



RE: H374  
Lot 74 H3

**MiTek USA, Inc.**

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

**Site Information:**

Customer: Project Name: H374  
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: ASCE 7 - 16[Low Rise]  
Roof Load: 45.0 psf

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

This package includes 62 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal#     | Truss Name | Date       | No. | Seal#     | Truss Name | Date       |
|-----|-----------|------------|------------|-----|-----------|------------|------------|
| 1   | I48788133 | A1         | 11/15/2021 | 21  | I48788153 | C4         | 11/15/2021 |
| 2   | I48788134 | A2         | 11/15/2021 | 22  | I48788154 | C5         | 11/15/2021 |
| 3   | I48788135 | A3         | 11/15/2021 | 23  | I48788155 | C6         | 11/15/2021 |
| 4   | I48788136 | A4         | 11/15/2021 | 24  | I48788156 | D1         | 11/15/2021 |
| 5   | I48788137 | A5         | 11/15/2021 | 25  | I48788157 | D2         | 11/15/2021 |
| 6   | I48788138 | B1         | 11/15/2021 | 26  | I48788158 | D3         | 11/15/2021 |
| 7   | I48788139 | B2         | 11/15/2021 | 27  | I48788159 | D4         | 11/15/2021 |
| 8   | I48788140 | B3         | 11/15/2021 | 28  | I48788160 | D5         | 11/15/2021 |
| 9   | I48788141 | B4         | 11/15/2021 | 29  | I48788161 | D6         | 11/15/2021 |
| 10  | I48788142 | B5         | 11/15/2021 | 30  | I48788162 | D7         | 11/15/2021 |
| 11  | I48788143 | B6         | 11/15/2021 | 31  | I48788163 | E1         | 11/15/2021 |
| 12  | I48788144 | B7         | 11/15/2021 | 32  | I48788164 | E2         | 11/15/2021 |
| 13  | I48788145 | B8         | 11/15/2021 | 33  | I48788165 | E3         | 11/15/2021 |
| 14  | I48788146 | B9         | 11/15/2021 | 34  | I48788166 | J1         | 11/15/2021 |
| 15  | I48788147 | B10        | 11/15/2021 | 35  | I48788167 | J2         | 11/15/2021 |
| 16  | I48788148 | B11        | 11/15/2021 | 36  | I48788168 | J3         | 11/15/2021 |
| 17  | I48788149 | B12        | 11/15/2021 | 37  | I48788169 | J4         | 11/15/2021 |
| 18  | I48788150 | C1         | 11/15/2021 | 38  | I48788170 | LAY1       | 11/15/2021 |
| 19  | I48788151 | C2         | 11/15/2021 | 39  | I48788171 | LAY2       | 11/15/2021 |
| 20  | I48788152 | C3         | 11/15/2021 | 40  | I48788172 | LAY3       | 11/15/2021 |

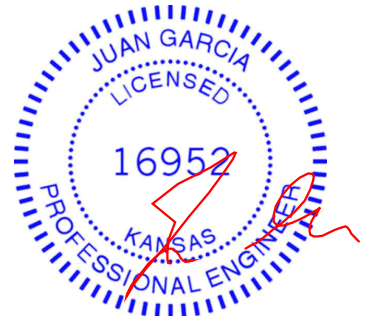
The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Wheeler - Waverly.

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.



November 15, 2021



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

**Site Information:**

Project Customer:      Project Name: H374

Lot/Block:

Subdivision:

Address:

City, County:

State:

| No. | Seal#     | Truss Name | Date       |
|-----|-----------|------------|------------|
| 41  | I48788173 | LAY4       | 11/15/2021 |
| 42  | I48788174 | V1         | 11/15/2021 |
| 43  | I48788175 | V2         | 11/15/2021 |
| 44  | I48788176 | V3         | 11/15/2021 |
| 45  | I48788177 | V4         | 11/15/2021 |
| 46  | I48788178 | V5         | 11/15/2021 |
| 47  | I48788179 | V6         | 11/15/2021 |
| 48  | I48788180 | V7         | 11/15/2021 |
| 49  | I48788181 | V8         | 11/15/2021 |
| 50  | I48788182 | V9         | 11/15/2021 |
| 51  | I48788183 | V10        | 11/15/2021 |
| 52  | I48788184 | V11        | 11/15/2021 |
| 53  | I48788185 | V12        | 11/15/2021 |
| 54  | I48788186 | V13        | 11/15/2021 |
| 55  | I48788187 | V14        | 11/15/2021 |
| 56  | I48788188 | V15        | 11/15/2021 |
| 57  | I48788189 | V16        | 11/15/2021 |
| 58  | I48788190 | V17        | 11/15/2021 |
| 59  | I48788191 | V18        | 11/15/2021 |
| 60  | I48788192 | V19        | 11/15/2021 |
| 61  | I48788193 | V20        | 11/15/2021 |
| 62  | I48788194 | V21        | 11/15/2021 |



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Wind Code: ASCE 7 - 16[Low Rise]  
Roof Load: 45.0 psf

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

This package includes 62 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal#     | Truss Name | Date       | No. | Seal#     | Truss Name | Date       |
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| 1   | I48788133 | A1         | 11/15/2021 | 21  | I48788153 | C4         | 11/15/2021 |
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| 18  | I48788150 | C1         | 11/15/2021 | 38  | I48788170 | LAY1       | 11/15/2021 |
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| 20  | I48788152 | C3         | 11/15/2021 | 40  | I48788172 | LAY3       | 11/15/2021 |

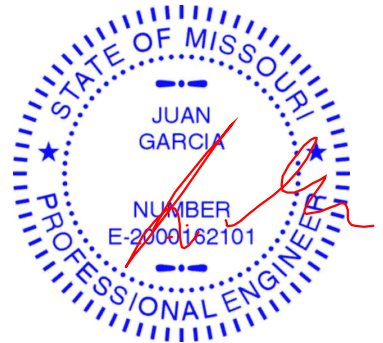
The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2022.

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.



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| 59  | I48788191 | V18        | 11/15/2021 |
| 60  | I48788192 | V19        | 11/15/2021 |
| 61  | I48788193 | V20        | 11/15/2021 |
| 62  | I48788194 | V21        | 11/15/2021 |

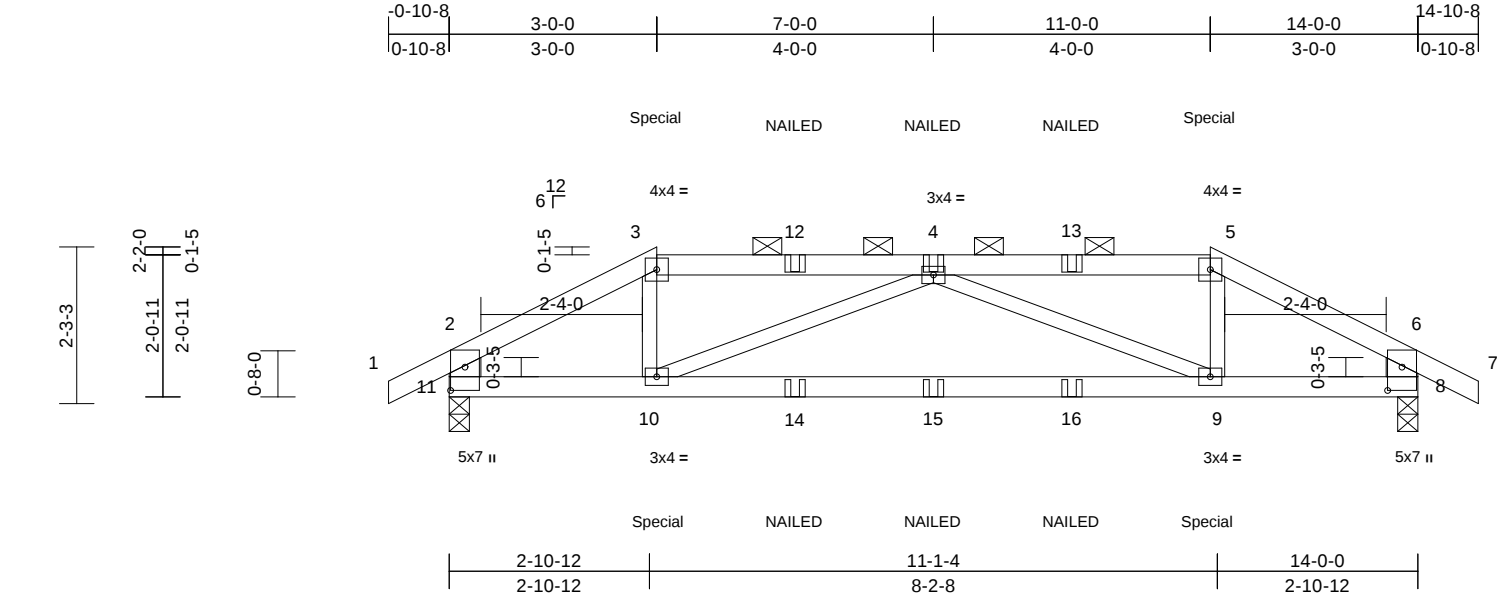
|             |             |                          |          |          |                                       |           |
|-------------|-------------|--------------------------|----------|----------|---------------------------------------|-----------|
| Job<br>H374 | Truss<br>A1 | Truss Type<br>Hip Girder | Qty<br>1 | Ply<br>1 | Lot 74 H3<br>Job Reference (optional) | I48788133 |
|-------------|-------------|--------------------------|----------|----------|---------------------------------------|-----------|

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:16

Page: 1

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Scale = 1:33.3

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.70 | Vert(LL) | -0.14 | 9-10  | >999   | 360 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.68 | Vert(CT) | -0.32 | 9-10  | >508   | 240 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB       | 0.27 | Horz(CT) | 0.02  | 8     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.08  | 9-10  | >999   | 240 | Weight: 46 lb | FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\* 11-2,8-6:2x6 SP DSS

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-8-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 8-11-11 oc bracing.

REACTIONS (lb/size) 8=743/0-3-8, 11=743/0-3-8  
Max Horiz 11=42 (LC 6)  
Max Uplift 8=-195 (LC 9), 11=-195 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/35, 2-3=-1025/255, 3-4=-826/234, 4-5=-826/234, 5-6=-1025/255, 6-7=0/35, 2-11=-691/172, 6-8=-691/172

BOT CHORD 10-11=-211/841, 9-10=-423/1283, 8-9=-195/841

WEBS 3-10=0/362, 5-9=0/362, 4-10=-512/246, 4-9=-512/246

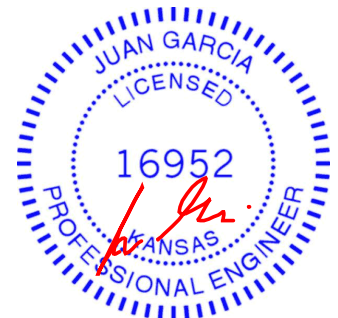
#### NOTES

- 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 195 lb uplift at joint 11 and 195 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 85 lb down and 145 lb up at 3-0-0, and 85 lb down and 145 lb up at 11-0-0 on top chord, and 30 lb down at 3-0-0, and 30 lb down at 10-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-7=-70, 8-11=-20  
Concentrated Loads (lb)  
Vert: 3=-12 (F), 5=-12 (F), 10=-10 (F), 9=-10 (F), 4=-12 (F), 12=-12 (F), 13=-12 (F), 14=-10 (F), 15=-10 (F), 16=-10 (F)



November 15, 2021

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

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

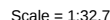
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:19 Page: 1  
ID:dwZTNCNxRfJm8tRCSiY7DzSTnz-RfC?PsB70Ha3NSaPanL8w3uITXbGKWrCDoi7J4zJC?f



| <b>Loading</b> | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in    | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
|----------------|-------|-----------------|-----------------|------------|------|-------------|-------|-------|--------|-----|---------------|-------------|
| TCLL (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.48 | Vert(LL)    | -0.05 | 7-8   | >999   | 360 | MT20          | 197/144     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.41 | Vert(CT)    | -0.10 | 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-S   |      | Wind(LL)    | 0.03  | 7-8   | >999   | 240 | Weight: 44 lb | FT = 10%    |

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\* 9-2,6-5:2x6 SPF No.2

|           |                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied or 5-8-5 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                                                          |

Max Horiz 9=59 (LC 5)  
Max Uplift 6=-58 (LC 9), 9=-85 (LC 8)

Tension

TOP CHORD 1-2=0/35, 2-3=-849/64, 3-4=-672/95,  
4-5=-835/63, 2-9=-623/119, 5-6=-523/90

BOT CHORD 8-9=-53/679, 7-8=-55/676, 6-7=-23/674

WEBS 3-8=0/171, 3-7=-98/87, 4-7=0/156

- 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 9 and 58 lb uplift at joint 6.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.1.1 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.

LOAD CASE(S) Standard



November 15.2021



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16023 Swingley Ridge Rd  
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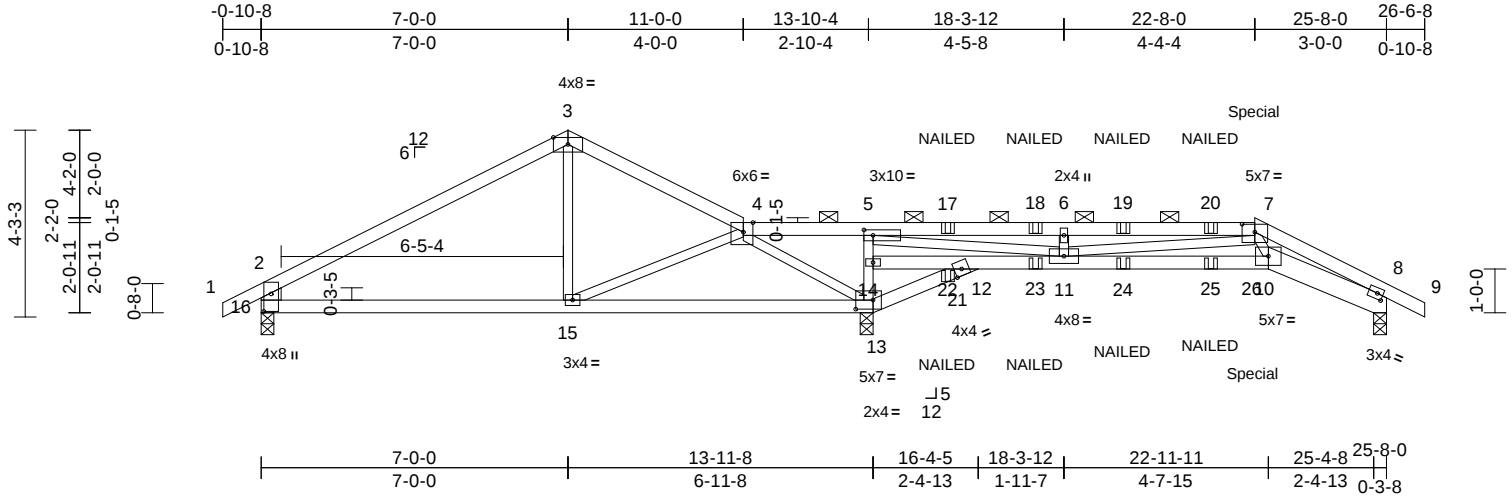
|      |       |                     |     |     |                          |           |
|------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type          | Qty | Ply | Lot 74 H3                | I48788135 |
| H374 | A3    | Roof Special Girder | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:20

Page: 1

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Scale = 1:52.6

Plate Offsets (X, Y): [4:0-2-10,Edge], [5:0-2-8,0-1-8], [7:0-3-8,0-2-3], [8:0-1-9,0-1-8], [13:0-4-12,0-2-8], [16:0-4-13,0-2-0]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.66 | Vert(LL) | -0.11 | 10-11  | >999 | 360    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.67 | Vert(CT) | -0.21 | 10-11  | >661 | 240    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB       | 0.55 | Horz(CT) | 0.07  | 8      | n/a  | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.11  | 10-11  | >999 | 240    | Weight: 87 lb FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2 \*Except\* 10-8:2x6 SPF No.2  
 WEBS 2x3 SPF No.2 \*Except\* 16-2:2x6 SPF No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-3-1 oc purlins, except end verticals, and 2-0-0 oc purlins (5-10-6 max.): 4-7.  
 BOT CHORD Rigid ceiling directly applied or 5-10-1 oc bracing.

**REACTIONS** (lb/size) 8=520/0-3-8, 13=1428/0-3-8, 16=590/0-3-8  
 Max Horiz 16=-63 (LC 13)  
 Max Uplift 8=-169 (LC 9), 13=-277 (LC 9), 16=-147 (LC 27)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/35, 2-3=-579/164, 3-4=-506/196, 4-5=-120/750, 5-6=-830/333, 6-7=-830/333, 7-8=-1818/573, 8-9=0/8, 2-16=-541/192  
 BOT CHORD 15-16=-105/416, 13-15=-330/226, 12-13=-855/219, 12-14=-24/32, 11-12=-767/193, 10-11=-414/1198, 8-10=-507/1629  
 WEBS 3-15=-35/179, 4-15=-55/381, 4-13=-993/151, 13-14=-532/206, 5-14=-594/221, 5-11=-459/1591, 6-11=-338/184, 7-11=-394/171, 7-10=-147/786

#### NOTES

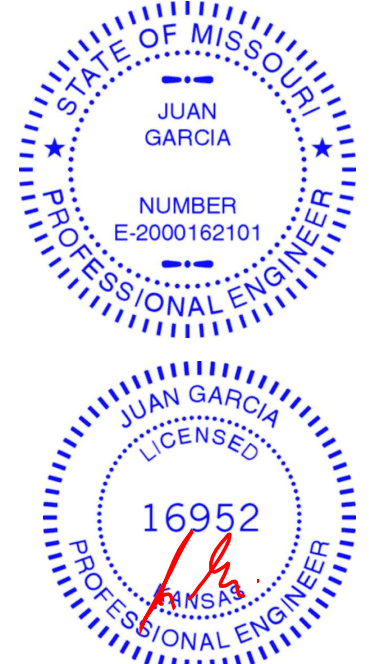
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 8 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 147 lb uplift at joint 16, 277 lb uplift at joint 13 and 169 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 119 lb down and 150 lb up at 22-8-0 on top chord, and 30 lb down at 22-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-7=-70, 7-9=-70, 13-16=-20, 12-13=-20, 10-12=-20, 8-10=-20  
 Concentrated Loads (lb)

Vert: 7=-13 (F), 17=-13 (F), 18=-13 (F), 19=-13 (F), 20=-13 (F), 21=-10 (F), 23=-10 (F), 24=-10 (F), 25=-10 (F), 26=-10 (F)



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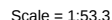
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



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| <b>Loading</b> | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in    | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
|----------------|-------|-----------------|-----------------|------------|------|-------------|-------|-------|--------|-----|---------------|-------------|
| TCLL (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.65 | Vert(LL)    | -0.08 | 10-11 | >999   | 360 | MT20          | 197/144     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.51 | Vert(CT)    | -0.16 | 10-11 | >845   | 240 |               |             |
| BCLL           | 0.0 * | Rep Stress Incr | YES             | WB         | 0.71 | Horz(CT)    | 0.05  | 8     | n/a    | n/a |               |             |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      | Wind(LL)    | 0.03  | 10-11 | >999   | 240 | Weight: 88 lb | FT = 10%    |

|           |                       |                   |
|-----------|-----------------------|-------------------|
| TOP CHORD | 2x4 SPF No.2 *Except* | 3-4:2x6 SPF No.2  |
| BOT CHORD | 2x4 SPF No.2 *Except* | 10-8:2x6 SPF No.2 |
| WEBS      | 2x3 SPF No.2 *Except* | 14-2:2x6 SPF No.2 |

|           |                                                                                                                                |
|-----------|--------------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied or 5-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 4-6. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing, Except:<br>6-0-0 oc bracing: 11-12.                                       |

Max Horiz 14=-62 (LC 13)  
Max Uplift 8=-114 (LC 9), 12=-187 (LC 9),  
14=-128 (LC 8)

Tension

TOP CHORD 1-2=0/35, 2-3=-572/129, 3-4=-461/160,  
4-5=0/521, 5-6=0/307, 6-7=-1007/221,  
7-8=-1201/182, 8-9=0/8, 2-14=-533/172

BOT CHORD 13-14=-78/413, 12-13=-123/334,  
11-12=-600/71, 10-11=-101/478,  
8-10=-115/1032

WEBS 3-13=0/167, 4-13=0/186, 4-12=-907/54,  
5-12=-667/192, 5-11=0/311, 6-11=-801/177,  
6-10=-29/549, 7-10=-17/164

- 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TP1 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 14, 187 lb uplift at joint 12 and 114 lb uplift at joint 8.
- 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/TP1 1.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



November 15.2021



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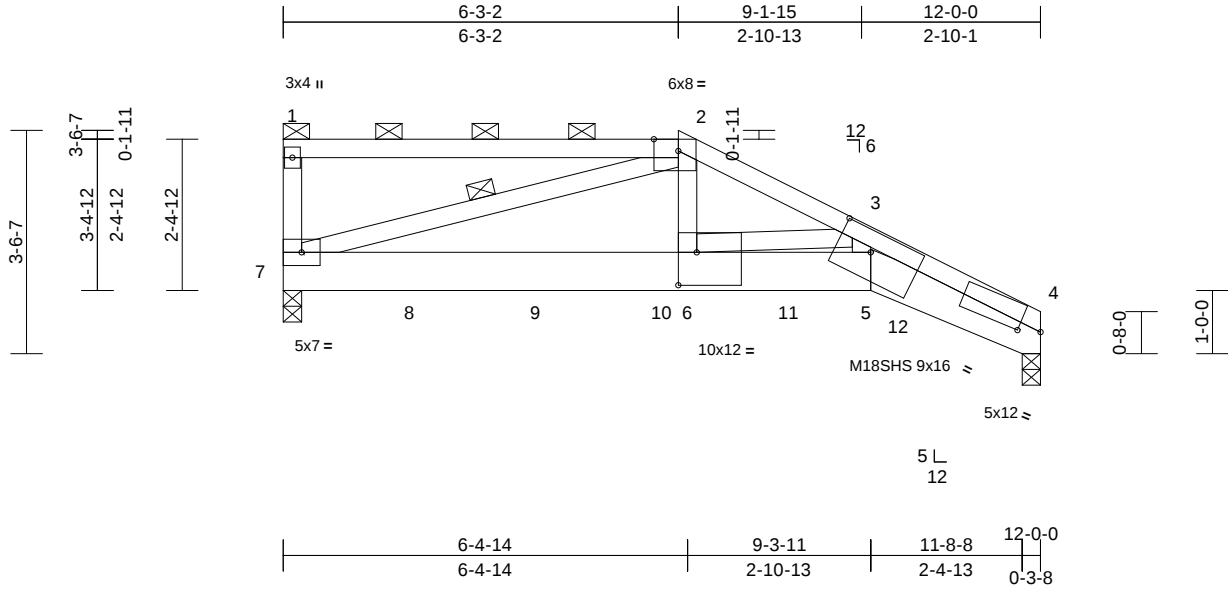
|      |       |                 |     |     |                          |           |
|------|-------|-----------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type      | Qty | Ply | Lot 74 H3                |           |
| H374 | A5    | Half Hip Girder | 1   | 2   | Job Reference (optional) | I48788137 |

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Scale = 1:36.5

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.87 | Vert(LL) | -0.13 | 5-6   | >999   | 360 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.64 | Vert(CT) | -0.23 | 5-6   | >600   | 240 | M18SHS         | 197/144  |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB       | 0.60 | Horz(CT) | 0.12  | 4     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.08  | 5-6   | >999   | 240 | Weight: 133 lb | FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2 \*Except\* 2-4:2x4 SPF 2100F 1.8E  
 BOT CHORD 2x8 SP DSS  
 WEBS 2x4 SPF No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-3-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 2-7

**REACTIONS** (lb/size) 4=3572/0-3-8, 7=3573/0-3-8  
 Max Horiz 7=-85 (LC 4)  
 Max Uplift 4=-346 (LC 9), 7=-200 (LC 4)  
 Max Grav 4=3773 (LC 14), 7=3605 (LC 15)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-7=-232/51, 1-2=-312/41, 2-3=-7933/493, 3-4=-11832/1022  
 BOT CHORD 6-7=-378/6824, 5-6=-745/9180, 4-5=-921/10748

WEBS 3-6=-2070/381, 3-5=-394/3416, 2-6=-292/5213, 2-7=-6850/447

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x8 - 4 rows staggered at 0-2-0 oc.  
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 4 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 200 lb uplift at joint 7 and 346 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1219 lb down and 37 lb up at 2-0-0, 1347 lb down and 47 lb up at 4-0-0, 1346 lb down and 46 lb up at 6-0-0, and 1355 lb down and 195 lb up at 8-0-0, and 1340 lb down and 193 lb up at 10-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

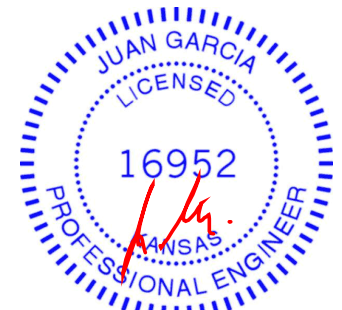
- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

#### Uniform Loads (lb/ft)

Vert: 1-2=-70, 2-4=-70, 5-7=-20, 4-5=-20

#### Concentrated Loads (lb)

Vert: 8=-1219 (B), 9=-1217 (B), 10=-1217 (B), 11=-1220 (B), 12=-1217 (B)



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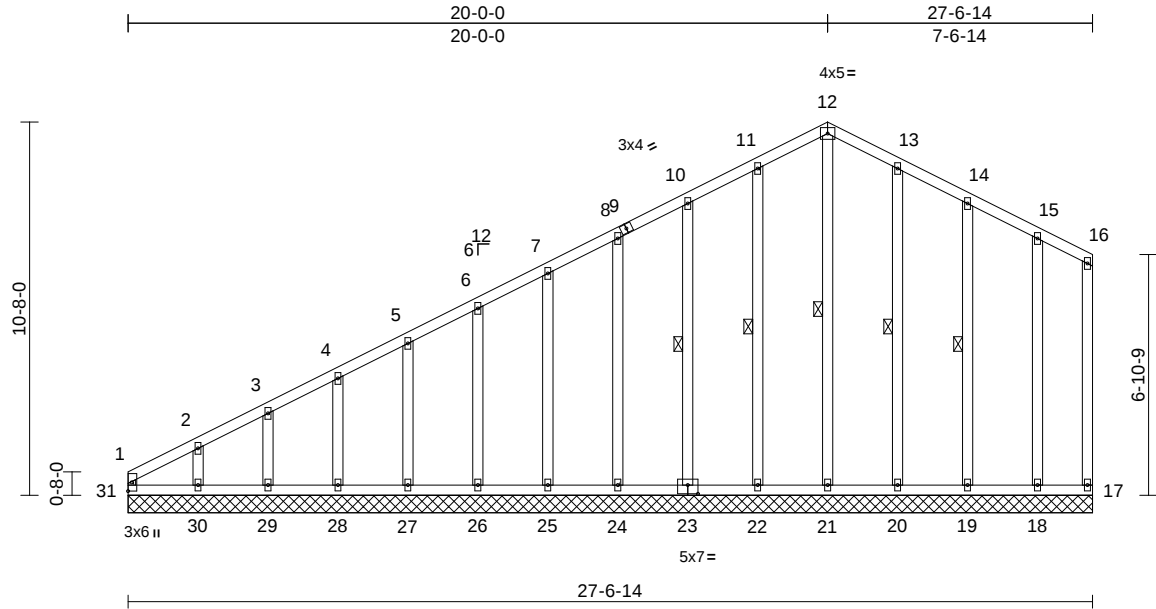
|      |       |                        |     |     |                          |           |
|------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type             | Qty | Ply | Lot 74 H3                | I48788138 |
| H374 | B1    | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:65.9

Plate Offsets (X, Y): [23:0-3-8,0-3-0]

| Loading                 | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.21 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20    |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.09 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144 |
| BCLL                    | 0.0*  | Rep Stress Incr | YES             | WB       | 0.13 | Horiz(TL) | 0.00  | 17     | n/a | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |           |       |        |     |        |         |
| Weight: 166 lb FT = 10% |       |                 |                 |          |      |           |       |        |     |        |         |

#### LUMBER

|           |                                          |
|-----------|------------------------------------------|
| TOP CHORD | 2x4 SPF No.2                             |
| BOT CHORD | 2x4 SPF No.2                             |
| WEBS      | 2x3 SPF No.2 *Except* 16-17:2x4 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.                                  |

|      |                |                                   |
|------|----------------|-----------------------------------|
| WEBS | 1 Row at midpt | 12-21, 11-22, 10-23, 13-20, 14-19 |
|------|----------------|-----------------------------------|

|                     |                                                                                                                                                                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REACTIONS (lb/size) | 17=50/27-6-14, 18=165/27-6-14, 19=183/27-6-14, 20=187/27-6-14, 21=167/27-6-14, 22=187/27-6-14, 23=179/27-6-14, 24=180/27-6-14, 25=180/27-6-14, 26=180/27-6-14, 27=180/27-6-14, 28=181/27-6-14, 29=176/27-6-14, 30=197/27-6-14, 31=67/27-6-14 |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Max Horiz 31=323 (LC 5)

Max Uplift 17=34 (LC 8), 18=42 (LC 9), 19=61 (LC 9), 20=52 (LC 9), 21=25 (LC 7), 22=51 (LC 8), 23=57 (LC 8), 24=54 (LC 8), 25=54 (LC 8), 26=54 (LC 8), 27=53 (LC 8), 28=60 (LC 8), 29=32 (LC 8), 30=143 (LC 8), 31=32 (LC 6)

Max Grav 17=69 (LC 16), 18=166 (LC 22), 19=183 (LC 22), 20=189 (LC 22), 21=190 (LC 15), 22=190 (LC 21), 23=179 (LC 21), 24=180 (LC 1), 25=180 (LC 21), 26=180 (LC 1), 27=180 (LC 1), 28=181 (LC 21), 29=176 (LC 1), 30=197 (LC 21), 31=195 (LC 5)

#### FORCES

|                                            |                                                                                                                                                                                                                            |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                                                                                            |
| TOP CHORD                                  | 1-31=147/35, 1-2=297/102, 2-3=249/95, 3-4=226/97, 4-5=208/100, 5-6=193/114, 6-7=178/127, 7-8=163/141, 8-10=149/154, 10-11=135/169, 11-12=118/179, 12-13=112/173, 13-14=113/148, 14-15=109/117, 15-16=129/106, 16-17=101/79 |
| BOT CHORD                                  | 30-31=95/72, 29-30=95/72, 28-29=95/72, 27-28=95/72, 26-27=95/72, 25-26=95/72, 24-25=95/72, 22-24=95/72, 21-22=95/72, 20-21=95/72, 19-20=95/72, 18-19=95/72, 17-18=95/72                                                    |
| WEBS                                       | 12-21=150/65, 11-22=150/75, 10-23=139/81, 8-24=140/78, 7-25=140/78, 6-26=140/78, 5-27=140/77, 4-28=141/81, 3-29=137/67, 2-30=151/123, 13-20=149/77, 14-19=142/79, 15-18=129/96                                             |

#### 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 31, 34 lb uplift at joint 17, 25 lb uplift at joint 21, 51 lb uplift at joint 22, 57 lb uplift at joint 23, 54 lb uplift at joint 24, 54 lb uplift at joint 25, 54 lb uplift at joint 26, 53 lb uplift at joint 27, 60 lb uplift at joint 28, 32 lb uplift at joint 29, 143 lb uplift at joint 30, 52 lb uplift at joint 20, 61 lb uplift at joint 19 and 42 lb uplift at joint 18.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.1.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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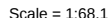
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Chesterfield, MO 63017

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ID:dwZTNCNxRfJm8tRCSiY7DzSTnz-RfC?PsB70Ha3NSaPanL8w3uITXbGKWrCDoi7J4zJC?f



| <b>Loading</b> | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in    | (loc) | l/defl | L/d | <b>PLATES</b>  | <b>GRIP</b> |
|----------------|-------|-----------------|-----------------|------------|------|-------------|-------|-------|--------|-----|----------------|-------------|
| TCLL (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.60 | Vert(LL)    | -0.17 | 11-12 | >999   | 360 | MT20           | 197/144     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.60 | Vert(CT)    | -0.31 | 11-12 | >999   | 240 |                |             |
| BCLL           | 0.0 * | Rep Stress Incr | YES             | WB         | 0.74 | Horz(CT)    | 0.07  | 8     | n/a    | n/a |                |             |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      | Wind(LL)    | 0.12  | 12-13 | >999   | 240 | Weight: 131 lb | FT = 10%    |

- 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 14 and 147 lb uplift at joint 8.
- 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.

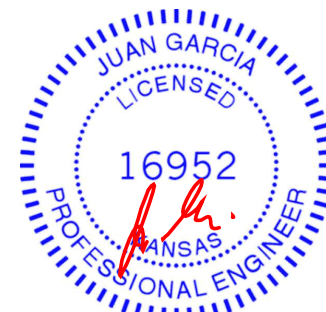
LOAD CASE(S) Standard

TOP CHORD 1-14=-127/25, 1-2=-288/37, 2-3=-2495/346,  
3-5=-1563/254, 5-6=-1535/401,  
6-7=-893/221, 7-8=-1167/190

BOT CHORD 13-14=-568/3160, 12-13=-582/3180,  
11-12=-403/2223, 10-11=0/78,  
5-11=-474/265, 9-10=-33/49, 8-9=-84/68

WEBS 2-14=-3025/402, 2-13=-168/86,  
2-12=-978/180, 3-12=0/424, 3-11=-982/248,  
9-11=-41/726, 6-11=-345/1199, 6-9=-500/145,  
7-9=-89/910

- 1) Unbalanced roof live loads have been considered for this design.



November 15, 2021

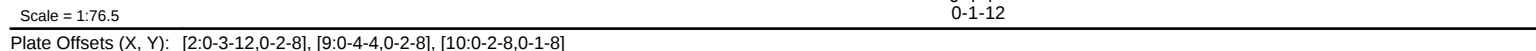


Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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



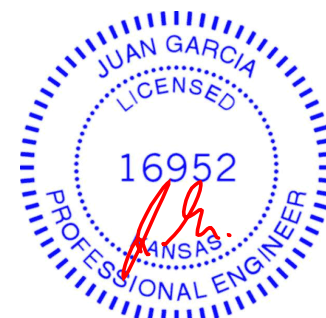
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:24 Page: 1  
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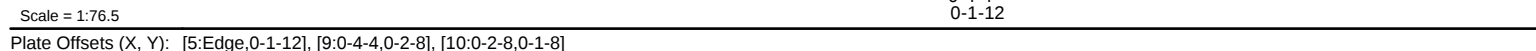
|                     |                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>       |                                                                                                                                    | <p>4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.</p> <p>5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00" tall by 2'-00"-00" wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.</p> <p>6) Refer to girder(s) for truss to truss connections.</p> <p>7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 12 and 142 lb uplift at joint 6.</p> <p>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.</p> <p>9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.</p> |
| TOP CHORD           | 2x4 SPF 2100F 1.8E *Except* 1-2:2x4 SPF No.2                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| BOT CHORD           | 2x4 SPF 2100F 1.8E                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| WEBS                | 2x3 SPF No.2 *Except* 9-3,7-4:2x4 SPF No.2                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>BRACING</b>      |                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| TOP CHORD           | Structural wood sheathing directly applied or 4-6-1 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| BOT CHORD           | Rigid ceiling directly applied or 10-0-0 oc bracing.                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| WEBS                | 1 Row at midpt      2-12, 3-9, 5-6, 2-10                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>REACTIONS</b>    | (lb/size)                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                     | 6=1242/ Mechanical, 12=1240/ Mechanical                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                     | Max Horiz      12=304 (LC 7)                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                     | Max Uplift      6=-142 (LC 8), 12=-183 (LC 8)                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>FORCES</b>       | Max Grav      6=1295 (LC 2), 12=1294 (LC 2)                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                     | (lb) - Maximum Compression/Maximum Tension                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| TOP CHORD           | 1-12=-133/52, 1-2=-101/14, 2-3=-2084/283, 3-4=-1012/198, 4-5=-960/227, 5-6=-1162/186                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| BOT CHORD           | 11-12=-558/3349, 10-11=-551/3360, 9-10=-274/1815, 7-8=0/145, 6-7=0/254                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| WEBS                | 8-9=-595/0, 2-12=-3425/462, 3-9=-1207/313, 7-9=0/780, 4-9=-26/418, 3-10=0/635, 2-11=0/201, 2-10=-1576/280, 6-9=-293/5, 5-9=-94/963 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>LOAD CASE(S)</b> |                                                                                                                                    | Standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDFL=6.0psf; BCDFL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior 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.



November 15.2021

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:24 Page: 1  
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|                                            |                                                                                                                               |                                                                                                                                                                                                                            |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>                              |                                                                                                                               | 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.                                                                                                             |
| TOP CHORD                                  | 2x4 SPF No.2 *Except* 4-5:2x4 SPF 2100F 1.8E                                                                                  | 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf. |
| BOT CHORD                                  | 2x4 SPF No.2 *Except* 9-8:2x3 SPF No.2                                                                                        | 6) Refer to girder(s) for truss to truss connections.                                                                                                                                                                      |
| WEBS                                       | 2x3 SPF No.2 *Except* 12-2,7-4,6-5:2x4 SPF No.2                                                                               | 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 12 and 7 lb uplift at joint 6.                                                                        |
| <b>BRACING</b>                             |                                                                                                                               | 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.                                                                  |
| TOP CHORD                                  | Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2. | 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.                                                                                            |
| BOT CHORD                                  | Rigid ceiling directly applied or 2-2-0 oc bracing.                                                                           |                                                                                                                                                                                                                            |
| WEBS                                       | 1 Row at midpt 2-12, 3-9, 5-6                                                                                                 |                                                                                                                                                                                                                            |
| <b>REACTIONS</b>                           | (lb/size) 6=1238/ Mechanical, 12=1237/ Mechanical                                                                             |                                                                                                                                                                                                                            |
|                                            | Max Horiz 12=244 (LC 7)                                                                                                       |                                                                                                                                                                                                                            |
|                                            | Max Uplift 6=-7 (LC 8), 12=-34 (LC 8)                                                                                         |                                                                                                                                                                                                                            |
|                                            | Max Grav 6=1289 (LC 2), 12=1290 (LC 2)                                                                                        |                                                                                                                                                                                                                            |
| <b>FORCES</b>                              |                                                                                                                               | <b>LOAD CASE(S)</b> Standard                                                                                                                                                                                               |
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                               |                                                                                                                                                                                                                            |
| TOP CHORD                                  | 1-12=-207/46, 1-2=-75/17, 2-3=-2033/63, 3-4=-1029/80, 4-5=-994/100, 5-6=-1162/48                                              |                                                                                                                                                                                                                            |
| BOT CHORD                                  | 11-12=-79/2668, 10-11=-75/2676, 9-10=-39/1797, 8-9=-554/0, 7-8=0/25, 6-7=0/172                                                |                                                                                                                                                                                                                            |
| WEBS                                       | 2-12=-2796/52, 3-9=-1140/122, 7-9=0/751, 4-9=0/420, 3-10=0/655, 2-11=0/221, 2-10=-982/39, 6-9=-186/12, 5-9=0/975              |                                                                                                                                                                                                                            |

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDFL=6.0psf; BCDFL=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
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 12 and 7 lb uplift at joint 6.
- 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.

LOAD CASE(S) Standard



November 15.2021



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

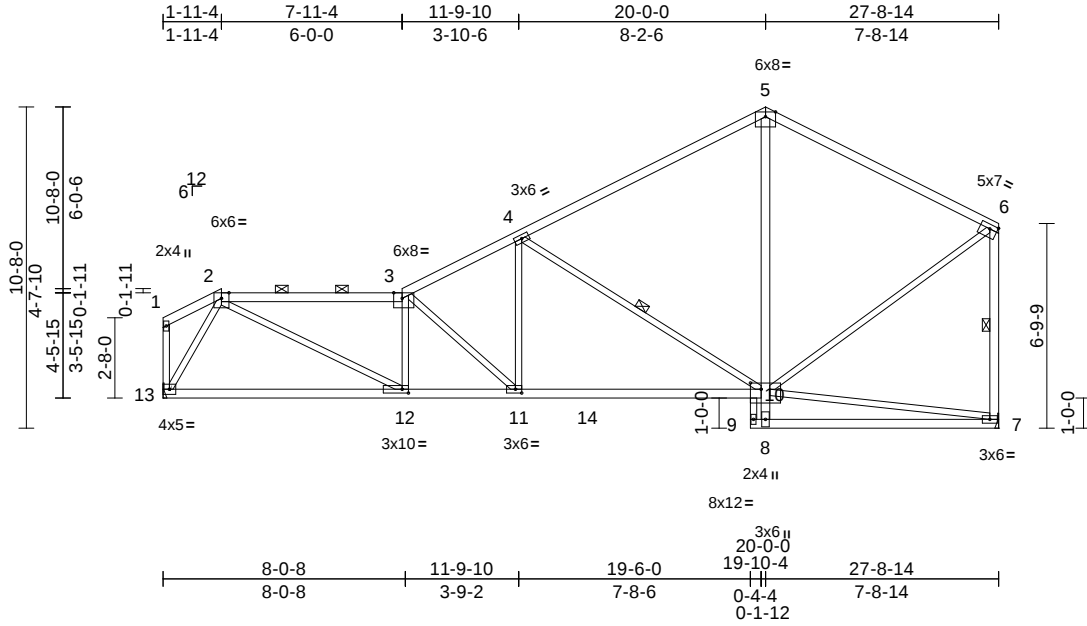
|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | B5    | Roof Special | 1   | 1   | Job Reference (optional) | I48788142 |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:76.5

Plate Offsets (X, Y): [3:0-3-6,Edge], [6:Edge,0-1-12], [10:0-4-4,0-2-8], [11:0-2-8,0-1-8], [12:0-2-8,0-1-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP                    |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|-------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.88 | Vert(LL) | -0.19 | 10-11  | >999 | 360    | MT20                    |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.80 | Vert(CT) | -0.37 | 10-11  | >898 | 240    | 197/144                 |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.97 | Horz(CT) | 0.06  | 7      | n/a  | n/a    |                         |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.06  | 11-12  | >999 | 240    | Weight: 128 lb FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2 \*Except\* 5-6:2x4 SPF 2100F 1.8E  
 BOT CHORD 2x4 SPF No.2 \*Except\* 10-9:2x3 SPF No.2  
 WEBS 2x3 SPF No.2 \*Except\* 8-5,7-6:2x4 SPF No.2

#### BRACING

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

#### REACTIONS

(lb/size) 7=1238/ Mechanical, 13=1237/ Mechanical  
 Max Horiz 13=244 (LC 7)  
 Max Uplift 7=-6 (LC 8), 13=-35 (LC 8)  
 Max Grav 7=1289 (LC 2), 13=1290 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-77/27, 2-3=-2303/45, 3-4=-1989/66, 4-5=-1029/78, 5-6=-995/100, 6-7=-1163/47, 1-13=-51/11  
 BOT CHORD 12-13=-161/715, 11-12=-47/2281, 10-11=-37/1767, 9-10=-556/0, 8-9=0/23, 7-8=0/164  
 WEBS 2-12=0/1845, 3-12=-691/73, 3-11=-698/13, 4-11=0/691, 4-10=-1121/121, 8-10=0/751, 5-10=0/418, 2-13=-1316/99, 7-10=-179/14, 6-10=0/970

#### NOTES

1) 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.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 7 and 35 lb uplift at joint 13.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



November 15,2021

**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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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



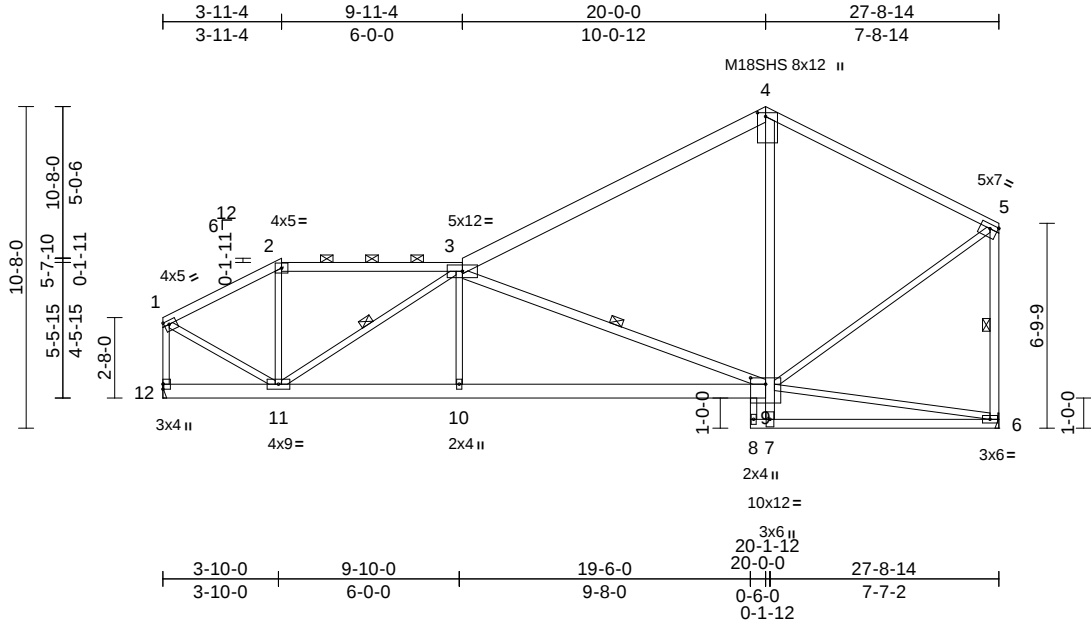
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | B6    | Roof Special | 1   | 1   | Job Reference (optional) | I48788143 |

Wheeler Lumber, Waverly, KS - 66871,

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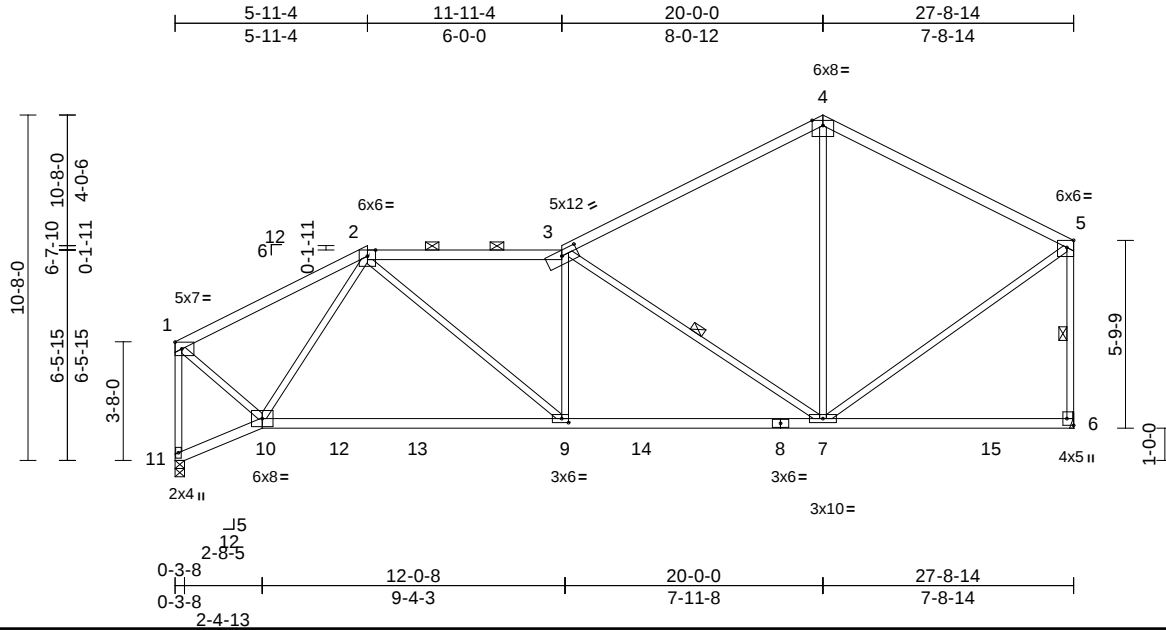
|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | B7    | Roof Special | 1   | 1   | Job Reference (optional) | I48788144 |

Wheeler Lumber, Waverly, KS - 66671,

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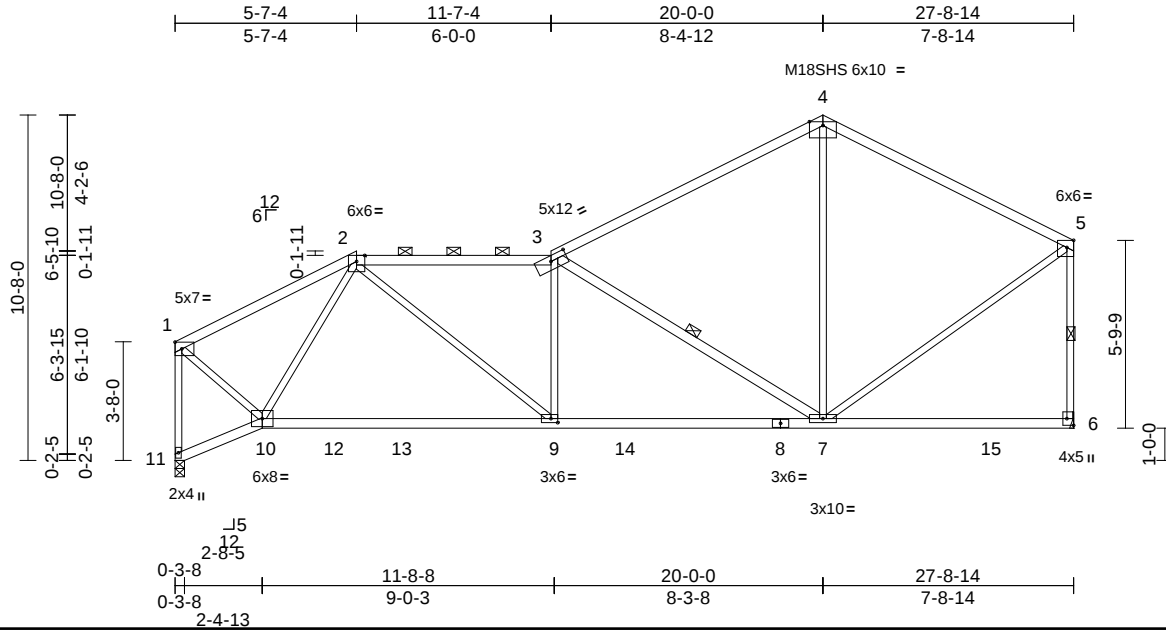
|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | B8    | Roof Special | 1   | 1   | Job Reference (optional) | I48788145 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:27

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Scale = 1:71.1

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP                    |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|-------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.72 | Vert(LL) | -0.25 | 9-10   | >999 | 360    | MT20 197/144            |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.90 | Vert(CT) | -0.45 | 9-10   | >727 | 240    | M18SHS 197/144          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.56 | Horz(CT) | 0.06  | 6      | n/a  | n/a    |                         |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.04  | 9      | >999 | 240    | Weight: 117 lb FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2 \*Except\* 3-4,4-5:2x4 SPF 2100F 1.8E  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x3 SPF No.2 \*Except\* 3-7:2x4 SPF No.2

#### BRACING

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

WEBS 1 Row at midpt 5-6, 3-7

REACTIONS (lb/size) 6=1239/ Mechanical, 11=1239/0-3-8

Max Horiz 11=239 (LC 5)  
 Max Uplift 6=-7 (LC 8), 11=-34 (LC 8)  
 Max Grav 6=1330 (LC 2), 11=1317 (LC 2)

#### FORCES

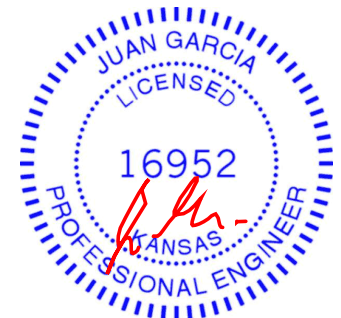
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-1002/42, 2-3=-1831/74, 3-4=-1024/72, 4-5=-985/97, 5-6=-1187/48, 1-11=-1320/48  
 BOT CHORD 10-11=-232/164, 9-10=-125/1153, 7-9=-40/1826, 6-7=-57/48  
 WEBS 3-9=-339/92, 4-7=0/399, 5-7=0/990, 1-10=0/1124, 3-7=-1183/104, 2-10=-641/69, 2-9=0/920

#### 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); 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 11 and 7 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



November 15,2021

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

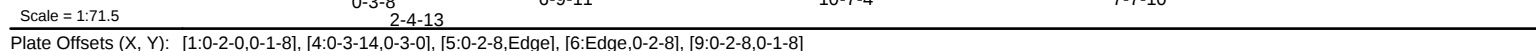
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

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

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

**MiTek**  
 16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:29 Page: 1  
ID:dwZTNcNXrfJm8tRCSiY7DzSTnz-RfC?PsB70Ha3NSaPanL8w3uITXbGKWrCDoi7J4zJC?f



|                  |                                                                                                                                                           |                                                                                                                                                                                                                            |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>    |                                                                                                                                                           | 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.                                                                                                             |
| TOP CHORD        | 2x4 SPF No.2 *Except* 3-4:2x6 SPF No.2                                                                                                                    | 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf. |
| BOT CHORD        | 2x4 SPF No.2 *Except* 8-6:2x4 SPF 2100F 1.8E                                                                                                              | 6) Refer to girder(s) for truss to truss connections.                                                                                                                                                                      |
| WEBS             | 2x3 SPF No.2 *Except* 3-7:2x4 SPF No.2                                                                                                                    | 7) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.                                                          |
| <b>BRACING</b>   |                                                                                                                                                           | 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 11 and 7 lb uplift at joint 6.                                                                        |
| TOP CHORD        | Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-7-1 max.): 2-3.                                                 | 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.                                                                  |
| BOT CHORD        | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 7-9.                                                                       | 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.                                                                                           |
| WEBS             | 1 Row at midpt 5-6, 3-7                                                                                                                                   |                                                                                                                                                                                                                            |
| <b>REACTIONS</b> | (lb/size) 6=1239/ Mechanical, 11=1239/0-3-8<br>Max Horiz 11=238 (LC 5)<br>Max Uplift 6=-7 (LC 8), 11=-34 (LC 8)<br>Max Grav 6=1308 (LC 2), 11=1275 (LC 2) |                                                                                                                                                                                                                            |
| <b>FORCES</b>    | (lb) - Maximum Compression/Maximum Tension                                                                                                                | <b>LOAD CASE(S)</b> Standard                                                                                                                                                                                               |
| TOP CHORD        | 1-2=-952/43, 2-3=-2052/65, 3-4=-1044/57, 4-5=-997/91, 5-6=-1185/41, 1-11=-1241/57                                                                         |                                                                                                                                                                                                                            |
| BOT CHORD        | 10-11=-239/157, 9-10=-155/1006, 7-9=-64/2062, 6-7=-60/48                                                                                                  |                                                                                                                                                                                                                            |
| WEBS             | 2-10=-667/56, 2-9=0/1326, 3-9=-533/113, 4-7=0/348, 5-7=0/1000, 1-10=-27/1119, 3-7=-1343/125                                                               |                                                                                                                                                                                                                            |

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDFL=6.0psf; BCDFL=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
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 11 and 7 lb uplift at joint 6.
- 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.

LOAD CASE(S) Standard



November 15.2021



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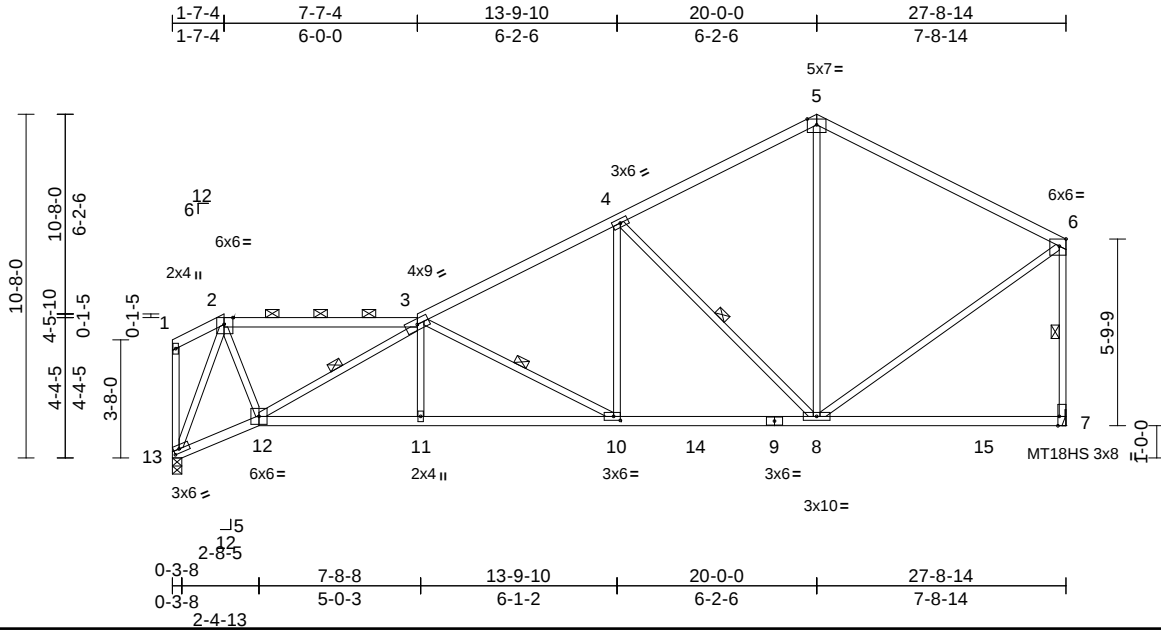
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | B10   | Roof Special | 1   | 1   | Job Reference (optional) | I48788147 |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:71.5

Plate Offsets (X, Y): [2:0-3-5,Edge], [6:0-2-8,Edge], [7:0-3-8,Edge], [10:0-2-8,0-1-8], [13:0-2-1,0-1-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP                    |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|-------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.77 | Vert(LL) | -0.14 | 10-11  | >999 | 360    | MT20 197/144            |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.71 | Vert(CT) | -0.26 | 7-8    | >999 | 240    | MT18HS 197/144          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.74 | Horz(CT) | 0.10  | 7      | n/a  | n/a    |                         |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.06  | 10-11  | >999 | 240    | Weight: 119 lb FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2 \*Except\* 5-6:2x4 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-10-11 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-12 max.): 2-3.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-10, 4-8, 6-7, 3-12

**REACTIONS** (lb/size) 7=1239/ Mechanical, 13=1239/0-3-8  
Max Horiz 13=239 (LC 5)  
Max Uplift 7=-7 (LC 8), 13=-34 (LC 8)  
Max Grav 7=1328 (LC 2), 13=1292 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-63/47, 2-3=-966/34, 3-4=-1743/69, 4-5=-987/86, 5-6=-977/96, 6-7=-1183/49, 1-13=-52/26

BOT CHORD 12-13=-214/675, 11-12=-86/2334, 10-11=-84/2341, 8-10=-34/1521, 7-8=-57/49

WEBS 2-12=0/1288, 3-11=0/235, 3-10=-944/61, 4-10=0/658, 4-8=-981/116, 5-8=0/477, 6-8=0/986, 2-13=-1573/83, 3-12=-1614/34

#### 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); 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Bearing at joint(s) 13 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 7 lb uplift at joint 7 and 34 lb uplift at joint 13.
- 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.

**LOAD CASE(S)** Standard



November 15, 2021

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

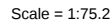
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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Page: 1

16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | B12   | Roof Special | 1   | 1   | Job Reference (optional) | I48788149 |

Wheeler Lumber, Waverly, KS - 66871,

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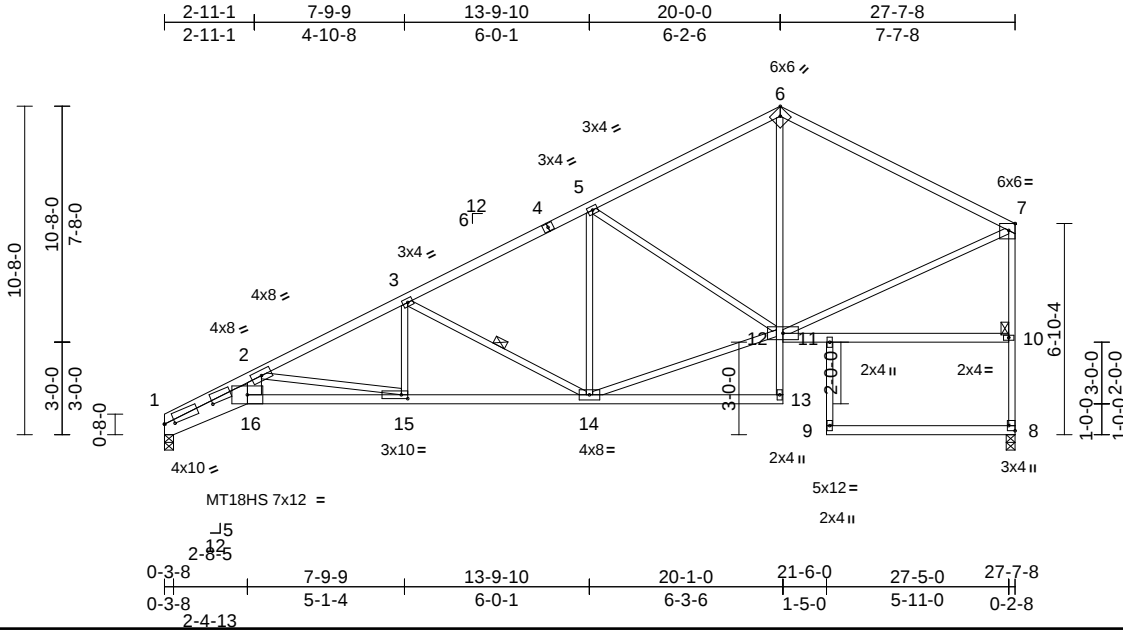


Plate Offsets (X, Y): [1:0-3-15,0-1-4], [1:1-8-6,0-0-2], [6:0-2-12,Edge], [7:0-2-8,Edge], [8:Edge,0-2-8], [15:0-2-8,0-1-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.79 | Vert(LL) | -0.22 | 15-16 | >999   | 360 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.66 | Vert(CT) | -0.41 | 15-16 | >805   | 240 | MT18HS         | 197/144  |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.96 | Horz(CT) | 0.22  | 8     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.19  | 15-16 | >999   | 240 | Weight: 130 lb | FT = 10% |

|                                                          |                                                                                                                                                  |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>                                            |                                                                                                                                                  |
| TOP CHORD                                                | 2x4 SPF No.2 *Except* 6-7:2x4 SPF 2100F 1.8E                                                                                                     |
| BOT CHORD                                                | 2x3 SPF No.2 *Except* 1-16:2x8 SP DSS, 16-13:2x4 SPF 2100F 1.8E, 12-10,9-8:2x4 SPF No.2                                                          |
| WEBS                                                     | 2x3 SPF No.2 *Except* 16-2:2x6 SPF No.2                                                                                                          |
| <b>BRACING</b>                                           |                                                                                                                                                  |
| TOP CHORD                                                | Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.                                                            |
| BOT CHORD                                                | Rigid ceiling directly applied or 6-0-0 oc bracing.                                                                                              |
| WEBS                                                     | 1 Row at midpt 3-14, 7-8                                                                                                                         |
| <b>REACTIONS</b> (lb/size)                               |                                                                                                                                                  |
|                                                          | 1=1232/0-3-8, 8=1232/0-3-8                                                                                                                       |
|                                                          | Max Horiz 1=321 (LC 7)                                                                                                                           |
|                                                          | Max Uplift 1=-176 (LC 8), 8=-152 (LC 8)                                                                                                          |
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                  |
| TOP CHORD                                                | 1-2=-5119/986, 2-3=-2469/399, 3-5=-1649/280, 5-6=-1150/214, 6-7=-1167/230, 8-10=-1171/183, 7-10=-1153/186                                        |
| BOT CHORD                                                | 1-16=-1065/4588, 15-16=-898/3783, 14-15=-433/2179, 13-14=-10/15, 12-13=0/106, 6-12=-56/512, 11-12=-142/104, 10-11=-141/84, 9-11=0/116, 8-9=-4/23 |
| WEBS                                                     | 2-16=-337/1733, 2-15=-1625/471, 3-15=-9/398, 3-14=-896/256, 5-14=0/244, 12-14=-209/1447, 5-12=-597/232, 7-12=-124/1003                           |

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 1 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 176 lb uplift at joint 1 and 152 lb uplift at joint 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.

**LOAD CASE(S)** Standard



November 15, 2021

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**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



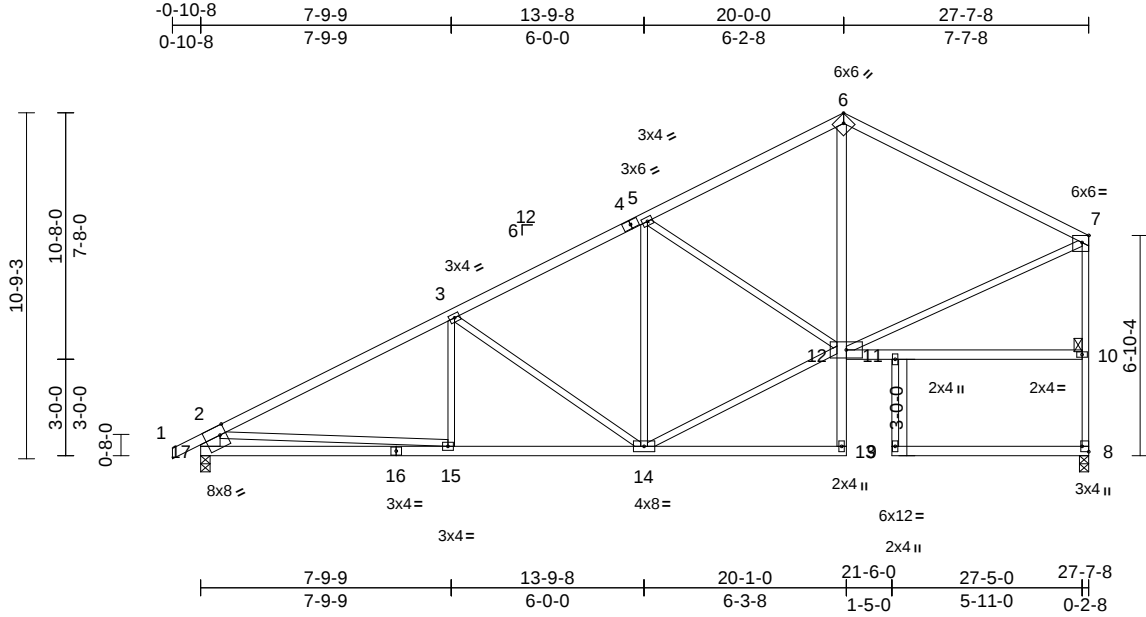
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | C1    | Roof Special | 1   | 1   | Job Reference (optional) | I48788150 |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:71.7

Plate Offsets (X, Y): [6:0-2-11,Edge], [7:0-2-8,Edge], [8:Edge,0-2-8], [17:0-2-4,Edge]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.71 | Vert(LL) | -0.09 | 15-17 | >999   | 360 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.49 | Vert(CT) | -0.19 | 15-17 | >999   | 240 |                |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.73 | Horz(CT) | -0.10 | 8     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.05  | 14-15 | >999   | 240 | Weight: 133 lb | FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2 \*Except\* 6-7:2x4 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF No.2 \*Except\* 11-9:2x3 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\* 17-2:2x8 SP DSS

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-5-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 9-0-13 oc bracing.  
WEBS 1 Row at midpt 7-8

**REACTIONS** (lb/size) 8=1223/0-3-8, 17=1309/0-3-8  
Max Horiz 17=332 (LC 5)  
Max Uplift 8=151 (LC 8), 17=201 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/37, 2-3=-1946/273, 3-5=-1420/251, 5-6=-1143/213, 6-7=-1162/229, 2-17=-1234/245, 8-10=-1162/183, 7-10=-1146/184  
BOT CHORD 15-17=-414/786, 14-15=-331/1629, 13-14=-8/14, 12-13=0/110, 6-12=-53/506, 11-12=-142/104, 10-11=-141/84, 9-11=0/117, 8-9=-5/22  
WEBS 3-15=0/237, 3-14=-548/189, 5-14=-130/108, 12-14=-193/1302, 5-12=-367/195, 7-12=-123/998, 2-15=0/844

#### 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 201 lb uplift at joint 17 and 151 lb uplift at joint 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.

**LOAD CASE(S)** Standard



November 15, 2021

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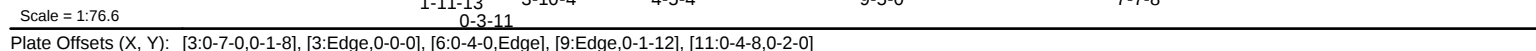
**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:31 Page: 1  
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|                  |                                                                                                                                                       |                                                                                                                                                                                                                            |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>    |                                                                                                                                                       | 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.                                                                                                             |
| TOP CHORD        | 2x4 SPF No.2 *Except* 1-6:2x6 SP DSS                                                                                                                  |                                                                                                                                                                                                                            |
| BOT CHORD        | 2x4 SPF No.2 *Except* 3-13:2x4 SPF 2100F 1.8E, 5-12:2x3 SPF No.2                                                                                      | 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf. |
| WEBS             | 2x3 SPF No.2 *Except* 11-8,10-9:2x4 SPF No.2                                                                                                          | 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 192 lb uplift at joint 2 and 152 lb uplift at joint 10.                                                                     |
| WEDGE            | Left: 2x4 SP No.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.                                                                  |
| <b>BRACING</b>   |                                                                                                                                                       | <b>LOAD CASE(S)</b> Standard                                                                                                                                                                                               |
| TOP CHORD        | Structural wood sheathing directly applied, except end verticals.                                                                                     |                                                                                                                                                                                                                            |
| BOT CHORD        | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-15.                                                                  |                                                                                                                                                                                                                            |
| WEBS             | 1 Row at midpt 7-11, 9-10                                                                                                                             |                                                                                                                                                                                                                            |
| <b>REACTIONS</b> | (lb/size) 2=1314/0-3-8, 10=1229/0-3-8<br>Max Horiz 2=327 (LC 5)<br>Max Uplift 2=-192 (LC 8), 10=-152 (LC 8)<br>Max Grav 2=1346 (LC 2), 10=1310 (LC 2) |                                                                                                                                                                                                                            |
| <b>FORCES</b>    | (lb) - Maximum Compression/Maximum Tension                                                                                                            |                                                                                                                                                                                                                            |
| TOP CHORD        | 1-2=0/12, 2-3=-865/33, 3-4=-2944/461, 4-5=-2076/341, 5-7=-2016/437, 7-8=-853/209, 8-9=-891/219, 9-10=-1169/189                                        |                                                                                                                                                                                                                            |
| BOT CHORD        | 2-15=-39/0, 3-14=-558/2797, 13-14=-558/2797, 12-13=0/165, 5-13=-233/152, 11-12=0/188, 10-11=-88/67                                                    |                                                                                                                                                                                                                            |
| WEBS             | 3-15=0/78, 4-13=-1119/283, 11-13=-177/970, 7-13=-270/1162, 7-11=-848/306, 8-11=-72/428, 9-11=-88/923, 4-14=0/235                                      |                                                                                                                                                                                                                            |

- 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; BC DL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed: Lumber DOL=1.60 plate grip DOL=1.60



November 15, 2021

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

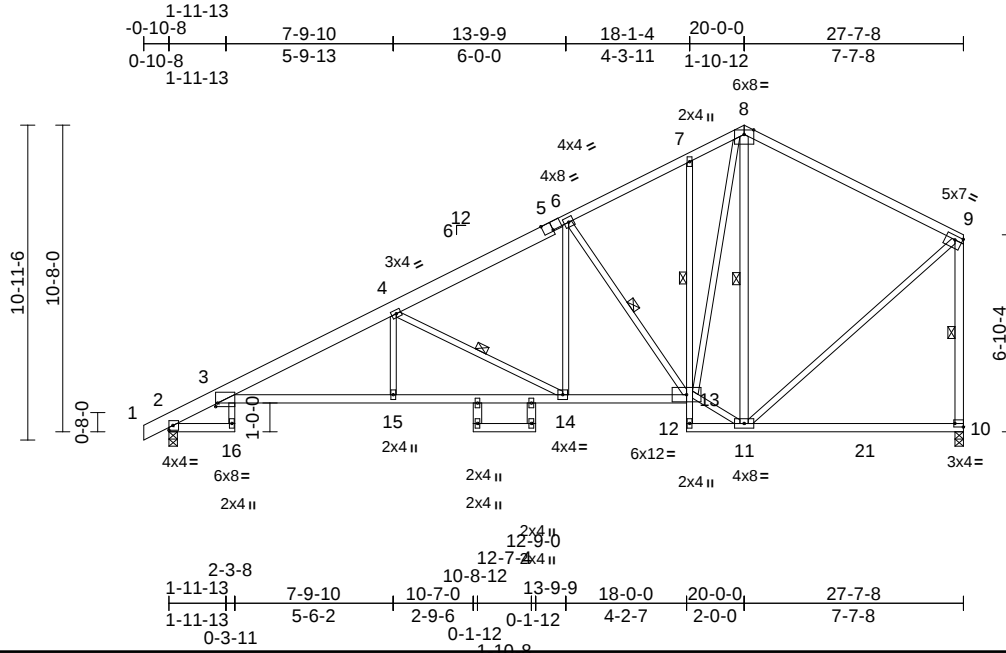
|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | C3    | Roof Special | 1   | 1   | Job Reference (optional) | I48788152 |

Wheeler Lumber, Waverly, KS - 66871,

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|                |                                                                                          |
|----------------|------------------------------------------------------------------------------------------|
| Scale = 1:80.1 | Plate Offsets (X, Y): [3:0-0-13,0-1-8], [5:0-4-0,Edge], [9:Edge,0-1-12], [10:Edge,0-1-8] |
|----------------|------------------------------------------------------------------------------------------|

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.93 | Vert(LL) | -0.27 | 3-15  | >999   | 360 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.57 | Vert(CT) | -0.48 | 3-15  | >681   | 240 |                |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.62 | Horz(CT) | 0.31  | 10    | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.22  | 16    | >999   | 240 | Weight: 154 lb | FT = 10% |

|                                                          |                                                                                                                                |  |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--|
| <b>LUMBER</b>                                            |                                                                                                                                |  |
| TOP CHORD                                                | 2x4 SPF No.2 *Except* 1-5:2x6 SP DSS                                                                                           |  |
| BOT CHORD                                                | 2x4 SPF No.2 *Except* 3-13:2x4 SPF 2100F 1.8E, 7-12:2x3 SPF No.2                                                               |  |
| WEBS                                                     | 2x3 SPF No.2 *Except* 11-8,10-9,17-19,18-20:2x4 SPF No.2                                                                       |  |
| <b>BRACING</b>                                           |                                                                                                                                |  |
| TOP CHORD                                                | Structural wood sheathing directly applied, except end verticals.                                                              |  |
| BOT CHORD                                                | Rigid ceiling directly applied or 6-0-0 oc bracing. Except:                                                                    |  |
| 1 Row at midpt                                           | 7-13                                                                                                                           |  |
| WEBS                                                     | 1 Row at midpt 4-14, 6-13, 8-11, 9-10                                                                                          |  |
| <b>REACTIONS</b> (lb/size)                               |                                                                                                                                |  |
|                                                          | 2=1314/0-3-8, 10=1229/0-3-8                                                                                                    |  |
|                                                          | Max Horiz 2=327 (LC 5)                                                                                                         |  |
|                                                          | Max Uplift 2=-192 (LC 8), 10=-152 (LC 8)                                                                                       |  |
|                                                          | Max Grav 2=1346 (LC 2), 10=1310 (LC 2)                                                                                         |  |
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension |                                                                                                                                |  |
| TOP CHORD                                                | 1-2=0/12, 2-3=-865/33, 3-4=-2641/402, 4-6=-1700/285, 6-7=-1105/240, 7-8=-1024/295, 8-9=-882/224, 9-10=-1164/196                |  |
| BOT CHORD                                                | 2-16=-39/0, 3-15=-478/2467, 14-15=-477/2466, 13-14=-198/1445, 12-13=-101/0, 7-13=-193/104, 11-12=-22/35, 10-11=-86/69          |  |
| WEBS                                                     | 3-16=0/78, 4-15=0/285, 4-14=-1155/316, 6-14=-80/721, 6-13=-839/234, 11-13=-63/811, 8-13=-292/1170, 8-11=-750/158, 9-11=-94/914 |  |

**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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 192 lb uplift at joint 2 and 152 lb uplift at joint 10.
- 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.

**LOAD CASE(S)** Standard



November 15,2021

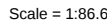
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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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**MiTek**  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

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1-2-4  
0-1-12

**LUMBER**

- 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; MFRCS (envelope) exterior zone:  
cantilever left and right exposed ; end vertical left and  
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are MT20 plates unless otherwise indicated.
- 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  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 192 lb uplift at  
joint 2 and 152 lb uplift at joint 9.
- 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.

## LOAD CASE(S) Standard

## NOTES

- 1) Unbalanced roof live loads have been considered for this design.



November 15, 2021



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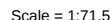
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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

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| <b>Loading</b> | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in    | (loc) | l/defl | L/d | <b>PLATES</b>  | <b>GRIP</b> |
|----------------|-------|-----------------|-----------------|------------|------|-------------|-------|-------|--------|-----|----------------|-------------|
| TCLL (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.75 | Vert(LL)    | -0.15 | 12-13 | >999   | 360 | MT20           | 197/144     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.77 | Vert(CT)    | -0.28 | 12-13 | >999   | 240 | MT20HS         | 148/108     |
| BCLL           | 0.0 * | Rep Stress Incr | YES             | WB         | 0.86 | Horz(CT)    | 0.07  | 8     | n/a    | n/a |                |             |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      | Wind(LL)    | 0.07  | 13    | >999   | 240 | Weight: 126 lb | FT = 10%    |

- 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) exterior zone:  
cantilever left and right exposed ; end vertical left and  
right exposed; Lumber DOL=1.60 plate grp DOL=1.60
- 3) All plates are MT20 plates unless otherwise indicated.
- 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'-06-00 tall by 2'-00-00 wide will fit between the bottom  
chord and any other members, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 200 lb uplift at  
joint 16 and 152 lb uplift at joint 8.
- 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.

LOAD CASE(S) Standard

## NOTES

- 1) Unbalanced roof live loads have been considered for this design.



November 15.2021



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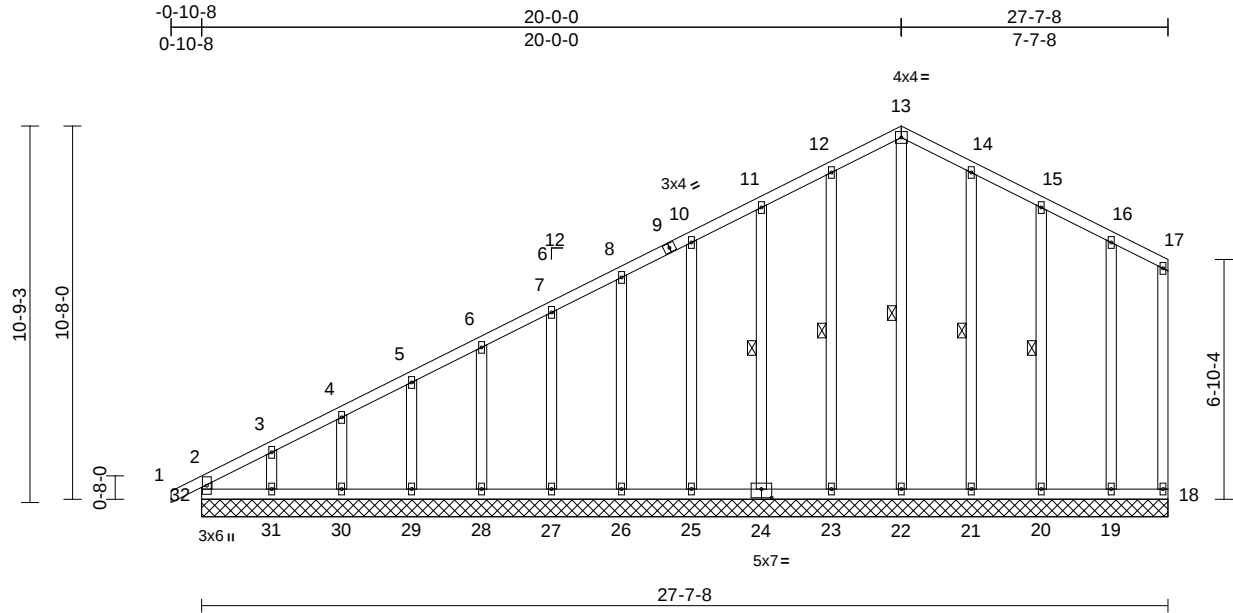
|      |       |                        |     |     |                          |           |
|------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type             | Qty | Ply | Lot 74 H3                | I48788155 |
| H374 | C6    | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:65.9

Plate Offsets (X, Y): [24:0-3-8,0-3-0]

| Loading                 | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.21 | Vert(LL) | n/a   | -      | n/a | 999    | MT20    |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.08 | Vert(CT) | n/a   | -      | n/a | 999    | 197/144 |
| BCLL                    | 0.0*  | Rep Stress Incr | YES             | WB       | 0.13 | Horz(CT) | 0.00  | 18     | n/a | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |     |        |         |
| Weight: 167 lb FT = 10% |       |                 |                 |          |      |          |       |        |     |        |         |

|               |              |
|---------------|--------------|
| <b>LUMBER</b> |              |
| TOP CHORD     | 2x4 SPF No.2 |
| BOT CHORD     | 2x4 SPF No.2 |
| WEBS          | 2x4 SPF No.2 |
| OTHERS        | 2x4 SPF No.2 |

|                |                                                                                       |
|----------------|---------------------------------------------------------------------------------------|
| <b>BRACING</b> |                                                                                       |
| TOP CHORD      | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD      | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS           | 1 Row at midpt 13-22, 12-23, 11-24, 14-21, 15-20                                      |

|                            |                                                                                                                                                                                                                                           |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REACTIONS</b> (lb/size) | 18=52/27-7-8, 19=168/27-7-8, 20=182/27-7-8, 21=187/27-7-8, 22=167/27-7-8, 23=187/27-7-8, 24=179/27-7-8, 25=180/27-7-8, 26=180/27-7-8, 27=180/27-7-8, 28=180/27-7-8, 29=179/27-7-8, 30=184/27-7-8, 31=164/27-7-8, 32=161/27-7-8            |
| Max Horiz                  | 32=332 (LC 5)                                                                                                                                                                                                                             |
| Max Uplift                 | 18=34 (LC 8), 19=44 (LC 9), 20=60 (LC 9), 21=52 (LC 9), 22=25 (LC 7), 23=51 (LC 8), 24=57 (LC 8), 25=54 (LC 8), 26=54 (LC 8), 27=54 (LC 8), 28=53 (LC 8), 29=59 (LC 8), 30=34 (LC 8), 31=140 (LC 8), 32=46 (LC 4)                         |
| Max Grav                   | 18=72 (LC 16), 19=168 (LC 22), 20=183 (LC 22), 21=189 (LC 22), 22=190 (LC 15), 23=190 (LC 21), 24=179 (LC 21), 25=180 (LC 1), 26=180 (LC 21), 27=180 (LC 1), 28=180 (LC 1), 29=179 (LC 21), 30=184 (LC 1), 31=166 (LC 15), 32=240 (LC 16) |

|               |                                                                                                                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FORCES</b> | (lb) - Maximum Compression/Maximum Tension                                                                                                                                                                                                            |
| TOP CHORD     | 2-32=202/50, 1-2=0/32, 2-3=-299/102, 3-4=-248/95, 4-5=-226/97, 5-6=-207/101, 6-7=-193/114, 7-8=-178/128, 8-10=-163/141, 10-11=-148/155, 11-12=-134/169, 12-13=-117/179, 13-14=-111/173, 14-15=-113/148, 15-16=-108/117, 16-17=-128/105, 17-18=-100/78 |
| BOT CHORD     | 31-32=-95/72, 30-31=-95/72, 29-30=-95/72, 28-29=-95/72, 27-28=-95/72, 26-27=-95/72, 25-26=-95/72, 23-25=-95/72, 22-23=-95/72, 21-22=-95/72, 20-21=-95/72, 19-20=-95/72, 18-19=-95/72                                                                  |
| WEBS          | 13-22=-150/64, 12-23=-150/75, 11-24=-139/81, 10-25=-140/77, 8-26=-140/78, 7-27=-140/78, 6-28=-140/77, 5-29=-139/81, 4-30=-143/67, 3-31=-126/126, 14-21=-149/77, 15-20=-142/79, 16-19=-131/96                                                          |

#### 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 32, 34 lb uplift at joint 18, 25 lb uplift at joint 22, 51 lb uplift at joint 23, 57 lb uplift at joint 24, 54 lb uplift at joint 25, 54 lb uplift at joint 26, 54 lb uplift at joint 27, 53 lb uplift at joint 28, 59 lb uplift at joint 29, 34 lb uplift at joint 30, 140 lb uplift at joint 31, 52 lb uplift at joint 21, 60 lb uplift at joint 20 and 44 lb uplift at joint 19.
- This truss is designed in accordance with the 2018 International Residential Code sections R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984, R985, R986, R987, R988, R989, R990, R991, R992, R993, R994, R995, R996, R997, R998, R999, R1000

LOAD CASE(S) Standard



November 15, 2021

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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



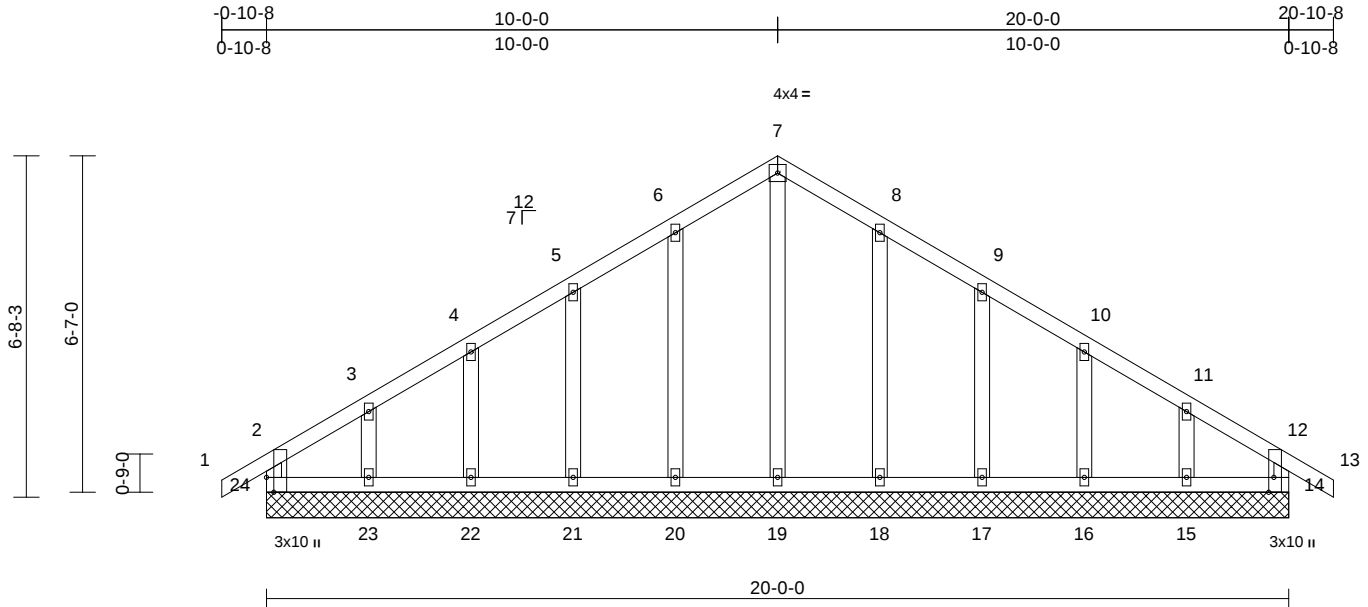
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |                        |     |     |                          |           |
|------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type             | Qty | Ply | Lot 74 H3                | I48788156 |
| H374 | D1    | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:45.1

Plate Offsets (X, Y): [14:0-3-8,Edge], [24:0-3-8,Edge]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.07 | Vert(LL) | n/a   | -      | n/a | 999           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.04 | Vert(CT) | n/a   | -      | n/a | 999           |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.10 | Horz(CT) | 0.00  | 14     | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |     |               |          |
|             |       |                 |                 |          |      |          |       |        |     | Weight: 88 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 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |

|                     |                                                                                                                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REACTIONS (lb/size) | 14=162/20-0-0, 15=164/20-0-0, 16=184/20-0-0, 17=177/20-0-0, 18=188/20-0-0, 19=165/20-0-0, 20=188/20-0-0, 21=177/20-0-0, 22=184/20-0-0, 23=164/20-0-0, 24=162/20-0-0                     |
|                     | Max Horiz 24=186 (LC 7)                                                                                                                                                                 |
| Max Uplift          | 14=-22 (LC 5), 15=-91 (LC 9), 16=-54 (LC 9), 17=-65 (LC 9), 18=-61 (LC 9), 20=-61 (LC 8), 21=-65 (LC 8), 22=-52 (LC 8), 23=-99 (LC 8), 24=-55 (LC 4)                                    |
|                     | Max Grav 14=162 (LC 22), 15=192 (LC 16), 16=184 (LC 22), 17=183 (LC 16), 18=193 (LC 16), 19=192 (LC 18), 20=194 (LC 15), 21=184 (LC 15), 22=184 (LC 21), 23=205 (LC 15), 24=178 (LC 16) |

#### FORCES (lb) - Maximum Compression/Maximum Tension

|           |                                                                                                                                                                                       |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | 2-24=-149/51, 1-2=0/36, 2-3=-123/116, 3-4=-96/93, 4-5=-85/113, 5-6=-72/146, 6-7=-62/174, 7-8=-52/165, 8-9=-40/124, 9-10=-52/91, 10-11=-62/61, 11-12=-79/69, 12-13=0/36, 12-14=-144/27 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|           |                                                                                                                                            |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------|
| BOT CHORD | 23-24=-74/90, 22-23=-74/90, 21-22=-74/90, 20-21=-74/90, 19-20=-74/90, 18-19=-74/90, 17-18=-74/90, 16-17=-74/90, 15-16=-74/90, 14-15=-74/90 |
| WEBS      | 7-19=-152/0, 6-20=-154/86, 5-21=-143/88, 4-22=-144/81, 3-23=-151/105, 8-18=-153/85, 9-17=-143/88, 10-16=-145/82, 11-15=-144/100            |

#### 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 24, 22 lb uplift at joint 14, 61 lb uplift at joint 20, 65 lb uplift at joint 21, 52 lb uplift at joint 22, 99 lb uplift at joint 23, 61 lb uplift at joint 18, 65 lb uplift at joint 17, 54 lb uplift at joint 16 and 91 lb uplift at joint 15.

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.

LOAD CASE(S) Standard



November 15, 2021

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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



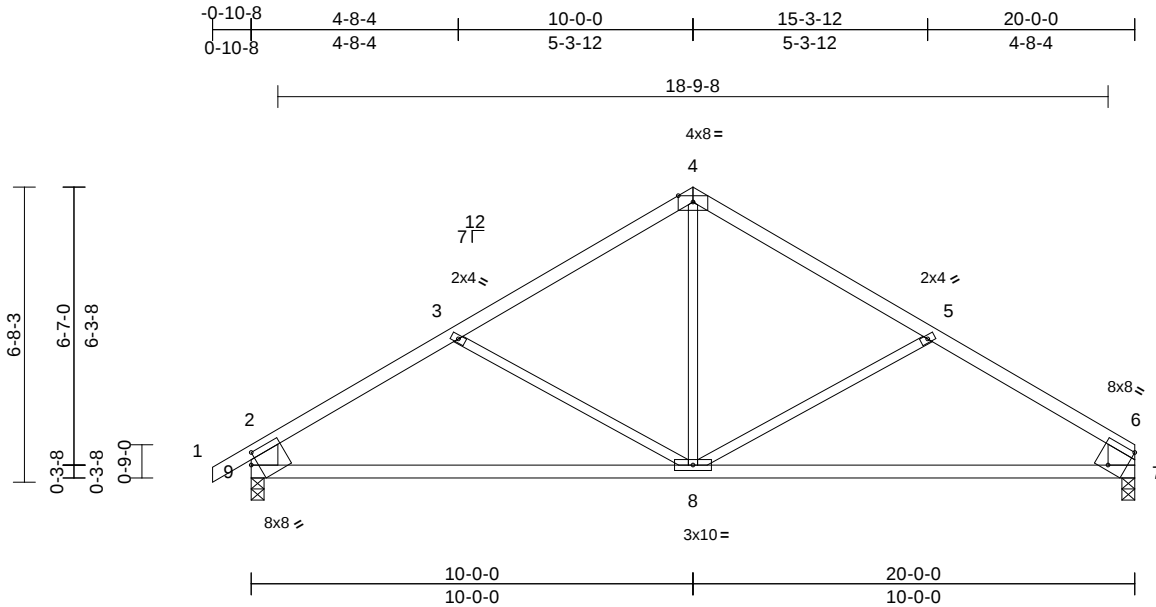
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |             |                      |          |          |           |           |
|--------------------------|-------------|----------------------|----------|----------|-----------|-----------|
| Job<br>H374              | Truss<br>D2 | Truss Type<br>Common | Qty<br>5 | Ply<br>1 | Lot 74 H3 | I48788157 |
| Job Reference (optional) |             |                      |          |          |           |           |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:52.2

Plate Offsets (X, Y): [6:Edge,0-6-10], [9:0-1-11,0-2-15]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.77 | Vert(LL) | -0.17 | 8-9   | >999   | 360 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.74 | Vert(CT) | -0.36 | 8-9   | >649   | 240 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.28 | Horz(CT) | 0.03  | 7     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.07  | 8-9   | >999   | 240 | Weight: 68 lb | FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\* 9-2,7-6:2x8 SP DSS

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.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=870/0-3-8, 9=958/0-3-8  
Max Horiz 9=183 (LC 5)  
Max Uplift 7=103 (LC 9), 9=130 (LC 8)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/42, 2-3=-1177/186, 3-4=-911/140, 4-5=-911/140, 5-6=-1188/189, 2-9=-854/178, 6-7=-762/149  
BOT CHORD 8-9=-185/920, 7-8=-111/931  
WEBS 4-8=-4/472, 5-8=-292/215, 3-8=-273/210

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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 3-06-00 tall by 2-00-00 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 130 lb uplift at joint 9 and 103 lb uplift at joint 7.



November 15, 2021

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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

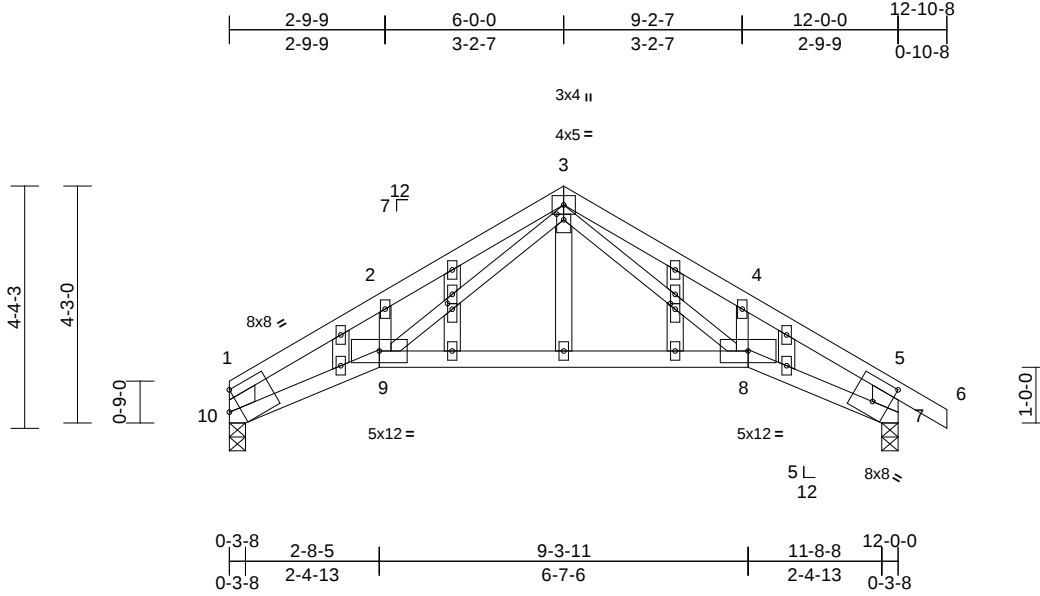
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | D3    | GABLE      | 1   | 1   | Job Reference (optional) | I48788158 |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:41.3

Plate Offsets (X, Y): [1:Edge,0-4-2], [3:0-1-4,0-1-8], [7:0-3-8,0-4-15], [12:0-1-4,0-1-0], [19:0-1-4,0-1-0]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.72 | Vert(LL) | -0.12 | 8-9   | >999   | 360 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.67 | Vert(CT) | -0.29 | 8-9   | >475   | 240 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.16 | Horz(CT) | 0.14  | 7     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.08  | 8-9   | >999   | 240 | Weight: 49 lb | FT = 10% |

|                                            |                                                                                               |  |
|--------------------------------------------|-----------------------------------------------------------------------------------------------|--|
| <b>LUMBER</b>                              |                                                                                               |  |
| TOP CHORD                                  | 2x4 SPF No.2                                                                                  |  |
| BOT CHORD                                  | 2x4 SPF No.2                                                                                  |  |
| WEBS                                       | 2x3 SPF No.2 *Except* 10-1,7-5:2x6 SPF No.2                                                   |  |
| OTHERS                                     | 2x4 SPF No.2                                                                                  |  |
| <b>BRACING</b>                             |                                                                                               |  |
| TOP CHORD                                  | Structural wood sheathing directly applied or 4-1-14 oc purlins, except end verticals.        |  |
| BOT CHORD                                  | Rigid ceiling directly applied or 10-0-0 oc bracing.                                          |  |
| <b>REACTIONS</b>                           |                                                                                               |  |
| (lb/size)                                  | 7=600/0-3-8, 10=516/0-3-8                                                                     |  |
| Max Horiz                                  | 10=-121 (LC 6)                                                                                |  |
| Max Uplift                                 | 7=-86 (LC 9), 10=-60 (LC 8)                                                                   |  |
| <b>FORCES</b>                              |                                                                                               |  |
| (lb) - Maximum Compression/Maximum Tension |                                                                                               |  |
| TOP CHORD                                  | 1-2=-1094/129, 2-3=-976/224, 3-4=-969/175, 4-5=-1111/75, 5-6=0/39, 1-10=-733/100, 5-7=-847/94 |  |
| BOT CHORD                                  | 9-10=-117/927, 8-9=-13/494, 7-8=-15/886                                                       |  |
| WEBS                                       | 3-8=-113/466, 4-8=-7/149, 3-9=-146/525, 2-9=-25/128                                           |  |

#### 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) exterior 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.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 10, 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 60 lb uplift at joint 10 and 86 lb uplift at joint 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.

LOAD CASE(S) Standard



November 15,2021

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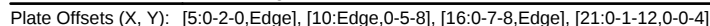
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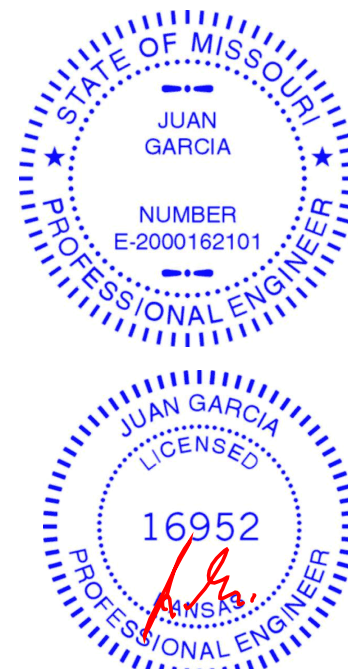
|               |                                              |             |                                                                                                                                                  |                                                                                                                                                            |
|---------------|----------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b> |                                              | <b>WEBS</b> | 2-18=-35/408, 2-17=-877/313, 3-17=-25/379, 3-16=-692/226, 5-15=-531/31, 5-14=-184/53, 7-13=-1137/313, 7-12=-81/204, 8-12=-103/563, 9-12=-297/201 | 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. |
| TOP CHORD     | 2x4 SPF No.2                                 |             |                                                                                                                                                  | <b>LOAD CASE(S)</b> Standard                                                                                                                               |
| BOT CHORD     | 2x4 SPF No.2 *Except* 16-4,6-13:2x3 SPF No.2 |             |                                                                                                                                                  |                                                                                                                                                            |

## NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) 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) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 8) Gable studs spaced at 2'-0" oc.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-0" x 6'-0" tall by 2'-0" x 6'-0" wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 11) WARNING: Required bearing size at joint(s) 13, 16 greater than input bearing size.
- 12) Refer to girder(s) for truss to truss connections.
- 13) Bearing at joint(s) 19, 16 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 115 lb uplift at joint 19, 246 lb uplift at joint 13, 176 lb uplift at joint 11 and 210 lb uplift at joint 16.

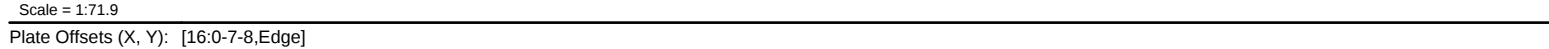
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 15.2021

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:36 Page: 1  
ID:dWTzNcNxRqfJm8tRCSiY7DzSTnz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f



|                  |                                                                                                                                                                         |                                                                                                                                                                                                                                                                              |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>    |                                                                                                                                                                         | Wind: ASCE 7-16; Vult=15mph (3-second gust)<br>Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.<br>II; Exp C; Enclosed; MWFRS (envelope) exterior zone;<br>cantilever left and right exposed ; end vertical left and<br>right exposed; Lumber DOL=1.60 plate grip DOL=1.60 |
| TOP CHORD        | 2x4 SPF No.2                                                                                                                                                            |                                                                                                                                                                                                                                                                              |
| BOT CHORD        | 2x4 SPF No.2 *Except* 16-4,6-13:2x3 SPF<br>No.2                                                                                                                         |                                                                                                                                                                                                                                                                              |
| WEBS             | 2x3 SPF No.2 *Except* 19-1:2x6 SPF No.2                                                                                                                                 |                                                                                                                                                                                                                                                                              |
| <b>BRACING</b>   |                                                                                                                                                                         |                                                                                                                                                                                                                                                                              |
| TOP CHORD        | Structural wood sheathing directly applied or<br>5-11-8 oc purlins, except end verticals.                                                                               | 3) Provide adequate drainage to prevent water ponding.<br>4) All plates are MT20 plates unless otherwise indicated.                                                                                                                                                          |
| BOT CHORD        | Rigid ceiling directly applied or 4-2-13 oc<br>bracing.                                                                                                                 | 5) This truss has been designed for a 10.0 psf bottom<br>chord live load nonconcurrent with any other live loads.                                                                                                                                                            |
| WEBS             | 1 Row at midpt 5-15, 5-14, 7-13, 9-11                                                                                                                                   | 6) * This truss has been designed for a live load of 20.0psf<br>on the bottom chord in all areas where a rectangle<br>3-06-00 tall by 2-00-00 wide will fit between the bottom<br>chord and any other members, with BCDL = 10.0psf.                                          |
| <b>REACTIONS</b> | (lb/size) 11=836/ Mechanical,<br>13=1168/0-2-0, 16=1148/0-2-0,<br>(req. 0-2-5), 19=358/0-3-8                                                                            | 7) WARNING: Required bearing size at joint(s) 13, 16<br>greater than input bearing size.                                                                                                                                                                                     |
|                  | Max Horiz 19=-255 (LC 6)                                                                                                                                                | 8) Refer to girder(s) for truss to truss connections.                                                                                                                                                                                                                        |
|                  | Max Uplift 11=-151 (LC 9), 13=-253 (LC 9),<br>16=-223 (LC 8), 19=-42 (LC 8)                                                                                             | 9) Bearing at joint(s) 19, 16 considers parallel to grain<br>value using ANSI/TPI 1 angle to grain formula. Building<br>designer should verify capacity of bearing surface.                                                                                                  |
|                  | Max Grav 11=854 (LC 24), 13=1314 (LC 16),<br>16=1474 (LC 15), 19=395 (LC 16)                                                                                            | 10) Provide mechanical connection (by others) of truss to<br>bearing plate capable of withstanding 42 lb uplift at joint<br>19, 253 lb uplift at joint 13, 151 lb uplift at joint 11 and<br>223 lb uplift at joint 16.                                                       |
| <b>FORCES</b>    | (lb) - Maximum Compression/Maximum<br>Tension                                                                                                                           | 11) This truss is designed in accordance with the 2018<br>International Residential Code sections R502.11.1.1 and<br>R802.10.2 and referenced standard ANSI/TPI 1.                                                                                                           |
| TOP CHORD        | 1-2=-845/261, 2-3=-168/330, 3-4=-82/510,<br>4-5=-48/536, 5-6=-103/252, 6-7=-49/266,<br>7-8=-918/154, 8-9=-904/170, 9-10=-99/57,<br>1-19=-522/154, 10-11=-246/96         |                                                                                                                                                                                                                                                                              |
| BOT CHORD        | 18-19=-367/904, 17-18=-347/812,<br>16-17=-101/40, 15-16=-861/55,<br>4-15=-179/103, 14-15=-148/64,<br>13-14=-573/163, 6-14=-414/239,<br>12-13=-172/778, 11-12=-185/823   |                                                                                                                                                                                                                                                                              |
| WEBS             | 2-18=-38/408, 2-17=-876/318, 3-17=-26/379,<br>3-16=-692/227, 5-15=-561/4, 5-14=-100/74,<br>7-13=-1100/247, 7-12=-127/146,<br>8-12=-72/645, 9-11=-930/187, 9-12=-305/163 |                                                                                                                                                                                                                                                                              |
|                  |                                                                                                                                                                         | <b>LOAD CASE(S)</b> Standard                                                                                                                                                                                                                                                 |

STATE OF MISSOURI  
JUAN GARCIA  
NUMBER  
E-2000162101  
PROFESSIONAL ENGINEER

JUAN GARCIA  
LICENSED  
16952  
KANSAS  
PROFESSIONAL ENGINEER

**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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Chesterfield, MO 63017

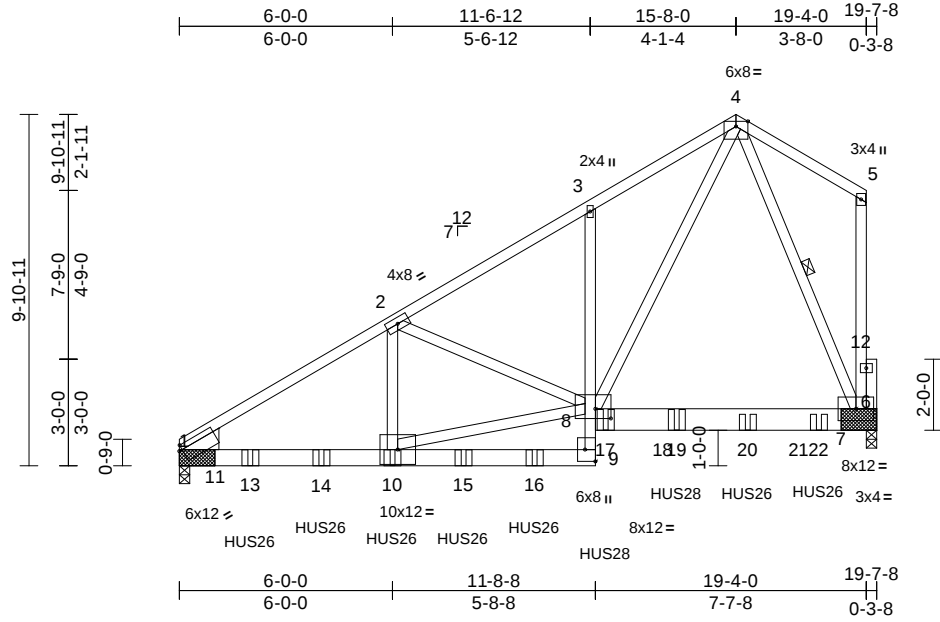
|      |       |                     |     |     |                          |           |
|------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type          | Qty | Ply | Lot 74 H3                | I48788161 |
| H374 | D6    | Roof Special Girder | 1   | 2   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:64.8

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP                    |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|-------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.82 | Vert(LL) | -0.20 | 6-8    | >999 | 360    | MT20                    |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.77 | Vert(CT) | -0.35 | 6-8    | >652 | 240    | 197/144                 |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB       | 0.97 | Horz(CT) | 0.06  | 6      | n/a  | n/a    |                         |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.10  | 6-8    | >999 | 240    | Weight: 289 lb FT = 10% |

|               |                                                                            |
|---------------|----------------------------------------------------------------------------|
| <b>LUMBER</b> |                                                                            |
| TOP CHORD     | 2x4 SPF 2100F 1.8E *Except* 4-5:2x4 SPF No.2                               |
| BOT CHORD     | 2x6 SP 2400F 2.0E *Except* 9-3:2x4 SPF No.2, 8-6,6-7,6-7:2x8 SP 2400F 2.0E |
| WEBS          | 2x4 SPF No.2                                                               |
| OTHERS        | 2x4 SPF No.2                                                               |
| WEDGE         | Left: 2x8 SP No.2                                                          |

|                |                                                                                        |
|----------------|----------------------------------------------------------------------------------------|
| <b>BRACING</b> |                                                                                        |
| TOP CHORD      | Structural wood sheathing directly applied or 4-10-1 oc purlins, except end verticals. |
| BOT CHORD      | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 9-10.   |
| WEBS           | 1 Row at midpt 4-6                                                                     |

|                  |            |                                                                                             |
|------------------|------------|---------------------------------------------------------------------------------------------|
| <b>REACTIONS</b> | (lb/size)  | 1=6202/(0-3-8 + bearing block), (req. 0-5-5), 6=6489/(0-3-8 + bearing block), (req. 0-5-10) |
|                  | Max Horiz  | 1=270 (LC 5)                                                                                |
|                  | Max Uplift | 1=-329 (LC 8), 6=-168 (LC 8)                                                                |
|                  | Max Grav   | 1=6767 (LC 13), 6=7168 (LC 13)                                                              |

|               |                                                                             |
|---------------|-----------------------------------------------------------------------------|
| <b>FORCES</b> | (lb) - Maximum Compression/Maximum Tension                                  |
| TOP CHORD     | 1-2=-9952/356, 2-3=-6644/207, 3-4=-6700/295, 4-5=-299/93, 5-6=-274/61       |
| BOT CHORD     | 1-10=-368/8391, 9-10=-30/245, 8-9=0/1159, 3-8=-342/130, 6-8=-105/2076       |
| WEBS          | 2-10=-165/3057, 8-10=-355/8380, 2-8=-2970/254, 4-8=-309/8473, 4-6=-4804/152 |

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc, 2x4 - 1 row at 0-9-0 oc, 2x8 - 2 rows staggered at 0-5-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 2x6 SP 2400F 2.0E bearing block 12" long at jt. 1 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.
- 2x8 SP 2400F 2.0E bearing block 12" long at jt. 6 attached to each face with 4 rows of 10d (0.131"x3") nails spaced 3" o.c. 16 Total fasteners per block. 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); 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 3-06-00 tall by 2-00-00 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 329 lb uplift at joint 1 and 168 lb uplift at joint 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.
  - Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 6-0-0 oc max. starting at 2-0-0 from the left end to 18-0-0 to connect truss(es) to back face of bottom chord.
  - Use Simpson Strong-Tie HUS28 (22-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 12-0-0 from the left end to 14-0-0 to connect truss(es) to back face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard E-2000162101
- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-4=-70, 4-5=-70, 1-9=-20, 6-8=-20  
Concentrated Loads (lb)  
Vert: 10=-1218 (B), 13=-1217 (B), 14=-1222 (B), 15=-1218 (B), 16=-1223 (B), 17=-1219 (B), 19=-1219 (B), 20=-1219 (B), 22=-1219 (B)



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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



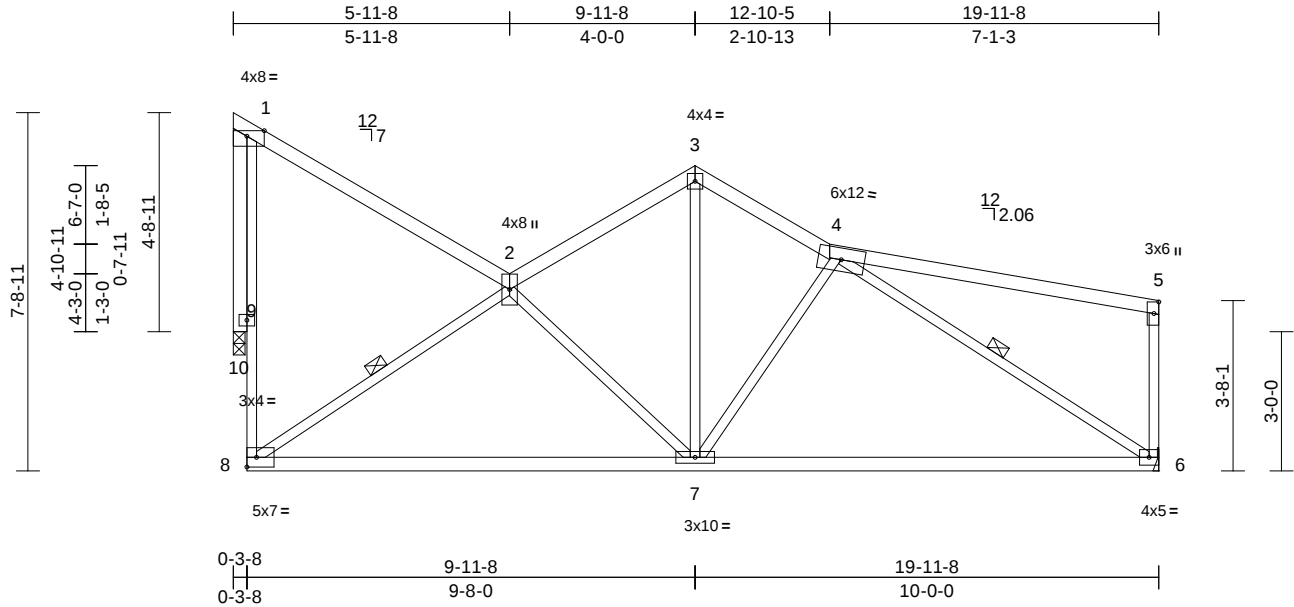
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|             |             |                            |          |          |                                       |           |
|-------------|-------------|----------------------------|----------|----------|---------------------------------------|-----------|
| Job<br>H374 | Truss<br>D7 | Truss Type<br>Roof Special | Qty<br>1 | Ply<br>1 | Lot 74 H3<br>Job Reference (optional) | I48788162 |
|-------------|-------------|----------------------------|----------|----------|---------------------------------------|-----------|

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:49.7

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.77 | Vert(LL) | -0.23 | 6-7   | >999   | 360 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.87 | Vert(CT) | -0.46 | 6-7   | >513   | 240 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.64 | Horz(CT) | 0.41  | 6     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.08  | 7-8   | >999   | 240 | Weight: 87 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 5-9-9 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS      | 1 Row at midpt 2-8, 4-6                                                               |

|           |                                           |
|-----------|-------------------------------------------|
| REACTIONS | (lb/size) 6=888/ Mechanical, 10=864/0-3-0 |
|           | Max Horiz 10=-210 (LC 4)                  |
|           | Max Uplift 6=-140 (LC 9), 10=-187 (LC 9)  |

#### FORCES

|           |                                                                                            |
|-----------|--------------------------------------------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension                                                 |
| TOP CHORD | 8-9=-89/706, 1-9=-89/706, 1-2=-160/51, 2-3=-929/135, 3-4=-920/151, 4-5=-89/55, 5-6=-246/95 |
| BOT CHORD | 7-8=-131/931, 6-7=-168/895                                                                 |
| WEBS      | 2-8=-1080/240, 4-6=-1015/168, 2-7=-277/71, 3-7=-53/668, 4-7=-300/165, 1-10=-866/188        |

#### 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) exterior 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.

- 6) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 140 lb uplift at joint 6 and 187 lb uplift at joint 10.
- 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.

LOAD CASE(S) Standard



November 15, 2021

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



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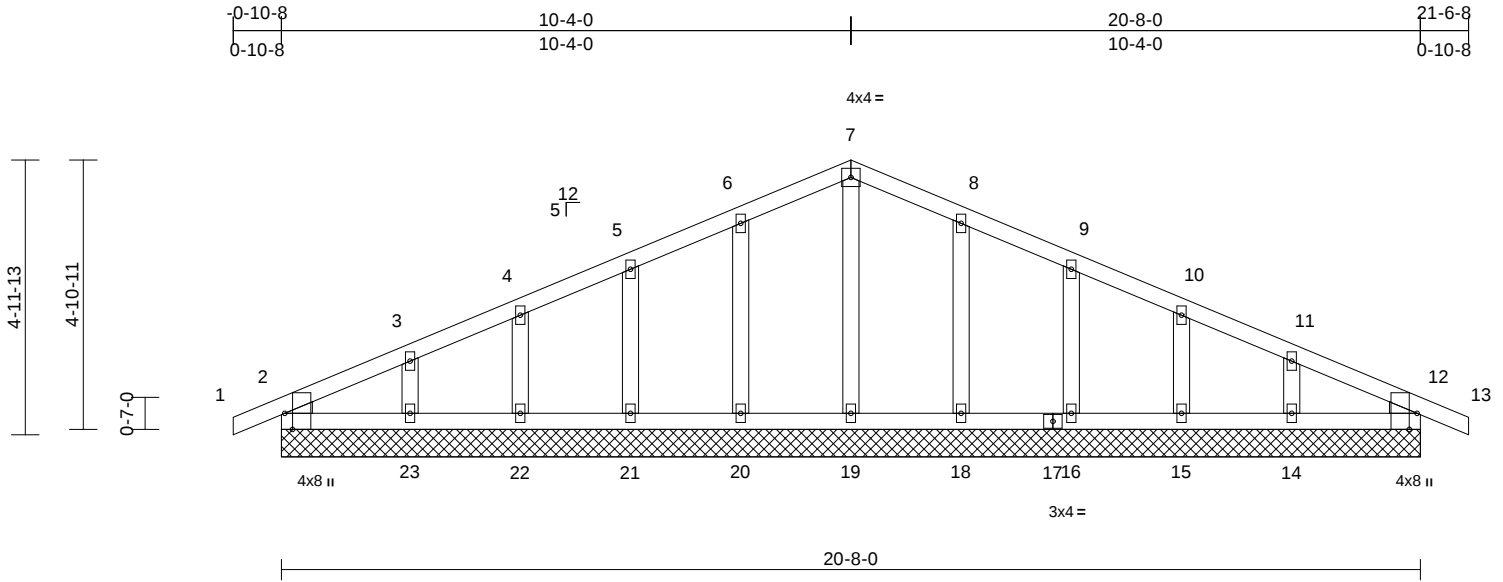
|      |       |                        |     |     |                          |           |
|------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type             | Qty | Ply | Lot 74 H3                |           |
| H374 | E1    | Common Supported Gable | 1   | 1   | Job Reference (optional) | I48788163 |

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Scale = 1:41.8

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.05 | Vert(LL) | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.03 | Vert(CT) | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.04 | Horz(CT) | 0.00  | 12     | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |     |        | Weight: 78 lb FT = 10% |

**LUMBER**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2  
WEDGE Left: 2x3 SPF No.2  
Right: 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** (lb/size)  
2=166/20-8-0, 12=166/20-8-0,  
14=206/20-8-0, 15=172/20-8-0,  
16=180/20-8-0, 18=187/20-8-0,  
19=159/20-8-0, 20=187/20-8-0,  
21=180/20-8-0, 22=172/20-8-0,  
23=206/20-8-0  
Max Horiz 2=-82 (LC 9)  
Max Uplift 2=-22 (LC 4), 12=-25 (LC 5),  
14=-63 (LC 9), 15=-45 (LC 9),  
16=-49 (LC 9), 18=-50 (LC 9),  
20=-51 (LC 8), 21=-48 (LC 8),  
22=-45 (LC 8), 23=-67 (LC 8)  
Max Grav 2=166 (LC 1), 12=166 (LC 1),  
14=206 (LC 22), 15=173 (LC 22),  
16=180 (LC 1), 18=190 (LC 22),  
19=159 (LC 1), 20=190 (LC 21),  
21=180 (LC 1), 22=173 (LC 21),  
23=206 (LC 21)

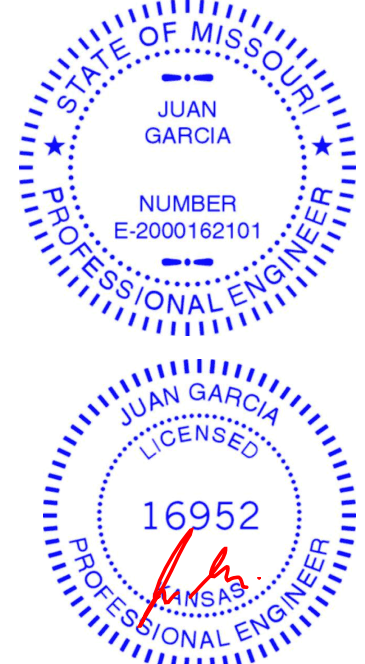
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/6, 2-3=-96/55, 3-4=-60/61, 4-5=-40/81,  
5-6=-38/103, 6-7=-40/123, 7-8=-40/116,  
8-9=-38/79, 9-10=-38/45, 10-11=-39/25,  
11-12=-68/32, 12-13=0/6

**BOT CHORD** 2-23=-5/71, 22-23=-5/71, 21-22=-5/71,  
20-21=-5/71, 19-20=-5/71, 18-19=-5/71,  
16-18=-5/71, 15-16=-5/71, 14-15=-5/71,  
12-14=-5/71  
**WEBS** 7-19=-119/0, 6-20=-151/75, 5-21=-139/72,  
4-22=-136/68, 3-23=-156/92, 8-18=-151/74,  
9-16=-139/73, 10-15=-136/68, 11-14=-156/88

#### NOTES

- 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) exterior 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.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2, 51 lb uplift at joint 20, 48 lb uplift at joint 21, 45 lb uplift at joint 22, 67 lb uplift at joint 23, 50 lb uplift at joint 18, 49 lb uplift at joint 16, 45 lb uplift at joint 15, 63 lb uplift at joint 14 and 25 lb uplift at joint 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.

**LOAD CASE(S)** Standard



November 15, 2021

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**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



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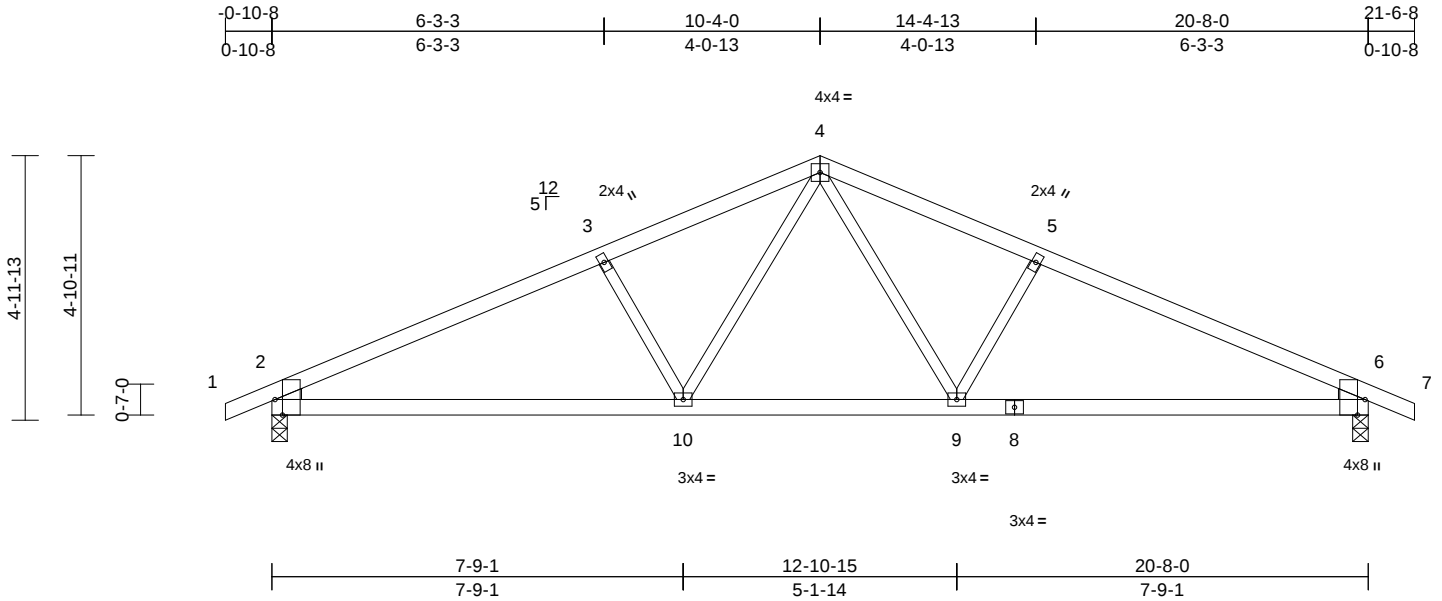
|             |             |                      |          |          |                                       |           |
|-------------|-------------|----------------------|----------|----------|---------------------------------------|-----------|
| Job<br>H374 | Truss<br>E2 | Truss Type<br>Common | Qty<br>4 | Ply<br>1 | Lot 74 H3<br>Job Reference (optional) | I48788164 |
|-------------|-------------|----------------------|----------|----------|---------------------------------------|-----------|

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:43.4

Plate Offsets (X, Y): [2:0-3-8,Edge], [6:0-3-8,Edge]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.52 | Vert(LL) | -0.11 | 6-9   | >999   | 360 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.60 | Vert(CT) | -0.25 | 6-9   | >977   | 240 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.17 | Horz(CT) | 0.04  | 6     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.06  | 2-10  | >999   | 240 | Weight: 65 lb | FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x3 SPF No.2  
 WEDGE Left: 2x3 SPF No.2  
 Right: 2x3 SPF No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or  
 3-8-13 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc  
 bracing.

**REACTIONS** (lb/size) 2=988/0-3-8, 6=988/0-3-8  
 Max Horiz 2=-82 (LC 13)  
 Max Uplift 2=-141 (LC 8), 6=-141 (LC 9)

**FORCES** (lb) - Maximum Compression/Maximum  
 Tension

TOP CHORD 1-2=0/6, 2-3=-1643/210, 3-4=-1437/214,  
 4-5=-1437/214, 5-6=-1643/211, 6-7=0/6

BOT CHORD 2-10=-199/1413, 9-10=-56/1021,  
 6-9=-117/1413

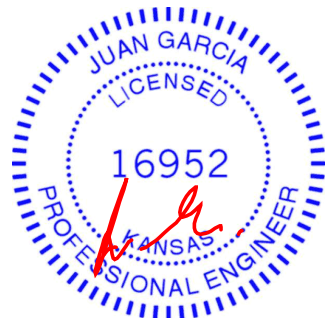
WEBS 4-9=-107/507, 5-9=-339/190, 4-10=-107/507,  
 3-10=-339/190

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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 3-06-00 tall by 2-00-00 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 141 lb uplift at joint 2 and 141 lb uplift at joint 6.
- 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.

**LOAD CASE(S)** Standard



November 15, 2021

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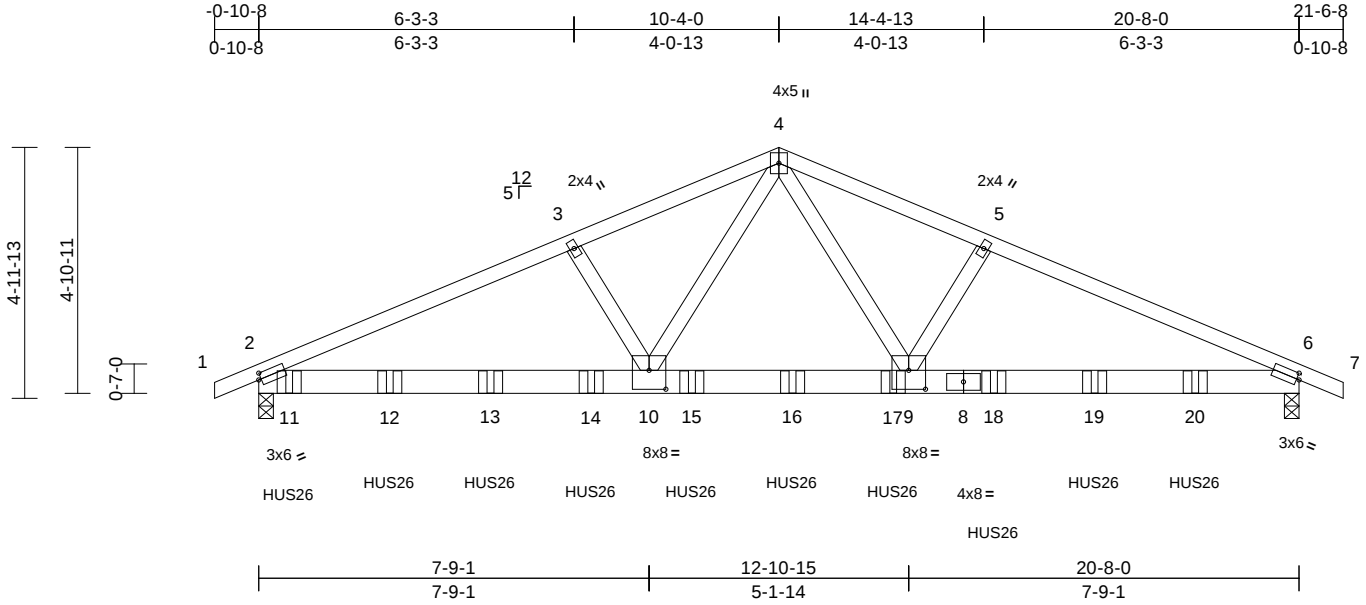
|             |             |                             |          |          |                                       |           |
|-------------|-------------|-----------------------------|----------|----------|---------------------------------------|-----------|
| Job<br>H374 | Truss<br>E3 | Truss Type<br>COMMON GIRDER | Qty<br>1 | Ply<br>3 | Lot 74 H3<br>Job Reference (optional) | I48788165 |
|-------------|-------------|-----------------------------|----------|----------|---------------------------------------|-----------|

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:45.8

Plate Offsets (X, Y): [2:0-0-10,0-1-8], [6:0-0-10,0-1-8], [9:0-4-0,0-4-8], [10:0-4-0,0-4-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.58 | Vert(LL) | -0.14 | 6-9   | >999   | 360 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.57 | Vert(CT) | -0.26 | 6-9   | >948   | 240 |                |          |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB       | 0.29 | Horz(CT) | 0.04  | 6     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | Wind(LL) | 0.11  | 2-10  | >999   | 240 | Weight: 282 lb | FT = 10% |

#### LUMBER

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x4 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** (lb/size) 2=5445/0-3-8, 6=4873/0-3-8  
Max Horiz 2=49 (LC 10)  
Max Uplift 2=849 (LC 8), 6=647 (LC 9)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/12, 2-3=-8540/1312, 3-4=-8409/1323, 4-5=-8330/1215, 5-6=-8500/1204, 6-7=0/12  
BOT CHORD 2-10=-1188/7764, 9-10=-817/5846, 6-9=-1039/7684  
WEBS 4-9=-469/3594, 5-9=-142/217, 4-10=-669/3823, 3-10=-146/214

#### NOTES

- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 849 lb uplift at joint 2 and 647 lb uplift at joint 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.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-7-4 from the left end to 18-7-4 to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-4=-70, 4-7=-70, 2-6=-20  
Concentrated Loads (lb)  
Vert: 11=-873 (F), 12=-819 (F), 13=-819 (F), 14=-819 (F), 15=-819 (F), 16=-793 (F), 17=-850 (F), 18=-850 (F), 19=-850 (F), 20=-850 (F)



November 15, 2021

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

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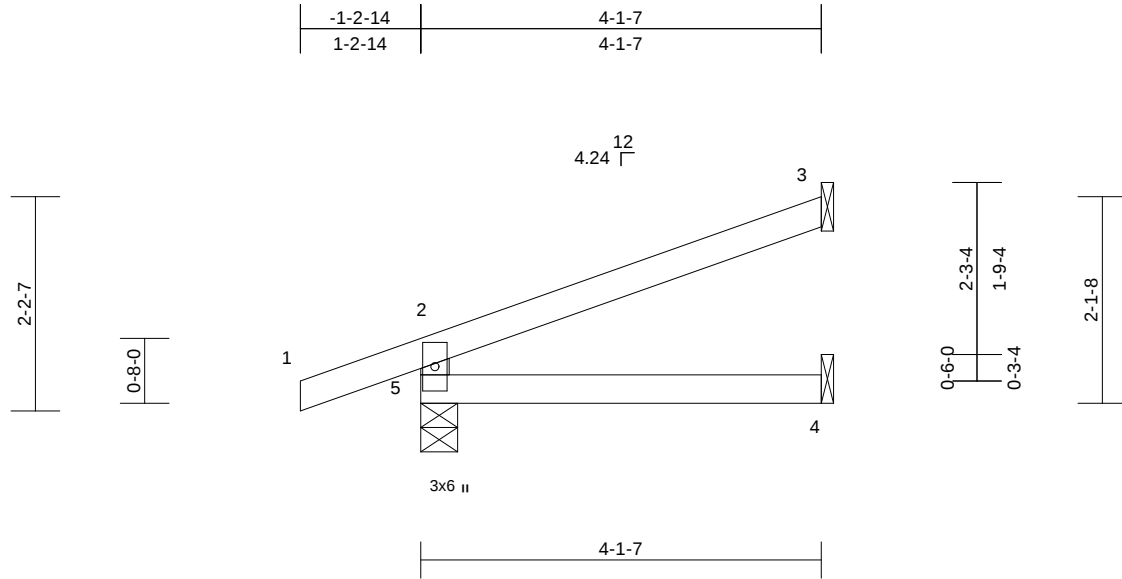
|      |       |                     |     |     |                          |           |
|------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type          | Qty | Ply | Lot 74 H3                | I48788166 |
| H374 | J1    | Diagonal Hip Girder | 2   | 1   | Job Reference (optional) |           |

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Scale = 1:23.7

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.15 | Vert(LL) | -0.01 | 4-5   | >999   | 360 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.10 | Vert(CT) | -0.02 | 4-5   | >999   | 240 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | 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 4-1-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(lb/size) 3=80/ Mechanical, 4=24/ Mechanical, 5=144/0-4-9  
Max Horiz 5=81 (LC 12)  
Max Uplift 3=-51 (LC 12), 5=-91 (LC 6)  
Max Grav 3=80 (LC 1), 4=60 (LC 3), 5=144 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-5=-128/119, 1-2=-7/25, 2-3=-36/18  
BOT CHORD 4-5=0/0

#### 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) exterior 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 3-06-00 tall by 2-00-00 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 91 lb uplift at joint 5 and 51 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.

- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 30 lb down and 11 lb up at -1-2-14, and 30 lb down and 11 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=-46 (F=-23, B=-23)  
Trapezoidal Loads (lb/ft)  
Vert: 1=0 (F=35, B=35)-to-2=-24 (F=23, B=23), 2=-3 (F=34, B=34)-to-3=-72 (F=-1, B=-1), 5=0 (F=10, B=10)-to-4=-21 (F=0, B=0)



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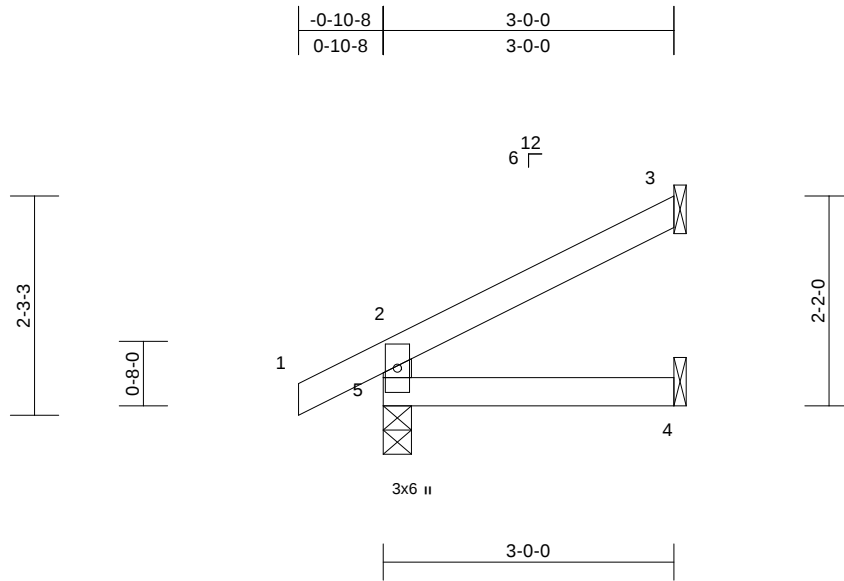
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|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | J2    | Jack-Open  | 5   | 1   | Job Reference (optional) | I48788167 |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:23.8

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.10 | Vert(LL) | 0.00  | 4-5   | >999   | 360 | MT20         | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.06 | Vert(CT) | -0.01 | 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  | 4-5   | >999   | 240 | Weight: 9 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  
3-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc  
bracing.

**REACTIONS** (lb/size) 3=82/ Mechanical, 4=30/  
Mechanical, 5=210/0-3-8  
Max Horiz 5=69 (LC 8)  
Max Uplift 3=-49 (LC 8), 5=-27 (LC 8)  
Max Grav 3=82 (LC 1), 4=52 (LC 3), 5=210  
(LC 1)

**FORCES** (lb) - Maximum Compression/Maximum  
Tension

TOP CHORD 2-5=-184/55, 1-2=0/32, 2-3=-56/28  
BOT CHORD 4-5=0/0

#### 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) exterior 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  
3-06-00 tall by 2-00-00 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 27 lb uplift at joint  
5 and 49 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.

**LOAD CASE(S)** Standard



November 15, 2021

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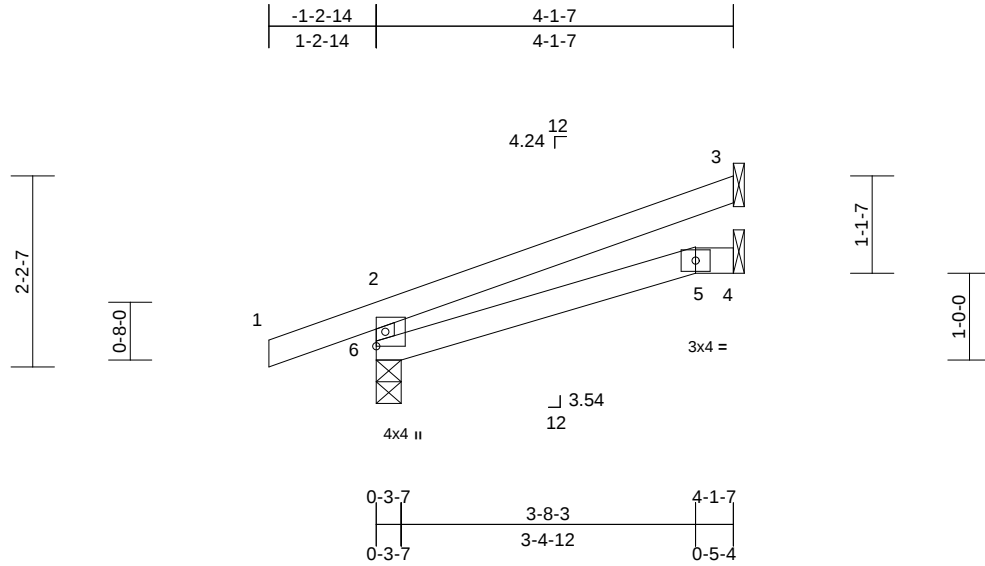
|      |       |                  |     |     |                          |           |
|------|-------|------------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type       | Qty | Ply | Lot 74 H3                | I48788168 |
| H374 | J3    | Jack-Open Girder | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:26.6

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.18 | Vert(LL) | -0.01 | 5-6   | >999   | 360 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.11 | Vert(CT) | -0.02 | 5-6   | >999   | 240 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | 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: 12 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 4-1-7 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 6-0-0 oc bracing.                                   |

#### REACTIONS

|            |                                                 |
|------------|-------------------------------------------------|
| (lb/size)  | 3=81/ Mechanical, 4=25/ Mechanical, 6=142/0-3-7 |
| Max Horiz  | 6=80 (LC 12)                                    |
| Max Uplift | 3=-55 (LC 12), 6=-89 (LC 6)                     |
| Max Grav   | 3=81 (LC 1), 4=62 (LC 3), 6=142 (LC 1)          |

#### FORCES

|                                            |                                     |
|--------------------------------------------|-------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                     |
| TOP CHORD                                  | 2-6=-127/115, 1-2=-7/24, 2-3=-37/18 |
| BOT CHORD                                  | 5-6=-16/9, 4-5=0/0                  |

#### 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) exterior 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 3-06-00 tall by 2-00-00 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 89 lb uplift at joint 6 and 55 lb uplift at joint 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.
- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 30 lb down and 11 lb up at -1-2-14, and 30 lb down and 11 lb up at -1-2-14 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 9) 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=-46 (F=-23, B=-23)  
Trapezoidal Loads (lb/ft)  
Vert: 1=0 (F=35, B=35)-to-2=-23 (F=23, B=23), 2=-2 (F=34, B=34)-to-3=-72 (F=-1, B=-1), 6=0 (F=10, B=10)-to-5=-19 (F=1, B=1), 5=-19 (F=1, B=1)-to-4=-21 (F=0, B=0)



November 15, 2021

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

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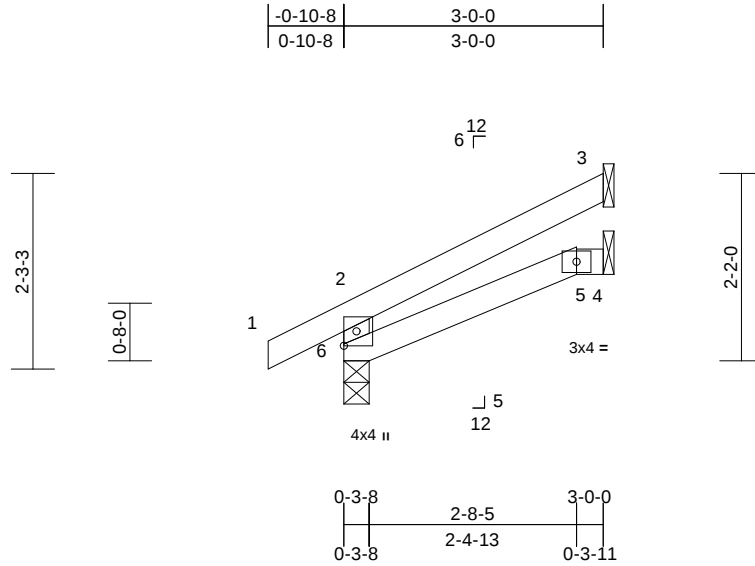
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | J4    | Jack-Open  | 5   | 1   | Job Reference (optional) | I48788169 |

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Scale = 1:26.7

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.10 | Vert(LL) | 0.00  | 5-6   | >999   | 360 | MT20         | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.06 | Vert(CT) | -0.01 | 5-6   | >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  | 5-6   | >999   | 240 | Weight: 9 lb | FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

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

#### REACTIONS

(lb/size) 3=83/ Mechanical, 4=30/  
Mechanical, 6=210/0-3-8  
Max Horiz 6=68 (LC 8)  
Max Uplift 3=-50 (LC 8), 6=-26 (LC 8)  
Max Grav 3=83 (LC 1), 4=52 (LC 3), 6=210 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-6=-184/54, 1-2=0/32, 2-3=-56/28  
BOT CHORD 5-6=-23/12, 4-5=0/0

#### 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) exterior 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 3-06-00 tall by 2-00-00 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 26 lb uplift at joint 6 and 50 lb uplift at joint 3.



November 15,2021

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

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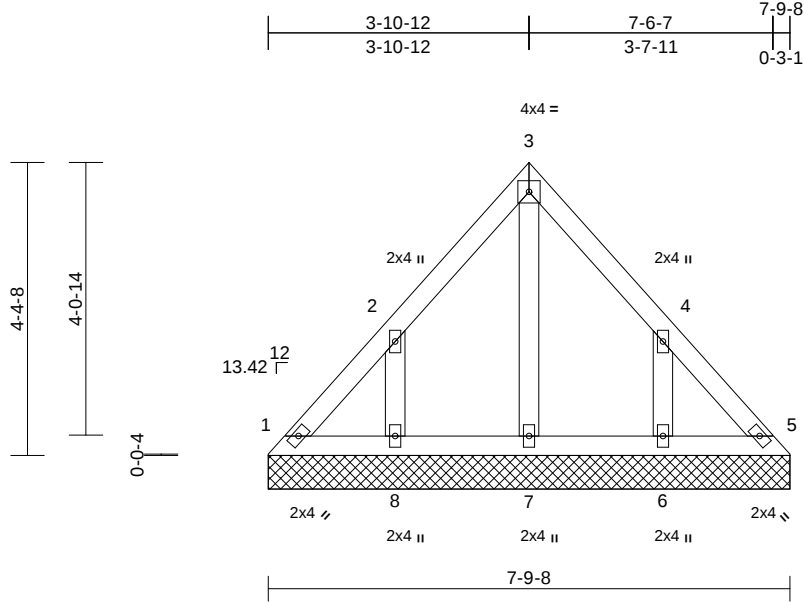
|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                | I48788170 |
| H374 | LAY1  | Lay-In Gable | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:34.4

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.06 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.02 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.03 | Horiz(TL) | 0.00  | 5      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 29 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. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.            |

#### REACTIONS

|            |                                                                         |
|------------|-------------------------------------------------------------------------|
| (lb/size)  | 1=71/7-9-8, 5=71/7-9-8, 6=198/7-9-8, 7=108/7-9-8, 8=198/7-9-8           |
| Max Horiz  | 1=-108 (LC 4)                                                           |
| Max Uplift | 1=-27 (LC 4), 5=-10 (LC 5), 6=-154 (LC 9), 8=-154 (LC 8)                |
| Max Grav   | 1=99 (LC 17), 5=91 (LC 18), 6=228 (LC 16), 7=122 (LC 18), 8=229 (LC 15) |

#### FORCES

|                                            |                                                   |
|--------------------------------------------|---------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                   |
| TOP CHORD                                  | 1-2=-121/92, 2-3=-101/79, 3-4=-92/64, 4-5=-106/69 |
| BOT CHORD                                  | 1-8=-45/94, 7-8=-45/94, 6-7=-45/94, 5-6=-45/94    |
| WEBS                                       | 3-7=-82/0, 2-8=-189/178, 4-6=-189/178             |

#### 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) exterior 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1, 10 lb uplift at joint 5, 154 lb uplift at joint 8 and 154 lb uplift at joint 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.

LOAD CASE(S) Standard



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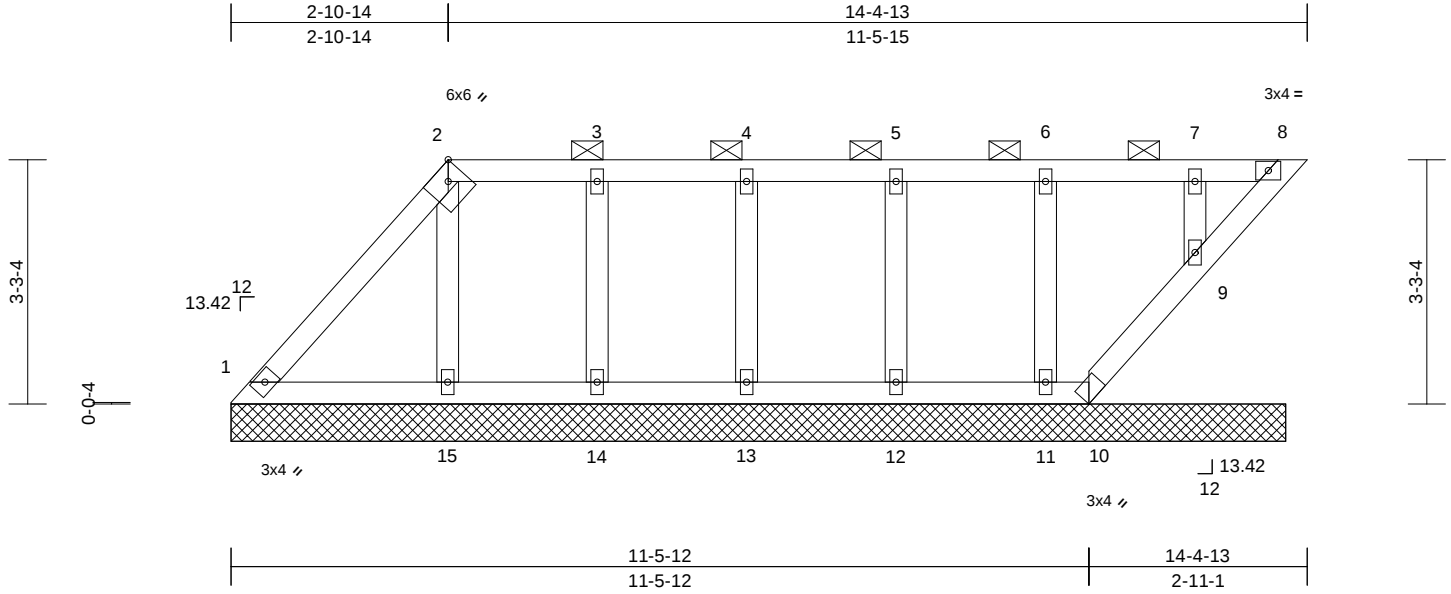
16023 Swingley Ridge Rd  
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|             |               |                            |          |          |                                       |           |
|-------------|---------------|----------------------------|----------|----------|---------------------------------------|-----------|
| Job<br>H374 | Truss<br>LAY2 | Truss Type<br>Lay-In Gable | Qty<br>1 | Ply<br>1 | Lot 74 H3<br>Job Reference (optional) | I48788171 |
|-------------|---------------|----------------------------|----------|----------|---------------------------------------|-----------|

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Scale = 1:30.8

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

| Loading                | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP    |
|------------------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|---------|
| TCLL (roof)            | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.08 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20    |
| TCDL                   | 10.0  | Lumber DOL      | 1.15            | BC       | 0.04 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144 |
| BCLL                   | 0.0*  | Rep Stress Incr | YES             | WB       | 0.03 | Horiz(TL) | 0.00  | 8      | n/a | n/a    |         |
| BCDL                   | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        |         |
| Weight: 52 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.): 2-8. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                                       |

|                     |                                                                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| REACTIONS (lb/size) | 1=115/14-1-5, 8=48/14-1-5, 9=157/14-1-5, 10=-4/14-1-5, 11=174/14-1-5, 12=180/14-1-5, 13=182/14-1-5, 14=171/14-1-5, 15=215/14-1-5            |
|                     | Max Horiz 1=121 (LC 8)                                                                                                                      |
| Max Uplift          | 8=-24 (LC 8), 9=-33 (LC 5), 10=-6 (LC 15), 11=-40 (LC 5), 12=-33 (LC 4), 13=-34 (LC 5), 14=-47 (LC 4), 15=-87 (LC 8)                        |
|                     | Max Grav 1=115 (LC 1), 8=48 (LC 1), 9=157 (LC 1), 10=32 (LC 8), 11=174 (LC 1), 12=181 (LC 22), 13=182 (LC 1), 14=184 (LC 22), 15=215 (LC 1) |

#### FORCES

|           |                                                                                                            |
|-----------|------------------------------------------------------------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension                                                                 |
| TOP CHORD | 1-2=-88/60, 2-3=-17/22, 3-4=-15/22, 4-5=-15/22, 5-6=-15/22, 6-7=-15/22, 7-8=-15/22                         |
| BOT CHORD | 1-15=-22/15, 14-15=-22/15, 13-14=-22/15, 12-13=-22/15, 11-12=-22/15, 10-11=-22/15, 9-10=-39/36, 8-9=-39/27 |
| WEBS      | 2-15=-150/104, 3-14=-149/68, 4-13=-140/58, 5-12=-140/58, 6-11=-143/59, 7-9=-124/51                         |

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 8, 6 lb uplift at joint 10, 87 lb uplift at joint 15, 47 lb uplift at joint 14, 34 lb uplift at joint 13, 33 lb uplift at joint 12, 40 lb uplift at joint 11 and 33 lb uplift at joint 9.
- 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.

LOAD CASE(S) Standard



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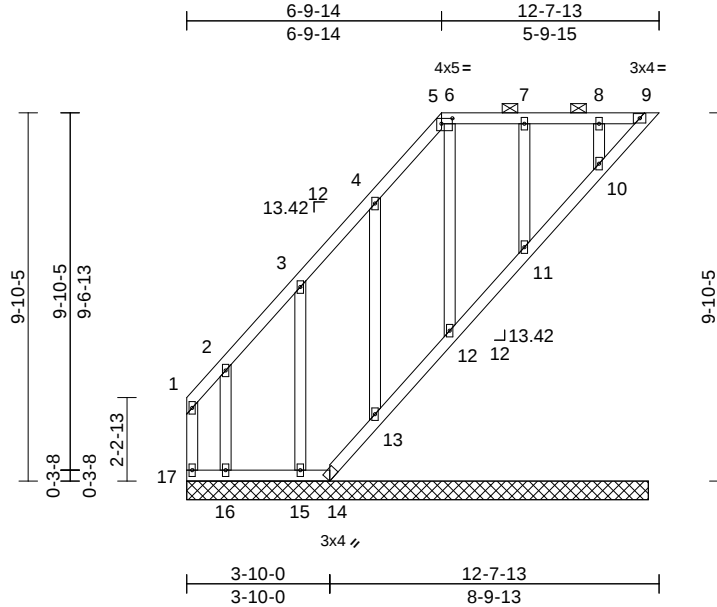
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | LAY3  | Lay-In Gable | 1   | 1   | Job Reference (optional) | I48788172 |

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Page: 1



Scale = 1:61.7

Plate Offsets (X, Y): [5:0-3-8,0-1-12]

| Loading                | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP    |
|------------------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|---------|
| TCLL (roof)            | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.09 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20    |
| TCDL                   | 10.0  | Lumber DOL      | 1.15            | BC       | 0.05 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144 |
| BCLL                   | 0.0*  | Rep Stress Incr | YES             | WB       | 0.13 | Horiz(TL) | -0.01 | 9      | n/a | n/a    |         |
| BCDL                   | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        |         |
| Weight: 67 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 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-9.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (lb/size)  
9=41/12-4-5, 10=164/12-4-5, 11=185/12-4-5, 12=175/12-4-5, 13=176/12-4-5, 14=6/12-4-5, 15=180/12-4-5, 16=146/12-4-5, 17=23/12-4-5  
Max Horiz 17=279 (LC 8)  
Max Uplift 9=-292 (LC 8), 10=-30 (LC 4), 11=-47 (LC 5), 12=-70 (LC 6), 13=-136 (LC 8), 14=-138 (LC 6), 15=-140 (LC 8), 16=-197 (LC 8), 17=-20 (LC 6)  
Max Grav 9=149 (LC 6), 10=164 (LC 1), 11=192 (LC 22), 12=247 (LC 17), 13=204 (LC 15), 14=305 (LC 8), 15=205 (LC 15), 16=208 (LC 15), 17=119 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-17=-74/0, 1-2=-86/32, 2-3=-92/79, 3-4=-137/212, 4-5=-186/337, 5-6=-129/262, 6-7=-129/262, 7-8=-129/262, 8-9=-129/262  
BOT CHORD 16-17=-262/129, 15-16=-262/129, 14-15=-262/129, 13-14=-405/211, 12-13=-401/210, 11-12=-401/209, 10-11=-402/209, 9-10=-398/198

**WEBS**  
2-16=-148/170, 3-15=-175/171, 4-13=-164/145, 6-12=-216/111, 7-11=-152/71, 8-10=-126/51

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 17, 292 lb uplift at joint 9, 138 lb uplift at joint 14, 197 lb uplift at joint 16, 140 lb uplift at joint 15, 136 lb uplift at joint 13, 70 lb uplift at joint 12, 47 lb uplift at joint 11 and 30 lb uplift at joint 10.
- 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.

13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 15, 2021

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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

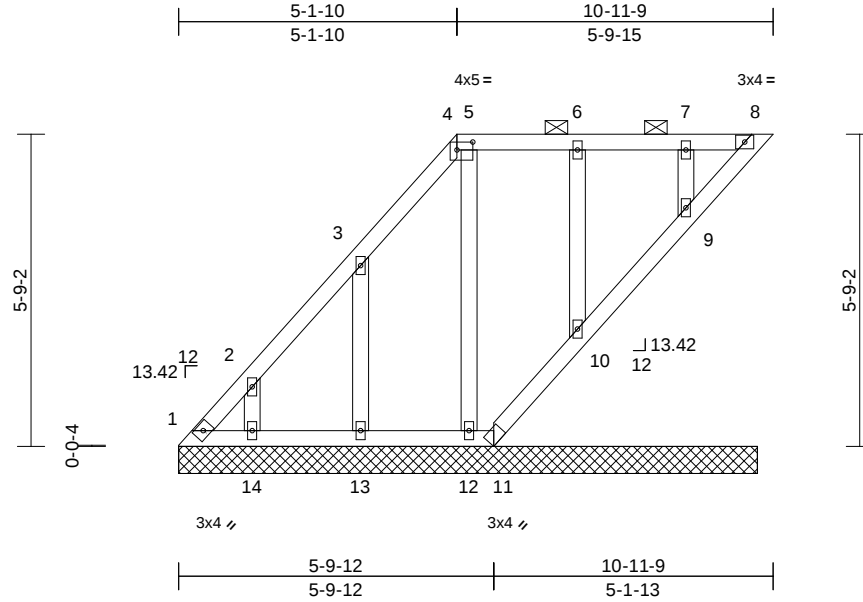
|      |       |              |     |     |                          |           |
|------|-------|--------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type   | Qty | Ply | Lot 74 H3                |           |
| H374 | LAY4  | Lay-In Gable | 1   | 1   | Job Reference (optional) | I48788173 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:42

Page: 1

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Scale = 1:42.5

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.05 | Vert(LL)  | n/a   | -      | n/a | 999           | MT20     |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.03 | Vert(TL)  | n/a   | -      | n/a | 999           | 197/144  |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.06 | Horiz(TL) | 0.00  | 8      | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |               |          |
|             |       |                 |                 |          |      |           |       |        |     | Weight: 46 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

|            |                                                                                                                        |
|------------|------------------------------------------------------------------------------------------------------------------------|
| (lb/size)  | 1=42/10-8-1, 8=55/10-8-1, 9=164/10-8-1, 10=186/10-8-1, 11=10/10-8-1, 12=149/10-8-1, 13=187/10-8-1, 14=156/10-8-1       |
| Max Horiz  | 1=223 (LC 8)                                                                                                           |
| Max Uplift | 1=-50 (LC 6), 8=-54 (LC 8), 9=-30 (LC 5), 10=-42 (LC 4), 11=-22 (LC 15), 12=-15 (LC 5), 13=-142 (LC 8), 14=-117 (LC 8) |
| Max Grav   | 1=176 (LC 8), 8=55 (LC 1), 9=164 (LC 1), 10=191 (LC 22), 11=60 (LC 8), 12=149 (LC 1), 13=218 (LC 15), 14=179 (LC 15)   |

#### FORCES

|                                            |                                                                                              |
|--------------------------------------------|----------------------------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                                              |
| TOP CHORD                                  | 1-2=-243/98, 2-3=-133/62, 3-4=-78/27, 4-5=-26/49, 5-6=-26/49, 6-7=-26/49, 7-8=-26/49         |
| BOT CHORD                                  | 1-14=-49/26, 13-14=-49/26, 12-13=-49/26, 11-12=-49/26, 10-11=-79/55, 9-10=-82/54, 8-9=-80/43 |
| WEBS                                       | 2-14=-143/135, 3-13=-176/167, 5-12=-117/35, 6-10=-152/66, 7-9=-126/51                        |

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 1, 54 lb uplift at joint 8, 22 lb uplift at joint 11, 117 lb uplift at joint 14, 142 lb uplift at joint 13, 15 lb uplift at joint 12, 42 lb uplift at joint 10 and 30 lb uplift at joint 9.
- 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.

LOAD CASE(S) Standard



November 15,2021

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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



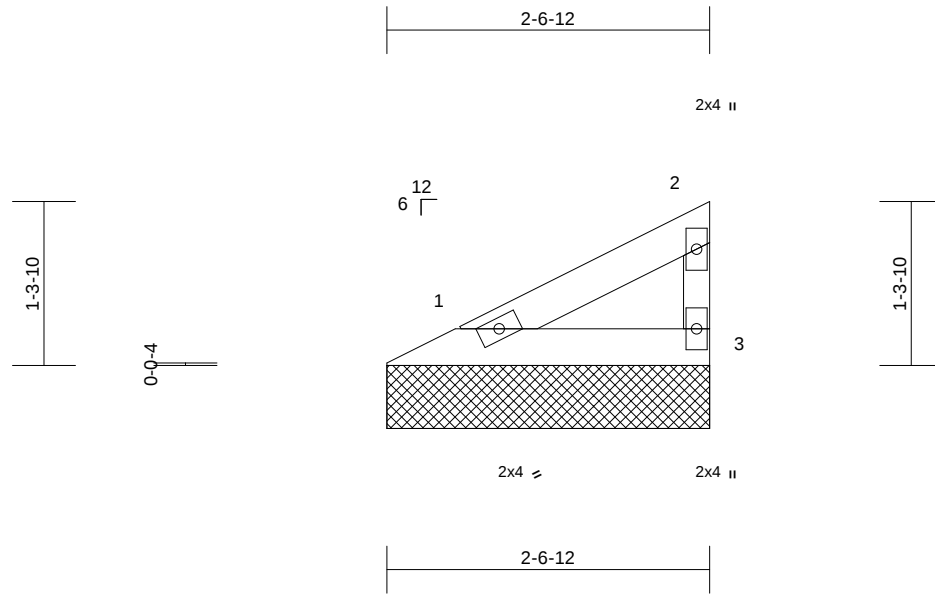
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | V1    | Valley     | 1   | 1   | Job Reference (optional) | I48788174 |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:18.3

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                  |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|-----------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.06 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.03 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144               |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 6 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-7-4 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=84/2-6-12, 3=84/2-6-12  
Max Horiz 1=39 (LC 5)  
Max Uplift 1=-11 (LC 8), 3=-21 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-36/24, 2-3=-65/32  
BOT CHORD 1-3=-13/10

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1 and 21 lb uplift at joint 3.



November 15,2021

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

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

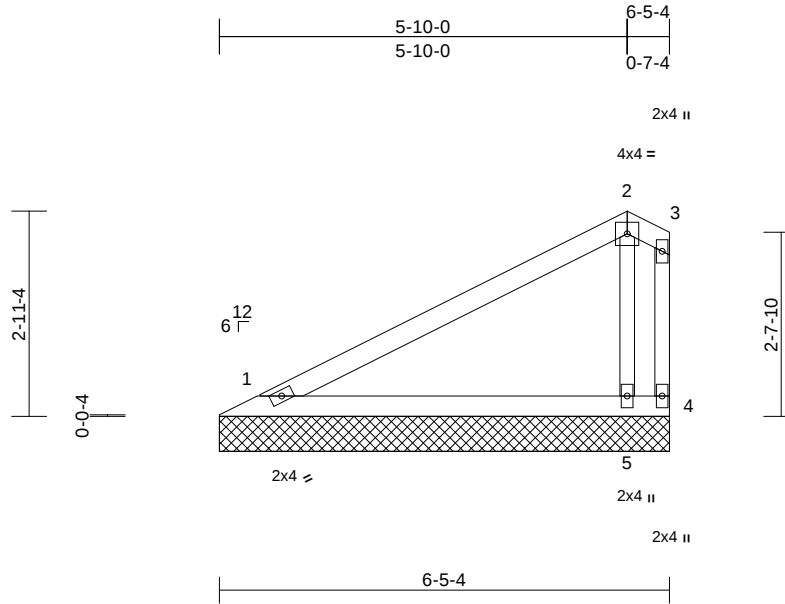
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788175 |
| H374 | V2    | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1

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Scale = 1:33

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.54 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.21 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.05 | Horiz(TL) | 0.00  | 4      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 19 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 6-5-12 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                   |

|                            |                                           |
|----------------------------|-------------------------------------------|
| <b>REACTIONS</b> (lb/size) | 1=224/6-5-4, 4=-103/6-5-4, 5=396/6-5-4    |
| Max Horiz                  | 1=102 (LC 7)                              |
| Max Uplift                 | 1=-39 (LC 8), 4=-236 (LC 3)               |
| Max Grav                   | 1=224 (LC 1), 4=-59 (LC 20), 5=448 (LC 3) |

#### FORCES (lb) - Maximum Compression/Maximum Tension

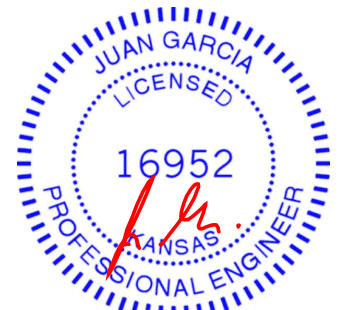
|           |                                    |
|-----------|------------------------------------|
| TOP CHORD | 1-2=-97/66, 2-3=-39/33, 3-4=-27/18 |
| BOT CHORD | 1-5=-34/26, 4-5=-34/26             |
| WEBS      | 2-5=-201/77                        |

#### 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) exterior 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 1 and 236 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.

LOAD CASE(S) Standard



November 15, 2021

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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



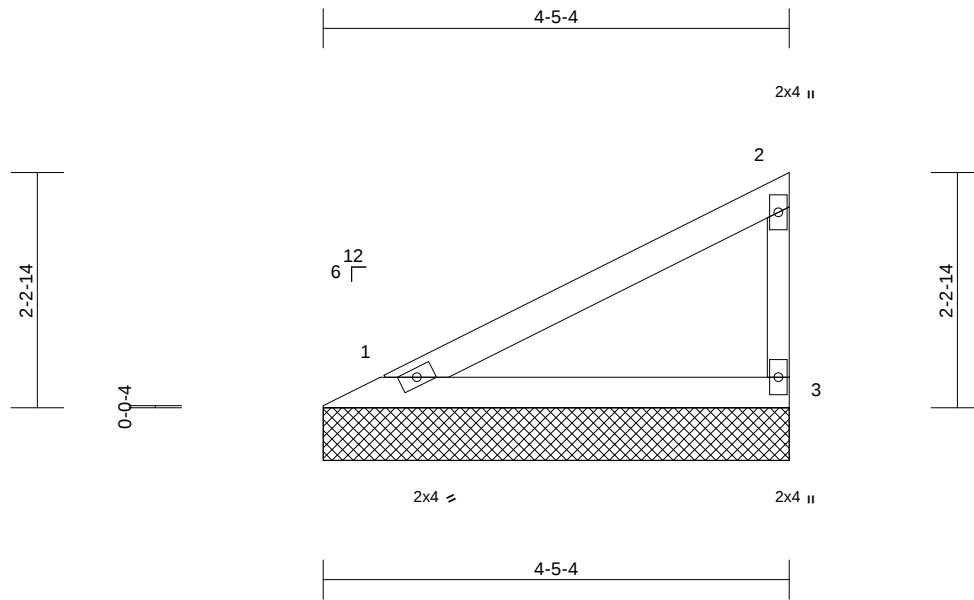
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788176 |
| H374 | V3    | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:21.9

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.26 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.14 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 11 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

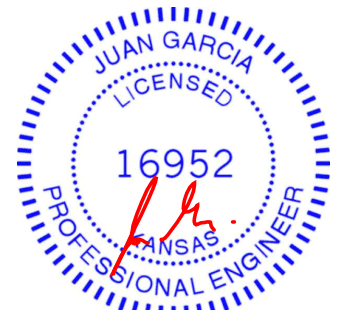
REACTIONS (lb/size) 1=169/4-5-4, 3=169/4-5-4  
Max Horiz 1=78 (LC 5)  
Max Uplift 1=-22 (LC 8), 3=-41 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-71/47, 2-3=-131/64  
BOT CHORD 1-3=-27/20

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 1 and 41 lb uplift at joint 3.



November 15,2021

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

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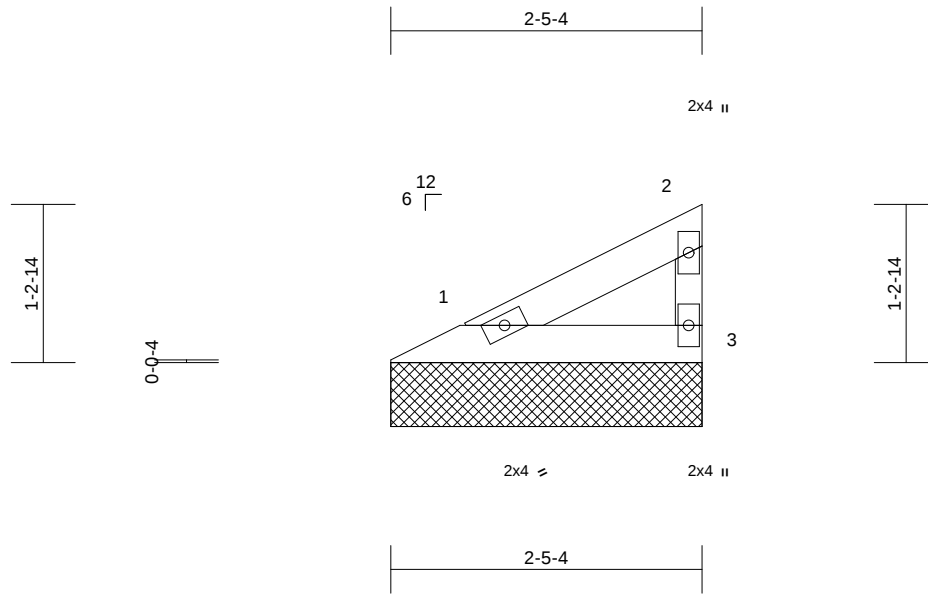
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | V4    | Valley     | 1   | 1   | Job Reference (optional) | I48788177 |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:18

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                  |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|-----------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.05 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.03 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144               |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 6 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-5-12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=79/2-5-4, 3=79/2-5-4  
Max Horiz 1=37 (LC 5)  
Max Uplift 1=-10 (LC 8), 3=-19 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-33/22, 2-3=-61/30  
BOT CHORD 1-3=-12/9

#### 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) exterior 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1 and 19 lb uplift at joint 3.



November 15, 2021

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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

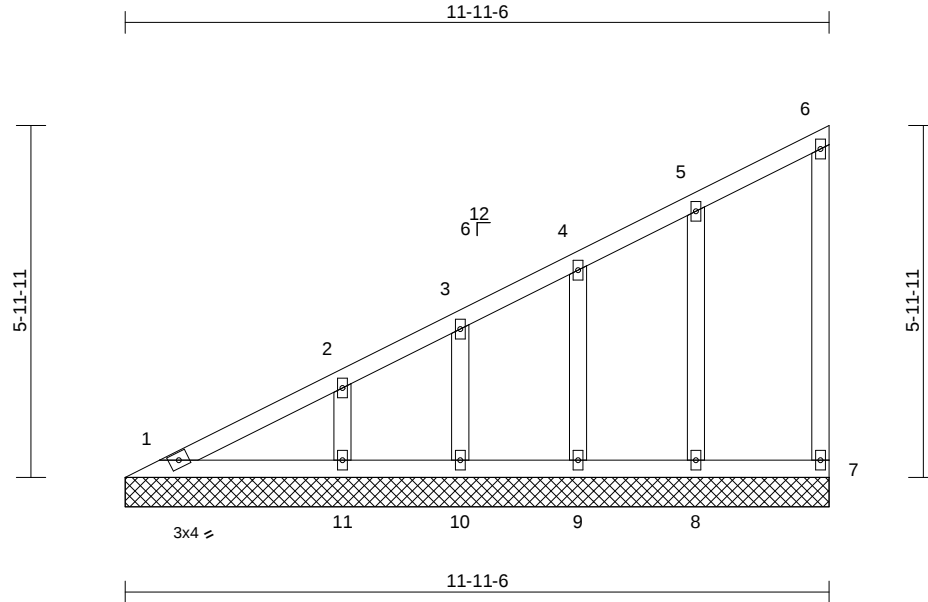
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | V5    | Valley     | 1   | 1   | Job Reference (optional) | I48788178 |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:39.1

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.14 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.06 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.06 | Horiz(TL) | 0.00  | 7      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        | Weight: 47 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 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |

#### REACTIONS

|            |                                                                                           |
|------------|-------------------------------------------------------------------------------------------|
| (lb/size)  | 1=113/11-11-6, 7=80/11-11-6, 8=202/11-11-6, 9=183/11-11-6, 10=144/11-11-6, 11=283/11-11-6 |
| Max Horiz  | 1=233 (LC 5)                                                                              |
| Max Uplift | 7=-31 (LC 5), 8=-61 (LC 8), 9=-55 (LC 8), 10=-44 (LC 8), 11=-85 (LC 8)                    |
| Max Grav   | 1=139 (LC 16), 7=80 (LC 1), 8=202 (LC 1), 9=183 (LC 1), 10=144 (LC 1), 11=283 (LC 1)      |

#### FORCES

|                                            |                                                                            |
|--------------------------------------------|----------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                            |
| TOP CHORD                                  | 1-2=-195/65, 2-3=-154/39, 3-4=-133/48, 4-5=-123/53, 5-6=-96/58, 6-7=-62/27 |
| BOT CHORD                                  | 1-11=-79/61, 10-11=-79/61, 9-10=-79/61, 8-9=-79/61, 7-8=-79/61             |
| WEBS                                       | 2-11=-212/115, 3-10=-116/65, 4-9=-142/84, 5-8=-158/68                      |

#### 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) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are 2x4 MT20 unless otherwise indicated.

- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 31 lb uplift at joint 7, 85 lb uplift at joint 11, 44 lb uplift at joint 10, 55 lb uplift at joint 9 and 61 lb uplift at joint 8.
- 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.

LOAD CASE(S) Standard



November 15, 2021

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

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Chesterfield, MO 63017

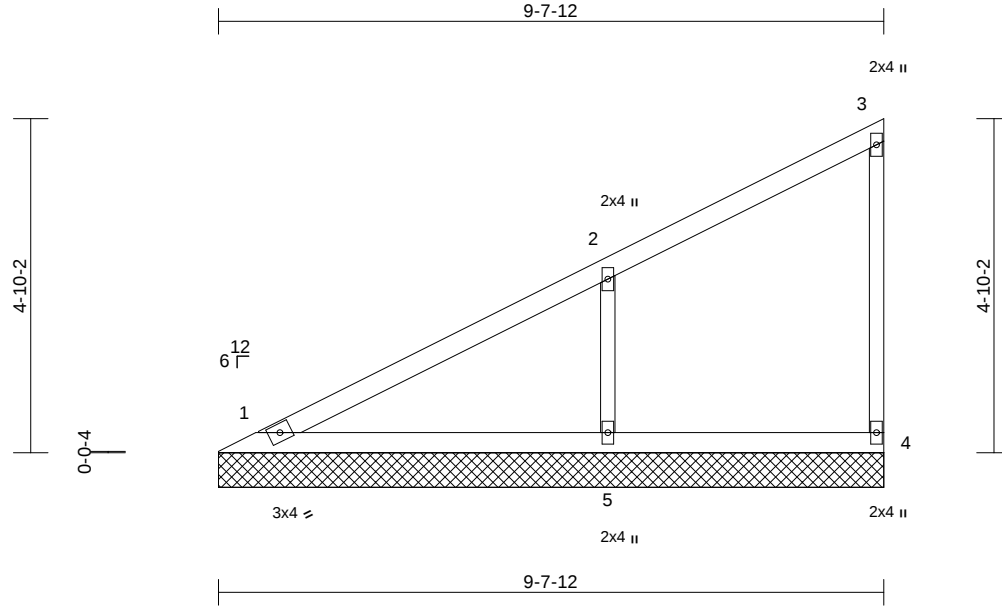
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788179 |
| H374 | V6    | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:33.4

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.33 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.17 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.09 | Horiz(TL) | 0.00  | 4      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        | Weight: 28 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.                                  |

|                            |                                          |
|----------------------------|------------------------------------------|
| <b>REACTIONS</b> (lb/size) | 1=183/9-7-12, 4=117/9-7-12, 5=506/9-7-12 |
| Max Horiz                  | 1=187 (LC 5)                             |
| Max Uplift                 | 4=-28 (LC 5), 5=-152 (LC 8)              |

|                                                          |                                      |
|----------------------------------------------------------|--------------------------------------|
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension |                                      |
| TOP CHORD                                                | 1-2=-147/91, 2-3=-126/49, 3-4=-93/40 |
| BOT CHORD                                                | 1-5=-63/49, 4-5=-63/49               |
| WEBS                                                     | 2-5=-383/203                         |

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 4 and 152 lb uplift at joint 5.
- 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.

**LOAD CASE(S)** Standard



November 15, 2021

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

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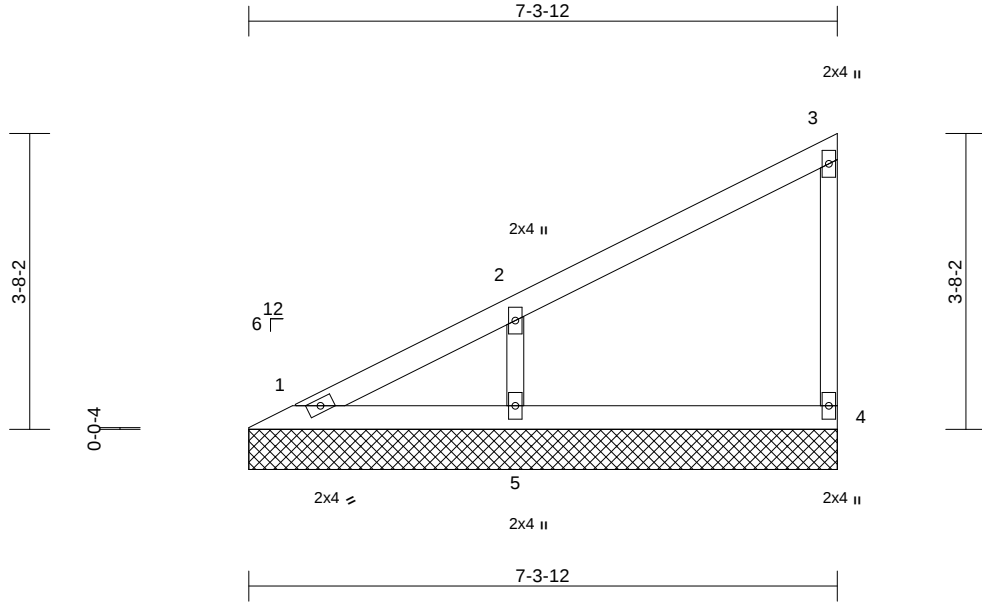
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788180 |
| H374 | V7    | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:28.6

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.19 | n/a       | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.10 | n/a       | -     | n/a    | 999 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.05 | Horiz(TL) | 0.00  | 4      | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     | Weight: 20 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.                                  |

|                            |                                          |
|----------------------------|------------------------------------------|
| <b>REACTIONS</b> (lb/size) | 1=73/7-3-12, 4=141/7-3-12, 5=382/7-3-12  |
| Max Horiz                  | 1=138 (LC 5)                             |
| Max Uplift                 | 4=-26 (LC 8), 5=-115 (LC 8)              |
| Max Grav                   | 1=87 (LC 16), 4=141 (LC 1), 5=382 (LC 1) |

#### FORCES (lb) - Maximum Compression/Maximum Tension

|           |                                       |
|-----------|---------------------------------------|
| TOP CHORD | 1-2=-115/62, 2-3=-108/44, 3-4=-110/45 |
| BOT CHORD | 1-5=-47/36, 4-5=-47/36                |
| WEBS      | 2-5=-297/165                          |

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 4 and 115 lb uplift at joint 5.
- 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.

**LOAD CASE(S)** Standard



November 15, 2021

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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**

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16023 Swingley Ridge Rd  
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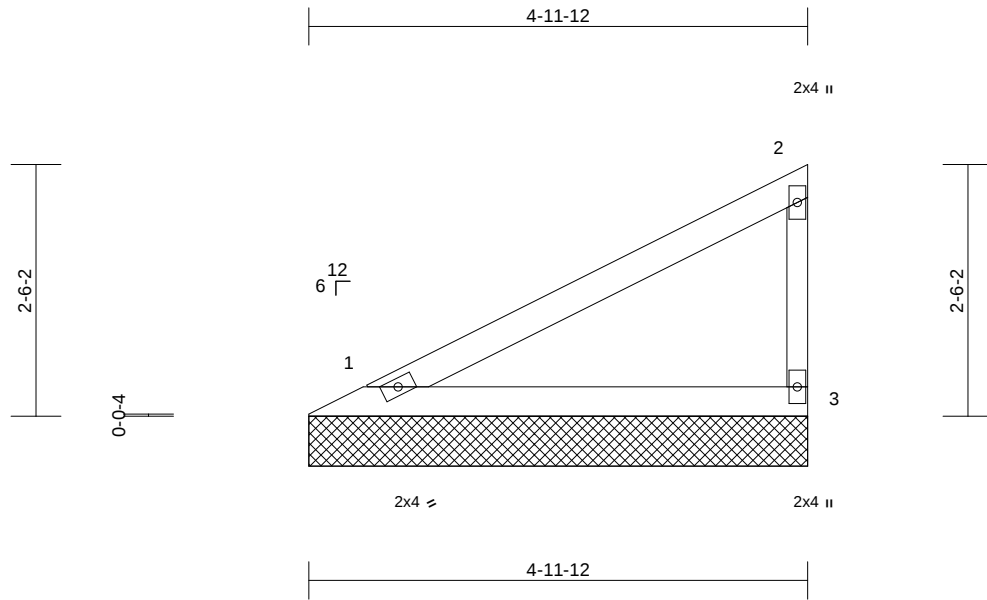
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | V8    | Valley     | 1   | 1   | Job Reference (optional) | I48788181 |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:23

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.35 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.19 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 13 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

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

REACTIONS (lb/size) 1=193/4-11-12, 3=193/4-11-12  
Max Horiz 1=89 (LC 5)  
Max Uplift 1=-25 (LC 8), 3=-47 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-82/54, 2-3=-150/73  
BOT CHORD 1-3=-31/23

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1 and 47 lb uplift at joint 3.



November 15,2021

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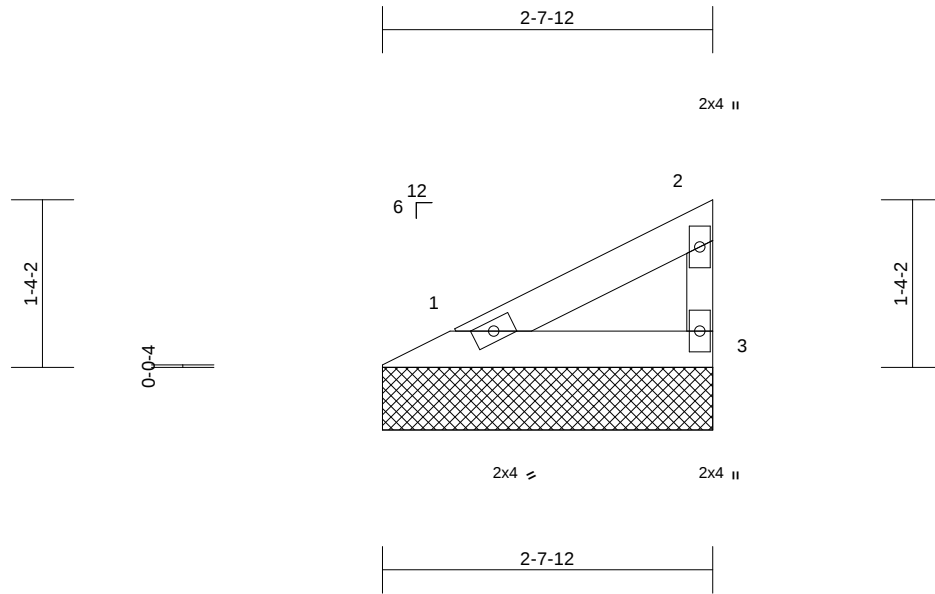
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788182 |
| H374 | V9    | Valley     | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:18.5

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                  |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|-----------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.06 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.03 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144               |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 6 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-8-4 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=88/2-7-12, 3=88/2-7-12  
Max Horiz 1=41 (LC 7)  
Max Uplift 1=-11 (LC 8), 3=-22 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-37/25, 2-3=-68/33  
BOT CHORD 1-3=-14/11

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1 and 22 lb uplift at joint 3.



November 15, 2021

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

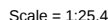
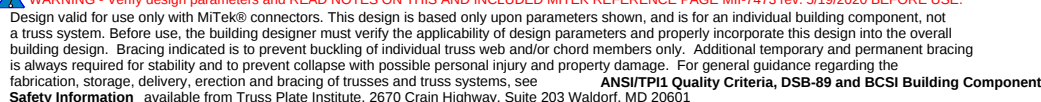
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

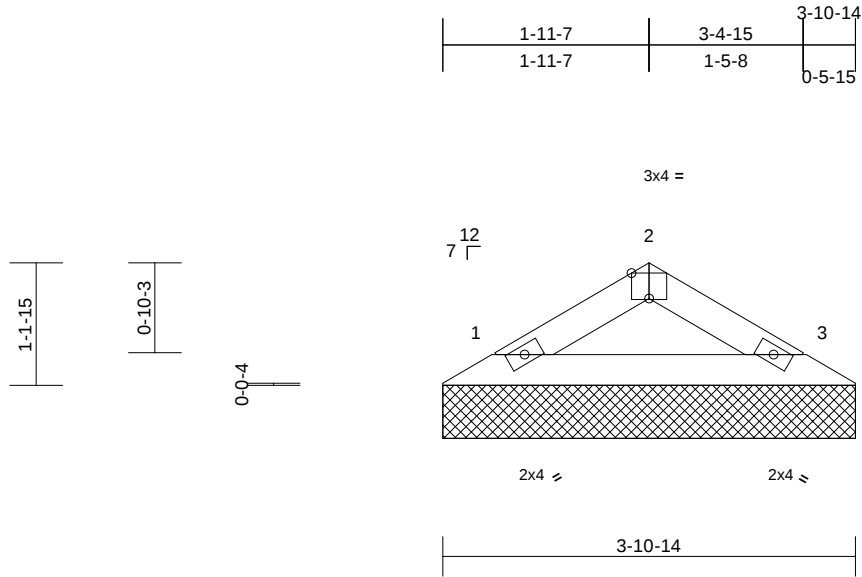
Page: 1LOAD CASE(S) Standard

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | V11   | Valley     | 1   | 1   | Job Reference (optional) | I48788184 |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:21.8

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                  |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|-----------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.03 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.08 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144               |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 8 lb FT = 10% |

#### LUMBER

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

#### BRACING

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

**REACTIONS** (lb/size) 1=130/3-10-14, 3=130/3-10-14  
Max Horiz 1=-22 (LC 4)  
Max Uplift 1=-16 (LC 8), 3=-16 (LC 9)

**FORCES** (lb) - Maximum Compression/Maximum Tension

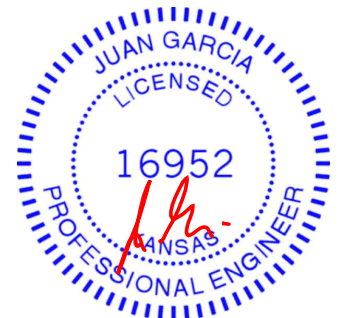
TOP CHORD 1-2=-121/36, 2-3=-121/36  
BOT CHORD 1-3=-19/87

#### 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) exterior 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1 and 16 lb uplift at joint 3.

- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 15, 2021

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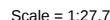
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:45 Page: 1  
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| <b>Loading</b> | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in   | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
|----------------|-------|-----------------|-----------------|------------|------|-------------|------|-------|--------|-----|---------------|-------------|
| TCLL (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.52 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 197/144     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.32 | Vert(TL)    | n/a  | -     | n/a    | 999 |               |             |
| BCLL           | 0.0 * | Rep Stress Incr | YES             | WB         | 0.00 | Horiz(TL)   | 0.00 | 4     | n/a    | n/a |               |             |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R   |      |             |      |       |        |     | Weight: 17 lb | FT = 10%    |

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

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.

LOAD CASE(S) Standard

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| 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** (lb/size) 1=272/7-6-0, 4=272/7-6-0  
Max Horiz 1=60 (LC 5)  
Max Uplift 1=-48 (LC 4), 4=-54 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-173/24, 2-3=-55/10, 3-4=-193/84  
BOT CHORD 1-4=-17/127

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BC DL=6.0psf; h=25ft; Cat. I; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4'-0" oc.
- 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'-0" tall by 2'-0" wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 1 and 54 lb uplift at joint 4.



November 15.2021



**WARNING –** Verify design parameters and READ NOTES ON THIS AND INCLUDED WITHER REFERENCE PAGE MH-1473 (rev. 3/29/2020) 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



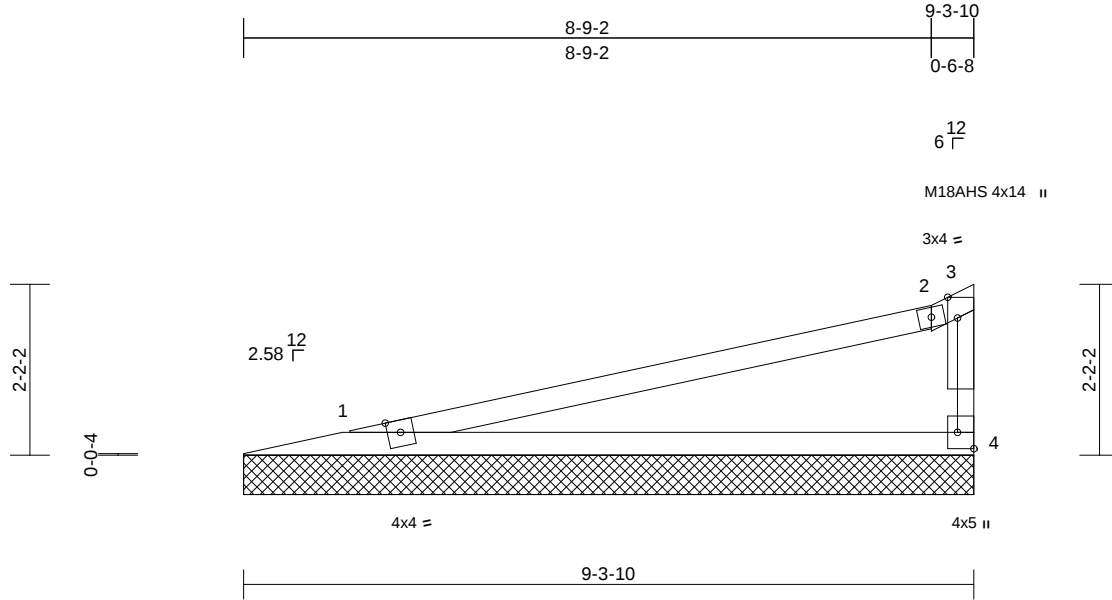
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788186 |
| H374 | V13   | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:29.4

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.92 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20 197/144           |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.55 | Vert(TL)  | n/a   | -      | n/a | 999    | M18AHS 142/136         |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 4      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |           |       |        |     |        | Weight: 21 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### 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 (lb/size) 1=353/9-3-10, 4=353/9-3-10  
Max Horiz 1=77 (LC 5)  
Max Uplift 1=-63 (LC 4), 4=-70 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-226/31, 2-3=-70/11, 3-4=-251/109  
BOT CHORD 1-4=-22/166

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 63 lb uplift at joint 1 and 70 lb uplift at joint 4.



November 15,2021

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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



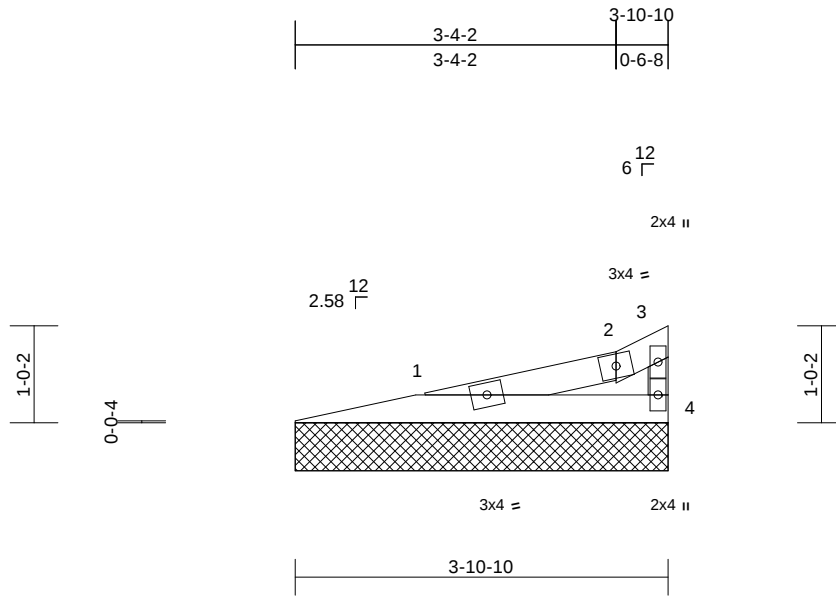
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                |           |
| H374 | V14   | Valley     | 1   | 1   | Job Reference (optional) | I48788187 |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:24

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                  |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|-----------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.08 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.05 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144               |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 4      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |           |       |        |     |        | Weight: 8 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-11-13 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=109/3-10-10, 4=109/3-10-10  
Max Horiz 1=27 (LC 5)  
Max Uplift 1=-19 (LC 4), 4=-22 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-62/8, 2-3=-24/5, 3-4=-78/34  
BOT CHORD 1-4=-7/43

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 1 and 22 lb uplift at joint 4.



November 15, 2021

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



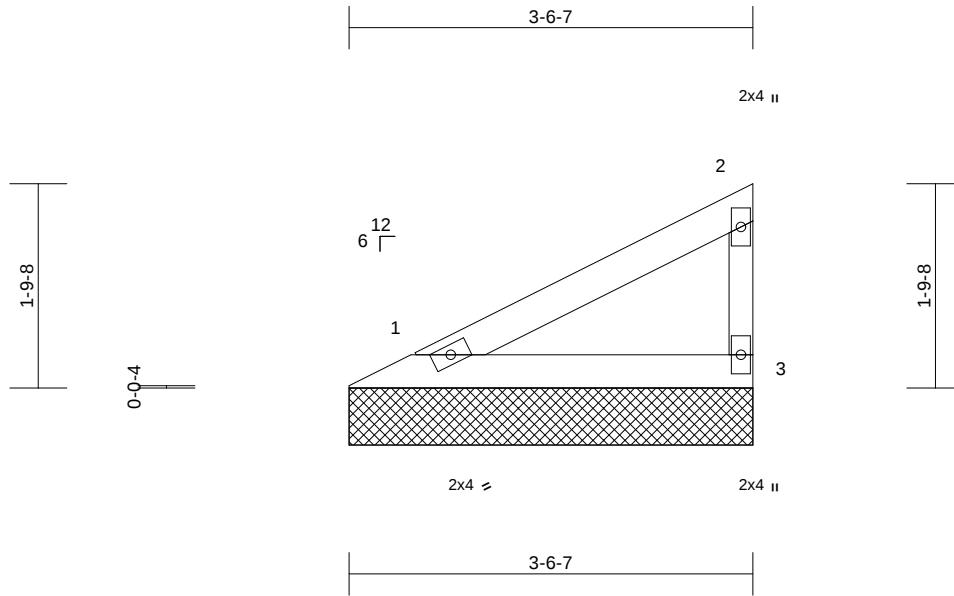
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Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788188 |
| H374 | V15   | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:20.2

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP         |          |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|--------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.14 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20         | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.08 | Vert(TL)  | n/a   | -      | n/a | 999    |              |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 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

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.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-6-15 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=128/3-6-7, 3=128/3-6-7  
Max Horiz 1=59 (LC 5)  
Max Uplift 1=-16 (LC 8), 3=-31 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-54/36, 2-3=-100/48  
BOT CHORD 1-3=-20/15

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1 and 31 lb uplift at joint 3.



November 15, 2021

**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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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

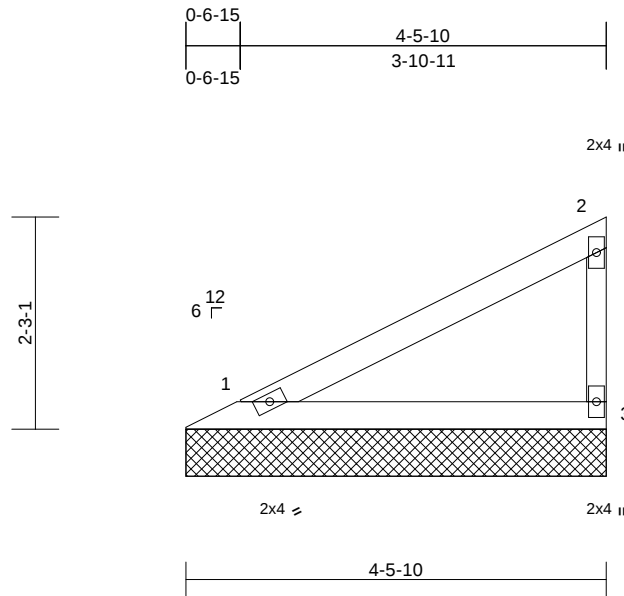
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788189 |
| H374 | V16   | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:46

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Scale = 1:24.5

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL      | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|-----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.26 | Vert(LL)  | n/a  | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.14 | Vert(TL)  | n/a  | -     | n/a    | 999 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00 | 3     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |      |       |        |     | Weight: 11 lb | FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

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

REACTIONS (lb/size) 1=170/4-5-10, 3=170/4-5-10  
Max Horiz 1=79 (LC 5)  
Max Uplift 1=-22 (LC 8), 3=-42 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-72/47, 2-3=-132/64  
BOT CHORD 1-3=-27/20

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 1 and 42 lb uplift at joint 3.



November 15,2021

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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

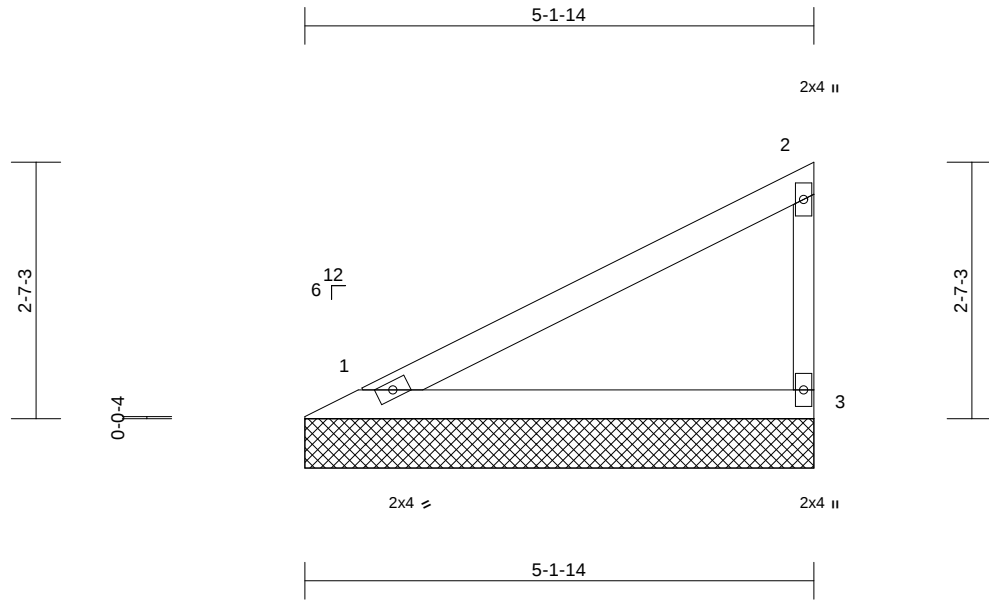
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788190 |
| H374 | V17   | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:23.3

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.38 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.20 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 13 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-2-6 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=201/5-1-14, 3=201/5-1-14  
Max Horiz 1=93 (LC 5)  
Max Uplift 1=-26 (LC 8), 3=-49 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-85/56, 2-3=-156/76  
BOT CHORD 1-3=-32/24

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 1 and 49 lb uplift at joint 3.



November 15,2021

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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



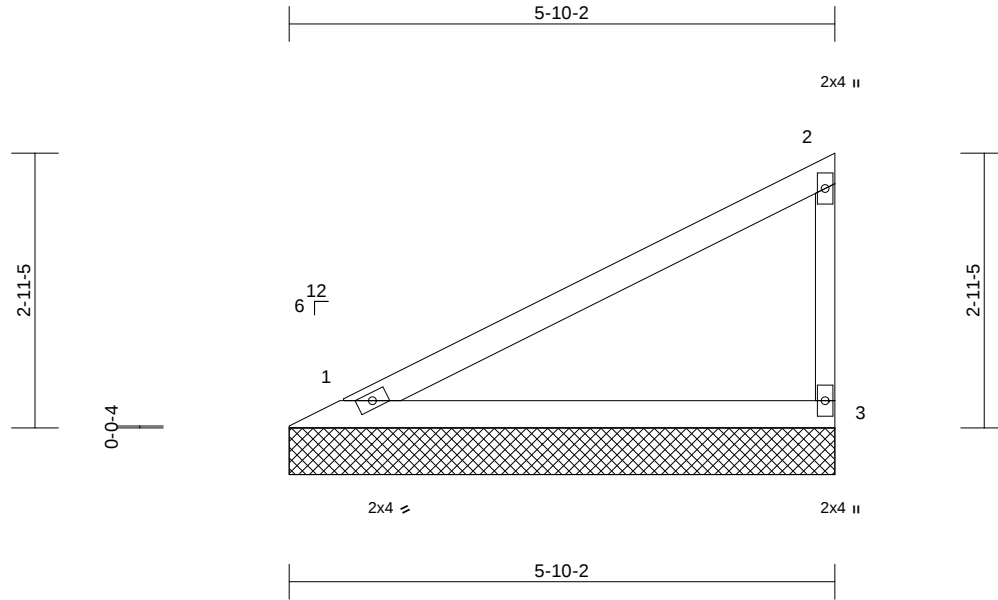
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788191 |
| H374 | V18   | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:24.7

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.52 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.28 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 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

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.

LOAD CASE(S) Standard

#### BRACING

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

REACTIONS (lb/size) 1=232/5-10-2, 3=232/5-10-2  
Max Horiz 1=107 (LC 7)  
Max Uplift 1=-30 (LC 8), 3=-57 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-98/65, 2-3=-180/88  
BOT CHORD 1-3=-37/28

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 1 and 57 lb uplift at joint 3.



November 15, 2021

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

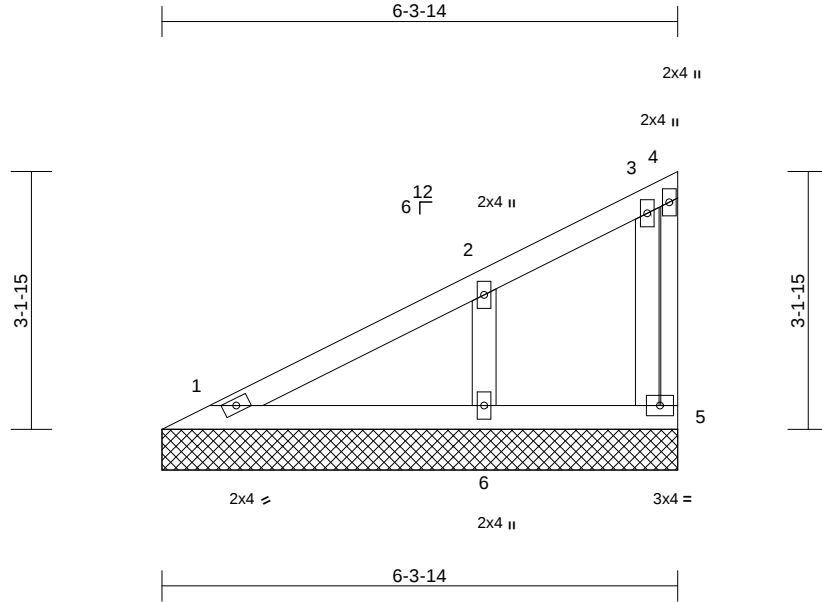
|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788192 |
| H374 | V19   | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:28.2

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.15 | Vert(LL)  | n/a   | -      | 999 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.07 | Vert(TL)  | n/a   | -      | 999 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.03 | Horiz(TL) | 0.00  | 5      | 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    | 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.                                  |

|                            |                                         |
|----------------------------|-----------------------------------------|
| <b>REACTIONS</b> (lb/size) | 1=122/6-3-14, 5=62/6-3-14, 6=316/6-3-14 |
| Max Horiz                  | 1=117 (LC 5)                            |
| Max Uplift                 | 5=-23 (LC 5), 6=-94 (LC 8)              |

|                                                          |  |
|----------------------------------------------------------|--|
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension |  |
|----------------------------------------------------------|--|

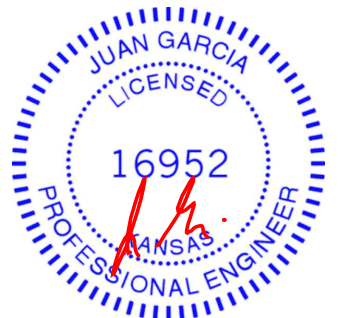
|           |                                                |
|-----------|------------------------------------------------|
| TOP CHORD | 1-2=-91/61, 2-3=-78/31, 3-4=-44/32, 4-5=-16/14 |
| BOT CHORD | 1-6=-39/30, 5-6=-39/30                         |
| WEBS      | 2-6=-245/137, 3-5=-37/19                       |

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 5 and 94 lb uplift at joint 6.
- 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.

**LOAD CASE(S)** Standard



November 15, 2021

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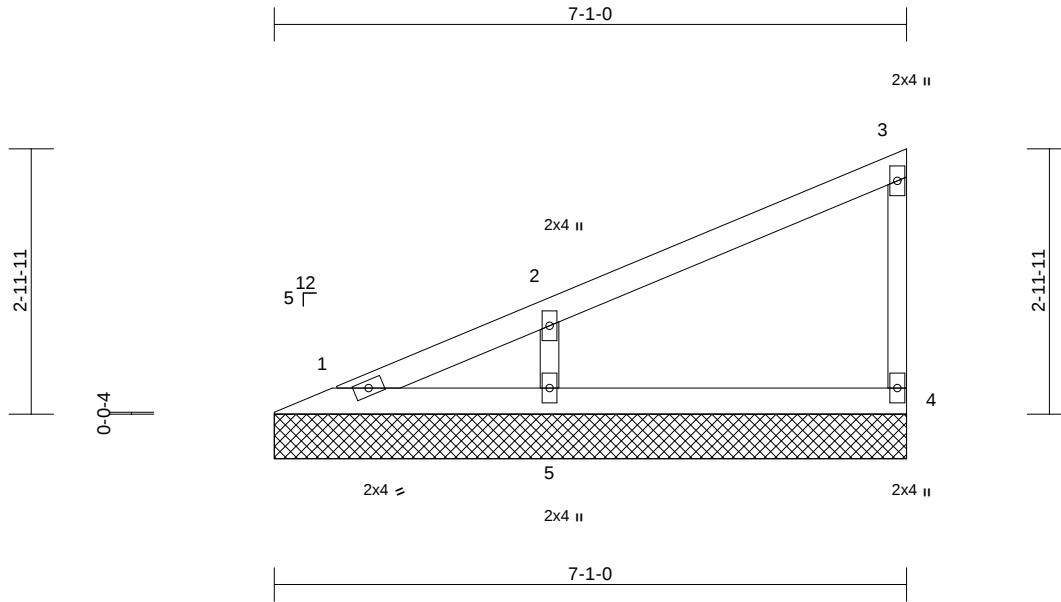
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788193 |
| H374 | V20   | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



|                |       |                 |                 |            |      |             |      |       |        |     |               |             |
|----------------|-------|-----------------|-----------------|------------|------|-------------|------|-------|--------|-----|---------------|-------------|
| <b>Loading</b> | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in   | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.19 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 197/144     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.10 | Vert(TL)    | n/a  | -     | n/a    | 999 |               |             |
| BCLL           | 0.0*  | Rep Stress Incr | YES             | WB         | 0.05 | Horiz(TL)   | 0.00 | 4     | n/a    | n/a |               |             |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P   |      |             |      |       |        |     | Weight: 18 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.                                  |

|                  |            |                                          |
|------------------|------------|------------------------------------------|
| <b>REACTIONS</b> | (lb/size)  | 1=53/7-1-0, 4=142/7-1-0, 5=370/7-1-0     |
|                  | Max Horiz  | 1=115 (LC 5)                             |
|                  | Max Uplift | 4=-27 (LC 8), 5=-98 (LC 8)               |
|                  | Max Grav   | 1=62 (LC 16), 4=142 (LC 1), 5=370 (LC 1) |

#### FORCES

(lb) - Maximum Compression/Maximum Tension

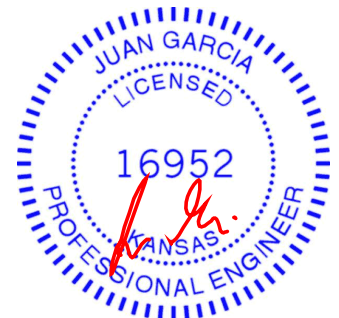
|           |                                     |
|-----------|-------------------------------------|
| TOP CHORD | 1-2=-95/49, 2-3=-90/32, 3-4=-111/46 |
| BOT CHORD | 1-5=-37/28, 4-5=-37/28              |
| WEBS      | 2-5=-288/148                        |

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 4 and 98 lb uplift at joint 5.
- 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.

**LOAD CASE(S)** Standard



November 15, 2021

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**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



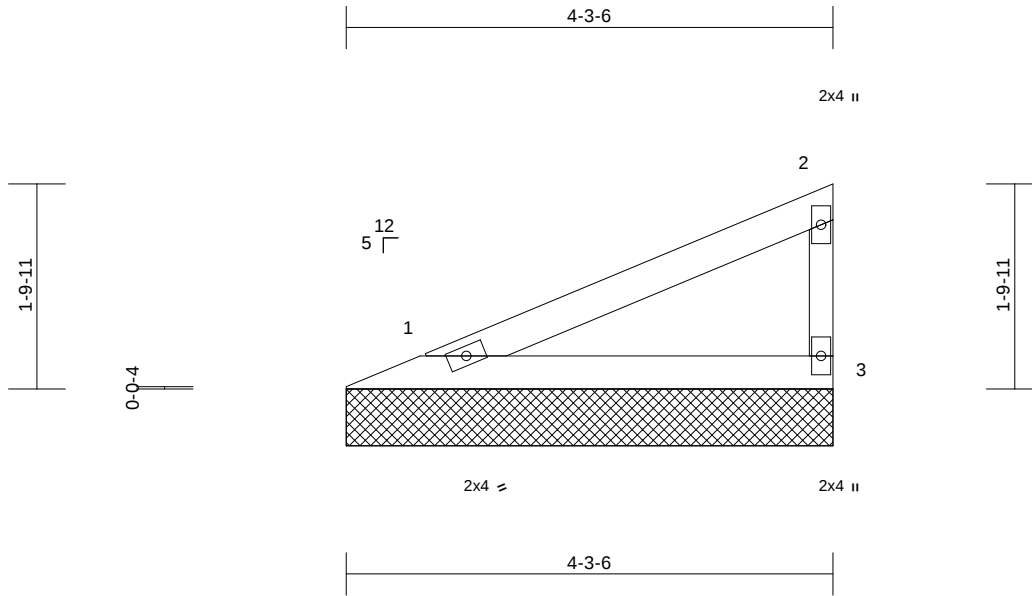
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|      |       |            |     |     |                          |           |
|------|-------|------------|-----|-----|--------------------------|-----------|
| Job  | Truss | Truss Type | Qty | Ply | Lot 74 H3                | I48788194 |
| H374 | V21   | Valley     | 1   | 1   | Job Reference (optional) |           |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Fri Nov 12 11:59:48  
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Page: 1



Scale = 1:20.3

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.22 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.12 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 10 lb FT = 10% |

#### LUMBER

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

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.

LOAD CASE(S) Standard

#### BRACING

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

REACTIONS (lb/size) 1=156/4-3-6, 3=156/4-3-6  
Max Horiz 1=64 (LC 7)  
Max Uplift 1=-23 (LC 8), 3=-36 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-57/38, 2-3=-122/56  
BOT CHORD 1-3=-21/16

#### 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) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1 and 36 lb uplift at joint 3.



November 15, 2021

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

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

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

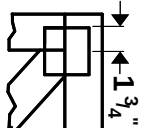
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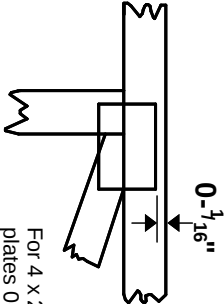
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# Symbols

## 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-  $\frac{3}{16}$ " from outside edge of truss.

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

**\* Plate location details available in MiTek 2012 software or upon request.**

## PLATE SIZE

4 X 4

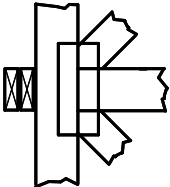
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



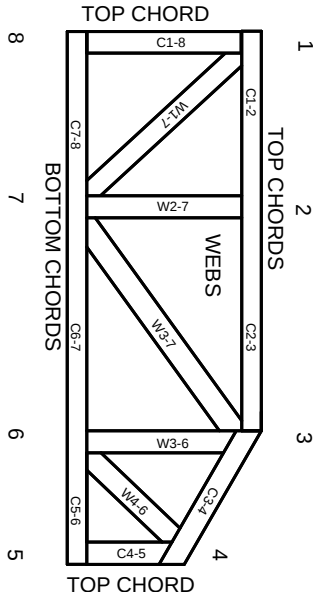
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## 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.