



RE: P230324  
Roof - Osage Lot 68

MiTek USA, Inc.  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314-434-1200

**Site Information:**

Customer: Clover & Hive Project Name: P230324  
Lot/Block: 74 Model: Basswood - Farmhouse  
Address: 2130 SW Rutherford Dr Subdivision: Osage  
City: Lee's Summit State: MO

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6  
Wind Code: ASCE 7-16 Wind Speed: 115 mph  
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 25 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal#     | Truss Name | Date      | No. | Seal#     | Truss Name | Date      |
|-----|-----------|------------|-----------|-----|-----------|------------|-----------|
| 1   | I58951912 | B1         | 6/15/2023 | 21  | I58951932 | V6         | 6/15/2023 |
| 2   | I58951913 | B2         | 6/15/2023 | 22  | I58951933 | V7         | 6/15/2023 |
| 3   | I58951914 | B3         | 6/15/2023 | 23  | I58951934 | V8         | 6/15/2023 |
| 4   | I58951915 | C1         | 6/15/2023 | 24  | I58951935 | V9         | 6/15/2023 |
| 5   | I58951916 | C2         | 6/15/2023 | 25  | I58951936 | V10        | 6/15/2023 |
| 6   | I58951917 | C3         | 6/15/2023 |     |           |            |           |
| 7   | I58951918 | D1         | 6/15/2023 |     |           |            |           |
| 8   | I58951919 | D2         | 6/15/2023 |     |           |            |           |
| 9   | I58951920 | D3         | 6/15/2023 |     |           |            |           |
| 10  | I58951921 | E1         | 6/15/2023 |     |           |            |           |
| 11  | I58951922 | E4         | 6/15/2023 |     |           |            |           |
| 12  | I58951923 | E5         | 6/15/2023 |     |           |            |           |
| 13  | I58951924 | E6         | 6/15/2023 |     |           |            |           |
| 14  | I58951925 | E7         | 6/15/2023 |     |           |            |           |
| 15  | I58951926 | R1         | 6/15/2023 |     |           |            |           |
| 16  | I58951927 | V1         | 6/15/2023 |     |           |            |           |
| 17  | I58951928 | V2         | 6/15/2023 |     |           |            |           |
| 18  | I58951929 | V3         | 6/15/2023 |     |           |            |           |
| 19  | I58951930 | V4         | 6/15/2023 |     |           |            |           |
| 20  | I58951931 | V5         | 6/15/2023 |     |           |            |           |

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

Truss Design Engineer's Name: Nathan Fox

My license renewal date for the state of Missouri is December 31, 2024.

Missouri COA: 001193

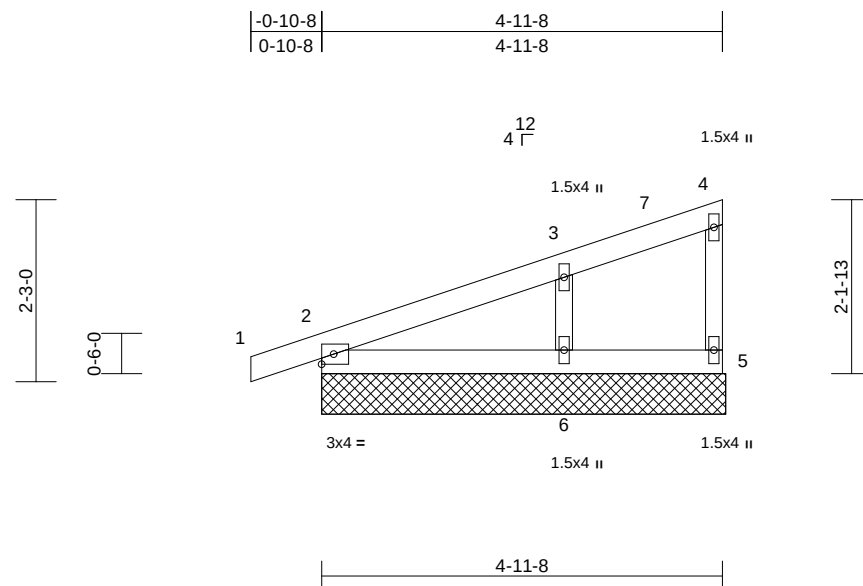
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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.



June 15, 2023

|                           |     |     |                          |           |
|---------------------------|-----|-----|--------------------------|-----------|
| Truss Type                | Qty | Ply | Roof - Osage Lot 68      | I58951912 |
| Monopitch Supported Gable | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:28.5

| 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       | 0.12 | n/a      | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.07 | Vert(CT) | n/a   | -      | n/a | 999           |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.07 | Horz(CT) | n/a   | -      | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |          |       |        |     | Weight: 19 lb | FT = 20% |

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=5-0-0, 5=5-0-0, 6=5-0-0  
 Max Horiz 2=85 (LC 8)  
 Max Uplift 2=-49 (LC 8), 5=-14 (LC 8), 6=-78 (LC 12)  
 Max Grav 2=182 (LC 1), 5=47 (LC 1), 6=269 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/6, 2-3=-141/58, 3-4=-29/8, 4-5=-37/47  
 BOT CHORD 2-6=0/0, 5-6=0/0  
 WEBS 3-6=-205/304

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-10-4 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 5, 49 lb uplift at joint 2 and 78 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



June 15, 2023

**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



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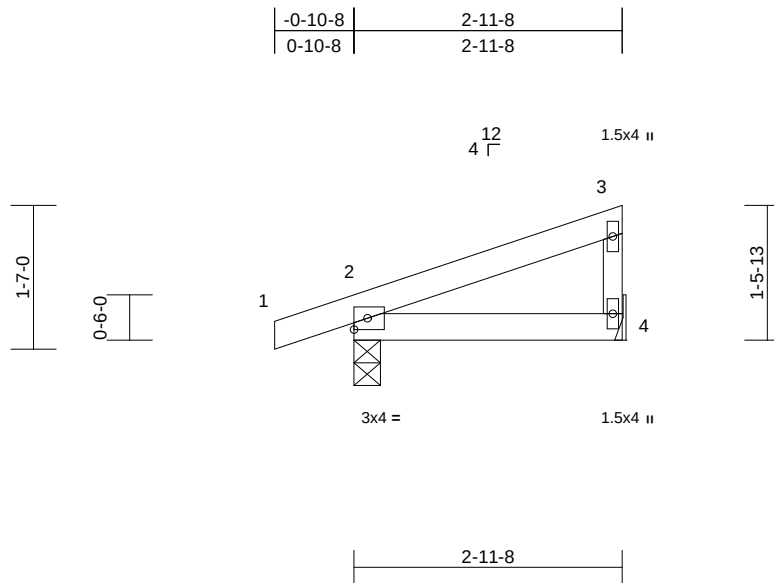
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|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951914 |
| Monopitch  | 7   | 1   | Job Reference (optional) |           |

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| Scale = 1:25.4 |       |                 |                 |          |      |          |       |       |        |     |               |          |
|----------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| 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       | 0.13 | Vert(LL) | 0.00  | 2-4   | >999   | 240 | MT20          | 197/144  |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC       | 0.08 | Vert(CT) | -0.01 | 2-4   | >999   | 180 |               |          |
| BCLL           | 0.0   | Rep Stress Incr | YES             | WB       | 0.00 | Horz(CT) | n/a   | -     | n/a    | n/a |               |          |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |          |       |       |        |     | Weight: 11 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 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 (size) 2=0-3-8, 4= Mechanical  
Max Horiz 2=56 (LC 8)  
Max Uplift 2=-72 (LC 8), 4=-32 (LC 12)  
Max Grav 2=207 (LC 1), 4=108 (LC 1)

FORCES (lb) - Maximum Compression/Maximum  
Tension

TOP CHORD 1-2=0/6, 2-3=-61/28, 3-4=-81/124  
BOT CHORD 2-4=0/0

#### NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) zone; cantilever left  
and right exposed ; end vertical left exposed;C-C for  
members and forces & MWFRS for reactions shown;  
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.
- Bearings are assumed to be: Joint 2 SP No.2 crushing  
capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 32 lb uplift at joint  
4 and 72 lb uplift at joint 2.
- 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



June 15, 2023

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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

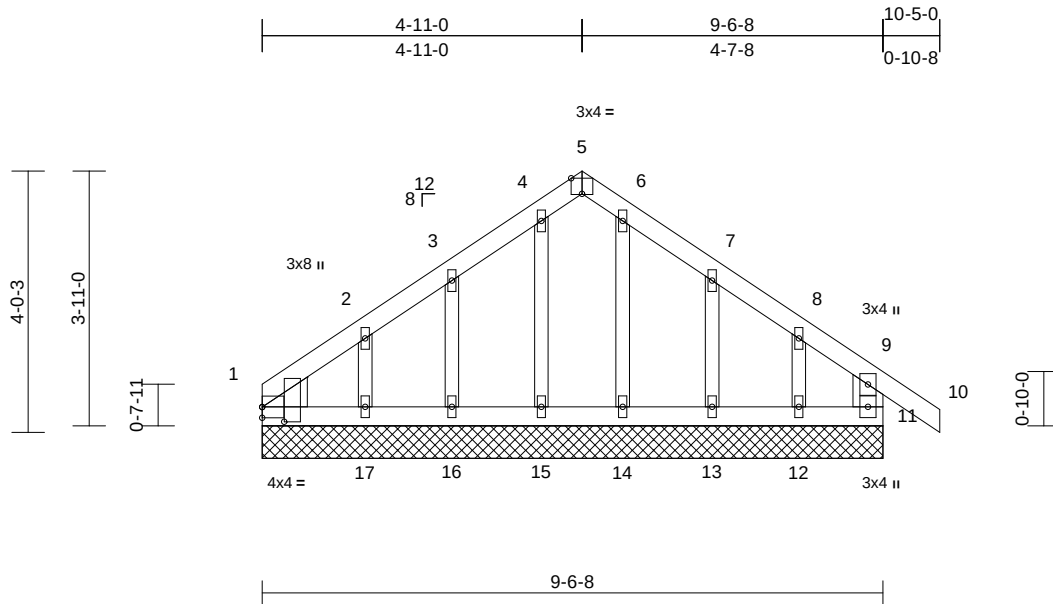


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|                         |     |     |                          |           |
|-------------------------|-----|-----|--------------------------|-----------|
| Truss Type              | Qty | Ply | Roof - Osage Lot 68      | I58951915 |
| Common Structural Gable | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:35.4

Plate Offsets (X, Y): [1:0-2-11,0-4-1], [5:0-2-0,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       | 0.10 | Vert(LL) | n/a   | -      | n/a | 999    | MT20    |
| TCDL                   | 10.0  | Lumber DOL      | 1.15            | BC       | 0.04 | Vert(CT) | n/a   | -      | n/a | 999    | 244/190 |
| BCLL                   | 0.0   | Rep Stress Incr | YES             | WB       | 0.03 | Horz(CT) | 0.00  | 11     | n/a | n/a    |         |
| BCDL                   | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |     |        |         |
| Weight: 45 lb FT = 20% |       |                 |                 |          |      |          |       |        |     |        |         |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x6 SPF No.2  
OTHERS 2x3 SPF No.2  
WEDGE Left: 2x6 SPF No.2

#### BRACING

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

**REACTIONS** (size) 1=9-6-8, 11=9-6-8, 12=9-6-8, 13=9-6-8, 14=9-6-8, 15=9-6-8, 16=9-6-8, 17=9-6-8  
Max Horiz 1=117 (LC 11)  
Max Uplift 1=-30 (LC 8), 11=-4 (LC 9), 12=-77 (LC 13), 13=-60 (LC 13), 15=-9 (LC 9), 16=-57 (LC 12), 17=-84 (LC 12)  
Max Grav 1=85 (LC 20), 11=160 (LC 1), 12=94 (LC 20), 13=139 (LC 20), 14=116 (LC 1), 15=131 (LC 19), 16=119 (LC 19), 17=170 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 5-6=-68/99, 6-7=-69/100, 7-8=-29/37, 8-9=-54/30, 9-10=0/43, 1-2=-101/97, 2-3=-67/65, 3-4=-68/99, 4-5=-68/99, 9-11=-138/68  
BOT CHORD 1-17=-46/98, 16-17=-46/98, 15-16=-46/98, 14-15=-46/98, 13-14=-46/98, 12-13=-46/98, 11-12=-46/98  
WEBS 4-15=-104/24, 6-14=-91/1, 2-17=-131/116, 8-12=-95/89, 3-16=-96/96, 7-13=-110/102

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 4-11-0, Exterior(2R) 4-11-0 to 9-11-0, Interior (1) 9-11-0 to 10-5-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) All plates are 1.5x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2'-0" oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 11, 30 lb uplift at joint 1, 9 lb uplift at joint 15, 84 lb uplift at joint 17, 77 lb uplift at joint 12, 57 lb uplift at joint 16 and 60 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.

**LOAD CASE(S)** Standard



June 15, 2023

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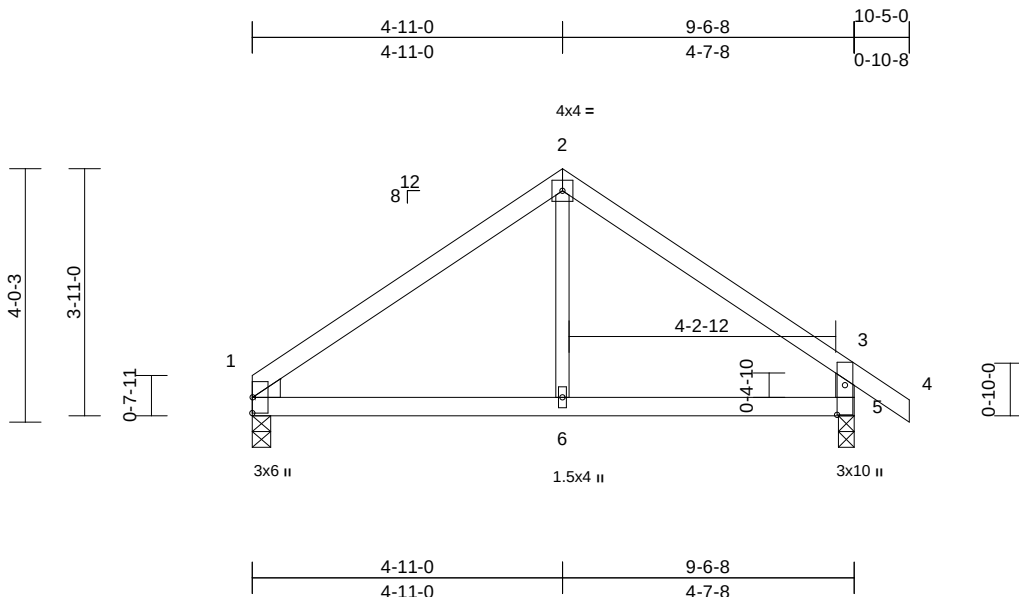
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|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951916 |
| Common     | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:36.5

Plate Offsets (X, Y): [5:0-5-10,0-1-8]

| 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       | 0.42 | Vert(LL) | 0.06  | 1-6    | >999 | 240    | MT20    |
| TCDL                   | 10.0  | Lumber DOL      | 1.15            | BC       | 0.54 | Vert(CT) | -0.04 | 1-6    | >999 | 180    | 197/144 |
| BCLL                   | 0.0   | Rep Stress Incr | YES             | WB       | 0.11 | Horz(CT) | 0.00  | 5      | n/a  | n/a    |         |
| BCDL                   | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |         |
| Weight: 37 lb FT = 20% |       |                 |                 |          |      |          |       |        |      |        |         |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 5-3:2x4 SP No.2  
WEDGE Left: 2x4 SPF No.3

#### BRACING

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

#### REACTIONS

(size) 1=0-3-8, 5=0-3-0  
Max Horiz 1=116 (LC 11)  
Max Uplift 1=-57 (LC 12), 5=-82 (LC 13)  
Max Grav 1=412 (LC 1), 5=492 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-3=-452/479, 3-4=0/40, 1-2=-465/468, 3-5=-445/419  
BOT CHORD 1-6=-266/295, 5-6=-266/295  
WEBS 2-6=-342/207

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-11-0, Exterior(2R) 4-11-0 to 9-11-0, Interior (1) 9-11-0 to 10-5-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 5 and 57 lb uplift at joint 1.
- 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



June 15, 2023

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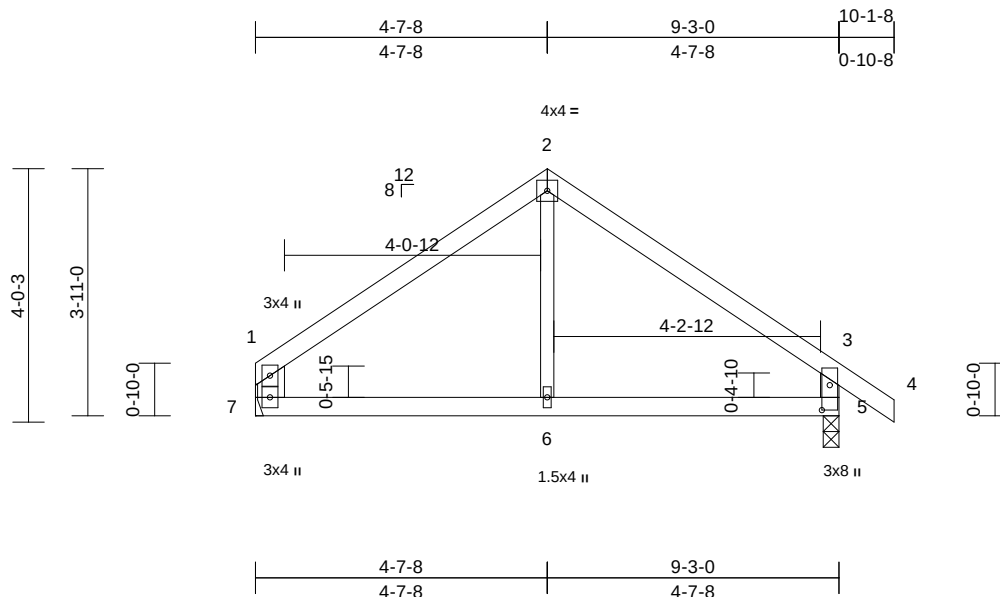
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



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Scale = 1:36.5

Plate Offsets (X, Y): [5:0-4-12,0-1-8]

| 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       | 0.32 | Vert(LL) | 0.03  | 5-6    | >999 | 240    | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.19 | Vert(CT) | -0.03 | 5-6    | >999 | 180    |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.09 | Horz(CT) | 0.00  | 5      | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |      |        | Weight: 37 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 7-1:2x6 SPF No.2,  
5-3:2x4 SP No.2

#### BRACING

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

#### REACTIONS

(size) 5=0-3-0, 7= Mechanical  
Max Horiz 7=-122 (LC 8)  
Max Uplift 5=-81 (LC 13), 7=-54 (LC 12)  
Max Grav 5=475 (LC 1), 7=395 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 2-3=-411/435, 3-4=0/40, 1-2=-404/434,  
1-7=-339/330, 3-5=-423/401  
BOT CHORD 6-7=-230/259, 5-6=-230/259  
WEBS 2-6=-298/175

#### 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=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) 0-2-12 to 4-7-8,  
Exterior(2R) 4-7-8 to 9-7-8, Interior (1) 9-7-8 to 10-1-8  
zone; cantilever left and right exposed; end vertical left  
and right exposed; porch left and right exposed; C-C for  
members and forces & MWFRS for reactions shown;  
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) Bearings are assumed to be: , Joint 5 SP No.2 crushing  
capacity of 565 psi.
- 5) Refer to girder(s) for truss to truss connections.

- 6) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 81 lb uplift at joint  
5 and 54 lb uplift at joint 7.
- 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



June 15, 2023

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

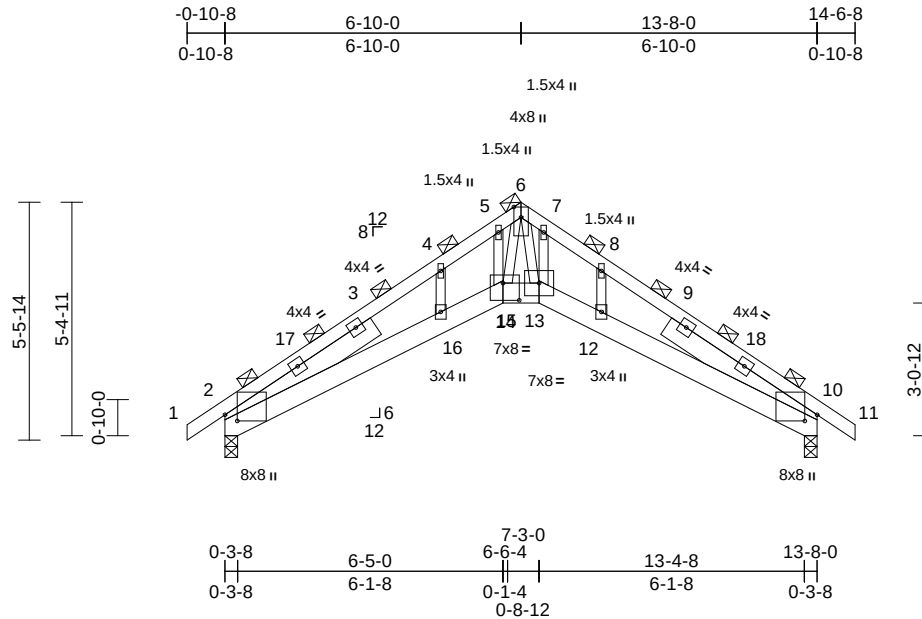
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



Scale = 1:53.2

Plate Offsets (X, Y): [2:0-1-12,0-3-6], [10:0-1-12,0-3-6], [15:0-4-8,0-4-12]

| Loading     | (psf) | Spacing         | 4-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.55 | Vert(LL) | -0.11 | 15-16  | >999 | 240    | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.75 | Vert(CT) | -0.20 | 15-16  | >785 | 180    |               |          |
| BCLL        | 0.0   | Rep Stress Incr | NO              | WB       | 0.49 | Horz(CT) | 0.24  | 10     | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        | Weight: 77 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SPF No.2 \*Except\* 15-13:2x6 SP 2400F 2.0E  
WEBS 2x3 SPF No.2  
OTHERS 2x3 SPF No.2  
SLIDER Left 2x6 SPF No.2 -- 4-1-3, Right 2x6 SPF No.2 -- 4-1-3

#### BRACING

TOP CHORD 2-0-0 oc purlins (3-2-7 max.)  
(Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=287 (LC 11)  
Max Uplift 2=-219 (LC 12), 10=-219 (LC 13)  
Max Grav 2=1344 (LC 1), 10=1344 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/19, 2-4=-3165/323, 4-5=-2827/528, 5-6=-2667/579, 6-7=-2685/550, 7-8=-2859/499, 8-10=-3192/316, 10-11=0/19  
BOT CHORD 2-16=-247/2683, 15-16=-338/2767, 14-15=-200/2406, 13-14=-93/2122, 12-13=-135/2716, 10-12=-106/2647  
WEBS 6-13=-426/1370, 6-14=-574/1567, 5-15=-3/188, 7-13=-116/265, 4-16=-139/339, 8-12=-169/358

#### 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; BC DL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-10-0, Exterior(2R) 6-10-0 to 11-10-0, Interior (1) 11-10-0 to 14-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable studs spaced at 1-4-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- 7) Bearing at joint(s) 2, 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 219 lb uplift at joint 2 and 219 lb uplift at joint 10.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



June 15, 2023

**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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Truss Type

Roof Special Structural Gable

Qty

Ply

Roof - Osage Lot 68

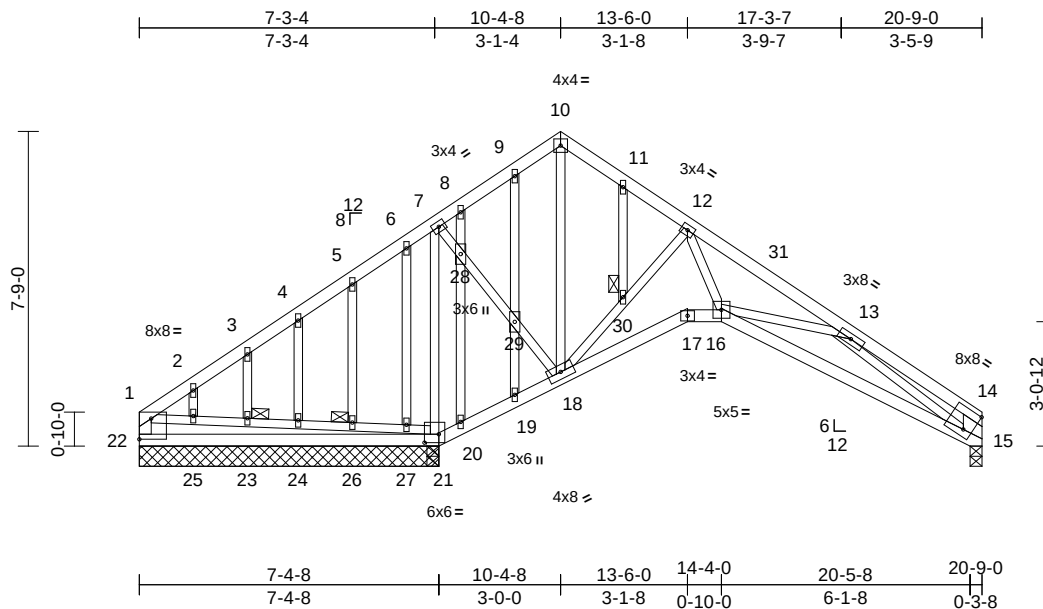
I58951919

Job Reference (optional)

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jun 14 14:50:48

Page: 1

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Scale = 1:56.7

Plate Offsets (X, Y): [1:Edge,0-6-2], [14:0-2-8,0-6-0], [21:0-4-4,0-2-8]

| 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       | 0.51 | Vert(LL) | -0.09 | 21-22  | >999 | 240    | 197/144 |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.47 | Vert(CT) | -0.17 | 21-22  | >500 | 180    |         |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.60 | Horz(CT) | 0.07  | 15     | n/a  | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |         |
| Weight: 124 lb FT = 20% |       |                 |                 |          |      |          |       |        |      |        |         |

#### LUMBER

|           |                                                            |
|-----------|------------------------------------------------------------|
| TOP CHORD | 2x4 SP No.2                                                |
| BOT CHORD | 2x4 SP No.2                                                |
| WEBS      | 2x3 SPF No.2 *Except* 22-1:2x4 SP No.2, 15-14:2x6 SPF No.2 |
| OTHERS    | 2x3 SPF No.2                                               |

#### BRACING

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 6-0-0 oc bracing.                                   |
| JOINTS    | 1 Brace at Jt(s): 23, 26, 30                                                          |

|           |            |                                               |
|-----------|------------|-----------------------------------------------|
| REACTIONS | (size)     | 15=0-3-8, 21=7-4-8, 22=7-4-8                  |
|           | Max Horiz  | 22=217 (LC 11)                                |
|           | Max Uplift | 15=84 (LC 13), 21=141 (LC 12), 22=242 (LC 26) |
|           | Max Grav   | 15=367 (LC 1), 21=1549 (LC 1), 22=128 (LC 25) |

#### FORCES

|           |                                                                                                                                                                                                         |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension                                                                                                                                                              |
| TOP CHORD | 1-2=-73/574, 2-3=-85/606, 3-4=-63/619, 4-5=-50/658, 5-6=-27/698, 6-7=-13/643, 7-8=-46/219, 8-9=-1/183, 9-10=0/192, 10-11=0/231, 11-12=-5/171, 12-13=-482/49, 13-14=-221/49, 1-22=-58/309, 14-15=-193/60 |
| BOT CHORD | 21-22=-293/534, 20-21=-658/155, 19-20=-607/182, 18-19=-594/194, 17-18=-19/226, 16-17=-8/203, 15-16=-192/688                                                                                             |

#### WEBS

7-21=-856/219, 12-16=0/461, 1-25=-888/293, 23-25=-883/290, 23-24=-885/292, 24-26=-886/292, 26-27=-888/293, 21-27=-913/293, 13-15=-620/207, 7-28=0/549, 28-29=0/613, 18-29=0/586, 10-18=-304/0, 18-30=-517/132, 12-30=-517/132, 13-16=-309/285, 3-23=-46/33, 4-24=-23/15, 2-25=-48/83, 5-26=-36/30, 6-27=-152/9, 8-28=-115/50, 20-28=-132/0, 9-29=-54/18, 19-29=-21/11, 11-30=0/3

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-2-15, Interior (1) 5-2-15 to 10-4-8, Exterior(2R) 10-4-8 to 15-4-8, Interior (1) 15-4-8 to 20-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1.5x4 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 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 15 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 242 lb uplift at joint 22, 141 lb uplift at joint 21 and 84 lb uplift at joint 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



June 15, 2023

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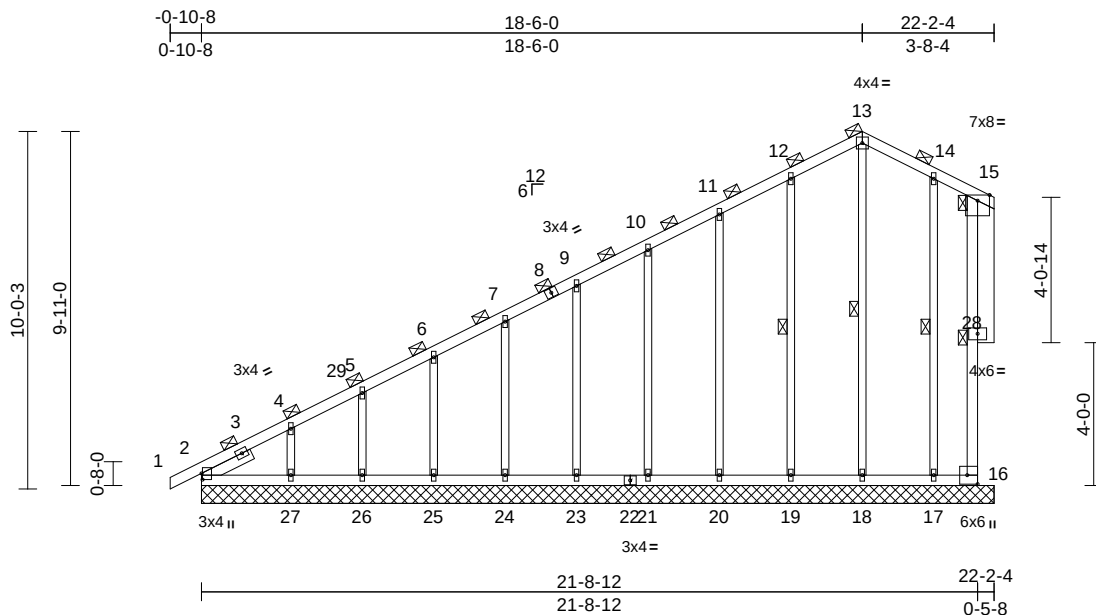
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017





Scale = 1:64.5

Plate Offsets (X, Y): [2:0-2-1,0-0-5], [16:Edge,0-3-8]

| Loading                 | (psf) | Spacing         | 4-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.87 | Vert(LL) | n/a   | -      | n/a | 999    | 244/190 |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.51 | Vert(CT) | n/a   | -      | n/a | 999    |         |
| BCLL                    | 0.0   | Rep Stress Incr | NO              | WB       | 0.40 | Horz(CT) | 0.01  | 16     | n/a | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |     |        |         |
| Weight: 138 lb FT = 20% |       |                 |                 |          |      |          |       |        |     |        |         |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP 1650F 1.5E  
OTHERS 2x3 SPF No.2 \*Except\* 28-15:2x6 SPF No.2  
SLIDER Left 2x4 SP No.2 -- 1-6-7

**BRACING**  
TOP CHORD 2-0-0 oc purlins (5-6-9 max.), except end verticals  
(Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD Rigid ceiling directly applied or 9-7-14 oc bracing.  
WEBS 1 Row at midpt 13-18, 12-19, 14-17, 15-16

**REACTIONS** (size) 2=22-2-4, 16=22-2-4, 17=22-2-4, 18=22-2-4, 19=22-2-4, 20=22-2-4, 21=22-2-4, 23=22-2-4, 24=22-2-4, 25=22-2-4, 26=22-2-4, 27=22-2-4  
Max Horiz 2=759 (LC 9)  
Max Uplift 2=-36 (LC 8), 16=-91 (LC 8), 17=-77 (LC 13), 18=-126 (LC 11), 19=-123 (LC 12), 20=-126 (LC 12), 21=-122 (LC 12), 23=-123 (LC 12), 24=-121 (LC 12), 25=-129 (LC 12), 26=-91 (LC 12), 27=-261 (LC 12)  
Max Grav 2=475 (LC 26), 16=144 (LC 20), 17=310 (LC 20), 18=370 (LC 19), 19=377 (LC 25), 20=359 (LC 25), 21=360 (LC 1), 23=360 (LC 25), 24=359 (LC 1), 25=365 (LC 25), 26=341 (LC 1), 27=432 (LC 25)

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

**TOP CHORD** 1-2=0/11, 2-4=-990/650, 4-5=-779/549, 5-6=-690/525, 6-7=-578/485, 7-9=-471/448, 9-10=-397/410, 10-11=-365/426, 11-12=-365/540, 12-13=-396/635, 13-14=-395/613, 14-15=-450/603, 15-16=-388/528  
**BOT CHORD** 2-27=-305/391, 26-27=-305/391, 25-26=-305/391, 24-25=-305/391, 23-24=-305/391, 21-23=-305/391, 20-21=-305/391, 19-20=-305/391, 18-19=-305/391, 17-18=-305/391, 16-17=-305/391  
**WEBS** 13-18=-377/221, 12-19=-298/197, 11-20=-279/206, 10-21=-280/193, 9-23=-280/193, 7-24=-280/193, 6-25=-282/202, 5-26=-270/202, 4-27=-326/415, 14-17=-332/375

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-1-8, Exterior(2N) 4-1-8 to 18-6-0, Corner(3E) 18-6-0 to 21-8-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1.5x4 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.

- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 91 lb uplift at joint 16, 126 lb uplift at joint 18, 123 lb uplift at joint 19, 126 lb uplift at joint 20, 122 lb uplift at joint 21, 123 lb uplift at joint 23, 121 lb uplift at joint 24, 129 lb uplift at joint 25, 91 lb uplift at joint 26, 261 lb uplift at joint 27, 77 lb uplift at joint 17 and 36 lb uplift at joint 2.
- 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



June 15,2023

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

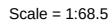
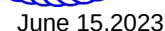
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

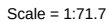
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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Chesterfield, MO 63017

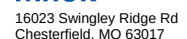
LOAD CASE(S) Standard





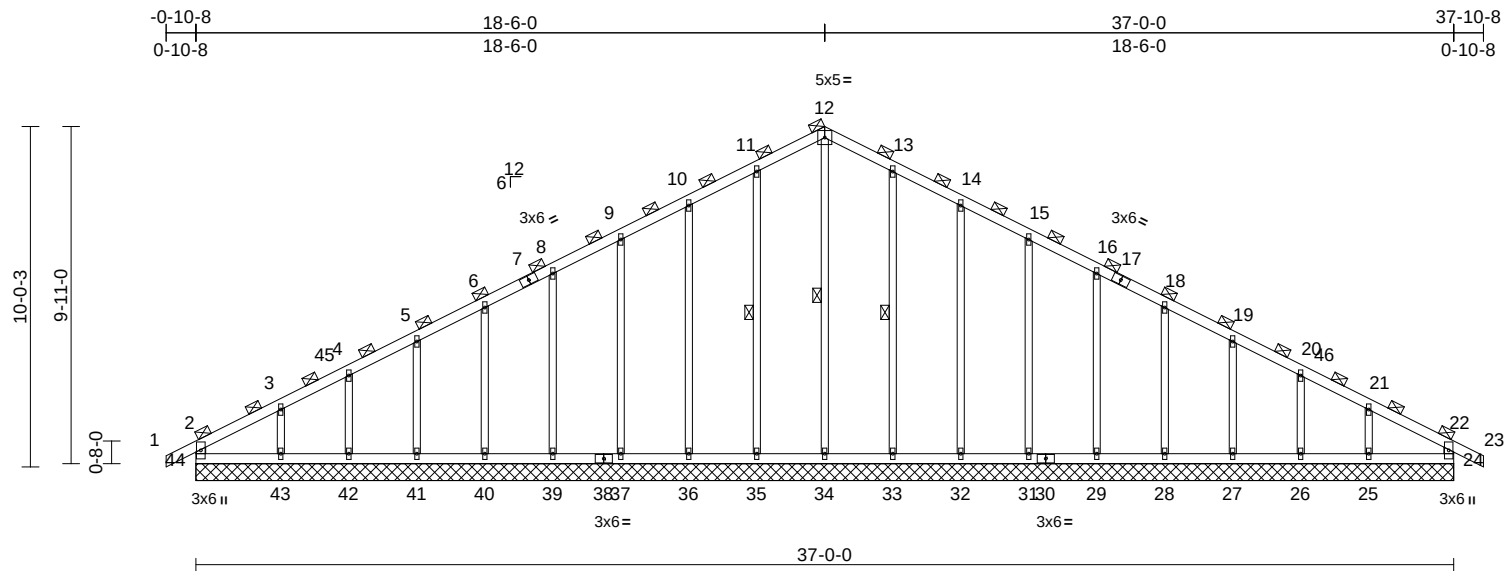
16023 Swingley Ridge Rd  
Chesterfield, MO 63017





|                        |     |     |                          |
|------------------------|-----|-----|--------------------------|
| Truss Type             | Qty | Ply | Roof - Osage Lot 68      |
| Common Supported Gable | 1   | 1   | Job Reference (optional) |
| I58951925              |     |     |                          |

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jun 14 14:50:51 Page: 1  
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Scale = 1:67.8  
Plate Offsets (X, Y): [17:0-0-0,0-0-0]

| Loading                 | (psf) | Spacing         | 4-0-0           | 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       | 0.16 | Vert(CT) | n/a   | -      | n/a | 999    | 244/190 |
| BCLL                    | 0.0   | Rep Stress Incr | NO              | WB       | 0.40 | Horz(CT) | 0.02  | 24     | n/a | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |     |        |         |
| Weight: 191 lb FT = 20% |       |                 |                 |          |      |          |       |        |     |        |         |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2  
OTHERS 2x3 SPF No.2

**BRACING**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals  
(Switched from sheathed: Spacing > 2-8-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 12-34, 11-35, 13-33

**REACTIONS** (size)  
24=37-0-0, 25=37-0-0, 26=37-0-0,  
27=37-0-0, 28=37-0-0, 29=37-0-0,  
31=37-0-0, 32=37-0-0, 33=37-0-0,  
34=37-0-0, 35=37-0-0, 36=37-0-0,  
37=37-0-0, 39=37-0-0, 40=37-0-0,  
41=37-0-0, 42=37-0-0, 43=37-0-0,  
44=37-0-0  
Max Horiz 44=334 (LC 17)  
Max Uplift 24=20 (LC 9), 25=225 (LC 13),  
26=92 (LC 13), 27=129 (LC 13),  
28=121 (LC 13), 29=123 (LC 13),  
31=120 (LC 13), 32=135 (LC 13),  
33=99 (LC 13), 35=105 (LC 12),  
36=132 (LC 12), 37=120 (LC 12),  
39=123 (LC 12), 40=120 (LC 12),  
41=132 (LC 12), 42=83 (LC 12),  
43=254 (LC 12), 44=78 (LC 8)  
Max Grav 24=375 (LC 1), 25=397 (LC 26),  
26=350 (LC 1), 27=363 (LC 26),  
28=359 (LC 1), 29=360 (LC 26),  
31=360 (LC 1), 32=359 (LC 26),  
33=376 (LC 26), 34=431 (LC 22),  
35=376 (LC 25), 36=359 (LC 25),  
37=360 (LC 1), 39=360 (LC 25),  
40=359 (LC 1), 41=363 (LC 25),  
42=350 (LC 1), 43=397 (LC 25),  
44=375 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
**TOP CHORD** 2-44=-331/145, 1-2=0/64, 2-3=-395/168,  
3-4=-263/184, 4-5=-207/232, 5-6=-163/287,  
6-8=-139/343, 8-9=-171/424, 9-10=-208/531,  
10-11=-248/646, 11-12=-282/738,  
12-13=-282/738, 13-14=-248/646,  
14-15=-208/531, 15-16=-171/424,  
16-18=-133/316, 18-19=-96/209,  
19-20=-128/127, 20-21=-177/81,  
21-22=-285/79, 22-23=0/64, 22-24=-331/154  
**BOT CHORD** 43-44=-78/318, 42-43=-78/318,  
41-42=-78/318, 40-41=-78/318,  
39-40=-78/318, 37-39=-78/318,  
36-37=-78/318, 35-36=-78/318,  
34-35=-78/318, 33-34=-78/318,  
32-33=-78/318, 31-32=-78/318,  
29-31=-78/318, 28-29=-78/318,  
27-28=-78/318, 26-27=-78/318,  
25-26=-78/318, 24-25=-78/318  
**WEBS** 12-34=-472/99, 11-35=-296/158,  
10-36=-279/210, 9-37=-280/190,  
8-39=-280/193, 6-40=-280/193,  
5-41=-281/197, 4-42=-275/205,  
3-43=-302/378, 13-33=-296/158,  
14-32=-279/210, 15-31=-280/190,  
16-29=-280/193, 18-28=-280/193,  
19-27=-281/197, 20-26=-275/206,  
21-25=-302/375

**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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-1-8, Exterior(2N) 4-1-8 to 18-6-0, Corner(3R) 18-6-0 to 23-6-0, Exterior(2N) 23-6-0 to 37-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1.5x4 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



June 15,2023

Continued on page 2

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



|                          |     |     |                     |
|--------------------------|-----|-----|---------------------|
| Truss Type               | Qty | Ply | Roof - Osage Lot 68 |
| Common Supported Gable   | 1   | 1   | I58951925           |
| Job Reference (optional) |     |     |                     |

Premier Building Supply (Springhill, KS) Spring Hills, KS - 66083,

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- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 44, 20 lb uplift at joint 24, 105 lb uplift at joint 35, 132 lb uplift at joint 36, 120 lb uplift at joint 37, 123 lb uplift at joint 39, 120 lb uplift at joint 40, 132 lb uplift at joint 41, 83 lb uplift at joint 42, 254 lb uplift at joint 43, 99 lb uplift at joint 33, 135 lb uplift at joint 32, 120 lb uplift at joint 31, 123 lb uplift at joint 29, 121 lb uplift at joint 28, 129 lb uplift at joint 27, 92 lb uplift at joint 26 and 225 lb uplift at joint 25.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

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

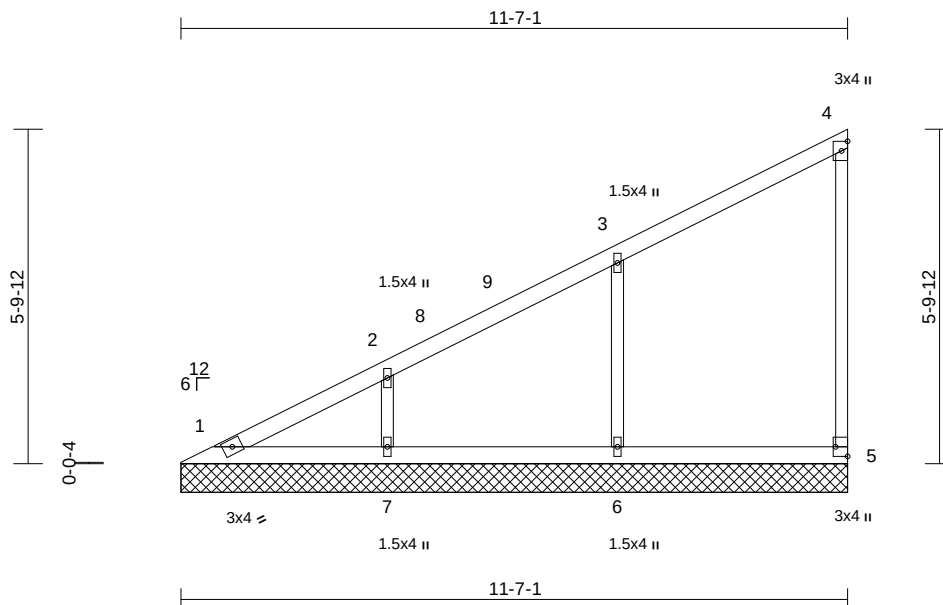


16023 Swingley Ridge Rd  
Chesterfield, MO 63017



16023 Swingley Ridge Rd  
Chesterfield, MO 63017





Scale = 1:40.1

Plate Offsets (X, Y): [5: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       | 0.39 | Vert(LL)  | n/a   | -      | n/a | 999           | MT20     |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.13 | Vert(TL)  | n/a   | -      | n/a | 999           | 244/190  |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.10 | Horiz(TL) | 0.00  | 5      | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |               |          |
|             |       |                 |                 |          |      |           |       |        |     | Weight: 43 lb | FT = 20% |

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 1=11-7-1, 5=11-7-1, 6=11-7-1, 7=11-7-1  
Max Horiz 1=243 (LC 9)  
Max Uplift 5=-39 (LC 9), 6=-135 (LC 12), 7=-116 (LC 12)  
Max Grav 1=132 (LC 20), 5=141 (LC 1), 6=398 (LC 1), 7=340 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-385/228, 2-3=-294/188, 3-4=-142/118, 4-5=-109/121  
BOT CHORD 1-7=-110/120, 6-7=-110/120, 5-6=-110/120  
WEBS 3-6=-311/291, 2-7=-260/229

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9, Interior (1) 5-7-9 to 11-6-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 5, 135 lb uplift at joint 6 and 116 lb uplift at joint 7.
- 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



June 15, 2023

**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

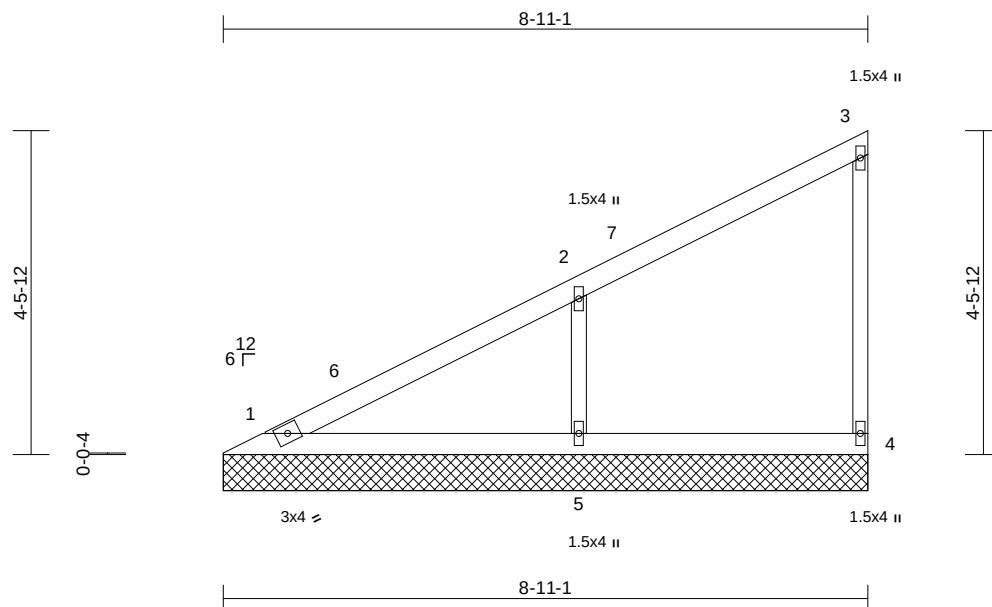


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951929 |
| Valley     | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:31.9

| 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       | 0.34 | 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    | 244/190                |
| 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-P |      |           |       |        |     |        | Weight: 32 lb FT = 20% |

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 1=8-11-1, 4=8-11-1, 5=8-11-1  
Max Horiz 1=183 (LC 9)  
Max Uplift 4=-32 (LC 9), 5=-157 (LC 12)  
Max Grav 1=153 (LC 20), 4=126 (LC 1), 5=463 (LC 1)

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

TOP CHORD 1-2=-308/189, 2-3=-131/103, 3-4=-105/127  
BOT CHORD 1-5=-85/92, 4-5=-85/92  
WEBS 2-5=-360/350

#### NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9,  
Interior (1) 5-7-9 to 8-10-5 zone; cantilever left and right  
exposed; end vertical left and right exposed; C-C for  
members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.

- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 32 lb uplift at joint  
4 and 157 lb uplift at joint 5.
- This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



June 15, 2023

**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



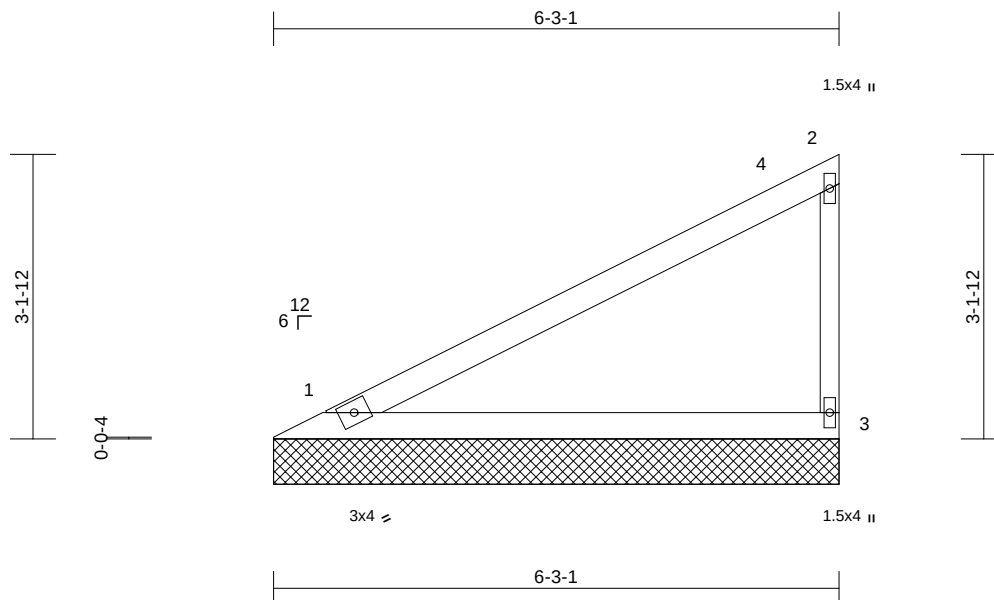
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951930 |
| Valley     | 1   | 1   | Job Reference (optional) |           |

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Page: 1



Scale = 1:25.5

| 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       | 0.73 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.39 | 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: 21 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP 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 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS (size)

1=6-3-1, 3=6-3-1  
Max Horiz 1=124 (LC 9)  
Max Uplift 1=-39 (LC 12), 3=-70 (LC 12)  
Max Grav 1=250 (LC 1), 3=250 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-170/115, 2-3=-195/241  
BOT CHORD 1-3=-57/62

#### NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9,  
Interior (1) 5-7-9 to 6-2-5 zone; cantilever left and right  
exposed; end vertical left and right exposed; C-C for  
members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 39 lb uplift at joint  
1 and 70 lb uplift at joint 3.



June 15, 2023

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

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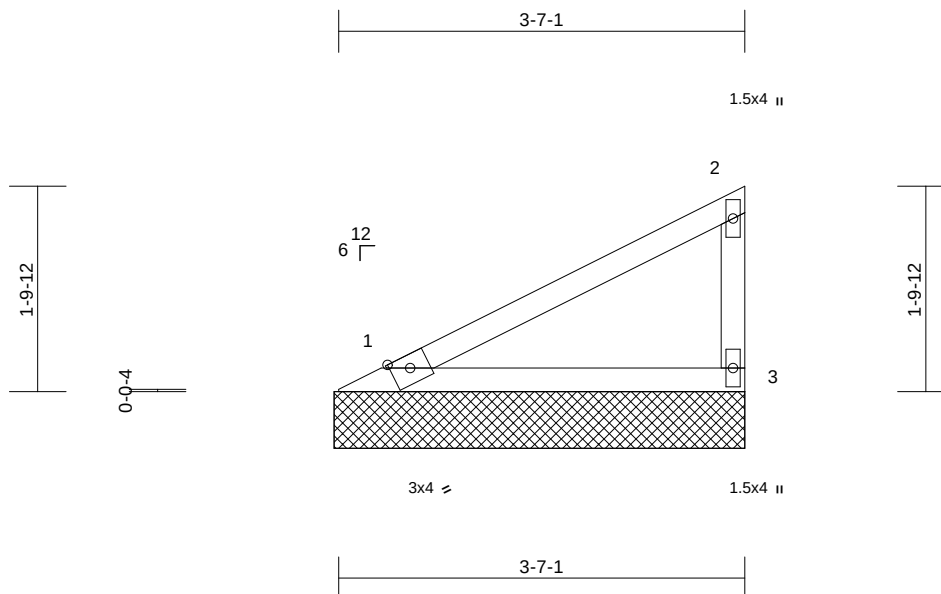
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951931 |
| Valley     | 1   | 1   | Job Reference (optional) |           |

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Scale = 1:20.4

| 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       | 0.35 | 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) | n/a   | -      | n/a | n/a    |              |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 7 lb |
|             |       |                 |                 |          |      |           |       |        |     |        | FT = 20%     |

#### LUMBER

TOP CHORD 2x3 SPF No.2  
BOT CHORD 2x3 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 3-7-9 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS (size) 1=3-7-9, 3=3-7-9

Max Horiz 1=67 (LC 12)  
Max Uplift 1=-13 (LC 12), 3=-47 (LC 12)  
Max Grav 1=138 (LC 1), 3=138 (LC 1)

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

TOP CHORD 1-2=-72/39, 2-3=-107/128  
BOT CHORD 1-3=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1 and 47 lb uplift at joint 3.



June 15, 2023

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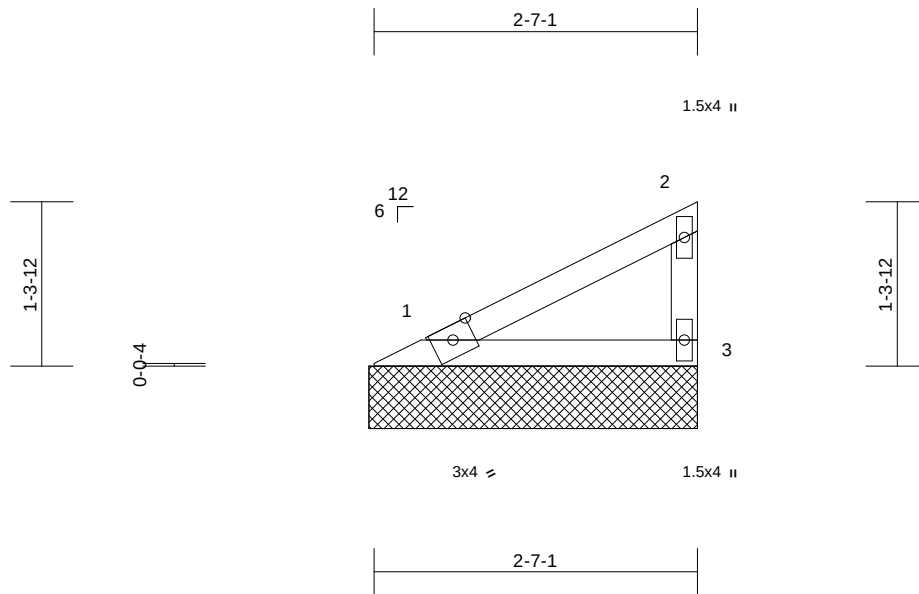
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951932 |
| Valley     | 1   | 1   | Job Reference (optional) |           |

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jun 14 14:50:53

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Page: 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       | 0.15 | 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) | n/a   | -      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 5 lb FT = 20% |

#### LUMBER

TOP CHORD 2x3 SPF No.2  
BOT CHORD 2x3 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 2-7-9 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-7-9, 3=2-7-9

Max Horiz 1=45 (LC 12)  
Max Uplift 1=-9 (LC 12), 3=-32 (LC 12)  
Max Grav 1=93 (LC 1), 3=93 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-49/26, 2-3=-72/86  
BOT CHORD 1-3=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 1 and 32 lb uplift at joint 3.



June 15, 2023

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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

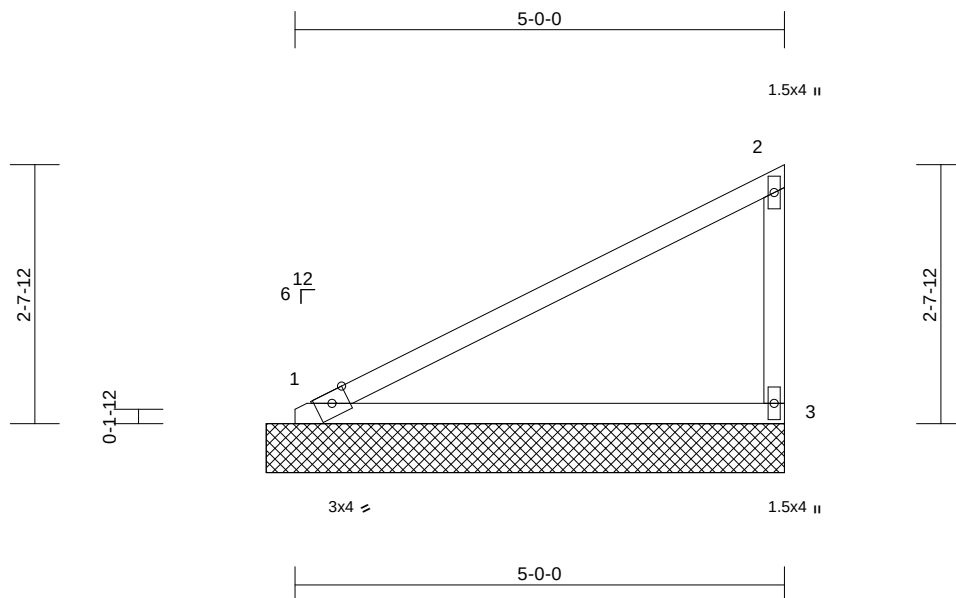


|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951933 |
| Valley     | 1   | 1   | Job Reference (optional) |           |

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Page: 1



Scale = 1:23.5

| 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       | 0.89 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.48 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | n/a   | -      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 10 lb FT = 20% |

#### LUMBER

TOP CHORD 2x3 SPF No.2  
BOT CHORD 2x3 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, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS (size) 1=5-3-9, 3=5-3-9

Max Horiz 1=104 (LC 12)  
Max Uplift 1=20 (LC 12), 3=72 (LC 12)  
Max Grav 1=213 (LC 1), 3=213 (LC 1)

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

TOP CHORD 1-2=-111/59, 2-3=-165/197  
BOT CHORD 1-3=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1 and 72 lb uplift at joint 3.



June 15, 2023

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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



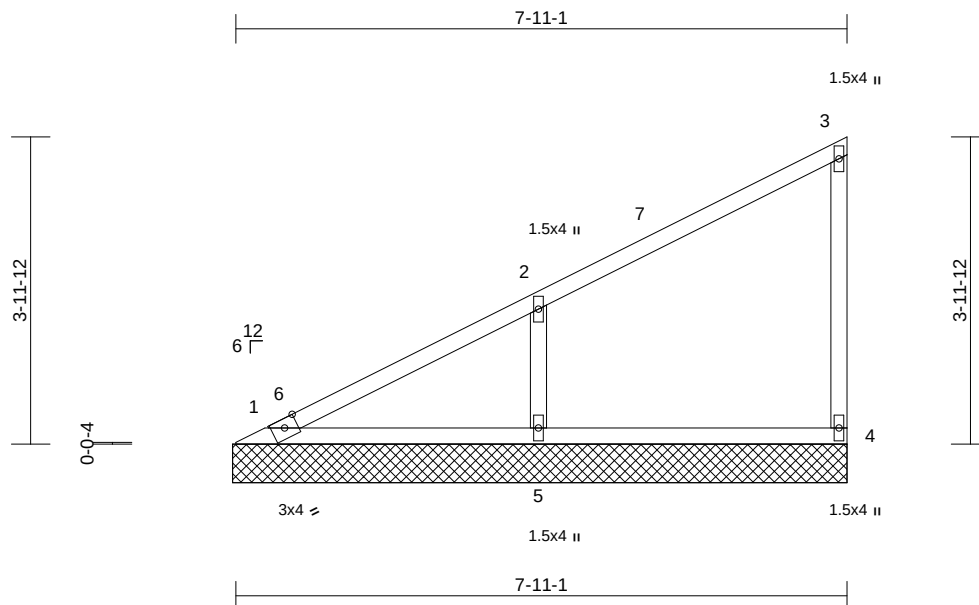
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951934 |
| Valley     | 1   | 1   | Job Reference (optional) |           |

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jun 14 14:50:54

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Scale = 1:29.9

| 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       | 0.43 | Vert(LL)  | n/a   | -      | n/a | 999           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.23 | Vert(TL)  | n/a   | -      | n/a | 999           |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.08 | Horiz(TL) | n/a   | -      | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |               |          |
|             |       |                 |                 |          |      |           |       |        |     | Weight: 17 lb | FT = 20% |

#### LUMBER

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

#### BRACING

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

#### REACTIONS

|            |                                          |
|------------|------------------------------------------|
| (size)     | 1=7-11-9, 4=7-11-9, 5=7-11-9             |
| Max Horiz  | 1=162 (LC 12)                            |
| Max Uplift | 4=-46 (LC 12), 5=-142 (LC 12)            |
| Max Grav   | 1=113 (LC 1), 4=136 (LC 1), 5=417 (LC 1) |

#### FORCES

(lb) - Maximum Compression/Maximum Tension

|           |                                        |
|-----------|----------------------------------------|
| TOP CHORD | 1-2=-237/110, 2-3=-81/35, 3-4=-105/109 |
| BOT CHORD | 1-5=0/0, 4-5=0/0                       |
| WEBS      | 2-5=-324/335                           |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) 0-5-9 to 5-5-9,  
Interior (1) 5-5-9 to 7-10-5 zone; cantilever left and right  
exposed; end vertical left exposed; C-C for members  
and forces & MWFRS for reactions shown; Lumber  
DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) 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) All bearings are assumed to be SPF No.2 crushing  
capacity of 425 psi.

- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 46 lb uplift at joint  
4 and 142 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



June 15, 2023

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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

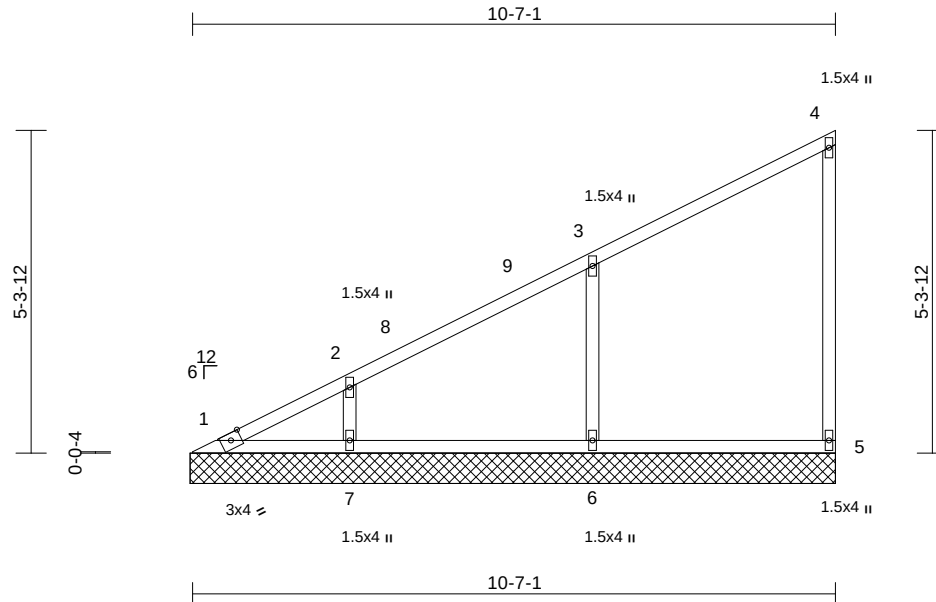


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951935 |
| Valley     | 1   | 1   | Job Reference (optional) |           |

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Page: 1



Scale = 1:38

| 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       | 0.41 | n/a       | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.21 | Vert(TL)  | n/a   | -      | n/a |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.09 | Horiz(TL) | 0.00  | 5      | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     | Weight: 25 lb | FT = 20% |

#### LUMBER

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

#### BRACING

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

|           |            |                                                        |
|-----------|------------|--------------------------------------------------------|
| REACTIONS | (size)     | 1=10-7-9, 5=10-7-9, 6=10-7-9, 7=10-7-9                 |
|           | Max Horiz  | 1=220 (LC 12)                                          |
|           | Max Uplift | 5=-49 (LC 12), 6=-135 (LC 12), 7=-105 (LC 12)          |
|           | Max Grav   | 1=91 (LC 21), 5=143 (LC 1), 6=399 (LC 1), 7=304 (LC 1) |

#### FORCES

(lb) - Maximum Compression/Maximum Tension

|           |                                                     |
|-----------|-----------------------------------------------------|
| TOP CHORD | 1-2=-299/129, 2-3=-212/91, 3-4=-83/44, 4-5=-110/101 |
| BOT CHORD | 1-7=-4/6, 6-7=-4/6, 5-6=-4/6                        |
| WEBS      | 3-6=-311/285, 2-7=-235/220                          |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) 0-5-9 to 5-5-9,  
Interior (1) 5-5-9 to 10-6-5 zone; cantilever left and right  
exposed; end vertical left exposed; C-C for members  
and forces & MWFRS for reactions shown; Lumber  
DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) 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) All bearings are assumed to be SPF No.2 crushing  
capacity of 425 psi.
- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 49 lb uplift at joint  
5, 135 lb uplift at joint 6 and 105 lb uplift at joint 7.
- 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

June 15, 2023

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

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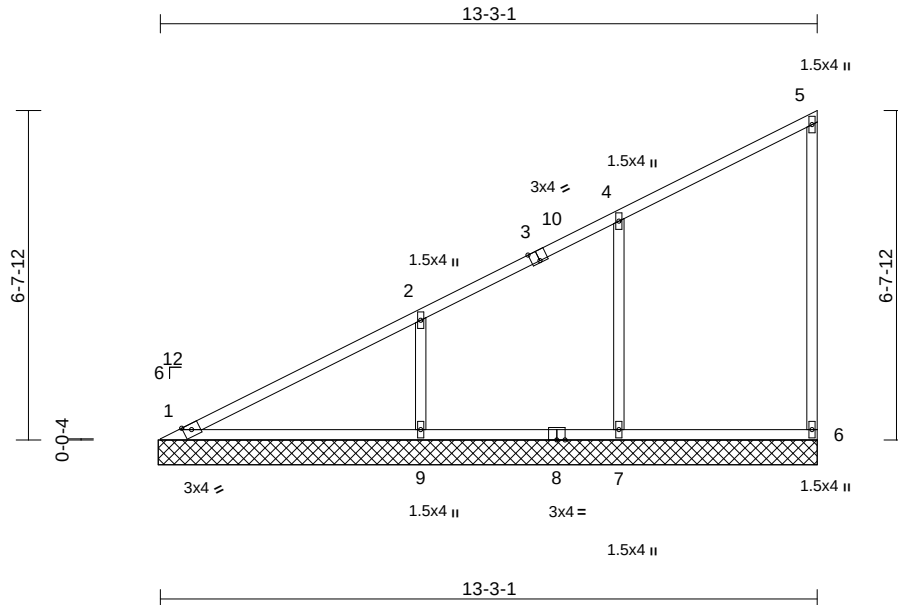
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|            |     |     |                          |           |
|------------|-----|-----|--------------------------|-----------|
| Truss Type | Qty | Ply | Roof - Osage Lot 68      | I58951936 |
| Valley     | 1   | 1   | Job Reference (optional) |           |

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Page: 1



Scale = 1:46.5

Plate Offsets (X, Y): [3:0-2-0,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       | 0.59 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.32 | Vert(TL)  | n/a   | -      | n/a | 999    | 197/144                |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.14 | Horiz(TL) | 0.00  | 6      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        | Weight: 33 lb FT = 20% |

#### LUMBER

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

#### BRACING

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

|           |            |                                                        |
|-----------|------------|--------------------------------------------------------|
| REACTIONS | (size)     | 1=13-3-9, 6=13-3-9, 7=13-3-9, 9=13-3-9                 |
|           | Max Horiz  | 1=278 (LC 12)                                          |
|           | Max Uplift | 6=-52 (LC 12), 7=-121 (LC 12), 9=-157 (LC 12)          |
|           | Max Grav   | 1=179 (LC 1), 6=151 (LC 1), 7=357 (LC 1), 9=459 (LC 1) |

#### FORCES

|           |                                                    |
|-----------|----------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension         |
| TOP CHORD | 1-2=-317/141, 2-4=-185/76, 4-5=-82/47, 5-6=-115/95 |
| BOT CHORD | 1-9=-3/5, 7-9=-3/5, 6-7=-3/5                       |
| WEBS      | 4-7=-282/228, 2-9=-346/264                         |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-9 to 5-3-9, Interior (1) 5-3-9 to 13-2-5 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 6, 121 lb uplift at joint 7 and 157 lb uplift at joint 9.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



June 15, 2023

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

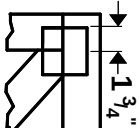
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



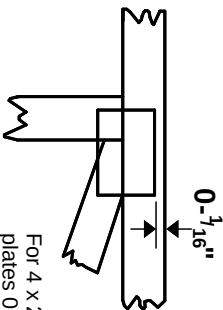
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

## 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.

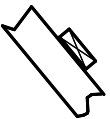
\* Plate location details available in **Mittek 20120** software or upon request.

### PLATE SIZE

4 X 4

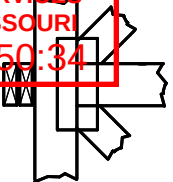
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

### LATERAL BRACING LOCATION



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

### BEARING



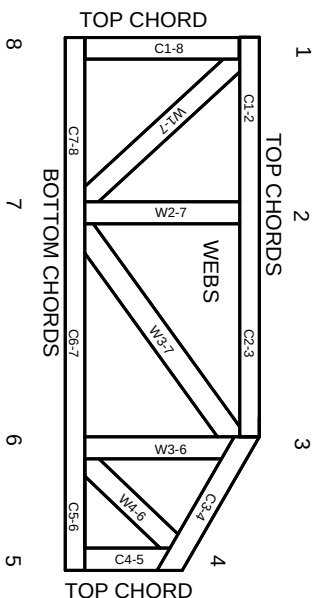
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
BCS 139: Design Standard for Bracing.  
BCS 17: 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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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