MiTek®

RE: P240285-01 - Roof - HR Lot 160

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

**Site Information:**

Project Customer: Clayton Properties Project Name: Basswood - Transitional 3Car
Lot/Block: 160 Subdivision: Hawthorne Ridge
Model:
Address: 1604 SW Buckthorn Dr
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
Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
Roof Load: 45.0 psf
Floor Load: N/A psf

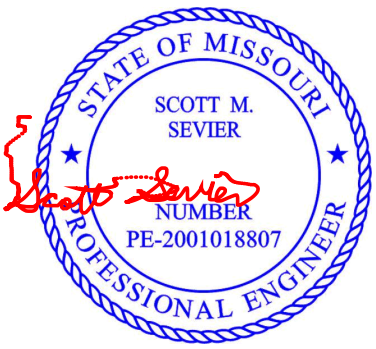
Mean Roof Height (feet): 35
Exposure Category: C

| No. | Seal# | Truss Name | Date |
|---|---|---|---|
| 1 | I65076792 | B1 | 4/23/24 |
| 2 | I65076793 | B2 | 4/23/24 |
| 3 | I65076794 | B3 | 4/23/24 |
| 4 | I65076795 | C1 | 4/23/24 |
| 5 | I65076796 | C2 | 4/23/24 |
| 6 | I65076797 | C3 | 4/23/24 |
| 7 | I65076798 | C4 | 4/23/24 |
| 8 | I65076799 | D1 | 4/23/24 |
| 9 | I65076800 | D2 | 4/23/24 |
| 10 | I65076801 | D3 | 4/23/24 |
| 11 | I65076802 | E1 | 4/23/24 |
| 12 | I65076803 | E4 | 4/23/24 |
| 13 | I65076804 | E5 | 4/23/24 |
| 14 | I65076805 | E6 | 4/23/24 |
| 15 | I65076806 | E7 | 4/23/24 |
| 16 | I65076807 | G1 | 4/23/24 |
| 17 | I65076808 | G2 | 4/23/24 |
| 18 | I65076809 | R1 | 4/23/24 |
| 19 | I65076810 | V1 | 4/23/24 |
| 20 | I65076811 | V2 | 4/23/24 |
| 21 | I65076812 | V3 | 4/23/24 |
| 22 | I65076813 | V4 | 4/23/24 |
| 23 | I65076814 | V7 | 4/23/24 |
| 24 | I65076815 | V8 | 4/23/24 |
| 25 | I65076816 | V9 | 4/23/24 |
| 26 | I65076817 | V10 | 4/23/24 |

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Premier Building Supply (Springhill, KS)20300 W 207th Street.

Truss Design Engineer's Name: Sevier, Scott
My license renewal date for the state of Missouri is December 31, 2025.

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




April 23,2024

Sevier, Scott

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | B1 | Monopitch Supported Gable | 1 | 1 | I65076792 Job Reference (optional) |

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

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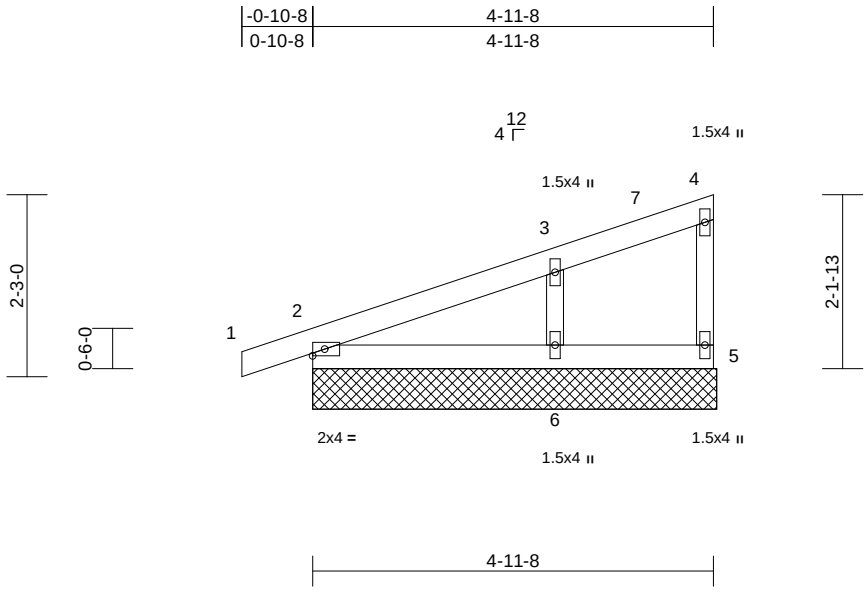


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| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.12 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | B2 | Monopitch | 3 | 1 | I65076793 |
| | | | | | Job Reference (optional) |

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

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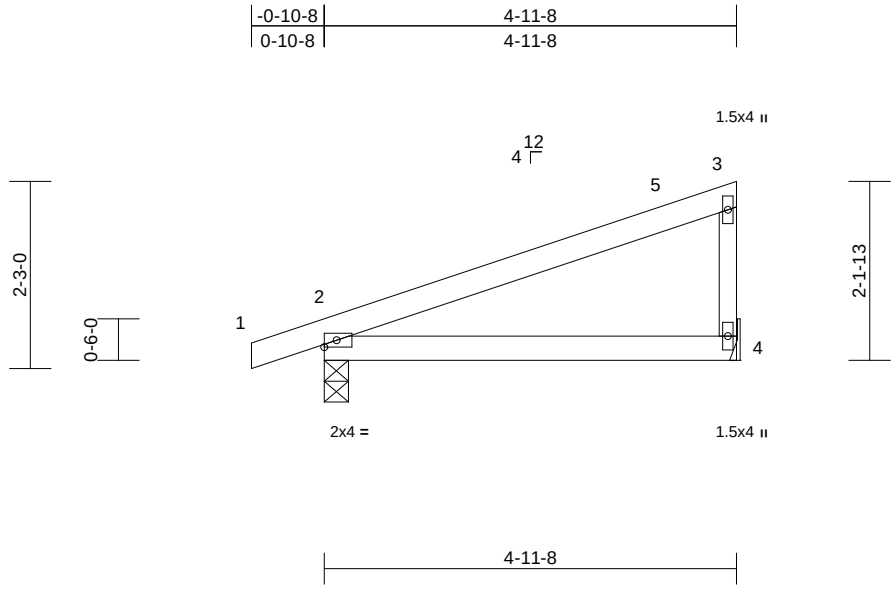


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| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.49 | Vert(LL) | -0.03 | 2-4 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.27 | Vert(CT) | -0.06 | 2-4 | >958 | 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: 18 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 5-0-0 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=85 (LC 8)
Max Uplift 2=-83 (LC 8), 4=-59 (LC 12)
Max Grav 2=291 (LC 1), 4=204 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-100/45, 3-4=-157/228
BOT CHORD 2-4=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) -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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 4 and 83 lb uplift at joint 2.
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


April 23,2024



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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | B3 | Monopitch | 7 | 1 | I65076794 |
| | | | | | Job Reference (optional) |

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

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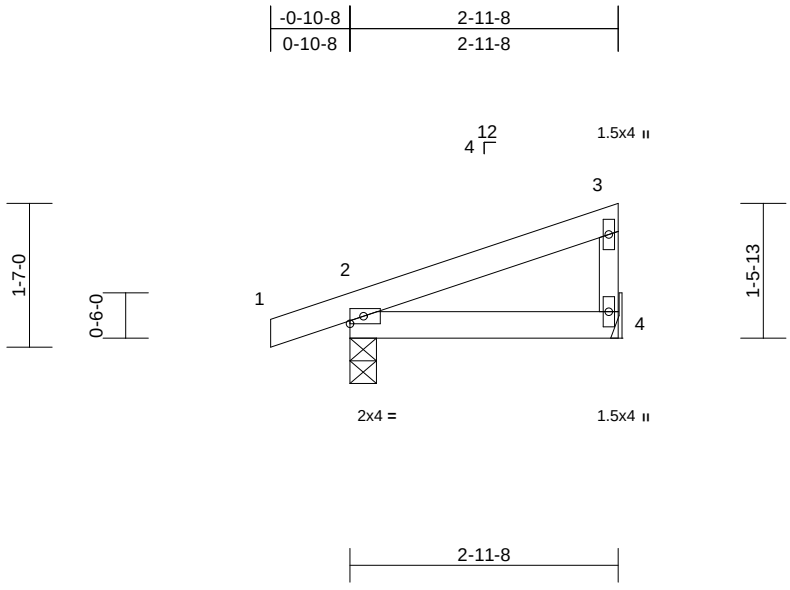


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| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.13 | Vert(LL) | 0.00 | 2-4 | >999 | 240 | MT20 | 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**

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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) 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.
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


April 23,2024



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Chesterfield, MO 63017
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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | C1 | Common | 1 | 1 | I65076795 |
| | | | | | Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:21 Page: 1

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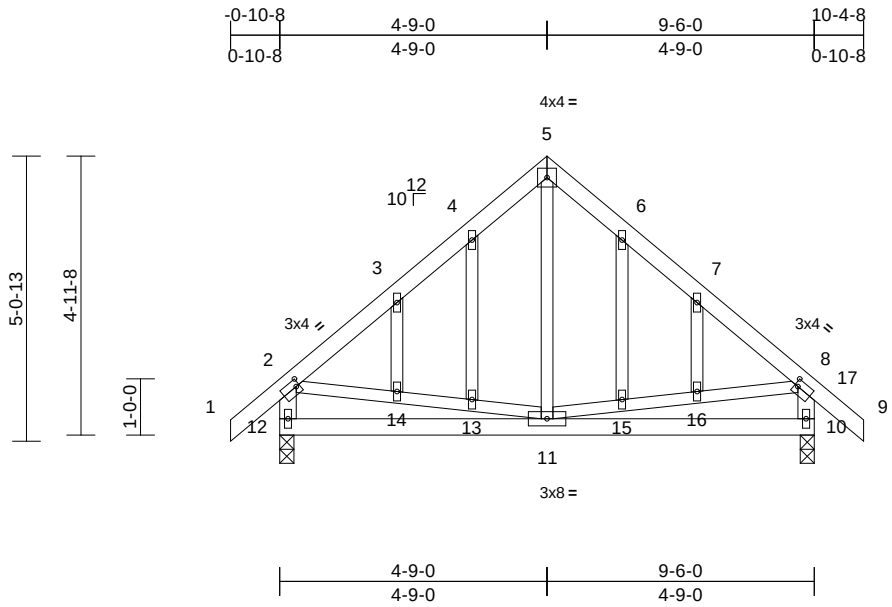


Scale = 1:41

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

| 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 | 0.29 | Vert(LL) | -0.01 | 11-12 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.19 | Vert(CT) | -0.02 | 11-12 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.00 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 56 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 12-2,10-8:2x4 SP 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) 10=0-3-0, 12=0-3-0
Max Horiz 12=163 (LC 11)
Max Uplift 10=-75 (LC 13), 12=-75 (LC 12)
Max Grav 10=486 (LC 1), 12=486 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-395/132, 3-4=-314/154, 4-5=-257/178, 5-6=-257/178, 6-7=-314/154, 7-8=-395/132, 8-9=0/46, 2-12=-441/233, 8-10=-441/233
BOT CHORD 11-12=-164/260, 10-11=-95/158
WEBS 5-11=-38/167, 2-14=-60/183, 13-14=-61/186, 11-13=-66/194, 11-15=-74/198, 15-16=-68/189, 8-16=-67/187, 4-13=-20/34, 3-14=-23/23, 6-15=-22/35, 7-16=-23/22

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-9-0, Exterior(2R) 4-9-0 to 9-9-0, Interior (1) 9-9-0 to 10-4-8 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) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 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 75 lb uplift at joint 12 and 75 lb uplift at joint 10.
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


April 23,2024



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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | C2 | Common | 1 | 1 | I65076796 |
| | | | | | Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:21 Page: 1
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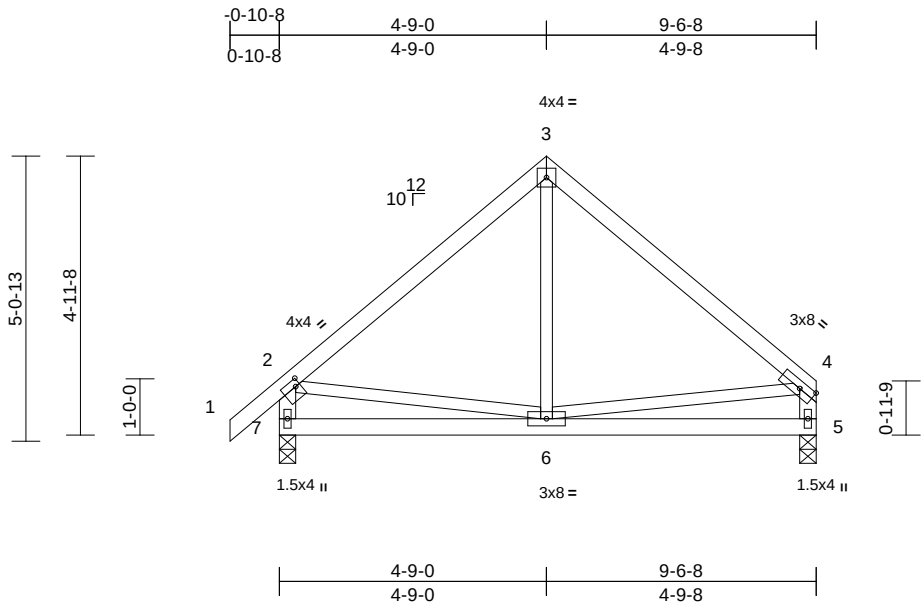


Scale = 1:41

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

| 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 | 0.33 | Vert(LL) | -0.01 | 5-6 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.19 | Vert(CT) | -0.02 | 5-6 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 47 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-2,5-4:2x4 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=0-3-8, 7=0-3-8
Max Horiz 7=154 (LC 9)
Max Uplift 5=-49 (LC 13), 7=-75 (LC 12)
Max Grav 5=412 (LC 1), 7=492 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-409/155, 3-4=-403/161, 2-7=-450/221, 4-5=-370/172
BOT CHORD 6-7=-232/259, 5-6=-104/139
WEBS 3-6=0/180, 2-6=-74/204, 4-6=-53/161

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-9-0, Exterior(2E) 4-9-0 to 9-4-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 7 and 49 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 23,2024



MiTek®
16023 Swingley Ridge Rd.
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314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | C3 | Common | 1 | 1 | I65076797 |
| | | | | | Job Reference (optional) |

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

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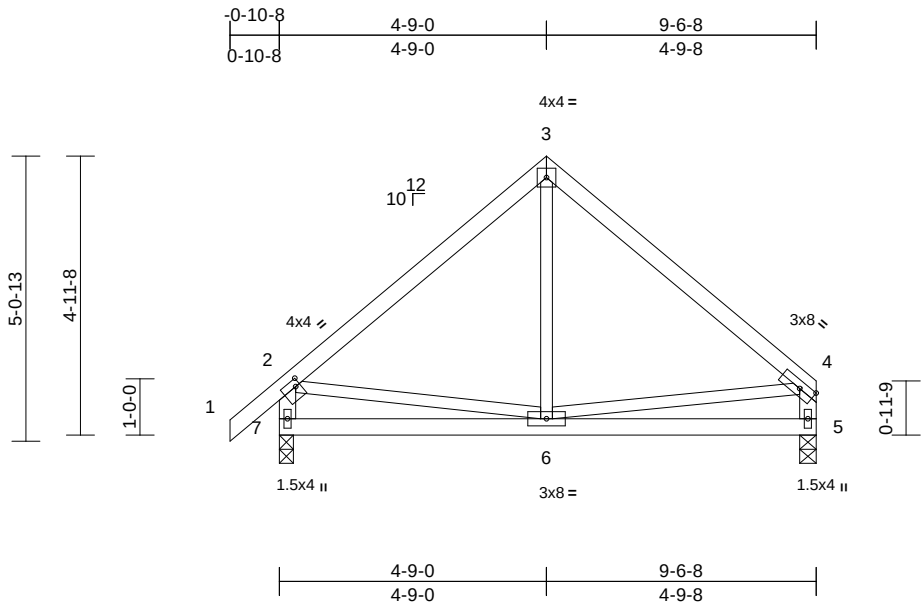



Scale = 1:41

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

| 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 | 0.33 | Vert(LL) | -0.01 | 5-6 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.19 | Vert(CT) | -0.02 | 5-6 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 47 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-2,5-4:2x4 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=0-3-8, 7=0-3-0
Max Horiz 7=154 (LC 9)
Max Uplift 5=-49 (LC 13), 7=-75 (LC 12)
Max Grav 5=412 (LC 1), 7=492 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-409/155, 3-4=-403/161, 2-7=-450/221, 4-5=-370/172
BOT CHORD 6-7=-232/259, 5-6=-104/139
WEBS 3-6=0/180, 2-6=-74/204, 4-6=-53/161

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-9-0, Exterior(2E) 4-9-0 to 9-4-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 7 and 49 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

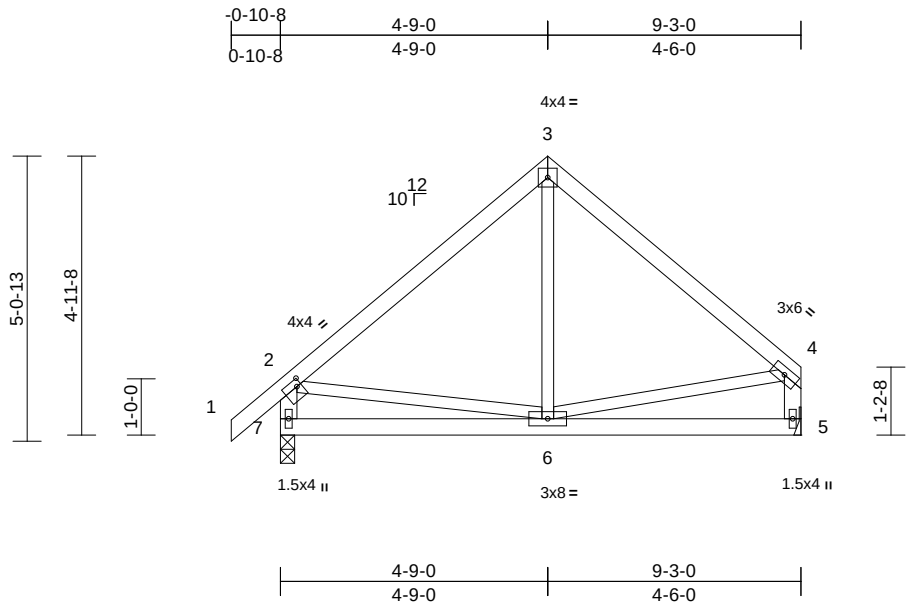

April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | C4 | Common | 1 | 1 | I65076798 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:21 Page: 1
ID:VxU9gQnQvzVKU0kGuJkbVcybQT5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:41

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

| 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 | 0.29 | Vert(LL) | -0.01 | 6-7 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.18 | Vert(CT) | -0.02 | 6-7 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 47 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-2,5-4:2x4 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= Mechanical, 7=0-3-0
Max Horiz 7=158 (LC 9)
Max Uplift 5=-47 (LC 13), 7=-73 (LC 12)
Max Grav 5=399 (LC 1), 7=479 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-391/150, 3-4=-376/160, 2-7=-436/223, 4-5=-360/171
BOT CHORD 6-7=-257/260, 5-6=-77/99
WEBS 3-6=0/166, 2-6=-81/215, 4-6=-43/181

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-9-0, Exterior(2E) 4-9-0 to 9-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 7 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 73 lb uplift at joint 7 and 47 lb uplift at joint 5.
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


April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | D1 | Roof Special Supported Gable | 1 | 1 | I65076799 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:21 Page: 1
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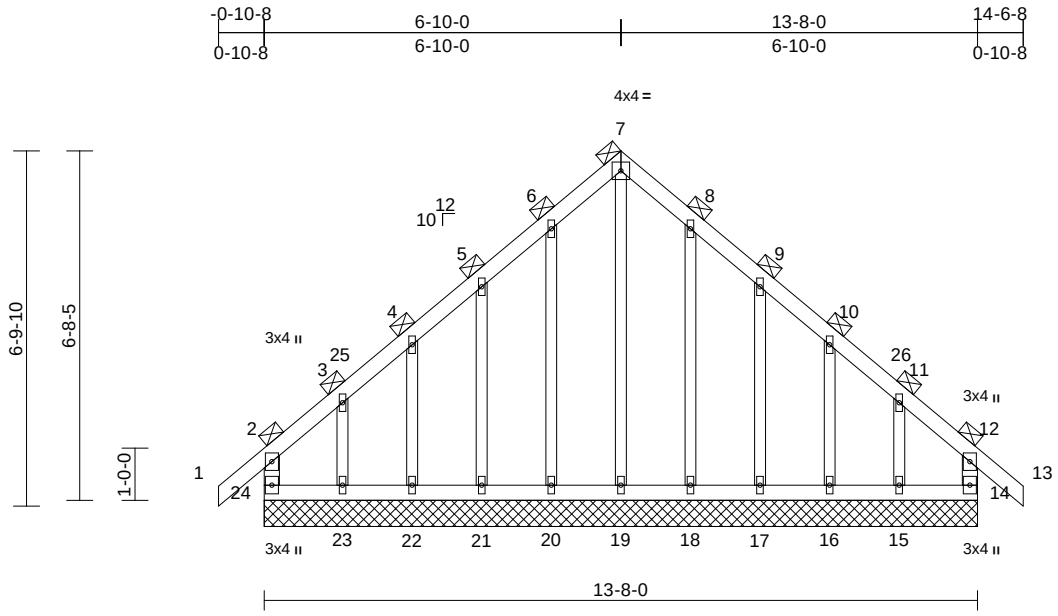


Scale = 1:44.1

| 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 | 0.20 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.17 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | NO | WB | 0.45 | Horz(CT) | 0.00 | 14 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | | | | | | Weight: 79 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 sheeted: Spacing > 2-8-0).
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 14=13-8-0, 15=13-8-0, 16=13-8-0, 17=13-8-0, 18=13-8-0, 19=13-8-0, 20=13-8-0, 21=13-8-0, 22=13-8-0, 23=13-8-0, 24=13-8-0
Max Horiz 24=-423 (LC 10)
Max Uplift 14=-161 (LC 9), 15=-275 (LC 13), 16=-98 (LC 13), 17=-162 (LC 13), 18=-82 (LC 13), 20=-85 (LC 12), 21=-161 (LC 12), 22=-94 (LC 12), 23=-289 (LC 12), 24=-215 (LC 8)
Max Grav 14=364 (LC 19), 15=336 (LC 20), 16=249 (LC 26), 17=266 (LC 20), 18=264 (LC 20), 19=395 (LC 13), 20=269 (LC 19), 21=266 (LC 19), 22=249 (LC 25), 23=361 (LC 19), 24=407 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-24=-326/172, 1-2=0/91, 2-3=-273/261, 3-4=-182/193, 4-5=-157/267, 5-6=-233/401, 6-7=-284/479, 7-8=-284/471, 8-9=-233/386, 9-10=-146/252, 10-11=-135/169, 11-12=-217/203, 12-13=0/91, 12-14=-292/155
BOT CHORD 23-24=-200/222, 22-23=-200/222, 21-22=-200/222, 20-21=-200/222, 19-20=-200/222, 18-19=-200/222, 17-18=-200/222, 16-17=-200/222, 15-16=-200/222, 14-15=-200/222
WEBS 7-19=-457/197, 6-20=-217/123, 5-21=-208/214, 4-22=-200/172, 3-23=-240/236, 8-18=-212/121, 9-17=-209/214, 10-16=-202/173, 11-15=-228/229

**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) -0-10-8 to 4-2-0, Interior (1) 4-2-0 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) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 215 lb uplift at joint 24, 161 lb uplift at joint 14, 85 lb uplift at joint 20, 161 lb uplift at joint 21, 94 lb uplift at joint 22, 289 lb uplift at joint 23, 82 lb uplift at joint 18, 162 lb uplift at joint 17, 98 lb uplift at joint 16 and 275 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.
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


April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | D2 | Roof Special Structural Gable | 1 | 1 | I65076800 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:21 Page: 1

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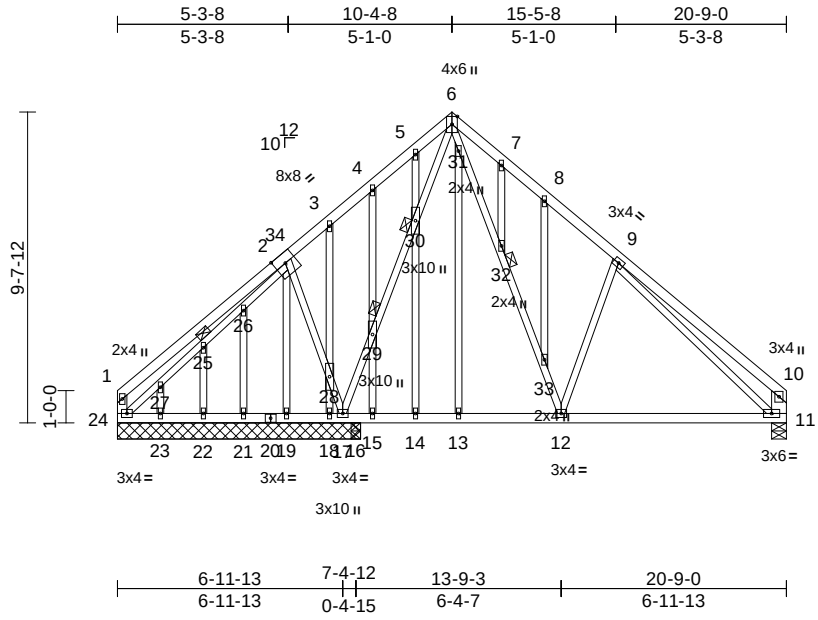


Scale = 1:71.5

| 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 | 0.36 | Vert(LL) | -0.05 | 11-12 | >999 | 240 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.36 | Vert(CT) | -0.11 | 11-12 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.44 | Horz(CT) | 0.01 | 11 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 148 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 24-1:2x4 SP No.2, 11-10:2x6 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 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 25, 29, 30, 32

**REACTIONS** (size) 11=0-5-8, 16=0-3-8, 17=7-6-8, 18=7-6-8, 19=7-6-8, 21=7-6-8, 22=7-6-8, 23=7-6-8, 24=7-6-8
Max Horiz 24=271 (LC 9)
Max Uplift 11=-86 (LC 13), 16=-182 (LC 12), 17=-120 (LC 13), 19=-83 (LC 12), 21=-5 (LC 8), 23=-22 (LC 12), 24=-65 (LC 13)
Max Grav 11=629 (LC 1), 16=472 (LC 19), 17=220 (LC 26), 18=83 (LC 3), 19=197 (LC 19), 21=60 (LC 3), 22=51 (LC 3), 23=55 (LC 10), 24=276 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-216/154, 2-3=-209/157, 3-4=-145/166, 4-5=-205/206, 5-6=-173/218, 6-7=-443/279, 7-8=-488/266, 8-9=-551/222, 9-10=-341/172, 1-24=-240/155, 10-11=-324/168
BOT CHORD 23-24=-120/208, 22-23=-120/208, 21-22=-120/208, 19-21=-120/208, 18-19=-118/199, 17-18=-118/199, 16-17=-20/231, 15-16=-20/231, 14-15=-20/231, 13-14=-20/231, 12-13=-20/231, 11-12=-24/425
WEBS 6-31=-224/510, 31-32=-241/490, 32-33=-240/490, 12-33=-189/430, 9-12=-295/265, 17-29=-391/6, 29-30=-378/2, 6-30=-392/6, 2-28=-160/194, 17-28=-211/258, 24-27=-186/130, 25-27=-185/128, 25-26=-186/130, 2-26=-216/150, 9-11=-370/0, 22-25=-3/4, 21-26=-41/27, 23-27=-2/2, 2-19=-174/102, 3-28=-2/17, 18-28=-70/58, 4-29=-158/103, 15-29=-151/107, 5-30=-16/55, 14-30=-11/38, 13-31=-3/54, 7-32=-6/6, 8-33=-63/64

**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) 0-1-12 to 5-0-2, Interior (1) 5-0-2 to 10-4-8, Exterior(2R) 10-4-8 to 15-6-2, Interior (1) 15-6-2 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
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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 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 120 lb uplift at joint 17, 65 lb uplift at joint 24, 86 lb uplift at joint 11, 5 lb uplift at joint 21, 22 lb uplift at joint 23, 83 lb uplift at joint 19 and 182 lb uplift at joint 16.
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


April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | D3 | Common | 7 | 1 | I65076801<br>Job Reference (optional) |

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

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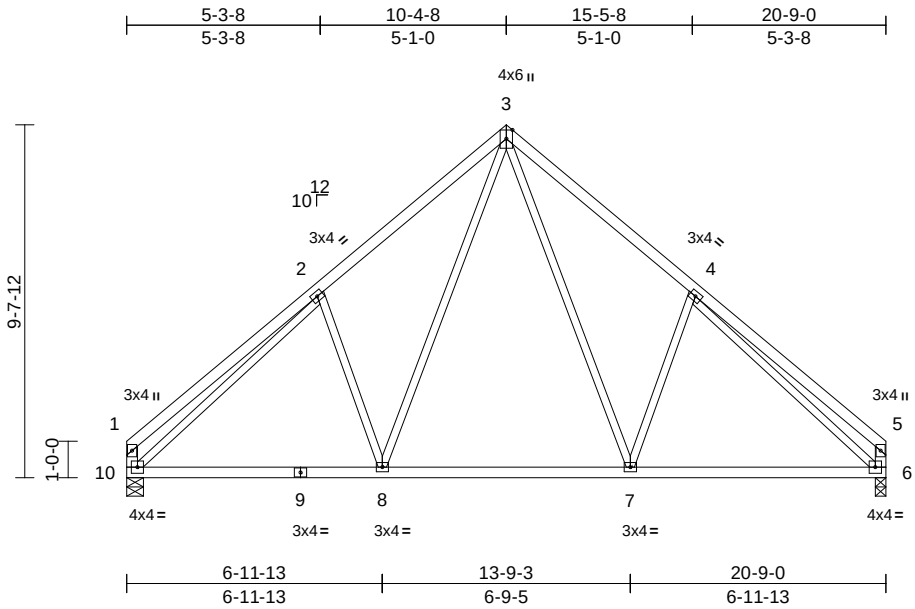


Scale = 1:63

| 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) | -0.05 | 6-7 | >999 | 240 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.43 | Vert(CT) | -0.11 | 8-10 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.93 | Horz(CT) | 0.02 | 6 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 108 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-1,6-5:2x4 SP No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-6-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 6=0-3-8, 10=0-5-8
Max Horiz 10=262 (LC 11)
Max Uplift 6=-113 (LC 13), 10=-113 (LC 12)
Max Grav 6=921 (LC 1), 10=921 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-351/173, 2-3=-970/312, 3-4=-970/310, 4-5=-361/166, 1-10=-328/165, 5-6=-334/161
BOT CHORD 8-10=-166/796, 7-8=-19/537, 6-7=-89/731
WEBS 3-7=-210/461, 4-7=-311/300, 3-8=-211/460, 2-8=-310/300, 2-10=-761/79, 4-6=-761/70

**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) 0-1-12 to 5-2-14, Interior (1) 5-2-14 to 10-4-8, Exterior(2R) 10-4-8 to 15-6-2, Interior (1) 15-6-2 to 20-7-4 zone; cantilever left and right exposed ; end vertical 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 113 lb uplift at joint 10 and 113 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


April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | E1 | Common Supported Gable | 1 | 1 | I65076802 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:22 Page: 1

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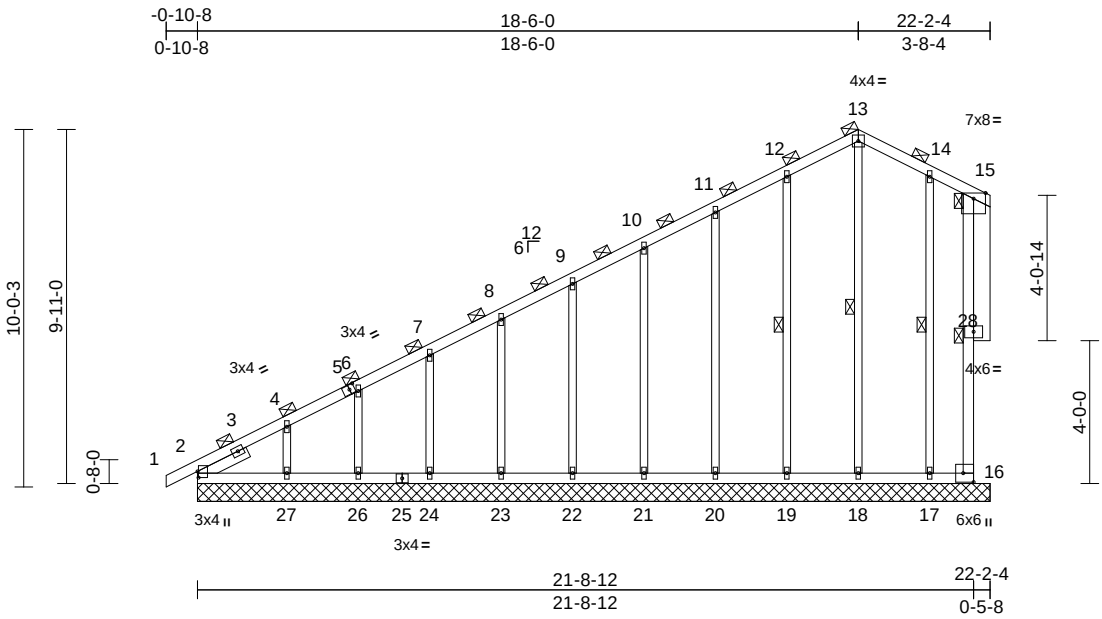


Scale = 1:64.5

Plate Offsets (X, Y): [2:0-2-1,0-0-5], [5:0-1-12,0-1-8], [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 | MT20 | 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 15-16, 13-18, 12-19, 14-17 |

**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, 22=22-2-4, 23=22-2-4, 24=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), 22=-123 (LC 12), 23=-121 (LC 12), 24=-129 (LC 12), 26=-91 (LC 12), 27=-261 (LC 12)

Max Grav 2=475 (LC 20), 16=144 (LC 20), 17=310 (LC 26), 18=370 (LC 19), 19=377 (LC 25), 20=359 (LC 25), 21=360 (LC 1), 22=360 (LC 25), 23=359 (LC 1), 24=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, 4-6=-779/549, 6-7=-690/525, 7-8=-578/485, 8-9=-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, 24-26=-305/391, 23-24=-305/391, 22-23=-305/391, 21-22=-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, 9-22=-280/193, 8-23=-280/193, 7-24=-282/202, 6-26=-270/208, 4-27=-326/416, 14-17=-332/375 |

**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 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
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 2-0-0 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 91 lb uplift at joint 16, 36 lb uplift at joint 2, 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 22, 121 lb uplift at joint 23, 129 lb uplift at joint 24, 91 lb uplift at joint 26, 261 lb uplift at joint 27 and 77 lb uplift at joint 17.
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


April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | E4 | Roof Special | 8 | 1 | I65076803 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:22 Page: 1

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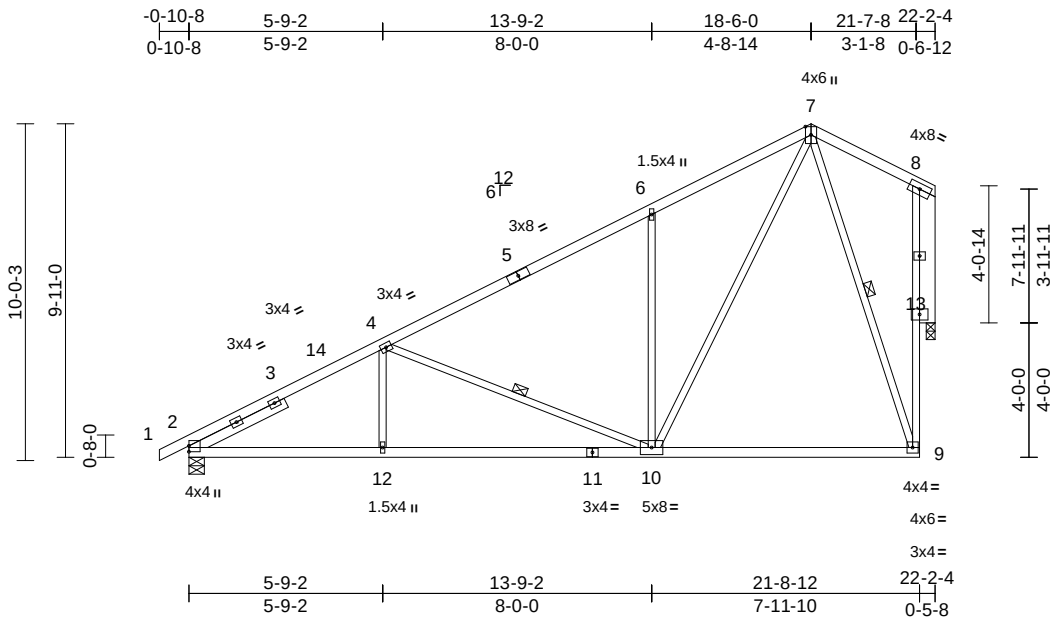



Scale = 1:68.5

| 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 | 0.79 | Vert(LL) | -0.11 | 9-10 | >999 | 240 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.71 | Vert(CT) | -0.23 | 9-10 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.96 | Horz(CT) | -0.03 | 13 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 121 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 9-8:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-8:2x6 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-2-3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-5-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-4-8 oc bracing.
WEBS 1 Row at midpt 4-10, 7-9

**REACTIONS** (size) 2=0-5-8, 13=0-3-2
Max Horiz 2=384 (LC 12)
Max Uplift 2=-153 (LC 12), 13=-235 (LC 12)
Max Grav 2=1036 (LC 1), 13=972 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-1623/208, 4-6=-943/120, 6-7=-924/276, 7-8=-64/49, 9-13=-212/848, 8-13=-124/66
BOT CHORD 2-12=-483/1364, 10-12=-483/1364, 9-10=-82/264
WEBS 6-10=-521/308, 7-10=-338/1066, 4-12=0/277, 4-10=-680/274, 7-9=-822/263

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-6-0, Exterior(2E) 18-6-0 to 21-7-8 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
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 2 SP No.2 crushing capacity of 565 psi, Joint 13 SPF No.2 crushing capacity of 425 psi.
5) 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 153 lb uplift at joint 2 and 235 lb uplift at joint 13.
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


April 23,2024

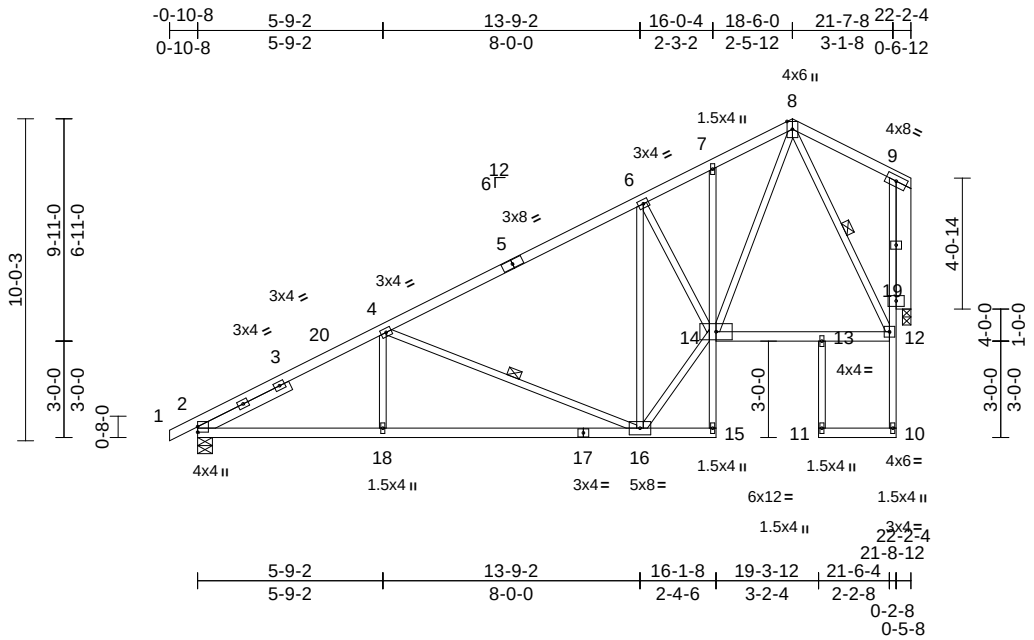


MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | E5 | Roof Special | 2 | 1 | I65076804 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:22 Page: 1

ID:X3j9csSdTd?hyQgxh8rn6OzwvzW-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:71.7

| 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 | 0.82 | Vert(LL) | -0.10 | 16-18 | >999 | 240 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.59 | Vert(CT) | -0.22 | 16-18 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.73 | Horz(CT) | 0.04 | 19 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 134 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 15-7,13-11,10-9:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 19-9:2x6 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-2-3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-10-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-16, 8-12

**REACTIONS** (size) 2=0-5-8, 19=0-3-2
Max Horiz 2=384 (LC 12)
Max Uplift 2=-153 (LC 12), 19=-235 (LC 12)
Max Grav 2=1036 (LC 1), 19=972 (LC 1)

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

TOP CHORD 1-2=0/6, 2-4=-1624/204, 4-6=-940/125, 6-7=-943/261, 7-8=-841/278, 8-9=-69/49, 10-12=0/47, 12-19=-208/852, 9-19=-122/68
BOT CHORD 2-18=-480/1364, 16-18=-480/1364, 15-16=-13/1, 14-15=-43/0, 7-14=-20/62, 13-14=-115/391, 12-13=-116/391, 11-13=0/41, 10-11=0/2
WEBS 6-16=-566/285, 8-14=-303/1001, 4-18=0/294, 4-16=-682/265, 8-12=-875/265, 14-16=-374/1218, 6-14=-16/34

**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=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 18-6-0, Exterior(2E) 18-6-0 to 21-7-8 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
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 2 SP No.2 crushing capacity of 565 psi, Joint 19 SPF No.2 crushing capacity of 425 psi.
5) Bearing at joint(s) 19 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 153 lb uplift at joint 2 and 235 lb uplift at joint 19.
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

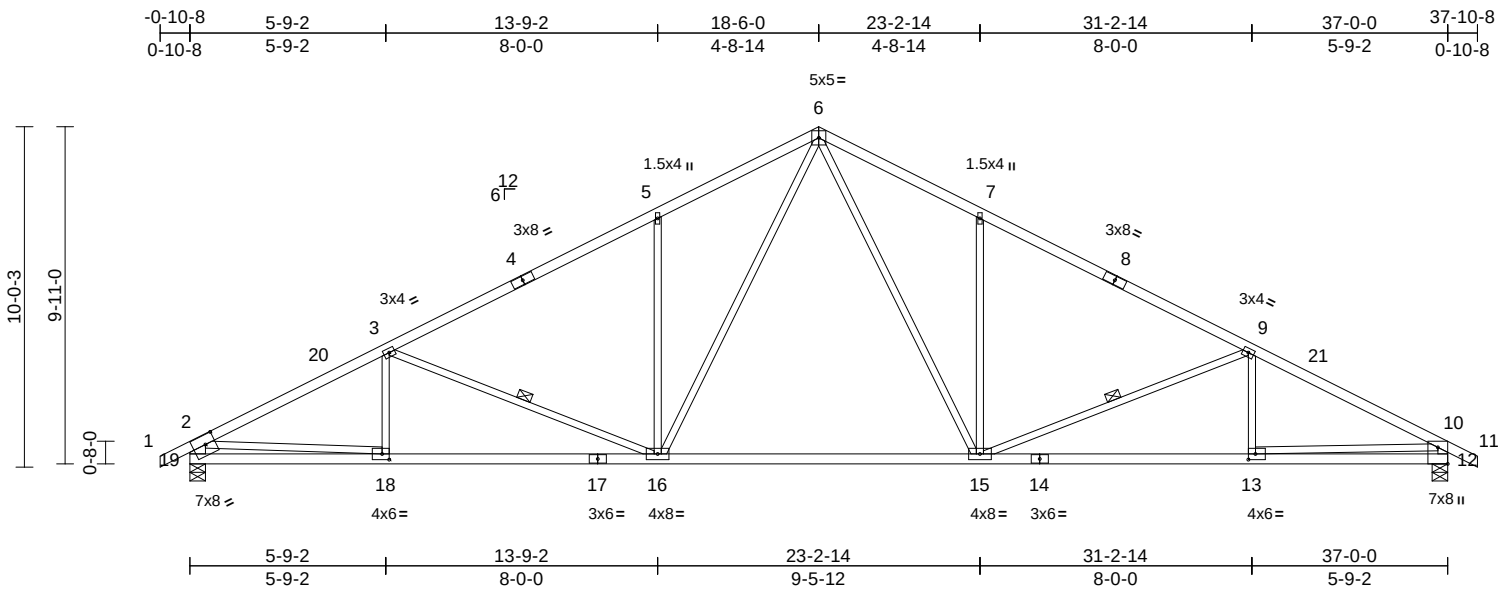

April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | E6 | Common | 7 | 1 | I65076805 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:22 Page: 1
ID:TnZ3x61kRmd3IVZaqXdQQ5zwvtc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:67.8

Plate Offsets (X, Y): [12:Edge,0-3-8], [13:0-2-8,0-2-0], [18:0-2-8,0-2-0], [19:0-3-8,0-3-4]

| 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 | 0.64 | Vert(LL) | -0.19 | 15-16 | >999 | 240 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.90 | Vert(CT) | -0.44 | 15-16 | >993 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.92 | Horz(CT) | 0.10 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 176 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 19-2:2x6 SPF No.2, 12-10:2x4 SP 1650F 1.5E

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-4-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-5-5 oc bracing: 16-18.
WEBS 1 Row at midpt 3-16, 9-15

**REACTIONS** (size) 12=0-5-8, 19=0-5-8
Max Horiz 19=-166 (LC 17)
Max Uplift 12=-276 (LC 13), 19=-278 (LC 12)
Max Grav 12=1719 (LC 1), 19=1726 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-2848/431, 3-5=-2360/418, 5-6=-2337/549, 6-7=-2343/549, 7-9=-2365/419, 9-10=-2884/437, 10-11=0/32, 2-19=-1661/338, 10-12=-1654/334
BOT CHORD 18-19=-249/555, 16-18=-474/2474, 15-16=-102/1561, 13-15=-312/2506, 12-13=-114/613
WEBS 5-16=-512/308, 6-16=-325/1012, 9-13=-32/166, 7-15=-511/308, 3-18=-52/151, 10-13=-208/1899, 3-16=-556/246, 6-15=-327/1021, 2-18=-225/1934, 9-15=-581/251

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-6-0, Exterior(2R) 18-6-0 to 23-2-14, Interior (1) 23-2-14 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
3) The Fabrication Tolerance at joint 10 = 16%
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 276 lb uplift at joint 12 and 278 lb uplift at joint 19.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

April 23,2024



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | E7 | Common Supported Gable | 1 | 1 | I65076806 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:22 Page: 1
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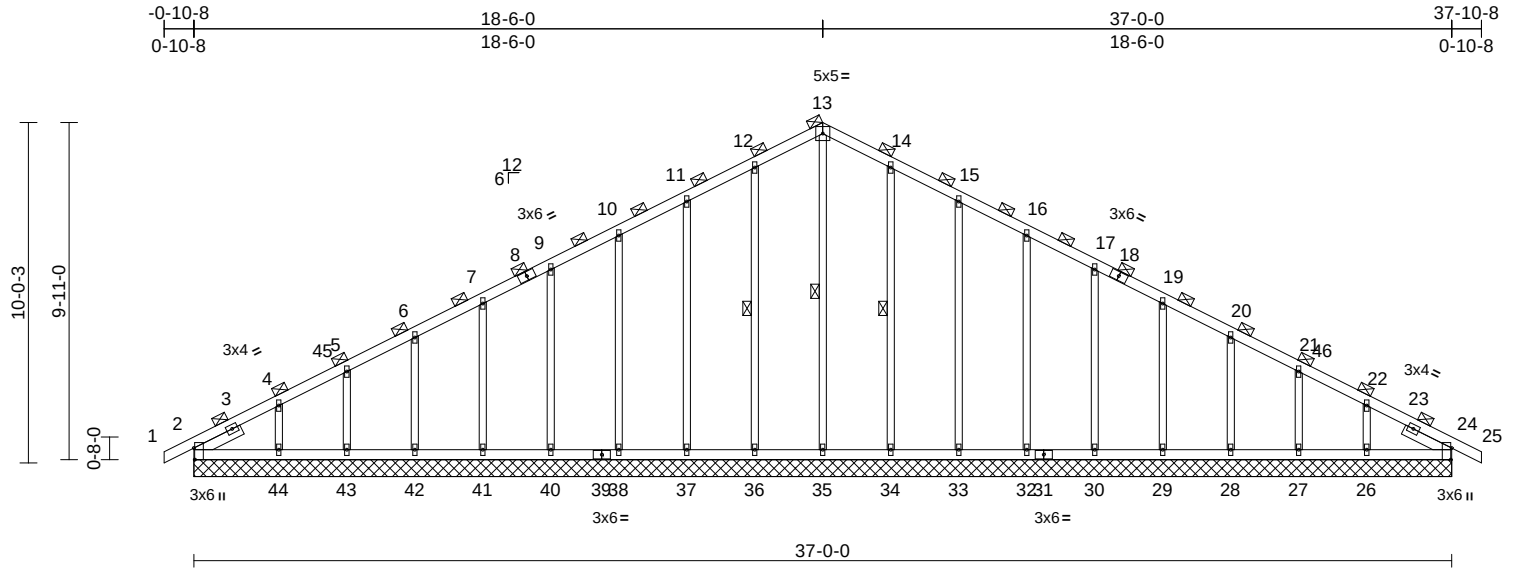


Scale = 1:67.8

Plate Offsets (X, Y): [2:0-4-1,Edge], [18:0-0-0,0-0-0], [24:0-4-1,Edge]

| 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 | 0.20 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(CT) | n/a | - | n/a | 999 | | |
| 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-S | | | | | | | Weight: 195 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-7, Right 2x4 SP No.2 -- 1-6-7

**BRACING**
TOP CHORD 2-0-0 oc purlins (6-0-0 max.) (Switched from sheeted: Spacing > 2-8-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 13-35, 12-36, 14-34

**REACTIONS** (size) 2=37-0-0, 24=37-0-0, 26=37-0-0, 27=37-0-0, 28=37-0-0, 29=37-0-0, 30=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, 38=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 2=-365 (LC 13)
Max Uplift 2=-53 (LC 13), 26=-211 (LC 13), 27=-102 (LC 13), 28=-127 (LC 13), 29=-121 (LC 13), 30=-123 (LC 13), 32=-120 (LC 13), 33=-134 (LC 13), 34=-101 (LC 13), 36=-109 (LC 12), 37=-131 (LC 12), 38=-121 (LC 12), 40=-123 (LC 12), 41=-121 (LC 12), 42=-128 (LC 12), 43=-96 (LC 12), 44=-238 (LC 12)
Max Grav 2=372 (LC 21), 24=368 (LC 1), 26=426 (LC 26), 27=343 (LC 1), 28=364 (LC 26), 29=359 (LC 1), 30=360 (LC 26), 32=360 (LC 1), 33=359 (LC 26), 34=376 (LC 26), 35=416 (LC 22), 36=376 (LC 25), 37=359 (LC 25), 38=360 (LC 1), 40=360 (LC 25), 41=359 (LC 1), 42=364 (LC 25), 43=343 (LC 1), 44=426 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-4=-486/167, 4-5=-324/179, 5-6=-257/209, 6-7=-204/262, 7-9=-165/317, 9-10=-146/373, 10-11=-183/473, 11-12=-222/588, 12-13=-257/681, 13-14=-257/681, 14-15=-222/588, 15-16=-183/473, 16-17=-146/367, 17-19=-117/259, 19-20=-117/151, 20-21=-147/62, 21-22=-197/44, 22-24=-331/100, 24-25=0/11
BOT CHORD 2-44=-96/385, 43-44=-96/385, 42-43=-96/385, 41-42=-96/385, 40-41=-96/385, 38-40=-96/385, 37-38=-96/385, 36-37=-96/385, 35-36=-96/385, 34-35=-96/385, 33-34=-96/385, 32-33=-96/385, 30-32=-96/385, 29-30=-96/385, 28-29=-96/385, 27-28=-96/385, 26-27=-96/385, 24-26=-96/385
WEBS 13-35=-425/84, 12-36=-296/163, 11-37=-279/208, 10-38=-280/191, 9-40=-280/193, 7-41=-280/193, 6-42=-282/197, 5-43=-271/202, 4-44=-321/414, 14-34=-296/163, 15-33=-279/208, 16-32=-280/191, 17-30=-280/193, 19-29=-280/193, 20-28=-282/197, 21-27=-271/203, 22-26=-321/407

**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 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
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 2-0-0 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.


April 23,2024

Continued on page 2



MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 2, 109 lb uplift at joint 36, 131 lb uplift at joint 37, 121 lb uplift at joint 38, 123 lb uplift at joint 40, 121 lb uplift at joint 41, 128 lb uplift at joint 42, 96 lb uplift at joint 43, 238 lb uplift at joint 44, 101 lb uplift at joint 34, 134 lb uplift at joint 33, 120 lb uplift at joint 32, 123 lb uplift at joint 30, 121 lb uplift at joint 29, 127 lb uplift at joint 28, 102 lb uplift at joint 27 and 211 lb uplift at joint 26.
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

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | G1 | Common Supported Gable | 1 | 1 | I65076807 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:23 Page: 1
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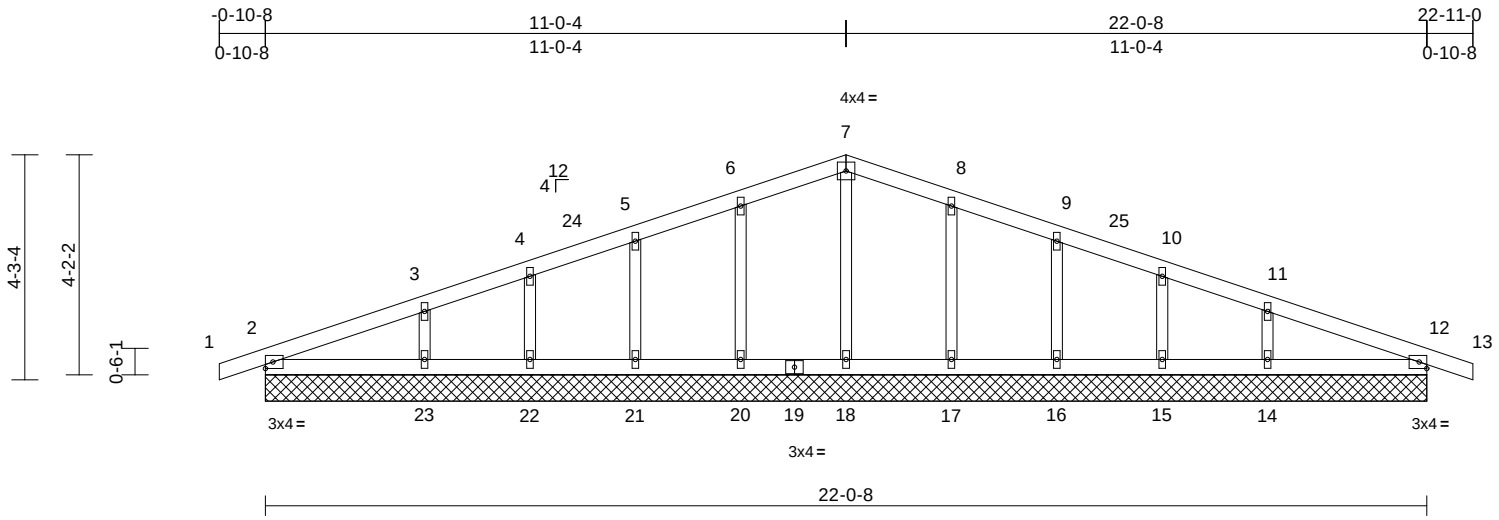


Scale = 1:43.7

| 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) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 86 lb | FT = 20% |

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

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

**REACTIONS** (size) 2=22-0-8, 12=22-0-8, 14=22-0-8, 15=22-0-8, 16=22-0-8, 17=22-0-8, 18=22-0-8, 20=22-0-8, 21=22-0-8, 22=22-0-8, 23=22-0-8
Max Horiz 2=-75 (LC 13)
Max Uplift 2=-50 (LC 8), 12=-60 (LC 9), 14=-75 (LC 13), 15=-43 (LC 9), 16=-51 (LC 13), 17=-52 (LC 13), 20=-52 (LC 12), 21=-51 (LC 12), 22=-43 (LC 8), 23=-77 (LC 12)
Max Grav 2=188 (LC 1), 12=188 (LC 1), 14=262 (LC 26), 15=151 (LC 26), 16=185 (LC 1), 17=189 (LC 26), 18=161 (LC 1), 20=189 (LC 25), 21=185 (LC 1), 22=151 (LC 25), 23=262 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-85/56, 3-4=-50/62, 4-5=-31/87, 5-6=-42/123, 6-7=-55/159, 7-8=-55/154, 8-9=-42/110, 9-10=-31/74, 10-11=-37/41, 11-12=-58/34, 12-13=0/6
BOT CHORD 2-23=-16/67, 22-23=-16/67, 21-22=-16/67, 20-21=-16/67, 18-20=-16/67, 17-18=-16/67, 16-17=-16/67, 15-16=-16/67, 14-15=-16/67, 12-14=-16/67
WEBS 7-18=-121/2, 6-20=-150/135, 5-21=-143/129, 4-22=-121/80, 3-23=-196/126, 8-17=-150/135, 9-16=-143/129, 10-15=-121/80, 11-14=-196/125

**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 Corner(3E) -0-10-8 to 4-1-8, Exterior(2N) 4-1-8 to 11-0-4, Corner(3R) 11-0-4 to 16-0-4, Exterior(2N) 16-0-4 to 22-11-0 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 2-0-0 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 50 lb uplift at joint 2, 52 lb uplift at joint 20, 51 lb uplift at joint 21, 43 lb uplift at joint 22, 77 lb uplift at joint 23, 52 lb uplift at joint 17, 51 lb uplift at joint 16, 43 lb uplift at joint 15, 75 lb uplift at joint 14 and 60 lb uplift at joint 12.
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


April 23,2024



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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | G2 | Common | 5 | 1 | I65076808<br>Job Reference (optional) |

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

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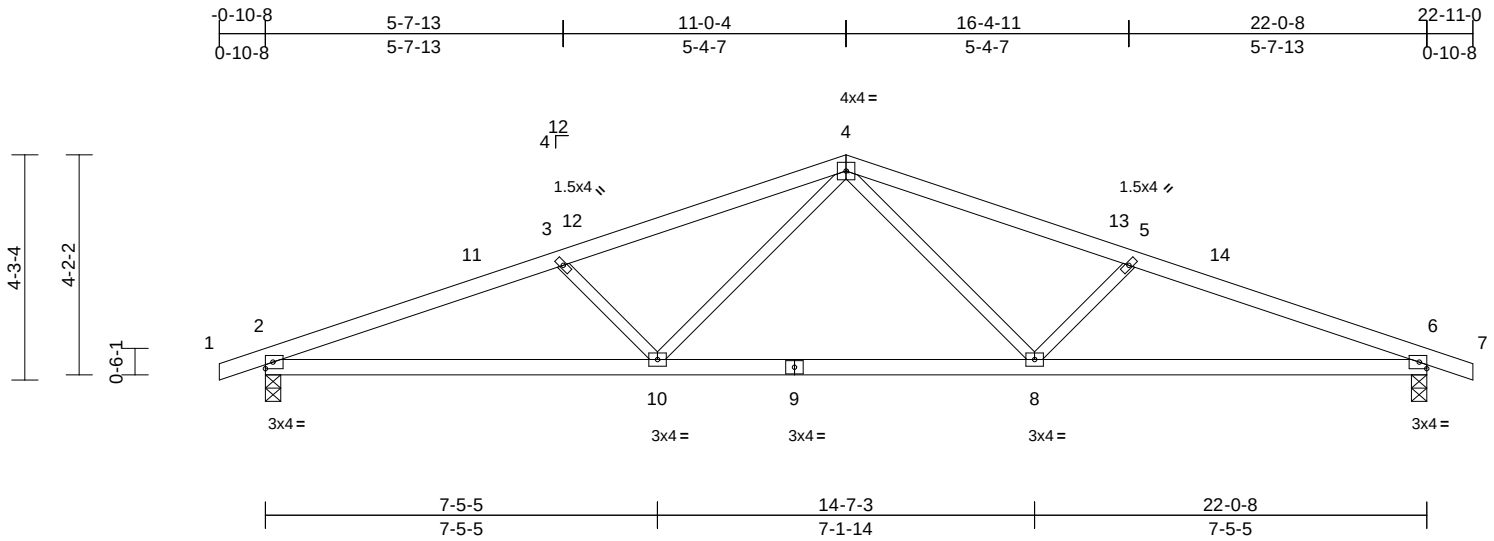
Page: 1




Scale = 1:43.7

| 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 | 0.46 | Vert(LL) | -0.11 | 8-10 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.72 | Vert(CT) | -0.22 | 8-10 | >999 | 180 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.20 | Horz(CT) | 0.06 | 6 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 83 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 3-5-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-4-1 oc bracing.

**REACTIONS** (size) 2=0-3-8, 6=0-3-8
Max Horiz 2=-75 (LC 17)
Max Uplift 2=-219 (LC 8), 6=-219 (LC 9)
Max Grav 2=1050 (LC 1), 6=1050 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-2188/584, 3-4=-1917/518, 4-5=-1917/518, 5-6=-2188/584, 6-7=0/6
BOT CHORD 2-10=-486/1992, 8-10=-269/1376, 6-8=-494/1992
WEBS 4-8=-103/589, 5-8=-376/227, 4-10=-103/589, 3-10=-376/227

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 11-0-4, Exterior(2R) 11-0-4 to 16-0-4, Interior (1) 16-0-4 to 22-11-0 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) 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 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


April 23,2024



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Chesterfield, MO 63017
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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | R1 | Flat Girder | 1 | 2 | I65076809 |
| | | | | | Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:23 Page: 1

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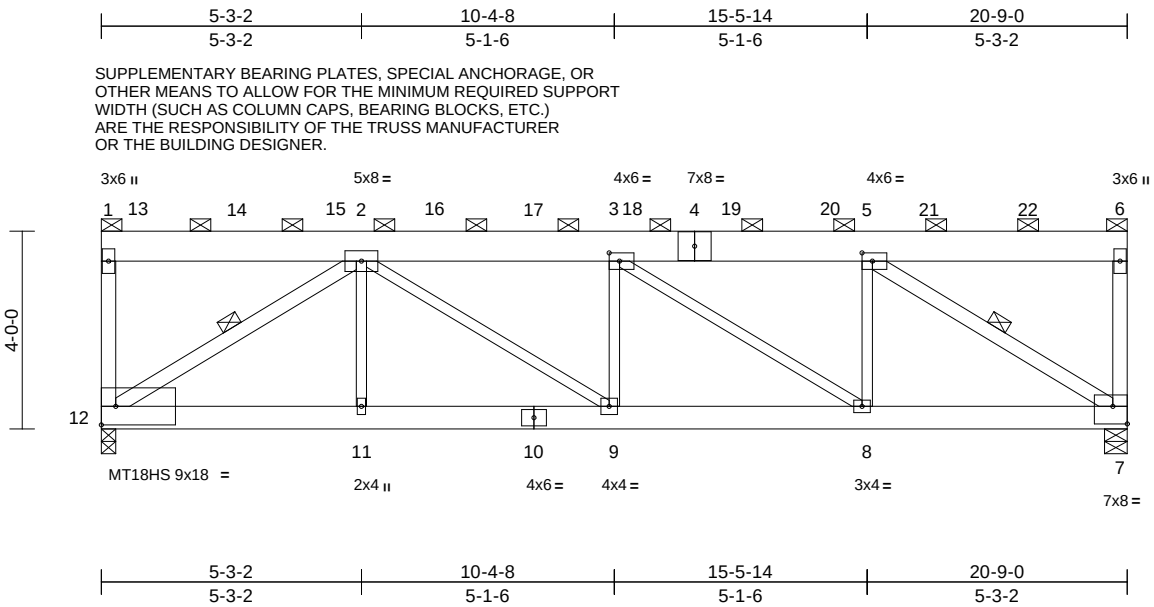


Scale = 1:46.6

Plate Offsets (X, Y): [3:0-2-8,0-2-0], [5:0-2-8,0-2-0], [7:Edge,0-4-4]

| 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 | 0.42 | Vert(LL) | -0.11 | 9 | >999 | 240 | MT18HS | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.85 | Vert(CT) | -0.20 | 9 | >999 | 180 | MT20 | 197/144 |
| BCLL | 0.0 | Rep Stress Incr | NO | WB | 0.62 | Horz(CT) | 0.07 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 257 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x8 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-1,5-7,12-2:2x4 SP No.2
OTHERS 2x4 SP No.2

**BRACING**

TOP CHORD 2-0-0 oc purlins (5-10-6 max.): 1-6, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-7, 2-12

**REACTIONS** (size) 7=0-5-8, 12=0-3-8, (req. 0-4-8)
Max Uplift 7=-1154 (LC 8), 12=-1281 (LC 8)
Max Grav 7=5155 (LC 1), 12=5719 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-1320/361, 1-2=-76/18, 2-3=-8293/2099, 3-5=-6403/1622, 5-6=-72/17, 6-7=-768/252
BOT CHORD 11-12=-1628/6426, 9-11=-1628/6426, 8-9=-2099/8293, 7-8=-1622/6403
WEBS 5-7=-7649/1939, 2-11=0/188, 2-12=-7674/1945, 2-9=-570/2256, 3-9=-1153/373, 3-8=-2284/577, 5-8=-239/1336

**NOTES**

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) 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 (3) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) WARNING: Required bearing size at joint(s) 12 greater than input bearing size.
8) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1281 lb uplift at joint 12 and 1154 lb uplift at joint 7.
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.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 916 lb down and 206 lb up at 0-9-0, 902 lb down and 203 lb up at 2-9-0, 902 lb down and 203 lb up at 4-9-0, 902 lb down and 203 lb up at 6-9-0, 902 lb down and 203 lb up at 8-9-0, 902 lb down and 203 lb up at 10-9-0, 902 lb down and 203 lb up at 12-9-0, 902 lb down and 203 lb up at 14-9-0, and 902 lb down and 203 lb up at 16-9-0, and 902 lb down and 203 lb up at 18-9-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-70, 7-12=-20
Concentrated Loads (lb)
Vert: 13=-916, 14=-902, 15=-902, 16=-902, 17=-902, 18=-902, 19=-902, 20=-902, 21=-902, 22=-902


April 23,2024



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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | V1 | Valley | 1 | 1 | I65076810 Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:23 Page: 1

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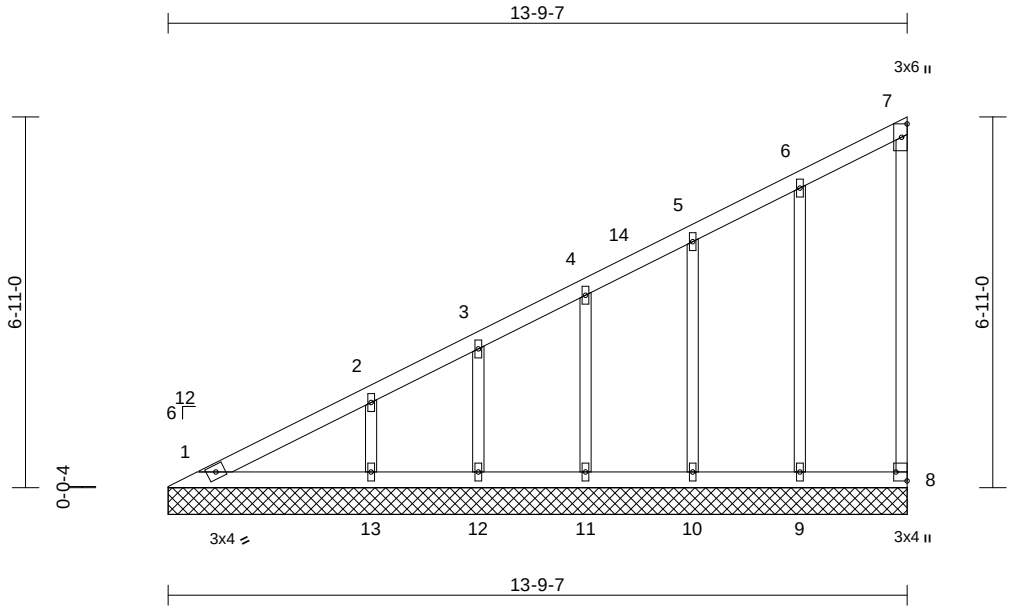


Scale = 1:43

Plate Offsets (X, Y): [8: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 | 0.55 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.18 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.12 | Horiz(TL) | 0.00 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 61 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=13-9-7, 8=13-9-7, 9=13-9-7, 10=13-9-7, 11=13-9-7, 12=13-9-7, 13=13-9-7

Max Horiz 1=292 (LC 9)

Max Uplift 8=-38 (LC 9), 9=-67 (LC 12), 10=-58 (LC 12), 11=-65 (LC 12), 12=-47 (LC 12), 13=-100 (LC 12)

Max Grav 1=156 (LC 20), 8=73 (LC 19), 9=193 (LC 1), 10=176 (LC 1), 11=190 (LC 1), 12=138 (LC 1), 13=294 (LC 1)

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

| | |
|---|---|
| TOP CHORD | 1-2=-441/258, 2-3=-357/213, 3-4=-312/199, 4-5=-254/175, 5-6=-198/158, 6-7=-124/116, 7-8=-54/50 |
| BOT CHORD | 1-13=-132/143, 12-13=-132/143, 11-12=-132/143, 10-11=-132/143, 9-10=-132/143, 8-9=-132/143 |
| WEBS | 6-9=-149/167, 5-10=-138/110, 4-11=-146/104, 3-12=-112/84, 2-13=-219/173 |

**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 5-9-15, Interior (1) 5-9-15 to 13-8-11 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) All plates are 1.5x4 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 8, 67 lb uplift at joint 9, 58 lb uplift at joint 10, 65 lb uplift at joint 11, 47 lb uplift at joint 12 and 100 lb uplift at joint 13.
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


April 23,2024



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Chesterfield, MO 63017
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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | V2 | Valley | 1 | 1 | I65076811 |
| | | | | | Job Reference (optional) |

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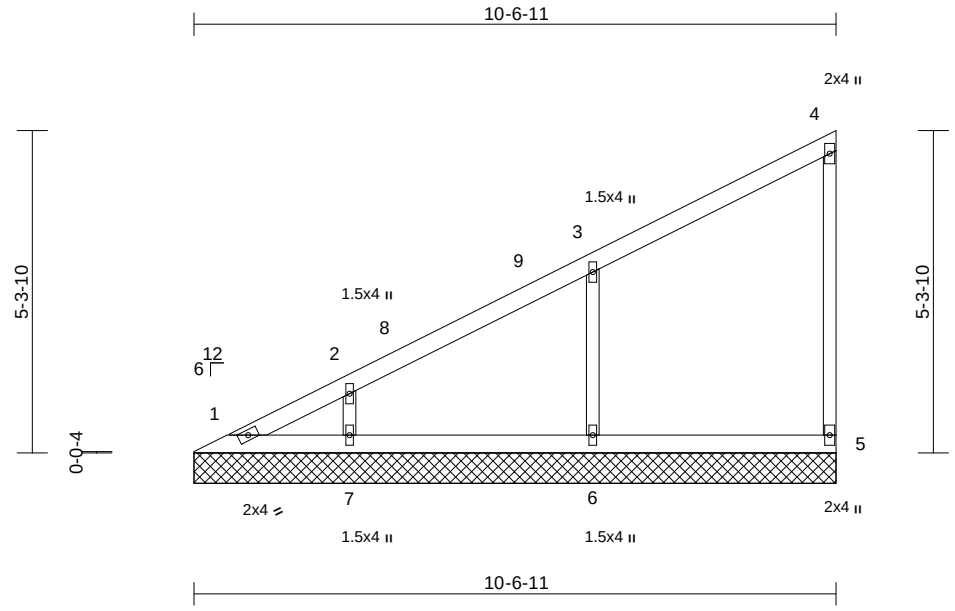


Scale = 1:37.9

| 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 | 0.32 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.13 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.08 | Horiz(TL) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 39 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=10-6-11, 5=10-6-11, 6=10-6-11, 7=10-6-11
Max Horiz 1=220 (LC 9)
Max Uplift 5=-37 (LC 9), 6=-137 (LC 12), 7=-101 (LC 12)
Max Grav 1=88 (LC 20), 5=140 (LC 1), 6=405 (LC 1), 7=296 (LC 1)

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

| | |
|---|---|
| TOP CHORD | 1-2=-377/217, 2-3=-294/184, 3-4=-137/111, 4-5=-108/124 |
| BOT CHORD | 1-7=-99/110, 6-7=-99/110, 5-6=-99/110 |
| WEBS | 3-6=-315/302, 2-7=-230/225 |

**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 10-5-15 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 37 lb uplift at joint 5, 137 lb uplift at joint 6 and 101 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


April 23,2024



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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | V3 | Valley | 1 | 1 | I65076812 |
| | | | | | Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:23 Page: 1

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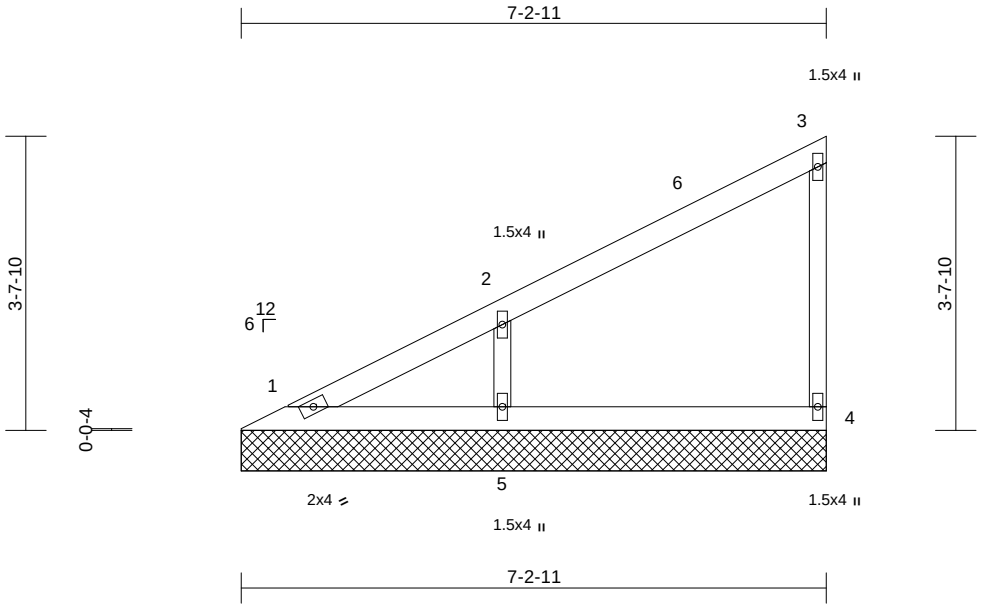


Scale = 1:28.5

| 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 | 0.23 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.08 | Horiz(TL) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | Weight: 25 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=7-2-11, 4=7-2-11, 5=7-2-11
Max Horiz 1=146 (LC 9)
Max Uplift 4=-31 (LC 12), 5=-128 (LC 12)
Max Grav 1=85 (LC 20), 4=141 (LC 1), 5=378 (LC 1)

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

| | |
|---|---|
| TOP CHORD | 1-2=-280/164, 2-3=-126/93, 3-4=-111/141 |
| BOT CHORD | 1-5=-67/73, 4-5=-67/73 |
| WEBS | 2-5=-294/316 |

**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 7-1-15 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 31 lb uplift at joint 4 and 128 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


April 23,2024



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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | V4 | Valley | 1 | 1 | I65076813 |
| | | | | | Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:23 Page: 1
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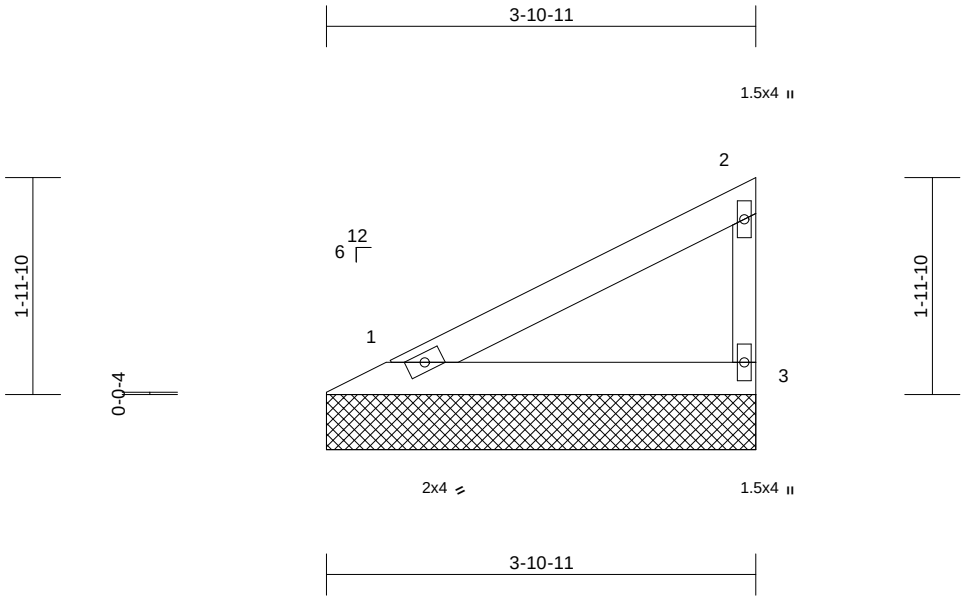


Scale = 1:20.9

| 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 | 0.22 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | 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: 12 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 3-11-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=3-10-11, 3=3-10-11
Max Horiz 1=71 (LC 9)
Max Uplift 1=-22 (LC 12), 3=-40 (LC 12)
Max Grav 1=144 (LC 1), 3=144 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-101/68, 2-3=-112/145
BOT CHORD 1-3=-33/36

**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 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 22 lb uplift at joint 1 and 40 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 23,2024



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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | V7 | Valley | 1 | 1 | I65076814 |
| | | | | | Job Reference (optional) |

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

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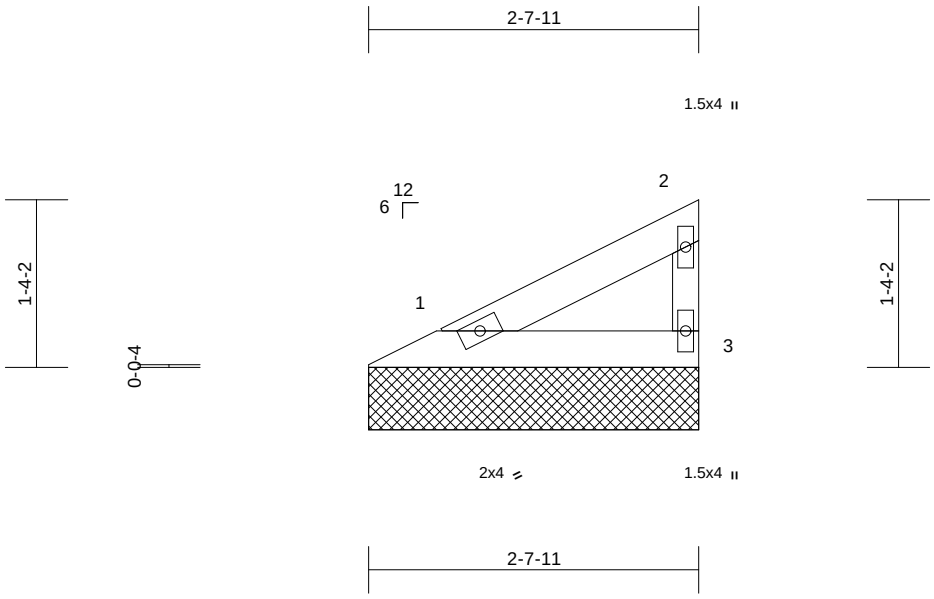
Page: 1




Scale = 1:18.4

| 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 | 0.07 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.04 | Vert(TL) | n/a | - | n/a | 999 | | |
| 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: 8 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 2-8-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=2-7-11, 3=2-7-11
Max Horiz 1=43 (LC 12)
Max Uplift 1=-8 (LC 12), 3=-30 (LC 12)
Max Grav 1=88 (LC 1), 3=88 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-46/25, 2-3=-68/81
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 SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 30 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 23,2024



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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | V8 | Valley | 1 | 1 | I65076815 |
| | | | | | Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:23 Page: 1
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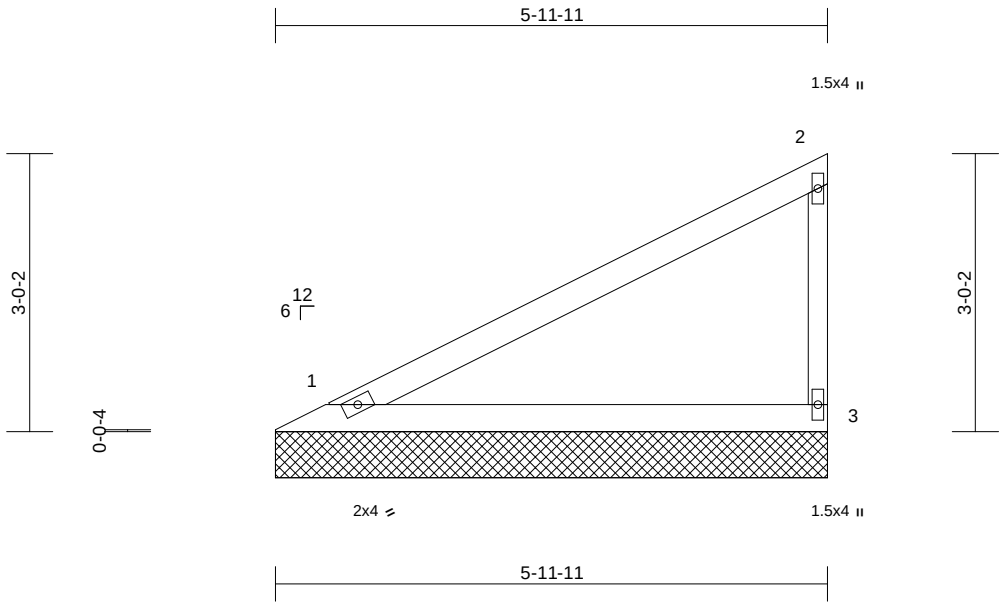


Scale = 1:24.9

| 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 | 0.65 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.35 | Vert(TL) | n/a | - | n/a | 999 | | |
| 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: 20 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 6-0-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=5-11-11, 3=5-11-11
Max Horiz 1=116 (LC 12)
Max Uplift 1=-23 (LC 12), 3=-81 (LC 12)
Max Grav 1=238 (LC 1), 3=238 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-121/66, 2-3=-185/213
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 SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1 and 81 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 23,2024



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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | V9 | Valley | 1 | 1 | I65076816 |
| | | | | | Job Reference (optional) |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:23 Page: 1
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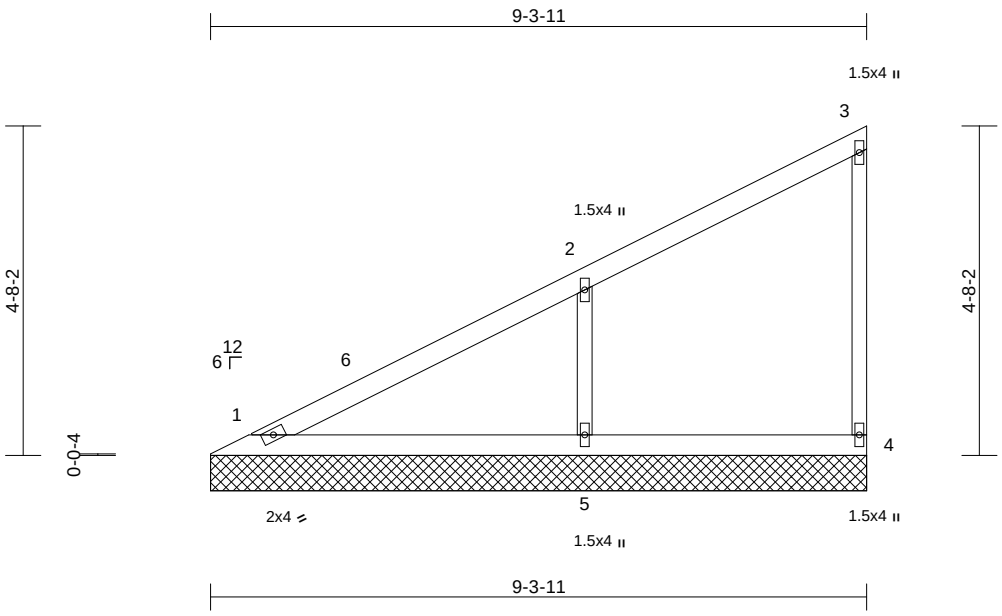


Scale = 1:32.7

| 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 | 0.34 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.18 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.08 | Horiz(TL) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 33 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=9-3-11, 4=9-3-11, 5=9-3-11
Max Horiz 1=188 (LC 12)
Max Uplift 4=-42 (LC 12), 5=-164 (LC 12)
Max Grav 1=169 (LC 1), 4=123 (LC 1), 5=483 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-241/113, 2-3=-84/29, 3-4=-97/97
BOT CHORD 1-5=-2/3, 4-5=-2/3
WEBS 2-5=-366/342

**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 5-4-3, Interior (1) 5-4-3 to 9-2-15 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 SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 4 and 164 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


April 23,2024



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| Job | Truss | Truss Type | Qty | Ply | Roof - HR Lot 160 |
|---|---|---|---|---|---|
| P240285-01 | V10 | Valley | 1 | 1 | I65076817 |
| | | | | | Job Reference (optional) |

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

Run: 8.63 S Apr 5 2024 Print: 8.630 S Apr 5 2024 MiTek Industries, Inc. Mon Apr 22 14:01:23

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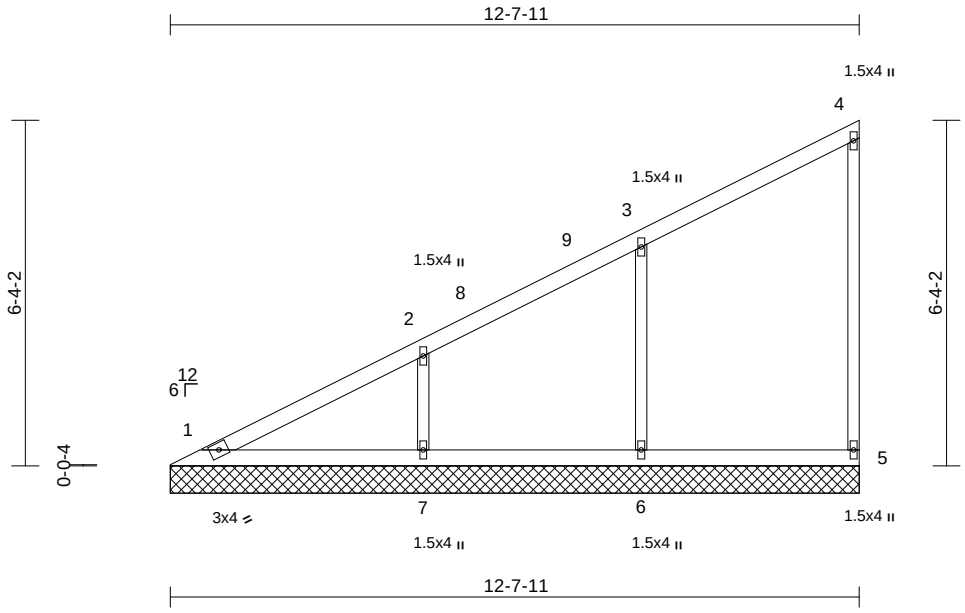


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| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.24 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.13 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.12 | Horiz(TL) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 48 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=12-7-11, 5=12-7-11, 6=12-7-11, 7=12-7-11

Max Horiz 1=261 (LC 12)

Max Uplift 5=-49 (LC 12), 6=-129 (LC 12), 7=-138 (LC 12)

Max Grav 1=149 (LC 21), 5=144 (LC 1), 6=381 (LC 1), 7=403 (LC 1)

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

| | |
|---|---|
| TOP CHORD | 1-2=-310/137, 2-3=-193/83, 3-4=-81/35, 4-5=-111/94 |
| BOT CHORD | 1-7=-2/3, 6-7=-2/3, 5-6=-2/3 |
| WEBS | 3-6=-299/245, 2-7=-305/244 |

**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 12-6-15 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 SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 5, 129 lb uplift at joint 6 and 138 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


April 23,2024



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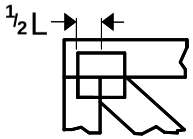
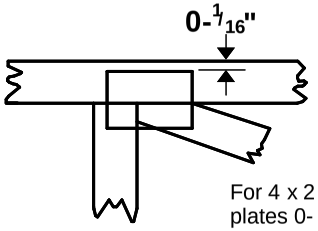
# Symbols

## 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- 1/16" from outside edge of truss.

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

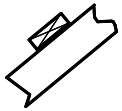
* Plate location details available in MiTek software or upon request.

## PLATE SIZE

4 x 4

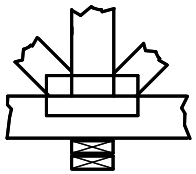
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

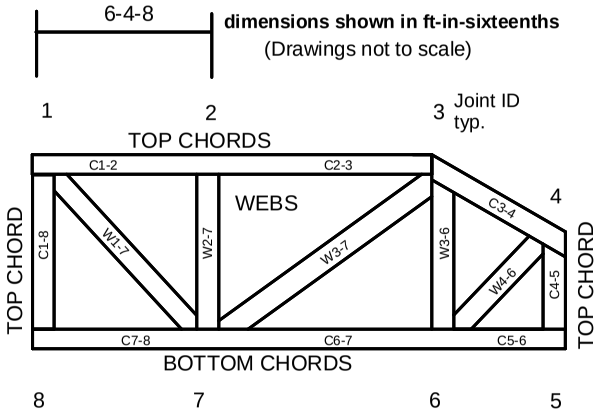


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System




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

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

# Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

# Design General Notes

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.



MiTek®



# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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