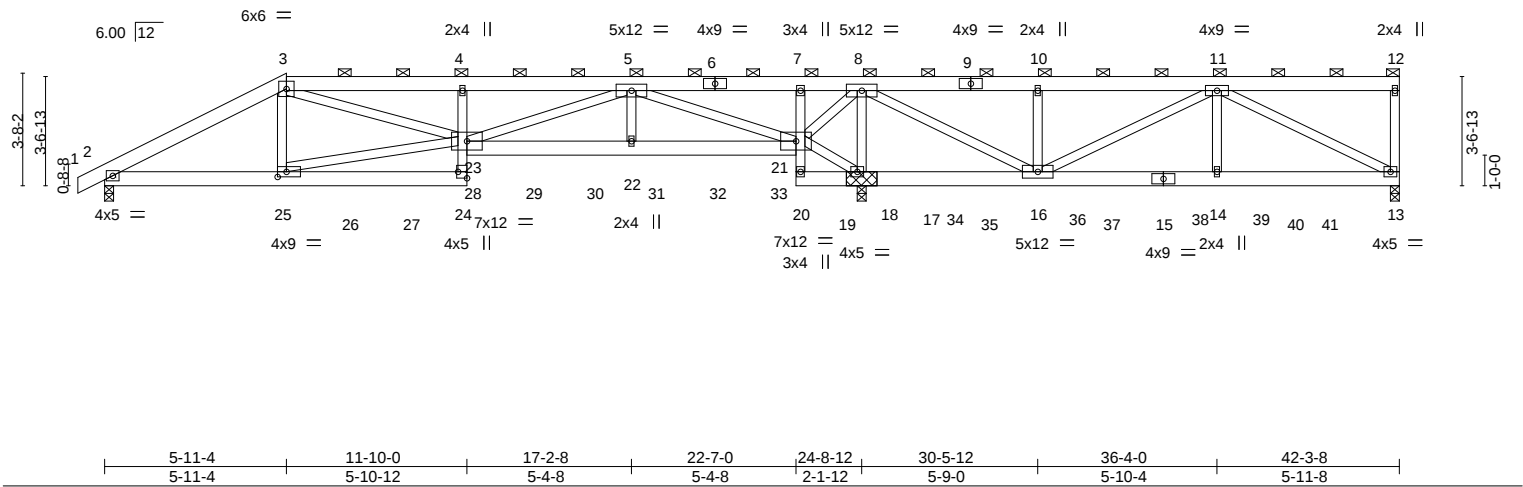
8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:31 2020 Page 1

ID:ehbCcHA60Xzxp2EXV2Vt?1yyWkt-hpiKPNIXT4hqHf5FnSRy29wZdyROQGbkQvmKryyE?nE

0-10-8 5-11-4 11-10-0 17-2-8 22-7-0 24-8-12 30-5-12 36-4-0 42-3-8

0-10-8 5-11-4 5-10-12 5-4-8 5-4-8 2-1-12 5-9-0 5-10-4 5-11-8

Scale = 1:75.3



|               |       |                      |      |          |      |          |                      |                |  |          |  |
|---------------|-------|----------------------|------|----------|------|----------|----------------------|----------------|--|----------|--|
| LOADING (psf) |       | SPACING-             |      | CSI.     |      | DEFL.    |                      | PLATES         |  | GRIP     |  |
| TCLL          | 25.0  | Plate Grip DOL       | 1.15 | TC       | 0.49 | Vert(LL) | -0.12 22-23 >999 360 | MT20           |  | 197/144  |  |
| TCDL          | 20.0  | Lumber DOL           | 1.15 | BC       | 0.48 | Vert(CT) | -0.26 22-23 >999 240 |                |  |          |  |
| BCLL          | 0.0 * | Rep Stress Incr      | NO   | WB       | 0.92 | Horz(CT) | 0.06 18 n/a n/a      |                |  |          |  |
| BCDL          | 10.0  | Code IRC2018/TPI2014 |      | Matrix-S |      | Wind(LL) | 0.08 22-23 >999 240  | Weight: 515 lb |  | FT = 10% |  |

**LUMBER-**  
TOP CHORD 2x6 SPF No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\*  
4-24,7-20: 2x4 SPF No.2  
WEBS 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-12.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 20-21,18-20,16-18.

**REACTIONS.** (size) 13=0-3-8, 2=0-3-8, 18=(0-3-8 + bearing block) (req. 0-5-4)  
Max Horz 2=105(LC 26)  
Max Uplift 13=-103(LC 4), 2=-191(LC 8), 18=-629(LC 5)  
Max Grav 13=1249(LC 20), 2=2348(LC 1), 18=6704(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-4297/430, 3-4=-5900/605, 4-5=-6032/615, 5-7=-300/2908, 7-8=-313/3034  
BOT CHORD 2-25=-432/3665, 24-25=-81/753, 23-24=-13/388, 4-23=-536/100, 22-23=-356/3397, 21-22=-356/3397, 20-21=-429/42, 7-21=-407/65, 18-20=-540/43, 16-18=-4097/394, 14-16=-133/1475, 13-14=-133/1475  
WEBS 3-25=-128/660, 23-25=-353/2923, 3-23=-235/2478, 5-23=-318/2822, 5-22=-41/980, 5-21=-6750/662, 18-21=-3978/393, 8-21=-162/1545, 8-18=-3651/382, 8-16=-414/4503, 10-16=-477/112, 11-16=-1802/175, 11-14=-39/1029, 11-13=-1615/140

- NOTES-**  
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.  
2) 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.  
3) 2x6 SP 2400F 2.0E bearing block 12" long at jt. 18 attached to each face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12  
Total fasteners per block. Bearing is assumed to be SPF No.2.  
4) Unbalanced roof live loads have been considered for this design.  
5) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCdL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60  
6) Provide adequate drainage to prevent water ponding.  
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
8) \* 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.  
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 13=103, 2=191, 18=629.  
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 
- November 30,2020

|       |       |                 |     |     |           |
|-------|-------|-----------------|-----|-----|-----------|
| Job   | Truss | Truss Type      | Qty | Ply | Lot 18 W1 |
| W1 18 | B9    | HALF HIP GIRDER | 1   | 2   | I43793728 |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:31 2020 Page 2  
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NOTES-

12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 723 lb down and 175 lb up at 5-11-4, 285 lb down and 44 lb up at 8-0-0, 285 lb down and 44 lb up at 10-0-0, 288 lb down and 45 lb up at 12-0-0, 288 lb down and 45 lb up at 14-0-0, 288 lb down and 45 lb up at 16-0-0, 288 lb down and 45 lb up at 18-0-0, 288 lb down and 45 lb up at 20-0-0, 288 lb down and 45 lb up at 22-0-0, 285 lb down and 44 lb up at 24-0-0, 285 lb down and 44 lb up at 26-0-0, 285 lb down and 44 lb up at 28-0-0, 285 lb down and 44 lb up at 30-0-0, 285 lb down and 44 lb up at 32-0-0, 285 lb down and 44 lb up at 34-0-0, 285 lb down and 44 lb up at 36-0-0, and 285 lb down and 44 lb up at 38-0-0, and 285 lb down and 44 lb up at 40-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

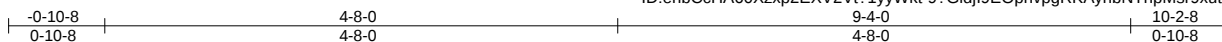
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-90, 3-12=-90, 2-24=-20, 21-23=-20, 13-20=-20  
Concentrated Loads (lb)  
Vert: 25=-723(B) 19=-285(B) 26=-285(B) 27=-285(B) 28=-288(B) 29=-288(B) 30=-288(B) 31=-288(B) 32=-288(B) 33=-288(B) 34=-285(B) 35=-285(B) 36=-285(B) 37=-285(B) 38=-285(B) 39=-285(B) 40=-285(B) 41=-285(B)

|       |       |                        |     |     |                          |           |
|-------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type             | Qty | Ply | Lot 18 W1                | I43793729 |
| W1 18 | C1    | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

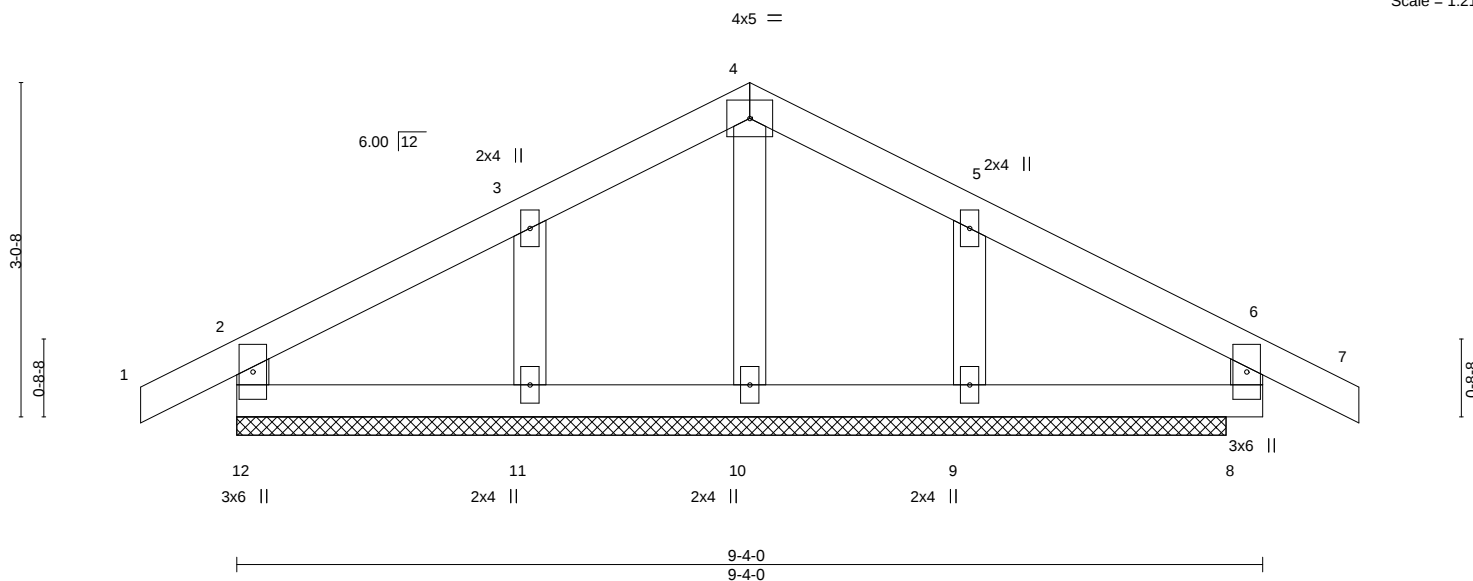
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:32 2020 Page 1

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Scale = 1:21.0



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.27  | Vert(LL) | -0.00 | 6-7   | n/r    | 120 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.15  | Vert(CT) | -0.01 | 6-7   | n/r    | 120 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.06  | Horz(CT) | -0.00 | 9     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R |          |       |       |        |     | Weight: 32 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 9-4-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

#### REACTIONS.

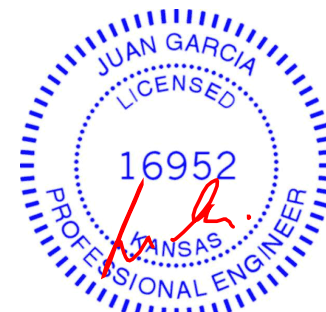
All bearings 9-0-0.  
(lb) - Max Horz 12=-54(LC 6)  
Max Uplift All uplift 100 lb or less at joint(s) 12, 11 except 9=-108(LC 9)  
Max Grav All reactions 250 lb or less at joint(s) 12 except 10=323(LC 1), 11=375(LC 1), 9=450(LC 22)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-34/357, 3-4=0/306, 4-5=0/297, 5-6=-57/364  
BOT CHORD 11-12=-259/77, 10-11=-259/77, 9-10=-259/77, 8-9=-259/77  
WEBS 4-10=-351/10, 3-11=-275/107, 5-9=-312/117

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 11 except (jt=lb) 9=108.
- Non Standard bearing condition. Review required.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793730 |
| W1 18 | C2    | Common     | 2   | 1   |           |           |

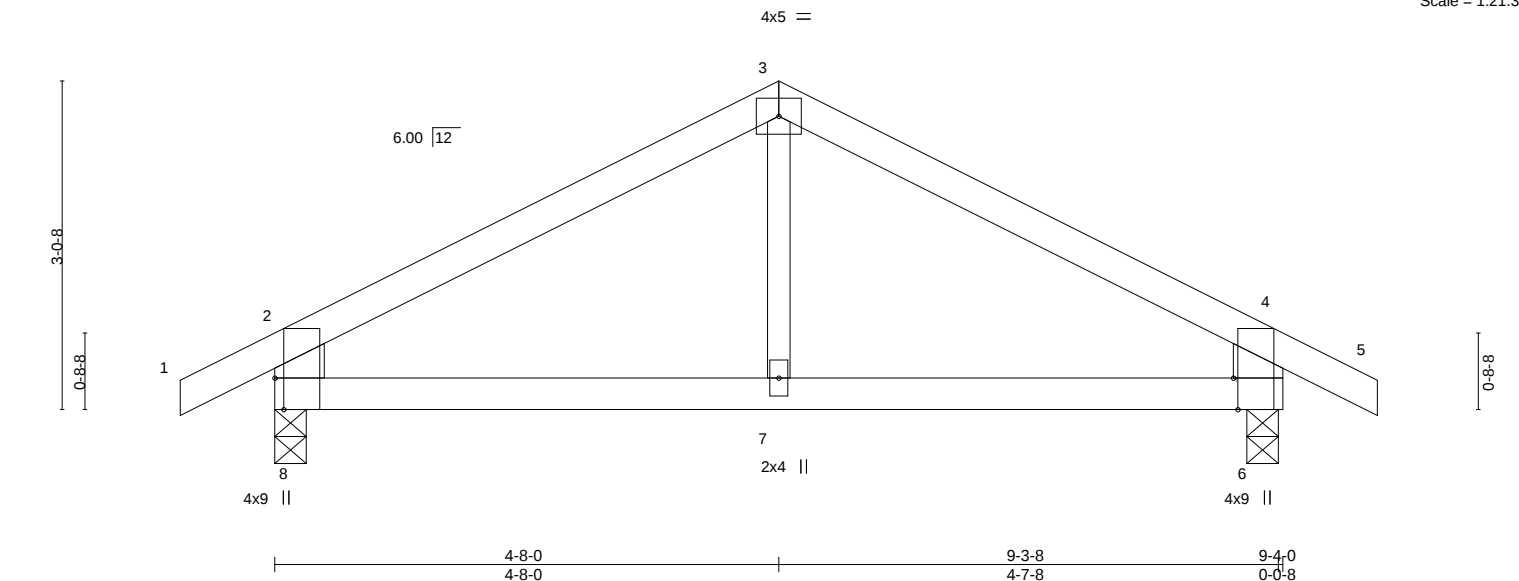
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:34 2020 Page 1

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|         |       |       |        |
|---------|-------|-------|--------|
| -0-10-8 | 4-8-0 | 9-4-0 | 10-2-8 |
| 0-10-8  | 4-8-0 | 4-8-0 | 0-10-8 |

Scale = 1:21.3



| Plate Offsets (X,Y)-- |       | [6:0-3-8,Edge], [8:0-3-8,Edge] |       |          |          |       |       |        |     |               |          |
|-----------------------|-------|--------------------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| LOADING               | (psf) | SPACING-                       | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
| TCLL                  | 25.0  | Plate Grip DOL                 | 1.15  | TC 0.38  | Vert(LL) | -0.01 | 7-8   | >999   | 360 | MT20          | 197/144  |
| TCDL                  | 20.0  | Lumber DOL                     | 1.15  | BC 0.17  | Vert(CT) | -0.03 | 7-8   | >999   | 240 |               |          |
| BCLL                  | 0.0 * | Rep Stress Incr                | YES   | WB 0.06  | Horz(CT) | 0.01  | 6     | n/a    | n/a |               |          |
| BCDL                  | 10.0  | Code IRC2018/TPI2014           |       | Matrix-R | Wind(LL) | 0.00  | 7-8   | >999   | 240 | Weight: 28 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x6 SPF No.2 \*Except\*  
 3-7: 2x3 SPF No.2

#### BRACING-

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

#### REACTIONS.

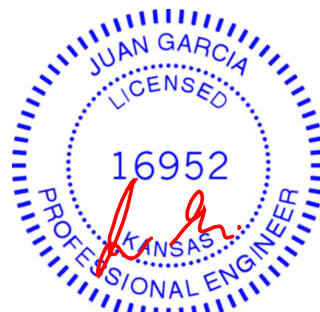
(size) 8=0-3-8, 6=0-3-8  
 Max Horz 8=55(LC 7)  
 Max Uplift 8=75(LC 8), 6=75(LC 9)  
 Max Grav 8=588(LC 1), 6=587(LC 1)

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

TOP CHORD 2-3=-554/67, 3-4=-554/67, 2-8=-536/106, 4-6=-536/106  
 BOT CHORD 7-8=-5/402, 6-7=-5/402

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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) 8, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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|                          |       |                        |     |     |           |           |
|--------------------------|-------|------------------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type             | Qty | Ply | Lot 18 W1 | I43793732 |
| W1 18                    | D1    | Common Supported Gable | 1   | 1   |           |           |
| Job Reference (optional) |       |                        |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

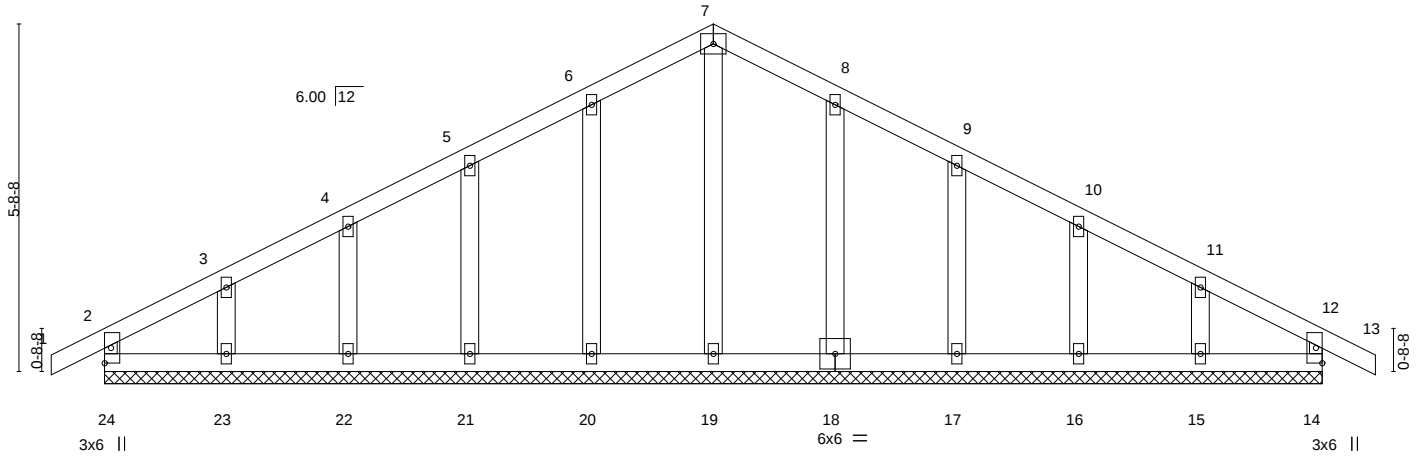
8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:36 2020 Page 1

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0-10-8 10-0-0 20-0-0 20-10-8  
0-10-8 10-0-0 10-0-0 0-10-8

4x5 =

Scale = 1:37.8



|               |       |                      |      |          |      |          |                  |                        |  |         |  |
|---------------|-------|----------------------|------|----------|------|----------|------------------|------------------------|--|---------|--|
| LOADING (psf) |       | SPACING- 2-0-0       |      | CSI.     |      | DEFL.    |                  | PLATES                 |  | GRIP    |  |
| TCLL          | 25.0  | Plate Grip DOL       | 1.15 | TC       | 0.08 | Vert(LL) | -0.00 13 n/r 120 | MT20                   |  | 197/144 |  |
| TCDL          | 20.0  | Lumber DOL           | 1.15 | BC       | 0.03 | Vert(CT) | -0.00 13 n/r 120 |                        |  |         |  |
| BCLL          | 0.0 * | Rep Stress Incr      | YES  | WB       | 0.09 | Horz(CT) | 0.00 14 n/a n/a  |                        |  |         |  |
| BCDL          | 10.0  | Code IRC2018/TPI2014 |      | Matrix-R |      |          |                  |                        |  |         |  |
|               |       |                      |      |          |      |          |                  | Weight: 81 lb FT = 10% |  |         |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

All bearings 20-0-0.  
(lb) - Max Horz 24=87(LC 7)  
Max Uplift All uplift 100 lb or less at joint(s) 24, 14, 20, 21, 22, 23, 18, 17, 16, 15  
Max Grav All reactions 250 lb or less at joint(s) 24, 14, 19, 20, 21, 22, 23, 18, 17, 16, 15

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 14, 20, 21, 22, 23, 18, 17, 16, 15.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793733 |
| W1 18 | D2    | Common     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:40 2020 Page 1

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Scale = 1:37.0

|                       |                                    |
|-----------------------|------------------------------------|
| Plate Offsets (X,Y)-- | [8:0-3-2,0-6-8], [11:0-1-10,0-3-4] |
|-----------------------|------------------------------------|

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc)    | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.67  | Vert(LL) | -0.17 10-11 | >999   | 360 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.80  | Vert(CT) | -0.36 10-11 | >650   | 240 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.35  | Horz(CT) | 0.04 8      | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.05 10     | >999   | 240 | Weight: 67 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF 2100F 1.8E  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x3 SPF No.2 \*Except\*  
 2-11,6-8: 2x8 SP DSS

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-8-9 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 11=0-3-8, 8=0-3-8  
 Max Horz 11=91(LC 7)  
 Max Uplift 11=-135(LC 8), 8=-135(LC 9)  
 Max Grav 11=1173(LC 1), 8=1173(LC 1)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1587/212, 3-4=-1205/132, 4-5=-1205/132, 5-6=-1587/212, 2-11=-1071/183,  
 6-8=-1071/183  
 BOT CHORD 10-11=-199/1293, 8-10=-122/1293  
 WEBS 4-10=0/514, 5-10=-367/211, 3-10=-367/211

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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 (it=lb) 11=135, 8=135.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30,2020

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16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793734 |
| W1 18 | D3    | Common     | 1   | 1   |           |           |

Wheeler Lumber, Waverly, KS - 66871,

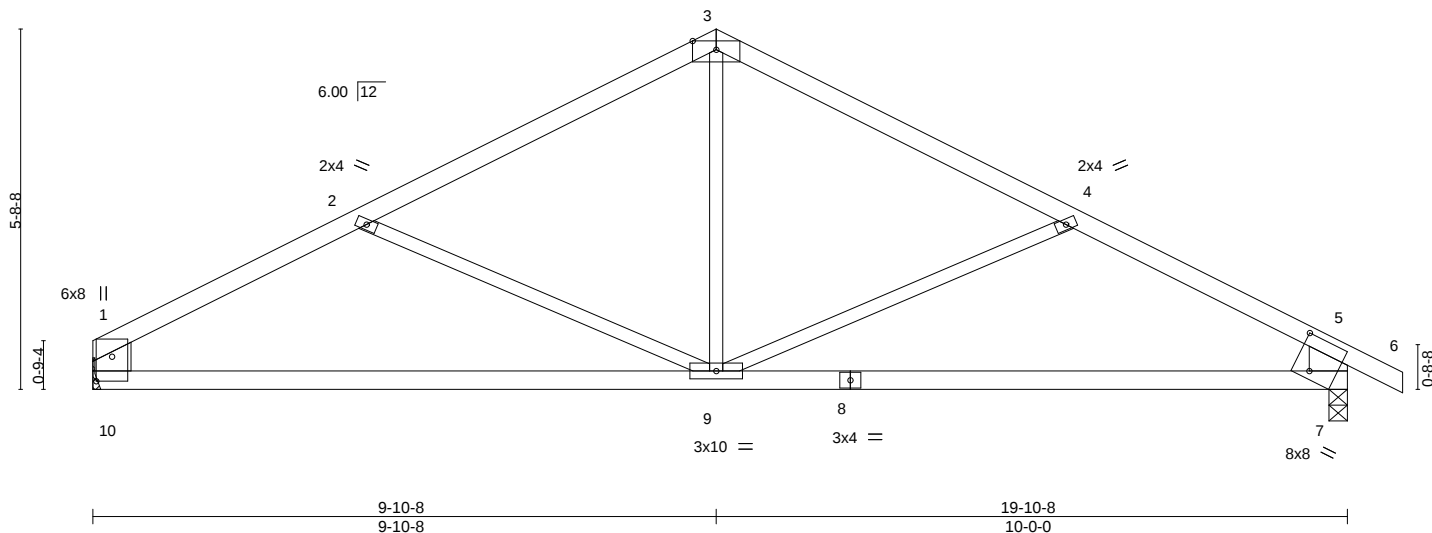
8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:41 2020 Page 1

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|       |        |        |         |        |
|-------|--------|--------|---------|--------|
| 4-4-0 | 9-10-8 | 15-5-0 | 19-10-8 | 20-9-0 |
| 4-4-0 | 5-6-8  | 5-6-8  | 4-5-8   | 0-10-8 |

4x9 =

Scale = 1:36.5



| Plate Offsets (X,Y)-- |                      | [1:0-4-11,0-3-0], [7:0-3-2,0-6-8] |          |          |       |       |        |     |               |          |  |
|-----------------------|----------------------|-----------------------------------|----------|----------|-------|-------|--------|-----|---------------|----------|--|
| LOADING (psf)         | SPACING-             | 2-0-0                             | CSI.     | DEFL.    | in    | (loc) | L/defl | L/d | PLATES        | GRIP     |  |
| TCLL 25.0             | Plate Grip DOL       | 1.15                              | TC 0.93  | Vert(LL) | -0.18 | 7-9   | >999   | 360 | MT20          | 197/144  |  |
| TCDL 20.0             | Lumber DOL           | 1.15                              | BC 0.78  | Vert(CT) | -0.40 | 7-9   | >574   | 240 |               |          |  |
| BCLL 0.0 *            | Rep Stress Incr      | YES                               | WB 0.35  | Horz(CT) | 0.04  | 7     | n/a    | n/a |               |          |  |
| BCDL 10.0             | Code IRC2018/TPI2014 |                                   | Matrix-S | Wind(LL) | 0.08  | 7-9   | >999   | 240 | Weight: 66 lb | FT = 10% |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
3-6: 2x4 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
1-10,5-7: 2x8 SP DSS

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 10=Mechanical, 7=0-3-8  
Max Horz 10=-96(LC 4)  
Max Uplift 10=-106(LC 8), 7=-135(LC 9)  
Max Grav 10=1057(LC 1), 7=1169(LC 1)

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

TOP CHORD 1-2=-1569/211, 2-3=-1189/130, 3-4=-1190/131, 4-5=-1576/211, 1-10=-942/151,  
5-7=-1062/182  
BOT CHORD 9-10=-199/1283, 7-9=-122/1284  
WEBS 2-9=-371/211, 3-9=0/501, 4-9=-373/212

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- 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) 10=106, 7=135.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30,2020

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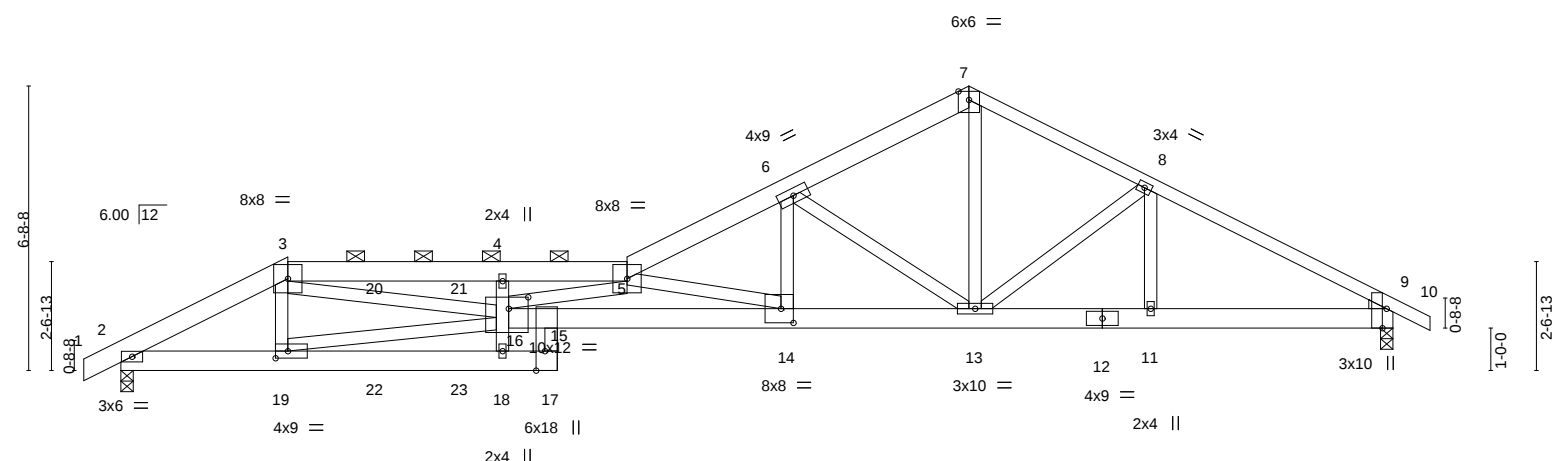
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:43 2020 Page 1

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|         |        |        |        |         |        |        |        |        |         |
|---------|--------|--------|--------|---------|--------|--------|--------|--------|---------|
| -Q-10-8 | 3-11-4 | 9-0-0  | 10-3-8 | 11-11-4 | 15-8-9 | 20-0-0 | 24-3-7 | 30-0-0 | 30-10-8 |
| 0-10-8  | 3-11-4 | 5-0-12 | 1-3-8  | 1-7-12  | 3-9-5  | 4-3-7  | 4-3-7  | 5-8-9  | 0-10-8  |

Scale = 1:54.3



|                                                                                                                                                                                                                                                                           |       |                      |      |          |      |                           |       |       |      |        |                |          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|------|----------|------|---------------------------|-------|-------|------|--------|----------------|----------|--|
| <div><div><div>3-11-4</div><div>9-0-0</div><div>10-3-8</div><div>15-8-9</div><div>20-0-0</div><div>24-3-7</div><div>30-0-0</div></div><div><div>3-11-4</div><div>5-0-12</div><div>1-3-8</div><div>5-5-1</div><div>4-3-7</div><div>4-3-7</div><div>5-8-9</div></div></div> |       |                      |      |          |      |                           |       |       |      |        |                |          |  |
| Plate Offsets (X,Y)-- [9:0-5-8,Edge], [14:0-3-8,0-4-0], [16:0-5-8,0-3-4], [17:0-5-8,Edge], [19:0-3-8,0-2-0]                                                                                                                                                               |       |                      |      |          |      |                           |       |       |      |        |                |          |  |
| LOADING (psf)                                                                                                                                                                                                                                                             |       | SPACING- 2-0-0       |      | CSI.     |      | DEFL. in (loc) l/defl L/d |       |       |      | PLATES |                | GRIP     |  |
| TCLL                                                                                                                                                                                                                                                                      | 25.0  | Plate Grip DOL       | 1.15 | TC       | 0.76 | Vert(LL)                  | -0.41 | 14-15 | >875 | 360    | MT20           | 197/144  |  |
| TCDL                                                                                                                                                                                                                                                                      | 20.0  | Lumber DOL           | 1.15 | BC       | 0.74 | Vert(CT)                  | -0.89 | 14-15 | >401 | 240    |                |          |  |
| BCLL                                                                                                                                                                                                                                                                      | 0.0 * | Rep Stress Incr      | NO   | WB       | 0.95 | Horz(CT)                  | 0.17  | 9     | n/a  | n/a    |                |          |  |
| BCDL                                                                                                                                                                                                                                                                      | 10.0  | Code IRC2018/TPI2014 |      | Matrix-S |      | Wind(LL)                  | 0.33  | 14-15 | >999 | 240    | Weight: 349 lb | FT = 10% |  |

**LUMBER-**  
TOP CHORD 2x6 SPF No.2 \*Except\*  
7-10: 2x4 SPF No.2  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x4 SPF No.2  
WEDGE  
Right: 2x3 SPF No.2

|                  |                                                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------|
| <b>BRACING-</b>  |                                                                                                             |
| <b>TOP CHORD</b> | Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (3-5-13 max.): 3-5. |
| <b>BOT CHORD</b> | Rigid ceiling directly applied or 10-0-0 oc bracing.                                                        |

**REACTIONS.** (size) 2=0-3-8, 9=0-3-8  
 Max Horz 2=139(LC 29)  
 Max Uplift 2=-443(LC 8), 9=-223(LC 9)  
 Max Grav 2=2570(LC 1), 9=2022(LC 1)

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

**TOP CHORD**  
2-3=-5053/845, 3-4=-11916/1982, 4-5=-12715/2104, 5-6=-6067/874, 6-7=-2967/421,  
7-8=-3006/445, 8-9=-3437/393

**BOT CHORD**  
2-19=-822/4367, 18-19=-113/750, 15-16=-2246/13997, 14-15=-2246/13997,  
13-14=-786/5378, 11-13=-287/2878, 9-11=-287/2878  
15-17=-316/1566, 3-16=-1227/7723, 16-18=-967/275, 5-16=-1478/496, 5-14=-8983/1522,  
6-14=-407/2913, 6-13=-3442/618, 7-13=-308/2255, 8-13=-395/194, 16-19=-727/3675

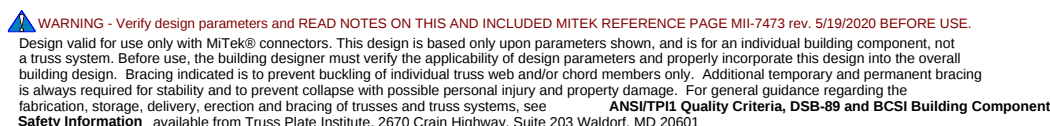
**NOTES-**

- 1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-8-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 2) 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.
- 3) Unbalanced roof live loads have been considered for this design.
- 4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 5) Provide adequate drainage to prevent water ponding.
- 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) except (jt=lb) 2=443, 9=223.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Continued on page 2



November 30, 2020



|       |       |                     |     |     |           |
|-------|-------|---------------------|-----|-----|-----------|
| Job   | Truss | Truss Type          | Qty | Ply | Lot 18 W1 |
| W1 18 | D4    | Roof Special Girder | 1   | 2   | I43793735 |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:43 2020 Page 2  
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NOTES-

- 11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 119 lb down and 78 lb up at 3-11-4, and 119 lb down and 78 lb up at 6-0-0, and 119 lb down and 78 lb up at 8-0-0 on top chord, and 266 lb down and 76 lb up at 3-11-4, 34 lb down at 6-0-0, and 34 lb down at 8-0-0, and 643 lb down and 134 lb up at 10-1-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)
- Vert: 1-3=-90, 3-5=-90, 5-7=-90, 7-10=-90, 2-17=-20, 9-15=-20
- Concentrated Loads (lb)
- Vert: 3=-60(B) 17=-643(B) 19=-266(B) 20=-60(B) 21=-60(B) 22=-26(B) 23=-26(B)

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16023 Swingley Ridge Rd  
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|       |       |              |     |     |           |           |
|-------|-------|--------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type   | Qty | Ply | Lot 18 W1 | 143793736 |
| W1 18 | D5    | Roof Special | 1   | 1   |           |           |

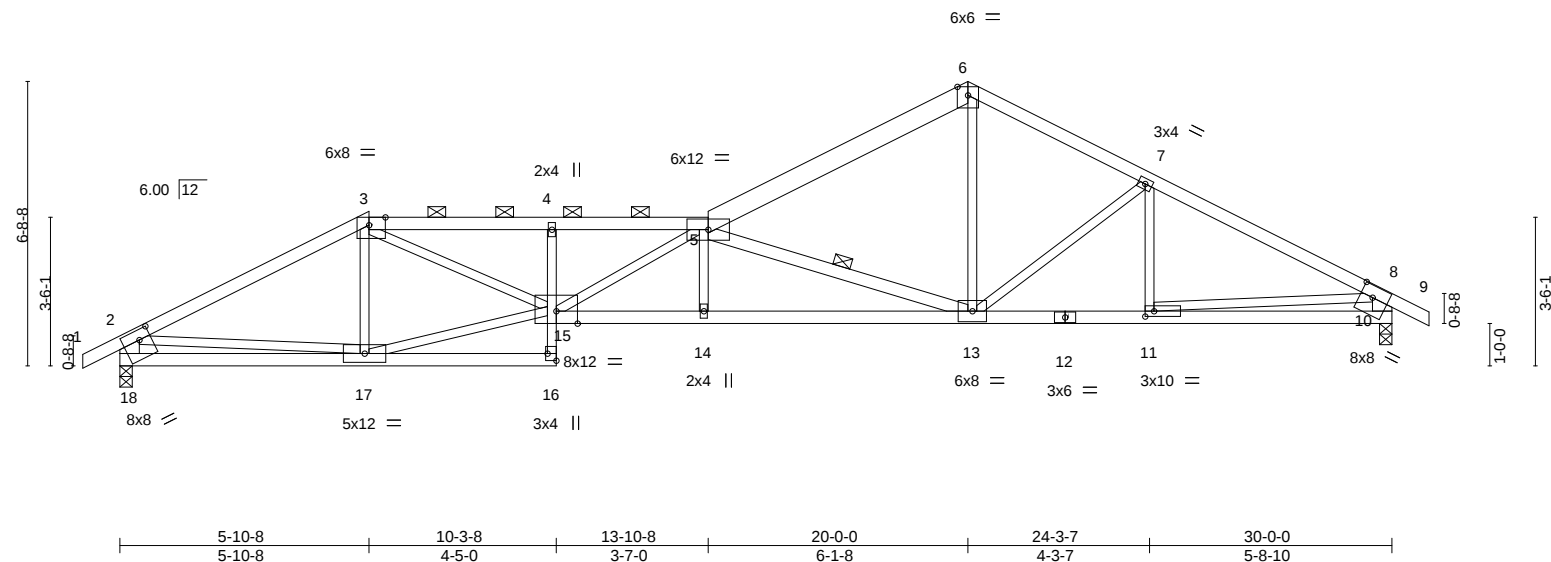
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:45 2020 Page 1

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|        |        |        |         |        |        |        |         |
|--------|--------|--------|---------|--------|--------|--------|---------|
| 0-10-8 | 5-10-8 | 10-3-8 | 13-10-8 | 20-0-0 | 24-3-7 | 30-0-0 | 30-10-8 |
| 0-10-8 | 5-10-8 | 4-5-0  | 3-7-0   | 6-1-8  | 4-3-7  | 5-8-10 | 0-10-8  |

Scale = 1:54.3



|                                                                                                               |       |                       |      |             |      |                                  |                      |                |             |
|---------------------------------------------------------------------------------------------------------------|-------|-----------------------|------|-------------|------|----------------------------------|----------------------|----------------|-------------|
| Plate Offsets (X,Y)-- [3:0-4-10,Edge], [10:0-3-8,0-3-4], [11:0-2-8,0-1-8], [16:Edge,0-2-8], [18:0-3-4,0-2-12] |       |                       |      |             |      |                                  |                      |                |             |
| <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                                                                                                          | 25.0  | Plate Grip DOL        | 1.15 | TC          | 0.92 | Vert(LL)                         | -0.32 14-15 >999 360 | MT20           | 197/144     |
| TCDL                                                                                                          | 20.0  | Lumber DOL            | 1.15 | BC          | 0.63 | Vert(CT)                         | -0.70 14-15 >508 240 |                |             |
| BCLL                                                                                                          | 0.0 * | Rep Stress Incr       | YES  | WB          | 0.97 | Horz(CT)                         | 0.17 10 n/a n/a      |                |             |
| BCDL                                                                                                          | 10.0  | Code IRC2018/TPI2014  |      | Matrix-S    |      | Wind(LL)                         | 0.24 14-15 >999 240  | Weight: 123 lb | FT = 10%    |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
5-6: 2x6 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
4-16: 2x3 SPF No.2, 12-15: 2x4 SPF 2100F 1.8E  
WEBS 2x3 SPF No.2 \*Except\*  
5-13: 2x4 SPF No.2, 2-18,8-10: 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-8-3 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 9-9-4 oc bracing.  
WEBS 1 Row at midpt 5-13

#### REACTIONS.

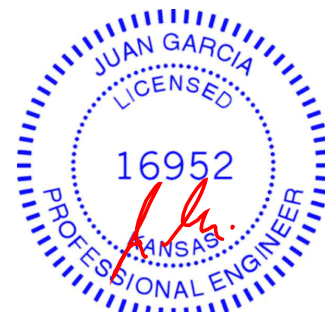
(size) 18=0-3-8, 10=0-3-8  
Max Horz 18=118(LC 8)  
Max Uplift 18=-233(LC 8), 10=-146(LC 9)  
Max Grav 18=1724(LC 1), 10=1724(LC 1)

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

TOP CHORD 2-3=-2670/337, 3-4=-4789/651, 4-5=-4829/654, 5-6=-2326/259, 6-7=-2333/298,  
7-8=-2642/245, 2-18=-1659/264, 8-10=-1653/178  
BOT CHORD 17-18=-280/721, 4-15=-459/137, 14-15=-648/5335, 13-14=-651/5330, 11-13=-153/2251,  
10-11=-110/669  
WEBS 3-17=-538/147, 15-17=-325/2152, 3-15=-347/2813, 5-15=-591/51, 5-13=-3548/534,  
6-13=-122/1519, 7-13=-378/143, 2-17=-62/1566, 8-11=-100/1588

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 18=233, 10=146.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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16023 Swingley Ridge Rd  
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|                          |       |              |     |     |           |           |
|--------------------------|-------|--------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type   | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | D6    | Roof Special | 2   | 1   |           | I43793737 |
| Job Reference (optional) |       |              |     |     |           |           |

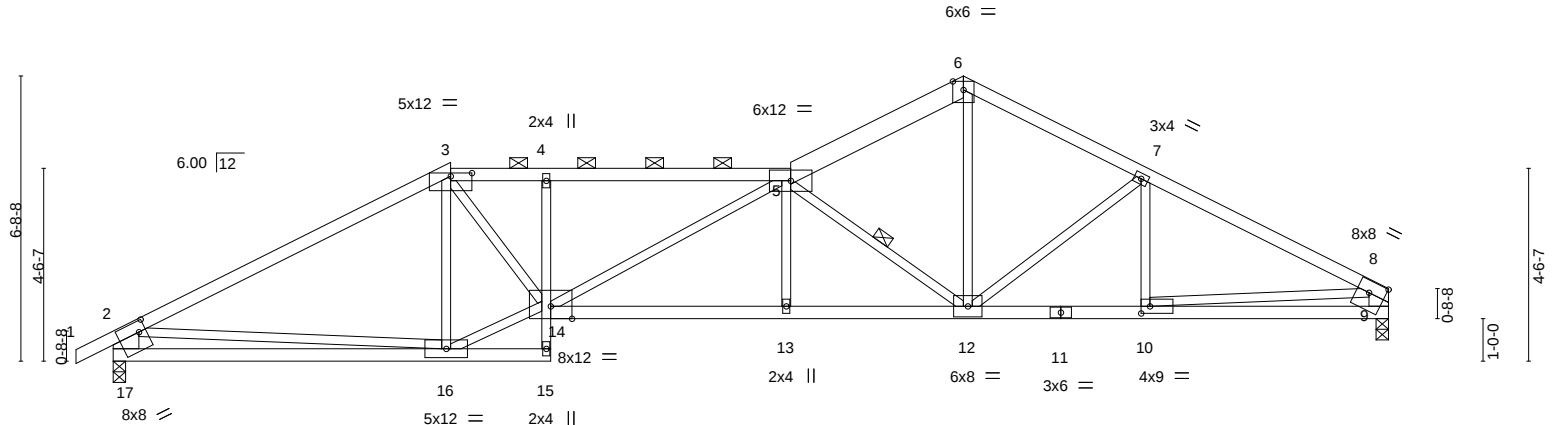
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:47 2020 Page 1

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|        |        |        |         |        |        |        |
|--------|--------|--------|---------|--------|--------|--------|
| 0-10-8 | 7-11-4 | 10-3-8 | 15-11-4 | 20-0-0 | 24-3-7 | 30-0-0 |
| 0-10-8 | 7-11-4 | 2-4-4  | 5-7-12  | 4-0-12 | 4-3-7  | 5-8-10 |

Scale = 1:54.2



|                       |                      |                                                                      |
|-----------------------|----------------------|----------------------------------------------------------------------|
| Plate Offsets (X,Y)-- |                      | [3:0-6-0,0-0-15], [8:Edge,0-3-4], [10:0-2-8,0-2-0], [17:0-2-0,0-3-0] |
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | 2-0-0                                                                |
| TCLL 25.0             | Plate Grip DOL       | 1.15                                                                 |
| TCDL 20.0             | Lumber DOL           | 1.15                                                                 |
| BCLL 0.0 *            | Rep Stress Incr      | YES                                                                  |
| BCDL 10.0             | Code IRC2018/TPI2014 |                                                                      |
| <b>CSL</b>            | <b>DEFL.</b>         | in (loc) l/defl L/d                                                  |
| TC 0.69               | Vert(LL) -0.19       | 13-14 >999 360                                                       |
| BC 0.98               | Vert(CT) -0.44       | 13-14 >806 240                                                       |
| WB 0.79               | Horz(CT) 0.14        | 9 n/a n/a                                                            |
| Matrix-S              | Wind(LL) 0.14        | 13-14 >999 240                                                       |
| <b>PLATES</b>         | <b>GRIP</b>          |                                                                      |
| MT20                  | 197/144              |                                                                      |
| Weight: 122 lb        |                      | FT = 10%                                                             |

#### LUMBER-

TOP CHORD 2x4 SPF 2100F 1.8E \*Except\*  
5-6: 2x6 SPF No.2, 6-8: 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
4-15: 2x3 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
2-17: 2x8 SP DSS, 8-9: 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-10-4 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-5 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
WEBS 1 Row at midpt 5-12

#### REACTIONS.

(size) 17=0-3-8, 9=0-3-8  
Max Horz 17=127(LC 8)  
Max Uplift 17=-234(LC 8), 9=-121(LC 9)  
Max Grav 17=1729(LC 1), 9=1619(LC 1)

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

TOP CHORD 2-3=-2598/325, 3-4=-3303/483, 4-5=-3332/487, 5-6=-2300/279, 6-7=-2322/300,  
7-8=-2652/244, 2-17=-1655/279, 8-9=-1547/151  
BOT CHORD 16-17=-402/1085, 4-14=-475/156, 13-14=-424/3675, 12-13=-426/3672, 10-12=-164/2274,  
9-10=-75/519  
WEBS 3-16=-857/194, 14-16=-297/2303, 3-14=-243/1966, 5-14=-395/64, 5-12=-2163/343,  
6-12=-176/1644, 7-12=-419/145, 2-16=-51/1090, 8-10=-138/1762

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 17=234, 9=121.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |              |     |     |           |           |
|--------------------------|-------|--------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type   | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | D7    | Roof Special | 1   | 1   |           | I43793738 |
| Job Reference (optional) |       |              |     |     |           |           |

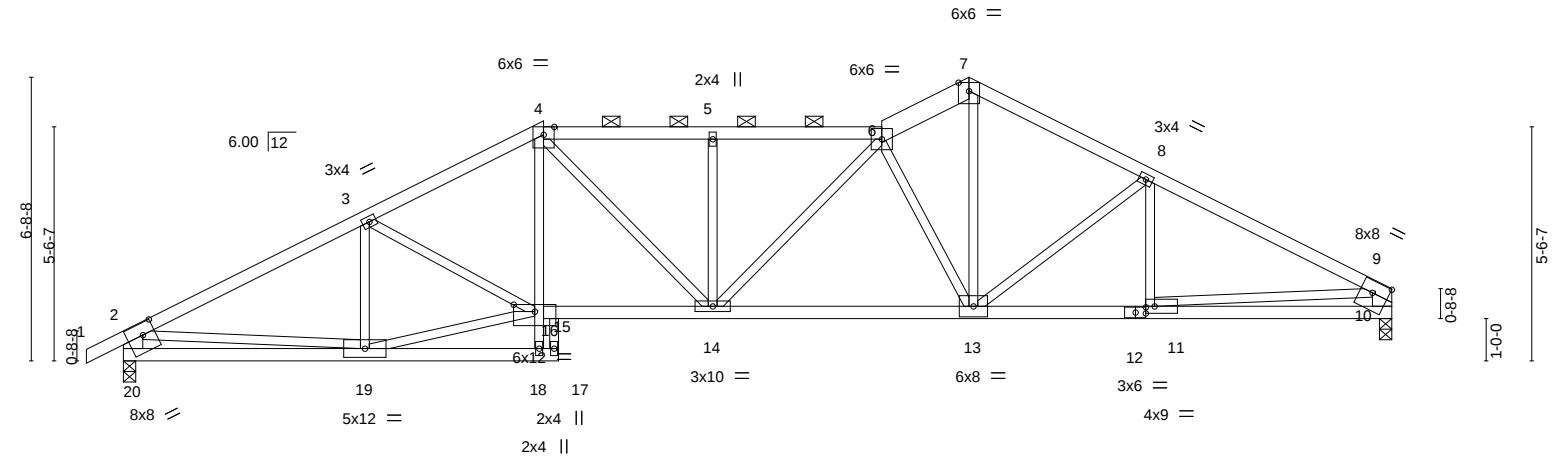
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:48 2020 Page 1

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|        |       |        |        |         |         |        |        |        |
|--------|-------|--------|--------|---------|---------|--------|--------|--------|
| 0-10-8 | 5-8-9 | 9-11-4 | 10-3-8 | 13-11-4 | 17-11-4 | 20-0-0 | 24-3-7 | 30-0-0 |
| 0-10-8 | 5-8-9 | 4-2-12 | 0-4-4  | 3-7-12  | 4-0-0   | 2-0-12 | 4-3-7  | 5-8-10 |

Scale = 1:54.5



|                                                                                                               |       |                      |        |          |         |                           |                      |                |          |
|---------------------------------------------------------------------------------------------------------------|-------|----------------------|--------|----------|---------|---------------------------|----------------------|----------------|----------|
|                                                                                                               |       | 5-8-9                | 9-11-4 | 10-3-8   | 13-11-4 | 17-11-4                   | 20-0-0               | 24-3-7         | 30-0-0   |
|                                                                                                               |       | 5-8-9                | 4-2-12 | 0-4-4    | 3-7-12  | 4-0-0                     | 2-0-12               | 4-3-7          | 5-8-10   |
| Plate Offsets (X,Y)-- [9:Edge,0-3-4], [11:0-2-8,0-2-0], [12:0-2-15,0-1-8], [15:0-6-0,0-2-0], [20:0-3-8,0-3-4] |       |                      |        |          |         |                           |                      |                |          |
|                                                                                                               |       |                      |        |          |         |                           |                      |                |          |
| LOADING (psf)                                                                                                 |       | SPACING- 2-0-0       |        | CSI.     |         | DEFL. in (loc) l/defl L/d |                      | PLATES         | GRIP     |
| TCLL                                                                                                          | 25.0  | Plate Grip DOL       | 1.15   | TC       | 0.63    | Vert(LL)                  | -0.15 14 >999 360    | MT20           | 197/144  |
| TCDL                                                                                                          | 20.0  | Lumber DOL           | 1.15   | BC       | 0.73    | Vert(CT)                  | -0.35 13-14 >999 240 |                |          |
| BCLL                                                                                                          | 0.0 * | Rep Stress Incr      | YES    | WB       | 0.87    | Horz(CT)                  | 0.11 10 n/a n/a      |                |          |
| BCDL                                                                                                          | 10.0  | Code IRC2018/TPI2014 |        | Matrix-S |         | Wind(LL)                  | 0.11 14 >999 240     | Weight: 125 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
6-7: 2x6 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
2-20,9-10: 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-10-2 oc purlins, except end verticals, and 2-0-0 oc purlins (3-2-3 max.): 4-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 20=0-3-8, 10=0-3-8  
Max Horz 20=128(LC 8)  
Max Uplift 20=-233(LC 8), 10=-121(LC 9)  
Max Grav 20=1726(LC 1), 10=1623(LC 1)

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

TOP CHORD 2-3=-2652/344, 3-4=-2832/414, 4-5=-2848/413, 5-6=-2846/411, 6-7=-2267/291,  
7-8=-2335/297, 8-9=-2658/247, 2-20=-1657/263, 9-10=-1551/152  
BOT CHORD 19-20=-249/657, 15-16=-320/2471, 14-15=-320/2471, 13-14=-286/2694, 11-13=-167/2279,  
10-11=-74/522  
WEBS 3-19=-601/160, 4-14=-86/549, 6-13=-1578/295, 7-13=-210/1735, 8-13=-409/151,  
2-19=-104/1611, 9-11=-142/1765, 4-16=-66/505, 16-19=-363/2279, 5-14=-462/137,  
6-14=-70/328

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 20=233, 10=121.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017



|                          |       |              |     |     |           |           |
|--------------------------|-------|--------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type   | Qty | Ply | Lot 18 W1 | 143793740 |
| W1 18                    | D9    | Roof Special | 1   | 1   |           |           |
| Job Reference (optional) |       |              |     |     |           |           |

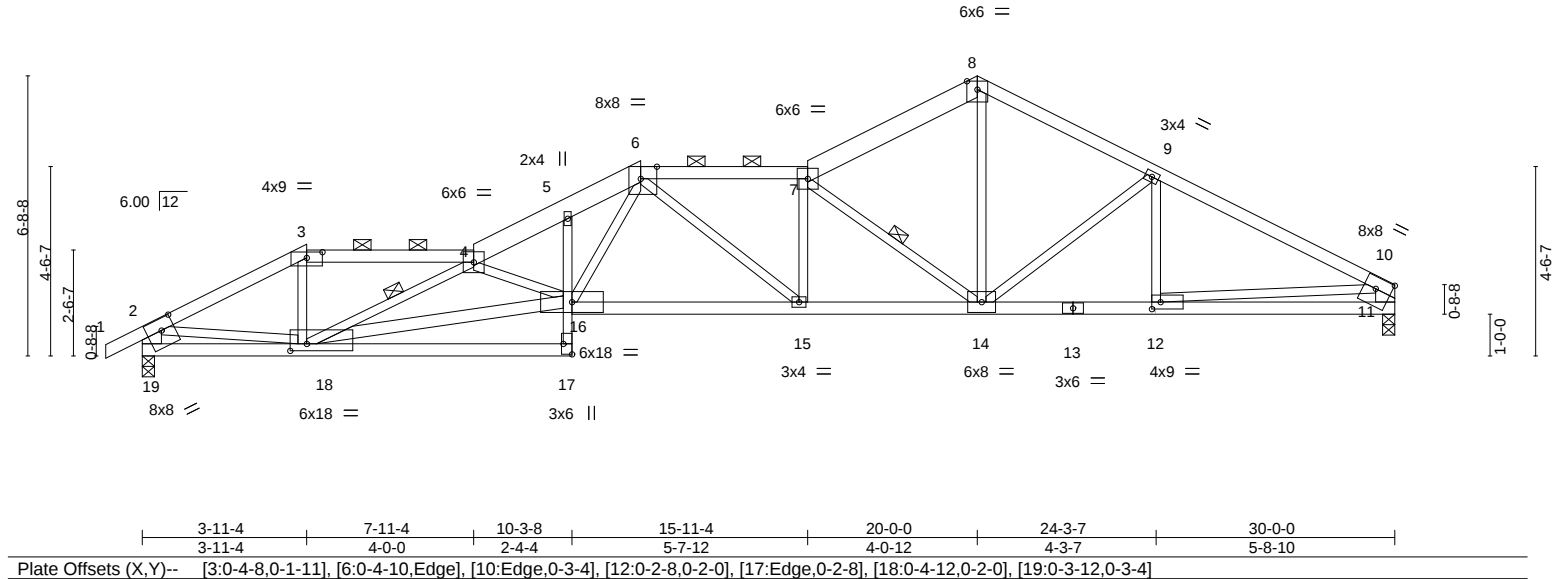
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:52 2020 Page 1

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|        |        |        |        |         |         |        |        |        |
|--------|--------|--------|--------|---------|---------|--------|--------|--------|
| 0-10-8 | 3-11-4 | 7-11-4 | 10-3-8 | 11-11-4 | 15-11-4 | 20-0-0 | 24-3-7 | 30-0-0 |
| 0-10-8 | 3-11-4 | 4-0-0  | 2-4-4  | 1-7-12  | 4-0-0   | 4-0-12 | 4-3-7  | 5-8-10 |

Scale = 1:55.2



|                      |                       |             |                                  |                |             |
|----------------------|-----------------------|-------------|----------------------------------|----------------|-------------|
| <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 25.0            | Plate Grip DOL 1.15   | TC 0.62     | Vert(LL) -0.28 15-16 >999 360    | MT20           | 197/144     |
| TCDL 20.0            | Lumber DOL 1.15       | BC 1.00     | Vert(CT) -0.65 15-16 >545 240    |                |             |
| BCLL 0.0 *           | Rep Stress Incr YES   | WB 0.93     | Horz(CT) 0.17 11 n/a n/a         |                |             |
| BCDL 10.0            | Code IRC2018/TPI2014  | Matrix-S    | Wind(LL) 0.22 15-16 >999 240     | Weight: 128 lb | FT = 10%    |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
4-6,7-8: 2x6 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
5-17: 2x3 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
16-18: 2x4 SPF 2100F 1.8E, 2-19,10-11: 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-10-2 oc purlins, except end verticals, and 2-0-0 oc purlins (2-7-2 max.): 3-4, 6-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
2-2-0 oc bracing: 15-16  
9-0-11 oc bracing: 14-15.  
WEBS 1 Row at midpt 4-18, 7-14

#### REACTIONS.

(size) 19=0-3-8, 11=0-3-8  
Max Horz 19=128(LC 8)  
Max Uplift 19=-233(LC 8), 11=-121(LC 9)  
Max Grav 19=1726(LC 1), 11=1623(LC 1)

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

TOP CHORD 2-3=-2676/335, 3-4=-2489/333, 4-5=-4902/640, 5-6=-4819/666, 6-7=-3678/459,  
7-8=-2284/278, 8-9=-2330/301, 9-10=-2660/246, 2-19=-1663/248, 10-11=-1552/152  
BOT CHORD 18-19=-196/447, 15-16=-465/3514, 14-15=-423/3678, 12-14=-165/2281, 11-12=-75/520  
WEBS 3-18=-37/844, 4-18=-3545/499, 16-18=-779/5317, 4-16=-1345/247, 6-16=-253/1781,  
6-15=-36/255, 7-14=-2161/338, 8-14=-172/1634, 9-14=-419/145, 2-18=-175/1896,  
10-12=-139/1769

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 19=233, 11=121.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

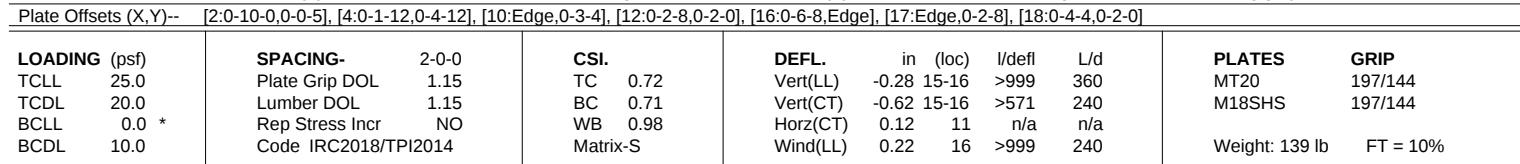
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16023 Swingley Ridge Rd  
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Wheeler Lumber, Waverly, KS - 66871, 8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:39 2020 Page 1  
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0-10-8 1-11-4 5-11-4 10-3-8 13-11-4 17-11-4 20-0-0 24-3-7 30-0-0  
0-10-8 1-11-4 4-0-0 4-4-4 3-7-12 4-0-0 2-0-12 4-3-7 5-8-10  
Scale = 1:55.2



**REACTIONS.** (size) 2=0-3-8, 11=0-3-8  
 Max Horz 2=141(LC 8)  
 Max Uplift 2=-273(LC 8), 11=-132(LC 9)  
 Max Grav 2=1720(LC 1), 11=1628(LC 1)

A circular professional engineer seal for the State of Missouri. The outer ring contains the text "STATE OF MISSOURI" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. Inside the ring, the name "JUAN GARCIA" is printed in the upper half and "NUMBER E-2000162101" is printed in the lower half. The seal is blue and white.

Continued on page 2

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Chesterfield, MO 63017

|                          |       |                     |     |     |           |
|--------------------------|-------|---------------------|-----|-----|-----------|
| Job                      | Truss | Truss Type          | Qty | Ply | Lot 18 W1 |
| W1 18                    | D10   | Roof Special Girder | 1   | 1   | I43793741 |
| Job Reference (optional) |       |                     |     |     |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:39 2020 Page 2  
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NOTES-

- 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 137 lb down and 144 lb up at 1-11-4, and 68 lb down and 34 lb up at 4-0-0, and 68 lb down and 36 lb up at 5-11-4 on top chord, and 11 lb down and 3 lb up at 1-11-4, and 7 lb down and 0 lb up at 4-0-0, and 7 lb down and 0 lb up at 5-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 11) 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: 1-3=-90, 3-4=-90, 4-6=-90, 6-7=-90, 7-8=-90, 8-10=-90, 2-17=-20, 11-16=-20
- Concentrated Loads (lb)
- Vert: 19=2(F) 18=0(F) 21=0(F)

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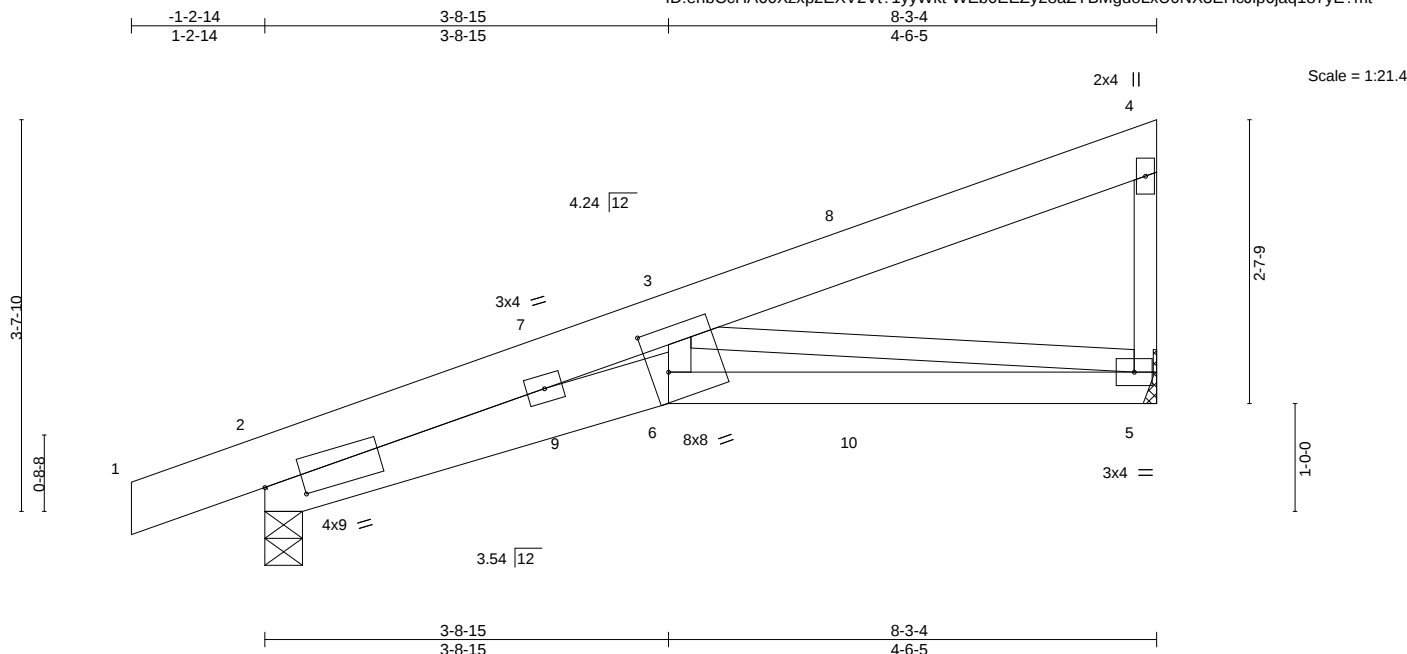
16023 Swingley Ridge Rd  
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|       |       |                     |     |     |           |           |
|-------|-------|---------------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type          | Qty | Ply | Lot 18 W1 | I43793742 |
| W1 18 | J1    | Diagonal Hip Girder | 1   | 1   |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:54 2020 Page 1

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|                                                         |       |                      |      |          |      |                           |       |   |      |             |               |          |
|---------------------------------------------------------|-------|----------------------|------|----------|------|---------------------------|-------|---|------|-------------|---------------|----------|
| Plate Offsets (X,Y)-- [2:0-4-4,0-2-0], [6:0-2-0,0-4-12] |       |                      |      |          |      |                           |       |   |      |             |               |          |
| LOADING (psf)                                           |       | SPACING- 2-0-0       |      | CSI.     |      | DEFL. in (loc) l/defl L/d |       |   |      | PLATES GRIP |               |          |
| TCLL                                                    | 25.0  | Plate Grip DOL       | 1.15 | TC       | 0.34 | Vert(LL)                  | -0.05 | 6 | >999 | 360         | MT20          | 197/144  |
| TCDL                                                    | 20.0  | Lumber DOL           | 1.15 | BC       | 0.49 | Vert(CT)                  | -0.11 | 6 | >898 | 240         |               |          |
| BCLL                                                    | 0.0 * | Rep Stress Incr      | NO   | WB       | 0.60 | Horz(CT)                  | 0.05  | 5 | n/a  | n/a         |               |          |
| BCDL                                                    | 10.0  | Code IRC2018/TPI2014 |      | Matrix-P |      | Wind(LL)                  | 0.05  | 6 | >999 | 240         | Weight: 36 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x6 SPF No.2  
 BOT CHORD 2x6 SPF No.2 \*Except\*  
 5-6: 2x4 SPF No.2  
 WEBS 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-8-8 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 9-11-9 oc bracing.

#### REACTIONS.

(size) 5=Mechanical, 2=0-4-3  
 Max Horz 2=130(LC 5)  
 Max Uplift 5=-108(LC 8), 2=-134(LC 4)  
 Max Grav 5=475(LC 1), 2=600(LC 1)

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

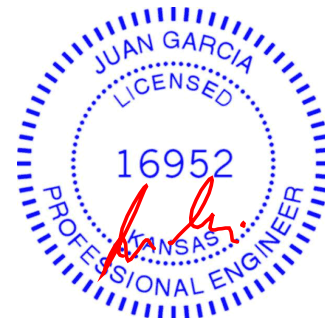
TOP CHORD 2-3=-1509/333  
 BOT CHORD 2-6=-365/1352, 5-6=-340/1217  
 WEBS 3-6=-48/481, 3-5=-1231/366

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=108, 2=134.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 78 lb down and 37 lb up at 2-8-7, 78 lb down and 37 lb up at 2-8-7, and 129 lb down and 75 lb up at 5-6-6, and 129 lb down and 75 lb up at 5-6-6 on top chord, and 3 lb down and 1 lb up at 2-8-7, 3 lb down and 1 lb up at 2-8-7, and 25 lb down at 5-6-6, and 25 lb down at 5-6-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-4=-90, 2-6=-20, 5-6=-20



November 30,2020

Continued on page 2

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

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16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

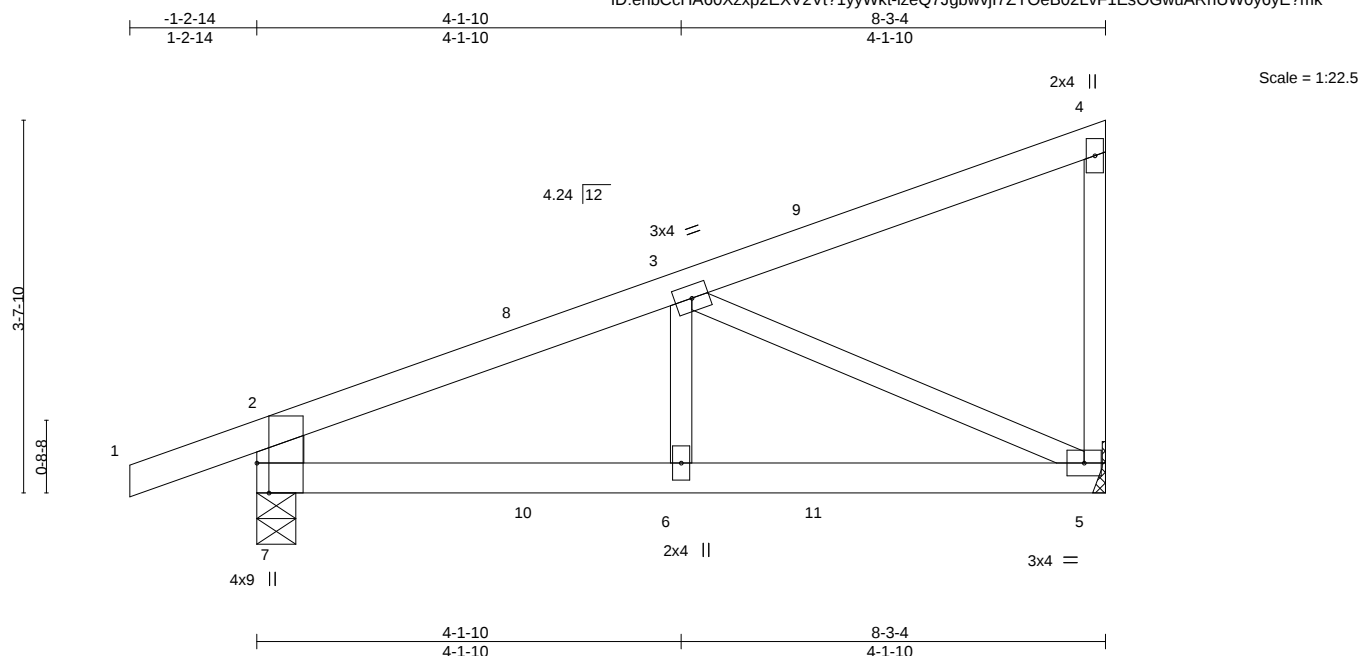
|                          |       |                     |     |     |           |
|--------------------------|-------|---------------------|-----|-----|-----------|
| Job                      | Truss | Truss Type          | Qty | Ply | Lot 18 W1 |
| W1 18                    | J1    | Diagonal Hip Girder | 1   | 1   | I43793742 |
| Job Reference (optional) |       |                     |     |     |           |

LOAD CASE(S)
Standard
Concentrated Loads (lb)
Vert: 8=-40(F=-20, B=-20) 9=1(F=1, B=1) 10=-31(F=-15, B=-15)

|                          |       |                     |     |     |           |           |
|--------------------------|-------|---------------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type          | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | J2    | Diagonal Hip Girder | 2   | 1   |           | I43793743 |
| Job Reference (optional) |       |                     |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:03 2020 Page 1  
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|                                      |                      |       |             |              |          |        |      |               |             |
|--------------------------------------|----------------------|-------|-------------|--------------|----------|--------|------|---------------|-------------|
| Plate Offsets (X,Y)-- [7:0-3-8,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 25.0                            | Plate Grip DOL       | 1.15  | TC 0.51     | Vert(LL)     | -0.02    | 5-6    | >999 | MT20          | 197/144     |
| TCDL 20.0                            | Lumber DOL           | 1.15  | BC 0.33     | Vert(CT)     | -0.05    | 5-6    | >999 |               |             |
| BCLL 0.0 *                           | Rep Stress Incr      | NO    | WB 0.28     | Horz(CT)     | 0.01     | 5      | n/a  |               |             |
| BCDL 10.0                            | Code IRC2018/TPI2014 |       | Matrix-S    | Wind(LL)     | 0.02     | 5-6    | >999 | Weight: 29 lb | FT = 10%    |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
2-7: 2x6 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 7=0-4-9, 5=Mechanical  
Max Horz 7=156(LC 24)  
Max Uplift 7=-134(LC 4), 5=-103(LC 8)  
Max Grav 7=601(LC 1), 5=467(LC 1)

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

TOP CHORD 2-7=-533/146, 2-3=-648/99  
BOT CHORD 6-7=-141/522, 5-6=-141/522  
WEBS 3-5=-557/151

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- 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) 7=134, 5=103.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 77 lb down and 36 lb up at 2-8-7, 77 lb down and 36 lb up at 2-8-7, and 127 lb down and 72 lb up at 5-6-6, and 127 lb down and 72 lb up at 5-6-6 on top chord, and 3 lb down and 1 lb up at 2-8-7, 3 lb down and 1 lb up at 2-8-7, and 25 lb down at 5-6-6, and 25 lb down at 5-6-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-90, 2-4=-90, 5-7=-20  
Concentrated Loads (lb)  
Vert: 9=-30(F=-15, B=-15) 10=1(F=1, B=1) 11=-34(F=-17, B=-17)



November 30, 2020

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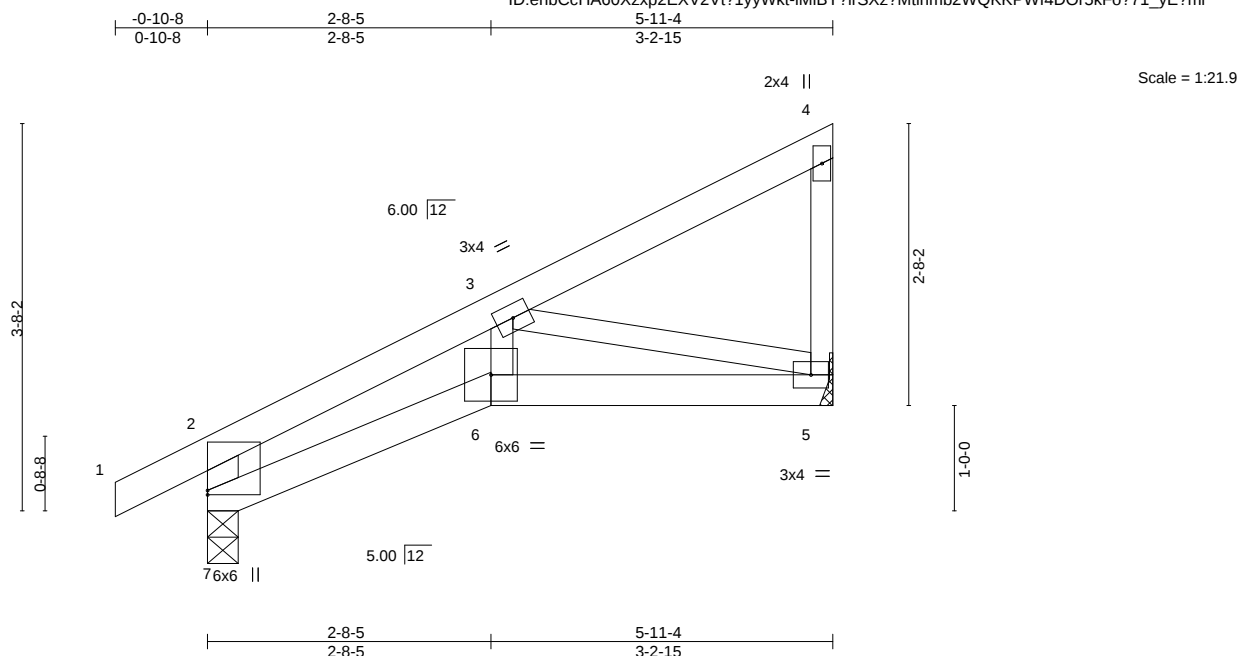
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |             |     |     |           |           |
|--------------------------|-------|-------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type  | Qty | Ply | Lot 18 W1 | I43793744 |
| W1 18                    | J3    | Jack-Closed | 16  | 1   |           |           |
| Job Reference (optional) |       |             |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:05 2020 Page 1

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| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.33  | Vert(LL) | -0.02 | 6     | >999   | 360 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.30  | Vert(CT) | -0.05 | 6     | >999   | 240 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.12  | Horz(CT) | 0.03  | 5     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S | Wind(LL) | 0.01  | 6     | >999   | 240 | Weight: 21 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x3 SPF No.2 \*Except\*  
 2-7: 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-11-4 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 7=0-3-8, 5=Mechanical  
 Max Horz 7=104(LC 5)  
 Max Uplift 7=-10(LC 8), 5=-26(LC 8)  
 Max Grav 7=413(LC 1), 5=305(LC 1)

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

TOP CHORD 2-7=-517/47, 2-3=-594/41  
 BOT CHORD 6-7=-85/477, 5-6=-73/429  
 WEBS 3-5=-425/79

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); 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.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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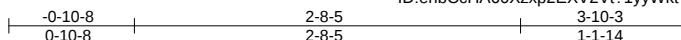
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793745 |
| W1 18 | J5    | Jack-Open  | 2   | 1   |           |           |

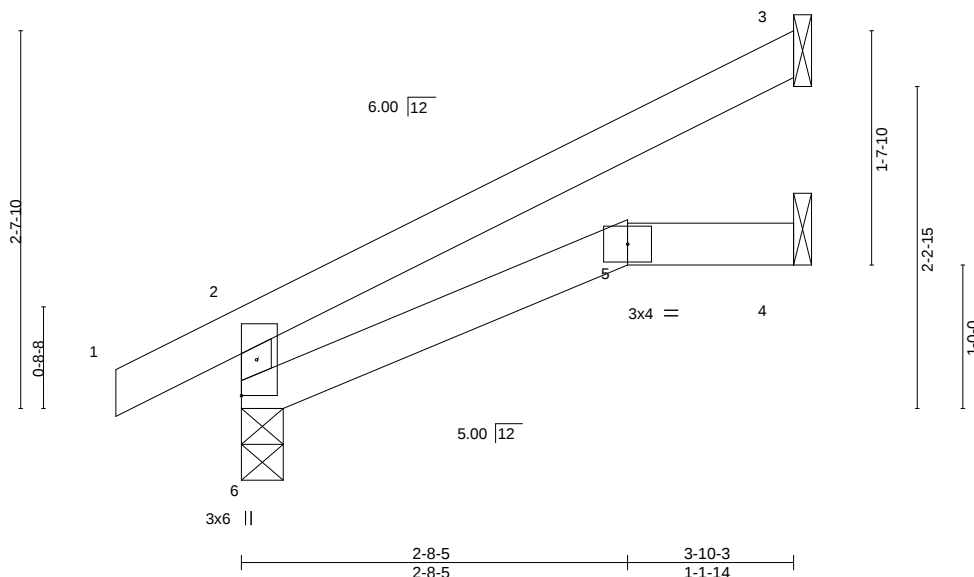
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:06 2020 Page 1

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Scale: 3/4"=1'



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.25  | Vert(LL) | -0.01 | 5-6   | >999   | 360 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.12  | Vert(CT) | -0.02 | 5-6   | >999   | 240 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | 0.01  | 3     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.01  | 5-6   | >999   | 240 |               |          |
|               |                      |       |          |          |       |       |        |     | Weight: 11 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 6=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 6=85(LC 8)  
Max Uplift 6=-26(LC 8), 3=-67(LC 8)  
Max Grav 6=302(LC 1), 3=147(LC 1), 4=72(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-6=-272/61

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 3.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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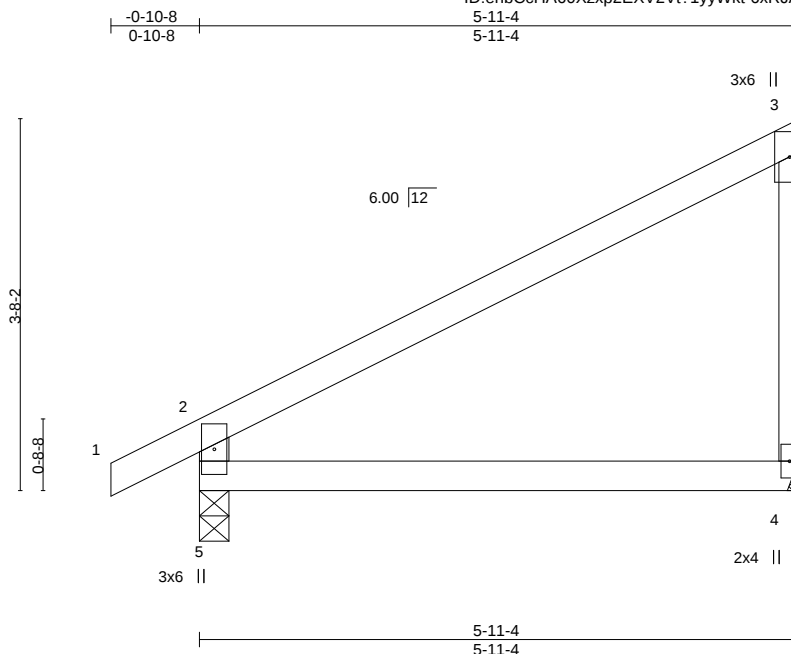
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |             |     |     |           |           |
|--------------------------|-------|-------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type  | Qty | Ply | Lot 18 W1 | I43793746 |
| W1 18                    | J6    | Jack-Closed | 18  | 1   |           |           |
| Job Reference (optional) |       |             |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:08 2020 Page 1

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Scale = 1:22.8

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.58  | Vert(LL) | -0.04 | 4-5   | >999   | 360 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.29  | Vert(CT) | -0.10 | 4-5   | >680   | 240 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | -0.00 | 4     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.02  | 4-5   | >999   | 240 | Weight: 18 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2 \*Except\*  
 3-4: 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-11-4 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 4=Mechanical  
 Max Horz 5=115(LC 7)  
 Max Uplift 5=-12(LC 8), 4=-24(LC 8)  
 Max Grav 5=413(LC 1), 4=305(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-5=-376/54

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; 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) 5, 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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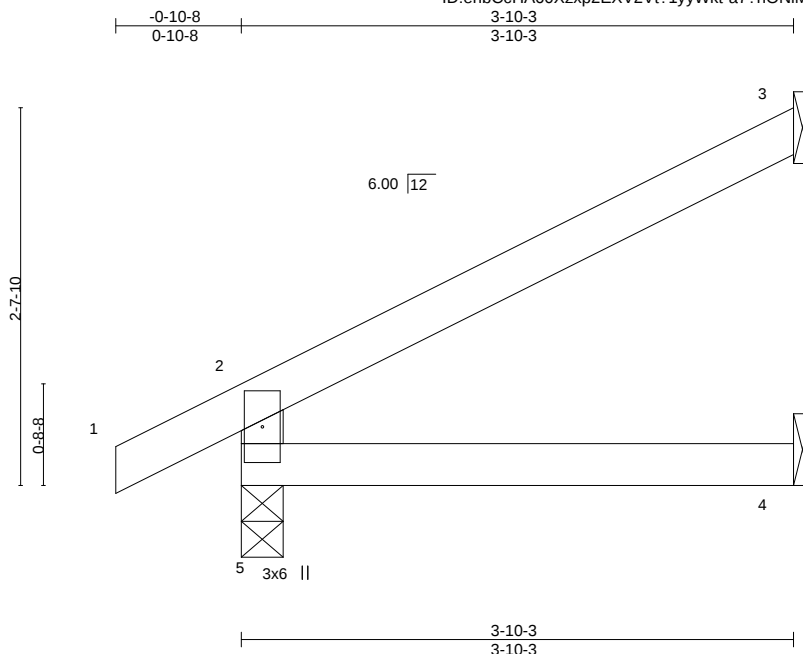
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793747 |
| W1 18 | J7    | Jack-Open  | 4   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:09 2020 Page 1

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Scale: 3/4"=1'

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.24  | Vert(LL) | -0.01 | 4-5   | >999   | 360 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.13  | Vert(CT) | -0.02 | 4-5   | >999   | 240 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | 0.01  | 3     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.01  | 4-5   | >999   | 240 |               |          |
|               |                      |       |          |          |       |       |        |     | Weight: 11 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

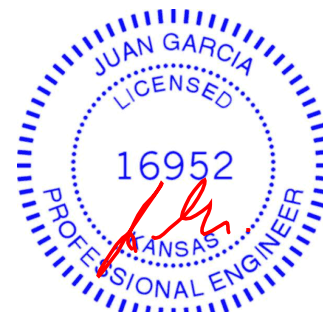
(size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 5=85(LC 8)  
Max Uplift 5=-28(LC 8), 3=-64(LC 8)  
Max Grav 5=305(LC 1), 3=142(LC 1), 4=71(LC 3)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-5=-277/64

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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) 5, 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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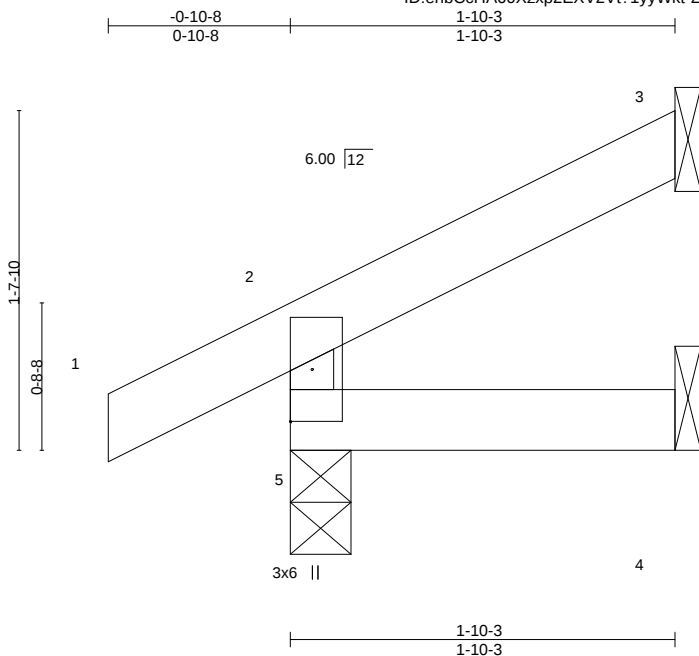


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793748 |
| W1 18 | J8    | Jack-Open  | 6   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:10 2020 Page 1  
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Scale = 1:11.1

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.08  | Vert(LL) | -0.00 | 5     | >999   | 360 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.02  | Vert(CT) | -0.00 | 5     | >999   | 240 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | -0.00 | 3     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.00  | 5     | >999   | 240 | Weight: 6 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 1-10-3 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 5=46(LC 8)  
Max Uplift 5=24(LC 8), 3=31(LC 8)  
Max Grav 5=208(LC 1), 3=56(LC 1), 4=32(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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) 5, 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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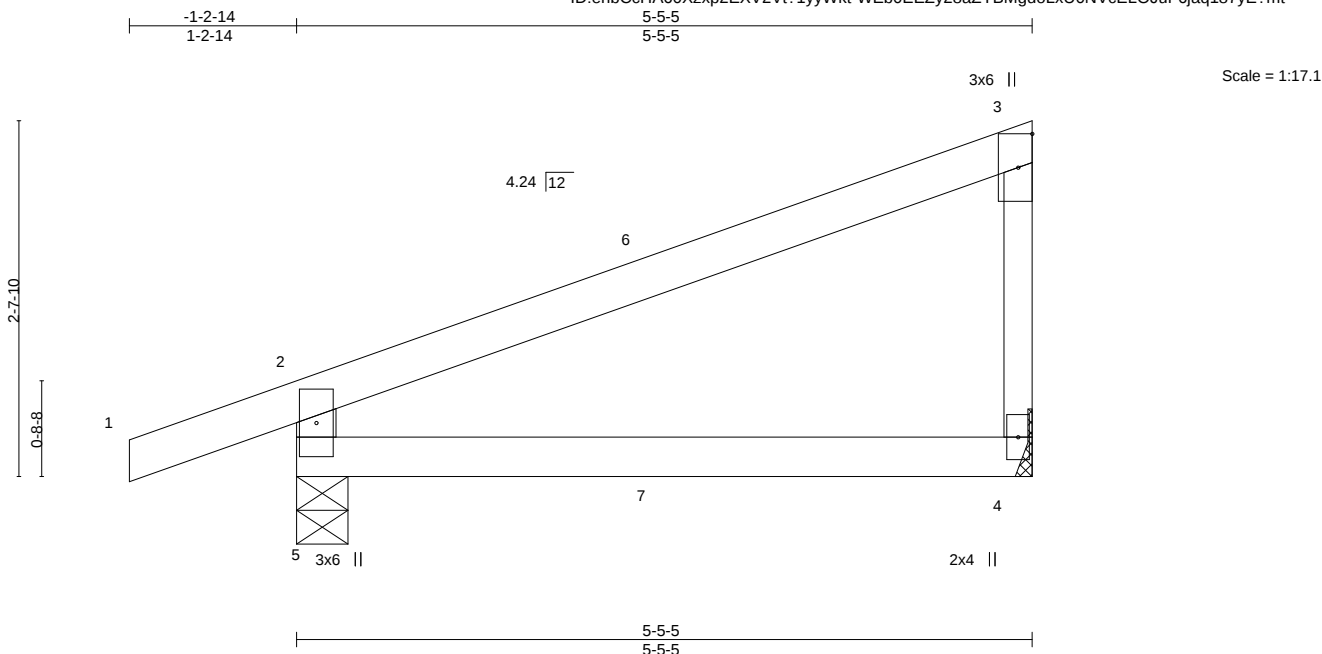
16023 Swingley Ridge Rd  
Chesterfield, MO 63017



|       |       |                     |     |     |                          |           |
|-------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type          | Qty | Ply | Lot 18 W1                | I43793750 |
| W1 18 | J10   | Diagonal Hip Girder | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:54 2020 Page 1  
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| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d  | PLATES | GRIP                   |
|---------------|----------------------|-------|----------|----------|----------|--------|------|--------|------------------------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.50  | Vert(LL) | -0.03    | 4-5    | >999 | 360    | MT20                   |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.25  | Vert(CT) | -0.06    | 4-5    | >971 | 240    | 197/144                |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.00  | Horz(CT) | 0.00     | 4      | n/a  | n/a    |                        |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.01     | 4-5    | >999 | 240    |                        |
|               |                      |       |          |          |          |        |      |        | Weight: 16 lb FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2 \*Except\*  
3-4: 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-5-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-4-9, 4=Mechanical  
Max Horz 5=111(LC 5)  
Max Uplift 5=100(LC 4), 4=50(LC 8)  
Max Grav 5=426(LC 1), 4=268(LC 1)

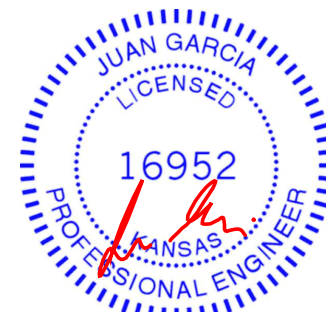
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-5=-389/139

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- 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) 4 except (jt=lb) 5=100.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 77 lb down and 36 lb up at 2-8-7, and 77 lb down and 36 lb up at 2-8-7 on top chord, and 3 lb down and 1 lb up at 2-8-7, and 3 lb down and 1 lb up at 2-8-7 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-90, 2-3=-90, 4-5=-20  
Concentrated Loads (lb)  
Vert: 7=1(F=1, B=1)



November 30, 2020

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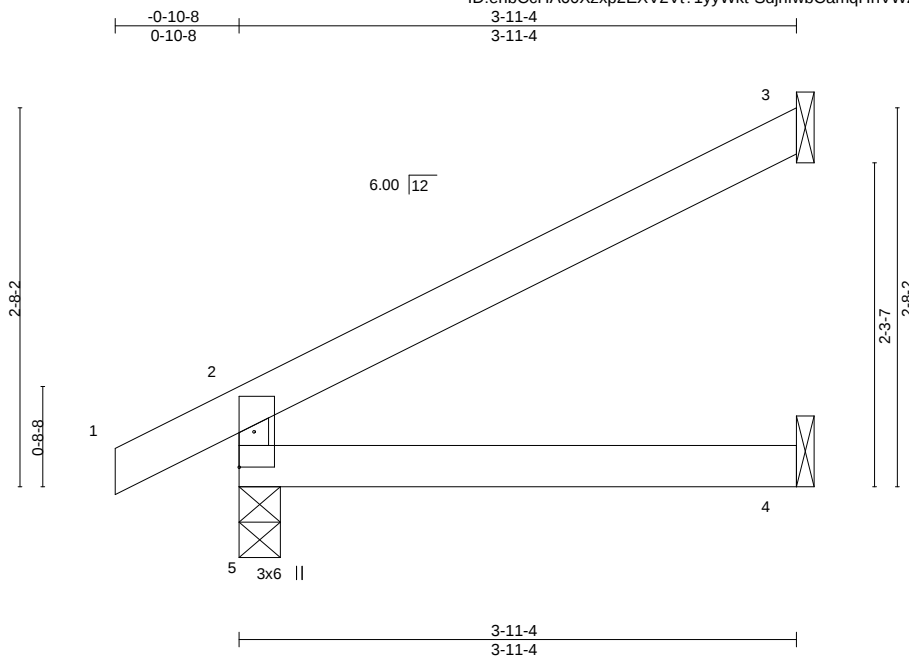
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793751 |
| W1 18 | J11   | Jack-Open  | 3   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:56 2020 Page 1

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Scale = 1:16.3

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.26  | Vert(LL) | -0.01 | 4-5   | >999   | 360 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.14  | Vert(CT) | -0.02 | 4-5   | >999   | 240 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | 0.01  | 3     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.01  | 4-5   | >999   | 240 | Weight: 11 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2

#### BRACING-

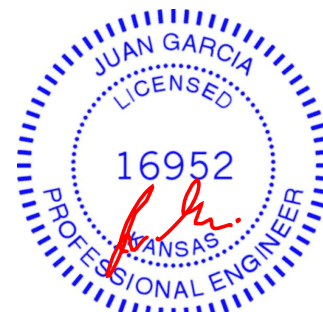
TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 5=88(LC 8)  
Max Uplift 5=-28(LC 8), 3=-68(LC 8)  
Max Grav 5=307(LC 1), 3=150(LC 1), 4=74(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-5=-277/63

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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) 5, 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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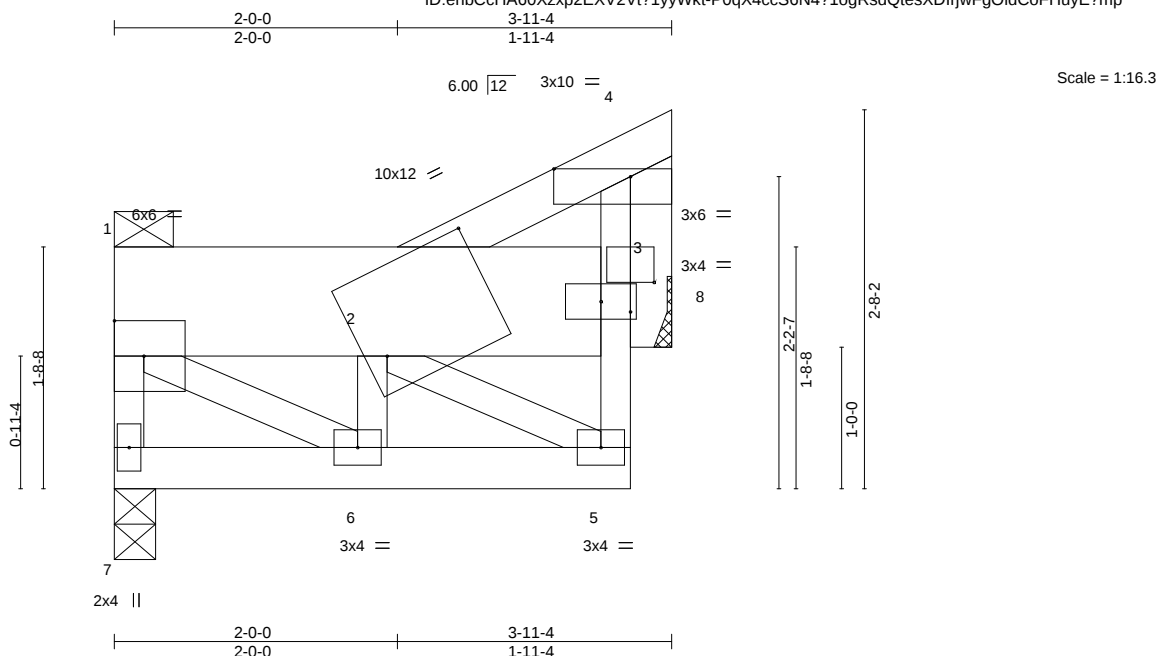
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |                    |     |     |           |           |
|--------------------------|-------|--------------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type         | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | J12   | Jack-Closed Girder | 1   | 1   |           | I43793752 |
| Job Reference (optional) |       |                    |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:32:58 2020 Page 1

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|                       |                      |                                                   |             |                           |                        |
|-----------------------|----------------------|---------------------------------------------------|-------------|---------------------------|------------------------|
| Plate Offsets (X,Y)-- |                      | [2:0-10-4,0-7-0], [3:0-2-0,0-2-8], [4:0-6-8,Edge] |             |                           |                        |
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | 2-0-0                                             | <b>CSI.</b> | <b>DEFL.</b>              | <b>PLATES</b>          |
| TCLL 25.0             | Plate Grip DOL       | 1.15                                              | TC 0.26     | in (loc) l/defl L/d       | MT20                   |
| TCDL 20.0             | Lumber DOL           | 1.15                                              | BC 0.15     | Vert(LL) -0.00 6 >999 360 | GRIP 197/144           |
| BCLL 0.0 *            | Rep Stress Incr      | NO                                                | WB 0.18     | Vert(CT) -0.01 6 >999 240 |                        |
| BCDL 10.0             | Code IRC2018/TPI2014 |                                                   | Matrix-P    | Horz(CT) 0.00 8 n/a n/a   |                        |
|                       |                      |                                                   |             | Wind(LL) 0.00 6 >999 240  | Weight: 27 lb FT = 10% |

#### LUMBER-

TOP CHORD 2x10 SP DSS \*Except\*  
2-4: 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins, except end verticals, and 2-0-0 oc purlins: 1-3.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 7=0-3-8, 8=Mechanical  
Max Horz 7=71(LC 5)  
Max Uplift 7=-106(LC 8), 8=-114(LC 8)  
Max Grav 7=782(LC 1), 8=678(LC 15)

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

TOP CHORD 1-7=-753/112, 1-2=-457/51, 3-5=-40/322, 3-4=-88/688  
BOT CHORD 5-6=-62/465  
WEBS 1-6=-73/539, 2-6=-293/71, 2-5=-515/82, 4-8=-694/116

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 2) Provide adequate drainage to prevent water ponding.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=106, 8=114.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1142 lb down and 161 lb up at 1-9-14 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 10) 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: 1-2=-90, 2-4=-90, 5-7=-20



November 30, 2020

Continued on page 2

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

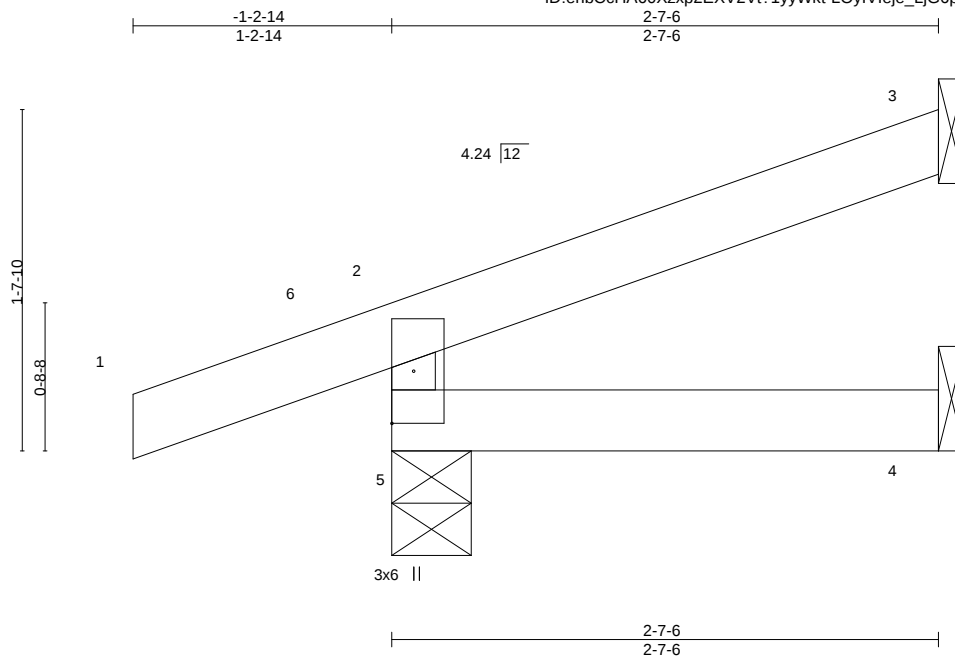
|                          |       |                    |     |     |           |
|--------------------------|-------|--------------------|-----|-----|-----------|
| Job                      | Truss | Truss Type         | Qty | Ply | Lot 18 W1 |
| W1 18                    | J12   | Jack-Closed Girder | 1   | 1   | I43793752 |
| Job Reference (optional) |       |                    |     |     |           |

**LOAD CASE(S)** Standard  
Concentrated Loads (lb)  
Vert: 2=-1057(B)

|       |       |                     |     |     |                          |           |
|-------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type          | Qty | Ply | Lot 18 W1                | I43793753 |
| W1 18 | J13   | Diagonal Hip Girder | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:00 2020 Page 1  
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Scale = 1:11.0

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.11  | Vert(LL) | -0.00 | 4-5   | >999   | 360 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.03  | Vert(CT) | -0.00 | 4-5   | >999   | 240 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.00  | Horz(CT) | -0.00 | 3     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.00  | 4-5   | >999   | 240 | Weight: 8 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-7-6 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-4-9, 3=Mechanical, 4=Mechanical  
Max Horz 5=61(LC 12)  
Max Uplift 5=-102(LC 19), 3=-35(LC 12), 4=-2(LC 19)  
Max Grav 5=107(LC 1), 3=37(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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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, 4 except (jt=lb) 5=102.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 21 lb down and 6 lb up at -1-2-14, and 21 lb down and 6 lb up at -1-2-14 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

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

Vert: 1=-34(F=-17, B=-17)

Trapezoidal Loads (plf)

Vert: 1=0(F=45, B=45)-to-6=-23(F=33, B=33), 6=0(F=45, B=45)-to-2=-7(F=41, B=41), 2=-7(F=41, B=41)-to-3=-64(F=13, B=13), 5=-2(F=9, B=9)-to-4=-14(F=3, B=3)



November 30, 2020

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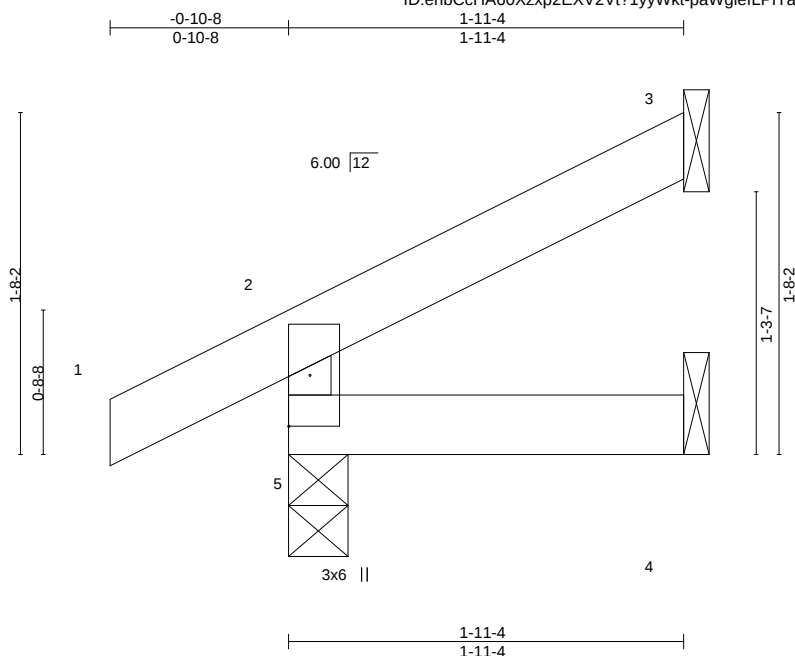
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793754 |
| W1 18 | J14   | Jack-Open  | 3   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:01 2020 Page 1

ID:ehbCcHA60Xzp2EXV2Vt?1yyWkt-paWgiefLPITauGO0XmzaGU9nK2naS2\_8KA1vuDyE?mm



Scale = 1:11.3

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.08  | Vert(LL) | -0.00 | 5     | >999   | 360 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.03  | Vert(CT) | -0.00 | 4-5   | >999   | 240 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | -0.00 | 3     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.00  | 5     | >999   | 240 | Weight: 6 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2

#### BRACING-

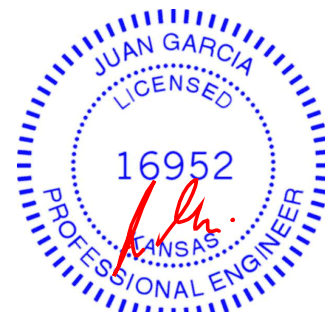
TOP CHORD Structural wood sheathing directly applied or 1-11-4 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 5=48(LC 8)  
Max Uplift 5=24(LC 8), 3=33(LC 8)  
Max Grav 5=212(LC 1), 3=60(LC 1), 4=34(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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) 5, 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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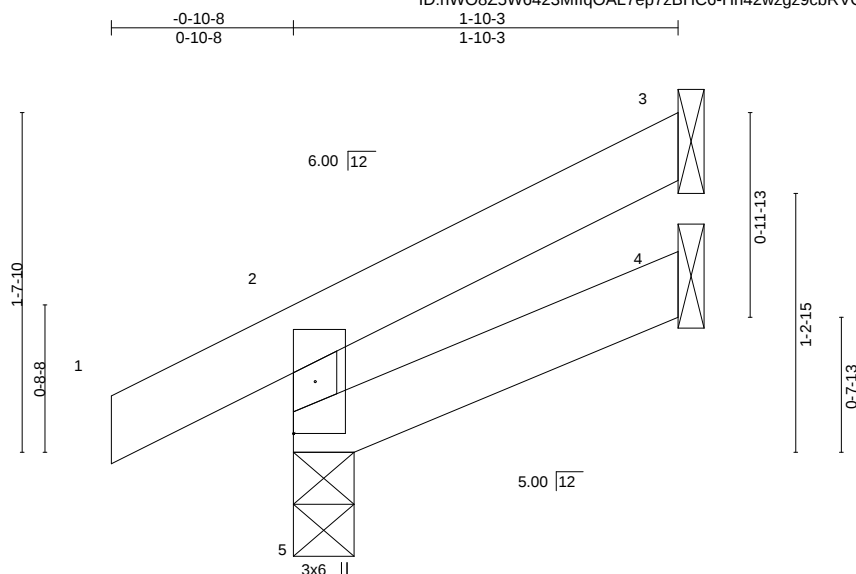
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793755 |
| W1 18 | J15   | Jack-Open  | 2   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:02 2020 Page 1

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Scale = 1:11.1

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.08  | Vert(LL) | -0.00 | 5     | >999   | 360 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.02  | Vert(CT) | -0.00 | 5     | >999   | 240 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | -0.00 | 3     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R | Wind(LL) | 0.00  | 5     | >999   | 240 | Weight: 6 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 1-10-3 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 5=45(LC 8)  
Max Uplift 5=22(LC 8), 3=32(LC 8)  
Max Grav 5=208(LC 1), 3=55(LC 1), 4=32(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793756 |
| W1 18 | LAY1  | GABLE      | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:14 2020 Page 1

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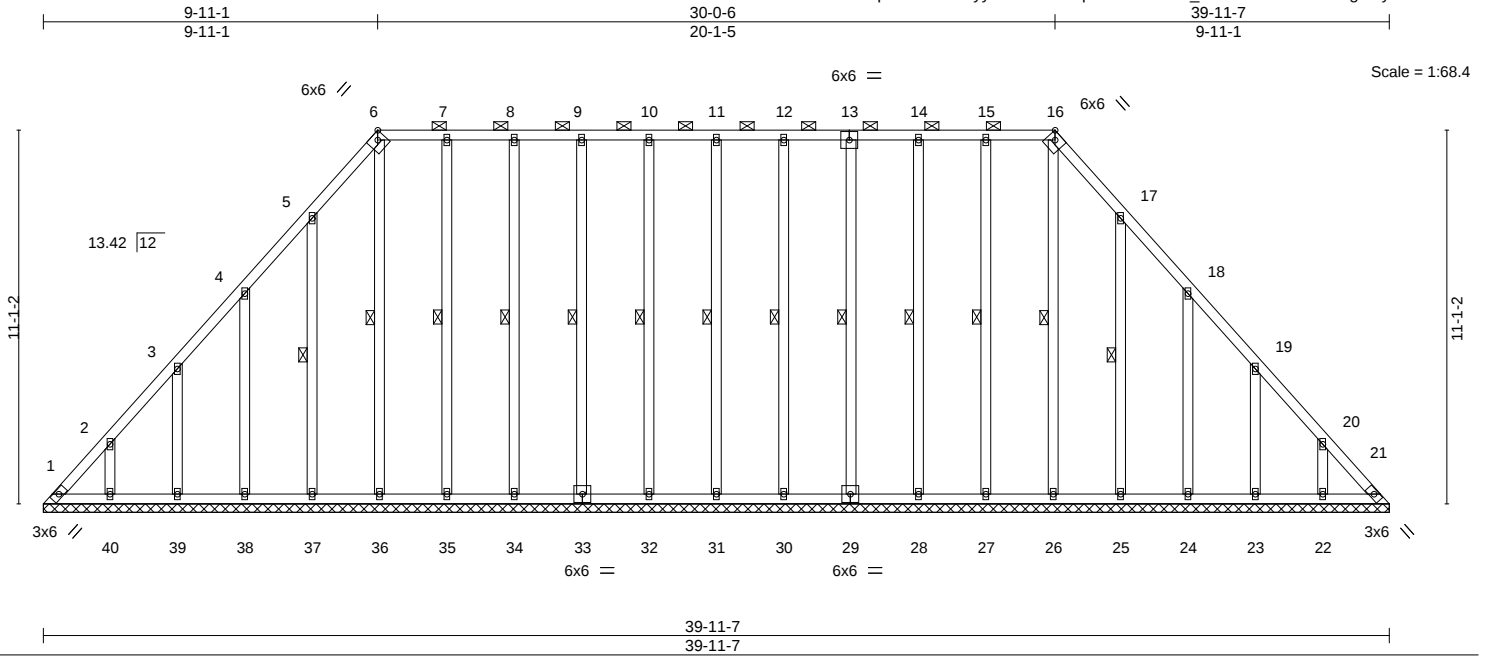


Plate Offsets (X,Y)-- [6:0-2-10,Edge], [16:0-2-10,Edge]

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in   | (loc) | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|----------|----------|------|-------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.08  | Vert(LL) | n/a  | -     | n/a    | 999 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.05  | Vert(CT) | n/a  | -     | n/a    | 999 |                |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.14  | Horz(CT) | 0.02 | 21    | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S |          |      |       |        |     | Weight: 279 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-16.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 11-31, 10-32, 9-33, 8-34, 7-35, 6-36, 5-37, 12-30, 13-29, 14-28, 15-27, 16-26, 17-25

#### REACTIONS.

All bearings 39-11-7.  
(lb) - Max Horz 1=290(LC 5)  
Max Uplift All uplift 100 lb or less at joint(s) 21, 31, 32, 33, 34, 35, 36, 30, 29, 28, 27 except 1=150(LC 6), 37=139(LC 8), 38=138(LC 8), 39=135(LC 8), 40=138(LC 8), 25=137(LC 9), 24=139(LC 9), 23=135(LC 9), 22=138(LC 9)  
Max Grav All reactions 250 lb or less at joint(s) 21, 31, 32, 33, 34, 35, 36, 38, 39, 30, 29, 28, 27, 26, 24, 23 except 1=281(LC 8), 37=257(LC 15), 40=252(LC 15), 25=255(LC 16), 22=252(LC 16)

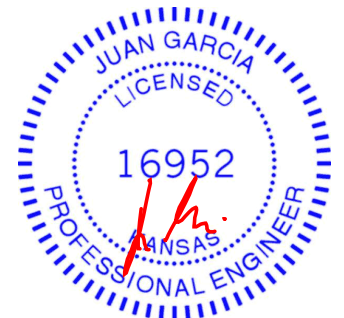
#### FORCES.

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

TOP CHORD 1-2=-392/292, 2-3=-261/241, 5-6=-160/271, 20-21=-317/178

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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) 21, 31, 32, 33, 34, 35, 36, 30, 29, 28, 27 except (jt=lb) 1=150, 37=139, 38=138, 39=135, 40=138, 25=137, 24=139, 23=135, 22=138.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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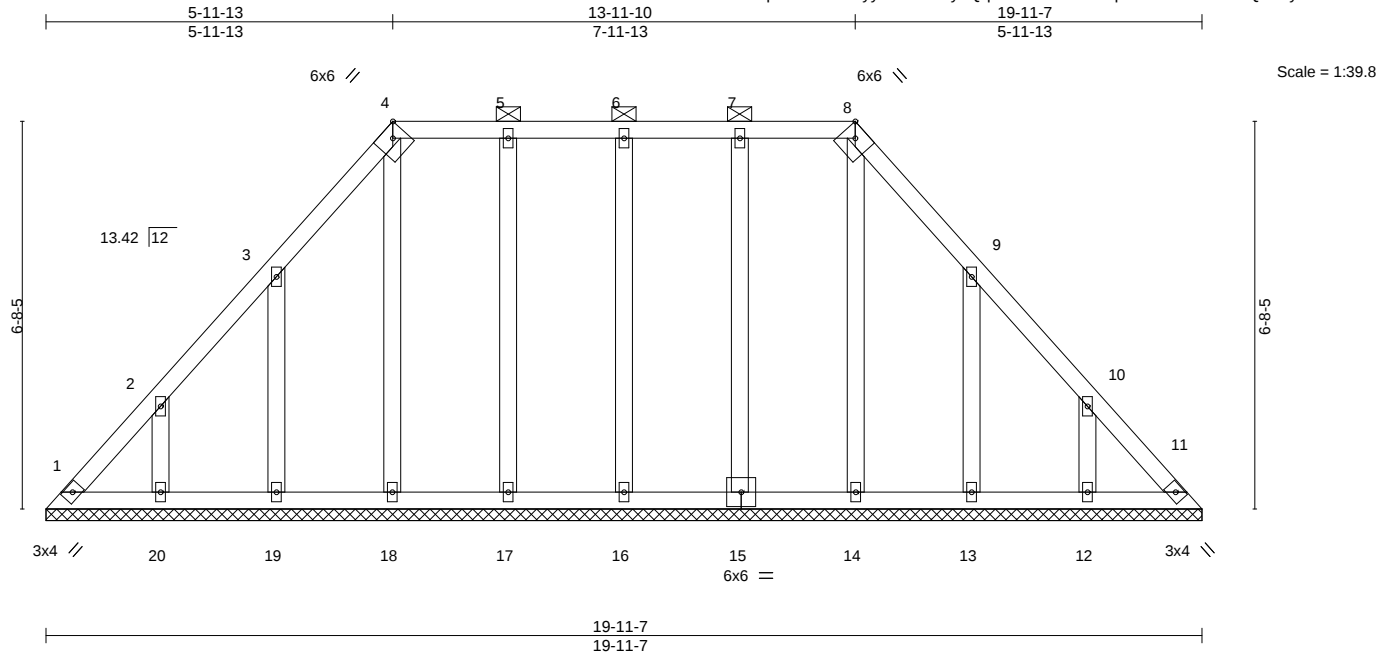
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |              |     |     |           |           |
|--------------------------|-------|--------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type   | Qty | Ply | Lot 18 W1 | I43793757 |
| W1 18                    | LAY2  | Lay-In Gable | 2   | 1   |           |           |
| Job Reference (optional) |       |              |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:15 2020 Page 1

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| Plate Offsets (X,Y)-- [4:0-2-10,Edge], [8:0-2-10,Edge] |       |                      |      |          |      |                           |             |        |                        |
|--------------------------------------------------------|-------|----------------------|------|----------|------|---------------------------|-------------|--------|------------------------|
| LOADING (psf)                                          |       | SPACING- 2-0-0       |      | CSI.     |      | DEFL. in (loc) l/defl L/d |             | PLATES | GRIP                   |
| TCLL                                                   | 25.0  | Plate Grip DOL       | 1.15 | TC       | 0.07 | Vert(LL)                  | n/a - n/a   | 999    | MT20 197/144           |
| TCDL                                                   | 20.0  | Lumber DOL           | 1.15 | BC       | 0.03 | Vert(CT)                  | n/a - n/a   | 999    |                        |
| BCLL                                                   | 0.0 * | Rep Stress Incr      | YES  | WB       | 0.14 | Horz(CT)                  | 0.00 11 n/a | n/a    |                        |
| BCDL                                                   | 10.0  | Code IRC2018/TPI2014 |      | Matrix-S |      |                           |             |        | Weight: 99 lb FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-8.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 19-11-7.  
(lb) - Max Horz 1=172(LC 5)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 11, 16, 17, 18, 15 except 19=147(LC 8), 20=136(LC 8), 13=147(LC 9), 12=136(LC 9)  
Max Grav All reactions 250 lb or less at joint(s) 1, 11, 16, 17, 18, 20, 15, 14, 12 except 19=262(LC 15), 13=262(LC 16)

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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, 11, 16, 17, 18, 15 except (jt=lb) 19=147, 20=136, 13=147, 12=136.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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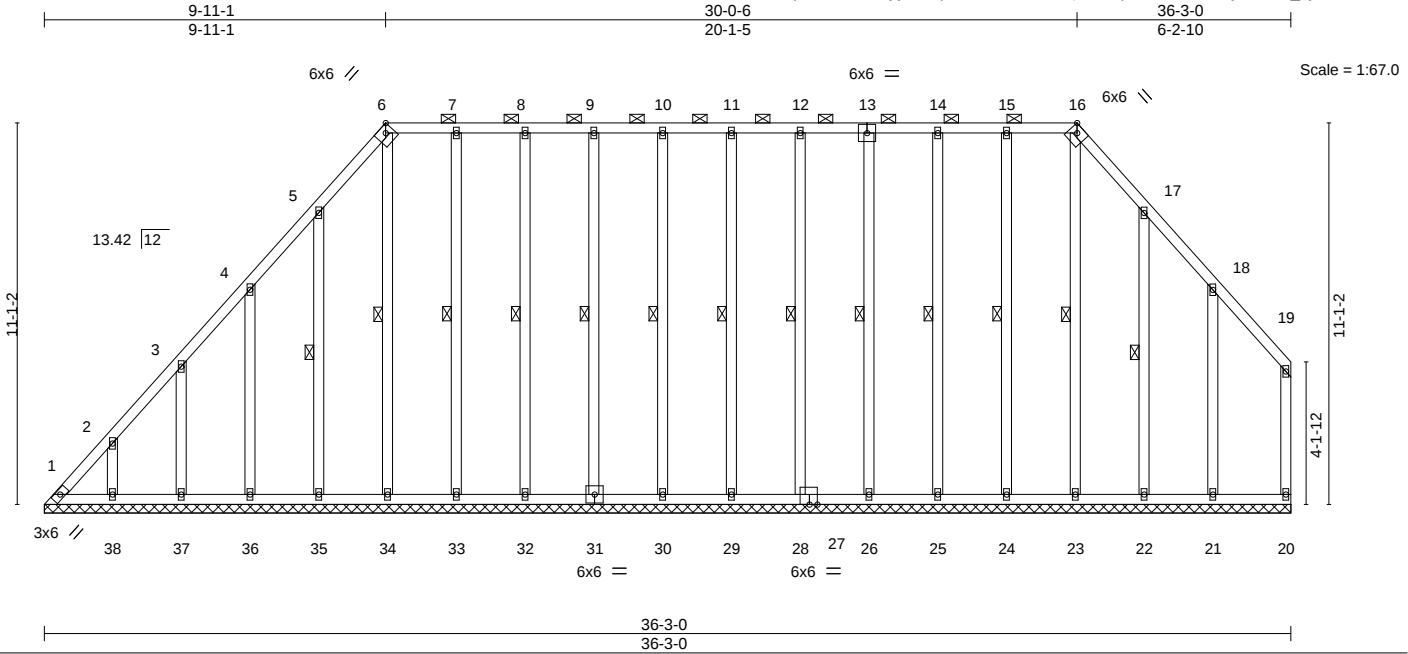


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | 143793758 |
| W1 18 | LAY3  | GABLE      | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:18 2020 Page 1  
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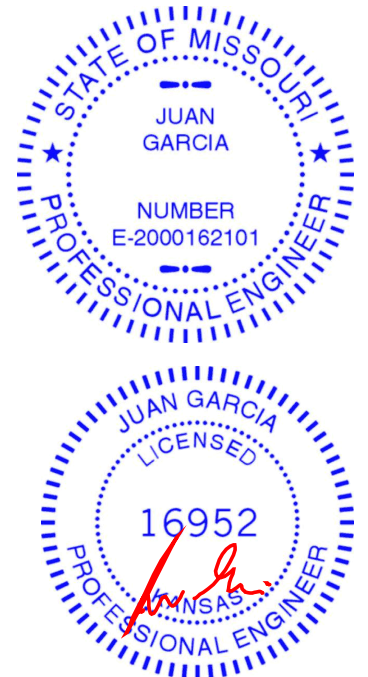
|                       |       |                                                      |      |             |      |                                  |           |               |                         |
|-----------------------|-------|------------------------------------------------------|------|-------------|------|----------------------------------|-----------|---------------|-------------------------|
| Plate Offsets (X,Y)-- |       | [6:0-2-10,Edge], [16:0-2-10,Edge], [28:0-2-12,0-0-0] |      |             |      |                                  |           |               |                         |
| <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                  | 25.0  | Plate Grip DOL                                       | 1.15 | TC          | 0.09 | Vert(LL)                         | n/a - n/a | 999           | MT20 197/144            |
| TCDL                  | 20.0  | Lumber DOL                                           | 1.15 | BC          | 0.04 | Vert(CT)                         | n/a - n/a | 999           |                         |
| BCLL                  | 0.0 * | Rep Stress Incr                                      | YES  | WB          | 0.16 | Horz(CT)                         | -0.00 20  | n/a n/a       |                         |
| BCDL                  | 10.0  | Code IRC2018/TPI2014                                 |      | Matrix-S    |      |                                  |           |               | Weight: 267 lb FT = 10% |

|                        |                                                                                                                                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>         | <b>BRACING-</b>                                                                                                                          |
| TOP CHORD 2x4 SPF No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-16. |
| BOT CHORD 2x4 SPF No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                                                           |
| WEBS 2x4 SPF No.2      | WEBS 1 Row at midpt 5-35, 6-34, 7-33, 8-32, 9-31, 10-30, 11-29, 12-28, 13-26, 14-25, 15-24, 16-23, 17-22                                 |
| OTHERS 2x4 SPF No.2    |                                                                                                                                          |

**REACTIONS.** All bearings 36-3-0.  
 (lb) - Max Horz 1=341(LC 5)  
 Max Uplift All uplift 100 lb or less at joint(s) 20, 33, 32, 31, 30, 29, 28, 26, 25, 24, 23 except 1=245(LC 4), 38=138(LC 8), 37=135(LC 8), 36=139(LC 8), 35=137(LC 8), 34=105(LC 7), 22=129(LC 9), 21=169(LC 9)  
 Max Grav All reactions 250 lb or less at joint(s) 20, 37, 36, 33, 32, 31, 30, 29, 28, 26, 25, 24, 23, 22 except 1=337(LC 7), 38=252(LC 15), 35=259(LC 15), 34=266(LC 18), 21=291(LC 16)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-436/401, 2-3=-403/351, 3-4=-364/334, 4-5=-329/324, 5-6=-282/343, 6-7=-161/250, 7-8=-160/250, 8-9=-160/250, 9-10=-160/250, 10-11=-160/250, 11-12=-160/250, 12-13=-160/250, 13-14=-160/250, 14-15=-160/250, 15-16=-161/250, 16-17=-248/316

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - 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) 20, 33, 32, 31, 30, 29, 28, 26, 25, 24, 23 except (jt=lb) 1=245, 38=138, 37=135, 36=139, 35=137, 34=105, 22=129, 21=169.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

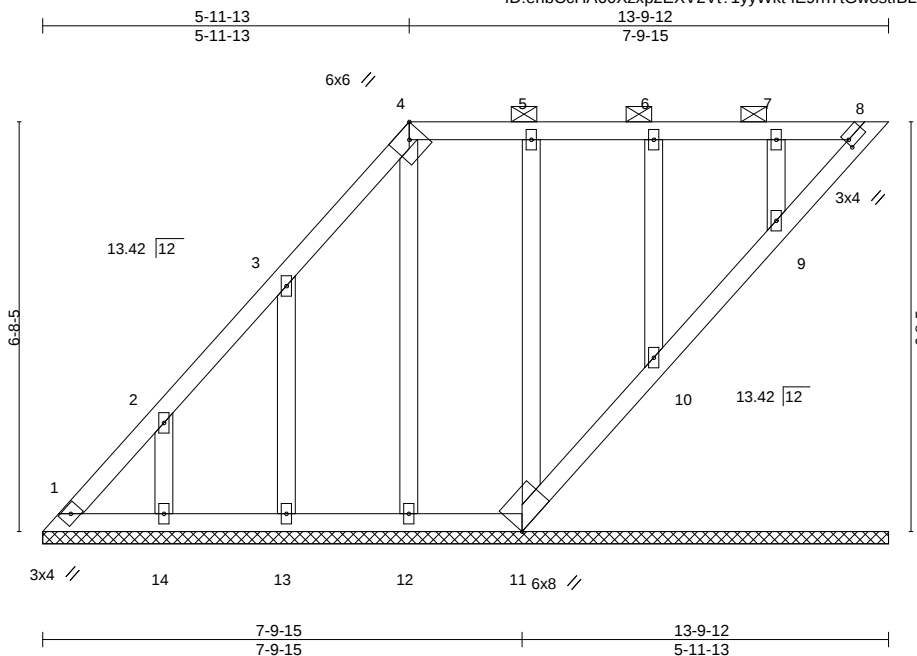


November 30,2020

|                          |       |            |     |     |           |           |
|--------------------------|-------|------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | LAY4  | GABLE      | 1   | 1   |           | I43793759 |
| Job Reference (optional) |       |            |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:20 2020 Page 1  
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Scale = 1:37.6

|                                                         |       |                       |      |             |      |                                  |             |               |               |          |
|---------------------------------------------------------|-------|-----------------------|------|-------------|------|----------------------------------|-------------|---------------|---------------|----------|
| Plate Offsets (X,Y)-- [4:0-2-10,Edge], [8:0-0-10,0-1-8] |       |                       |      |             |      |                                  |             |               |               |          |
| <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                                                    | 25.0  | Plate Grip DOL        | 1.15 | TC          | 0.06 | Vert(LL)                         | n/a - n/a   | 999           | MT20          | 197/144  |
| TCDL                                                    | 20.0  | Lumber DOL            | 1.15 | BC          | 0.04 | Vert(CT)                         | n/a - n/a   | 999           |               |          |
| BCLL                                                    | 0.0 * | Rep Stress Incr       | YES  | WB          | 0.12 | Horz(CT)                         | -0.00 8 n/a | n/a           |               |          |
| BCDL                                                    | 10.0  | Code IRC2018/TPI2014  |      | Matrix-S    |      |                                  |             |               | Weight: 63 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-8.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 13-9-12.  
(lb) - Max Horz 1=261(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 11, 12, 10, 9 except 14=135(LC 8), 13=148(LC 8)  
Max Grav All reactions 250 lb or less at joint(s) 1, 8, 11, 14, 12, 10, 9 except 13=262(LC 15)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=273/123

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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, 8, 11, 12, 10, 9 except (jt=lb) 14=135, 13=148.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8, 10, 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

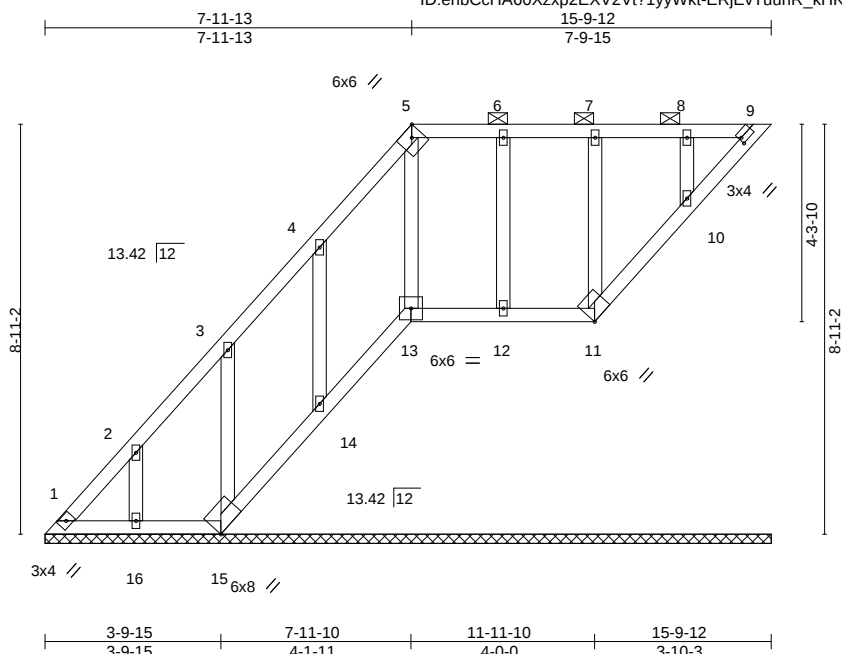


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793760 |
| W1 18 | LAY5  | GABLE      | 1   | 1   |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:21 2020 Page 1  
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Scale = 1:50.2

|                                                         |       |                       |      |             |      |                                  |             |                    |               |          |
|---------------------------------------------------------|-------|-----------------------|------|-------------|------|----------------------------------|-------------|--------------------|---------------|----------|
| Plate Offsets (X,Y)-- [5:0-2-10,Edge], [9:0-0-10,0-1-8] |       |                       |      |             |      |                                  |             |                    |               |          |
| <b>LOADING</b> (psf)                                    |       | <b>SPACING-</b> 2-0-0 |      | <b>CSI.</b> |      | <b>DEFL.</b> in (loc) l/defl L/d |             | <b>PLATES GRIP</b> |               |          |
| TCLL                                                    | 25.0  | Plate Grip DOL        | 1.15 | TC          | 0.07 | Vert(LL)                         | n/a - n/a   | 999                | MT20          | 197/144  |
| TCDL                                                    | 20.0  | Lumber DOL            | 1.15 | BC          | 0.04 | Vert(CT)                         | n/a - n/a   | 999                |               |          |
| BCLL                                                    | 0.0 * | Rep Stress Incr       | YES  | WB          | 0.06 | Horz(CT)                         | -0.00 9 n/a | n/a                |               |          |
| BCDL                                                    | 10.0  | Code IRC2018/TPI2014  |      | Matrix-S    |      |                                  |             |                    | Weight: 69 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-9.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

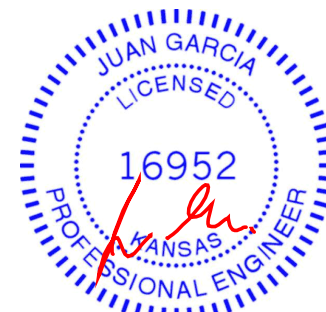
All bearings 15-9-12.  
(lb) - Max Horz 1=352(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 15, 13, 12, 11, 10 except 16=-138(LC 8), 14=-148(LC 8)  
Max Grav All reactions 250 lb or less at joint(s) 9, 15, 13, 12, 11, 10 except 1=279(LC 8), 16=254(LC 15), 14=272(LC 15)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-390/176, 2-3=-258/124

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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, 9, 15, 13, 12, 11, 10 except (jt=lb) 16=138, 14=148.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 9, 13, 14, 12, 11, 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30, 2020

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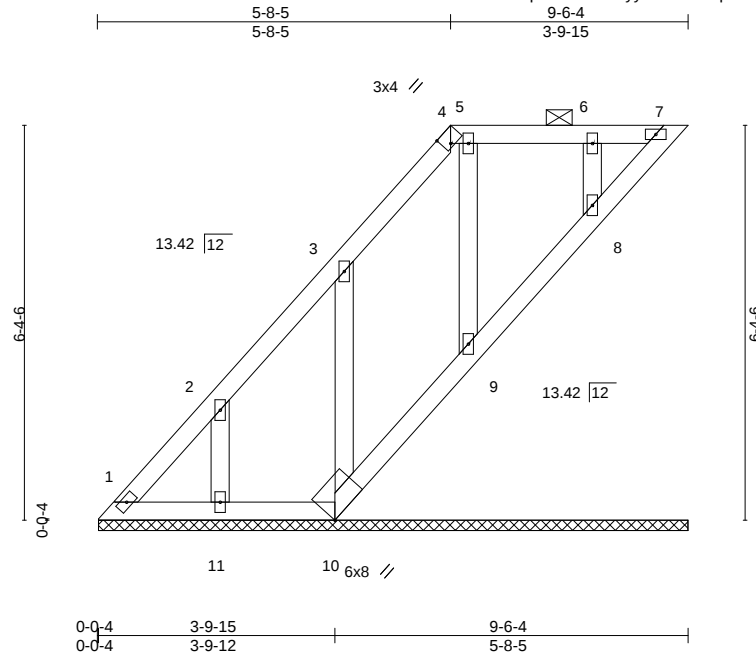
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |           |           |
|--------------------------|-------|------------|-----|-----|-----------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Lot 18 W1 |           |
| W1 18                    | LAY6  | GABLE      | 1   | 1   |           | I43793761 |
| Job Reference (optional) |       |            |     |     |           |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:22 2020 Page 1

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Scale = 1:37.1

| Plate Offsets (X,Y)-- |       | [4:0-1-6,Edge]       |      |          |      |                           |       |   |     |                        |      |         |
|-----------------------|-------|----------------------|------|----------|------|---------------------------|-------|---|-----|------------------------|------|---------|
| LOADING (psf)         |       | SPACING- 2-0-0       |      | CSI.     |      | DEFL. in (loc) l/defl L/d |       |   |     | PLATES GRIP            |      |         |
| TCLL                  | 25.0  | Plate Grip DOL       | 1.15 | TC       | 0.06 | Vert(LL)                  | n/a   | - | n/a | 999                    | MT20 | 197/144 |
| TCDL                  | 20.0  | Lumber DOL           | 1.15 | BC       | 0.04 | Vert(CT)                  | n/a   | - | n/a | 999                    |      |         |
| BCLL                  | 0.0 * | Rep Stress Incr      | YES  | WB       | 0.05 | Horz(CT)                  | -0.00 | 7 | n/a | n/a                    |      |         |
| BCDL                  | 10.0  | Code IRC2018/TPI2014 |      | Matrix-S |      |                           |       |   |     | Weight: 39 lb FT = 10% |      |         |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 9-6-0.  
(lb) - Max Horz 1=248(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 10, 9, 8 except 11=138(LC 8)  
Max Grav All reactions 250 lb or less at joint(s) 1, 7, 10, 9, 8 except 11=253(LC 15)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-253/116

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 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, 7, 10, 9, 8 except (jt=lb) 11=138.
- Non Standard bearing condition. Review required.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 30,2020

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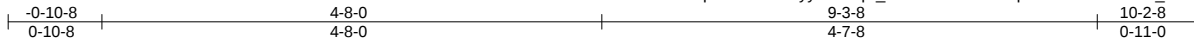
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |           |           |
|-------|-------|------------|-----|-----|-----------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1 | I43793762 |
| W1 18 | V1    | Valley     | 1   | 1   |           |           |

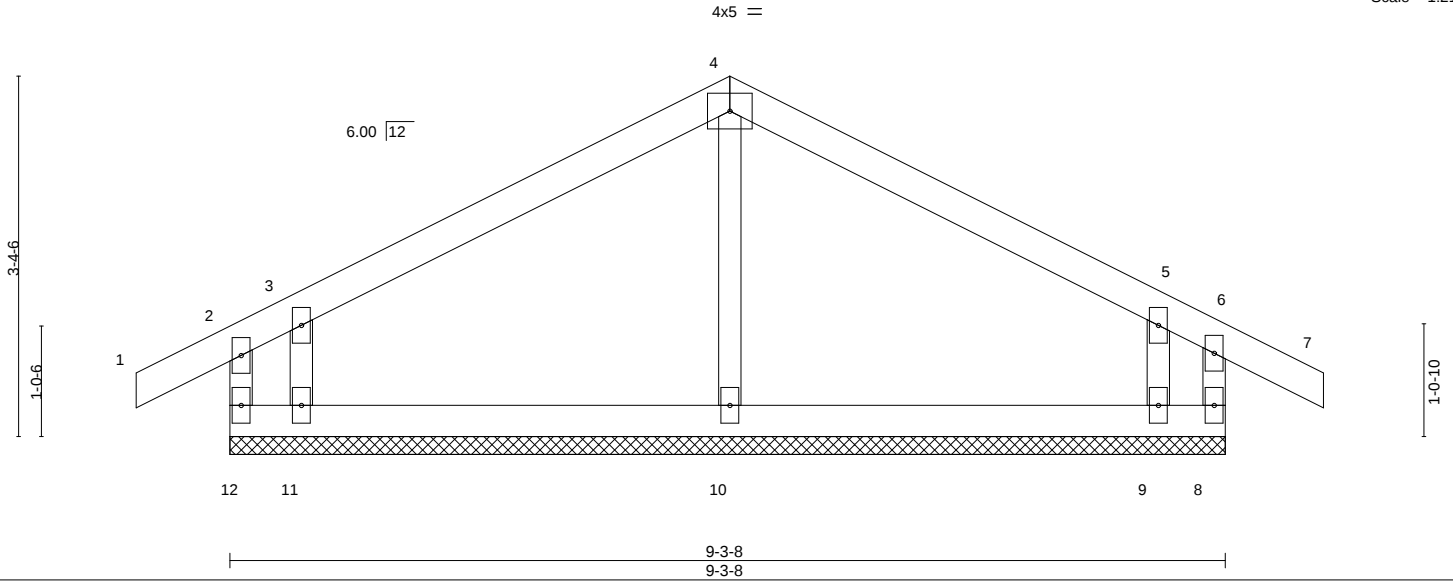
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:23 2020 Page 1

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Scale = 1:21.5



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.25  | Vert(LL) | -0.00 | 7     | n/r    | 120 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.10  | Vert(CT) | -0.01 | 7     | n/r    | 120 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.09  | Horz(CT) | -0.00 | 8     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R |          |       |       |        |     | Weight: 29 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2  
OTHERS 2x3 SPF No.2

#### BRACING-

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

#### REACTIONS.

All bearings 9-3-8.  
(lb) - Max Horz 12=66(LC 7)  
Max Uplift All uplift 100 lb or less at joint(s) except 12=-111(LC 6), 8=-110(LC 7), 11=-155(LC 8), 9=-155(LC 9)  
Max Grav All reactions 250 lb or less at joint(s) 12, 8 except 10=417(LC 1), 11=467(LC 21), 9=474(LC 22)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 4-10=-333/24, 3-11=-387/191, 5-9=-392/193

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- All plates are 2x4 MT20 unless otherwise indicated.
- 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 111 lb uplift at joint 12, 110 lb uplift at joint 8, 155 lb uplift at joint 11 and 155 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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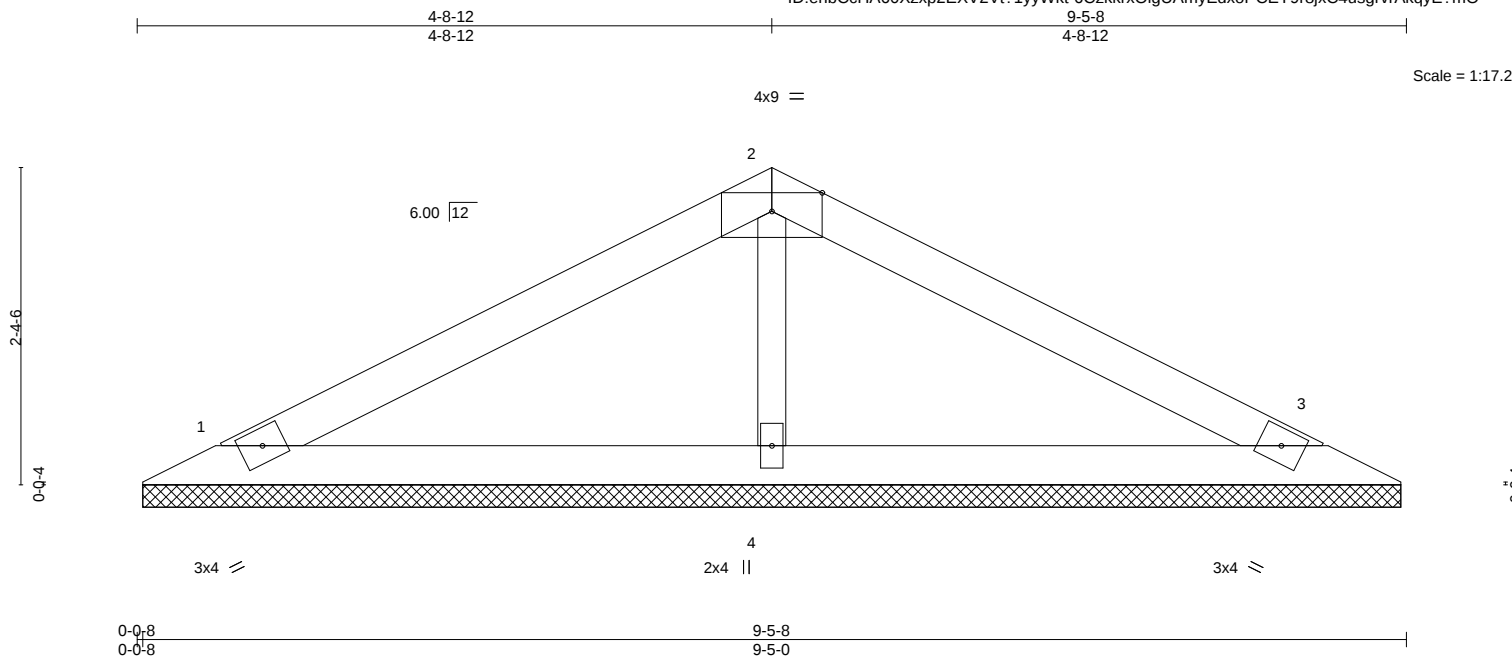


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793763 |
| W1 18 | V2    | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:25 2020 Page 1  
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| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES | GRIP                   |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|--------|------------------------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.28  | Vert(LL) | n/a      | -      | n/a | 999    | MT20                   |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.15  | Vert(CT) | n/a      | -      | n/a | 999    | 197/144                |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.07  | Horz(CT) | 0.00     | 3      | n/a | n/a    |                        |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-S |          |          |        |     |        |                        |
|               |                      |       |          |          |          |        |     |        | Weight: 23 lb FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x3 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 1=9-4-8, 3=9-4-8, 4=9-4-8  
Max Horz 1=-36(LC 13)  
Max Uplift 1=-35(LC 8), 3=-42(LC 9), 4=-22(LC 8)  
Max Grav 1=214(LC 21), 3=214(LC 22), 4=474(LC 1)

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

WEBS 2-4=-343/70

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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 35 lb uplift at joint 1, 42 lb uplift at joint 3 and 22 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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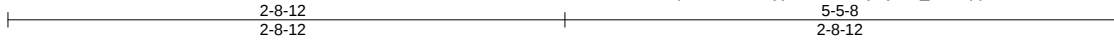


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793764 |
| W1 18 | V3    | Valley     | 1   | 1   | Job Reference (optional) |           |

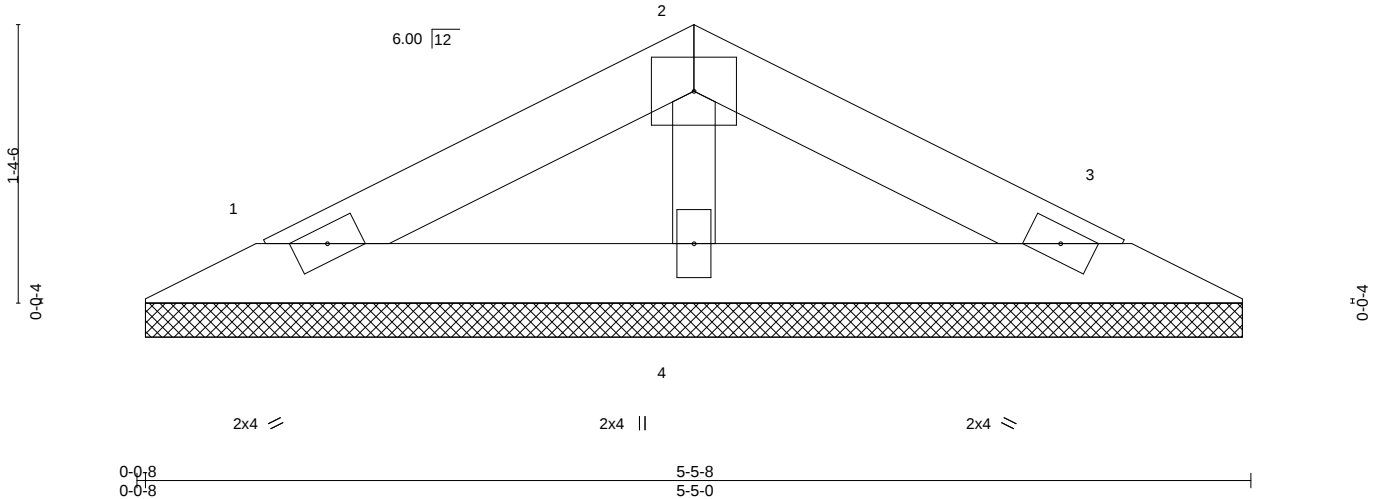
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:26 2020 Page 1  
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4x5 =

Scale = 1:11.3



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.09  | Vert(LL) | n/a  | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.04  | 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 IRC2018/TPI2014 |       | Matrix-P |          |      |       |        |     | Weight: 12 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-5-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 1=5-4-8, 3=5-4-8, 4=5-4-8  
Max Horz 1=19(LC 12)  
Max Uplift 1=-23(LC 8), 3=-26(LC 9), 4=-2(LC 8)  
Max Grav 1=122(LC 1), 3=122(LC 1), 4=217(LC 1)

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 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 23 lb uplift at joint 1, 26 lb uplift at joint 3 and 2 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793765 |
| W1 18 | V4    | Valley     | 1   | 1   | Job Reference (optional) |           |

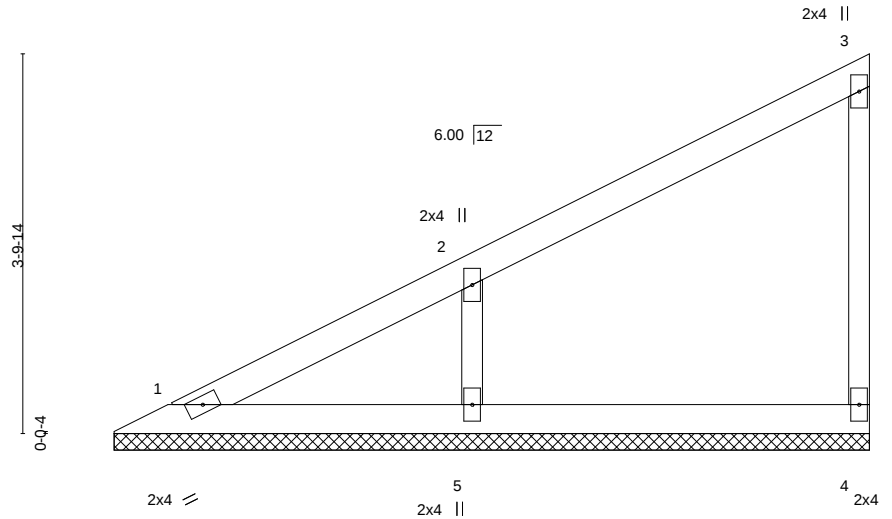
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:27 2020 Page 1

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7-7-12  
7-7-12

Scale = 1:23.2



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.26  | Vert(LL) | n/a   | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.10  | Vert(CT) | n/a   | -     | n/a    | 999 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.07  | Horz(CT) | -0.00 | 4     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-P |          |       |       |        |     | Weight: 21 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2  
OTHERS 2x3 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 1=7-7-4, 4=7-7-4, 5=7-7-4  
Max Horz 1=144(LC 5)  
Max Uplift 4=-26(LC 5), 5=-118(LC 8)  
Max Grav 1=120(LC 16), 4=170(LC 1), 5=481(LC 1)

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

WEBS 2-5=-393/171

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 4 and 118 lb uplift at joint 5.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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Chesterfield, MO 63017

|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793766 |
| W1 18 | V5    | Valley     | 1   | 1   | Job Reference (optional) |           |

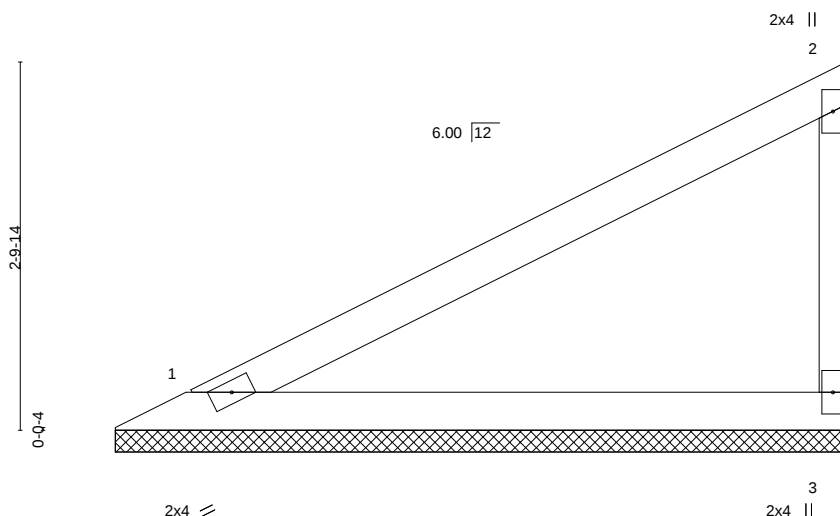
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:29 2020 Page 1

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5-7-12

5-7-12



Scale = 1:17.7

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.60  | Vert(LL) | n/a   | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.25  | 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 IRC2018/TPI2014 |       | Matrix-P |          |       |       |        |     | Weight: 15 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-7-12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 1=5-7-4, 3=5-7-4  
Max Horz 1=102(LC 7)  
Max Uplift 1=-28(LC 8), 3=-54(LC 8)  
Max Grav 1=270(LC 1), 3=270(LC 1)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1 and 54 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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|       |       |            |     |     |                          |           |
|-------|-------|------------|-----|-----|--------------------------|-----------|
| Job   | Truss | Truss Type | Qty | Ply | Lot 18 W1                | I43793767 |
| W1 18 | V6    | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

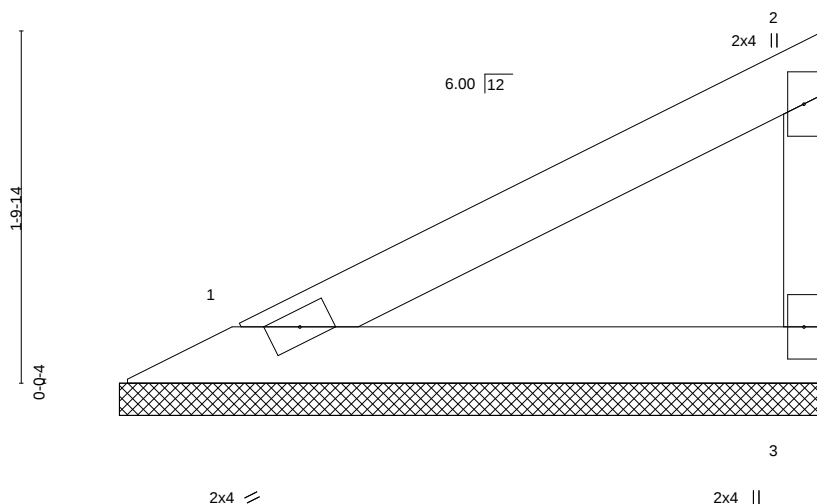
8.430 s Nov 18 2020 MiTek Industries, Inc. Mon Nov 30 11:33:29 2020 Page 1

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3-7-12

3-7-12

Scale: 1"=1'



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.19  | Vert(LL) | n/a   | -     | n/a    | 999 | MT20         | 197/144  |
| TCDL 20.0     | 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 IRC2018/TPI2014 |       | Matrix-P |          |       |       |        |     | Weight: 9 lb | FT = 10% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-7-12 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

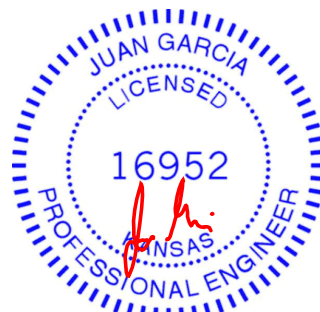
#### REACTIONS.

(size) 1=3-7-12, 3=3-7-12  
 Max Horz 1=61(LC 5)  
 Max Uplift 1=-17(LC 8), 3=-32(LC 8)  
 Max Grav 1=160(LC 1), 3=160(LC 1)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; 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
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 1 and 32 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 30, 2020

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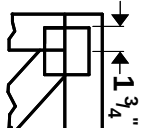
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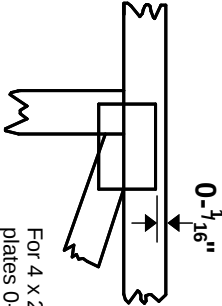
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

# Symbols

## PLATE LOCATION AND ORIENTATION



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



For 4 x 2 orientation, locate plates 0-  $\frac{1}{16}$ " from outside edge of truss.

—  
—  
This symbol indicates the required direction of slots in connector plates.

**\* Plate location details available in MITek 20120 software or upon request.**

## PLATE SIZE

4 X 4

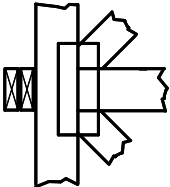
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

## BEARING



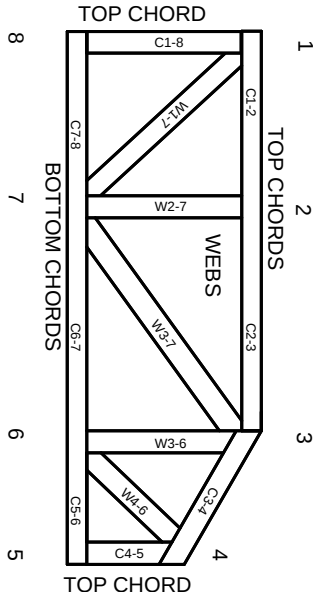
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, 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/TP1 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. 5/19/2020



# General Safety Notes

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

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.