MiTek®

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

RE: P240476-01 - Roof - Osage Lot 61

Site Information:

Project Customer: Clayton Properties Project Name: Basswoof Farmhouse
Lot/Block: 61 Subdivision: Osage
Model:
Address: 3808 SW Ravengate Pl
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	I65475617	B1	5/10/24
2	I65475618	B2	5/10/24
3	I65475619	B3	5/10/24
4	I65475620	C1	5/10/24
5	I65475621	C2	5/10/24
6	I65475622	C3	5/10/24
7	I65475623	D1	5/10/24
8	I65475624	D2	5/10/24
9	I65475625	D3	5/10/24
10	I65475626	E1	5/10/24
11	I65475627	E2	5/10/24
12	I65475628	E3	5/10/24
13	I65475629	E4	5/10/24
14	I65475630	E5	5/10/24
15	I65475631	R1	5/10/24
16	I65475632	V1	5/10/24
17	I65475633	V2	5/10/24
18	I65475634	V3	5/10/24
19	I65475635	V4	5/10/24
20	I65475636	V5	5/10/24
21	I65475637	V6	5/10/24
22	I65475638	V7	5/10/24
23	I65475639	V8	5/10/24

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.

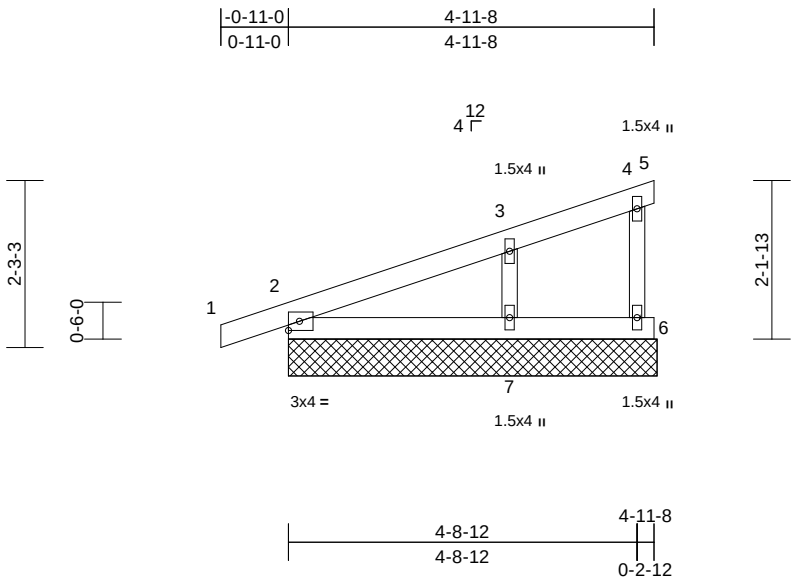
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

May 10,2024
Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	B1	Monopitch Supported Gable	1	1	Job Reference (optional) I65475617

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:27 Page: 1
ID:OaSecMxhRSfQIAVWAXas1vylfDC-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDorJ42JC?f



Scale = 1:31.3

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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, 7=5-0-0
Max Horiz 2=84 (LC 12)
Max Uplift 2=-50 (LC 12), 5=-9 (LC 16), 6=-13 (LC 12), 7=-75 (LC 16)
Max Grav 2=256 (LC 23), 5=18 (LC 23), 6=57 (LC 23), 7=349 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-3=-157/59, 3-4=-41/9, 4-5=-9/5, 4-6=-50/52
BOT CHORD 2-7=0/0, 6-7=0/0
WEBS 3-7=-288/331

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 Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 4-11-8 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
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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 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 9 lb uplift at joint 5, 13 lb uplift at joint 6, 50 lb uplift at joint 2 and 75 lb uplift at joint 7.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 10,2024

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

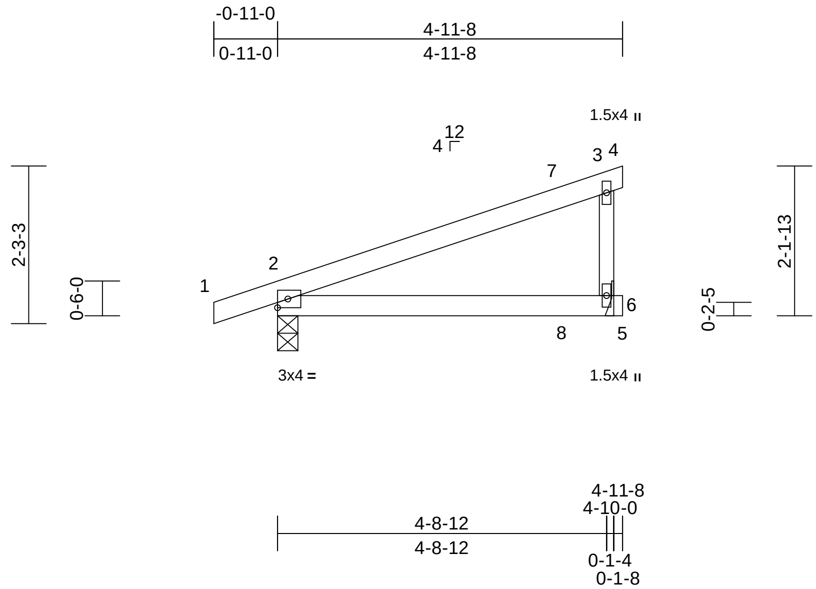
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/22/2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	
P240476-01	B2	Monopitch	3	1	Job Reference (optional)	I65475618

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:28 Page: 1

ID:O7VVk_L0RvxcNO62AgBqQ4ylfCg-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:33.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	0.10	2-6	>549	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	0.08	2-6	>651	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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, 6= Mechanical
Max Horiz 2=87 (LC 12)
Max Uplift 2=-131 (LC 12), 6=-106 (LC 12)
Max Grav 2=404 (LC 23), 6=299 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-105/64, 3-4=-7/0, 3-6=-248/242
BOT CHORD 2-6=0/0, 5-6=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) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 4-11-8 zone; cantilever left and right exposed ; end vertical left exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 106 lb uplift at joint 6 and 131 lb uplift at joint 2.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

May 10,2024

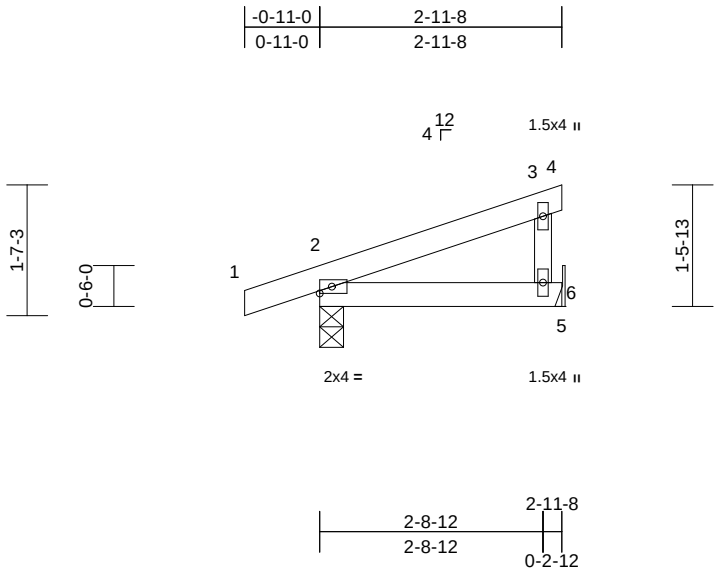
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/22/2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475619
P240476-01	B3	Monopitch	7	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:28 Page: 1
ID:OfYMtcmLQLDnSdia9popoFylfC8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J42JC?f



Scale = 1:28.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	0.00	2-6	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	2-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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, 6= Mechanical
Max Horiz 2=57 (LC 13)
Max Uplift 2=-78 (LC 12), 6=-30 (LC 16)
Max Grav 2=281 (LC 23), 6=161 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-83/47, 3-4=-7/0, 3-6=-131/144
BOT CHORD 2-6=-23/25, 5-6=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 and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 6 and 78 lb uplift at joint 2.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

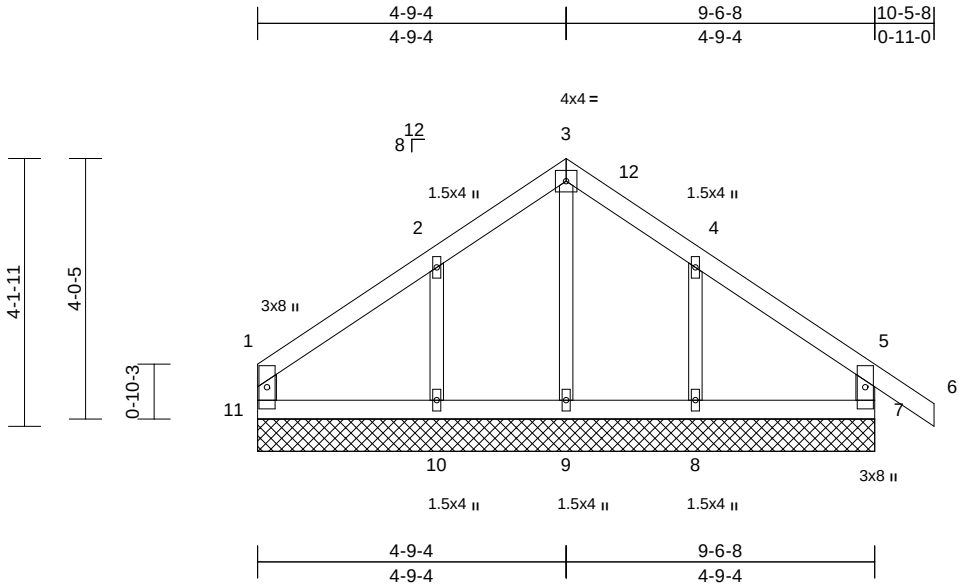
May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	C1	Common Structural Gable	1	1	Job Reference (optional) I65475620

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:28 Page: 1
ID:gfrsVxpQoNOr6dkbbQOWdoylfDM-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi7942SC?I



Scale = 1:35.6

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 41 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 9-3:2x3 SPF No.2
OTHERS 2x3 SPF No.2

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

REACTIONS (size) 7=9-6-8, 8=9-6-8, 9=9-6-8, 10=9-6-8, 11=9-6-8
Max Horiz 11=-121 (LC 12)
Max Uplift 7=-49 (LC 16), 8=-110 (LC 17), 10=-114 (LC 16), 11=-41 (LC 17)
Max Grav 7=260 (LC 24), 8=337 (LC 24), 9=123 (LC 28), 10=364 (LC 23), 11=175 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-115/105, 2-3=-133/229, 3-4=-133/234, 4-5=-118/117, 5-6=0/69, 1-11=-155/112, 5-7=-238/213
BOT CHORD 10-11=-51/76, 9-10=-51/76, 8-9=-51/76, 7-8=-51/76
WEBS 3-9=-158/54, 2-10=-308/253, 4-8=-284/231

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) 0-1-12 to 4-9-4, Corner(3R) 4-9-4 to 9-9-4, Exterior(2N) 9-9-4 to 10-5-8 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 11, 49 lb uplift at joint 7, 114 lb uplift at joint 10 and 110 lb uplift at joint 8.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

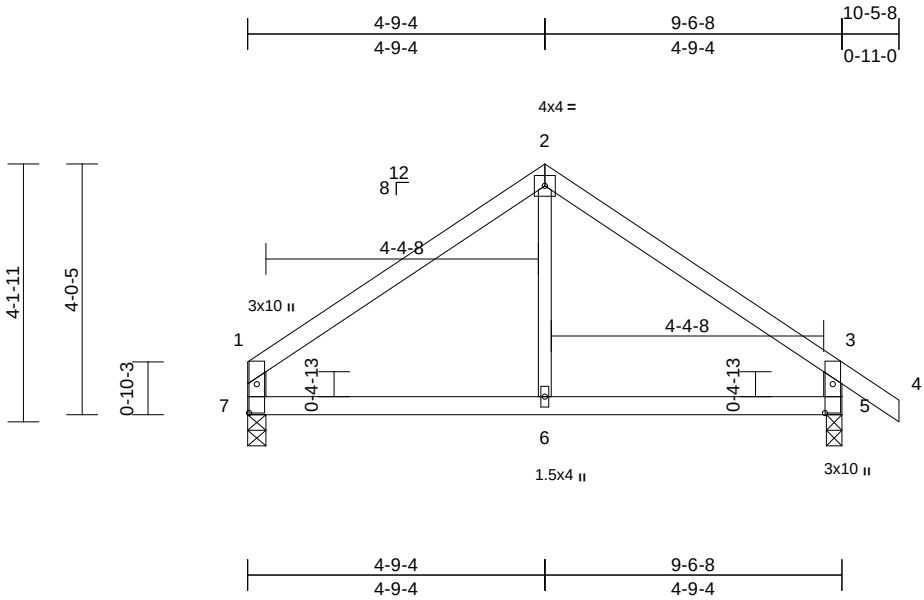
May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475621
P240476-01	C2	Common	1	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:28 Page: 1
ID:GfKth5P1324Gzx3gv2th0YylfKL-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWCDoi7J4z3CYf



Scale = 1:37

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

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	0.56	Vert(LL)	0.03	5-6	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.03	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 37 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 6-2:2x3 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) 5=0-3-0, 7=0-3-8
Max Horiz 7=-114 (LC 12)
Max Uplift 5=-83 (LC 17), 7=-56 (LC 16)
Max Grav 5=613 (LC 24), 7=537 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-515/449, 2-3=-516/453, 3-4=0/71, 1-7=-485/338, 3-5=-567/411
BOT CHORD 6-7=-238/296, 5-6=-238/296
WEBS 2-6=-310/185

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 4-9-4, Exterior(2R) 4-9-4 to 9-9-4, Interior (1) 9-9-4 to 10-5-8 zone; cantilever left and right exposed ; end vertical right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
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 56 lb uplift at joint 7 and 83 lb uplift at joint 5.
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

May 10,2024

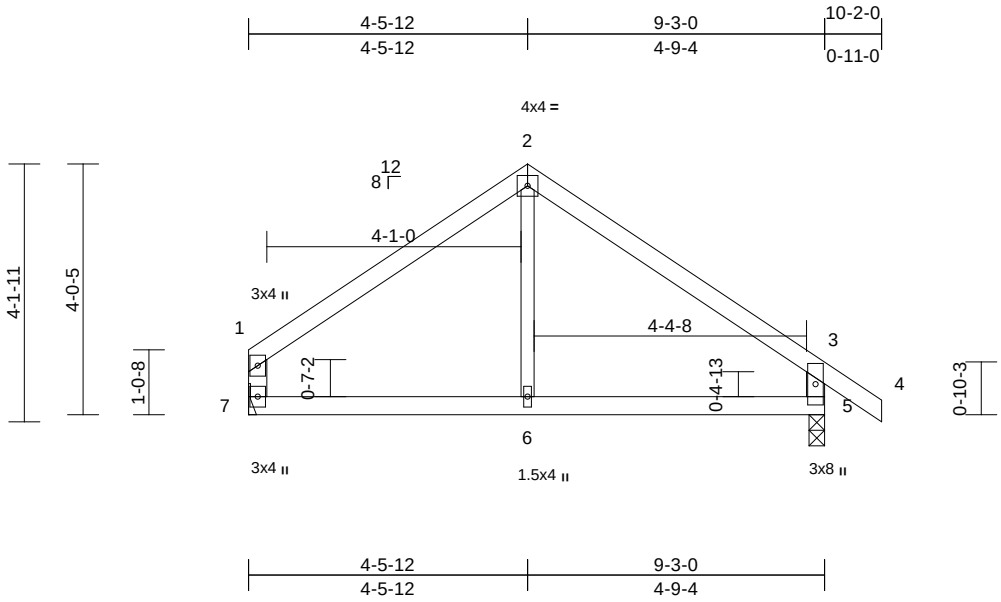
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/22/2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475622
P240476-01	C3	Common	1	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:29 Page: 1
ID:bBOxdUdBwZQGDBlEEzD_0KylfMf-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDonJ42JC?f



Scale = 1:37

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	0.47	Vert(LL)	0.04	5-6	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.04	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 37 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 6-2:2x3 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) 5=0-3-0, 7= Mechanical
Max Horiz 7=-113 (LC 12)
Max Uplift 5=-82 (LC 17), 7=-53 (LC 16)
Max Grav 5=597 (LC 24), 7=514 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-475/433, 2-3=-488/427, 3-4=0/71, 1-7=-454/330, 3-5=-549/400
BOT CHORD 6-7=-215/270, 5-6=-215/270
WEBS 2-6=-293/171

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 4-5-12, Exterior(2R) 4-5-12 to 9-5-12, Interior (1) 9-5-12 to 10-2-0 zone; cantilever left and right exposed ; end vertical right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 7 and 82 lb uplift at joint 5.
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

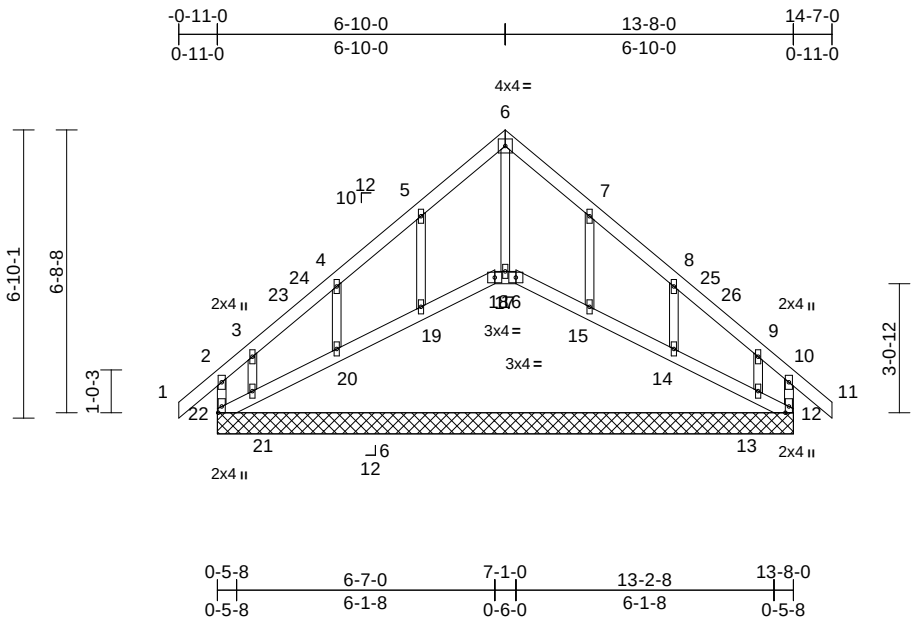
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

May 10,2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcscomponents.com)

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	D1	Roof Special Supported Gable	1	1	Job Reference (optional) I65475623



Scale = 1:54.7

Plate Offsets (X, Y): [10:0-0-0,Edge], [13:0-0-0,Edge], [14:0-0-0,Edge], [15:0-0-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 65 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 6-0-0 oc bracing.

REACTIONS (size) 12=13-8-0, 13=13-8-0, 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
Max Horiz 22=-218 (LC 14)
Max Uplift 12=-128 (LC 13), 13=-152 (LC 17), 14=-101 (LC 17), 15=-101 (LC 17), 16=-20 (LC 13), 17=-12 (LC 15), 18=-19 (LC 13), 19=-102 (LC 16), 20=-100 (LC 16), 21=-174 (LC 13), 22=-255 (LC 12)
Max Grav 12=191 (LC 22), 13=218 (LC 15), 14=261 (LC 24), 15=308 (LC 24), 16=76 (LC 14), 17=218 (LC 17), 18=74 (LC 14), 19=308 (LC 23), 20=261 (LC 23), 21=242 (LC 14), 22=274 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-22=-186/138, 1-2=0/78, 2-3=-153/163, 3-4=-100/122, 4-5=-106/206, 5-6=-164/293, 6-7=-164/287, 7-8=-105/200, 8-9=-82/114, 9-10=-125/137, 10-11=0/78, 10-12=-186/118
BOT CHORD 21-22=-154/150, 20-21=-124/121, 19-20=-129/123, 18-19=-128/120, 17-18=-107/105, 16-17=-107/105, 15-16=-128/120, 14-15=-128/122, 13-14=-130/124, 12-13=-90/91
WEBS 6-17=-295/103, 5-19=-268/138, 4-20=-220/144, 3-21=-136/123, 7-15=-268/138, 8-14=-220/144, 9-13=-127/118

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) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 6-10-0, Exterior(2R) 6-10-0 to 11-10-0, Interior (1) 11-10-0 to 14-7-0 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 1.5x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 255 lb uplift at joint 22, 128 lb uplift at joint 12, 19 lb uplift at joint 18, 20 lb uplift at joint 16, 12 lb uplift at joint 17, 102 lb uplift at joint 19, 100 lb uplift at joint 20, 174 lb uplift at joint 21, 101 lb uplift at joint 15, 101 lb uplift at joint 14 and 152 lb uplift at joint 13.
14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 18, 16, 17, 19, 20, 21, 15, 14, 13.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

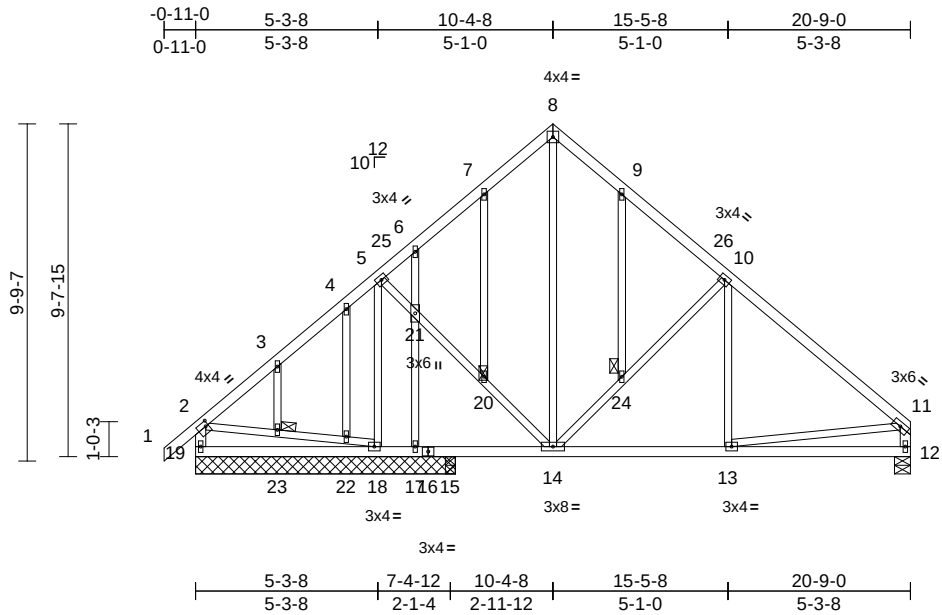
LOAD CASE(S) Standard

May 10,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475624
P240476-01	D2	Common Structural Gable	1	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:29 Page: 1
ID:DWJnveVQ7oN6jltbUjayQQylfPO-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J4zJC?f



Scale = 1:66.9

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

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.02	13-14	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.04	13-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.01	12	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 128 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 19-2,12-11:2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 20, 23, 24

REACTIONS (size) 12=0-5-8, 15=0-3-8, 17=7-6-8, 18=7-6-8, 19=7-6-8
Max Horiz 19=278 (LC 15)
Max Uplift 12=-75 (LC 17), 17=-171 (LC 16), 18=-78 (LC 16), 19=-4 (LC 17)
Max Grav 12=725 (LC 24), 15=123 (LC 7), 17=325 (LC 23), 18=755 (LC 1), 19=276 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/79, 2-3=-142/108, 3-4=-102/137, 4-5=-66/134, 5-6=-349/122, 6-7=-389/166, 7-8=-329/186, 8-9=-339/162, 9-10=-522/136, 10-11=-820/96, 2-19=-229/59, 11-12=-677/101
BOT CHORD 18-19=-279/345, 17-18=-175/189, 15-17=-175/189, 14-15=-175/189, 13-14=-15/560, 12-13=-65/128
WEBS 2-23=-259/263, 22-23=-262/266, 18-22=-280/279, 11-13=0/451, 5-18=-559/100, 5-21=-18/397, 20-21=-24/402, 14-20=-20/407, 8-14=-106/178, 14-24=-440/235, 10-24=-405/221, 10-13=0/184, 7-20=-56/29, 6-21=-321/120, 17-21=-396/147, 4-22=-68/50, 3-23=-22/24, 9-24=-50/20

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) -0-11-0 to 4-4-8, Interior (1) 4-4-8 to 10-4-8, Exterior(2R) 10-4-8 to 15-5-8, Interior (1) 15-5-8 to 20-7-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 1.5x4 MT20 unless otherwise indicated.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 19, 78 lb uplift at joint 18, 75 lb uplift at joint 12 and 171 lb uplift at joint 17.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

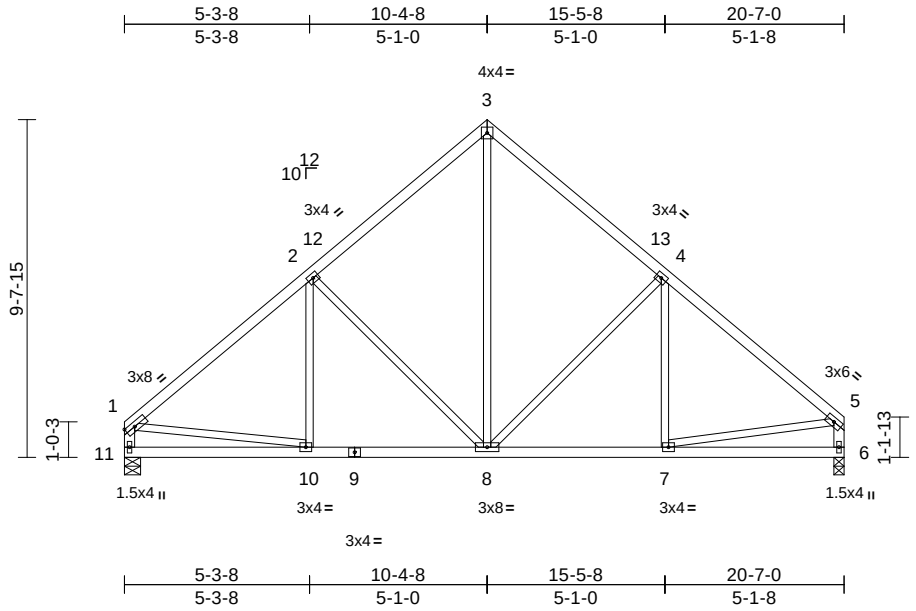
May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475625
P240476-01	D3	Common	7	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:29 Page: 1
ID:GxRwKJt_VBVld7M5l9q1YhznBFw-RfC?PsB70Hq3NSgPqnL8w3uITXbGCWrCDoi794z3C?f



Scale = 1:65.9

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	0.61	Vert(LL)	-0.03	8-10	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.06	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 107 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 11-1,6-5:2x4 SP No.2

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

REACTIONS (size) 6=0-3-8, 11=0-5-8
Max Horiz 11=273 (LC 13)
Max Uplift 6=-111 (LC 17), 11=-113 (LC 16)
Max Grav 6=968 (LC 23), 11=969 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1137/181, 2-3=-874/252, 3-4=-871/250, 4-5=-1108/177, 1-11=-917/155, 5-6=-919/154
BOT CHORD 10-11=-267/344, 8-10=-155/804, 7-8=-85/786, 6-7=-54/111
WEBS 1-10=-22/689, 5-7=-37/705, 2-10=-6/153, 2-8=-407/234, 3-8=-172/533, 4-8=-383/229, 4-7=-32/135

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 5-3-8, Interior (1) 5-3-8 to 10-4-8, Exterior(2R) 10-4-8 to 15-5-8, Interior (1) 15-5-8 to 20-5-4 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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 113 lb uplift at joint 11 and 111 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

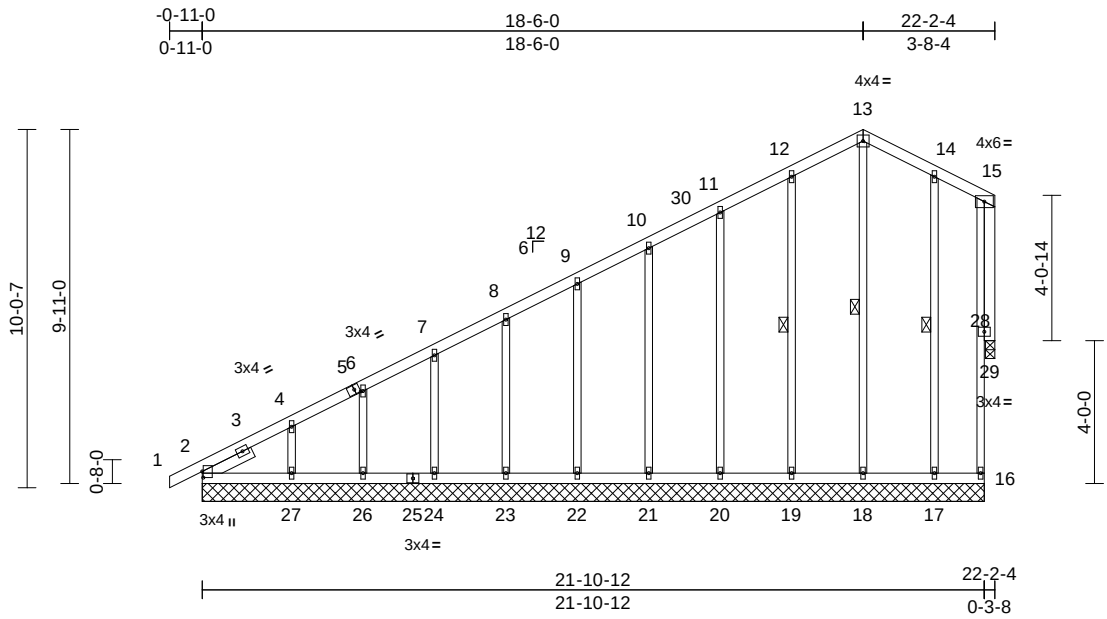
May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475626
P240476-01	E1	Roof Special Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:29 Page: 1
ID:gslTprHaUgIgDiJ2ZYuBGkylfYi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4z3C?f



Scale = 1:64.5

Plate Offsets (X, Y): [2:0-2-1,0-0-5], [5:0-1-12,0-1-8]

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	0.13	Vert(LL)	0.00	2-27	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	2-27	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.01	29	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 132 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 *Except* 28-15:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 1-6-7

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 13-18, 12-19, 14-17

REACTIONS (size) 2=21-10-12, 16=21-10-12, 17=21-10-12, 18=21-10-12, 19=21-10-12, 20=21-10-12, 21=21-10-12, 22=21-10-12, 23=21-10-12, 24=21-10-12, 26=21-10-12, 27=21-10-12, 29=0-3-2
Max Horiz 2=382 (LC 16)
Max Uplift 16=-9 (LC 17), 17=-50 (LC 17), 19=-64 (LC 16), 20=-62 (LC 16), 21=-61 (LC 16), 22=-61 (LC 16), 23=-60 (LC 16), 24=-65 (LC 16), 26=-42 (LC 16), 27=-147 (LC 16), 29=-11 (LC 16)
Max Grav 2=218 (LC 28), 16=43 (LC 24), 17=240 (LC 24), 18=180 (LC 24), 19=261 (LC 23), 20=233 (LC 23), 21=183 (LC 23), 22=180 (LC 36), 23=180 (LC 23), 24=182 (LC 36), 26=171 (LC 1), 27=215 (LC 36), 29=22 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/12, 2-4=-412/153, 4-6=-318/115, 6-7=-278/100, 7-8=-227/80, 8-9=-179/62, 9-10=-130/43, 10-11=-81/44, 11-12=-48/54, 12-13=-52/106, 13-14=-54/94, 14-15=-25/38, 16-28=-32/21, 15-28=-32/21
BOT CHORD	2-27=-1/1, 26-27=-1/1, 24-26=-1/1, 23-24=-1/1, 22-23=-1/1, 21-22=-1/1, 20-21=-1/1, 19-20=-1/1, 18-19=-1/1, 17-18=-1/1, 16-17=-1/1
WEBS	13-18=-139/20, 12-19=-222/96, 11-20=-193/98, 10-21=-143/96, 9-22=-140/97, 8-23=-140/96, 7-24=-141/100, 6-26=-135/97, 4-27=-162/242, 14-17=-206/128, 15-29=-22/20

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) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 18-6-0, Corner(3E) 18-6-0 to 21-9-8 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) 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 1.5x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
11) Bearing at joint(s) 29 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 16, 64 lb uplift at joint 19, 62 lb uplift at joint 20, 61 lb uplift at joint 21, 61 lb uplift at joint 22, 60 lb uplift at joint 23, 65 lb uplift at joint 24, 42 lb uplift at joint 26, 147 lb uplift at joint 27, 50 lb uplift at joint 17 and 11 lb uplift at joint 29.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

May 10,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475626
P240476-01	E1	Roof Special Supported Gable	1	1	Job Reference (optional)	

LOAD CASE(S) Standard

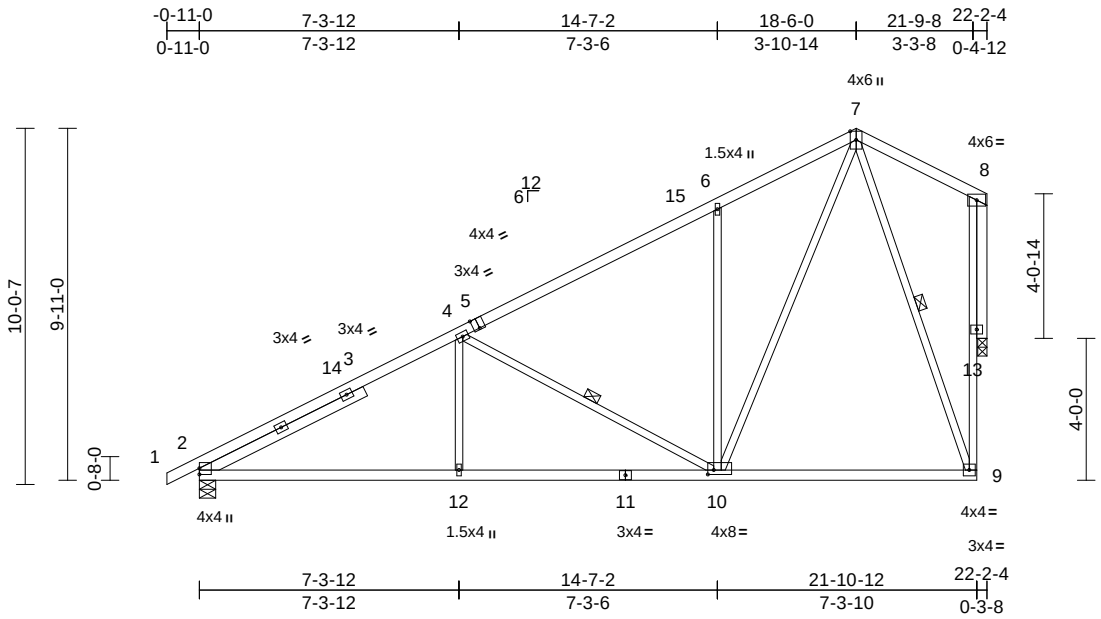
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	E2	Roof Special	8	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I65475627
05/22/2024

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:30 Page: 1
ID:g2jB6PgaV0svctvF4KTDi_ylfZV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWCDoi7J4z3C?f



Scale = 1:64.9

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

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	0.68	Vert(LL)	-0.08	9-10	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.18	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.03	13	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 123 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
OTHERS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 5-2-1

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

REACTIONS (size) 2=0-5-8, 13=0-3-2
Max Horiz 2=382 (LC 16)
Max Uplift 2=-157 (LC 16), 13=-232 (LC 16)
Max Grav 2=1079 (LC 23), 13=990 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-4=-1604/185, 4-6=-925/130, 6-7=-927/268, 7-8=-97/66
BOT CHORD 2-12=-437/1333, 10-12=-437/1333, 9-10=-84/303, 9-13=-207/928, 8-13=-196/70
WEBS 7-10=-320/1117, 7-9=-915/255, 6-10=-544/264, 4-10=-703/269, 4-12=0/302

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) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 18-6-0, Exterior(2E) 18-6-0 to 21-9-8 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
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) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 2 and 232 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

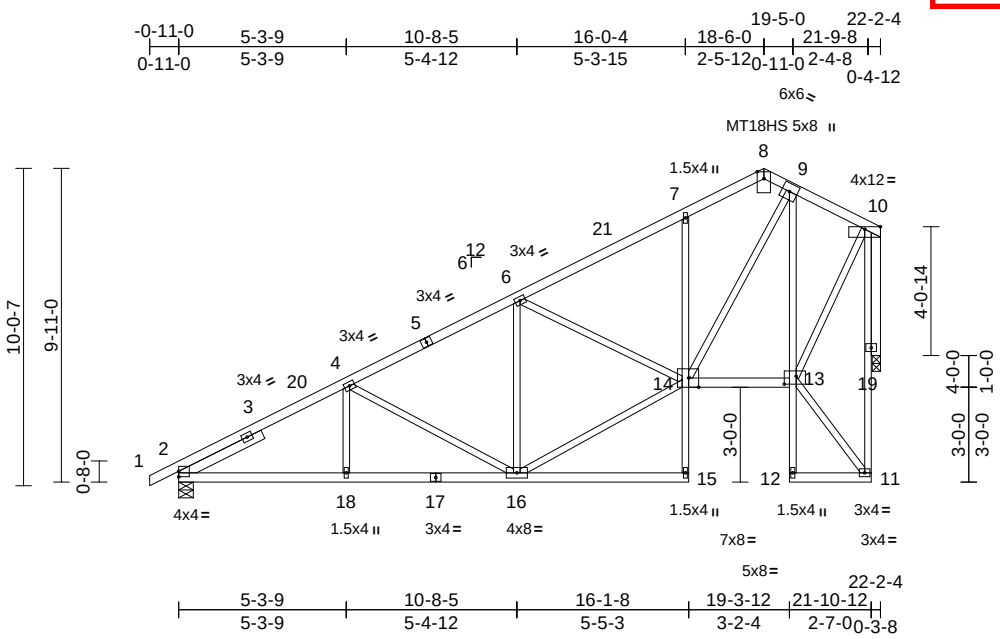
May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475628
P240476-01	E3	Roof Special	2	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:30 Page: 1
ID:HXyS?ajf9Rc8qbAhrG?Jw7ylfVZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J42JC?f



Scale = 1:72.9

Plate Offsets (X, Y): [2:Edge,0-2-1], [13:0-4-8,0-3-0], [14:0-3-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.08	7-14	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.15	15-16	>999	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.07	19	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 135 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 15-7,9-12,11-10:2x3 SPF No.2
WEBS 2x3 SPF No.2
OTHERS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-11-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 19=0-3-2
Max Horiz 2=382 (LC 16)
Max Uplift 2=-157 (LC 16), 19=-232 (LC 16)
Max Grav 2=1079 (LC 23), 19=990 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-4=-1673/203, 4-6=-1240/167, 6-7=-1067/231, 7-8=-964/302, 8-9=-685/242, 9-10=-443/145
BOT CHORD 2-18=-475/1395, 16-18=-475/1395, 15-16=-1/12, 14-15=0/90, 7-14=-239/139, 13-14=-80/321, 12-13=0/43, 9-13=-532/179, 11-12=-6/1, 11-19=0/38, 10-19=-978/292
WEBS 11-13=-7/23, 10-13=-174/707, 9-14=-336/1100, 6-14=-248/91, 4-18=0/213, 4-16=-412/177, 6-16=-268/166, 14-16=-366/1185

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) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 18-6-0, Exterior(2E) 18-6-0 to 21-9-8 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 2 and 232 lb uplift at joint 19.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

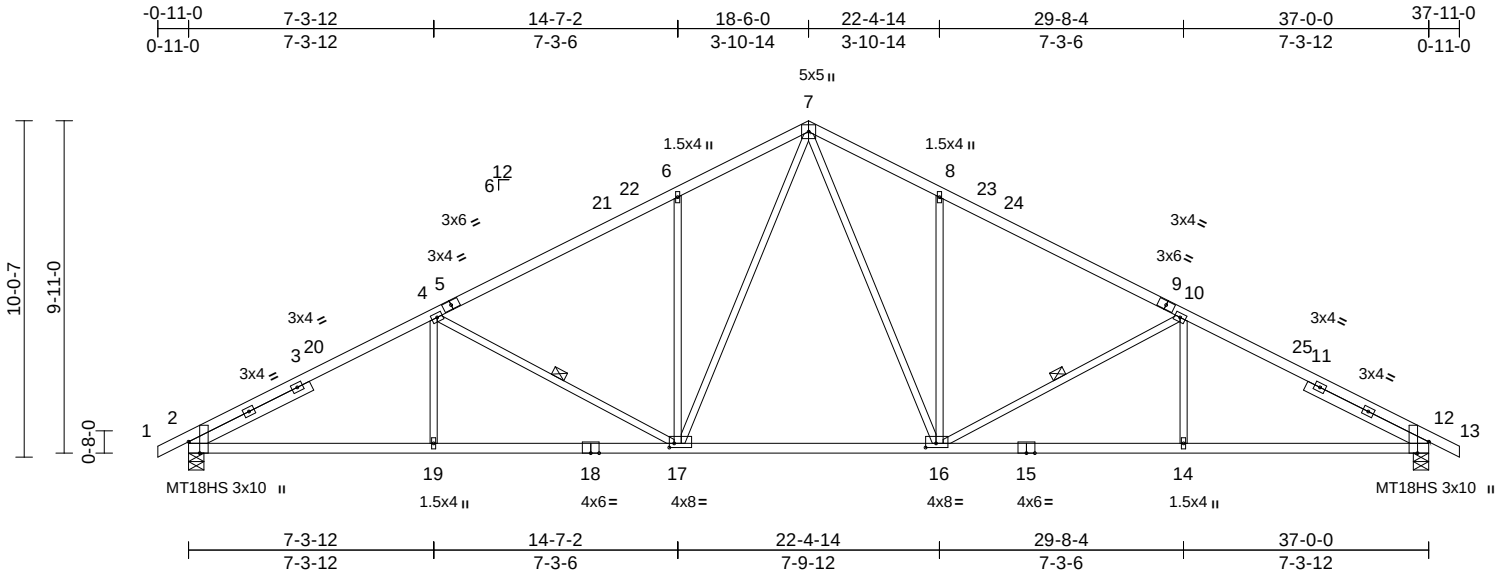
May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	E4	Common	7	1	Job Reference (optional) I65475629

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:30 Page: 1
ID:8Oa_xmr2iWnAyeeW9D9b2FylfSp-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi7342SC?I



Scale = 1:68.7

Plate Offsets (X, Y): [2:0-4-1,Edge], [12:0-4-1,Edge], [16:0-3-12,0-1-8], [17:0-1-12,0-1-8]

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	0.90	Vert(LL)	-0.17	16-17	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.36	16-17	>999	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.14	12	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 180 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-0-10, Right 2x4 SP No.2 -- 4-0-10

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 8-8-5 oc bracing.
WEBS 1 Row at midpt 4-17, 10-16

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=183 (LC 20)
Max Uplift 2=-276 (LC 16), 12=-276 (LC 17)
Max Grav 2=1729 (LC 1), 12=1729 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-4=-2935/447, 4-6=-2308/435, 6-7=-2285/551, 7-8=-2285/551, 8-10=-2308/435, 10-12=-2935/447, 12-13=0/12
BOT CHORD 2-19=-454/2497, 17-19=-454/2497, 16-17=-110/1596, 14-16=-286/2497, 12-14=-286/2497
WEBS 4-19=0/296, 4-17=-641/256, 6-17=-625/264, 8-16=-625/264, 10-16=-641/257, 10-14=0/296, 7-17=-320/1161, 7-16=-319/1161

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) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 18-6-0, Exterior(2R) 18-6-0 to 23-6-0, Interior (1) 23-6-0 to 37-11-0 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) 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 276 lb uplift at joint 2 and 276 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

May 10,2024

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

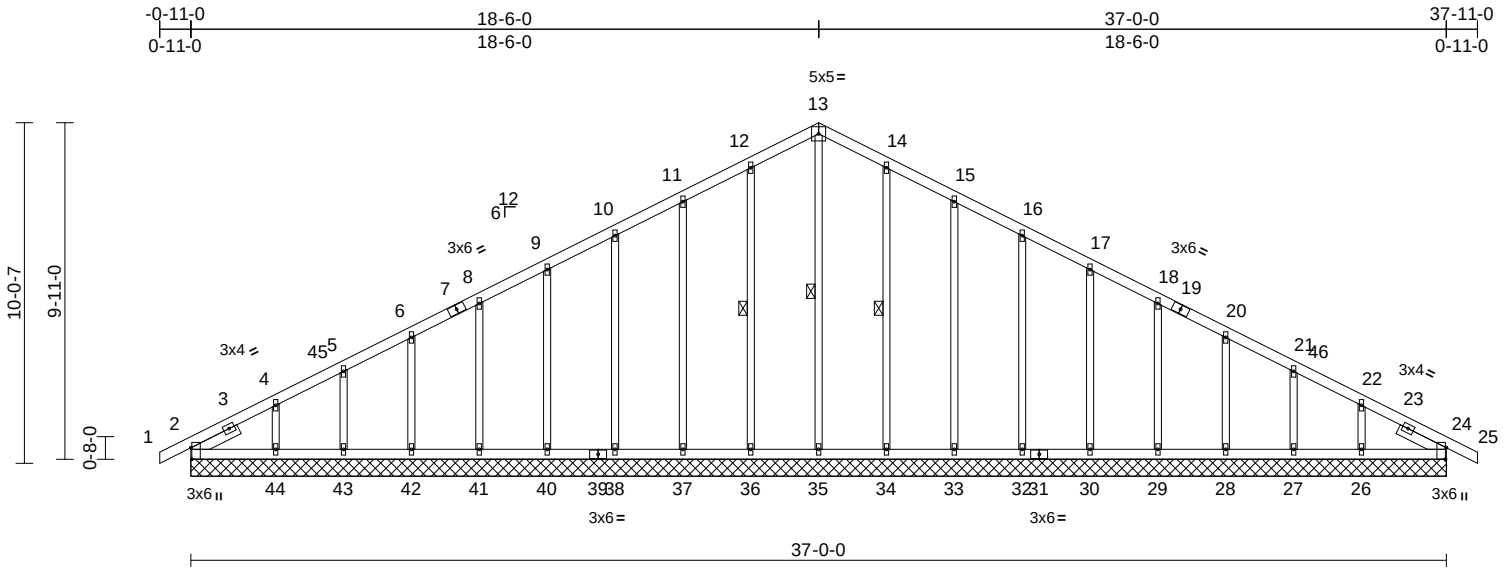
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	E5	Common Supported Gable	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/22/2024

I65475630

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:30 Page: 1
ID:WUXtsnQTcg5xShQlN2gNrTylfdh-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKVrCDoi7J42JC?f



Scale = 1:67.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.01	24	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										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	Structural wood sheathing directly applied or 6-0-0 oc purlins.
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=-183 (LC 17)

Max Uplift 2=-27 (LC 17), 26=-105 (LC 17), 27=-51 (LC 17), 28=-63 (LC 17), 29=-61 (LC 17), 30=-61 (LC 17), 32=-60 (LC 17), 33=-67 (LC 17), 34=-50 (LC 17), 36=-55 (LC 16), 37=-65 (LC 16), 38=-60 (LC 16), 40=-61 (LC 16), 41=-60 (LC 16), 42=-64 (LC 16), 43=-48 (LC 16), 44=-118 (LC 16)

Max Grav 2=188 (LC 1), 24=188 (LC 1), 26=211 (LC 17), 27=172 (LC 1), 28=182 (LC 37), 29=180 (LC 24), 30=180 (LC 37), 32=221 (LC 24), 33=265 (LC 24), 34=274 (LC 24), 35=208 (LC 29), 36=274 (LC 23), 37=265 (LC 23), 38=221 (LC 23), 40=180 (LC 36), 41=180 (LC 23), 42=182 (LC 36), 43=172 (LC 1), 44=211 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-4=-243/84, 4-5=-162/90, 5-6=-128/105, 6-8=-102/131, 8-9=-82/159, 9-10=-73/187, 10-11=-91/237, 11-12=-111/294, 12-13=-128/341, 13-14=-128/341, 14-15=-111/294, 15-16=-91/237, 16-17=-73/184, 17-18=-58/130, 18-20=-58/76, 20-21=-73/31, 21-22=-98/22, 22-24=-165/50, 24-25=0/12

BOT CHORD 2-44=-48/193, 43-44=-48/193, 42-43=-48/193, 41-42=-48/193, 40-41=-48/193, 38-40=-48/193, 37-38=-48/193, 36-37=-48/193, 35-36=-48/193, 34-35=-48/193, 33-34=-48/193, 32-33=-48/193, 30-32=-48/193, 29-30=-48/193, 28-29=-48/193, 27-28=-48/193, 26-27=-48/193, 24-26=-48/193

WEBS 13-35=-213/42, 12-36=-234/82, 11-37=-225/104, 10-38=-181/95, 9-40=-140/97, 8-41=-140/96, 6-42=-141/98, 5-43=-136/100, 4-44=-159/205, 14-34=-234/82, 15-33=-225/104, 16-32=-181/95, 17-30=-140/97, 18-29=-140/96, 20-28=-141/98, 21-27=-136/101, 22-26=-159/202

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) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 18-6-0, Corner(3R) 18-6-0 to 23-6-0, Exterior(2N) 23-6-0 to 37-11-0 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.

May 10,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475630
P240476-01	E5	Common Supported Gable	1	1	Job Reference (optional)	

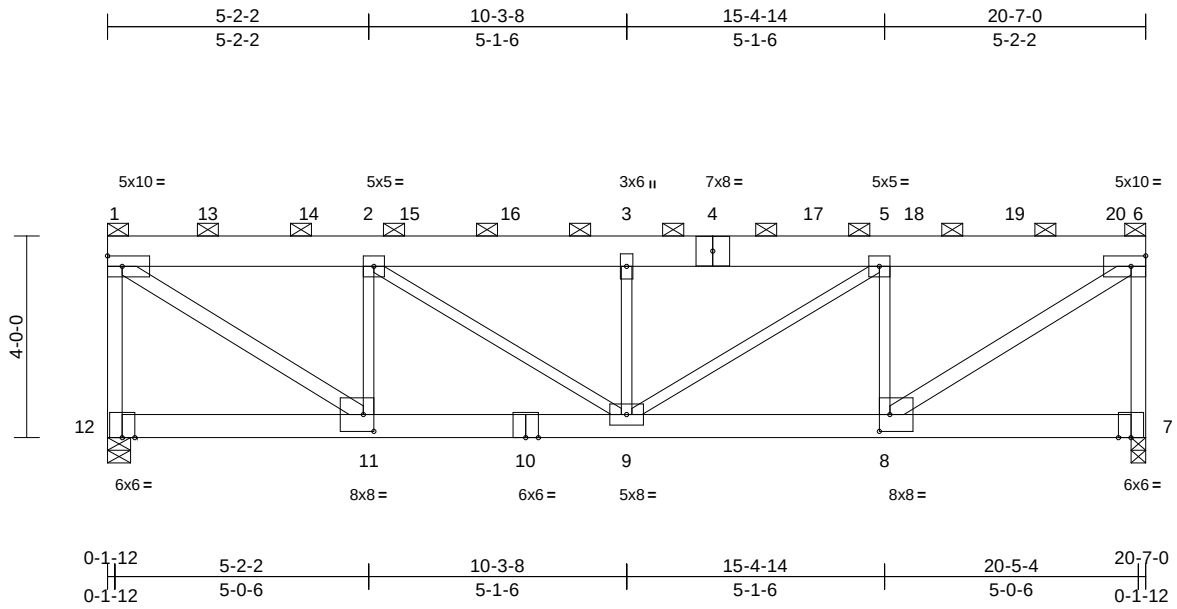
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 1.5x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 55 lb uplift at joint 36, 65 lb uplift at joint 37, 60 lb uplift at joint 38, 61 lb uplift at joint 40, 60 lb uplift at joint 41, 64 lb uplift at joint 42, 48 lb uplift at joint 43, 118 lb uplift at joint 44, 50 lb uplift at joint 34, 67 lb uplift at joint 33, 60 lb uplift at joint 32, 61 lb uplift at joint 30, 61 lb uplift at joint 29, 63 lb uplift at joint 28, 51 lb uplift at joint 27 and 105 lb uplift at joint 26.
13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
14) 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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	R1	Flat Girder	1	2	Job Reference (optional) I65475631

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:31 Page: 1
ID:p1lLYtHBqmZt0HL5osFBZ7ylfON-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4ZJc?f



Scale = 1:45.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.12	9	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.22	9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.76	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 255 lb	FT = 20%

LUMBER
TOP CHORD 2x8 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-1,6-7:2x4 SP No.2, 6-8,11-1:2x4 SP 1650F 1.5E

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

REACTIONS (size) 7=0-3-8, 12=0-5-8
Max Horiz 12=-105 (LC 14)
Max Uplift 7=-1290 (LC 13), 12=-1134 (LC 12)
Max Grav 7=5866 (LC 1), 12=5179 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-5097/1324, 1-2=-6339/1627, 2-3=-8280/2083, 3-5=-8280/2083, 5-6=-6413/1603, 6-7=-5782/1471
BOT CHORD 11-12=-97/106, 9-11=-1627/6339, 8-9=-1603/6413, 7-8=-19/79
WEBS 6-8=-1925/7694, 2-11=-4227/1157, 1-11=-1901/7608, 2-9=-588/2344, 3-9=-2521/704, 5-9=-579/2255, 5-8=-4280/1166

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 ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: Joint 12 SPF No.2 crushing capacity of 425 psi, Joint 7 SP No.2 crushing capacity of 565 psi.
9) Bearing at joint(s) 12, 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1134 lb uplift at joint 12 and 1290 lb uplift at joint 7.
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.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 18 lb down and 20 lb up at 0-1-12, 970 lb down and 200 lb up at 2-0-0, 970 lb down and 200 lb up at 4-0-0, 970 lb down and 200 lb up at 6-0-0, 970 lb down and 200 lb up at 8-0-0, 970 lb down and 200 lb up at 10-0-0, 970 lb down and 200 lb up at 12-0-0, 970 lb down and 200 lb up at 14-0-0, 970 lb down and 200 lb up at 16-0-0, and 970 lb down and 200 lb up at 18-0-0, and 976 lb down and 209 lb up at 20-0-0 on top chord. The design/ selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-70, 7-12=-20
Concentrated Loads (lb)
Vert: 4=-920, 3=-920, 13=-920, 14=-920, 15=-920, 16=-920, 17=-920, 18=-920, 19=-920, 20=-940

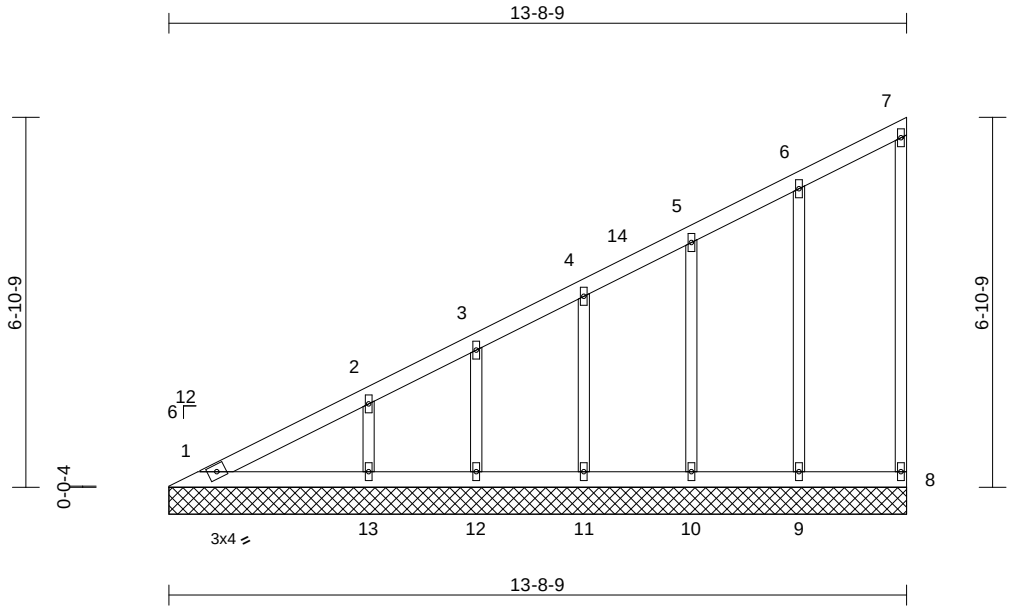
May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475632
P240476-01	V1	Valley	1	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:31 Page: 1
ID:znOG5Q?SPPEgIYP3TGYi3bylffX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7542JC?f



Scale = 1:42.8

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.00	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										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=13-8-9, 8=13-8-9, 9=13-8-9, 10=13-8-9, 11=13-8-9, 12=13-8-9, 13=13-8-9
Max Horiz 1=276 (LC 16)
Max Uplift 8=-24 (LC 16), 9=-62 (LC 16), 10=-59 (LC 16), 11=-62 (LC 16), 12=-47 (LC 16), 13=-95 (LC 16)
Max Grav 1=134 (LC 27), 8=98 (LC 22), 9=270 (LC 22), 10=254 (LC 22), 11=224 (LC 22), 12=136 (LC 1), 13=280 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-329/139, 2-3=-249/97, 3-4=-204/83, 4-5=-149/60, 5-6=-91/48, 6-7=-54/28, 7-8=-83/42
BOT CHORD 1-13=0/1, 12-13=0/1, 11-12=0/1, 10-11=0/1, 9-10=0/1, 8-9=0/1
WEBS 6-9=-228/116, 5-10=-216/107, 4-11=-181/100, 3-12=-110/83, 2-13=-209/165

NOTES

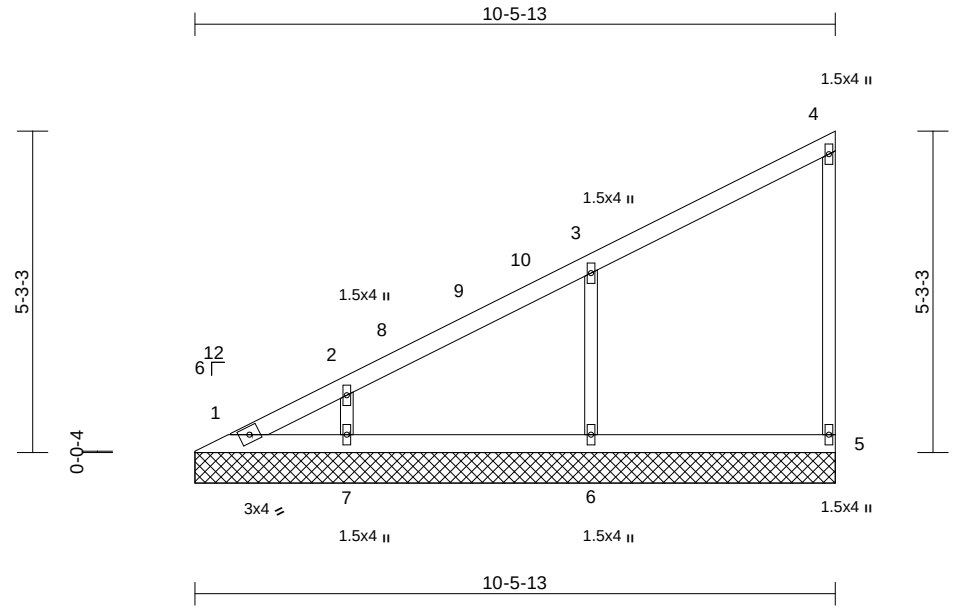
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-9-1, Interior (1) 5-9-1 to 13-7-13 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 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 24 lb uplift at joint 8, 62 lb uplift at joint 9, 59 lb uplift at joint 10, 62 lb uplift at joint 11, 47 lb uplift at joint 12 and 95 lb uplift at joint 13.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475633
P240476-01	V2	Valley	1	1	Job Reference (optional)	



Scale = 1:37.7

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	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										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=10-5-13, 5=10-5-13, 6=10-5-13, 7=10-5-13
Max Horiz 1=214 (LC 16)
Max Uplift 5=-48 (LC 16), 6=-137 (LC 16), 7=-101 (LC 16)
Max Grav 1=93 (LC 16), 5=206 (LC 22), 6=569 (LC 22), 7=302 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-299/129, 2-3=-214/95, 3-4=-120/54, 4-5=-174/99
BOT CHORD 1-7=-2/5, 6-7=-2/5, 5-6=-2/5
WEBS 3-6=-480/289, 2-7=-236/218

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 10-5-1 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
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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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 48 lb uplift at joint 5, 137 lb uplift at joint 6 and 101 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.

LOAD CASE(S) Standard

May 10,2024

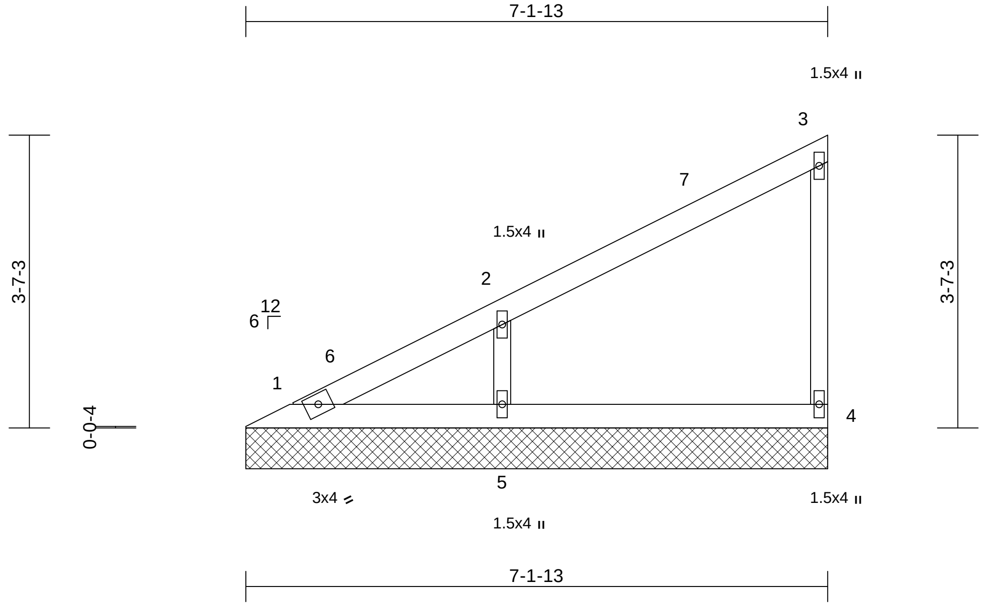
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/22/2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	V3	Valley	1	1	I65475634 Job Reference (optional)

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:31 Page: 1

ID:RiRCkypQAVDxN5B_XvGyPDylffn-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:28.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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=7-1-13, 4=7-1-13, 5=7-1-13
Max Horiz 1=141 (LC 16)
Max Uplift 4=-48 (LC 16), 5=-128 (LC 16)
Max Grav 1=72 (LC 27), 4=206 (LC 22), 5=541 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-227/105, 2-3=-115/59, 3-4=-175/119
BOT CHORD 1-5=0/0, 4-5=0/0
WEBS 2-5=-458/315

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 7-1-1 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
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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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 48 lb uplift at joint 4 and 128 lb uplift at joint 5.
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.

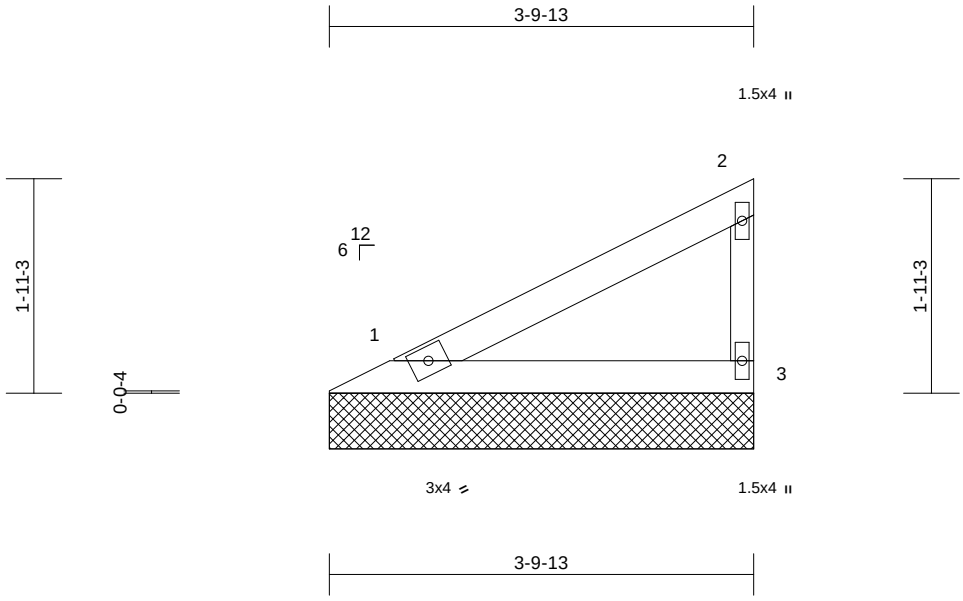
LOAD CASE(S) Standard

May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	V4	Valley	1	1	Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,
Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:31 Page: 1
ID:GbG2QBgWm6qVZPrtO5ZNTuylffy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoiYJ4zJC?f



Scale = 1:20.7

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	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	n/a	-	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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 3-10-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-9-13, 3=3-9-13
Max Horiz 1=68 (LC 16)
Max Uplift 1=-14 (LC 16), 3=-48 (LC 16)
Max Grav 1=191 (LC 22), 3=191 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-74/57, 2-3=-160/130
BOT CHORD 1-3=0/0

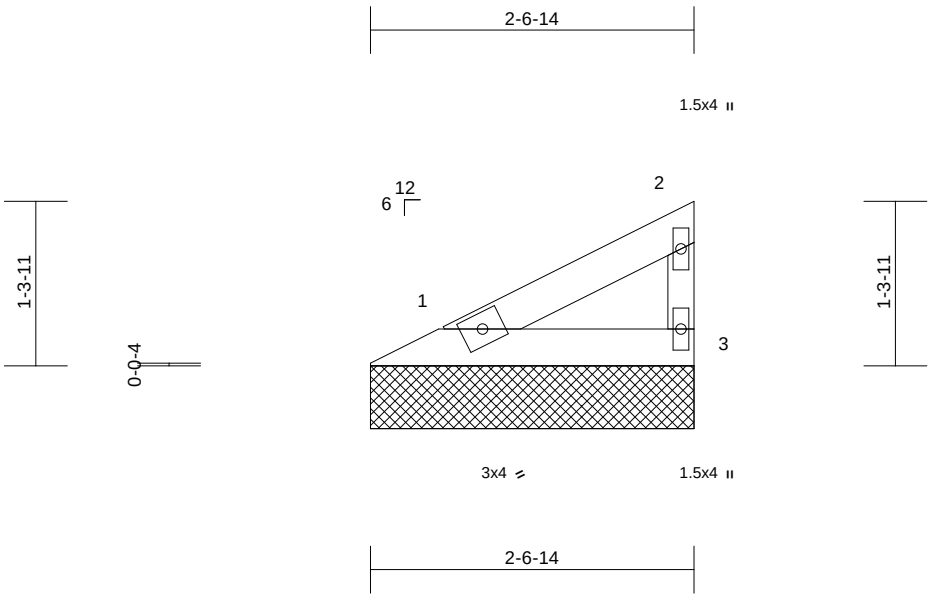
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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 14 lb uplift at joint 1 and 48 lb uplift at joint 3.
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

May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475636
P240476-01	V5	Valley	1	1	Job Reference (optional)	



Scale = 1:18.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	n/a	-	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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 2-7-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-6-14, 3=2-6-14
Max Horiz 1=41 (LC 16)
Max Uplift 1=-8 (LC 16), 3=-29 (LC 16)
Max Grav 1=108 (LC 22), 3=108 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-44/32, 2-3=-89/78
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 ;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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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 8 lb uplift at joint 1 and 29 lb uplift at joint 3.
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

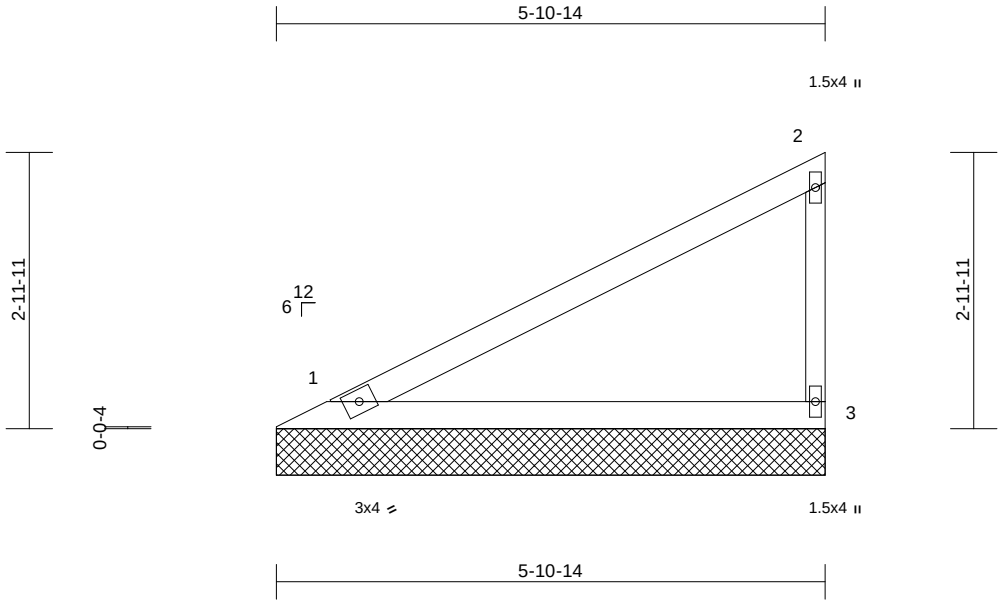
May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475637
P240476-01	V6	Valley	1	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:31 Page: 1
ID:gvQmUPVk3p3UtFmBZ9J5uxylfgA-RfC?PsB70Hq3NSgPqnL8w3uITXbGhWrCDoi?942JC?4



Scale = 1:24.8

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	1.00	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.34	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	n/a	-	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-10-14, 3=5-10-14
Max Horiz 1=114 (LC 16)
Max Uplift 1=-23 (LC 16), 3=-80 (LC 16)
Max Grav 1=341 (LC 22), 3=341 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-120/103, 2-3=-289/211
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 ;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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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 23 lb uplift at joint 1 and 80 lb uplift at joint 3.
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

May 10,2024

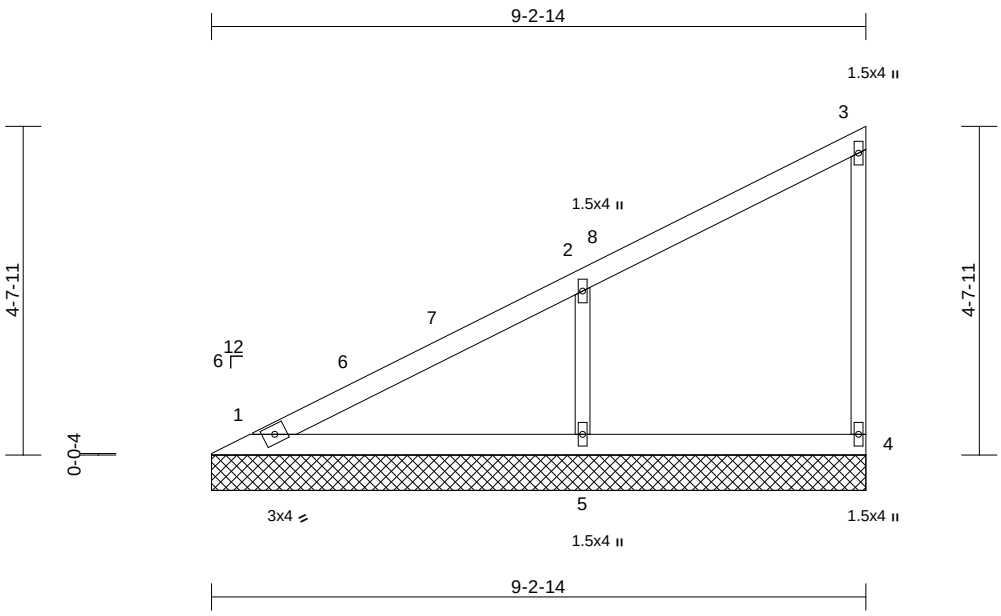
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/22/2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61	I65475638
P240476-01	V7	Valley	1	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Thu May 09 12:06:31 Page: 1
ID:rl3UEMR_TzJL9KJ1DuChfgylfgG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J4zJC?f



Scale = 1:32.5

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	0.46	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										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=9-2-14, 4=9-2-14, 5=9-2-14
Max Horiz 1=187 (LC 16)
Max Uplift 4=-42 (LC 16), 5=-162 (LC 16)
Max Grav 1=171 (LC 22), 4=190 (LC 22), 5=645 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-240/112, 2-3=-125/49, 3-4=-163/98
BOT CHORD 1-5=-2/5, 4-5=-2/5
WEBS 2-5=-529/341

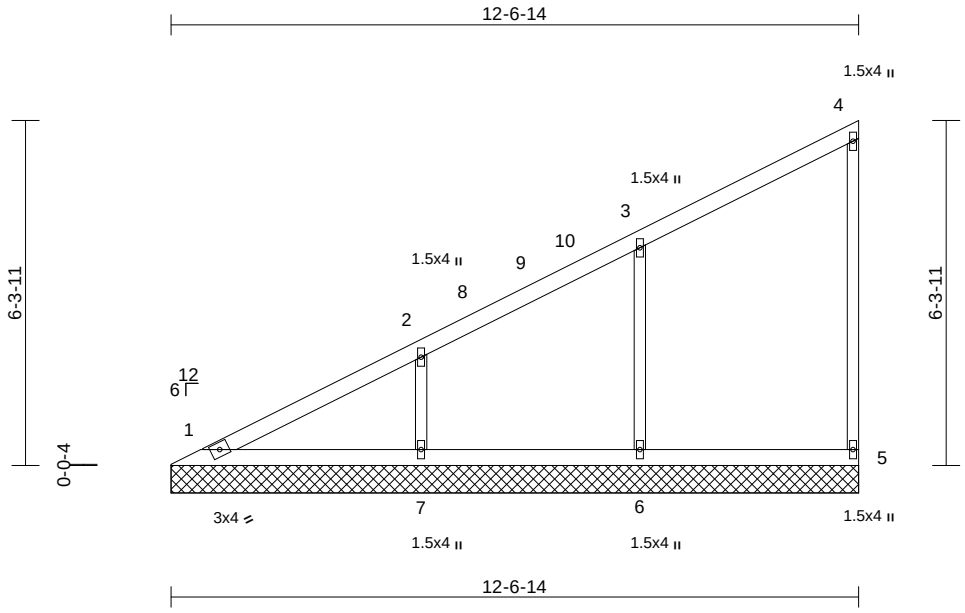
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9, Interior (1) 5-7-9 to 9-2-2 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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 42 lb uplift at joint 4 and 162 lb uplift at joint 5.
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

May 10,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 61
P240476-01	V8	Valley	1	1	Job Reference (optional) I65475639



Scale = 1:42.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										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=12-6-14, 5=12-6-14, 6=12-6-14, 7=12-6-14
Max Horiz 1=259 (LC 16)
Max Uplift 5=-49 (LC 16), 6=-129 (LC 16), 7=-136 (LC 16)
Max Grav 1=147 (LC 27), 5=210 (LC 22), 6=547 (LC 22), 7=405 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-310/137, 2-3=-193/90, 3-4=-118/56, 4-5=-176/94
BOT CHORD 1-7=-2/4, 6-7=-2/4, 5-6=-2/4
WEBS 3-6=-465/247, 2-7=-308/243

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 12-6-2 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
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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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 49 lb uplift at joint 5, 129 lb uplift at joint 6 and 136 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.

LOAD CASE(S) Standard

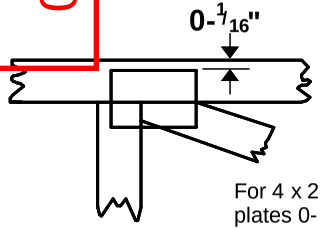
May 10,2024

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

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.

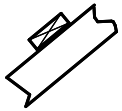
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

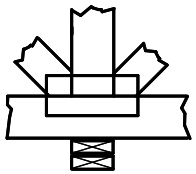
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

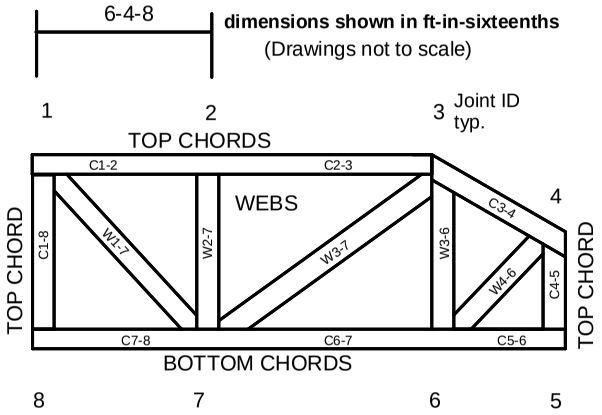


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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®

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

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.