MiTek®

RE: P240076-01 - Roof - Osage Lot 43

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

Site Information:

Project Customer: Clayton Properties Project Name: Emerald Townhome
Lot/Block: 43 Subdivision: Osage
Model:
Address: 3722/3726/3728/3730 SW Clayton 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	I63424346	A1	2/6/24
2	I63424347	A2	2/6/24
3	I63424348	A3	2/6/24
4	I63424349	A4	2/6/24
5	I63424350	B1	2/6/24
6	I63424351	B2	2/6/24
7	I63424352	C1	2/6/24
8	I63424353	C2	2/6/24
9	I63424354	C3	2/6/24
10	I63424355	C4	2/6/24
11	I63424356	D1	2/6/24
12	I63424357	D2	2/6/24
13	I63424358	D3	2/6/24
14	I63424359	E1	2/6/24
15	I63424360	E2	2/6/24
16	I63424361	G1	2/6/24
17	I63424362	G1A	2/6/24
18	I63424363	G2	2/6/24
19	I63424364	G2A	2/6/24
20	I63424365	V1	2/6/24
21	I63424366	V2	2/6/24
22	I63424367	V3	2/6/24
23	I63424368	V4	2/6/24
24	I63424369	V5	2/6/24
25	I63424370	V6	2/6/24
26	I63424371	V7	2/6/24

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/22/2024 10:33:26

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.

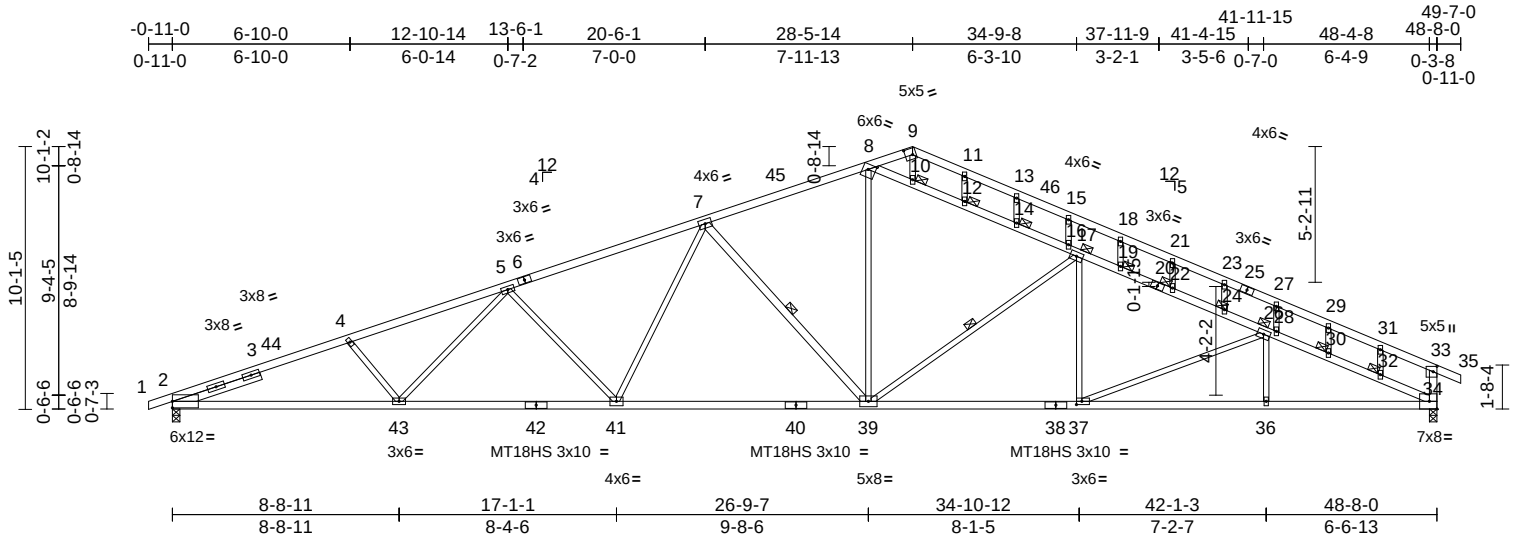
Truss Design Engineer's Name: Sevier, Scott
My license renewal date for the state of Missouri is December 31, 2025.

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.

February 6,2024
Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	A1	Roof Special Structural Gable	1	1	I63424346 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 E Jun 15 2023 Print: 8.630 E Jun 15 2023 MiTek Industries, Inc. Mon Feb 05 13:13:40 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-9GhMRTE7BbEzNQVDnxozuCaBE3jnnyWNJQb4IHzoAoQ



Scale = 1:88.7

Plate Offsets (X, Y): [8:0-3-8,0-2-7], [9:0-3-7,0-3-0], [33:0-2-8,0-1-12], [37:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.43	39-41	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.91	39-41	>640	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.26	34	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 262 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-6:2x4 SP 2400F 2.0E, 6-9:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 0-0:2x4 SP No.2, 38-40,40-42:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 34-33:2x4 SP 1650F 1.5E, 39-7:2x4 SP No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SPF No.3 -- 3-6-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-15 oc purlins, except end verticals. Except:
1 Row at midpt 17-22, 22-26
BOT CHORD Rigid ceiling directly applied or 7-8-14 oc bracing.
WEBS 1 Row at midpt 17-39, 7-39
JOINTS 1 Brace at Jt(s): 26, 17, 10, 12, 14, 22, 30, 32

REACTIONS (lb/size) 2=2247/0-3-8, 34=2258/0-3-8
Max Horiz 2=176 (LC 16)
Max Uplift 2=-410 (LC 8), 34=-299 (LC 13)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-3=-5356/1055, 3-44=-5266/1070, 4-44=-5249/1080, 4-5=-5112/1047, 5-6=-4321/904, 6-7=-4307/933, 7-45=-3096/742, 8-45=-3018/760, 8-9=-514/398, 9-11=-513/397, 11-13=-525/359, 13-46=-522/339, 15-46=-571/331, 15-18=-507/272, 18-21=-510/238, 21-23=-542/220, 23-25=-512/188, 25-27=-560/181, 27-29=-536/126, 29-31=-562/107, 31-33=-555/72, 33-35=0/29, 33-34=-388/146, 8-10=-2621/483, 10-12=-2554/428, 12-14=-2596/451, 14-16=-2610/458, 16-17=-2727/509, 17-19=-3346/625, 19-20=-3395/648, 20-22=-3395/648, 22-24=-3414/656, 24-26=-3455/681, 26-28=-3802/809, 28-30=-3881/867, 30-32=-3908/878, 32-34=-3976/917
BOT CHORD 2-43=-960/4934, 42-43=-854/4544, 41-42=-854/4544, 40-41=-645/3649, 39-40=-645/3649, 38-39=-607/3618, 37-38=-607/3618, 36-37=-816/4047, 34-36=-816/4047
WEBS 4-43=-226/176, 8-39=-283/1619, 5-43=-51/444, 5-41=-795/291, 7-41=-117/862, 26-36=0/217, 17-37=0/433, 26-37=-533/245, 17-39=-965/267, 7-39=-1204/363, 9-10=-154/173, 11-12=-107/75, 13-14=-38/27, 15-16=-310/150, 18-19=-129/66, 21-22=-48/24, 23-24=-110/67, 27-28=-220/158, 29-30=-71/30, 31-32=-160/92

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=0.96; 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 28-5-14, Exterior(2R) 28-5-14 to 33-5-14, Interior (1) 33-5-14 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) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.

February 6,2024

Continued on page 2

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

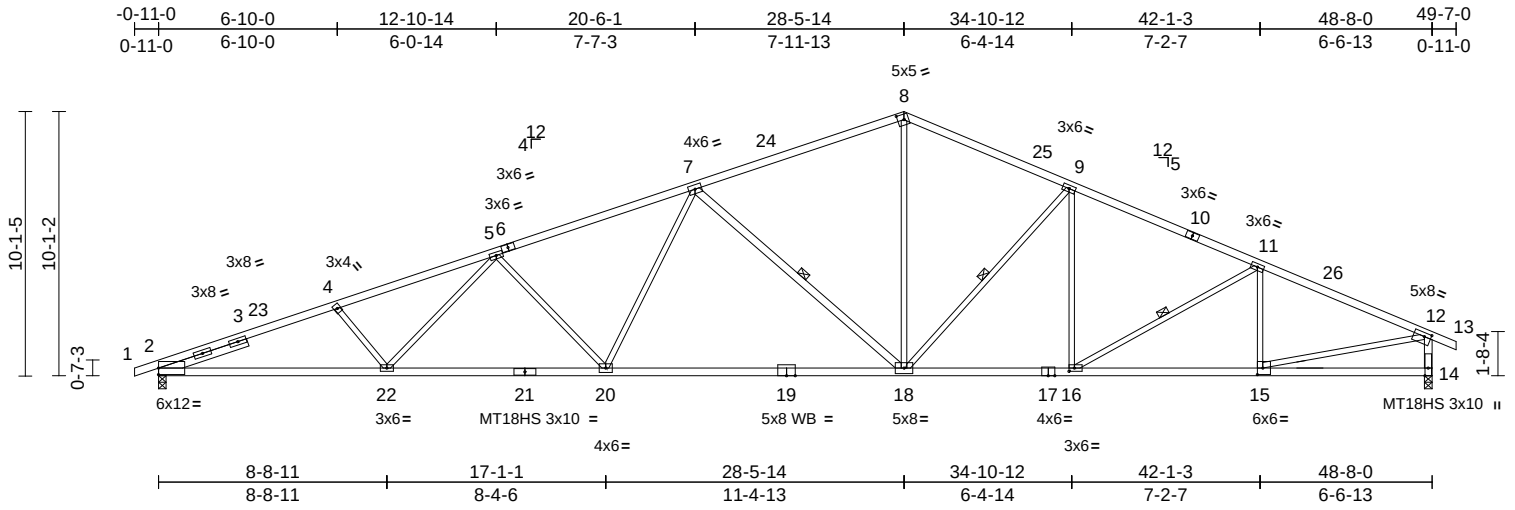
LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	A2	Roof Special	2	1	I63424347 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:44
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:88

Plate Offsets (X, Y): [8:0-2-15,0-2-8], [12:0-3-0,0-1-12], [15:0-2-8,0-3-0], [16:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.38	18-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.89	18-20	>651	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.20	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 229 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E *Except* 10-13:2x4 SP No.2, 10-8:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP 2400F 2.0E *Except* 0-0,17-14:2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 14-12,18-7:2x4 SP No.2
OTHERS	2x4 SPF No.3
SLIDER	Left 2x4 SPF No.3 -- 3-6-9

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-9-8 oc bracing.
WEBS	1 Row at midpt 11-16, 9-18, 7-18

REACTIONS (size) 2=0-3-8, 14=0-3-8
Max Horiz 2=176 (LC 12)
Max Uplift 2=-410 (LC 8), 14=-299 (LC 13)
Max Grav 2=2247 (LC 1), 14=2258 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/0, 2-4=-5356/1084, 4-5=-5108/1050, 5-7=-4330/928, 7-8=-2894/728, 8-9=-2968/743, 9-11=-3396/769, 11-12=-3356/696, 12-13=0/29, 12-14=-2192/569
BOT CHORD	2-22=-964/4936, 20-22=-847/4538, 18-20=-654/3662, 16-18=-509/3047, 15-16=-565/3019, 14-15=-80/181
WEBS	4-22=-238/181, 8-18=-292/1534, 5-22=-63/443, 5-20=-764/283, 7-20=-94/866, 11-15=-503/205, 9-16=0/222, 11-16=-138/178, 9-18=-686/266, 7-18=-1372/407, 12-15=-497/2909

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=0.96; 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 28-5-14, Exterior(2R) 28-5-14 to 33-5-14, Interior (1) 33-5-14 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 14 SP No.2 crushing capacity of 565 psi.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

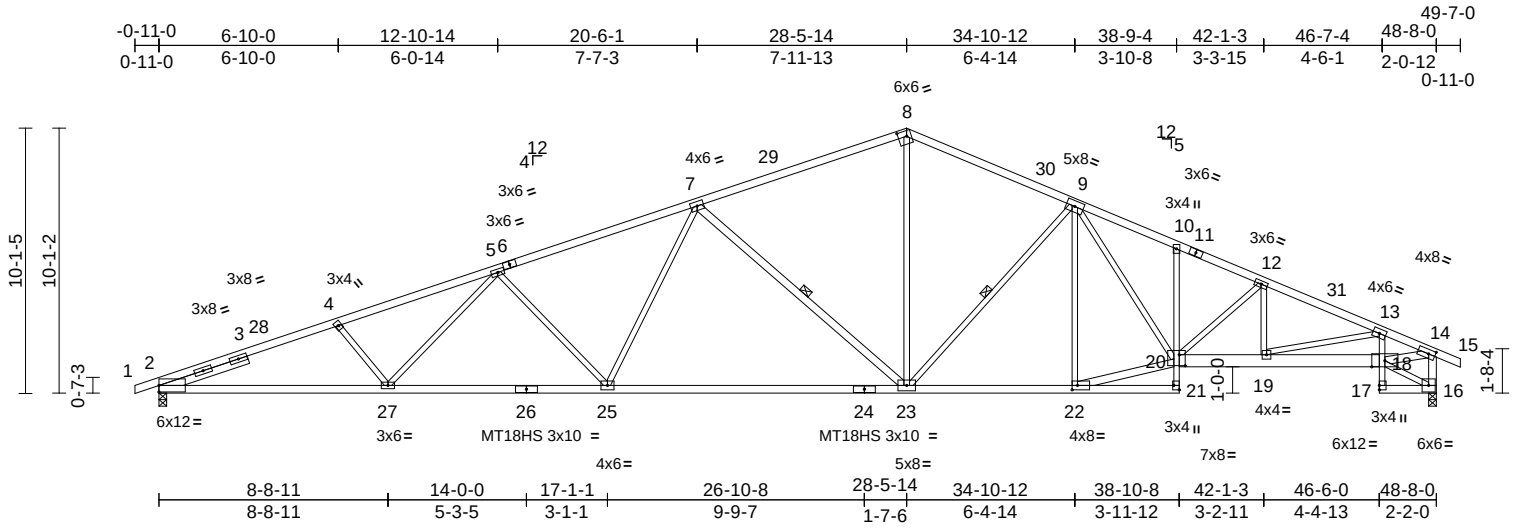
February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	A3	Roof Special	5	1	I63424348 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:45

ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:87.8

Plate Offsets (X, Y): [8:0-3-15,0-2-8], [14:0-2-15,0-2-0], [20:0-2-12,0-5-0], [21:Edge,0-2-8], [22:0-2-8,0-2-0]

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	0.79	Vert(LL)	-0.40	23-25	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.94	23-25	>617	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.91	Horz(CT)	0.30	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 246 lb	FT = 20%

LUMBER

TOP CHORD 2x8 SPF No.2 *Except* 1-6,6-8:2x4 SP 2400F 2.0E, 11-8:2x4 SP 1650F 1.5E, 11-15:2x4 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 21-10,13-17:2x3 SPF No.2, 20-18:2x6 SPF No.2, 26-2,24-26:2x4 SP 2400F 2.0E, 24-21:2x4 SP 1650F 1.5E

WEBS 2x3 SPF No.2 *Except* 16-14:2x4 SPF No.3, 20-22,23-7,14-18:2x4 SP No.2

SLIDER Left 2x4 SPF No.3 -- 3-6-9

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-3-10 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 8-5-13 oc bracing.

WEBS 1 Row at midpt 9-23, 7-23

REACTIONS (size) 2=0-3-8, 16=0-3-8
Max Horiz 2=176 (LC 16)
Max Uplift 2=-410 (LC 8), 16=-299 (LC 13)
Max Grav 2=2247 (LC 1), 16=2258 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-4=-5355/1084, 4-5=-5108/1050, 5-7=-4330/928, 7-8=-2893/729, 14-16=-2200/543, 8-9=-2963/742, 9-10=-4143/954, 10-12=-4185/904, 12-13=-4395/907, 13-14=-3505/748, 14-15=0/29

BOT CHORD 20-21=0/76, 10-20=-167/90, 19-20=-743/4004, 18-19=-692/3289, 17-18=0/34, 13-18=-714/196, 16-17=-26/86, 2-27=-964/4935, 25-27=-847/4539, 23-25=-654/3661, 22-23=-506/3031, 21-22=-26/165

WEBS 4-27=-238/180, 5-27=-63/443, 5-25=-764/283, 7-25=-93/867, 8-23=-286/1518, 12-19=-54/86, 9-22=-726/188, 20-22=-499/2976, 9-23=-664/259, 7-23=-1372/405, 13-19=-101/739, 12-20=-312/114, 16-18=-74/58, 14-18=-676/3260, 9-20=-302/1433

NOTES

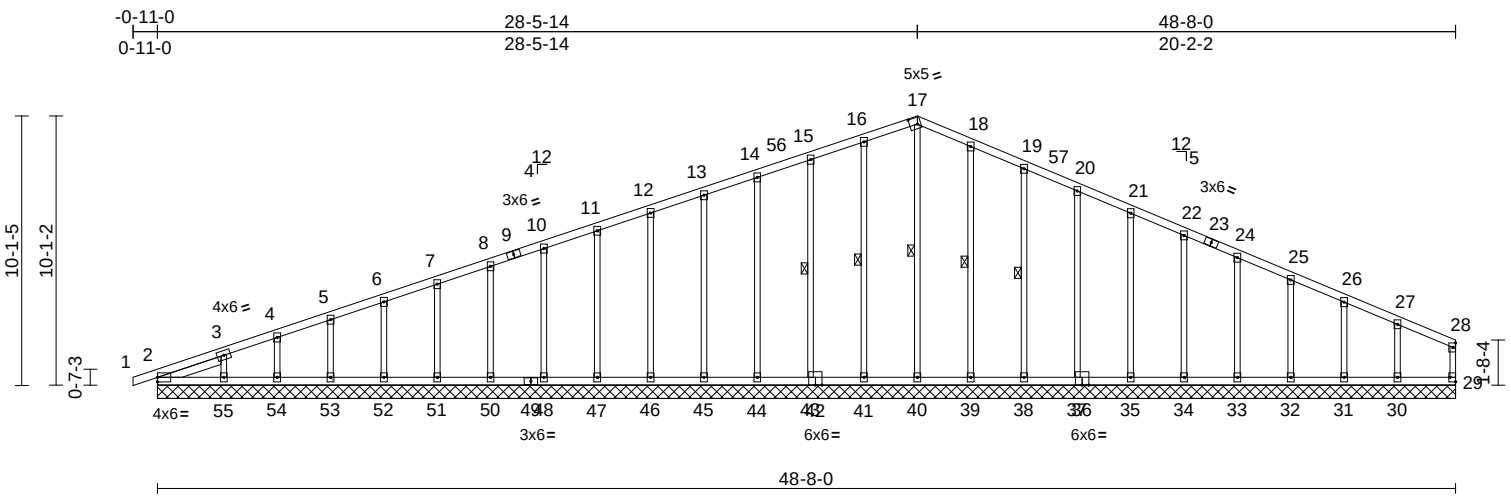
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 28-5-14, Exterior(2R) 28-5-14 to 33-5-14, Interior (1) 33-5-14 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 16 SP No.2 crushing capacity of 565 psi.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	A4	Roof Special Supported Gable	1	1	I63424349 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:46 ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:86.4

Plate Offsets (X, Y): [17:0-3-7,0-3-0], [29:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.21	Horz(CT)	0.00	29	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 254 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
SLIDER	Left 2x4 SPF No.3 -- 2-6-2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 17-40, 16-41, 15-43, 18-39, 19-38

REACTIONS (size) 2=48-8-0, 29=48-8-0, 30=48-8-0, 31=48-8-0, 32=48-8-0, 33=48-8-0, 34=48-8-0, 35=48-8-0, 37=48-8-0, 38=48-8-0, 39=48-8-0, 40=48-8-0, 41=48-8-0, 43=48-8-0, 44=48-8-0, 45=48-8-0, 46=48-8-0, 47=48-8-0, 48=48-8-0, 50=48-8-0, 51=48-8-0, 52=48-8-0, 53=48-8-0, 54=48-8-0, 55=48-8-0

Max Horiz 2=184 (LC 12)

Max Uplift 2=-50 (LC 13), 29=-1 (LC 8), 30=-87 (LC 13), 31=-42 (LC 13), 32=-53 (LC 13), 33=-51 (LC 13), 34=-51 (LC 13), 35=-51 (LC 13), 37=-50 (LC 13), 38=-57 (LC 13), 39=-40 (LC 13), 41=-39 (LC 12), 43=-50 (LC 8), 44=-45 (LC 12), 45=-46 (LC 8), 46=-46 (LC 12), 47=-46 (LC 8), 48=-46 (LC 12), 50=-46 (LC 8), 51=-46 (LC 12), 52=-46 (LC 8), 53=-46 (LC 12), 54=-46 (LC 8), 55=-76 (LC 12)

Max Grav 2=176 (LC 1), 29=83 (LC 1), 30=201 (LC 26), 31=175 (LC 1), 32=181 (LC 26), 33=180 (LC 1), 34=180 (LC 26), 35=180 (LC 26), 37=180 (LC 1), 38=180 (LC 26), 39=188 (LC 26), 40=218 (LC 22), 41=188 (LC 25), 43=180 (LC 25), 44=180 (LC 1), 45=180 (LC 25), 46=180 (LC 1), 47=180 (LC 25), 48=180 (LC 1), 50=180 (LC 1), 51=180 (LC 1), 52=180 (LC 25), 53=182 (LC 1), 54=174 (LC 25), 55=210 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-3=-205/124, 3-4=-163/127, 4-5=-141/144, 5-6=-120/161, 6-7=-99/178, 7-8=-78/195, 8-10=-88/219, 10-11=-99/247, 11-12=-111/275, 12-13=-122/303, 13-14=-133/331, 14-15=-145/358, 15-16=-157/388, 16-17=-167/411, 17-18=-171/409, 18-19=-158/352, 19-20=-142/292, 20-21=-128/253, 21-22=-113/218, 22-24=-99/182, 24-25=-84/146, 25-26=-69/110, 26-27=-56/76, 27-28=-50/41, 28-29=-65/27

BOT CHORD 2-55=-34/63, 54-55=-34/63, 53-54=-34/63, 52-53=-34/63, 51-52=-34/63, 50-51=-34/63, 48-50=-34/63, 47-48=-34/63, 46-47=-34/63, 45-46=-34/63, 44-45=-34/63, 43-44=-34/63, 41-43=-34/63, 40-41=-34/63, 39-40=-34/63, 38-39=-34/63, 37-38=-34/63, 35-37=-34/63, 34-35=-34/63, 33-34=-34/63, 32-33=-34/63, 31-32=-34/63, 30-31=-34/63, 29-30=-34/63

WEBS 17-40=-186/38, 16-41=-148/118, 15-43=-140/123, 14-44=-140/71, 13-45=-140/70, 12-46=-140/70, 11-47=-140/70, 10-48=-140/70, 8-50=-140/70, 7-51=-140/70, 6-52=-140/70, 5-53=-141/70, 4-54=-137/69, 3-55=-161/101, 18-39=-148/123, 19-38=-140/134, 20-37=-140/75, 21-35=-140/75, 22-34=-140/75, 24-33=-140/75, 25-32=-141/76, 26-31=-136/69, 27-30=-157/100

NOTES

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

February 6,2024

Continued on page 2

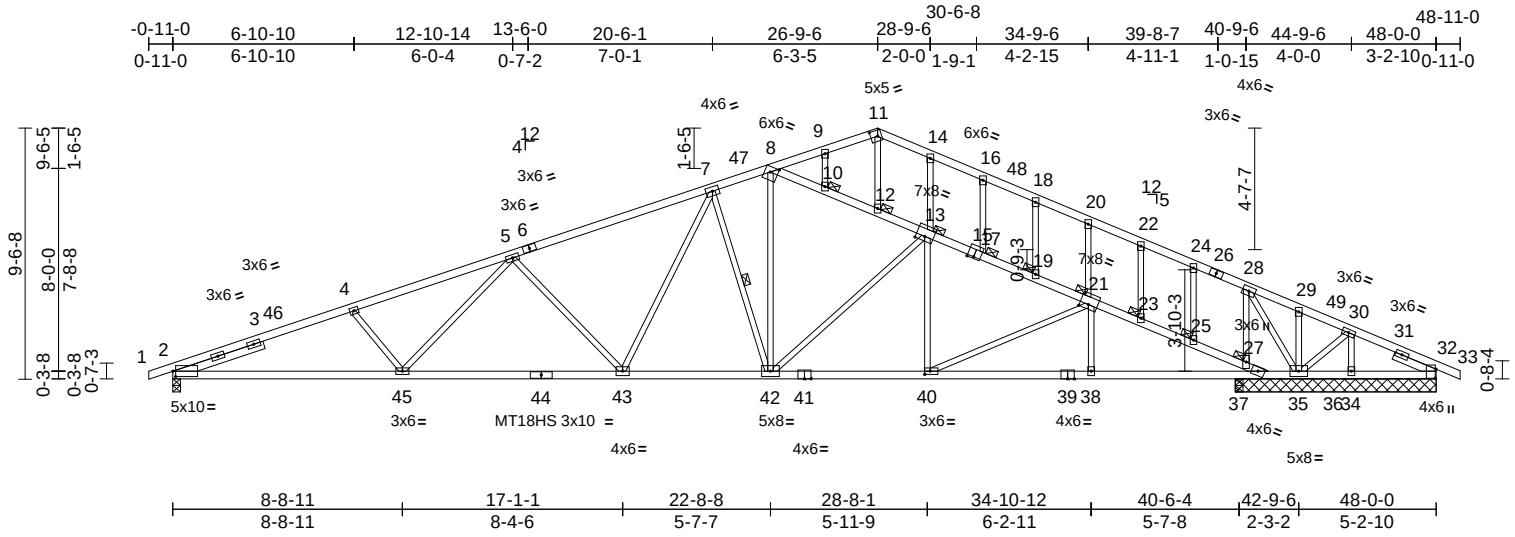
MiTek®
16023 Swingley Ridge Rd
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; 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 28-5-14, Corner(3R) 28-5-14 to 33-5-14, Exterior(2N) 33-5-14 to 48-6-12 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 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	B1	Roof Special Structural Gable	4	1	I63424350 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:47 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:87.5

Plate Offsets (X, Y): [2:0-1-4,0-2-8], [8:0-3-8,0-2-7], [11:0-3-3,0-2-12], [13:0-4-0,0-2-0], [15:0-3-0,0-0-12], [21:0-4-0,0-2-0], [32:0-4-3,0-0-7], [40:0-2-8,0-1-8]

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	0.80	Vert(LL)	-0.37	43-45	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.73	43-45	>669	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.78	Horz(CT)	0.23	35	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 263 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-6,6-11:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SPF No.3 -- 3-7-3, Right 2x4 SPF No.3 -- 1-8-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 7-42
JOINTS 1 Brace at Jt(s): 12, 10, 17, 19, 23, 25, 27, 13, 21

REACTIONS (size) 2=0-3-8, 32=7-7-8, 34=7-7-8, 35=7-7-8, 36=7-7-8, 37=0-3-8
Max Horiz 2=163 (LC 12)
Max Uplift 2=-354 (LC 8), 34=-37 (LC 26), 35=-592 (LC 13), 36=-8 (LC 8)
Max Grav 2=1905 (LC 1), 32=152 (LC 1), 34=206 (LC 13), 35=1876 (LC 1), 36=239 (LC 1), 37=270 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-4430/866, 4-5=-4194/834, 5-7=-3356/716, 7-8=-2655/646, 8-9=-741/252, 9-11=-742/281, 11-14=-760/292, 14-16=-761/253, 16-18=-790/234, 18-20=-822/212, 20-22=-753/143, 22-24=-778/118, 24-28=-817/100, 28-29=-329/412, 29-30=-355/376, 30-32=-159/138, 32-33=0/0, 8-10=-1901/410, 10-12=-1952/434, 12-13=-1844/396, 13-17=-2221/485, 17-19=-2238/498, 19-21=-2263/512, 21-23=-2773/665, 23-25=-2800/680, 25-27=-2818/690, 27-36=-2584/630
BOT CHORD 2-45=-774/4081, 43-45=-633/3635, 42-43=-382/2755, 40-42=-360/2767, 38-40=-525/3270, 37-38=-525/3270, 36-37=-525/3270, 35-36=-694/0, 34-35=-105/174, 32-34=-105/174
WEBS 11-12=-99/280, 9-10=-131/64, 13-14=-168/120, 16-17=-46/34, 18-19=-69/40, 20-21=-282/157, 22-23=-73/43, 24-25=-52/31, 27-28=-236/935, 29-35=-42/44, 30-34=-183/129, 4-45=-248/176, 5-45=-51/484, 5-43=-800/284, 8-42=-297/1354, 7-42=-1021/315, 13-42=-494/112, 13-40=-16/408, 21-40=-604/212, 21-38=0/184, 30-35=-326/319, 28-35=-1953/558, 7-43=-141/814

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=0.96; 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 26-9-6, Exterior(2R) 26-9-6 to 31-9-6, Interior (1) 31-9-6 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 MT20 plates unless otherwise indicated.
5) All plates are 3x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP 1650F 1.5E crushing capacity of 565 psi.

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

February 6,2024

Continued on page 2

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

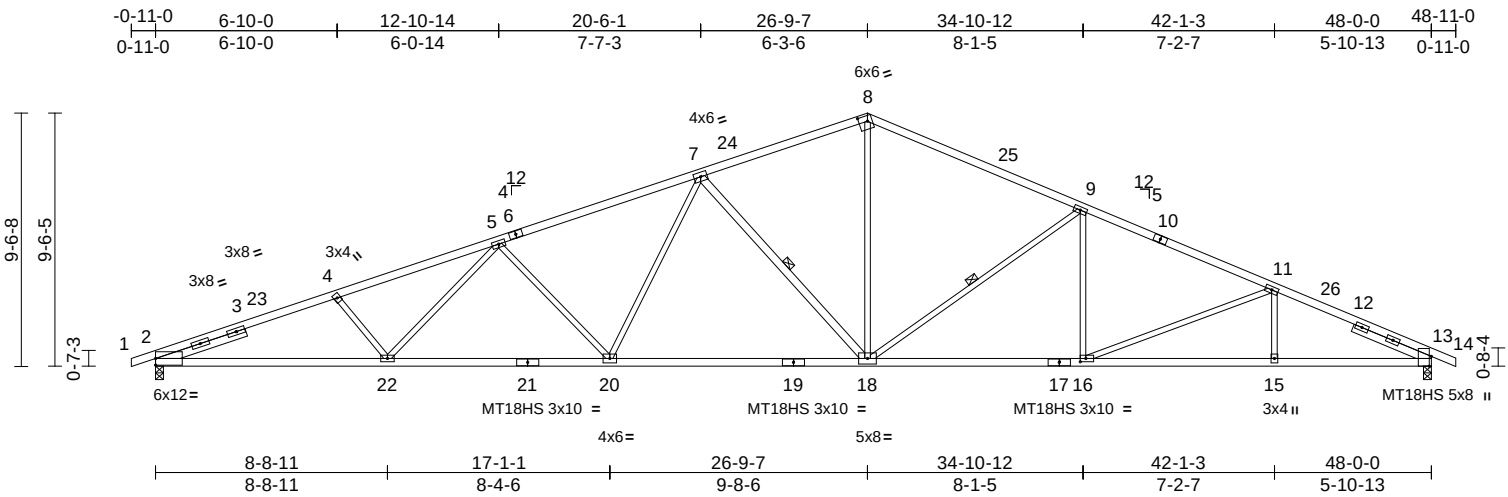
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	B1	Roof Special Structural Gable	4	1	I63424350 Job Reference (optional)

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) N/A

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	B2	Roof Special	8	1	I63424351 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:47 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:86.7

Plate Offsets (X, Y): [8:0-3-15,0-2-8], [13:0-4-7,Edge], [16:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.40	20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.85	18-20	>679	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.95	Horz(CT)	0.25	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 218 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 6-8:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 17-19,19-21:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 18-7:2x4 SP No.2
SLIDER Left 2x4 SPF No.3 -- 3-6-9, Right 2x4 SPF No.3 -- 3-2-1

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-0-12 oc bracing.
WEBS 1 Row at midpt 7-18, 9-18

REACTIONS (size) 2=0-3-8, 13=0-3-8
Max Horiz 2=169 (LC 12)
Max Uplift 2=-399 (LC 8), 13=-308 (LC 13)
Max Grav 2=2224 (LC 1), 13=2224 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-5291/1070, 4-5=-5047/1038, 5-7=-4251/923, 7-8=-3028/756, 8-9=-3158/759, 9-11=-3964/856, 11-13=-4430/895, 13-14=0/0
BOT CHORD 2-22=-917/4874, 20-22=-787/4479, 18-20=-572/3581, 16-18=-601/3609, 15-16=-715/3920, 13-15=-715/3920
WEBS 4-22=-234/178, 8-18=-308/1652, 5-22=-53/454, 7-20=-119/864, 7-18=-1208/360, 5-20=-798/292, 11-15=0/226, 9-16=0/396, 11-16=-423/169, 9-18=-1028/324

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=0.96; 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 26-9-7, Exterior(2R) 26-9-7 to 31-9-7, Interior (1) 31-9-7 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) All plates are 3x6 MT20 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) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

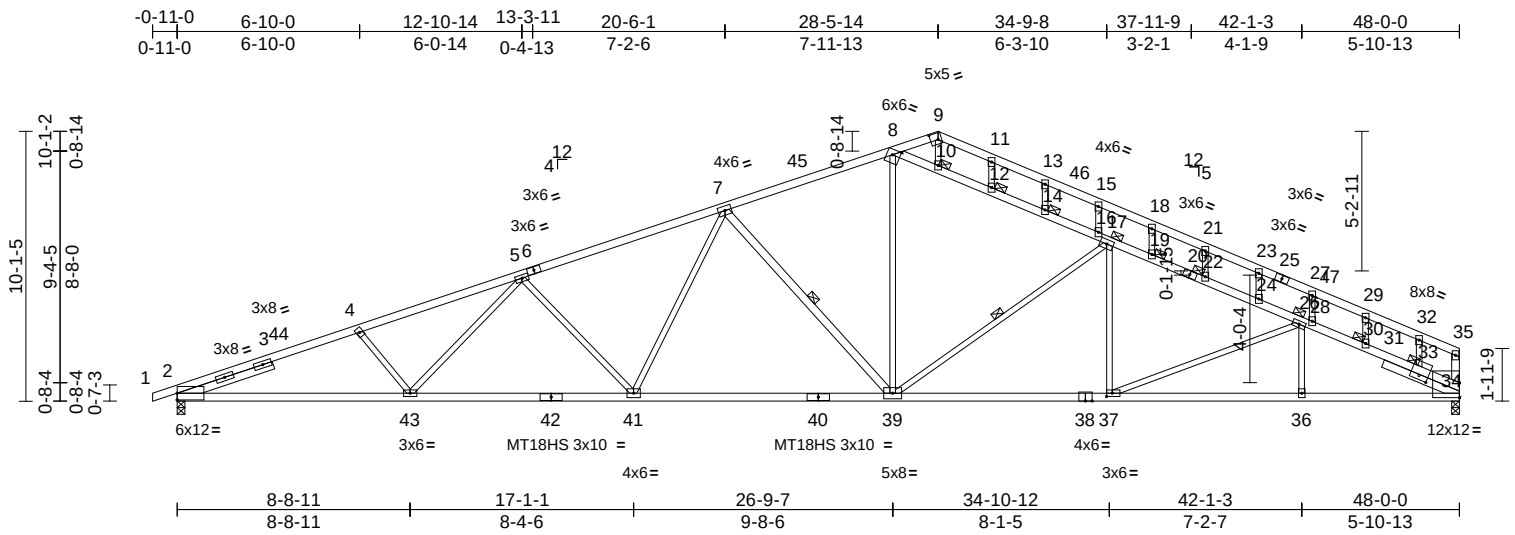
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

February 6,2024

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/22/2024 10:33:26

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	C1	Roof Special Structural Gable	1	1	I63424352 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:48 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:86.2

Plate Offsets (X, Y): [8:0-3-8,0-2-7], [9:0-3-7,0-3-0], [33:0-4-0,0-1-12], [34:Edge,0-6-12], [37:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.40	39-41	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.87	39-41	>661	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.83	Horz(CT)	0.24	34	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 261 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-6:2x4 SP 2400F 2.0E, 6-9,20-34:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 38-40,40-42:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 39-7,34-35:2x4 SP No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SPF No.3 -- 3-9-1, Right 2x4 SPF No.3 -- 3-0-13

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-3 oc purlins, except end verticals. Except:
1 Row at midpt 8-12, 17-22, 30-34
BOT CHORD Rigid ceiling directly applied or 7-7-3 oc bracing.
WEBS 1 Row at midpt 17-39, 7-39
JOINTS 1 Brace at Jt(s): 26, 17, 12, 14, 22, 30

REACTIONS (size) 2=0-3-8, 34=0-3-8
Max Horiz 2=185 (LC 12)
Max Uplift 2=-406 (LC 8), 34=-269 (LC 13)
Max Grav 2=2212 (LC 1), 34=2156 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-5253/1061, 4-5=-5015/1028, 5-7=-4214/912, 7-8=-2991/742, 8-9=-334/357, 9-11=-314/351, 11-13=-331/313, 13-15=-377/295, 15-18=-297/225, 18-21=-306/191, 21-23=-334/172, 23-27=-353/141, 27-29=-387/91, 29-32=-305/56, 32-35=-334/20, 8-10=-2694/514, 10-12=-2661/468, 12-14=-2698/490, 14-16=-2712/497, 16-17=-2840/551, 17-19=-3369/654, 19-22=-3419/677, 22-24=-3440/687, 24-26=-3474/709, 26-28=-3556/790, 28-30=-3581/839, 30-33=-3733/874, 33-34=-3733/930, 34-35=-160/9
BOT CHORD 2-43=-993/4846, 41-43=-887/4445, 39-41=-677/3546, 37-39=-635/3461, 36-37=-784/3556, 34-36=-784/3556
WEBS 4-43=-229/176, 8-39=-273/1566, 5-43=-51/451, 5-41=-798/291, 7-41=-118/864, 26-36=0/190, 17-37=0/347, 26-37=-246/189, 17-39=-907/259, 7-39=-1197/362, 9-10=-134/102, 11-12=-96/72, 13-14=-37/27, 15-16=-334/157, 18-19=-131/66, 21-22=-54/26, 23-24=-97/64, 27-28=-110/135, 29-30=-339/84, 32-33=-50/113

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=0.96; 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 28-5-14, Exterior(2R) 28-5-14 to 33-5-14, Interior (1) 33-5-14 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) 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) All plates are 3x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.

February 6,2024

Continued on page 2

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

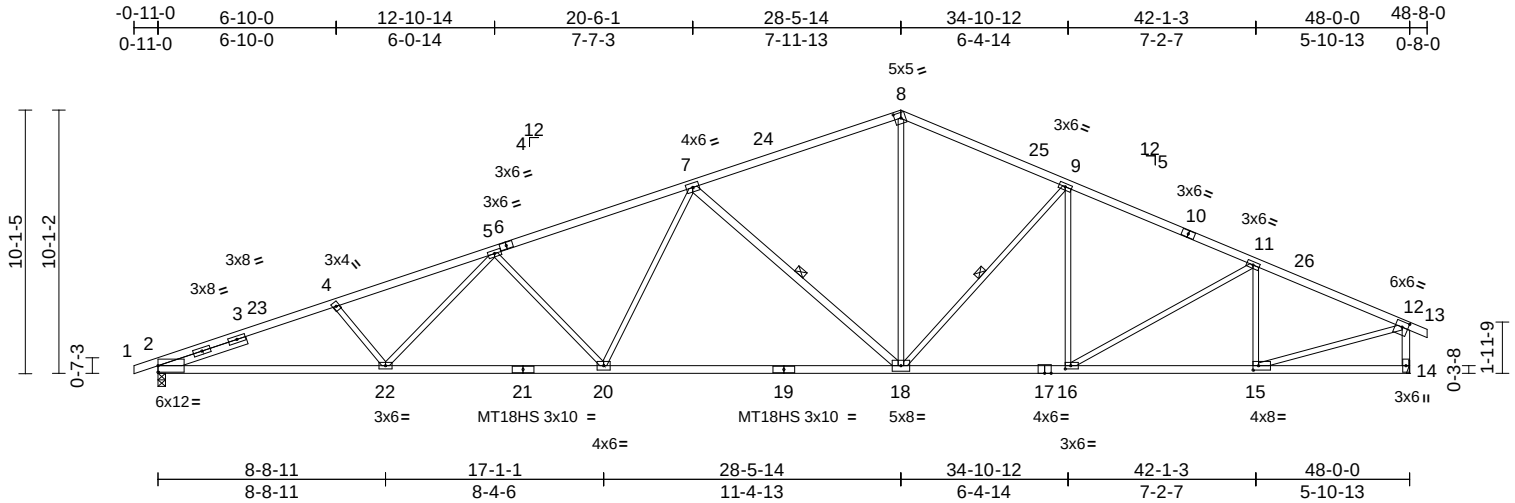
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	C1	Roof Special Structural Gable	1	1	I63424352 Job Reference (optional)

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	C2	Roof Special	2	1	I63424353 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:49 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:88.3

Plate Offsets (X, Y): [8:0-2-15,0-2-8], [12:0-2-12,0-2-8], [15:0-2-8,0-2-0], [16:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.37	18-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.86	18-20	>666	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.93	Horz(CT)	0.18	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 225 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 8-10:2x4 SP 1650F 1.5E, 10-13:2x4 SP No.2
BOT CHORD 2x4 SP 2400F 2.0E *Except* 0-0:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 14-12:2x4 SPF No.3, 18-7:2x4 SP No.2
SLIDER Left 2x4 SPF No.3 -- 3-6-9

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-5-3 oc bracing.
WEBS 1 Row at midpt 9-18, 7-18

REACTIONS (size) 2=0-3-8, 14= Mechanical
Max Horiz 2=179 (LC 12)
Max Uplift 2=-407 (LC 8), 14=-284 (LC 13)
Max Grav 2=2218 (LC 1), 14=2210 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-5274/1068, 4-5=-5025/1034, 5-7=-4241/911, 7-8=-2803/711, 8-9=-2875/726, 9-11=-3237/739, 11-12=-3010/634, 12-13=0/22, 12-14=-2151/543
BOT CHORD 2-22=-975/4859, 20-22=-857/4455, 18-20=-664/3577, 16-18=-508/2901, 15-16=-534/2712, 14-15=-67/111
WEBS 12-15=-487/2716, 4-22=-241/181, 8-18=-280/1470, 5-22=-63/447, 5-20=-765/283, 7-20=-94/866, 11-15=-650/234, 9-16=-33/160, 11-16=-46/296, 9-18=-615/255, 7-18=-1373/407

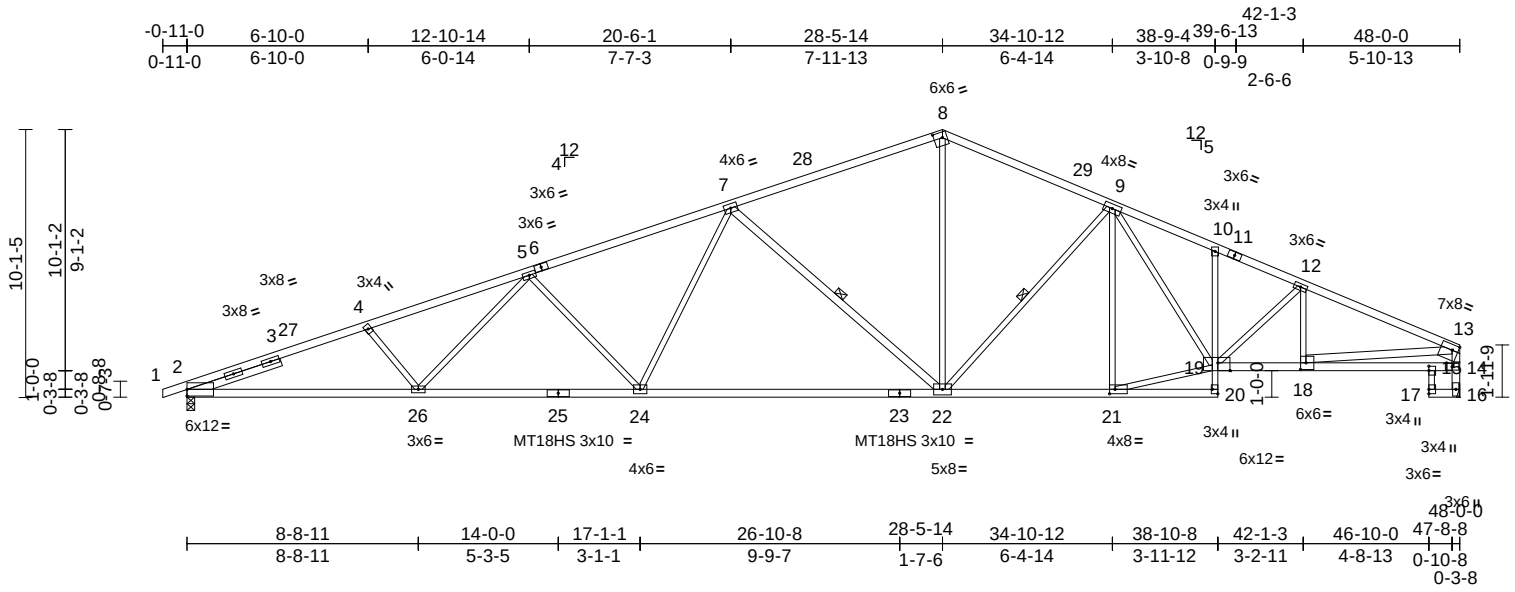
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 28-5-14, Exterior(2R) 28-5-14 to 33-5-14, Interior (1) 33-5-14 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
3) All plates are MT20 plates unless otherwise indicated.
4) All plates are 3x6 MT20 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 14 SPF No.3 crushing capacity of 425 psi.
7) Refer to girder(s) for truss to truss connections.
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

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	C3	Roof Special	5	1	I63424354 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:50 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:86.9

Plate Offsets (X, Y): [8:0-3-15,0-2-8], [13:Edge,0-2-8], [15:0-2-0,Edge], [18:0-2-8,0-3-0], [19:0-5-8,Edge], [20:Edge,0-2-8], [21:0-2-8,0-2-0]

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	0.84	Vert(LL)	-0.39	22-24	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.92	22-24	>624	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.25	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 239 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 11-13,11-8:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 20-10,15-17:2x3 SPF No.2, 19-14,23-20:2x4 SP 1650F 1.5E, 25-2,23-25:2x4 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 16-13:2x4 SPF No.3, 22-7,18-13:2x4 SP No.2
SLIDER Left 2x4 SPF No.3 -- 3-8-5

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 9-22, 7-22

REACTIONS (size) 2=0-3-8, 16= Mechanical
Max Horiz 2=185 (LC 12)
Max Uplift 2=-407 (LC 8), 16=-265 (LC 13)
Max Grav 2=2218 (LC 1), 16=2153 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-5273/1068, 4-5=-5028/1034, 5-7=-4242/910, 7-8=-2804/711, 8-9=-2871/715, 9-10=-3803/869, 10-12=-3854/823, 12-13=-3900/773, 14-16=-2092/420, 13-14=-2060/442
BOT CHORD 19-20=0/77, 10-19=-152/75, 18-19=-703/3527, 15-18=-124/465, 14-15=-122/529, 15-17=-42/13, 16-17=-63/7, 2-26=-1016/4862, 24-26=-897/4457, 22-24=-703/3577, 21-22=-536/2888, 20-21=-23/145
WEBS 12-18=-319/145, 4-26=-241/181, 8-22=-274/1455, 5-26=-64/448, 5-24=-765/283, 9-21=-636/187, 12-19=-141/100, 9-22=-594/247, 7-22=-1373/406, 13-18=-584/3086, 7-24=-93/868, 19-21=-530/2833, 9-19=-247/1129

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=0.96; 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 28-5-14, Exterior(2R) 28-5-14 to 33-5-14, Interior (1) 33-5-14 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) 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 16 SPF No.3 crushing capacity of 425 psi.
6) Refer to girder(s) for truss to truss connections.
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.

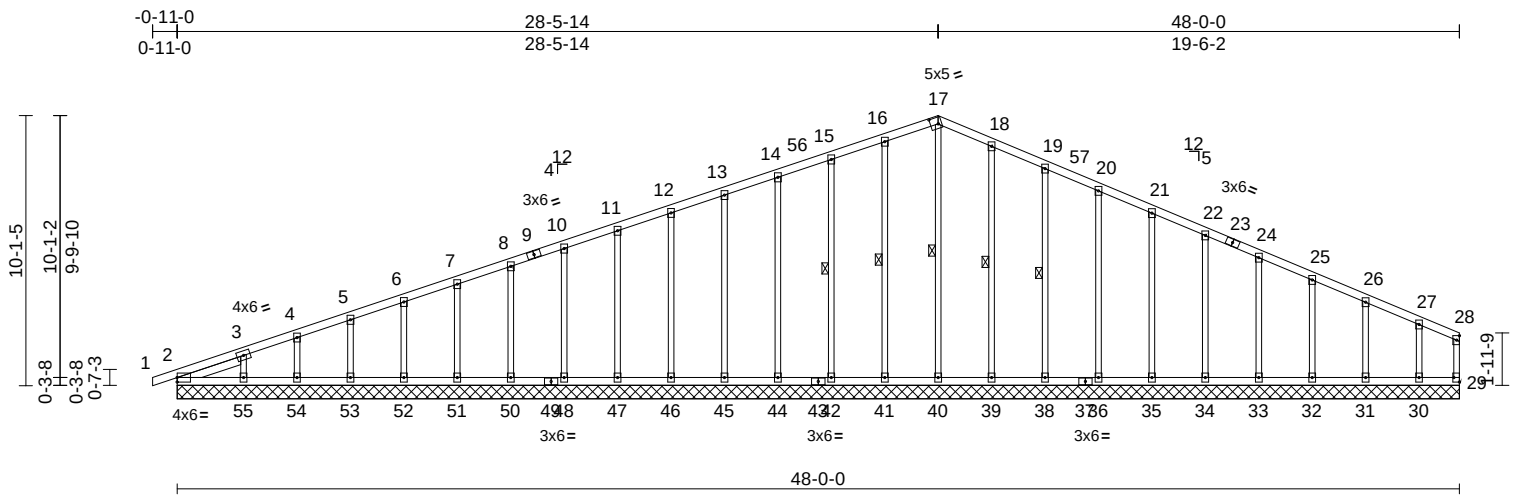
LOAD CASE(S) Standard

February 6,2024

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/22/2024 10:33:26

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	C4	Roof Special Supported Gable	1	1	I63424355 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:51 ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:86.2

Plate Offsets (X, Y): [17:0-3-7,0-3-0], [29:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.21	Horz(CT)	0.00	29	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 252 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
SLIDER Left 2x4 SPF No.3 -- 2-6-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 17-40, 16-41, 15-42, 18-39, 19-38

REACTIONS (size) 2=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, 35=48-0-0, 36=48-0-0, 38=48-0-0, 39=48-0-0, 40=48-0-0, 41=48-0-0, 42=48-0-0, 44=48-0-0, 45=48-0-0, 46=48-0-0, 47=48-0-0, 48=48-0-0, 50=48-0-0, 51=48-0-0, 52=48-0-0, 53=48-0-0, 54=48-0-0, 55=48-0-0
Max Horiz 2=185 (LC 16)
Max Uplift 2=-46 (LC 13), 30=-80 (LC 13), 31=-47 (LC 13), 32=-52 (LC 13), 33=-51 (LC 13), 34=-51 (LC 13), 35=-51 (LC 13), 36=-50 (LC 13), 38=-57 (LC 13), 39=-41 (LC 13), 41=-39 (LC 12), 42=-50 (LC 8), 44=-45 (LC 12), 45=-46 (LC 8), 46=-46 (LC 12), 47=-46 (LC 8), 48=-46 (LC 12), 50=-46 (LC 8), 51=-46 (LC 12), 52=-46 (LC 8), 53=-46 (LC 12), 54=-46 (LC 8), 55=-76 (LC 12)
Max Grav 2=174 (LC 1), 29=57 (LC 22), 30=165 (LC 26), 31=184 (LC 1), 32=179 (LC 26), 33=180 (LC 1), 34=180 (LC 26), 35=180 (LC 26), 36=180 (LC 1), 38=179 (LC 26), 39=189 (LC 26), 40=216 (LC 22), 41=189 (LC 25), 42=179 (LC 25), 44=180 (LC 1), 45=180 (LC 25), 46=180 (LC 1), 47=180 (LC 25), 48=180 (LC 1), 50=180 (LC 25), 51=180 (LC 1), 52=180 (LC 25), 53=182 (LC 1), 54=174 (LC 25), 55=210 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-3=-207/118, 3-4=-163/120, 4-5=-142/137, 5-6=-121/154, 6-7=-100/171, 7-8=-79/193, 8-10=-89/221, 10-11=-100/249, 11-12=-112/277, 12-13=-123/305, 13-14=-135/333, 14-15=-146/361, 15-16=-158/391, 16-17=-168/413, 17-18=-173/412, 18-19=-159/355, 19-20=-144/294, 20-21=-129/256, 21-22=-115/221, 22-24=-100/185, 24-25=-85/149, 25-26=-71/113, 26-27=-56/77, 27-28=-43/48, 28-29=-40/21
BOT CHORD 2-55=-40/64, 54-55=-40/64, 53-54=-40/64, 52-53=-40/64, 51-52=-40/64, 50-51=-40/64, 48-50=-40/64, 47-48=-40/64, 46-47=-40/64, 45-46=-40/64, 44-45=-40/64, 42-44=-40/64, 41-42=-40/64, 40-41=-40/64, 39-40=-40/64, 38-39=-40/64, 36-38=-40/64, 35-36=-40/64, 34-35=-40/64, 33-34=-40/64, 32-33=-40/64, 31-32=-40/64, 30-31=-40/64, 29-30=-40/64
WEBS 17-40=-187/39, 16-41=-149/119, 15-42=-139/123, 14-44=-140/71, 13-45=-140/70, 12-46=-140/70, 11-47=-140/70, 10-48=-140/70, 8-50=-140/70, 7-51=-140/70, 6-52=-140/70, 5-53=-141/70, 4-54=-137/69, 3-55=-161/101, 18-39=-149/123, 19-38=-139/134, 20-36=-140/75, 21-35=-140/75, 22-34=-140/75, 24-33=-140/75, 25-32=-139/75, 26-31=-143/74, 27-30=-129/87

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

February 6,2024

Continued on page 2

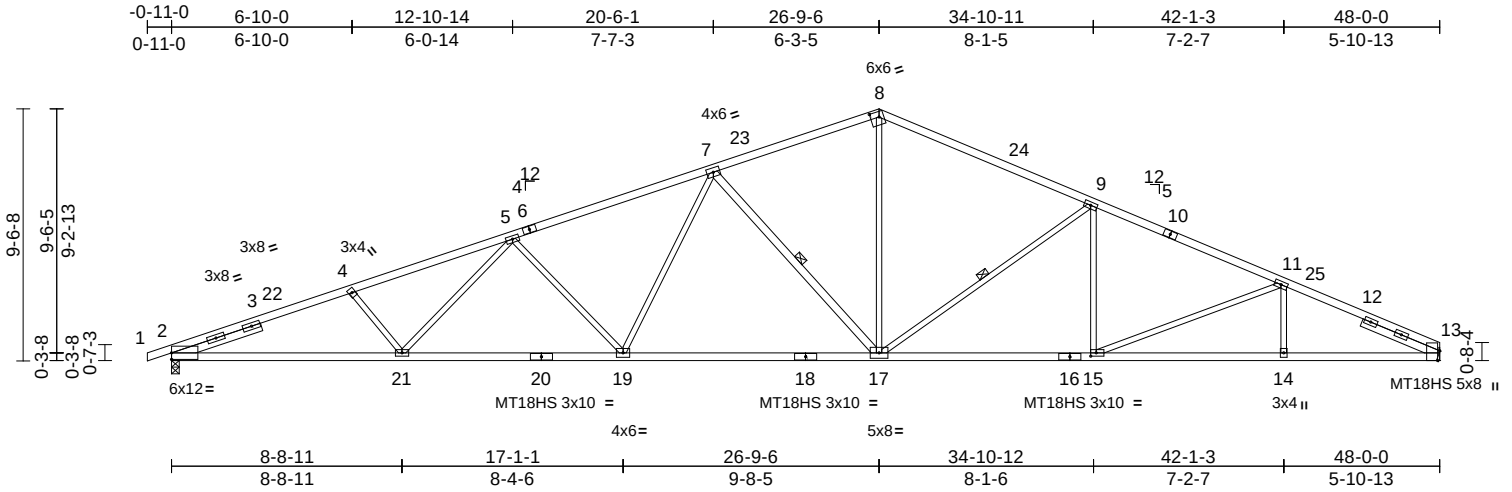
MiTek®
16023 Swingley Ridge Rd
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; 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 28-5-14, Corner(3R) 28-5-14 to 33-5-14, Exterior(2N) 33-5-14 to 47-10-12 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 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	D1	Roof Special	4	1	I63424356 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:51 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:87.2

Plate Offsets (X, Y): [8:0-3-15,0-2-8], [13:0-4-7,Edge], [15:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.40	19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.85	17-19	>680	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.95	Horz(CT)	0.25	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 217 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 6-8:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 18-20,18-16:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 17-7:2x4 SP No.2
SLIDER Left 2x4 SPF No.3 -- 3-6-9, Right 2x4 SPF No.3 -- 3-2-1

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-0-10 oc bracing.
WEBS 1 Row at midpt 7-17, 9-17

REACTIONS (size) 2=0-3-8, 13= Mechanical
Max Horiz 2=169 (LC 16)
Max Uplift 2=-399 (LC 8), 13=-285 (LC 13)
Max Grav 2=2225 (LC 1), 13=2159 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-5293/1071, 4-5=-5048/1039, 5-7=-4252/924, 7-8=-3031/757, 8-9=-3160/765, 9-11=-3969/870, 11-13=-4442/927
BOT CHORD 2-21=-917/4876, 19-21=-788/4481, 17-19=-572/3583, 15-17=-602/3614, 14-15=-743/3934, 13-14=-743/3934
WEBS 4-21=-234/178, 8-17=-312/1653, 5-21=-53/454, 7-19=-119/864, 7-17=-1207/360, 5-19=-798/292, 11-14=0/227, 9-15=0/398, 9-17=-1031/325, 11-15=-432/172

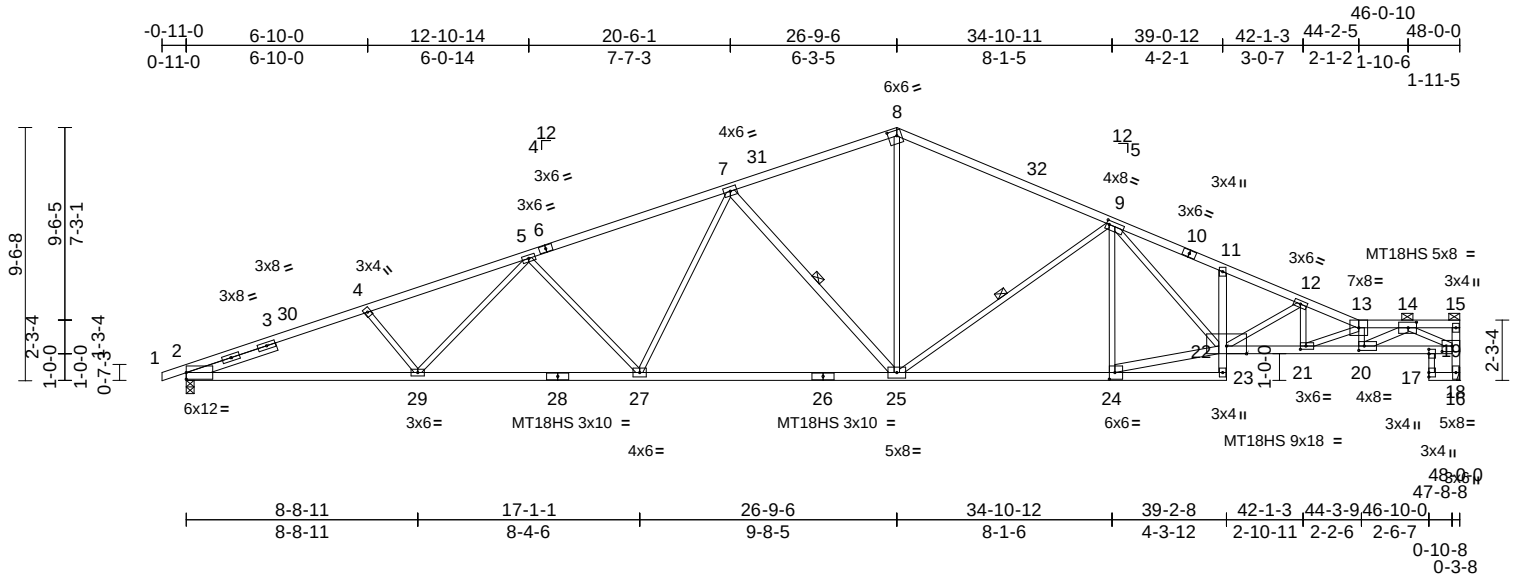
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 26-9-6, Exterior(2R) 26-9-6 to 31-9-6, Interior (1) 31-9-6 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) All plates are 3x6 MT20 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 13 SPF No.3 crushing capacity of 425 psi.
7) Refer to girder(s) for truss to truss connections.
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

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	D2	Roof Special	10	1	I63424357 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:52 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:86.8

Plate Offsets (X, Y): [8:0-3-15,0-2-8], [9:0-1-4,0-1-12], [14:0-3-12,0-2-8], [18:0-4-8,0-2-8], [19:0-2-0,Edge], [20:0-2-8,0-2-0], [21:0-2-8,0-1-8], [24:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.49	24-25	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-1.00	25-27	>571	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.92	Horz(CT)	0.41	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 236 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 2400F 2.0E *Except* 10-13:2x4 SP No.2, 13-15,6-8:2x4 SP 1650F 1.5E

BOT CHORD 2x4 SP 2400F 2.0E *Except* 23-11,17-16:2x4 SP No.2, 19-17:2x3 SPF No.2, 26-23,26-28:2x4 SP 1650F 1.5E

WEBS 2x3 SPF No.2 *Except* 25-7,22-24,16-15,20-14:2x4 SP No.2

SLIDER Left 2x4 SPF No.3 -- 3-6-9

BRACING

TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (2-2-4 max.): 13-15.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 7-25, 9-25

REACTIONS (size) 2=0-3-8, 16= Mechanical
Max Horiz 2=216 (LC 12)
Max Uplift 2=-397 (LC 8), 16=-285 (LC 13)
Max Grav 2=2218 (LC 1), 16=2153 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-4=-5275/1063, 4-5=-5030/1030, 5-7=-4232/915, 7-8=-3012/748, 8-9=-3137/747, 9-11=-5272/1132, 11-12=-5396/1104, 12-13=-6411/1291, 13-14=-6938/1396, 14-15=-80/10

BOT CHORD 2-29=-988/4859, 27-29=-879/4463, 25-27=-669/3564, 24-25=-665/3555, 23-24=-70/328, 22-23=0/60, 11-22=-110/71, 21-22=-1178/5924, 20-21=-1440/7145, 19-20=-787/3668, 18-19=-797/3747, 17-19=-35/11, 16-17=-78/10

WEBS 4-29=-234/178, 5-29=-53/455, 7-27=-119/863, 5-27=-799/293, 8-25=-296/1628, 7-25=-1206/360, 12-21=-117/741, 9-24=-662/225, 9-25=-987/313, 22-24=-612/3318, 12-22=-1149/265, 9-22=-412/2005, 13-21=-1347/289, 16-18=-2099/457, 15-18=-80/36, 13-20=-1951/418, 14-20=-697/3743, 14-18=-4086/884

NOTES

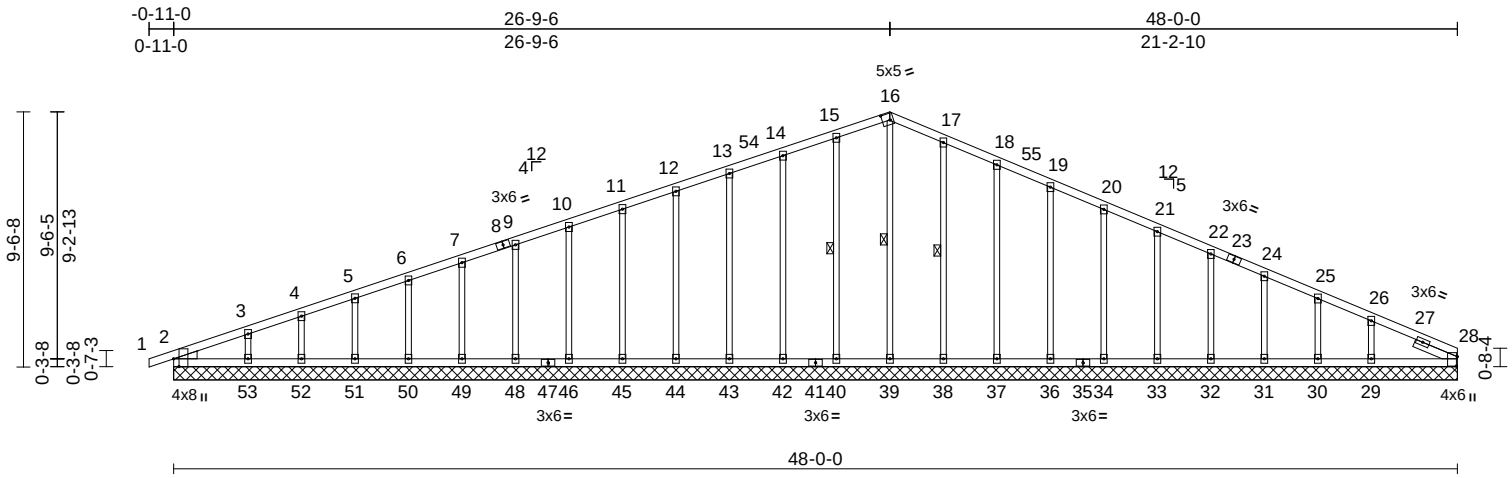
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 26-9-6, Exterior(2R) 26-9-6 to 31-9-6, Interior (1) 31-9-6 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 16 SPF No.3 crushing capacity of 425 psi.
7) Refer to girder(s) for truss to truss connections.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	D3	Roof Special Supported Gable	2	1	I63424358 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:53 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:86.1

Plate Offsets (X, Y): [2:0-3-8,Edge], [16:0-3-7,0-3-0], [28:0-4-3,0-0-7]

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	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.22	Horz(CT)	0.01	28	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 240 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x3 SPF No.2
WEDGE	Left: 2x4 SP No.2
SLIDER	Right 2x4 SPF No.3 -- 1-8-10

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, 42=48-0-0, 43=48-0-0, 44=48-0-0, 45=48-0-0, 46=48-0-0, 48=48-0-0, 49=48-0-0, 50=48-0-0, 51=48-0-0, 52=48-0-0, 53=48-0-0
Max Horiz 2=169 (LC 12)
Max Uplift 2=-25 (LC 13), 29=-107 (LC 13), 30=-33 (LC 13), 31=-55 (LC 13), 32=-50 (LC 13), 33=-51 (LC 13), 34=-51 (LC 13), 36=-50 (LC 13), 37=-56 (LC 13), 38=-44 (LC 13), 40=-41 (LC 12), 42=-49 (LC 8), 43=-45 (LC 12), 44=-46 (LC 8), 45=-46 (LC 8), 46=-46 (LC 12), 48=-46 (LC 8), 49=-46 (LC 12), 50=-46 (LC 8), 51=-47 (LC 12), 52=-42 (LC 8), 53=-83 (LC 12)
Max Grav 2=190 (LC 1), 28=133 (LC 1), 29=285 (LC 26), 30=145 (LC 1), 31=189 (LC 26), 32=178 (LC 1), 33=180 (LC 26), 34=180 (LC 26), 36=180 (LC 1), 37=180 (LC 26), 38=188 (LC 26), 39=189 (LC 22), 40=188 (LC 25), 42=180 (LC 25), 43=180 (LC 1), 44=180 (LC 25), 45=180 (LC 1), 46=180 (LC 25), 48=180 (LC 25), 49=180 (LC 1), 50=179 (LC 25), 51=185 (LC 1), 52=160 (LC 25), 53=240 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-3=-208/85, 3-4=-155/87, 4-5=-128/96, 5-6=-107/109, 6-7=-91/126, 7-9=-76/142, 9-10=-60/159, 10-11=-65/176, 11-12=-76/193, 12-13=-88/221, 13-14=-99/248, 14-15=-111/278, 15-16=-122/302, 16-17=-125/297, 17-18=-111/248, 18-19=-96/211, 19-20=-81/175, 20-21=-66/139, 21-22=-52/103, 22-24=-52/67, 24-25=-52/36, 25-26=-76/19, 26-28=-119/36

BOT CHORD 2-53=-38/138, 52-53=-38/138, 51-52=-38/138, 50-51=-38/138, 49-50=-38/138, 48-49=-38/138, 46-48=-38/138, 45-46=-38/138, 44-45=-38/138, 43-44=-38/138, 42-43=-38/138, 40-42=-38/138, 39-40=-38/138, 38-39=-38/138, 37-38=-38/138, 36-37=-38/138, 34-36=-38/138, 33-34=-38/138, 32-33=-38/138, 31-32=-38/138, 30-31=-38/138, 29-30=-38/138, 28-29=-38/138

WEBS 16-39=-149/21, 15-40=-148/120, 14-42=-140/123, 13-43=-140/70, 12-44=-140/70, 11-45=-140/70, 10-46=-140/70, 9-48=-140/70, 7-49=-140/70, 6-50=-139/70, 5-51=-143/71, 4-52=-127/65, 3-53=-179/109, 17-38=-148/129, 18-37=-140/131, 19-36=-140/76, 20-34=-140/75, 21-33=-140/75, 22-32=-139/74, 24-31=-145/79, 25-30=-118/59, 26-29=-211/127

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=0.96; 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 26-9-6, Corner(3R) 26-9-6 to 31-9-6, Exterior(2N) 31-9-6 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

February 6,2024

Continued on page 2

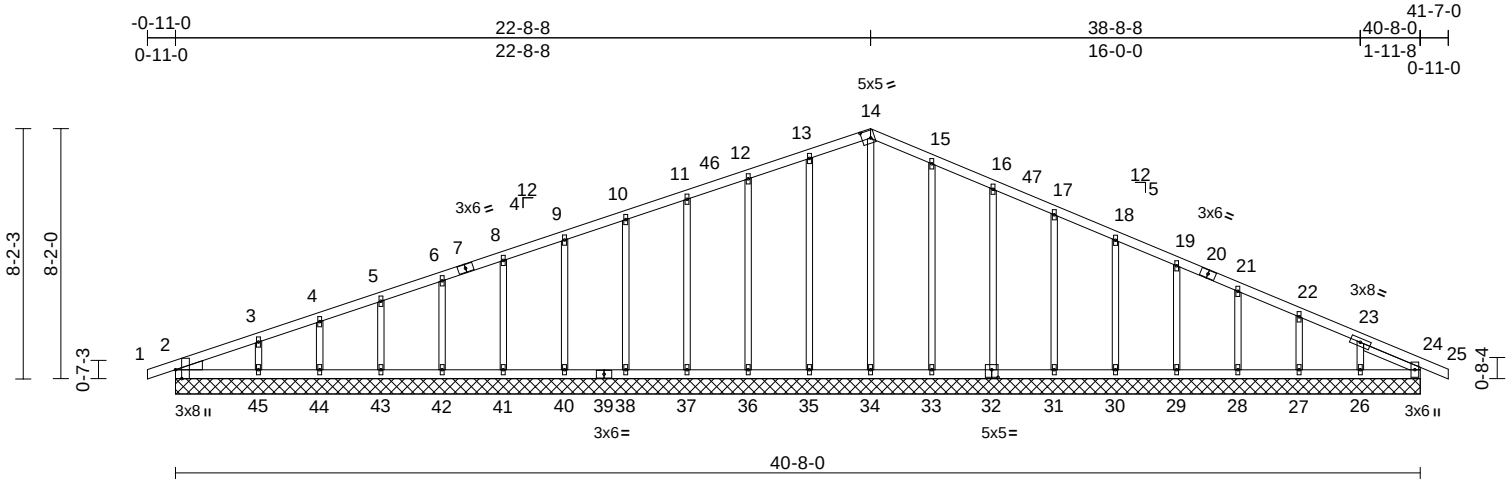
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	D3	Roof Special Supported Gable	2	1	I63424358 Job Reference (optional)

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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	E1	Roof Special Supported Gable	4	1	I63424359 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:54 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:75.3

Plate Offsets (X, Y): [2:0-3-8,Edge], [14:0-3-7,0-3-0], [32:0-2-8,0-3-0]

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.21	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 195 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
WEDGE Left: 2x4 SP 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, 38=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=139 (LC 12)
Max Uplift 2=-20 (LC 13), 24=-6 (LC 9), 26=-71 (LC 13), 27=-49 (LC 13), 28=-50 (LC 13), 29=-49 (LC 13), 30=-50 (LC 13), 31=-48 (LC 13), 32=-52 (LC 13), 33=-46 (LC 13), 35=-42 (LC 12), 36=-47 (LC 8), 37=-44 (LC 12), 38=-44 (LC 8), 40=-44 (LC 8), 41=-44 (LC 12), 42=-44 (LC 8), 43=-46 (LC 12), 44=-41 (LC 8), 45=-77 (LC 12)
Max Grav 2=177 (LC 1), 24=155 (LC 1), 26=170 (LC 26), 27=175 (LC 26), 28=174 (LC 1), 29=174 (LC 1), 30=174 (LC 26), 31=175 (LC 1), 32=173 (LC 26), 33=182 (LC 26), 34=174 (LC 22), 35=183 (LC 25), 36=174 (LC 25), 37=174 (LC 1), 38=174 (LC 25), 40=174 (LC 1), 41=175 (LC 25), 42=173 (LC 25), 43=179 (LC 1), 44=157 (LC 25), 45=227 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-3=-171/69, 3-4=-121/72, 4-5=-95/81, 5-6=-76/93, 6-8=-61/110, 8-9=-46/126, 9-10=-51/142, 10-11=-62/168, 11-12=-73/195, 12-13=-84/223, 13-14=-95/247, 14-15=-97/242, 15-16=-83/194, 16-17=-69/159, 17-18=-55/124, 18-19=-41/89, 19-21=-39/54, 21-22=-47/28, 22-23=-67/21, 23-24=-117/41, 24-25=0/0
BOT CHORD 2-45=-36/121, 44-45=-36/121, 43-44=-36/121, 42-43=-36/121, 41-42=-36/121, 40-41=-36/121, 38-40=-36/121, 37-38=-36/121, 36-37=-36/121, 35-36=-36/121, 34-35=-36/121, 33-34=-36/121, 31-33=-36/121, 30-31=-35/120, 29-30=-35/120, 28-29=-35/120, 27-28=-35/120, 26-27=-35/120, 24-26=-35/120
WEBS 14-34=-135/7, 13-35=-144/120, 12-36=-135/118, 11-37=-136/68, 10-38=-136/68, 9-40=-136/68, 8-41=-136/68, 6-42=-135/67, 5-43=-138/69, 4-44=-125/63, 3-45=-170/101, 15-33=-144/128, 16-32=-134/126, 17-31=-136/73, 18-30=-136/73, 19-29=-136/73, 21-28=-136/73, 22-27=-136/73, 23-26=-132/92

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=0.96; 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 22-8-8, Corner(3R) 22-8-8 to 27-8-8, Exterior(2N) 27-8-8 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

February 6,2024

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 43
P240076-01	E1	Roof Special Supported Gable	4	1	I63424359 Job Reference (optional)

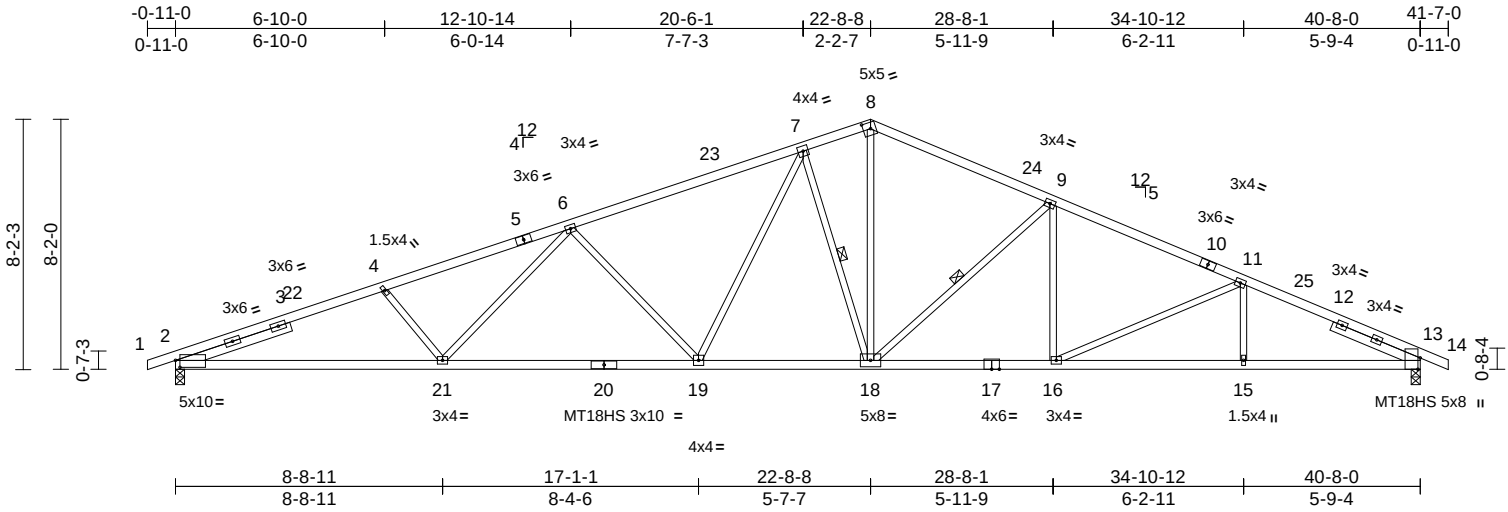
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) 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 43
P240076-01	E2	Roof Special	8	1	I63424360 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:55
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:75.3

Plate Offsets (X, Y): [2:0-1-12,0-2-12], [8:0-2-15,0-2-8], [13:0-4-7,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	0.91	Vert(LL)	-0.34	19-21	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.68	19-21	>716	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.82	Horz(CT)	0.21	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 184 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 0-0:2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SPF No.3 -- 3-11-3, Right 2x4 SPF No.3 -- 3-1-3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-3-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-2-6 oc bracing.
WEBS 1 Row at midpt 7-18, 9-18

REACTIONS (size) 2=0-3-8, 13=0-3-8
Max Horiz 2=144 (LC 12)
Max Uplift 2=-344 (LC 8), 13=-264 (LC 13)
Max Grav 2=1894 (LC 1), 13=1894 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-4371/905, 4-6=-4128/869, 6-7=-3246/749, 7-8=-2517/675, 8-9=-2634/661, 9-11=-3231/722, 11-13=-3680/763, 13-14=0/0
BOT CHORD 2-21=-762/4030, 19-21=-626/3551, 18-19=-393/2633, 16-18=-487/2935, 15-16=-596/3241, 13-15=-596/3241
WEBS 4-21=-276/186, 8-18=-389/1572, 6-19=-837/296, 7-18=-1016/316, 6-21=-55/525, 11-16=-414/164, 9-18=-816/250, 9-16=0/355, 11-15=0/210, 7-19=-148/847

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=0.96; 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 22-8-8, Exterior(2R) 22-8-8 to 27-8-8, Interior (1) 27-8-8 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) 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) All bearings are assumed to be SP 1650F 1.5E crushing capacity of 565 psi.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

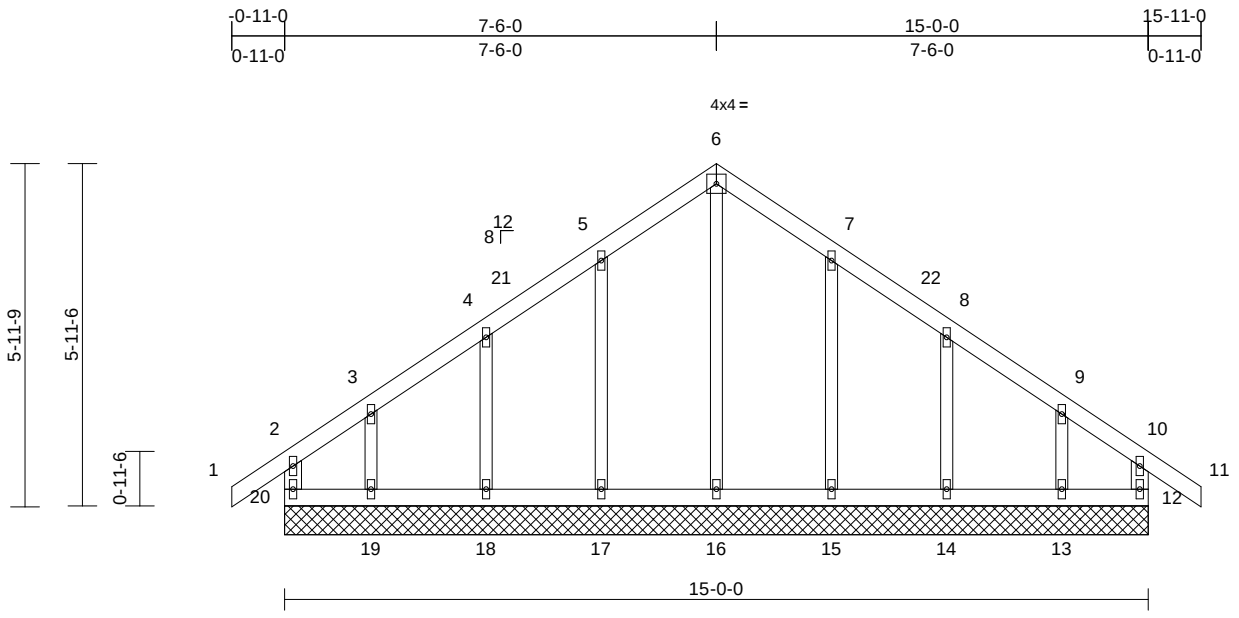
LOAD CASE(S) Standard

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	G1	Common Supported Gable	2	1	I63424361 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:55
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:40

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	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	NO	WB	0.14	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 72 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	Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 12=15-0-0, 13=15-0-0, 14=15-0-0, 15=15-0-0, 16=15-0-0, 17=15-0-0, 18=15-0-0, 19=15-0-0, 20=15-0-0
Max Horiz 20=180 (LC 11)
Max Uplift 12=-53 (LC 9), 13=-105 (LC 13), 14=-72 (LC 13), 15=-74 (LC 13), 17=-75 (LC 12), 18=-70 (LC 12), 19=-111 (LC 12), 20=-79 (LC 8)
Max Grav 12=155 (LC 19), 13=178 (LC 20), 14=189 (LC 20), 15=197 (LC 20), 16=195 (LC 22), 17=198 (LC 19), 18=187 (LC 25), 19=190 (LC 19), 20=176 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-20=-143/91, 1-2=0/41, 2-3=-110/106, 3-4=-80/85, 4-5=-78/165, 5-6=-117/243, 6-7=-117/243, 7-8=-77/165, 8-9=-59/80, 9-10=-80/76, 10-11=0/41, 10-12=-133/91
BOT CHORD	19-20=-83/90, 18-19=-83/90, 17-18=-83/90, 16-17=-83/90, 15-16=-83/90, 14-15=-83/90, 13-14=-83/90, 12-13=-83/90
WEBS	6-16=-181/31, 5-17=-157/117, 4-18=-149/152, 3-19=-135/128, 7-15=-156/117, 8-14=-150/152, 9-13=-128/128

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=0.96; 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 7-6-0, Corner(3R) 7-6-0 to 12-6-0, Exterior(2N) 12-6-0 to 15-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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.

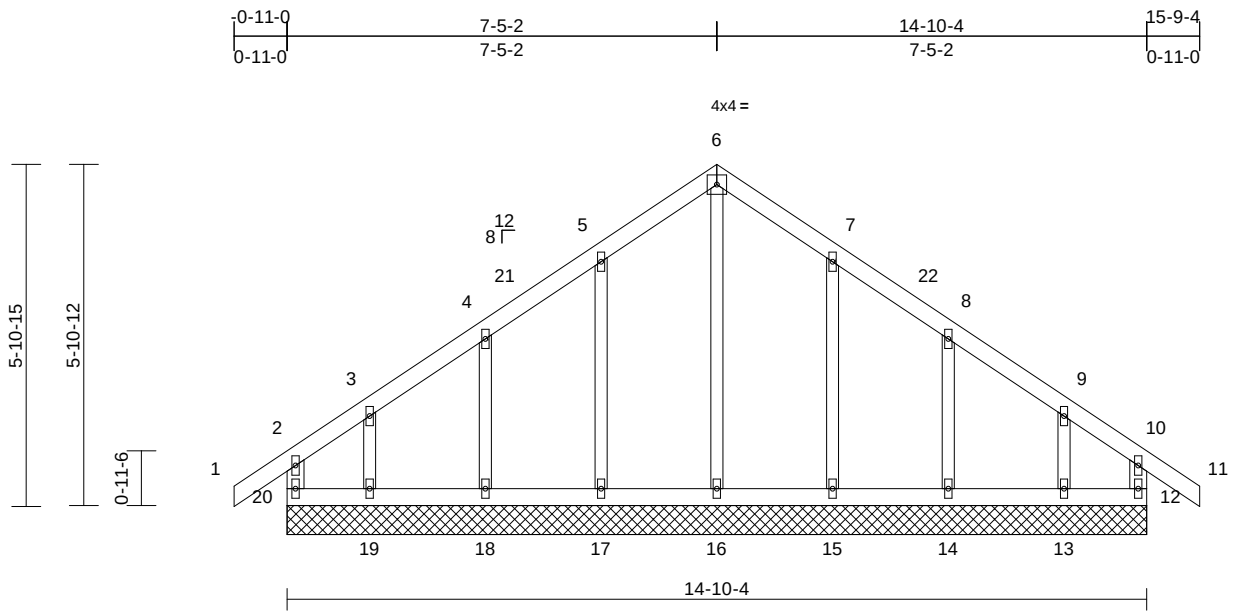
LOAD CASE(S) Standard

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	G1A	Common Supported Gable	1	1	I63424362 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:56
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



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	0.10	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	NO	WB	0.13	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 71 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 Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 12=14-10-4, 13=14-10-4, 14=14-10-4, 15=14-10-4, 16=14-10-4, 17=14-10-4, 18=14-10-4, 19=14-10-4, 20=14-10-4
Max Horiz 20=-179 (LC 10)
Max Uplift 12=-55 (LC 9), 13=-105 (LC 13), 14=-72 (LC 13), 15=-74 (LC 13), 17=-75 (LC 12), 18=-71 (LC 12), 19=-112 (LC 12), 20=-82 (LC 8)
Max Grav 12=154 (LC 19), 13=175 (LC 20), 14=190 (LC 20), 15=197 (LC 20), 16=194 (LC 22), 17=198 (LC 19), 18=187 (LC 19), 19=187 (LC 19), 20=176 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-20=-143/89, 1-2=0/41, 2-3=-110/107, 3-4=-79/85, 4-5=-76/162, 5-6=-116/241, 6-7=-116/241, 7-8=-76/162, 8-9=-59/77, 9-10=-81/76, 10-11=0/41, 10-12=-131/88
BOT CHORD 19-20=-82/90, 18-19=-82/90, 17-18=-82/90, 16-17=-82/90, 15-16=-82/90, 14-15=-82/90, 13-14=-82/90, 12-13=-82/90
WEBS 6-16=-179/29, 5-17=-157/118, 4-18=-150/154, 3-19=-132/125, 7-15=-156/118, 8-14=-151/154, 9-13=-125/126

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=0.96; 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 7-5-2, Corner(3R) 7-5-2 to 12-5-2, Exterior(2N) 12-5-2 to 15-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
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

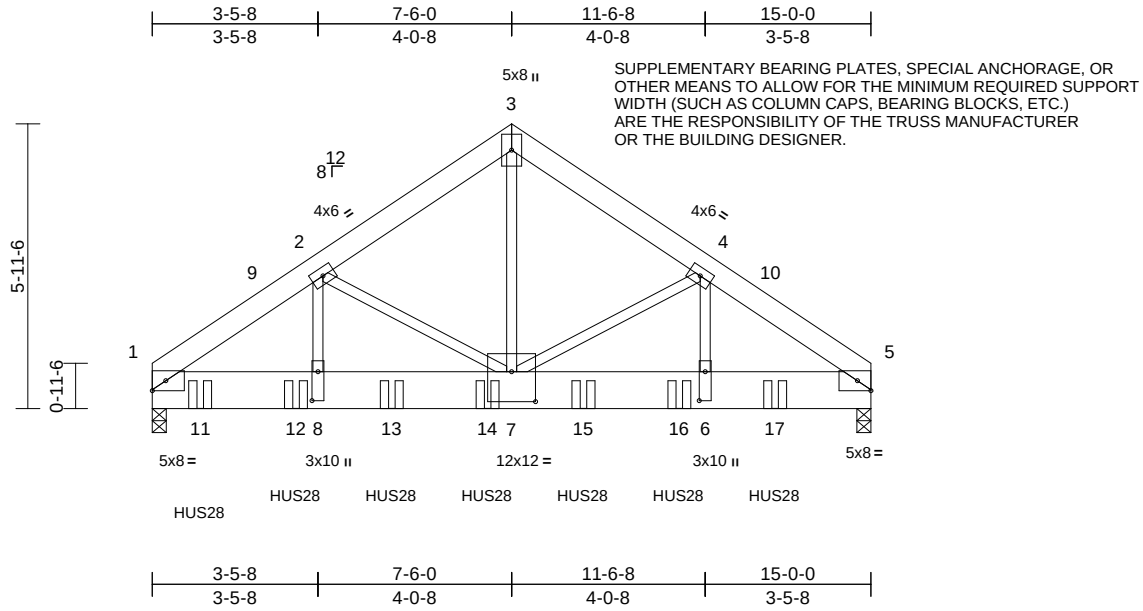
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

February 6,2024

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/22/2024 10:33:27

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	G2	Common Girder	2	3	I63424363 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:56 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:48.1

Plate Offsets (X, Y): [6:0-7-4,0-1-8], [7:0-6-0,0-7-8], [8:0-7-4,0-1-8]

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	0.23	Vert(LL)	-0.05	7-8	>999	240	MT20	185/144
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.09	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 281 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x10 HF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 1=0-3-8, (req. 0-4-12), 5=0-3-8, (req. 0-4-3)
Max Horiz 1=143 (LC 32)
Max Uplift 1=-1193 (LC 12), 5=-1052 (LC 13)
Max Grav 1=8643 (LC 1), 5=7625 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-10445/1493, 2-3=-7588/1148, 3-4=-7588/1148, 4-5=-10338/1478
BOT CHORD 1-8=-1169/8174, 7-8=-1173/8203, 6-7=-1112/8105, 5-6=-1108/8077
WEBS 2-8=-424/3292, 2-7=-2266/415, 3-7=-1123/7876, 4-7=-2150/402, 4-6=-404/3182

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: 2x10 - 4 rows staggered at 0-4-0 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=0.96; 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 7-6-0, Exterior(2R) 7-6-0 to 12-6-0, Interior (1) 12-6-0 to 14-10-4 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
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) WARNING: Required bearing size at joint(s) 1, 5 greater than input bearing size.
7) All bearings are assumed to be HF No.2 crushing capacity of 405 psi.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Use Simpson Strong-Tie HUS28 (22-16d Girder, 4-16d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-0-0 from the left end to 13-0-0 to connect truss(es) to back face of bottom chord.
10) Fill all nail holes where hanger is in contact with lumber.

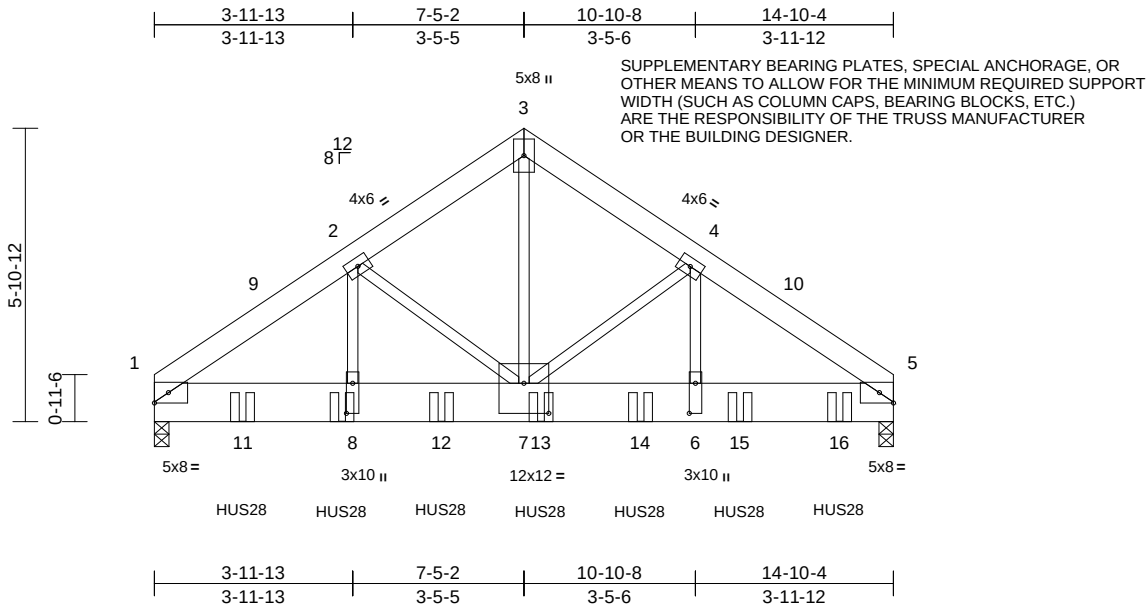
LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-5=-70, 1-5=-20
Concentrated Loads (lb)
Vert: 11=-2141 (B), 12=-2133 (B), 13=-2133 (B), 14=-2133 (B), 15=-2133 (B), 16=-2133 (B), 17=-2139 (B)

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

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	G2A	Common Girder	1	3	I63424364 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:57 Page: 1
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:46.3

Plate Offsets (X, Y): [6:0-7-4,0-1-8], [7:0-6-0,0-7-4], [8:0-7-4,0-1-8]

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	0.25	Vert(LL)	-0.05	7-8	>999	240	MT20	185/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.09	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 279 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x10 HF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 1=0-3-8, (req. 0-4-4), 5=0-3-8, (req. 0-4-11)
Max Horiz 1=142 (LC 11)
Max Uplift 1=-1021 (LC 12), 5=-1122 (LC 13)
Max Grav 1=7791 (LC 1), 5=8564 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-10106/1373, 2-3=-7483/1081, 3-4=-7485/1081, 4-5=-10143/1375
BOT CHORD 1-8=-1066/7957, 7-8=-1069/7983, 6-7=-1030/8023, 5-6=-1027/7996
WEBS 2-8=-400/3344, 2-7=-2301/403, 3-7=-1067/7769, 4-7=-2350/410, 4-6=-404/3379

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: 2x10 - 4 rows staggered at 0-4-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc,
Except member 2-8 2x3 - 1 row at 0-4-0 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=0.96; 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 7-5-2, Exterior(2R) 7-5-2 to 12-5-2, Interior (1) 12-5-2 to 14-8-8 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
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) WARNING: Required bearing size at joint(s) 1, 5 greater than input bearing size.
7) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Use Simpson Strong-Tie HUS28 (22-16d Girder, 4-16d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-9-4 from the left end to 13-9-4 to connect truss(es) to back face of bottom chord.
10) 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, 3-5=-70, 1-5=-20
Concentrated Loads (lb)
Vert: 8=-2133 (B), 11=-2190 (B), 12=-2133 (B), 13=-2133 (B), 14=-2133 (B), 15=-2133 (B), 16=-2191 (B)

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

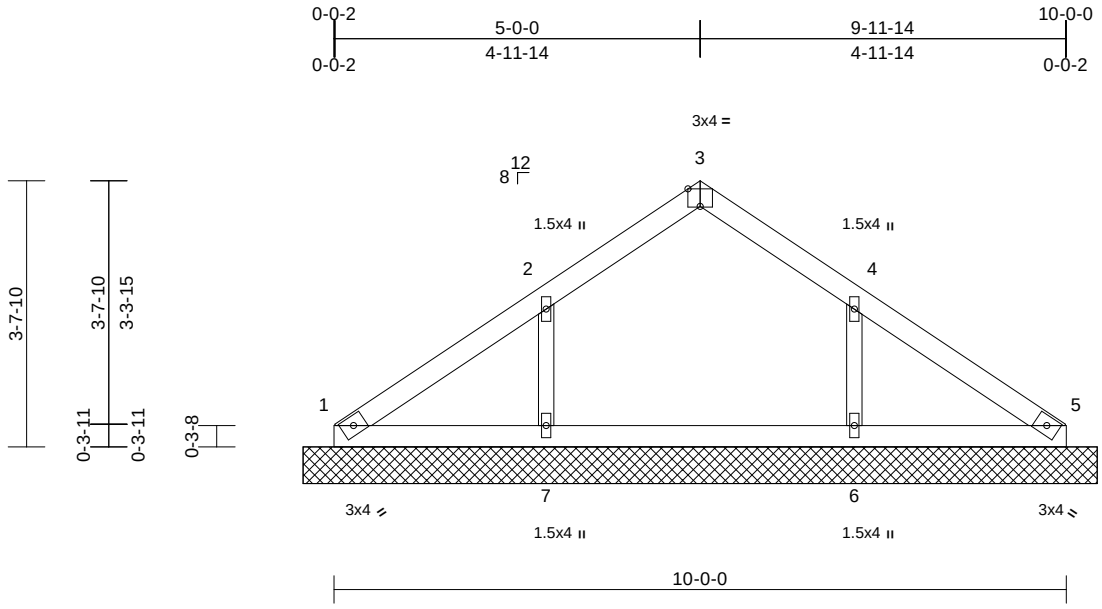
February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	V1	Valley	2	1	I63424365 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:57

ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:31.5

Plate Offsets (X, Y): [3:0-2-0,Edge], [4:0-0-0,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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.04	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 35 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=10-10-1, 5=10-10-1, 6=10-10-1, 7=10-10-1
Max Horiz 1=90 (LC 9)
Max Uplift 6=-96 (LC 13), 7=-98 (LC 12)
Max Grav 1=152 (LC 1), 5=152 (LC 1), 6=299 (LC 20), 7=301 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-153/33, 2-3=-149/64, 3-4=-149/64, 4-5=-151/30
BOT CHORD 1-7=-24/111, 6-7=-24/111, 5-6=-24/111
WEBS 2-7=-210/161, 4-6=-209/160

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=0.96; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

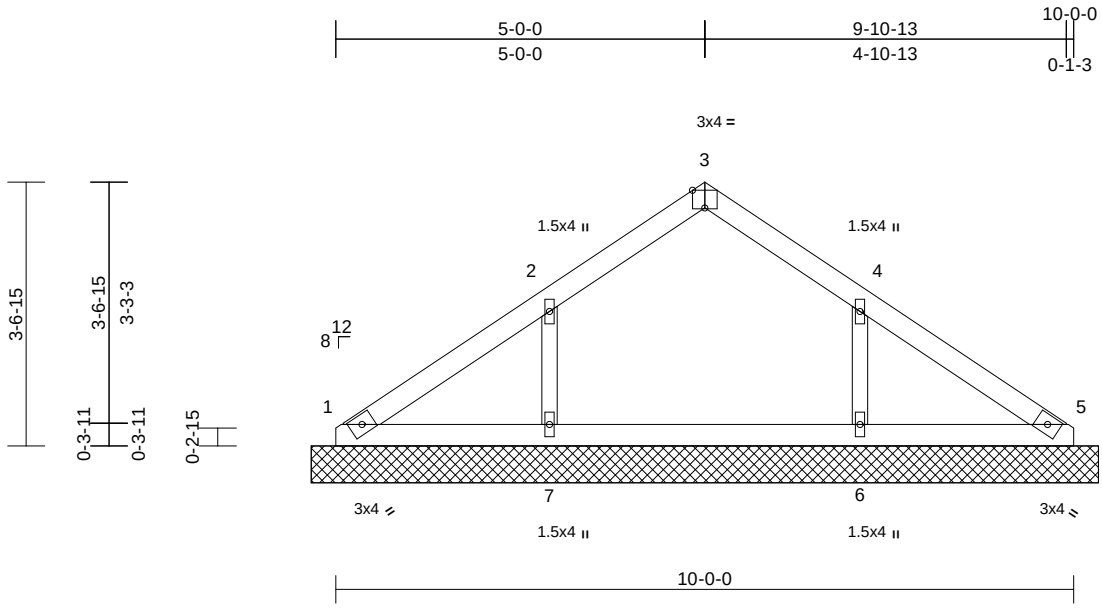
February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	V2	Valley	2	1	I63424366 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:58
ID:7VegtIUg48?DqlhT5TOJ?Mz8aV1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:31.2

Plate Offsets (X, Y): [3:0-2-0,Edge], [4:0-0-0,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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.04	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 35 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=10-8-0, 5=10-8-0, 6=10-8-0, 7=10-8-0
Max Horiz 1=-91 (LC 8)
Max Uplift 6=-100 (LC 13), 7=-101 (LC 12)
Max Grav 1=150 (LC 1), 5=150 (LC 1), 6=301 (LC 20), 7=303 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-151/33, 2-3=-149/67, 3-4=-149/67, 4-5=-150/30
BOT CHORD 1-7=-24/111, 6-7=-24/111, 5-6=-24/111
WEBS 2-7=-213/165, 4-6=-211/165

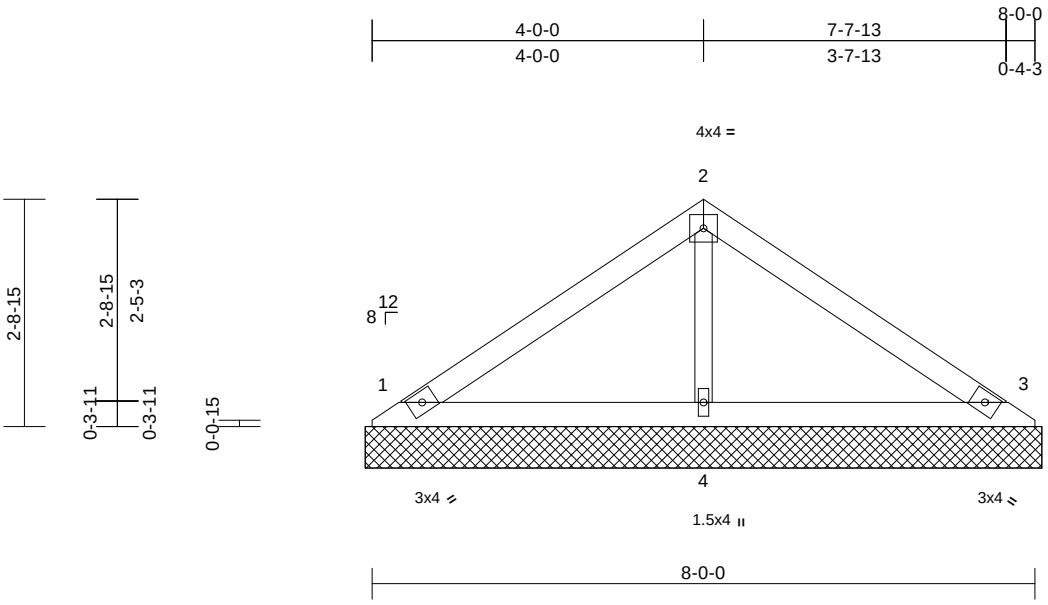
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end 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) 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

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	V3	Valley	2	1	I63424367 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:58 Page: 1
ID:ty0?Hnm2CiRkdX6xatJFZiz8aVz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.8

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	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 27 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=8-2-0, 3=8-2-0, 4=8-2-0
Max Horiz 1=68 (LC 11)
Max Uplift 1=-46 (LC 12), 3=-55 (LC 13)
Max Grav 1=184 (LC 1), 3=184 (LC 1), 4=286 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-116/68, 2-3=-110/68
BOT CHORD 1-4=-14/54, 3-4=-14/54
WEBS 2-4=-195/101

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) 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

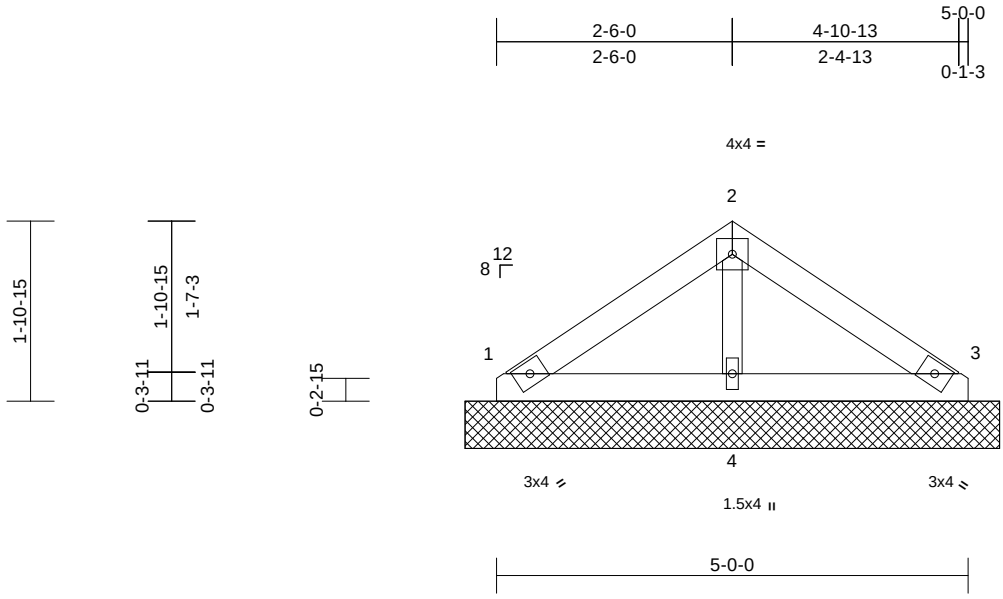
February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	V4	Valley	2	1	I63424368
					Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:58
ID:Lt2xwJZ?zoQ?i4tteW0UwKz8aWD-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:24.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 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 5-8-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-8-0, 3=5-8-0, 4=5-8-0
Max Horiz 1=44 (LC 9)
Max Uplift 1=-30 (LC 12), 3=-36 (LC 13)
Max Grav 1=120 (LC 1), 3=120 (LC 1), 4=184 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-76/53, 2-3=-72/53
BOT CHORD 1-4=-9/36, 3-4=-9/36
WEBS 2-4=-126/82

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) 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.

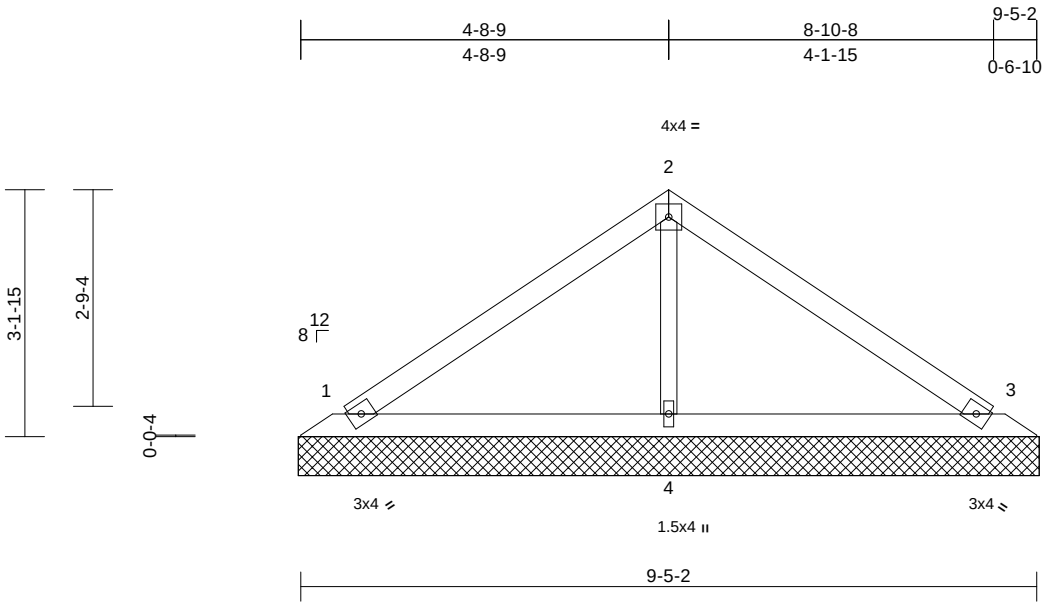
LOAD CASE(S) Standard

February 6,2024

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	V5	Valley	1	1	I63424369 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:58
ID:kkw6VMCTKypljEPYbt576Oz_rGt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



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	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							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=9-5-14, 3=9-5-14, 4=9-5-14
Max Horiz 1=-77 (LC 8)
Max Uplift 1=-35 (LC 12), 3=-44 (LC 13), 4=-25 (LC 12)
Max Grav 1=187 (LC 1), 3=187 (LC 1), 4=363 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-145/72, 2-3=-145/72
BOT CHORD 1-4=-15/64, 3-4=-15/64
WEBS 2-4=-217/88

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=0.96; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

February 6,2024

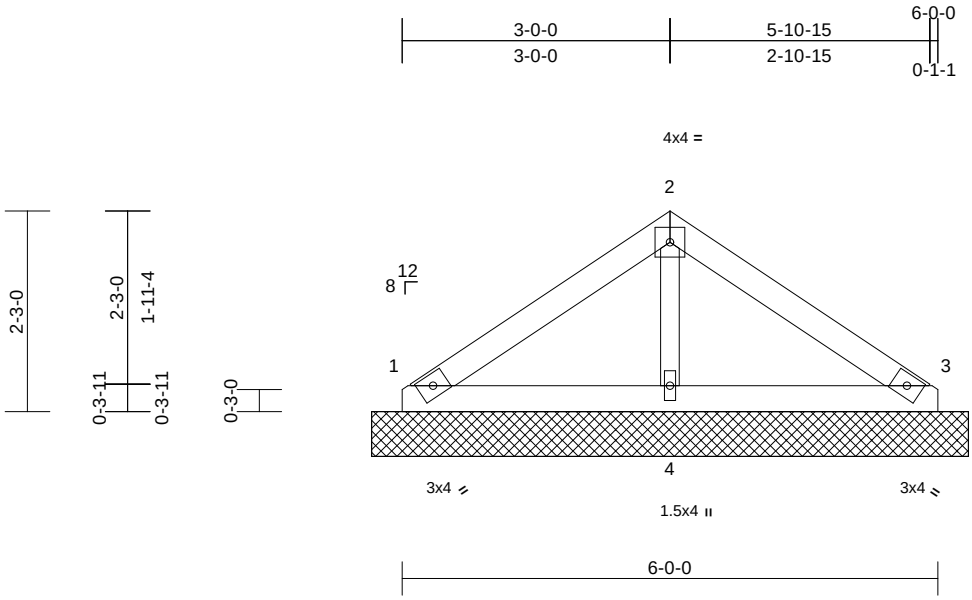
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	V6	Valley	1	1	I63424370 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:58

ID:kMiNMaImlEuxpo9ltz4U4_z8aSh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:25.8

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 21 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
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=6-8-3, 3=6-8-3, 4=6-8-3
Max Horiz 1=-54 (LC 8)
Max Uplift 1=-36 (LC 12), 3=-43 (LC 13)
Max Grav 1=145 (LC 1), 3=145 (LC 1), 4=224 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-92/62, 2-3=-87/62
BOT CHORD 1-4=-11/43, 3-4=-11/43
WEBS 2-4=-152/94

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) 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

February 6,2024

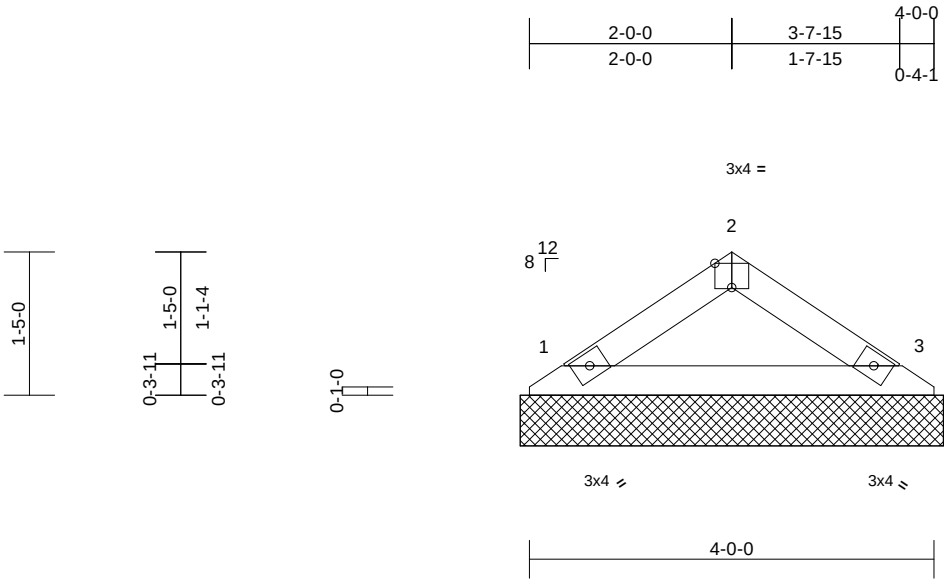
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 43
P240076-01	V7	Valley	1	1	I63424371 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Feb 02 17:14:59

ID:c7yuCyLHpTPNIQT46p9QEqz8aSd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:22.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 12 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-15 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-2-3, 3=4-2-3

Max Horiz 1=-31 (LC 8)

Max Uplift 1=-21 (LC 12), 3=-21 (LC 13)

Max Grav 1=148 (LC 1), 3=148 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-129/89, 2-3=-129/89

BOT CHORD 1-3=-33/86

NOTES

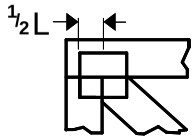
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical 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) 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

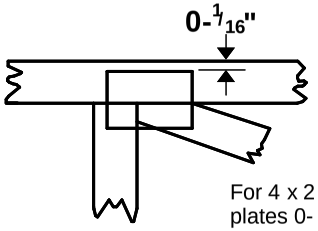
February 6,2024

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

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

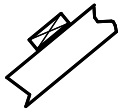
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

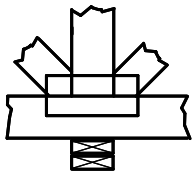
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

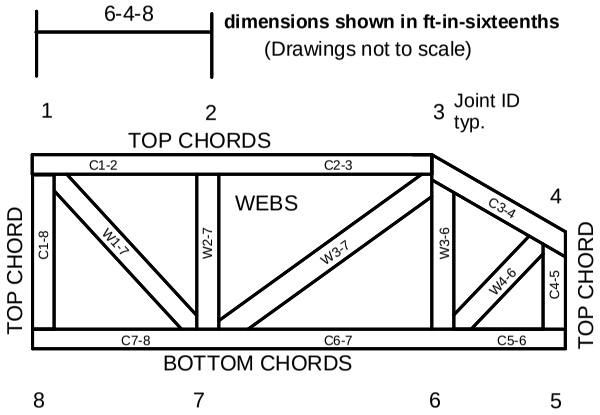


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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