MiTek®

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/28/2023 11:42:57

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

RE: P230431-01 - Roof - Osage Lot 59

Site Information:

Project Customer: Clover & Hive Project Name: Twin Emerald
Lot/Block: 59 Subdivision: Osage
Model:
Address: 2208/2210 SW Osage 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	I59801137	A1	7/28/23
2	I59801138	A2	7/28/23
3	I59801139	A3	7/28/23
4	I59801140	A4	7/28/23
5	I59801141	B1	7/28/23
6	I59801142	B2	7/28/23
7	I59801143	C1	7/28/23
8	I59801144	C2	7/28/23
9	I59801145	C3	7/28/23
10	I59801146	C4	7/28/23
11	I59801147	E1	7/28/23
12	I59801148	E2	7/28/23
13	I59801149	G1A	7/28/23
14	I59801150	G2A	7/28/23
15	I59801151	V5	7/28/23
16	I59801152	V6	7/28/23
17	I59801153	V7	7/28/23
18	I59801154	V8	7/28/23

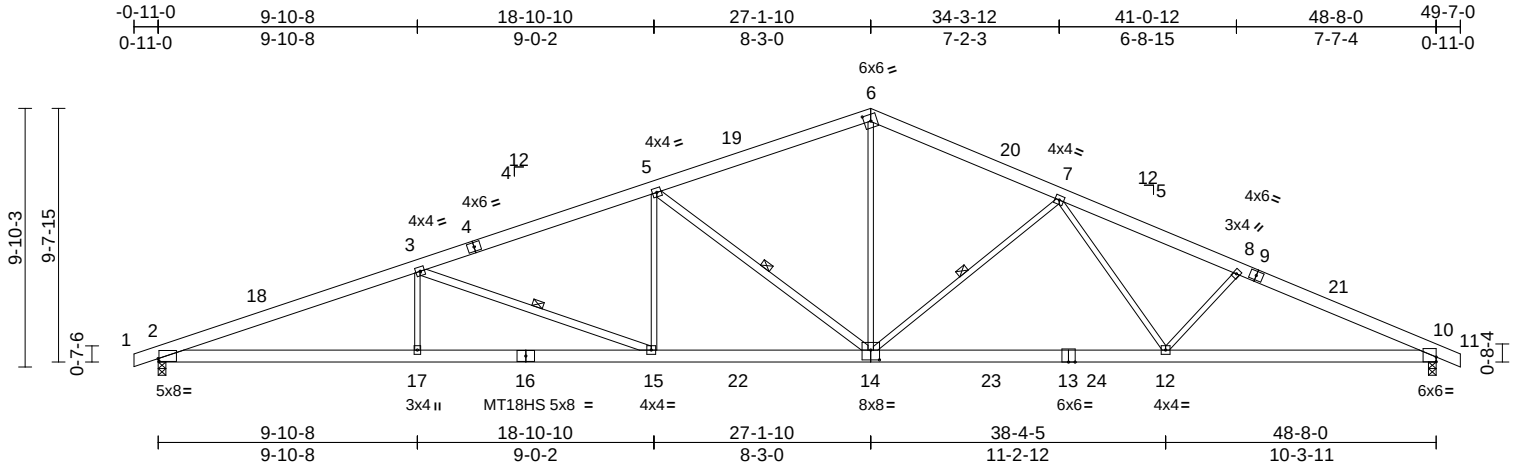
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Premier Building Supply (Springhill, KS)20300 W 207th Street.

Truss Design Engineer's Name: Nathan Fox
My license renewal date for the state of Missouri is December 31, 2024.

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.

July 28,2023
Nathan Fox

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P230431-01	A1	Roof Special Structural Gable	1	1	I59801137
Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,		Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:17			Job Reference (optional)
		ID:1FL_5cO5javKO0N85pK5gdz_bwQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f			Page: 1



Scale = 1:87.7

Plate Offsets (X, Y): [2:0-0-6,0-1-5], [6:0-3-1,0-3-0], [10:Edge,0-2-2], [14:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.58	12-14	>995	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-1.00	12-14	>583	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.17	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 266 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 13-14:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-5,15-3:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 12-14.
WEBS 1 Row at midpt 7-14, 5-14, 3-15

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-177 (LC 17)
Max Uplift 2=-442 (LC 8), 10=-344 (LC 13)
Max Grav 2=2345 (LC 2), 10=2361 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-5821/1146, 3-5=-4547/971, 5-6=-3268/819, 6-7=-3359/836, 7-8=-4675/927, 8-10=-4918/962, 10-11=0/12
BOT CHORD 2-17=-969/5411, 15-17=-969/5411, 12-15=-677/4232, 10-12=-759/4392
WEBS 3-17=0/416, 6-14=-326/1856, 8-12=-311/229, 5-15=-7/844, 7-14=-1043/331, 7-12=-8/894, 5-14=-1547/384, 3-15=-1275/348

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 27-1-10, Exterior(2R) 27-1-10 to 32-1-10, Interior (1) 32-1-10 to 49-7-0 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) All plates are MT20 plates unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 344 lb uplift at joint 10 and 442 lb uplift at joint 2.
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.

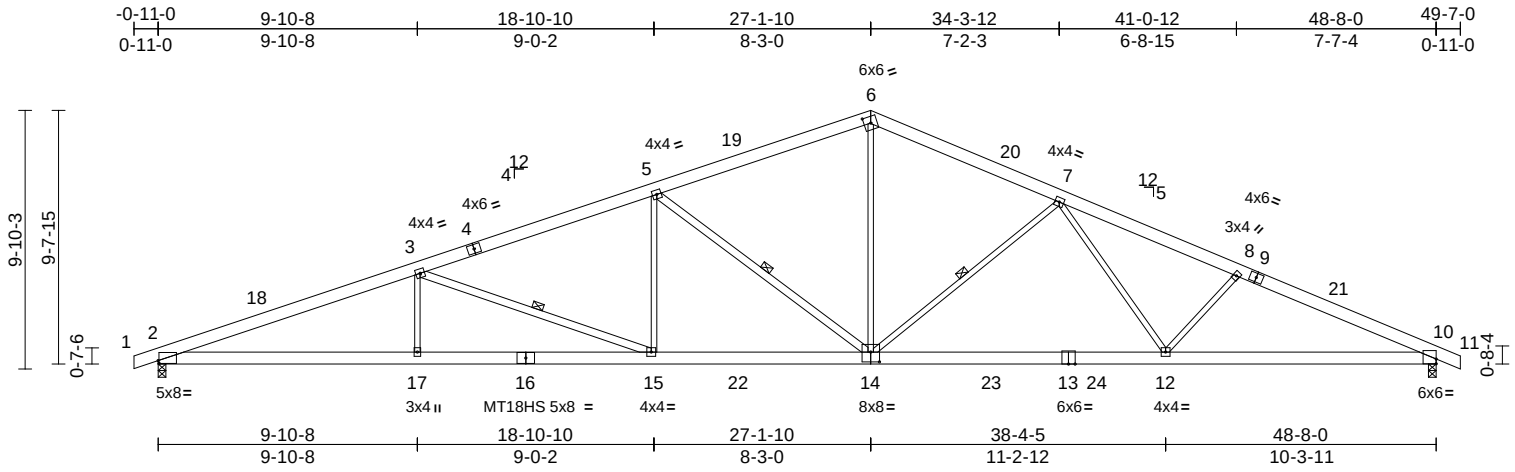
LOAD CASE(S) Standard

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P230431-01	A2	Roof Special	2	1	I59801138
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:19 Page: 1
ID:QF_s_JP9cHCCgLmFn8Tnnyz_c3R-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:87.7

Plate Offsets (X, Y): [2:0-0-6,0-1-5], [6:0-3-1,0-3-0], [10:Edge,0-2-2], [14:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.58	12-14	>995	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-1.00	12-14	>583	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.17	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 266 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 14-13:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-3,14-5:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 12-14.
WEBS 1 Row at midpt 3-15, 5-14, 7-14

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-177 (LC 17)
Max Uplift 2=-442 (LC 8), 10=-344 (LC 13)
Max Grav 2=2345 (LC 2), 10=2361 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-5821/1146, 3-5=-4547/971, 5-6=-3268/819, 6-7=-3359/836, 7-8=-4675/927, 8-10=-4918/962, 10-11=0/12
BOT CHORD 2-17=-969/5411, 15-17=-969/5411, 12-15=-677/4232, 10-12=-759/4392
WEBS 3-17=0/416, 3-15=-1275/348, 5-15=-7/844, 5-14=-1547/384, 6-14=-326/1856, 7-14=-1043/331, 7-12=-8/894, 8-12=-311/229

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) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 27-1-10, Exterior(2R) 27-1-10 to 32-1-10, Interior (1) 32-1-10 to 49-7-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 442 lb uplift at joint 2 and 344 lb uplift at joint 10.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

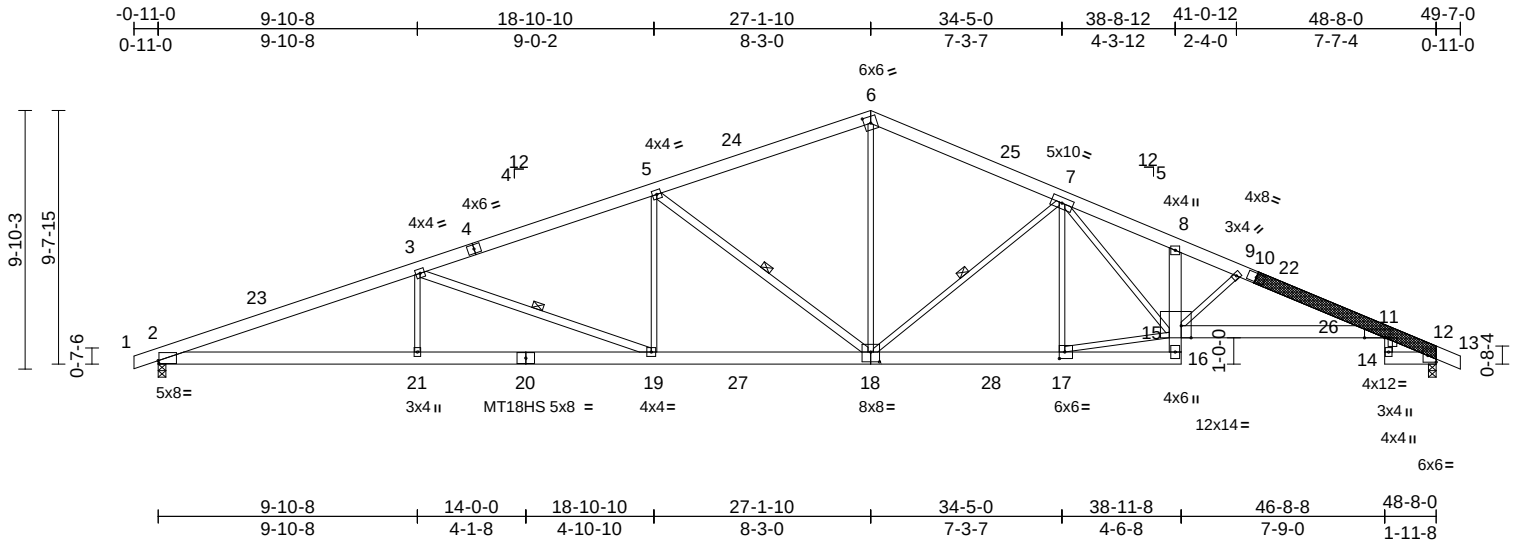
LOAD CASE(S) Standard

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	I59801139
P236431-01	A3	Roof Special	5	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:19 Page: 1
ID:m_P9pcXgCxbN3mpg9BHX8Rz_bfT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:87.7

Plate Offsets (X, Y): [2:0-0-6,0-1-5], [6:0-3-1,0-3-0], [11:0-9-4,Edge], [11:0-0-1,0-1-8], [12:Edge,0-3-0], [15:0-4-8,Edge], [17:0-2-8,0-3-0], [18:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.48	17-18	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.87	19-21	>671	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.37	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 322 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 10-13:1 1/2" x 5 1/2" 2.0E Microllam® LVL
BOT CHORD 2x6 SP 2400F 2.0E *Except* 11-14:2x4 SP No.2, 16-18:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 18-5,19-3:2x4 SP No.2
LBR SCAB 10-12 Trus Joist® LVL 2.0 E both sides

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-3-6 oc bracing.
WEBS 1 Row at midpt 7-18, 5-18, 3-19

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=-177 (LC 17)
Max Uplift 2=-442 (LC 8), 12=-344 (LC 13)
Max Grav 2=2339 (LC 2), 12=2346 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-5804/1146, 3-5=-4529/971, 5-6=-3251/820, 6-7=-3342/835, 7-8=-5404/1174, 8-9=-5858/1198, 9-11=-6465/1330, 11-12=-1235/296, 12-13=0/12
BOT CHORD 15-16=0/84, 8-15=-10/276, 11-15=-1144/6149, 11-14=-27/220, 12-14=-1/10, 2-21=-969/5395, 19-21=-969/5395, 17-19=-676/4216, 16-17=-235/1088
WEBS 3-21=0/416, 6-18=-320/1837, 9-15=-1150/340, 5-19=-7/844, 7-18=-1068/309, 7-15=-365/1846, 5-18=-1548/384, 3-19=-1275/348, 7-17=-491/193, 15-17=-405/2787

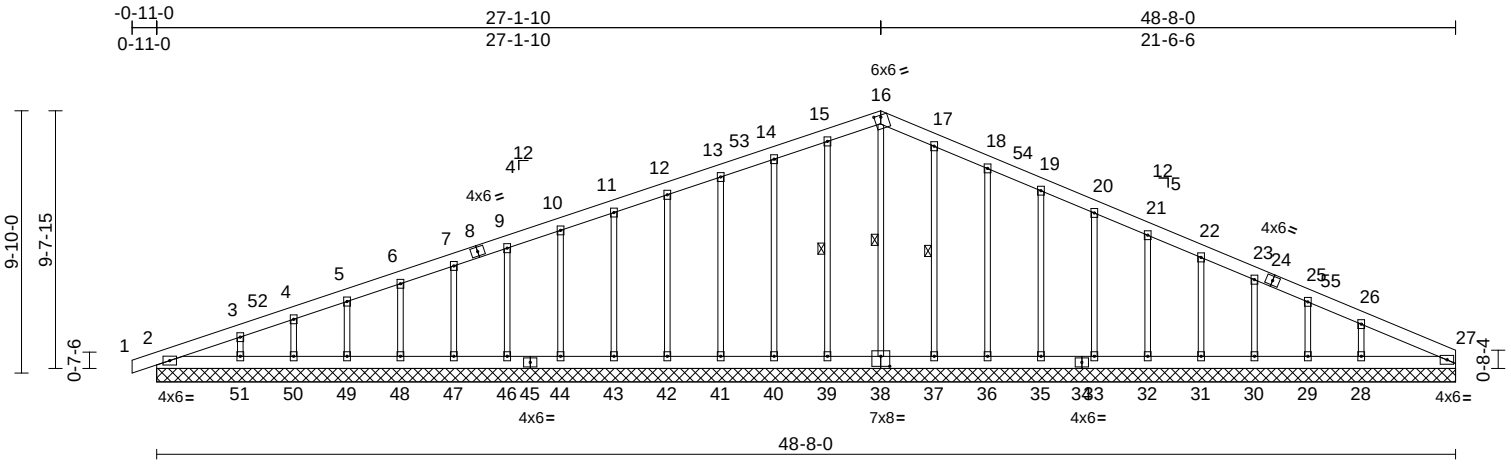
NOTES
1) Attached 7-6-3 scab 10 to 12, both face(s) 1 1/2" x 5 1/2" 2.0E Microllam® LVL with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 4-5-9 from end at joint 10, nail 2 row(s) at 4" o.c. for 2-0-0.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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 27-1-10, Exterior(2R) 27-1-10 to 32-1-10, Interior (1) 32-1-10 to 49-7-0 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
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 344 lb uplift at joint 12 and 442 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

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P230431-01	A4	Roof Special Supported Gable	1	1	I59801140
					Job Reference (optional)



Scale = 1:86.3

Plate Offsets (X, Y): [16:0-3-0,0-0-15], [38:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.01	27	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 266 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 16-38, 15-39, 17-37

REACTIONS (size) 2=48-8-0, 27=48-8-0, 28=48-8-0, 29=48-8-0, 30=48-8-0, 31=48-8-0, 32=48-8-0, 33=48-8-0, 35=48-8-0, 36=48-8-0, 37=48-8-0, 38=48-8-0, 39=48-8-0, 40=48-8-0, 41=48-8-0, 42=48-8-0, 43=48-8-0, 44=48-8-0, 46=48-8-0, 47=48-8-0, 48=48-8-0, 49=48-8-0, 50=48-8-0, 51=48-8-0
Max Horiz 2=179 (LC 16)
Max Uplift 2=-22 (LC 13), 28=-103 (LC 13), 29=-40 (LC 13), 30=-62 (LC 13), 31=-50 (LC 13), 32=-55 (LC 13), 33=-54 (LC 13), 35=-55 (LC 13), 36=-64 (LC 13), 37=-25 (LC 13), 39=-27 (LC 12), 40=-57 (LC 8), 41=-50 (LC 8), 42=-49 (LC 12), 43=-50 (LC 12), 44=-45 (LC 12), 46=-49 (LC 8), 47=-56 (LC 12), 48=-44 (LC 8), 49=-50 (LC 12), 50=-44 (LC 8), 51=-81 (LC 12)
Max Grav 2=199 (LC 1), 27=139 (LC 1), 28=315 (LC 26), 29=130 (LC 26), 30=200 (LC 1), 31=171 (LC 26), 32=181 (LC 26), 33=181 (LC 1), 35=180 (LC 1), 36=181 (LC 26), 37=188 (LC 1), 38=172 (LC 22), 39=188 (LC 1), 40=182 (LC 25), 41=180 (LC 1), 42=181 (LC 1), 43=179 (LC 25), 44=175 (LC 25), 46=187 (LC 1), 47=186 (LC 25), 48=171 (LC 25), 49=187 (LC 1), 50=151 (LC 25), 51=268 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-213/80, 3-4=-162/84, 4-5=-134/94, 5-6=-109/103, 6-7=-89/120, 7-9=-74/138, 9-10=-58/156, 10-11=-60/173, 11-12=-72/190, 12-13=-84/207, 13-14=-96/225, 14-15=-109/254, 15-16=-117/276, 16-17=-120/283, 17-18=-108/256, 18-19=-92/216, 19-20=-77/179, 20-21=-61/142, 21-22=-46/105, 22-23=-49/69, 23-25=-53/33, 25-26=-80/20, 26-27=-137/49
BOT CHORD 2-51=-42/150, 50-51=-42/150, 49-50=-42/150, 48-49=-42/150, 47-48=-42/150, 46-47=-42/150, 44-46=-42/150, 43-44=-42/150, 42-43=-42/150, 41-42=-42/150, 40-41=-42/150, 39-40=-42/150, 37-39=-42/150, 36-37=-42/150, 35-36=-42/150, 33-35=-42/150, 32-33=-42/150, 31-32=-42/150, 30-31=-42/150, 29-30=-42/150, 28-29=-42/150, 27-28=-42/150
WEBS 16-38=-140/6, 15-39=-143/62, 14-40=-143/96, 13-41=-140/74, 12-42=-140/73, 11-43=-140/73, 10-44=-134/70, 9-46=-144/75, 7-47=-149/78, 6-48=-131/68, 5-49=-144/75, 4-50=-122/66, 3-51=-198/134, 17-37=-143/70, 18-36=-143/103, 19-35=-140/79, 20-33=-140/78, 21-32=-141/79, 22-31=-132/74, 23-30=-155/87, 25-29=-108/61, 26-28=-232/180

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 27-1-10, Exterior(2R) 27-1-10 to 32-1-10, Interior (1) 32-1-10 to 48-8-0 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

July 28,2023

Continued on page 2

MiTek®
16023 Swingley Ridge Rd.
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Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P236431-01	A4	Roof Special Supported Gable	1	1	I59801140
					Job Reference (optional)

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 3x4 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2, 27 lb uplift at joint 39, 57 lb uplift at joint 40, 50 lb uplift at joint 41, 49 lb uplift at joint 42, 50 lb uplift at joint 43, 45 lb uplift at joint 44, 49 lb uplift at joint 46, 56 lb uplift at joint 47, 44 lb uplift at joint 48, 50 lb uplift at joint 49, 44 lb uplift at joint 50, 81 lb uplift at joint 51, 25 lb uplift at joint 37, 64 lb uplift at joint 36, 55 lb uplift at joint 35, 54 lb uplift at joint 33, 55 lb uplift at joint 32, 50 lb uplift at joint 31, 62 lb uplift at joint 30, 40 lb uplift at joint 29 and 103 lb uplift at joint 28.
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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	
P236431-01	B1	Roof Special Structural Gable	2	1	Job Reference (optional)	I59801141

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:20 Page: 1
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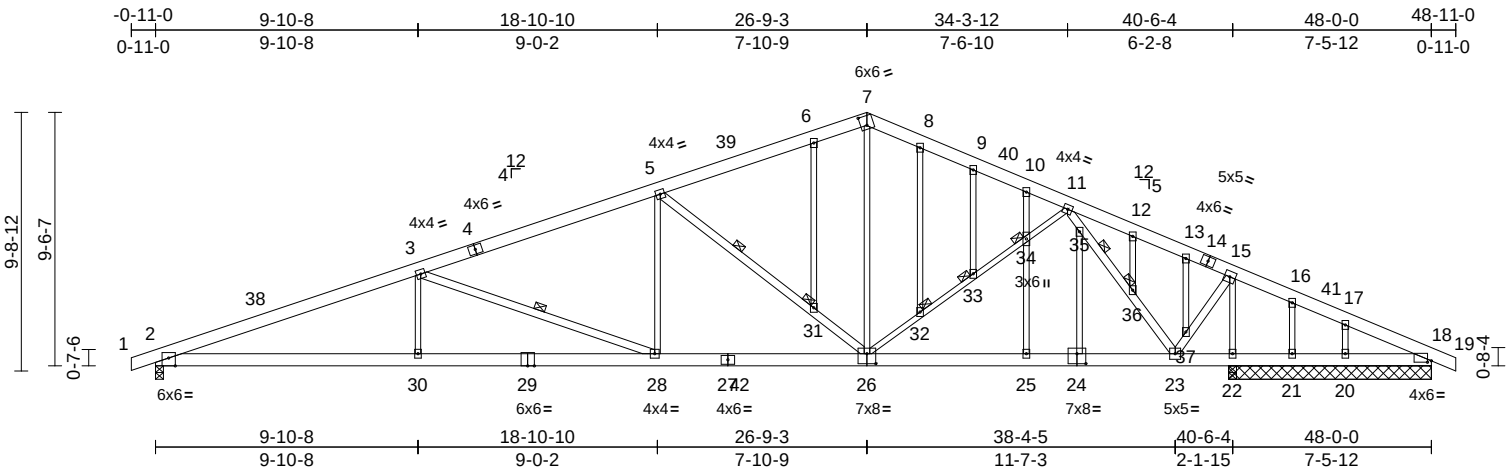


Scale = 1:86.7

Plate Offsets (X, Y): [2:0-3-0,Edge], [7:0-2-13,0-4-4], [18:0-1-12,0-0-10], [24:0-4-0,0-4-8], [26:0-4-0,0-4-8]

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	0.68	Vert(LL)	-0.24	26-28	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.48	28-30	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.10	22	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 290 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SPF No.2 *Except* 18-24,27-29:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 28-3,23-15,23-11,26-5:2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-28, 11-36, 5-31
JOINTS 1 Brace at Jt(s): 31, 32, 33, 34, 36

REACTIONS (size) 2=0-3-8, 18=7-7-8, 20=7-7-8, 21=7-7-8, 22=0-3-8
Max Horiz 2=-169 (LC 13)
Max Uplift 2=-365 (LC 8), 18=-410 (LC 27), 20=-94 (LC 13), 21=-176 (LC 27), 22=-380 (LC 8)
Max Grav 2=1787 (LC 2), 18=99 (LC 12), 20=394 (LC 2), 21=41 (LC 12), 22=2782 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-4156/835, 3-5=-2919/651, 5-6=-1710/504, 6-7=-1633/522, 7-8=-1637/521, 8-9=-1700/514, 9-10=-1735/503, 10-11=-1809/464, 11-12=-103/275, 12-13=-158/251, 13-15=-204/208, 15-16=-193/1215, 16-17=-224/1203, 17-18=-286/1240, 18-19=0/11
BOT CHORD 2-30=-735/3862, 28-30=-735/3862, 25-28=-405/2687, 23-25=-106/1079, 22-23=-1084/303, 21-22=-1084/303, 20-21=-1084/303, 18-20=-1084/303
WEBS 3-30=0/394, 5-28=-11/841, 3-28=-1260/353, 7-26=-134/773, 23-37=-290/1884, 15-37=-323/1838, 11-35=-1994/384, 35-36=-2057/391, 23-36=-2037/394, 5-31=-1452/350, 26-31=-1518/372, 26-32=-138/712, 32-33=-130/669, 33-34=-132/676, 11-34=-140/730, 6-31=-105/35, 8-32=-14/71, 9-33=-22/12, 10-34=0/151, 25-34=0/202, 24-35=-8/79, 12-36=0/32, 13-37=-13/101, 16-21=-114/61, 17-20=-222/148, 15-22=-2271/471

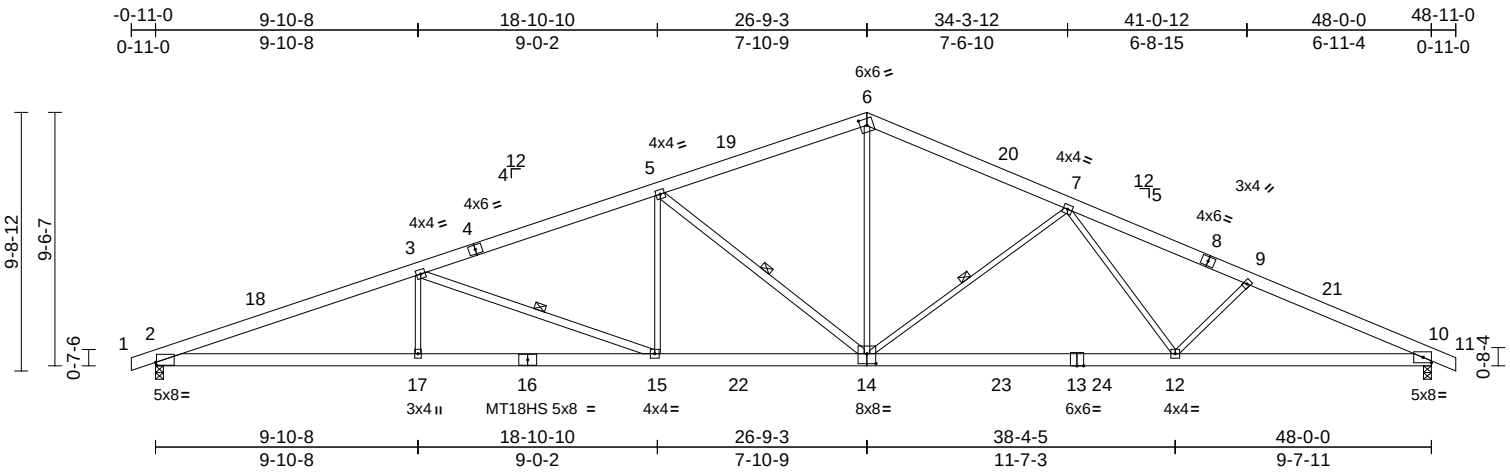
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 26-9-3, Exterior(2R) 26-9-3 to 31-9-3, Interior (1) 31-9-3 to 48-11-0 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 3x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Bearings are assumed to be: Joint 2 SPF No.2 crushing capacity of 425 psi, Joint 22 SP 2400F 2.0E crushing capacity of 805 psi, Joint 22 SP 2400F 2.0E crushing capacity of 805 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 410 lb uplift at joint 18, 365 lb uplift at joint 2, 176 lb uplift at joint 21, 94 lb uplift at joint 20 and 380 lb uplift at joint 22.
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

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	
P230431-01	B2	Roof Special	4	1	Job Reference (optional)	I59801142



Scale = 1:86.7

Plate Offsets (X, Y): [2:0-0-6,0-1-5], [6:0-3-1,0-3-0], [14:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.59	12-14	>978	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-1.01	12-14	>566	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.17	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 263 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 13-14:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-5,15-3:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 12-14.
WEBS 1 Row at midpt 7-14, 5-14, 3-15

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-174 (LC 17)
Max Uplift 2=-437 (LC 8), 10=-339 (LC 13)
Max Grav 2=2311 (LC 2), 10=2327 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-5724/1129, 3-5=-4438/952, 5-6=-3214/810, 6-7=-3312/822, 7-9=-4729/930, 9-10=-4963/979, 10-11=0/12
BOT CHORD 2-17=-953/5319, 15-17=-953/5319, 12-15=-659/4129, 10-12=-787/4448
WEBS 3-17=0/419, 6-14=-314/1818, 9-12=-352/251, 5-15=-11/838, 7-14=-1047/332, 7-12=-14/928, 5-14=-1504/373, 3-15=-1287/350

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 26-9-3, Exterior(2R) 26-9-3 to 31-9-3, Interior (1) 31-9-3 to 48-11-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 339 lb uplift at joint 10 and 437 lb uplift at joint 2.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P236431-01	G1	Roof Special Structural Gable	1	1	I59801143
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:21 Page: 1
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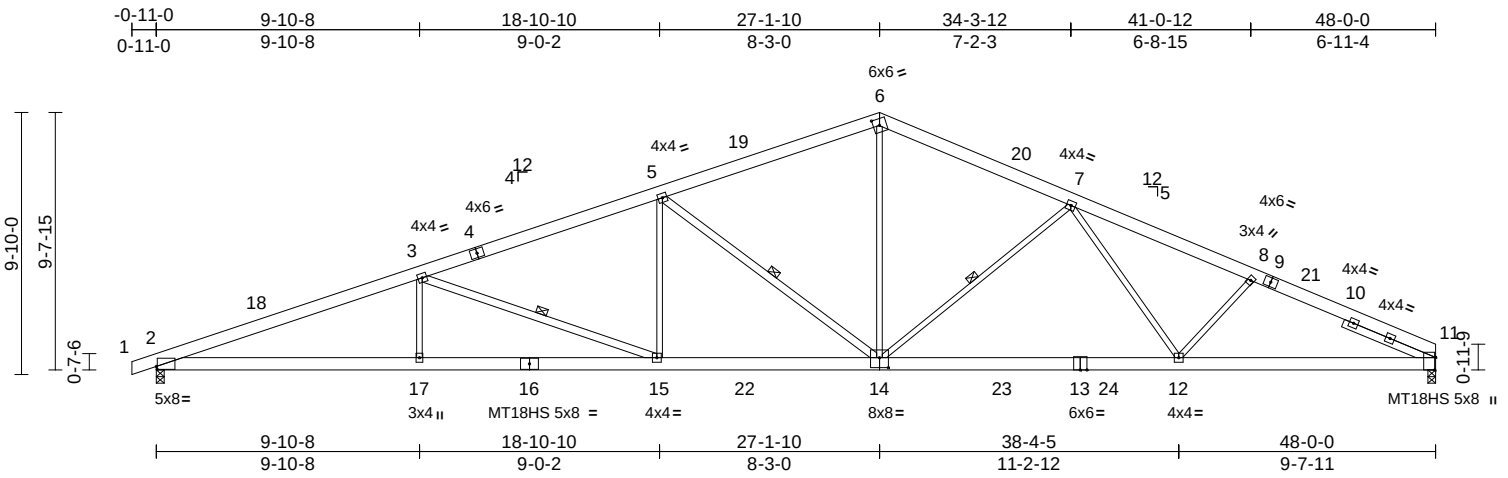


Scale = 1:86.5

Plate Offsets (X, Y): [2:0-0-6,0-1-5], [6:0-2-13,0-3-0], [11:0-5-10,Edge], [14:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.57	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.98	12-14	>587	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.16	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 271 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 9-11:2x6 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E *Except* 13-14:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-5,15-3:2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 3-8-8

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 12-14.
WEBS 1 Row at midpt 7-14, 5-14, 3-15

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=179 (LC 12)
Max Uplift 2=-440 (LC 8), 11=-310 (LC 13)
Max Grav 2=2321 (LC 2), 11=2275 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-5749/1132, 3-5=-4473/963, 5-6=-3193/805, 6-7=-3284/830, 7-8=-4439/908, 8-11=-4640/941
BOT CHORD 2-17=-962/5343, 15-17=-962/5343, 12-15=-675/4162, 11-12=-733/4088
WEBS 3-17=0/416, 6-14=-320/1806, 8-12=-208/214, 5-15=-7/844, 7-14=-976/321, 7-12=0/763, 5-14=-1549/384, 3-15=-1276/348

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 27-1-10, Exterior(2R) 27-1-10 to 32-1-10, Interior (1) 32-1-10 to 48-0-0 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 MT20 plates unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 310 lb uplift at joint 11 and 440 lb uplift at joint 2.
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.

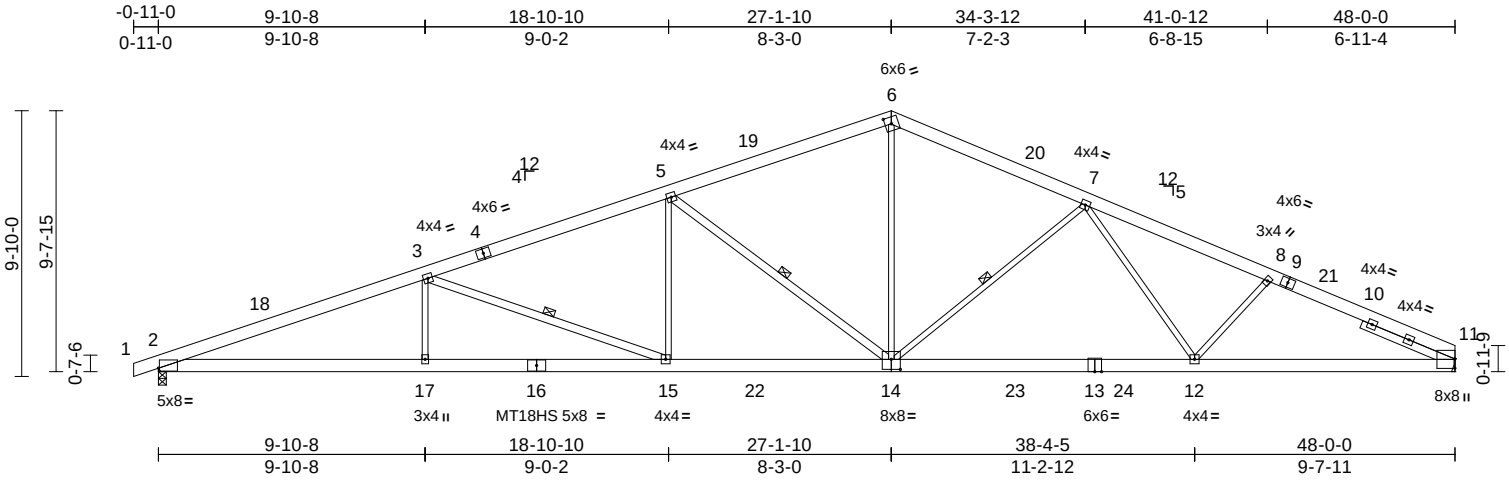
LOAD CASE(S) Standard

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	
P236431101	V2	Roof Special	2	1	Job Reference (optional)	I59801144



Scale = 1:85.3

Plate Offsets (X, Y): [2:0-0-6,0-1-5], [6:0-2-13,0-3-0], [14:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.57	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.98	12-14	>586	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.16	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 270 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 9-11:2x6 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E *Except* 13-14:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-5,15-3:2x4 SP No.2
SLIDER Right 2x4 SPF No.3 -- 3-8-5

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 12-14.
WEBS 1 Row at midpt 7-14, 5-14, 3-15

REACTIONS (size) 2=0-3-8, 11= Mechanical
Max Horiz 2=179 (LC 12)
Max Uplift 2=-440 (LC 8), 11=-310 (LC 13)
Max Grav 2=2321 (LC 2), 11=2275 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-5749/1132, 3-5=-4473/963, 5-6=-3193/805, 6-7=-3284/830, 7-8=-4439/908, 8-11=-4640/941
BOT CHORD 2-17=-962/5343, 15-17=-962/5343, 12-15=-675/4162, 11-12=-733/4088
WEBS 3-17=0/416, 6-14=-320/1806, 8-12=-208/214, 5-15=-7/844, 7-14=-976/321, 7-12=0/763, 5-14=-1549/384, 3-15=-1276/348

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 27-1-10, Exterior(2R) 27-1-10 to 32-1-10, Interior (1) 32-1-10 to 48-0-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 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 310 lb uplift at joint 11 and 440 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

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	
P236431-01	C3	Roof Special	5	1	Job Reference (optional)	I59801145

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:22 Page: 1
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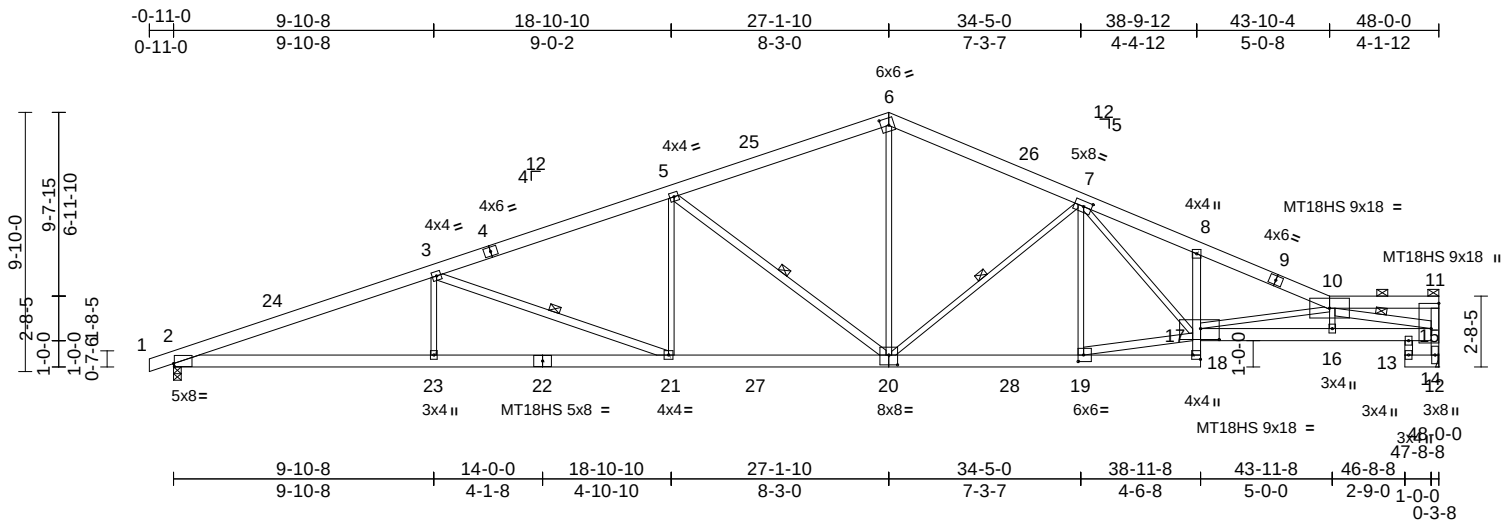


Scale = 1:87.4

Plate Offsets (X, Y): [2:0-0-6,0-1-5], [6:0-3-9,0-3-4], [7:0-3-10,0-2-8], [11:Edge,0-3-8], [17:0-8-8,0-5-0], [18:Edge,0-3-8], [19:0-2-8,0-3-0], [20:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.45	21-23	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.82	21-23	>697	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.32	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 287 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SPF No.2 *Except* 18-8,15-13:2x4 SP No.2, 17-14,20-22,22-2:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 20-5,21-3,19-17,10-14,12-11:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 10-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 8-10-14 oc bracing: 16-17 8-11-2 oc bracing: 15-16 8-10-12 oc bracing: 19-20.
WEBS 1 Row at midpt 7-20, 5-20, 3-21, 10-14

REACTIONS (size) 2=0-3-8, 12= Mechanical
Max Horiz 2=235 (LC 12)
Max Uplift 2=-437 (LC 8), 12=-310 (LC 13)
Max Grav 2=2309 (LC 2), 12=2267 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-5713/1122, 3-5=-4435/946, 5-6=-3157/795, 6-7=-3241/809, 7-8=-5471/1235, 8-10=-5557/1171, 10-11=-235/44
BOT CHORD 17-18=0/66, 8-17=-378/184, 16-17=-1350/6360, 15-16=-1339/6354, 14-15=-1330/6329, 13-15=0/17, 12-13=-9/25, 2-23=-1061/5309, 21-23=-1061/5309, 19-21=-786/4126, 18-19=-101/403
WEBS 3-23=0/416, 6-20=-297/1755, 7-20=-961/281, 7-19=-569/232, 5-20=-1547/384, 3-21=-1278/348, 5-21=-7/844, 10-17=-1291/324, 17-19=-598/3300, 7-17=-497/2120, 10-16=-144/123, 10-14=-6425/1360, 12-14=-2227/499, 11-14=-78/57

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 27-1-10, Exterior(2R) 27-1-10 to 32-1-10, Interior (1) 32-1-10 to 47-10-4 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) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 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 310 lb uplift at joint 12 and 437 lb uplift at joint 2.
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.

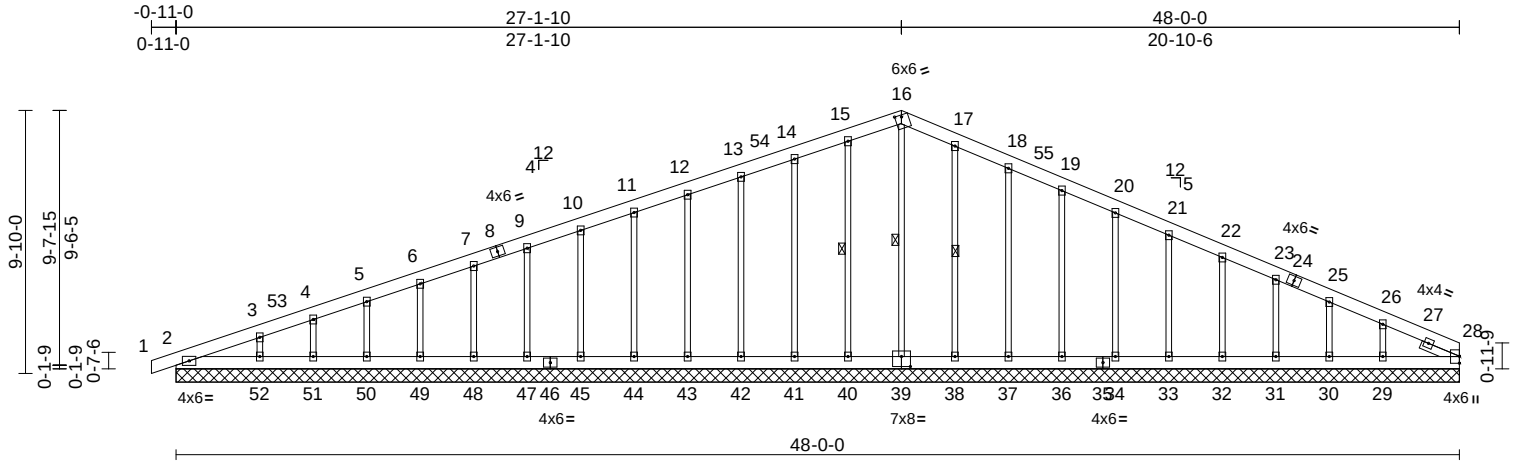
LOAD CASE(S) Standard

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	
P230431-01	C4	Roof Special Supported Gable	1	1	Job Reference (optional)	I59801146

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:22 Page: 1
ID:IDEkMeSePsGXytVpYj8zJQz_WR9-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:86.2

Plate Offsets (X, Y): [16:0-3-0,0-0-15], [39:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.01	28	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 266 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Right 2x4 SP No.2 -- 1-6-1

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 16-39, 15-40, 17-38

REACTIONS (size) 2=48-0-0, 28=48-0-0, 29=48-0-0, 30=48-0-0, 31=48-0-0, 32=48-0-0, 33=48-0-0, 34=48-0-0, 36=48-0-0, 37=48-0-0, 38=48-0-0, 39=48-0-0, 40=48-0-0, 41=48-0-0, 42=48-0-0, 43=48-0-0, 44=48-0-0, 45=48-0-0, 47=48-0-0, 48=48-0-0, 49=48-0-0, 50=48-0-0, 51=48-0-0, 52=48-0-0
Max Horiz 2=179 (LC 16)
Max Uplift 2=-23 (LC 13), 29=-111 (LC 13), 30=-40 (LC 13), 31=-62 (LC 13), 32=-50 (LC 13), 33=-55 (LC 13), 34=-54 (LC 13), 36=-55 (LC 13), 37=-64 (LC 13), 38=-25 (LC 13), 40=-27 (LC 12), 41=-57 (LC 8), 42=-50 (LC 8), 43=-49 (LC 12), 44=-50 (LC 12), 45=-45 (LC 12), 47=-49 (LC 8), 48=-56 (LC 12), 49=-44 (LC 8), 50=-50 (LC 12), 51=-44 (LC 8), 52=-81 (LC 12)
Max Grav 2=201 (LC 1), 28=122 (LC 1), 29=252 (LC 26), 30=159 (LC 1), 31=193 (LC 26), 32=172 (LC 1), 33=180 (LC 26), 34=181 (LC 1), 36=180 (LC 1), 37=182 (LC 26), 38=188 (LC 1), 39=170 (LC 22), 40=187 (LC 1), 41=182 (LC 25), 42=180 (LC 1), 43=180 (LC 1), 44=179 (LC 25), 45=175 (LC 25), 47=187 (LC 1), 48=186 (LC 25), 49=171 (LC 25), 50=187 (LC 1), 51=151 (LC 25), 52=268 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-212/81, 3-4=-161/86, 4-5=-133/95, 5-6=-110/106, 6-7=-93/123, 7-9=-78/141, 9-10=-62/159, 10-11=-64/176, 11-12=-76/193, 12-13=-87/211, 13-14=-99/228, 14-15=-112/257, 15-16=-120/282, 16-17=-123/289, 17-18=-112/262, 18-19=-95/222, 19-20=-80/185, 20-21=-65/148, 21-22=-52/111, 22-23=-54/75, 23-25=-57/35, 25-26=-78/20, 26-28=-130/38
BOT CHORD 2-52=-40/147, 51-52=-40/147, 50-51=-40/147, 49-50=-40/147, 48-49=-40/147, 47-48=-40/147, 45-47=-40/147, 44-45=-40/147, 43-44=-40/147, 42-43=-40/147, 41-42=-40/147, 40-41=-40/147, 38-40=-40/147, 37-38=-40/147, 36-37=-40/147, 34-36=-40/147, 33-34=-40/147, 32-33=-40/147, 31-32=-40/147, 30-31=-40/147, 29-30=-40/147, 28-29=-40/147
WEBS 16-39=-139/8, 15-40=-142/62, 14-41=-143/96, 13-42=-140/74, 12-43=-140/73, 11-44=-140/73, 10-45=-134/70, 9-47=-144/75, 7-48=-149/78, 6-49=-131/68, 5-50=-144/75, 4-51=-122/66, 3-52=-198/134, 17-38=-142/70, 18-37=-143/103, 19-36=-140/79, 20-34=-140/78, 21-33=-141/79, 22-32=-133/74, 23-31=-151/86, 25-30=-128/74, 26-29=-186/167

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 27-1-10, Exterior(2R) 27-1-10 to 32-1-10, Interior (1) 32-1-10 to 48-0-0 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

July 28,2023

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 59
P236431-01	C4	Roof Special Supported Gable	1	1	I59801146
					Job Reference (optional)

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 3x4 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 2, 27 lb uplift at joint 40, 57 lb uplift at joint 41, 50 lb uplift at joint 42, 49 lb uplift at joint 43, 50 lb uplift at joint 44, 45 lb uplift at joint 45, 49 lb uplift at joint 47, 56 lb uplift at joint 48, 44 lb uplift at joint 49, 50 lb uplift at joint 50, 44 lb uplift at joint 51, 81 lb uplift at joint 52, 25 lb uplift at joint 38, 64 lb uplift at joint 37, 55 lb uplift at joint 36, 54 lb uplift at joint 34, 55 lb uplift at joint 33, 50 lb uplift at joint 32, 62 lb uplift at joint 31, 40 lb uplift at joint 30 and 111 lb uplift at joint 29.
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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	I59801147
P236431-01	E1	Roof Special Supported Gable	2	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:23 Page: 1
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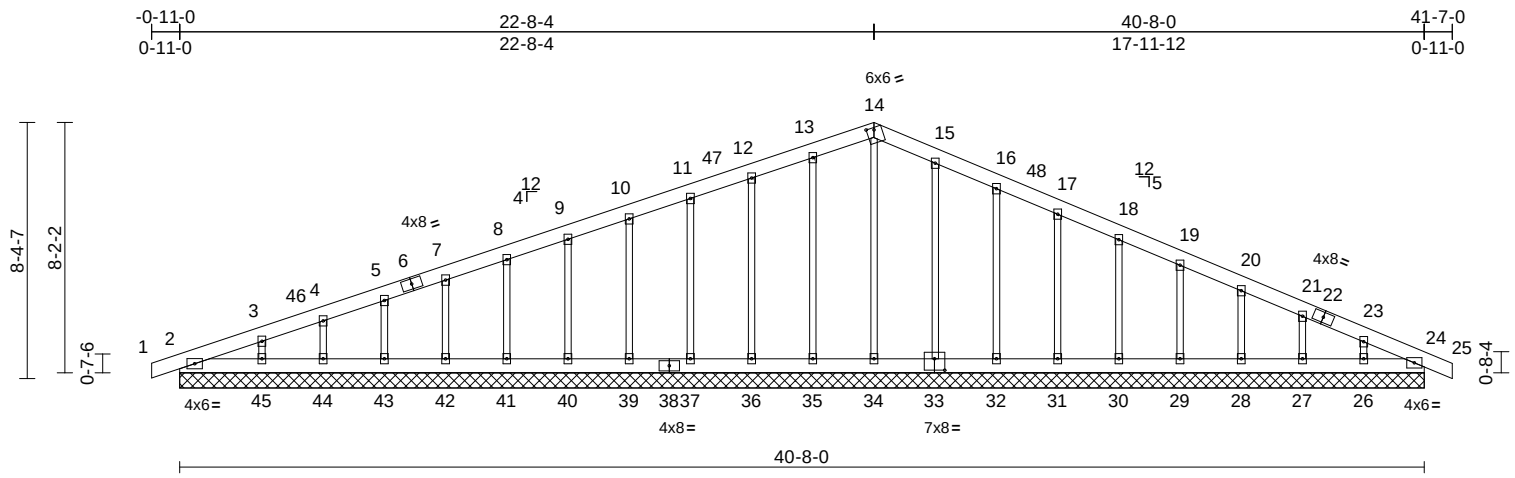

Scale = 1:75.3

Plate Offsets (X, Y): [14:0-3-0,0-0-15], [33:0-4-0,0-4-8]

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 213 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SPF No.2
OTHERS 2x3 SPF No.2

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

REACTIONS (size) 2=40-8-0, 24=40-8-0, 26=40-8-0, 27=40-8-0, 28=40-8-0, 29=40-8-0, 30=40-8-0, 31=40-8-0, 32=40-8-0, 33=40-8-0, 34=40-8-0, 35=40-8-0, 36=40-8-0, 37=40-8-0, 39=40-8-0, 40=40-8-0, 41=40-8-0, 42=40-8-0, 43=40-8-0, 44=40-8-0, 45=40-8-0
Max Horiz 2=-144 (LC 13)
Max Uplift 2=-20 (LC 13), 24=-14 (LC 9), 26=-62 (LC 13), 27=-58 (LC 13), 28=-49 (LC 13), 29=-53 (LC 13), 30=-52 (LC 13), 31=-54 (LC 13), 32=-57 (LC 13), 33=-39 (LC 13), 35=-34 (LC 12), 36=-54 (LC 8), 37=-46 (LC 8), 39=-48 (LC 12), 40=-48 (LC 8), 41=-44 (LC 12), 42=-49 (LC 8), 43=-53 (LC 12), 44=-42 (LC 8), 45=-69 (LC 12)
Max Grav 2=178 (LC 1), 24=155 (LC 1), 26=170 (LC 26), 27=184 (LC 26), 28=167 (LC 1), 29=175 (LC 26), 30=175 (LC 1), 31=173 (LC 1), 32=182 (LC 26), 33=169 (LC 1), 34=170 (LC 22), 35=177 (LC 1), 36=175 (LC 25), 37=177 (LC 1), 39=174 (LC 1), 40=174 (LC 25), 41=169 (LC 25), 42=177 (LC 25), 43=187 (LC 1), 44=151 (LC 25), 45=226 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-171/68, 3-4=-127/73, 4-5=-100/82, 5-7=-83/95, 7-8=-67/112, 8-9=-50/129, 9-10=-53/146, 10-11=-65/163, 11-12=-76/180, 12-13=-88/206, 13-14=-97/230, 14-15=-100/236, 15-16=-88/207, 16-17=-72/169, 17-18=-57/133, 18-19=-44/97, 19-20=-44/61, 20-21=-53/28, 21-23=-72/18, 23-24=-114/39, 24-25=0/11
BOT CHORD 2-45=-35/125, 44-45=-35/125, 43-44=-35/125, 42-43=-35/125, 41-42=-35/125, 40-41=-35/125, 39-40=-35/125, 37-39=-35/125, 36-37=-35/125, 35-36=-35/125, 34-35=-35/125, 32-34=-35/125, 31-32=-35/125, 30-31=-35/125, 29-30=-35/125, 28-29=-35/125, 27-28=-35/125, 26-27=-35/125, 24-26=-35/125
WEBS 14-34=-127/0, 13-35=-139/67, 12-36=-138/92, 11-37=-135/71, 10-39=-136/71, 9-40=-136/71, 8-41=-130/68, 7-42=-139/72, 5-43=-146/76, 4-44=-118/64, 3-45=-169/116, 15-33=-139/75, 16-32=-138/98, 17-31=-135/76, 18-30=-136/76, 19-29=-137/77, 20-28=-128/72, 21-27=-146/97, 23-26=-130/103

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 22-8-4, Exterior(2R) 22-8-4 to 27-8-4, Interior (1) 27-8-4 to 41-7-0 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) All plates are 3x4 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

July 28,2023

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 59	
P230431-01	E1	Roof Special Supported Gable	2	1	Job Reference (optional)	I59801147

9) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 2, 34 lb uplift at joint 35, 54 lb uplift at joint 36, 46 lb uplift at joint 37, 48 lb uplift at joint 39, 48 lb uplift at joint 40, 44 lb uplift at joint 41, 49 lb uplift at joint 42, 53 lb uplift at joint 43, 42 lb uplift at joint 44, 69 lb uplift at joint 45, 39 lb uplift at joint 33, 57 lb uplift at joint 32, 54 lb uplift at joint 31, 52 lb uplift at joint 30, 53 lb uplift at joint 29, 49 lb uplift at joint 28, 58 lb uplift at joint 27, 62 lb uplift at joint 26 and 14 lb uplift at joint 24.
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

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P236431-01	E2	Roof Special	4	1	I59801148
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:23 Page: 1
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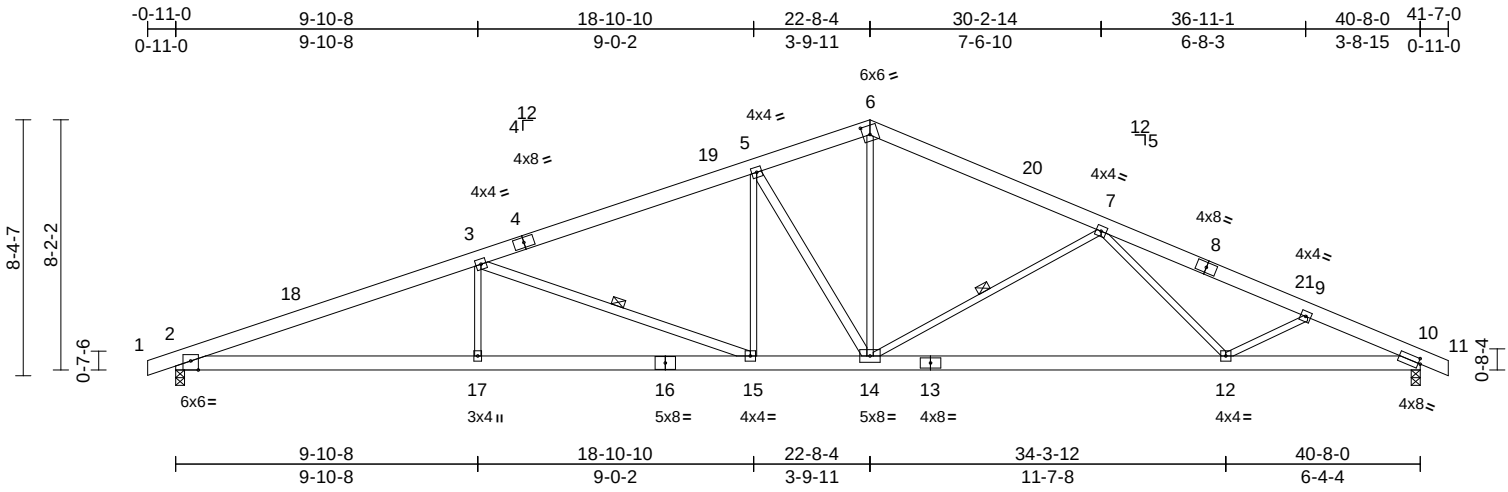

Scale = 1:75.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.26	15-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.55	15-17	>874	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.15	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 206 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-5,15-3:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-15, 7-14

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-149 (LC 17)
Max Uplift 2=-377 (LC 8), 10=-291 (LC 13)
Max Grav 2=1891 (LC 1), 10=1891 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-4410/924, 3-5=-3163/749, 5-6=-2570/697, 6-7=-2707/687, 7-9=-3717/822, 9-10=-3910/910, 10-11=0/12
BOT CHORD 2-17=-758/4059, 15-17=-758/4059, 14-15=-466/2902, 12-14=-625/3123, 10-12=-762/3488
WEBS 3-17=0/404, 6-14=-333/1488, 9-12=-212/226, 5-15=-49/573, 7-12=0/484, 5-14=-1045/305, 3-15=-1256/348, 7-14=-885/362

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 22-8-4, Exterior(2R) 22-8-4 to 27-8-4, Interior (1) 27-8-4 to 41-7-0 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 377 lb uplift at joint 2 and 291 lb uplift at joint 10.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P230431-01	G14	Common Supported Gable	1	1	I59801149
					Job Reference (optional)

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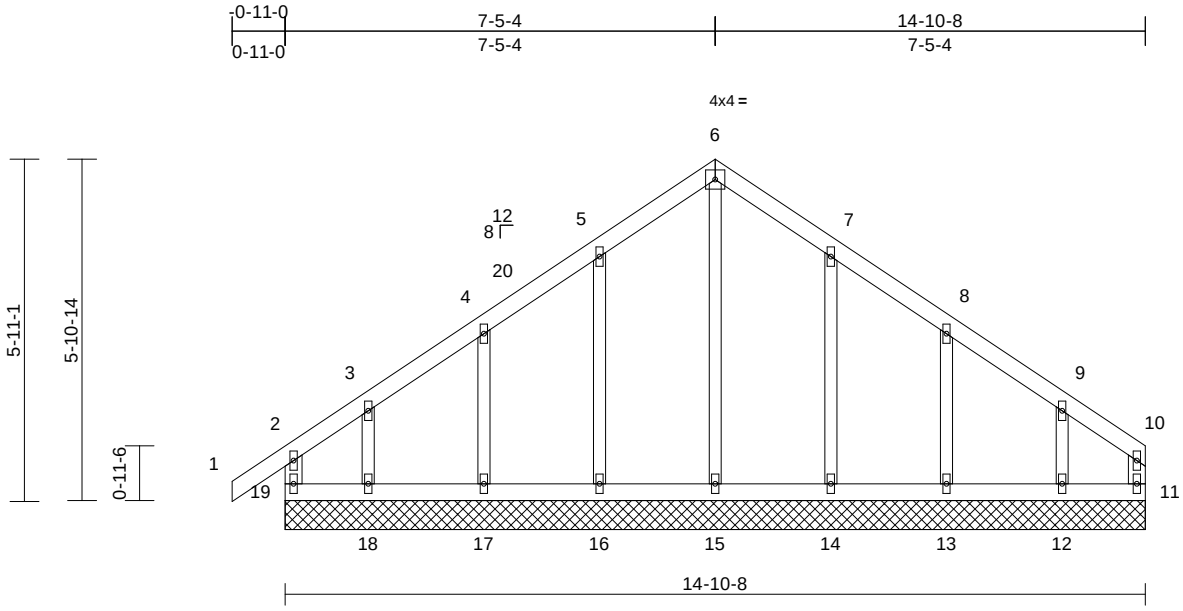


Scale = 1:39.8

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
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	0.14	Horz(CT)	0.00	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 70 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 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) 11=14-10-8, 12=14-10-8, 13=14-10-8, 14=14-10-8, 15=14-10-8, 16=14-10-8, 17=14-10-8, 18=14-10-8, 19=14-10-8
Max Horiz 19=178 (LC 9)
Max Uplift 11=-54 (LC 9), 12=-115 (LC 13), 13=-75 (LC 13), 14=-79 (LC 13), 16=-79 (LC 12), 17=-74 (LC 12), 18=-119 (LC 12), 19=-87 (LC 8)
Max Grav 11=91 (LC 19), 12=206 (LC 20), 13=187 (LC 20), 14=198 (LC 20), 15=185 (LC 22), 16=199 (LC 19), 17=189 (LC 19), 18=186 (LC 19), 19=191 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-19=-154/89, 1-2=0/41, 2-3=-121/109, 3-4=-91/88, 4-5=-85/164, 5-6=-126/246, 6-7=-126/246, 7-8=-85/163, 8-9=-69/76, 9-10=-81/75, 10-11=-65/40
BOT CHORD 18-19=-73/79, 17-18=-73/79, 16-17=-73/79, 15-16=-73/79, 14-15=-73/79, 13-14=-73/79, 12-13=-73/79, 11-12=-73/79
WEBS 6-15=-182/39, 5-16=-158/123, 4-17=-151/160, 3-18=-132/132, 7-14=-158/137, 8-13=-149/164, 9-12=-150/156

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 7-5-4, Corner(3R) 7-5-4 to 12-5-4, Exterior(2N) 12-5-4 to 14-8-12 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 19, 54 lb uplift at joint 11, 79 lb uplift at joint 16, 74 lb uplift at joint 17, 119 lb uplift at joint 18, 79 lb uplift at joint 14, 75 lb uplift at joint 13 and 115 lb uplift at joint 12.
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.

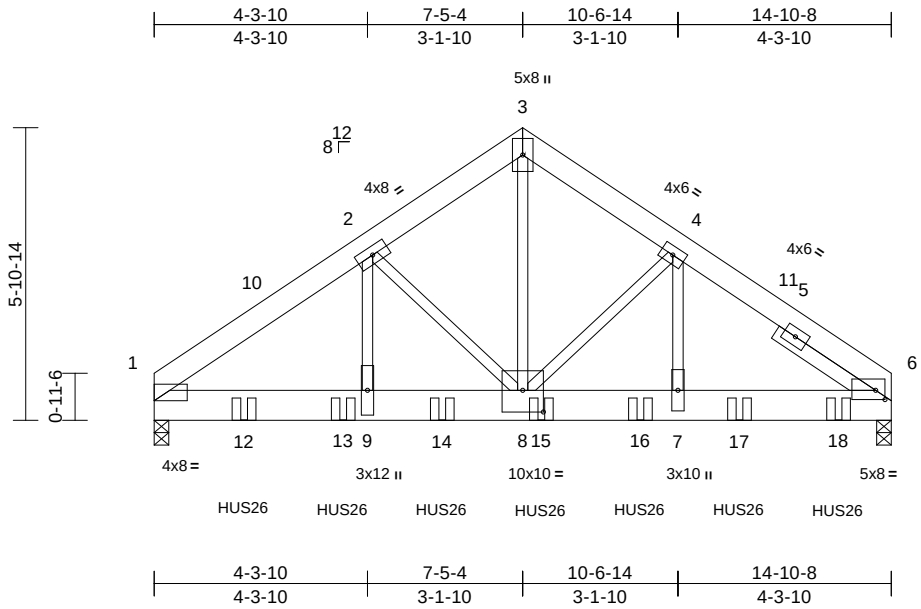
LOAD CASE(S) Standard

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	I59801150
P230431-01	G2A	Common Girder	1	3	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Thu Jul 27 13:11:24 Page: 1
ID:P3Fn?fAeoNHL7fkarwdBaSz_WL4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:46.5

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

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	0.61	Vert(LL)	-0.05	8-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.09	8-9	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 292 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2
SLIDER Right 2x4 SP No.2 -- 2-4-0

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

REACTIONS (size) 1=0-3-8, 6=0-3-8
Max Horiz 1=149 (LC 32)
Max Uplift 1=-1160 (LC 12), 6=-1275 (LC 13)
Max Grav 1=8033 (LC 2), 6=8843 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-10280/1540, 2-3=-7489/1202, 3-4=-7394/1187, 4-6=-10030/1510
BOT CHORD 1-9=-1187/8047, 8-9=-1191/8075, 7-8=-1123/7919, 6-7=-1119/7892
WEBS 2-9=-517/3948, 2-8=-2565/479, 3-8=-1173/7592, 4-8=-2345/449, 4-7=-498/3765

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-5-0 oc.
Web connected as follows: 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) Unbalanced roof live loads have been considered for this design.
4) 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 5-1-12, Interior (1) 5-1-12 to 7-5-4, Exterior(2R) 7-5-4 to 12-5-4, Interior (1) 12-5-4 to 14-8-12 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
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1160 lb uplift at joint 1 and 1275 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss) or equivalent spaced at 12-0-0 oc max. starting at 1-9-12 from the left end to 13-9-12 to connect truss(es) to back face of bottom chord.
11) Use Simpson Strong-Tie HUS26 (14-16d Girder, 6-16d Truss) or equivalent spaced at 2-0-0 oc max. starting at 3-9-12 from the left end to 11-9-12 to connect truss(es) to back face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-6=-70, 1-6=-20
Concentrated Loads (lb)
Vert: 12=-2133 (B), 13=-2126 (B), 14=-2126 (B), 15=-2126 (B), 16=-2126 (B), 17=-2126 (B), 18=-2133 (B)

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 28,2023

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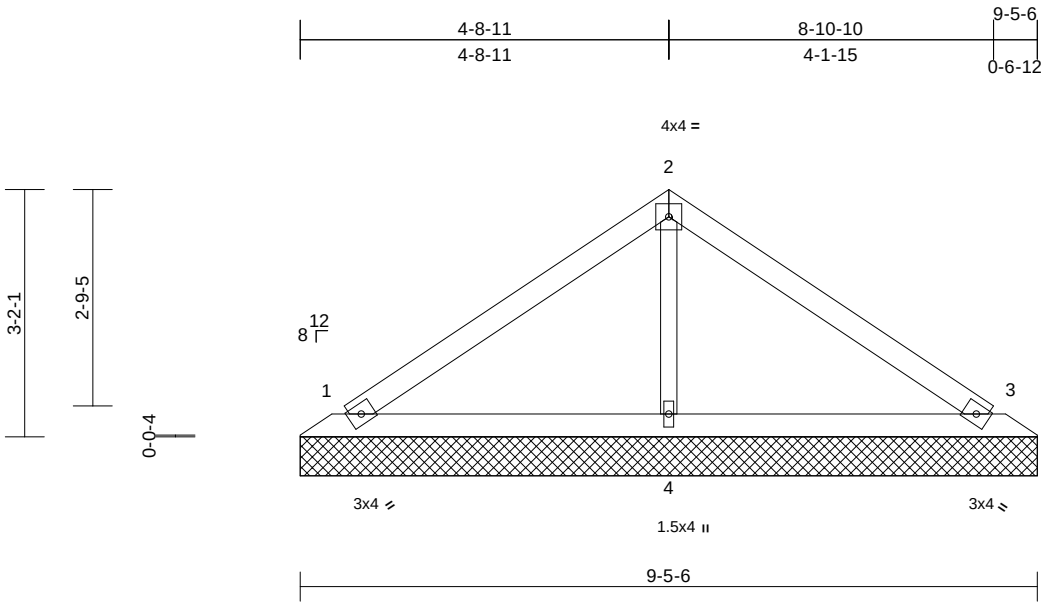
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P230431-01	V5	Valley	1	1	I59801151
					Job Reference (optional)



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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	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 31 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) 1=9-5-6, 3=9-5-6, 4=9-5-6
Max Horiz 1=-80 (LC 10)
Max Uplift 1=-41 (LC 12), 3=-51 (LC 13), 4=-21 (LC 12)
Max Grav 1=192 (LC 1), 3=192 (LC 1), 4=352 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-149/76, 2-3=-146/76
BOT CHORD 1-4=-17/69, 3-4=-17/69
WEBS 2-4=-227/105

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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) 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 41 lb uplift at joint 1, 51 lb uplift at joint 3 and 21 lb uplift at joint 4.
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

July 28,2023

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Chesterfield, MO 63017
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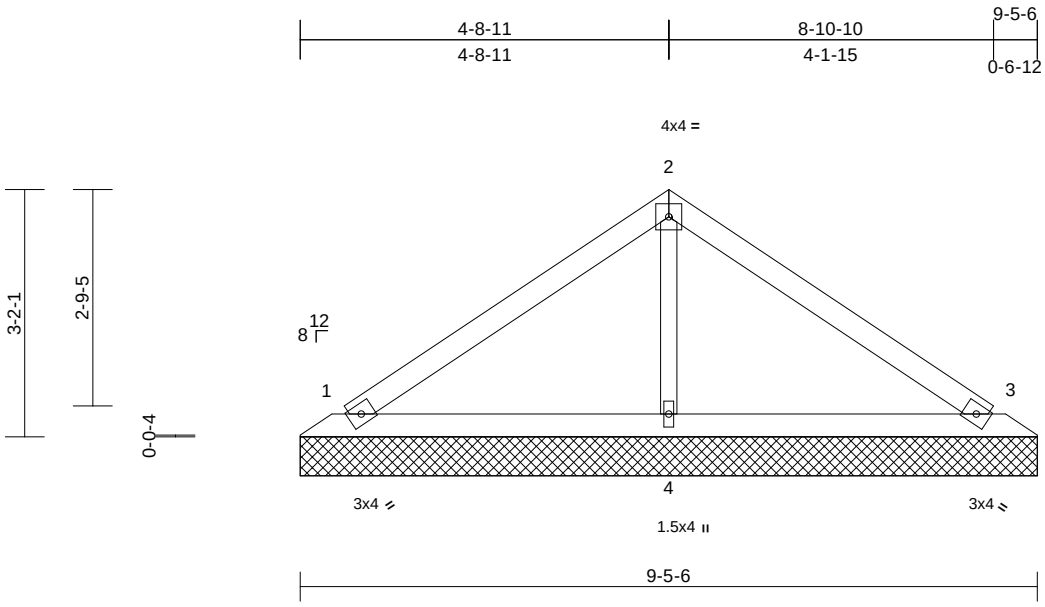
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59
P230431-01	V6	Valley	1	1	I59801152
					Job Reference (optional)



Scale = 1:29.5

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	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 31 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) 1=9-5-6, 3=9-5-6, 4=9-5-6
Max Horiz 1=-80 (LC 10)
Max Uplift 1=-41 (LC 12), 3=-51 (LC 13), 4=-21 (LC 12)
Max Grav 1=192 (LC 1), 3=192 (LC 1), 4=352 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-149/76, 2-3=-146/76
BOT CHORD 1-4=-17/69, 3-4=-17/69
WEBS 2-4=-227/105

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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) 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 41 lb uplift at joint 1, 51 lb uplift at joint 3 and 21 lb uplift at joint 4.
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

July 28,2023

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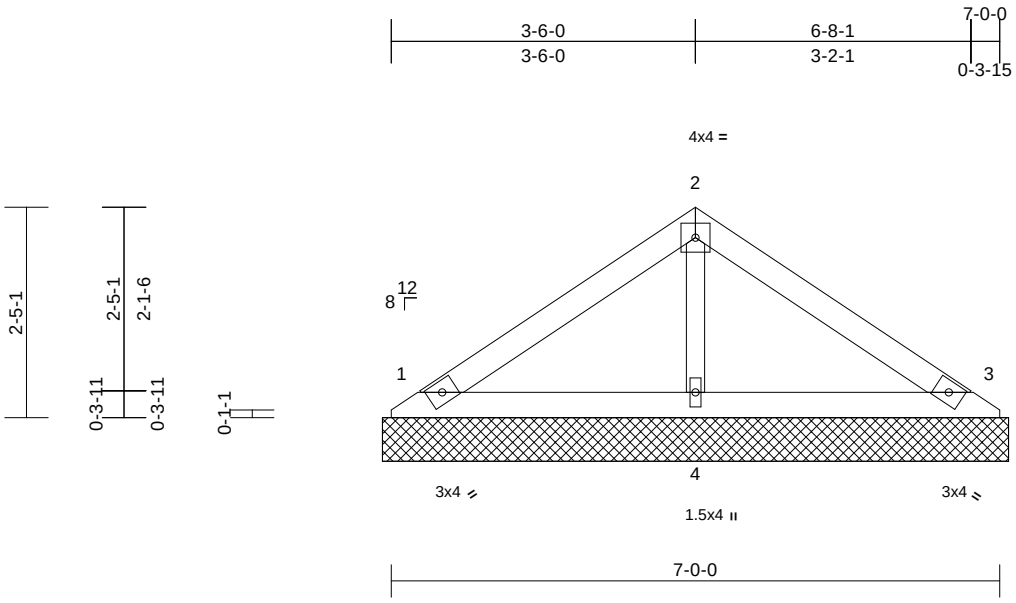
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	
P230431-01	V7	Valley	1	1	Job Reference (optional)	I59801153



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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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 23 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) 1=7-2-7, 3=7-2-7, 4=7-2-7
Max Horiz 1=-59 (LC 8)
Max Uplift 1=-40 (LC 12), 3=-48 (LC 13)
Max Grav 1=160 (LC 1), 3=160 (LC 1), 4=248 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-100/63, 2-3=-95/63
BOT CHORD 1-4=-12/47, 3-4=-12/47
WEBS 2-4=-169/96

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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) 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 40 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

July 28,2023

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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 59	
P230431-01	V8	Valley	1	1	Job Reference (optional)	I59801154

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

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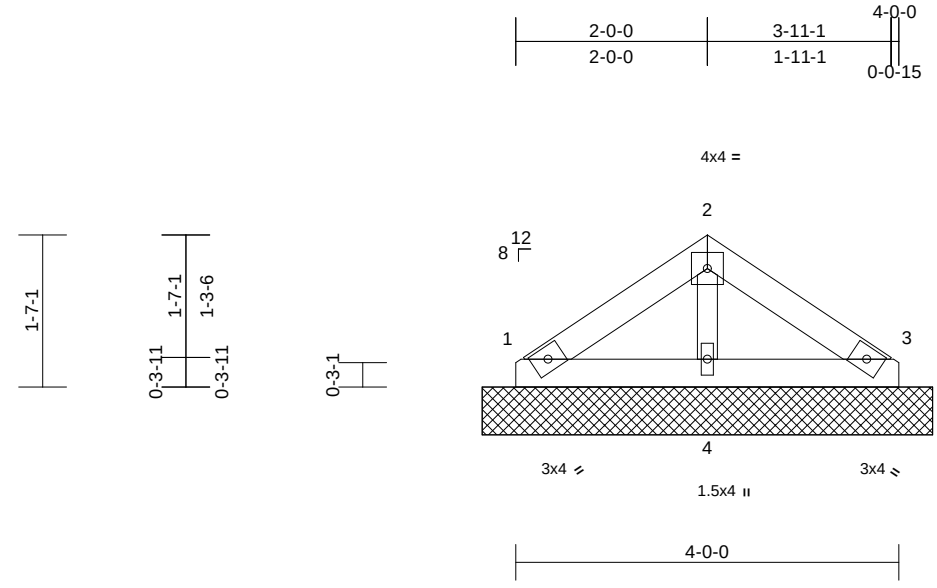

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 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 4-9-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-8-7, 3=4-8-7, 4=4-8-7
Max Horiz 1=-35 (LC 8)
Max Uplift 1=-24 (LC 12), 3=-28 (LC 13)
Max Grav 1=95 (LC 1), 3=95 (LC 1), 4=145 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-60/42, 2-3=-57/42
BOT CHORD 1-4=-8/28, 3-4=-8/28
WEBS 2-4=-98/64

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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) 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 24 lb uplift at joint 1 and 28 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

July 28,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
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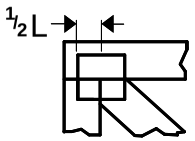
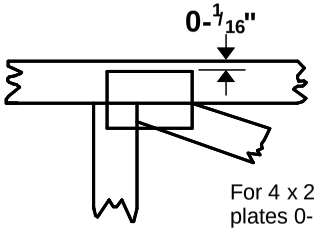
Symbols

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.

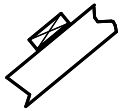
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

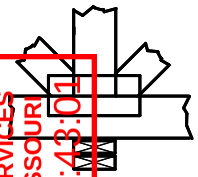
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

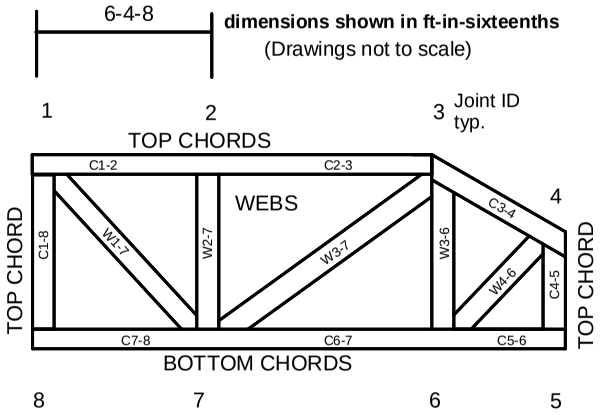


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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®

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.