MiTek®

RE: P230088
Roof - Osage Lot 52

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

Site Information:

Customer: Clover & Hive Project Name: P230088
Lot/Block: 52 Model:
Address: 2121/2123 SW Osage Subdivision: Osage
City: Lee's Summit State: MO

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

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

This package includes 22 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I56858530	A1	2/27/2023	21	I56858550	V7	2/27/2023
2	I56858531	A2	2/27/2023	22	I56858551	V8	2/27/2023
3	I56858532	A3	2/27/2023				
4	I56858533	A4	2/27/2023				
5	I56858534	A5	2/27/2023				
6	I56858535	A6	2/27/2023				
7	I56858536	B1	2/27/2023				
8	I56858537	B2	2/27/2023				
9	I56858538	C1	2/27/2023				
10	I56858539	C2	2/27/2023				
11	I56858540	C3	2/27/2023				
12	I56858541	C4	2/27/2023				
13	I56858542	D1	2/27/2023				
14	I56858543	D2	2/27/2023				
15	I56858544	V1	2/27/2023				
16	I56858545	V2	2/27/2023				
17	I56858546	V3	2/27/2023				
18	I56858547	V4	2/27/2023				
19	I56858548	V5	2/27/2023				
20	I56858549	V6	2/27/2023				

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

Truss Design Engineer's Name: Pohlman, Elizabeth

My license renewal date for the state of Missouri is December 31, 2023.

Missouri COA: 001193

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

February 27, 2023

Pohlman, Elizabeth

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230088	A1	Common Structural Gable	2	1	Job Reference (optional)	I56858530

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:38 Page: 1
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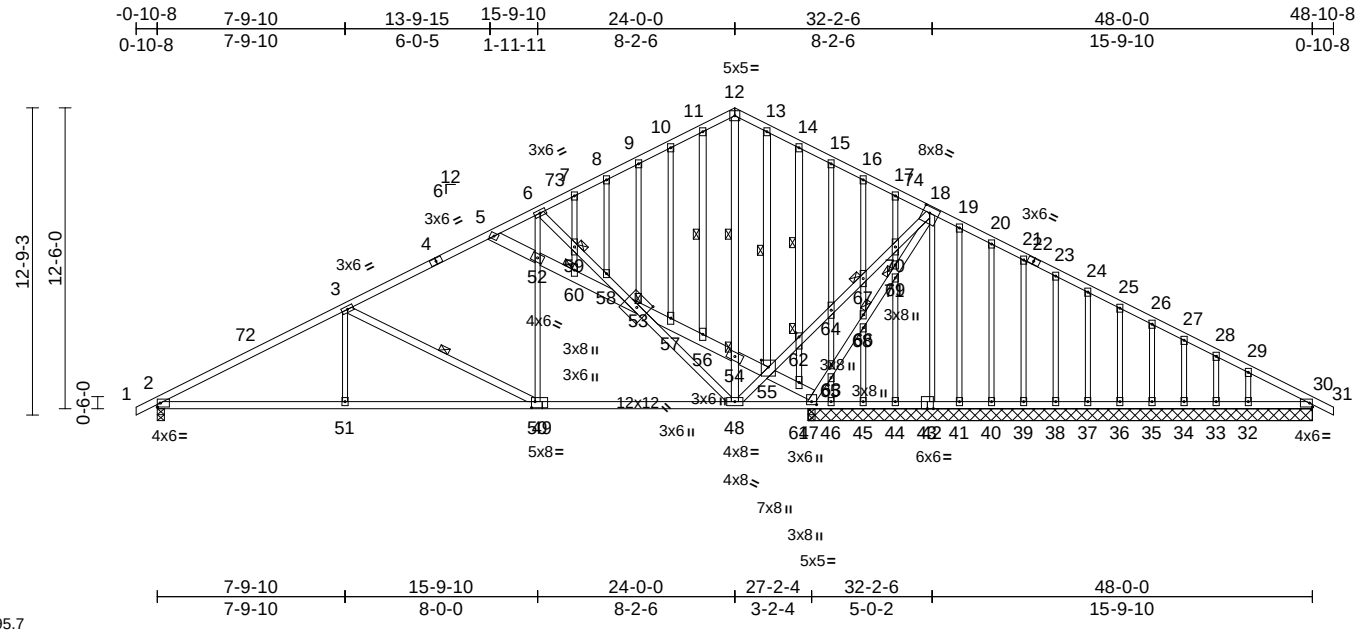

Scale = 1:95.7

Plate Offsets (X, Y): [18:0-3-8,0-3-0], [47:0-2-8,0-1-8], [49:0-1-12,0-3-0], [53:0-5-8,0-6-0], [55:0-3-8,0-3-8], [62:0-2-0,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	0.10	2-51	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.24	2-51	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.05	47	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 388 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4,22-31:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 51-3,50-6,42-18:2x3 SPF No.2, 5-52,52-53,53-54,54-55,55-47:2x6 SPF No.2
OTHERS 2x3 SPF No.2 *Except* 56-11,55-13,62-14:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
9-1-1 oc bracing: 2-51
9-2-14 oc bracing: 50-51
10-0-0 oc bracing: 48-50.
WEBS 1 Row at midpt 3-50, 12-54, 11-56, 13-55, 14-62
JOINTS 1 Brace at Jt(s): 53, 54, 59, 60, 62, 66, 67, 69

REACTIONS (size) 2=0-3-8, 30=20-11-8, 32=20-11-8, 33=20-11-8, 34=20-11-8, 35=20-11-8, 36=20-11-8, 37=20-11-8, 38=20-11-8, 39=20-11-8, 40=20-11-8, 41=20-11-8, 42=20-11-8, 44=20-11-8, 45=20-11-8, 46=20-11-8, 47=20-11-8
Max Horiz 2=-234 (LC 13)
Max Uplift 2=-223 (LC 12), 30=-112 (LC 25), 32=-86 (LC 13), 33=-28 (LC 13), 34=-42 (LC 13), 35=-41 (LC 13), 36=-41 (LC 13), 37=-41 (LC 13), 38=-40 (LC 13), 39=-42 (LC 13), 40=-48 (LC 13), 41=-6 (LC 12), 44=-15 (LC 13), 45=-53 (LC 13), 46=-81 (LC 25), 47=-272 (LC 12)
Max Grav 2=1215 (LC 1), 30=98 (LC 26), 32=242 (LC 1), 33=82 (LC 1), 34=128 (LC 26), 35=119 (LC 1), 36=120 (LC 26), 37=120 (LC 26), 38=121 (LC 1), 39=120 (LC 26), 40=117 (LC 26), 41=152 (LC 1), 42=317 (LC 1), 44=204 (LC 1), 45=114 (LC 26), 46=59 (LC 26), 47=1304 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1925/314, 3-5=-1159/239, 5-6=-745/157, 6-7=-170/178, 7-8=-183/197, 8-9=-142/212, 9-10=-163/234, 10-11=-180/256, 11-12=-177/268, 12-13=-185/275, 13-14=-184/262, 14-15=-160/235, 15-16=-152/208, 16-17=-161/182, 17-18=-147/160, 18-19=0/362, 19-20=0/371, 20-21=0/359, 21-23=-15/358, 23-24=-33/359, 24-25=-52/358, 25-26=-70/358, 26-27=-89/358, 27-28=-108/360, 28-29=-123/349, 29-30=-170/395, 30-31=0/17
BOT CHORD 2-51=-399/1598, 50-51=-399/1598, 48-50=-171/945, 47-48=-756/346, 46-47=-308/179, 45-46=-308/180, 44-45=-308/180, 42-44=-309/180, 41-42=-309/180, 40-41=-309/180, 39-40=-309/180, 38-39=-309/180, 37-38=-309/180, 36-37=-309/180, 35-36=-309/180, 34-35=-309/180, 33-34=-309/180, 32-33=-309/180, 30-32=-309/180

STATE OF MISSOURI
ELIZABETH POHLMAN
NUMBER PE-2023000043
PROFESSIONAL ENGINEER

February 27,2023

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P236088	A1	Common Structural Gable	2	1	Job Reference (optional)	I56858530

WEBS 3-51=0/339, 3-50=-738/258, 50-52=-17/564, 6-52=-80/646, 6-59=-658/120, 58-59=-618/109, 53-58=-613/120, 48-53=-1072/485, 48-54=-156/43, 12-54=-158/72, 48-55=-252/1364, 55-62=-270/1432, 62-64=-267/1390, 64-67=-268/1405, 67-70=-270/1414, 18-70=-275/1436, 18-42=-289/14, 47-65=-1078/261, 63-65=-1130/282, 63-68=-1074/260, 66-68=-1128/279, 66-71=-1076/262, 69-71=-1226/291, 18-69=-1147/278, 5-52=-375/209, 52-60=-323/185, 53-60=-409/220, 53-57=-178/0, 56-57=-200/0, 54-56=-203/0, 54-55=-200/0, 55-61=-189/0, 47-61=-302/22, 11-56=-50/19, 10-57=-105/61, 9-53=-130/81, 8-58=0/35, 7-59=-145/68, 59-60=-203/84, 13-55=-82/27, 14-62=-127/64, 61-62=-188/57, 15-64=-89/58, 63-64=-77/63, 46-65=-74/62, 16-67=-84/62, 66-67=-79/63, 45-68=-81/66, 17-70=-126/37, 69-70=-96/33, 44-71=-179/42, 19-41=-129/24, 20-40=-89/65, 21-39=-93/57, 23-38=-94/56, 24-37=-93/57, 25-36=-93/57, 26-35=-93/57, 27-34=-97/59, 28-33=-70/41, 29-32=-183/110

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 24-0-0, Exterior(2R) 24-0-0 to 31-0-14, Interior (1) 31-0-14 to 48-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 3x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 2, 272 lb uplift at joint 47, 81 lb uplift at joint 46, 53 lb uplift at joint 45, 15 lb uplift at joint 44, 6 lb uplift at joint 41, 48 lb uplift at joint 40, 42 lb uplift at joint 39, 40 lb uplift at joint 38, 41 lb uplift at joint 37, 41 lb uplift at joint 36, 41 lb uplift at joint 35, 42 lb uplift at joint 34, 28 lb uplift at joint 33, 86 lb uplift at joint 32 and 112 lb uplift at joint 30.
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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52
P230088	A2	Common	6	1	I56858531
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:41 Page: 1
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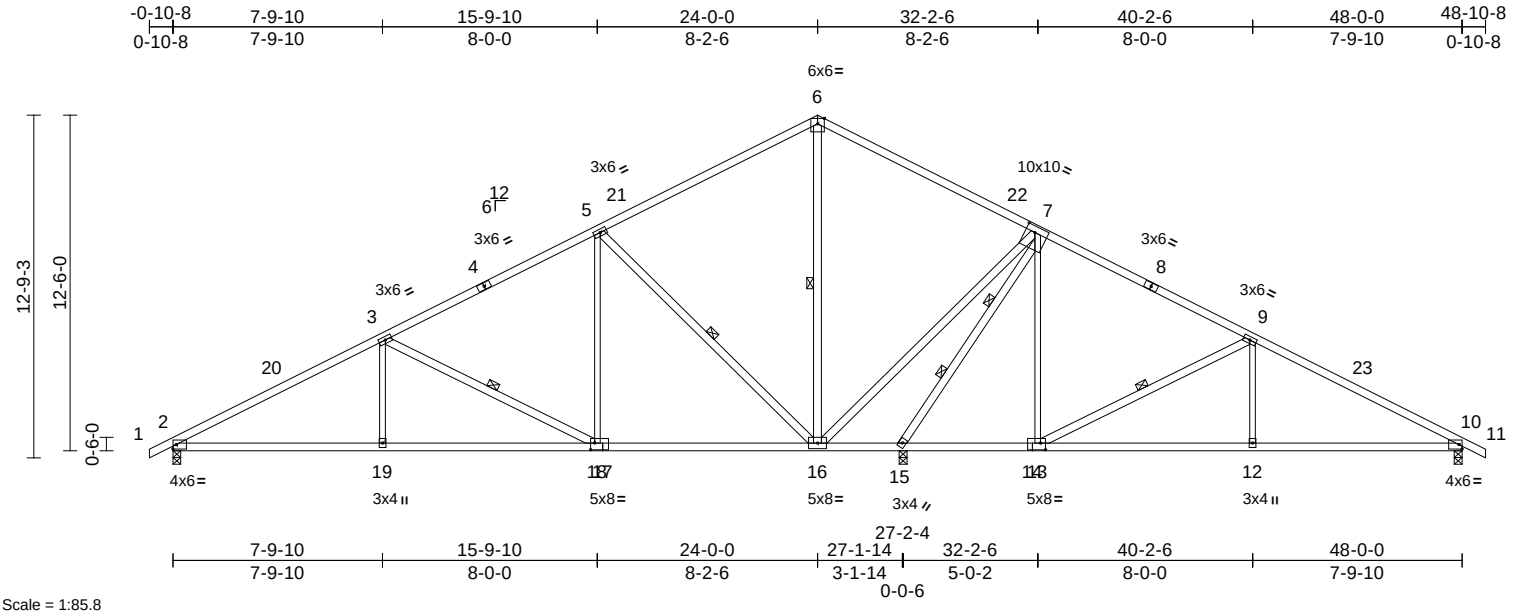

Scale = 1:85.8

Plate Offsets (X, Y): [7:0-4-4,0-2-12], [14:0-2-4,0-3-0], [17:0-1-12,0-3-0]

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	0.93	Vert(LL)	-0.12	16-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.27	16-18	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.06	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 264 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 1-4,8-11:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 19-3,18-5,13-7,12-9:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 4-9-10 oc bracing.
WEBS 1 Row at midpt 3-18, 5-16, 6-16, 9-13
WEBS 2 Rows at 1/3 pts 7-15

REACTIONS (size) 2=0-3-8, 10=0-3-8, 15=0-3-8
Max Horiz 2=-234 (LC 17)
Max Uplift 2=-222 (LC 12), 10=-198 (LC 13), 15=-301 (LC 12)
Max Grav 2=1165 (LC 25), 10=877 (LC 26), 15=2473 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1831/315, 3-5=-1036/235, 5-6=-204/206, 6-7=-150/203, 7-9=-405/185, 9-10=-1225/265, 10-11=0/17
BOT CHORD 2-19=-402/1517, 18-19=-402/1517, 16-18=-152/818, 15-16=-1351/352, 13-15=-56/253, 12-13=-122/983, 10-12=-122/983
WEBS 3-19=0/338, 3-18=-791/280, 5-18=-26/578, 5-16=-1075/375, 6-16=-512/40, 7-16=-303/1911, 7-13=-36/520, 9-13=-829/280, 9-12=0/357, 7-15=-2793/404

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 24-0-0, Exterior(2R) 24-0-0 to 31-0-14, Interior (1) 31-0-14 to 48-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 222 lb uplift at joint 2, 198 lb uplift at joint 10 and 301 lb uplift at joint 15.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230088	A3	Common	2	1	Job Reference (optional)	I56858532

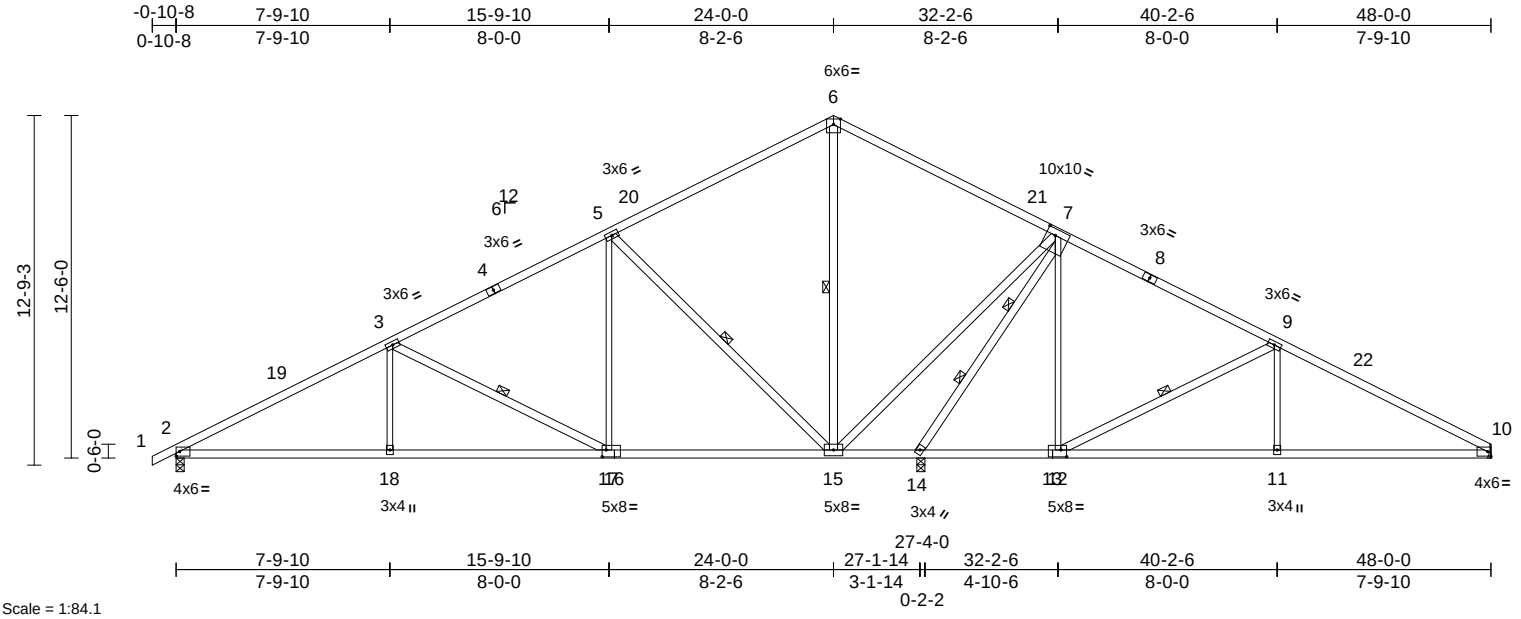

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Plate Offsets (X, Y): [7:0-4-0,0-2-12], [13:0-2-8,0-3-0], [16:0-1-12,0-3-0]

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	1.00	Vert(LL)	-0.12	15-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.27	15-17	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.06	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 262 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 18-3,17-5,12-7,11-9:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 4-9-5 oc bracing.
WEBS 1 Row at midpt 3-17, 5-15, 6-15, 9-12
WEBS 2 Rows at 1/3 pts 7-14

REACTIONS (size) 2=0-3-8, 10= Mechanical, 14=0-3-8
Max Horiz 2=239 (LC 12)
Max Uplift 2=-220 (LC 12), 10=-169 (LC 13), 14=-304 (LC 12)
Max Grav 2=1163 (LC 25), 10=804 (LC 26), 14=2486 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1827/313, 3-5=-1032/232, 5-6=-199/200, 6-7=-142/194, 7-9=-400/179, 9-10=-1208/261
BOT CHORD 2-18=-404/1514, 17-18=-404/1514, 15-17=-154/814, 14-15=-1366/355, 12-14=-60/248, 11-12=-131/996, 10-11=-131/996
WEBS 3-18=0/338, 3-17=-792/281, 5-17=-27/579, 5-15=-1075/374, 6-15=-520/46, 7-15=-307/1922, 7-12=-40/523, 9-12=-849/286, 9-11=0/361, 7-14=-2809/415

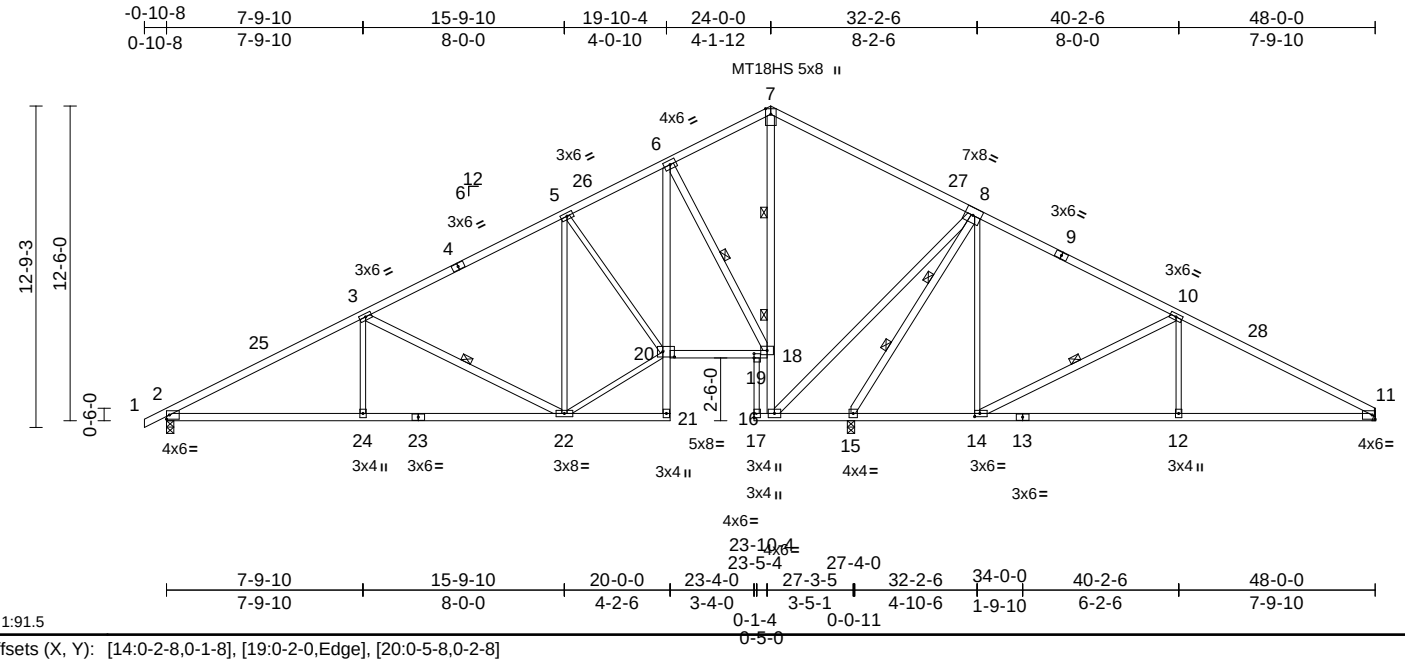
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 24-0-0, Exterior(2R) 24-0-0 to 31-0-14, Interior (1) 31-0-14 to 47-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 220 lb uplift at joint 2, 169 lb uplift at joint 10 and 304 lb uplift at joint 14.
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52
P230068	A4	Roof Special	2	1	I56858533
					Job Reference (optional)



Scale = 1:91.5

Plate Offsets (X, Y): [14:0-2-8,0-1-8], [19:0-2-0,Edge], [20:0-5-8,0-2-8]

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	0.97	Vert(LL)	0.10	2-24	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.23	2-24	>999	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.08	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 285 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 18-6,22-3,16-8,8-15,10-14:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 4-7-13 oc bracing. Except: 6-0-0 oc bracing: 7-16
WEBS 1 Row at midpt 6-18, 3-22, 10-14
WEBS 2 Rows at 1/3 pts 8-15

REACTIONS (size) 2=0-3-8, 11= Mechanical, 15=0-3-8
Max Horiz 2=239 (LC 16)
Max Uplift 2=-264 (LC 12), 11=-337 (LC 13), 15=-206 (LC 12)
Max Grav 2=1130 (LC 25), 11=803 (LC 26), 15=2547 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1769/427, 3-5=-941/434, 5-6=-588/460, 6-7=-155/486, 7-8=-172/452, 8-10=-395/546, 10-11=-1208/621
BOT CHORD 2-24=-491/1466, 22-24=-491/1466, 21-22=-10/9, 20-21=0/44, 6-20=-233/887, 19-20=-129/453, 18-19=-129/453, 16-18=-1390/181, 7-18=-485/0, 16-17=0/0, 15-16=-1394/159, 14-15=-202/237, 12-14=-450/996, 11-12=-450/996
WEBS 6-18=-1010/335, 5-20=-479/169, 3-24=0/353, 3-22=-836/295, 5-22=0/229, 20-22=-258/844, 8-16=-185/1901, 8-15=-2789/269, 8-14=-41/514, 10-14=-855/278, 10-12=0/362, 17-19=-33/32

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 24-0-0, Exterior(2R) 24-0-0 to 31-0-14, Interior (1) 31-0-14 to 47-11-4 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) 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) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 264 lb uplift at joint 2, 206 lb uplift at joint 15 and 337 lb uplift at joint 11.
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230088	A5	Common	10	1	Job Reference (optional)	I56858534

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:43 Page: 1
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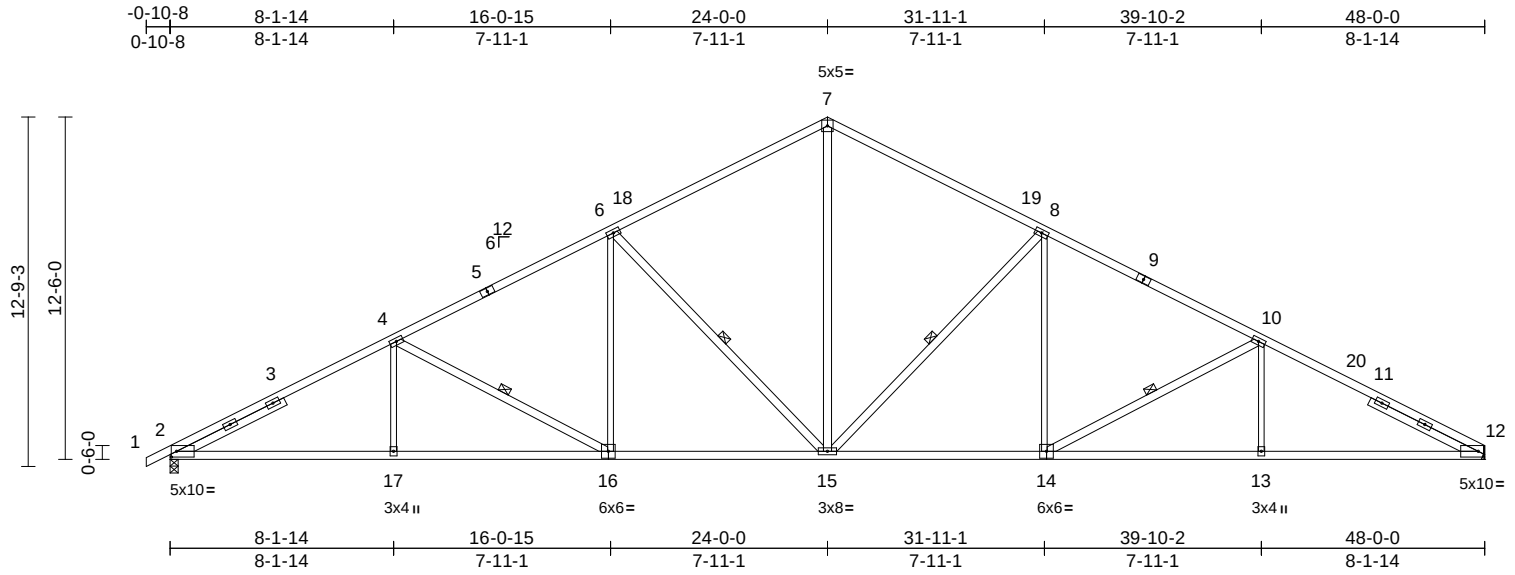

Scale = 1:84.1

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

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	0.79	Vert(LL)	-0.27	14-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.55	14-15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.24	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 262 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x4 SP No.2 *Except* 17-4,16-6,14-8,13-10:2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-4-7, Right 2x4 SP No.2 -- 4-4-7

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-0-2 oc bracing.
WEBS 1 Row at midpt 4-16, 6-15, 8-15, 10-14

REACTIONS (size) 2=0-3-8, 12= Mechanical
Max Horiz 2=239 (LC 16)
Max Uplift 2=-353 (LC 12), 12=-328 (LC 13)
Max Grav 2=2223 (LC 1), 12=2150 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-4=-3980/583, 4-6=-3288/530, 6-7=-2520/513, 7-8=-2520/516, 8-10=-3299/538, 10-12=-4017/590
BOT CHORD 2-17=-634/3430, 15-17=-634/3430, 13-15=-414/3472, 12-13=-414/3472
WEBS 4-17=0/330, 4-16=-698/263, 6-16=-31/529, 6-15=-1035/370, 7-15=-251/1635, 8-15=-1044/372, 8-14=-35/539, 10-14=-732/270, 10-13=0/336

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 24-0-0, Exterior(2R) 24-0-0 to 31-0-14, Interior (1) 31-0-14 to 47-11-4 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 3x6 MT20 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) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 353 lb uplift at joint 2 and 328 lb uplift at joint 12.
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230088	A6	Common Supported Gable	2	1	Job Reference (optional)	I56858535

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:43 Page: 1
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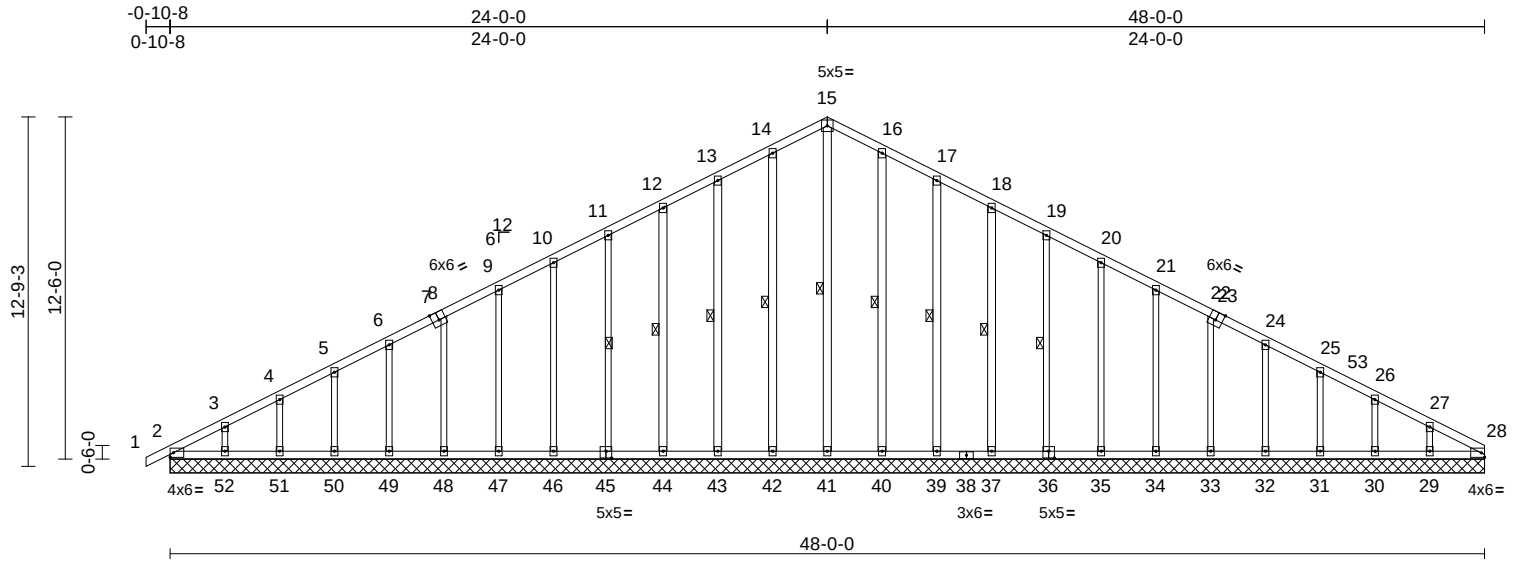

Scale = 1:84.1

Plate Offsets (X, Y): [7:0-3-0,Edge], [23:0-3-0,Edge], [36:0-2-8,0-3-0], [45:0-2-8,0-3-0]

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	0.11	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	YES	WB	0.20	Horz(CT)	0.02	28	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 317 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2 *Except* 41-15,40-16,39-17,37-18,42-14,43-13,44-12: 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.
WEBS 1 Row at midpt 15-41, 16-40, 17-39, 18-37, 19-36, 14-42, 13-43, 12-44, 11-45

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, 35=48-0-0, 36=48-0-0, 37=48-0-0, 39=48-0-0, 40=48-0-0, 41=48-0-0, 42=48-0-0, 43=48-0-0, 44=48-0-0, 45=48-0-0, 46=48-0-0, 47=48-0-0, 48=48-0-0, 49=48-0-0, 50=48-0-0, 51=48-0-0, 52=48-0-0
Max Horiz 2=239 (LC 16)
Max Uplift 2=-32 (LC 8), 29=-90 (LC 13), 30=-58 (LC 13), 31=-62 (LC 13), 32=-61 (LC 13), 33=-61 (LC 13), 34=-61 (LC 13), 35=-63 (LC 13), 36=-60 (LC 13), 37=-61 (LC 13), 39=-68 (LC 13), 40=-48 (LC 13), 42=-53 (LC 12), 43=-66 (LC 12), 44=-61 (LC 12), 45=-60 (LC 12), 46=-63 (LC 12), 47=-61 (LC 12), 48=-61 (LC 12), 49=-61 (LC 12), 50=-61 (LC 12), 51=-61 (LC 12), 52=-90 (LC 12)
Max Grav 2=185 (LC 21), 28=114 (LC 22), 29=203 (LC 26), 30=174 (LC 26), 31=182 (LC 1), 32=180 (LC 26), 33=180 (LC 26), 34=180 (LC 1), 35=180 (LC 26), 36=178 (LC 1), 37=184 (LC 1), 39=178 (LC 26), 40=189 (LC 26), 41=261 (LC 13), 42=189 (LC 25), 43=178 (LC 25), 44=184 (LC 1), 45=178 (LC 1), 46=180 (LC 25), 47=180 (LC 1), 48=180 (LC 25), 49=180 (LC 25), 50=180 (LC 1), 51=179 (LC 25), 52=182 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 15-16=-155/432, 16-17=-138/386, 17-18=-118/329, 18-19=-99/275, 19-20=-80/221, 20-21=-61/167, 21-22=-45/113, 22-24=-50/59, 24-25=-76/38, 25-26=-115/34, 26-27=-162/50, 27-28=-236/79, 1-2=0/17, 2-3=-327/107, 3-4=-260/105, 4-5=-212/119, 5-6=-163/133, 6-8=-127/152, 8-9=-96/180, 9-10=-80/208, 10-11=-80/236, 11-12=-99/275, 12-13=-118/329, 13-14=-138/386, 14-15=-155/432
BOT CHORD 2-52=-66/234, 51-52=-66/234, 50-51=-66/234, 49-50=-66/234, 48-49=-66/234, 47-48=-66/234, 46-47=-66/234, 44-46=-66/234, 43-44=-65/233, 42-43=-65/233, 41-42=-65/233, 40-41=-65/233, 39-40=-65/233, 37-39=-65/233, 35-37=-66/234, 34-35=-66/234, 33-34=-66/234, 32-33=-66/234, 31-32=-66/234, 30-31=-66/234, 29-30=-66/234, 28-29=-66/234
WEBS 15-41=-291/65, 16-40=-149/79, 17-39=-138/105, 18-37=-142/97, 19-36=-138/95, 20-35=-141/97, 21-34=-140/96, 22-33=-140/97, 24-32=-140/96, 25-31=-141/102, 26-30=-136/140, 27-29=-153/185, 14-42=-149/79, 13-43=-138/105, 12-44=-142/97, 11-45=-138/95, 10-46=-141/97, 9-47=-140/96, 8-48=-140/96, 6-49=-140/97, 5-50=-140/97, 4-51=-140/123, 3-52=-139/172

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

STATE OF MISSOURI
ELIZABETH POHLMAN
NUMBER
PE-2023000043
PROFESSIONAL ENGINEER

February 27,2023

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230868	A6	Common Supported Gable	2	1	Job Reference (optional)	I56858535

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 24-0-0, Corner(3R) 24-0-0 to 29-0-0, Exterior(2N) 29-0-0 to 48-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 40, 68 lb uplift at joint 39, 61 lb uplift at joint 37, 60 lb uplift at joint 36, 63 lb uplift at joint 35, 61 lb uplift at joint 34, 61 lb uplift at joint 33, 61 lb uplift at joint 32, 62 lb uplift at joint 31, 58 lb uplift at joint 30, 90 lb uplift at joint 29, 53 lb uplift at joint 42, 66 lb uplift at joint 43, 61 lb uplift at joint 44, 60 lb uplift at joint 45, 63 lb uplift at joint 46, 61 lb uplift at joint 47, 61 lb uplift at joint 48, 61 lb uplift at joint 49, 61 lb uplift at joint 50, 61 lb uplift at joint 51, 90 lb uplift at joint 52 and 32 lb uplift at joint 2.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230088	B1	Common Supported Gable	2	1	Job Reference (optional)	I56858536

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:44 Page: 1
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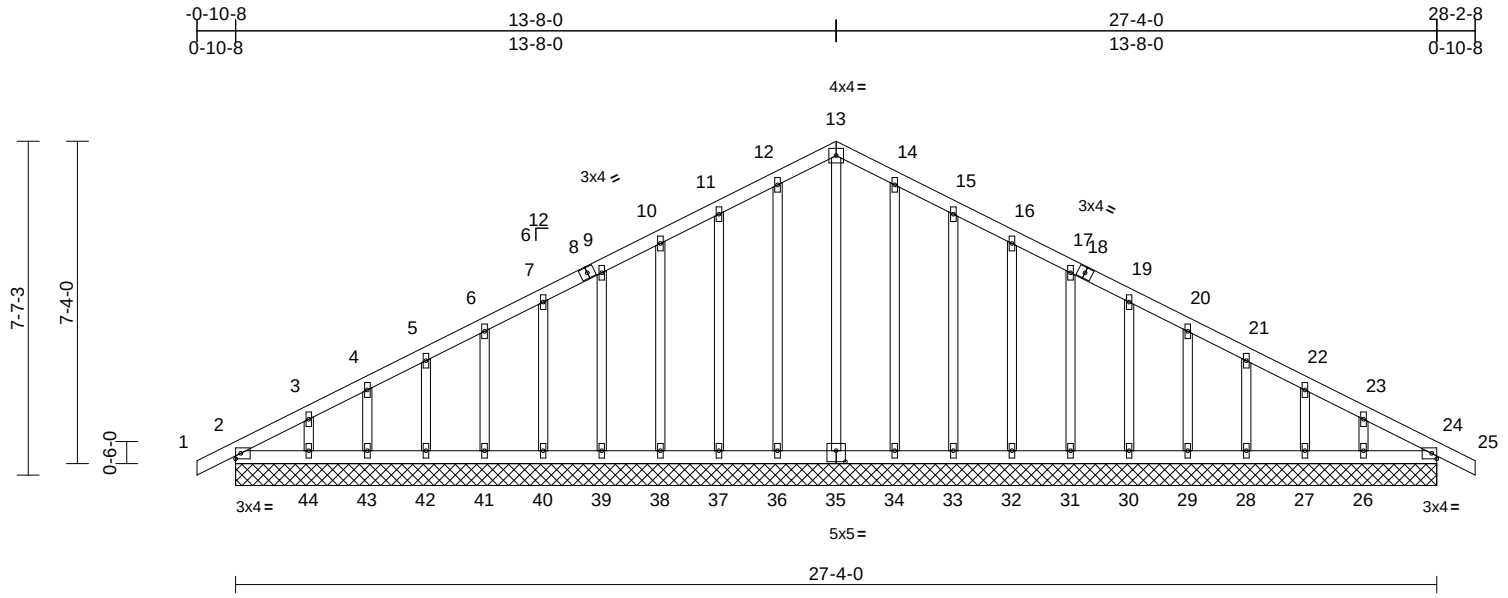

Scale = 1:52.4

Plate Offsets (X, Y): [35:0-2-8,0-3-0]

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 145 lb	FT = 20%

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

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

REACTIONS (size) 2=27-4-0, 24=27-4-0, 26=27-4-0, 27=27-4-0, 28=27-4-0, 29=27-4-0, 30=27-4-0, 31=27-4-0, 32=27-4-0, 33=27-4-0, 34=27-4-0, 35=27-4-0, 36=27-4-0, 37=27-4-0, 38=27-4-0, 39=27-4-0, 40=27-4-0, 41=27-4-0, 42=27-4-0, 43=27-4-0, 44=27-4-0
Max Horiz 2=-137 (LC 13)
Max Uplift 2=-26 (LC 8), 24=-4 (LC 9), 26=-57 (LC 13), 27=-40 (LC 13), 28=-41 (LC 13), 29=-41 (LC 13), 30=-41 (LC 13), 31=-41 (LC 13), 32=-41 (LC 13), 33=-48 (LC 13), 34=-21 (LC 13), 36=-27 (LC 12), 37=-46 (LC 12), 38=-41 (LC 12), 39=-41 (LC 12), 40=-41 (LC 12), 41=-41 (LC 12), 42=-41 (LC 12), 43=-40 (LC 12), 44=-63 (LC 12)
Max Grav 2=150 (LC 1), 24=150 (LC 1), 26=130 (LC 26), 27=117 (LC 26), 28=121 (LC 1), 29=120 (LC 26), 30=120 (LC 26), 31=120 (LC 1), 32=120 (LC 1), 33=121 (LC 26), 34=123 (LC 26), 35=145 (LC 22), 36=123 (LC 25), 37=121 (LC 25), 38=120 (LC 1), 39=120 (LC 1), 40=120 (LC 25), 41=120 (LC 25), 42=121 (LC 1), 43=117 (LC 25), 44=130 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 13-14=-89/255, 14-15=-80/230, 15-16=-66/191, 16-17=-53/155, 17-19=-41/119, 19-20=-34/83, 20-21=-35/48, 21-22=-51/20, 22-23=-74/22, 23-24=-123/45, 24-25=0/17, 1-2=0/17, 2-3=-181/64, 3-4=-131/67, 4-5=-99/76, 5-6=-76/89, 6-7=-59/107, 7-9=-50/126, 9-10=-53/155, 10-11=-66/191, 11-12=-80/230, 12-13=-89/255
BOT CHORD 2-44=-40/160, 43-44=-40/160, 42-43=-40/160, 41-42=-40/160, 40-41=-40/160, 39-40=-40/160, 38-39=-40/160, 37-38=-40/160, 36-37=-40/160, 34-36=-40/160, 33-34=-40/160, 32-33=-40/160, 31-32=-40/160, 30-31=-40/160, 29-30=-40/160, 28-29=-40/160, 27-28=-40/160, 26-27=-40/160, 24-26=-40/160
WEBS 13-35=-148/26, 12-36=-96/43, 11-37=-95/74, 10-38=-93/64, 9-39=-93/64, 7-40=-93/64, 6-41=-93/64, 5-42=-94/82, 4-43=-92/99, 3-44=-99/122, 14-34=-96/40, 15-33=-95/74, 16-32=-93/64, 17-31=-93/64, 19-30=-93/64, 20-29=-93/64, 21-28=-94/82, 22-27=-92/99, 23-26=-99/119

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-4-0, Exterior(2N) 4-4-0 to 13-8-0, Corner(3R) 13-8-0 to 18-8-0, Exterior(2N) 18-8-0 to 28-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

February 27,2023

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52
P230668	B1	Common Supported Gable	2	1	I56858536
					Job Reference (optional)

8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 2, 27 lb uplift at joint 36, 46 lb uplift at joint 37, 41 lb uplift at joint 38, 41 lb uplift at joint 39, 41 lb uplift at joint 40, 41 lb uplift at joint 41, 41 lb uplift at joint 42, 40 lb uplift at joint 43, 63 lb uplift at joint 44, 21 lb uplift at joint 34, 48 lb uplift at joint 33, 41 lb uplift at joint 32, 41 lb uplift at joint 31, 41 lb uplift at joint 30, 41 lb uplift at joint 29, 41 lb uplift at joint 28, 40 lb uplift at joint 27, 57 lb uplift at joint 26 and 4 lb uplift at joint 24.
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 52	
P230088	B2	Common	4	1	Job Reference (optional)	I56858537

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

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:44 Page: 1
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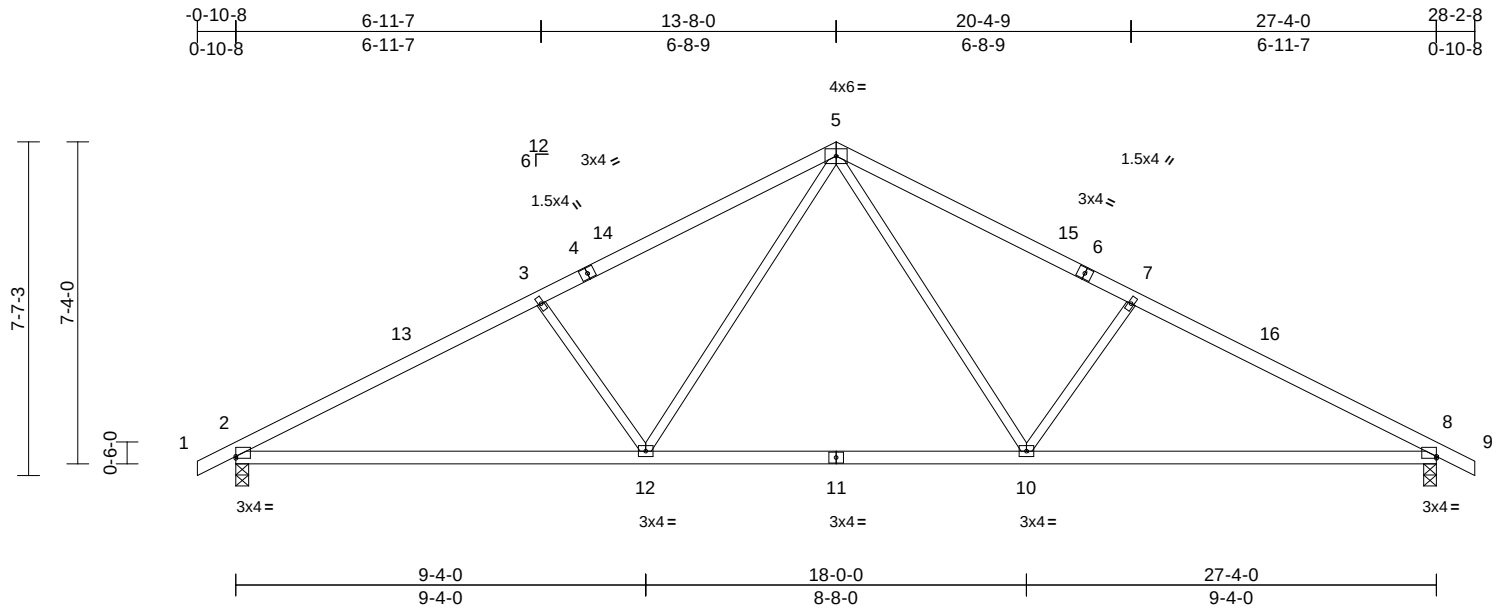

Scale = 1:52.5

Plate Offsets (X, Y): [2:Edge,0-0-9], [8:Edge,0-0-9]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.20	2-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.44	2-12	>732	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 109 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-137 (LC 13)
Max Uplift 2=-211 (LC 12), 8=-211 (LC 13)
Max Grav 2=1288 (LC 1), 8=1288 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-2071/392, 3-5=-1819/403, 5-7=-1819/403, 7-8=-2071/392, 8-9=0/17
BOT CHORD 2-12=-328/1762, 10-12=-86/1180, 8-10=-263/1762
WEBS 5-10=-153/671, 7-10=-452/287, 5-12=-153/671, 3-12=-452/287

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-8-0, Exterior(2R) 13-8-0 to 18-8-0, Interior (1) 18-8-0 to 28-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 2 and 211 lb uplift at joint 8.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230068	C1	Common Supported Gable	1	1	Job Reference (optional)	I56858538

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:45 Page: 1
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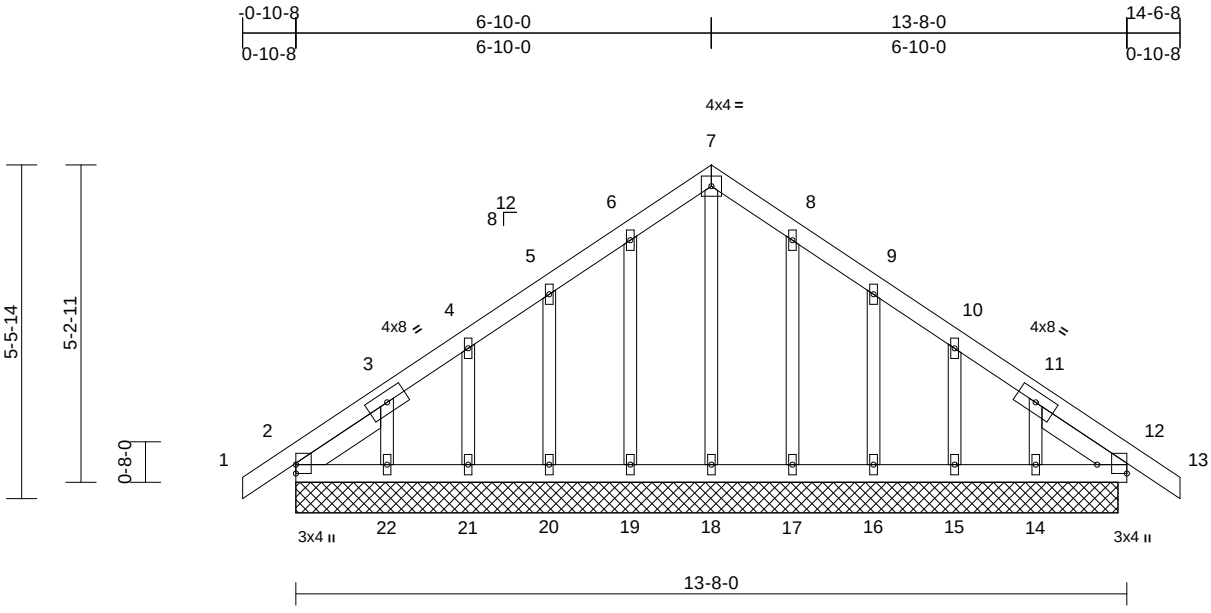


Scale = 1:37.9

Plate Offsets (X, Y): [12:Edge,0-5-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 73 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-8-5, Right 2x4 SP No.2 -- 1-8-5

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=13-6-4, 12=13-6-4, 14=13-6-4, 15=13-6-4, 16=13-6-4, 17=13-6-4, 18=13-6-4, 19=13-6-4, 20=13-6-4, 21=13-6-4, 22=13-6-4
Max Horiz 2=-144 (LC 10)
Max Uplift 2=-39 (LC 8), 12=-2 (LC 9), 14=-73 (LC 13), 15=-52 (LC 13), 16=-57 (LC 13), 17=-42 (LC 13), 19=-45 (LC 12), 20=-56 (LC 12), 21=-52 (LC 12), 22=-80 (LC 12)
Max Grav 2=159 (LC 20), 12=154 (LC 1), 14=132 (LC 20), 15=125 (LC 20), 16=128 (LC 20), 17=127 (LC 20), 18=119 (LC 22), 19=131 (LC 19), 20=126 (LC 19), 21=126 (LC 19), 22=139 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 7-8=-91/176, 8-9=-66/126, 9-10=-49/59, 10-11=-58/29, 11-12=-112/57, 12-13=0/16, 1-2=0/16, 2-3=-140/112, 3-4=-96/80, 4-5=-87/72, 5-6=-77/126, 6-7=-91/176
BOT CHORD 2-22=-52/150, 21-22=-52/150, 20-21=-52/150, 19-20=-52/150, 18-19=-52/150, 17-18=-52/150, 16-17=-52/150, 15-16=-52/150, 14-15=-52/150, 12-14=-52/150
WEBS 7-18=-119/26, 8-17=-100/74, 9-16=-101/107, 10-15=-100/111, 11-14=-102/129, 6-19=-104/73, 5-20=-99/106, 4-21=-100/111, 3-22=-109/131

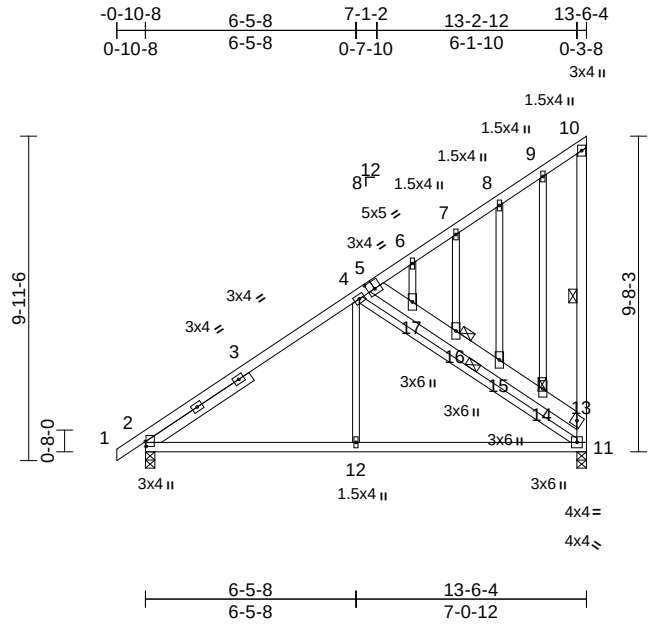
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-2-0, Exterior(2N) 4-2-0 to 6-10-0, Corner(3R) 6-10-0 to 11-10-0, Exterior(2N) 11-10-0 to 14-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 12, 39 lb uplift at joint 2, 42 lb uplift at joint 17, 57 lb uplift at joint 16, 52 lb uplift at joint 15, 73 lb uplift at joint 14, 45 lb uplift at joint 19, 56 lb uplift at joint 20, 52 lb uplift at joint 21 and 80 lb uplift at joint 22.
8) N/A
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52
P230088	G2	Monopitch	1	1	I56858539
					Job Reference (optional)



Scale = 1:70.6

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

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	0.50	Vert(LL)	-0.05	11-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.10	11-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 102 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-11:2x4 SP No.2, 5-13:2x6 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-10-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-9-7 oc bracing.
WEBS 1 Row at midpt 10-11, 4-11
JOINTS 1 Brace at Jt(s): 14, 16

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=399 (LC 9)
Max Uplift 2=-83 (LC 12), 11=-202 (LC 12)
Max Grav 2=665 (LC 1), 11=658 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-710/137, 4-6=-398/249, 6-7=-262/227, 7-8=-225/205, 8-9=-188/186, 9-10=-127/138, 11-13=-346/275, 10-13=-96/74
BOT CHORD 2-12=-341/590, 11-12=-341/590
WEBS 4-12=0/306, 4-11=-759/547, 5-17=-546/486, 16-17=-441/390, 15-16=-502/443, 14-15=-538/473, 13-14=-516/441, 9-14=-111/93, 8-15=-79/56, 7-16=-112/96, 6-17=-178/195

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable studs spaced at 1-4-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 11 and 83 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 27,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230668	V3	Monopitch Girder	2	2	Job Reference (optional)	I56858540

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

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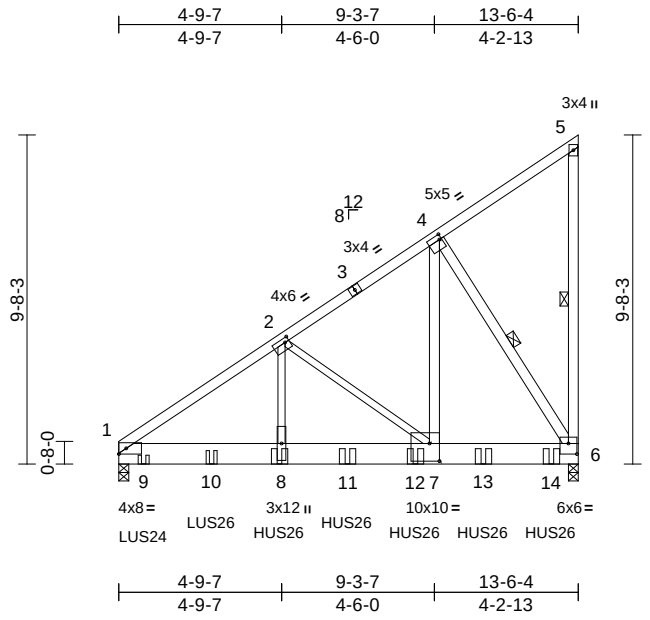

Scale = 1:67.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.08	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.15	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 210 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP No.2 *Except* 2-8,7-2:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-6, 4-6

REACTIONS (size) 1=0-3-8, 6=0-3-8
Max Horiz 1=388 (LC 11)
Max Uplift 1=-1106 (LC 12), 6=-1377 (LC 12)
Max Grav 1=5709 (LC 1), 6=7705 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-7730/1434, 2-4=-4248/811, 4-5=-205/172, 5-6=-150/127
BOT CHORD 1-8=-1408/6191, 7-8=-1408/6191, 6-7=-763/3467
WEBS 2-8=-740/3927, 2-7=-3406/807, 4-7=-1287/7362, 4-6=-6404/1229

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 4 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 13-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1377 lb uplift at joint 6 and 1106 lb uplift at joint 1.
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.
7) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent at 0-8-12 from the left end to connect truss(es) to back face of bottom chord.
8) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 2-8-12 from the left end to connect truss(es) to back face of bottom chord.
9) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 4-8-12 from the left end to 12-8-12 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: 1-5=-70, 1-6=-20
Concentrated Loads (lb)
Vert: 8=-2130 (B), 9=-788 (B), 10=-783 (B), 11=-2130 (B), 12=-2130 (B), 13=-2130 (B), 14=-2133 (B)

February 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230868	C4	Monopitch Supported Gable	1	1	Job Reference (optional)	I56858541

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:46 Page: 1
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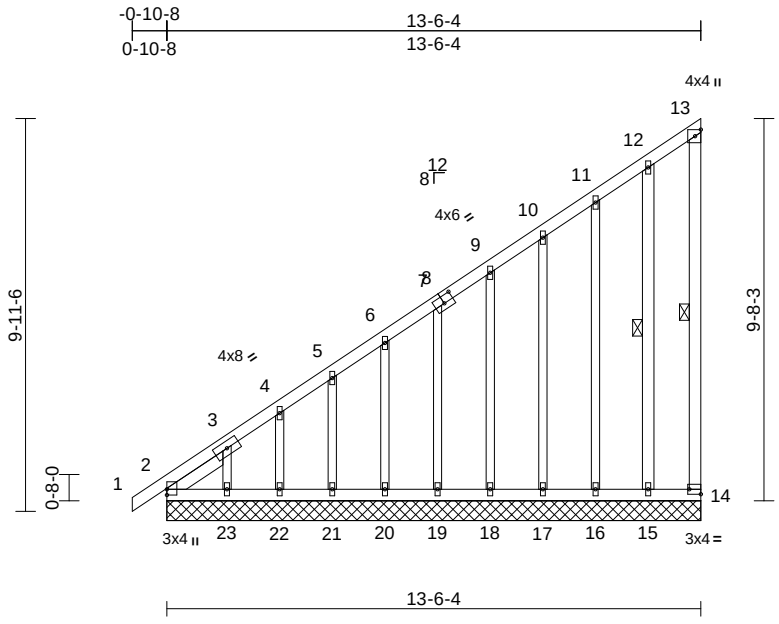

Scale = 1:58.3

Plate Offsets (X, Y): [8:0-3-0,0-2-4], [14:Edge,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	0.71	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 102 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 *Except* 15-12:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-8-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 13-14, 12-15

REACTIONS (size) 2=13-6-4, 14=13-6-4, 15=13-6-4, 16=13-6-4, 17=13-6-4, 18=13-6-4, 19=13-6-4, 20=13-6-4, 21=13-6-4, 22=13-6-4, 23=13-6-4
Max Horiz 2=399 (LC 9)
Max Uplift 2=-101 (LC 8), 14=-105 (LC 11), 15=-82 (LC 12), 16=-36 (LC 9), 17=-62 (LC 12), 18=-50 (LC 12), 19=-53 (LC 12), 20=-52 (LC 12), 21=-51 (LC 12), 22=-54 (LC 12), 23=-118 (LC 12)
Max Grav 2=258 (LC 20), 14=101 (LC 8), 15=123 (LC 1), 16=134 (LC 19), 17=124 (LC 19), 18=127 (LC 19), 19=126 (LC 19), 20=126 (LC 19), 21=126 (LC 19), 22=126 (LC 19), 23=160 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-829/516, 3-4=-675/430, 4-5=-613/400, 5-6=-556/372, 6-7=-497/343, 7-9=-438/315, 9-10=-374/286, 10-11=-304/259, 11-12=-237/235, 12-13=-119/134, 13-14=-61/74
BOT CHORD 2-23=-169/211, 22-23=-169/211, 21-22=-169/211, 20-21=-169/211, 19-20=-169/211, 18-19=-169/211, 17-18=-169/211, 16-17=-169/211, 15-16=-169/211, 14-15=-169/211
WEBS 12-15=-219/213, 11-16=-97/104, 10-17=-100/110, 9-18=-99/101, 7-19=-99/90, 6-20=-99/90, 5-21=-99/99, 4-22=-101/114, 3-23=-164/229

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-2-4, Exterior(2N) 4-2-4 to 13-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 105 lb uplift at joint 14, 101 lb uplift at joint 2, 82 lb uplift at joint 15, 36 lb uplift at joint 16, 62 lb uplift at joint 17, 50 lb uplift at joint 18, 53 lb uplift at joint 19, 52 lb uplift at joint 20, 51 lb uplift at joint 21, 54 lb uplift at joint 22 and 118 lb uplift at joint 23.
8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
ELIZABETH POHLMAN
NUMBER PE-2023000043
PROFESSIONAL ENGINEER

February 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230668	D1	Monopitch Supported Gable	2	1	Job Reference (optional)	I56858542

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:47 Page: 1
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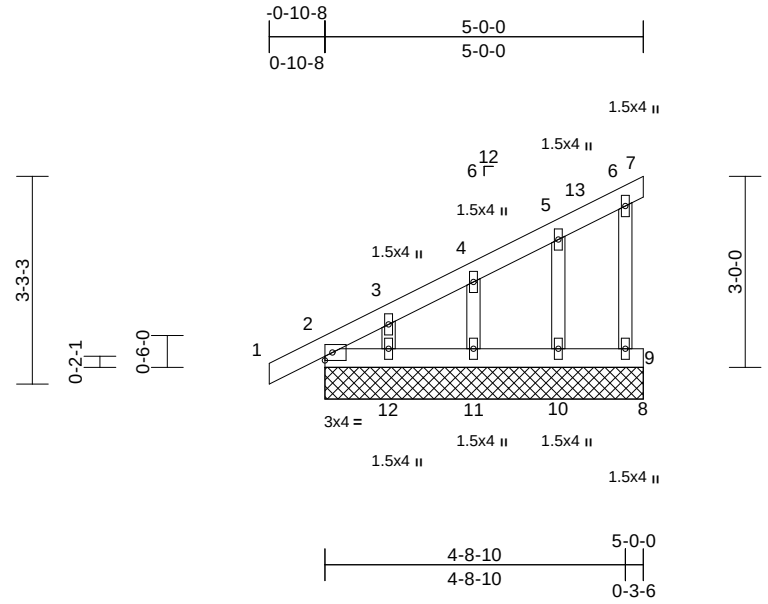

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 lb	FT = 20%

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

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

REACTIONS (size) 2=5-0-0, 8=5-0-0, 9=5-0-0, 10=5-0-0, 11=5-0-0, 12=5-0-0
Max Horiz 2=121 (LC 9)
Max Uplift 2=-17 (LC 8), 8=-3 (LC 3), 9=-14 (LC 9), 10=-37 (LC 12), 11=-45 (LC 12), 12=-40 (LC 12)
Max Grav 2=127 (LC 1), 8=-1 (LC 8), 9=52 (LC 1), 10=112 (LC 1), 11=130 (LC 1), 12=78 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-346/150, 3-4=-251/125, 4-5=-163/99, 5-6=-88/76, 6-7=-3/0, 6-9=-67/107
BOT CHORD 2-12=-53/70, 11-12=-53/70, 10-11=-53/70, 9-10=-53/70, 8-9=0/0
WEBS 5-10=-88/154, 4-11=-103/185, 3-12=-83/176

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-1-8, Exterior(2N) 4-1-8 to 5-0-0 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
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 9, 17 lb uplift at joint 2, 3 lb uplift at joint 8, 37 lb uplift at joint 10, 45 lb uplift at joint 11 and 40 lb uplift at joint 12.
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230088	D2	Monopitch	12	1	Job Reference (optional)	I56858543

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:47 Page: 1
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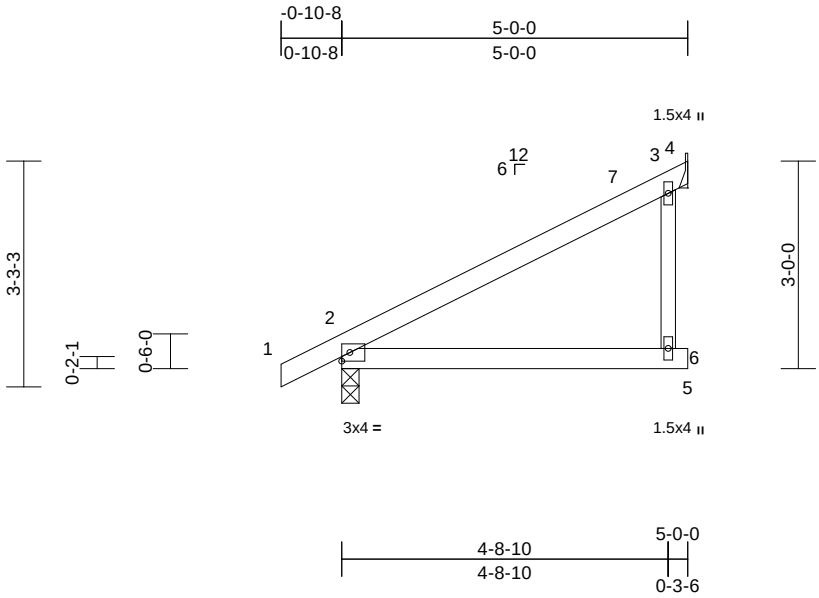

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.03	2-6	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.06	2-6	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-0, 4= Mechanical
Max Horiz 2=121 (LC 9)
Max Uplift 2=-58 (LC 12), 4=-61 (LC 12)
Max Grav 2=294 (LC 1), 4=211 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-140/106, 3-4=-64/94, 3-6=0/103
BOT CHORD 2-6=-53/57, 5-6=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-11-4 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 4 and 58 lb uplift at joint 2.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230088	V1	Valley	2	1	Job Reference (optional)	I56858544

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:47 Page: 1
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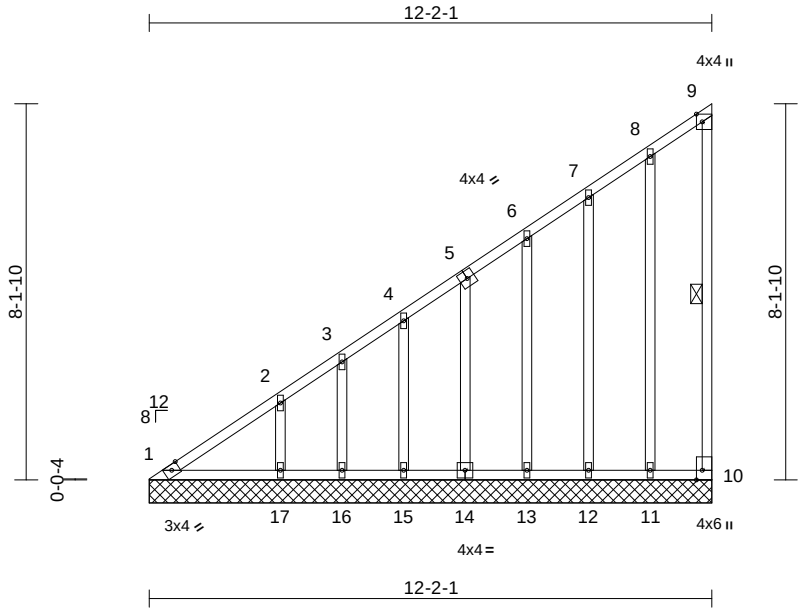

Scale = 1:49.9

Plate Offsets (X, Y): [9:0-2-0,Edge], [10:0-2-8,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	0.76	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.00	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 52 lb	FT = 20%

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

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

REACTIONS (size) 1=12-2-1, 10=12-2-1, 11=12-2-1, 12=12-2-1, 13=12-2-1, 14=12-2-1, 15=12-2-1, 16=12-2-1, 17=12-2-1
Max Horiz 1=334 (LC 9)
Max Uplift 1=-47 (LC 8), 10=-77 (LC 11), 11=-64 (LC 12), 12=-44 (LC 12), 13=-57 (LC 12), 14=-50 (LC 12), 15=-56 (LC 12), 16=-33 (LC 12), 17=-100 (LC 12)
Max Grav 1=174 (LC 20), 10=81 (LC 8), 11=126 (LC 19), 12=129 (LC 19), 13=126 (LC 19), 14=124 (LC 19), 15=136 (LC 19), 16=79 (LC 19), 17=243 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-503/385, 2-3=-417/318, 3-4=-380/302, 4-6=-330/269, 6-7=-234/209, 7-8=-193/188, 8-9=-111/110, 9-10=-41/38
BOT CHORD 1-17=-145/159, 16-17=-145/159, 15-16=-145/159, 13-15=-145/159, 12-13=-145/159, 11-12=-145/159, 10-11=-145/159
WEBS 8-11=-177/154, 7-12=-101/93, 6-13=-101/73, 5-14=-98/70, 4-15=-106/74, 3-16=-67/49, 2-17=-182/126

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 5-6-7, Interior (1) 5-6-7 to 12-1-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 10, 64 lb uplift at joint 11, 44 lb uplift at joint 12, 57 lb uplift at joint 13, 50 lb uplift at joint 14, 56 lb uplift at joint 15, 33 lb uplift at joint 16, 100 lb uplift at joint 17 and 47 lb uplift at joint 1.
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230888	V2	Valley	2	1	Job Reference (optional)	I56858545

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:48 Page: 1
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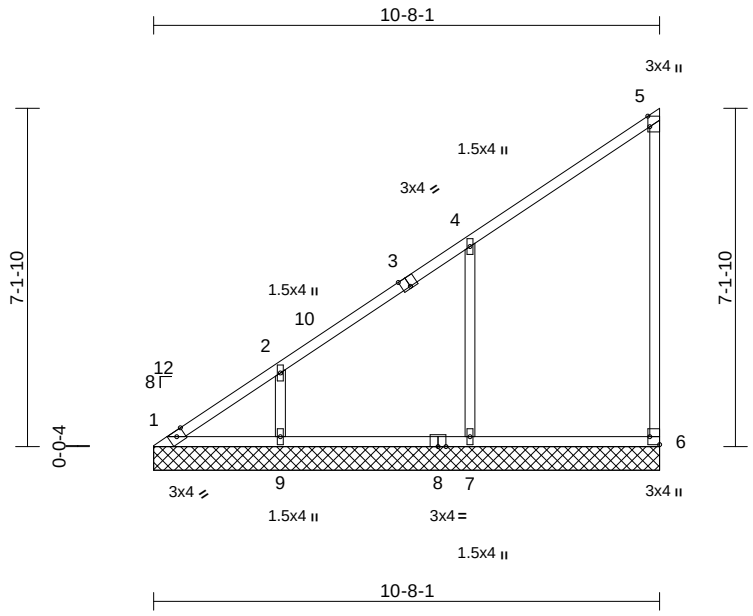

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Plate Offsets (X, Y): [3:0-2-0,Edge], [5:0-2-11,Edge], [6:Edge,0-2-8]

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	0.66	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 29 lb	FT = 20%

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

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

REACTIONS (size) 1=10-8-1, 6=10-8-1, 7=10-8-1, 9=10-8-1
Max Horiz 1=291 (LC 9)
Max Uplift 1=-47 (LC 10), 6=-60 (LC 9), 7=-174 (LC 12), 9=-135 (LC 12)
Max Grav 1=145 (LC 9), 6=168 (LC 19), 7=419 (LC 19), 9=327 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-465/296, 2-4=-356/245, 4-5=-174/146, 5-6=-130/137
BOT CHORD 1-9=-126/140, 7-9=-126/140, 6-7=-126/140
WEBS 4-7=-337/286, 2-9=-253/197

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 5-4-3, Interior (1) 5-4-3 to 10-7-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 1, 60 lb uplift at joint 6, 174 lb uplift at joint 7 and 135 lb uplift at joint 9.
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
ELIZABETH POHLMAN
NUMBER PE-2023000043
PROFESSIONAL ENGINEER
February 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230888	V3	Valley	2	1	Job Reference (optional)	I56858546

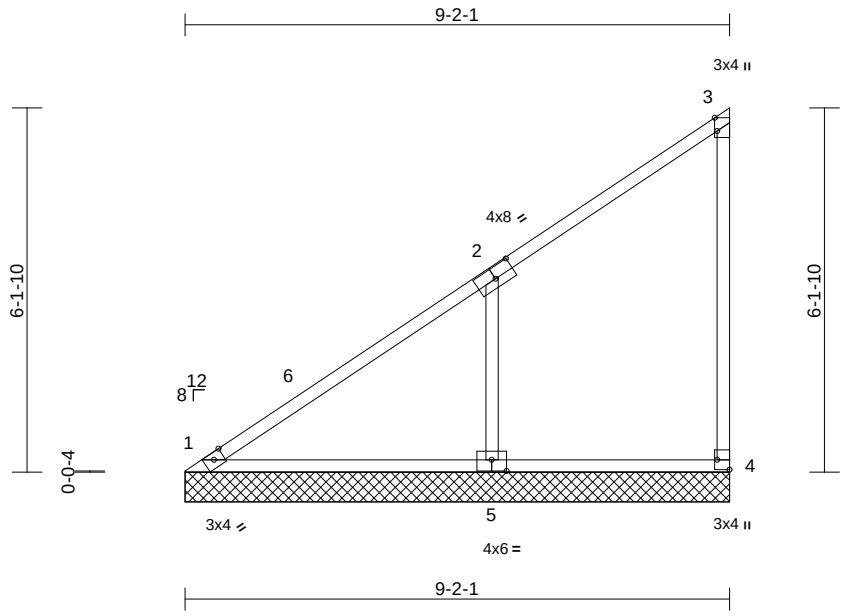

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Plate Offsets (X, Y): [2:0-4-0,0-2-4], [3:0-2-11,Edge], [4:Edge,0-2-8], [5:0-3-0,0-2-4]

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	0.62	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 23 lb	FT = 20%

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

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

REACTIONS (size) 1=9-2-1, 4=9-2-1, 5=9-2-1
Max Horiz 1=249 (LC 9)
Max Uplift 1=-1 (LC 8), 4=-51 (LC 9), 5=-213 (LC 12)
Max Grav 1=205 (LC 20), 4=144 (LC 19), 5=515 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-381/259, 3-4=-120/131
BOT CHORD 1-4=-111/123
WEBS 2-5=-399/341

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 5-2-7, Interior (1) 5-2-7 to 9-1-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 4, 213 lb uplift at joint 5 and 1 lb uplift at joint 1.
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
ELIZABETH POHLMAN
NUMBER PE-2023000043
PROFESSIONAL ENGINEER

February 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52
P230068	V4	Valley	2	1	I56858547
					Job Reference (optional)

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

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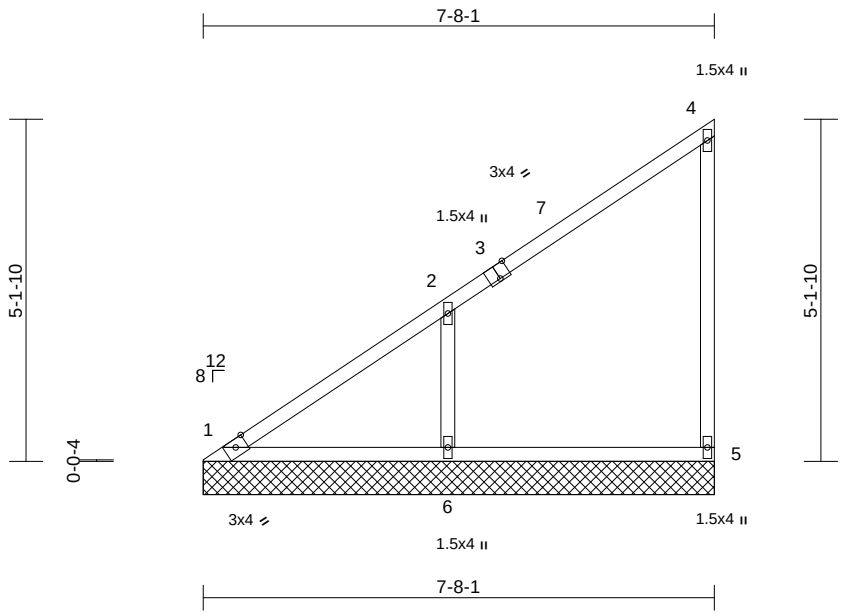

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Plate Offsets (X, Y): [3:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=7-8-1, 5=7-8-1, 6=7-8-1
Max Horiz 1=206 (LC 9)
Max Uplift 1=-14 (LC 8), 5=-47 (LC 9), 6=-178 (LC 12)
Max Grav 1=142 (LC 20), 5=156 (LC 19), 6=430 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-355/236, 2-4=-162/132, 4-5=-135/147
BOT CHORD	1-6=-95/104, 5-6=-95/104
WEBS	2-6=-339/312

NOTES

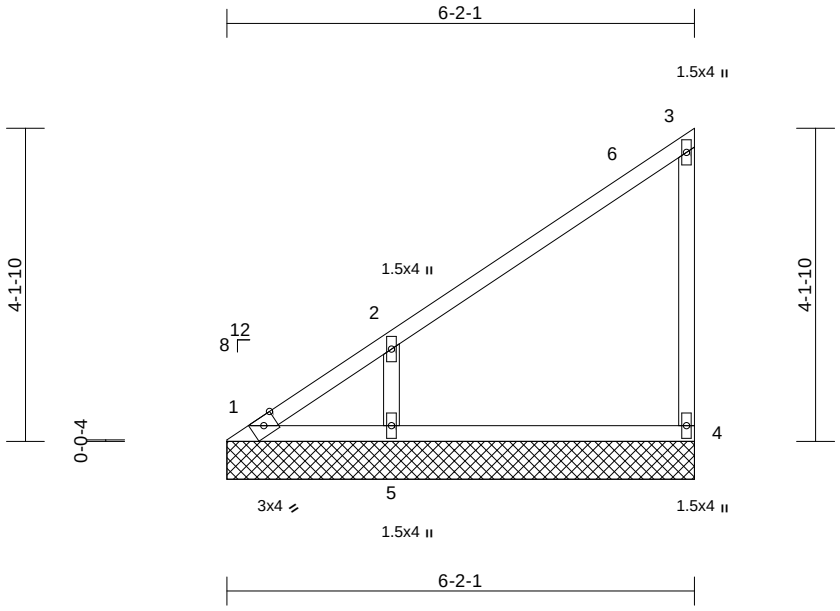
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 5-4-3, Interior (1) 5-4-3 to 7-7-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 5, 178 lb uplift at joint 6 and 14 lb uplift at joint 1.
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230068	V5	Valley	2	1	Job Reference (optional)	I56858548



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 20%

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

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

REACTIONS (size) 1=6-2-1, 4=6-2-1, 5=6-2-1
Max Horiz 1=163 (LC 9)
Max Uplift 1=-44 (LC 10), 4=-41 (LC 9), 5=-156 (LC 12)
Max Grav 1=84 (LC 9), 4=160 (LC 19), 5=379 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-332/216, 2-3=-156/121, 3-4=-136/153
BOT CHORD 1-5=-78/85, 4-5=-78/85
WEBS 2-5=-299/297

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 5-4-3, Interior (1) 5-4-3 to 6-1-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 1, 41 lb uplift at joint 4 and 156 lb uplift at joint 5.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 27,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230888	V6	Valley	2	1	Job Reference (optional)	I56858549

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:49 Page: 1
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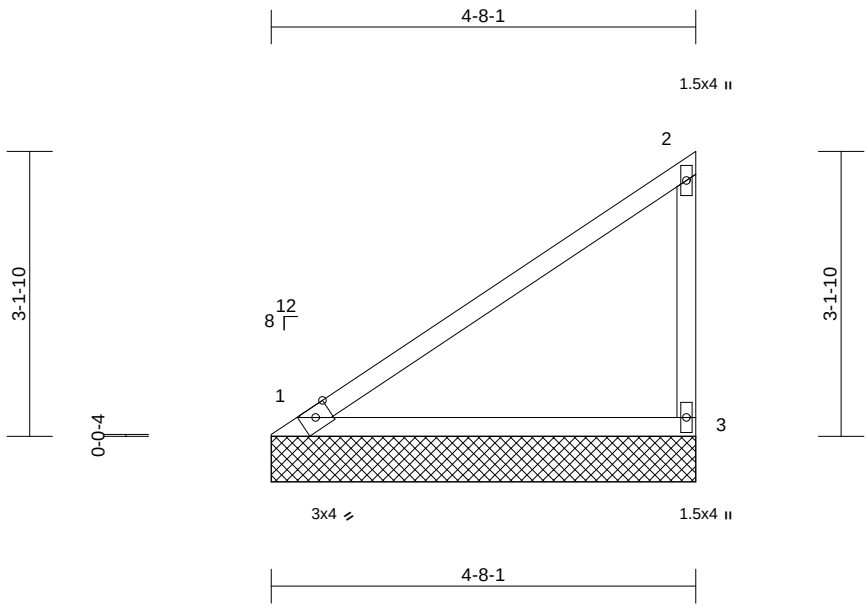

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb	FT = 20%

LUMBER
TOP CHORD 2x3 SPF No.2
BOT CHORD 2x3 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-8-1, 3=4-8-1
Max Horiz 1=121 (LC 9)
Max Uplift 1=-21 (LC 12), 3=-63 (LC 12)
Max Grav 1=191 (LC 1), 3=208 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-167/124, 2-3=-166/193
BOT CHORD 1-3=-58/63

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 1 and 63 lb uplift at joint 3.
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230668	V7	Valley	2	1	Job Reference (optional)	I56858550

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Sun Feb 26 18:04:49 Page: 1
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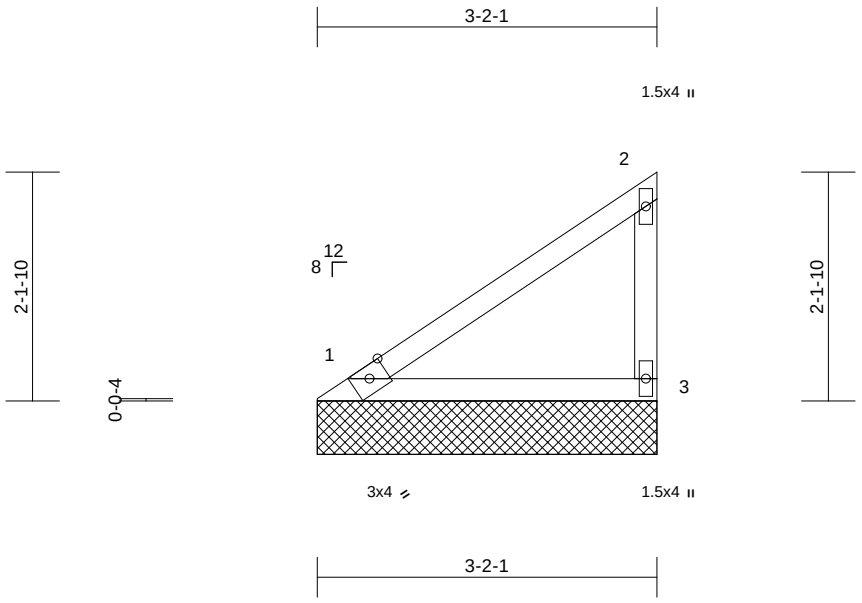


Scale = 1:21.5

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	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 7 lb	FT = 20%

LUMBER
TOP CHORD 2x3 SPF No.2
BOT CHORD 2x3 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-2-1, 3=3-2-1
Max Horiz 1=78 (LC 9)
Max Uplift 1=-13 (LC 12), 3=-41 (LC 12)
Max Grav 1=124 (LC 1), 3=135 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-112/83, 2-3=-110/132
BOT CHORD 1-3=-38/41

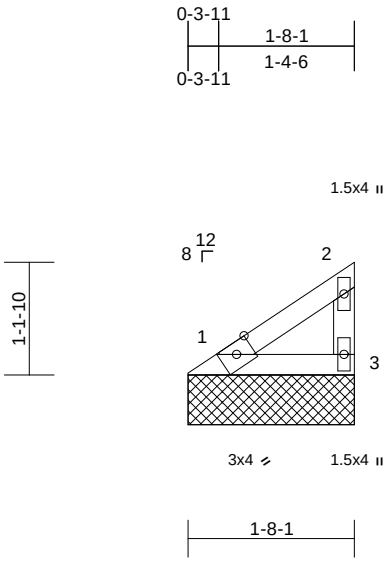
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1 and 41 lb uplift at joint 3.
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 27,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 52	
P230888	V8	Valley	2	1	Job Reference (optional)	I56858551



Scale = 1:23.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 3 lb	FT = 20%

LUMBER
TOP CHORD 2x3 SPF No.2
BOT CHORD 2x3 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=1-8-1, 3=1-8-1
Max Horiz 1=36 (LC 9)
Max Uplift 1=-6 (LC 12), 3=-19 (LC 12)
Max Grav 1=56 (LC 1), 3=61 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-52/39, 2-3=-53/62
BOT CHORD 1-3=-17/19

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 1 and 19 lb uplift at joint 3.
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.

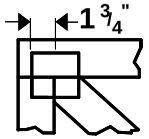
LOAD CASE(S) Standard

February 27,2023

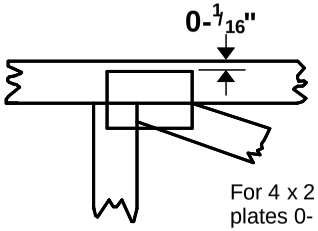
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

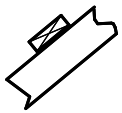
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

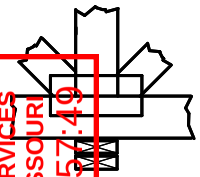
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

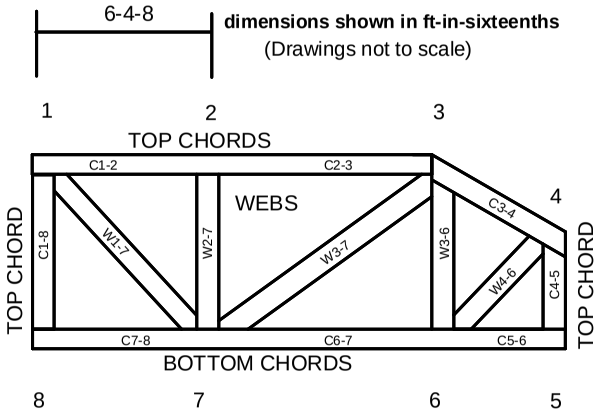


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative 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.