RE: Lot 27 OS
Lot 27 OS

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

Site Information:

Customer: Project Name: Lot 27 OS
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 23 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I45424710	B1	3/31/2021	21	I45424730	V2	3/31/2021
2	I45424711	B2	3/31/2021	22	I45424731	V3	3/31/2021
3	I45424712	B3	3/31/2021	23	I45424732	V4	3/31/2021
4	I45424713	B4	3/31/2021				
5	I45424714	B5	3/31/2021				
6	I45424715	B6	3/31/2021				
7	I45424716	C1	3/31/2021				
8	I45424717	C2	3/31/2021				
9	I45424718	C3	3/31/2021				
10	I45424719	C4	3/31/2021				
11	I45424720	C5	3/31/2021				
12	I45424721	D1	3/31/2021				
13	I45424722	D2	3/31/2021				
14	I45424723	D3	3/31/2021				
15	I45424724	D4	3/31/2021				
16	I45424725	D5	3/31/2021				
17	I45424726	D6	3/31/2021				
18	I45424727	D7	3/31/2021				
19	I45424728	D8	3/31/2021				
20	I45424729	V1	3/31/2021				

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

Truss Design Engineer's Name: Sevier, Scott

My license renewal date for the state of Missouri is December 31, 2021.

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.

March 31, 2021

Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	I45424710
Lot 27 OS	B1	GABLE	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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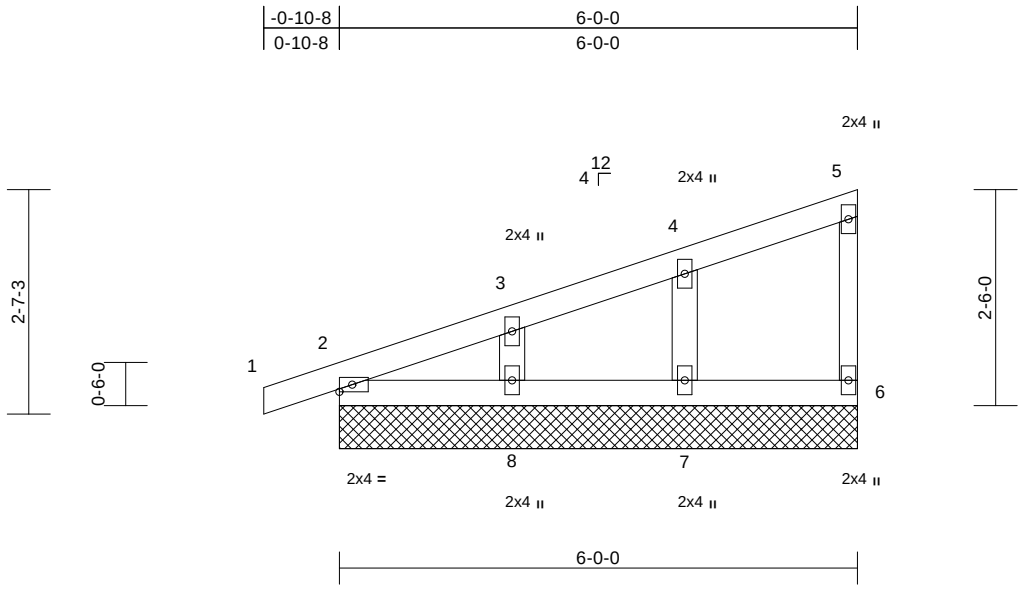

Scale = 1:26.7

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2
OTHERS	2x4 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) 2=6-0-0, 6=6-0-0, 7=6-0-0, 8=6-0-0
Max Horiz 2=98 (LC 5)
Max Uplift 2=-39 (LC 4), 6=-11 (LC 5), 7=-48 (LC 4), 8=-48 (LC 8)
Max Grav 2=150 (LC 1), 6=67 (LC 1), 7=196 (LC 1), 8=179 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-3=-78/27, 3-4=-55/23, 4-5=-48/16, 5-6=-52/20
BOT CHORD	2-8=-31/23, 7-8=-31/23, 6-7=-31/23
WEBS	3-8=-134/74, 4-7=-154/73

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 6, 39 lb uplift at joint 2, 48 lb uplift at joint 8 and 48 lb uplift at joint 7.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	B2	Monopitch	5	1	I45424711
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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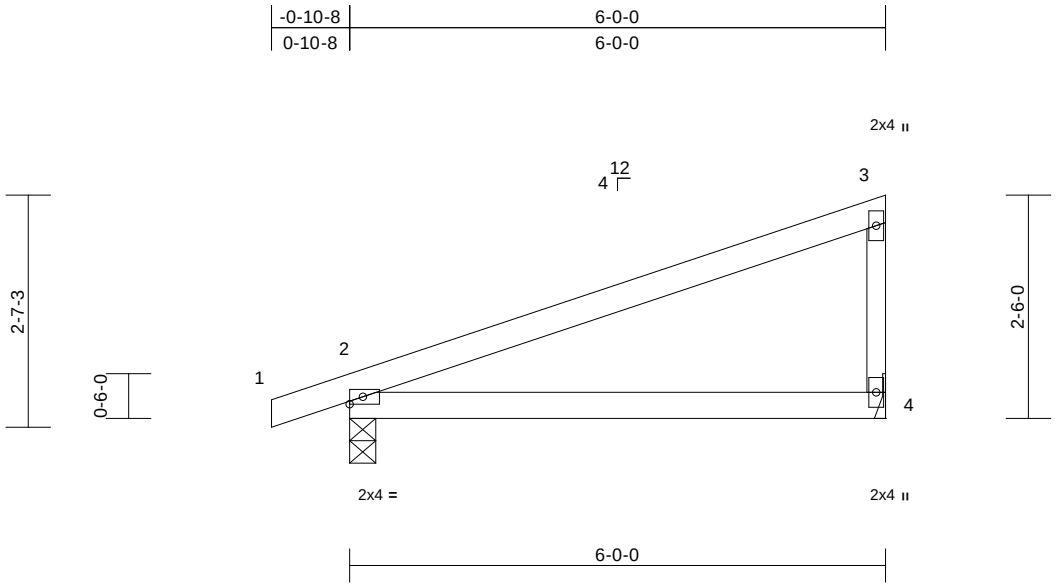

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.07	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.13	2-4	>526	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 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) 2=0-3-8, 4= Mechanical
Max Horiz 2=98 (LC 5)
Max Uplift 2=-88 (LC 4), 4=-55 (LC 8)
Max Grav 2=337 (LC 1), 4=252 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-87/55, 3-4=-195/89
BOT CHORD 2-4=-31/23

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) * 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.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 4 and 88 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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	B3	Monopitch	5	1	I45424712 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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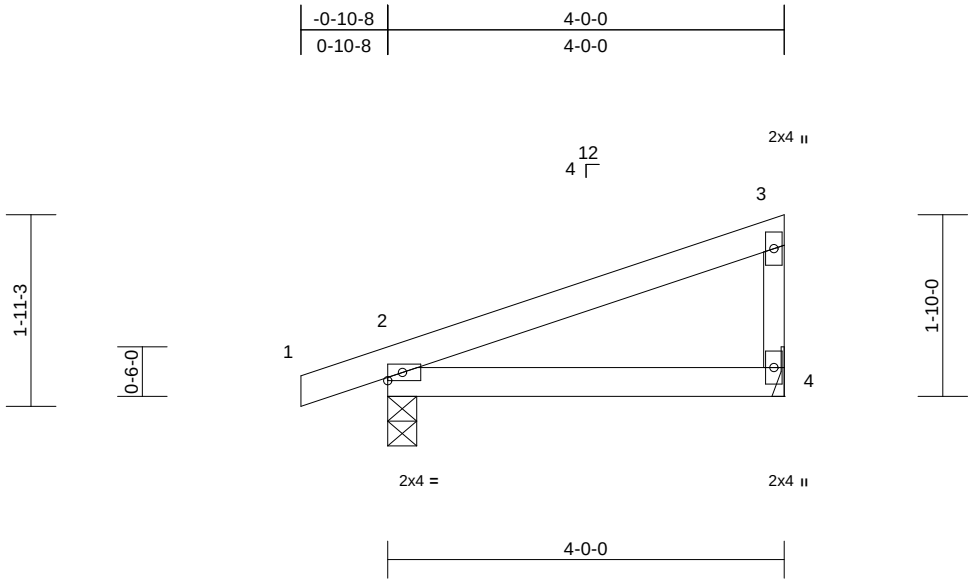

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	-0.01	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	2-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 12 lb	FT = 10%

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

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

REACTIONS (size) 2=0-3-8, 4= Mechanical
Max Horiz 2=69 (LC 5)
Max Uplift 2=-75 (LC 4), 4=-35 (LC 8)
Max Grav 2=250 (LC 1), 4=159 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-69/35, 3-4=-122/57
BOT CHORD 2-4=-21/16

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) * 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.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 4 and 75 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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	B4	GABLE	1	1	Job Reference (optional)	I45424713

Wheeler Lumber, Waverly, KS - 66871,

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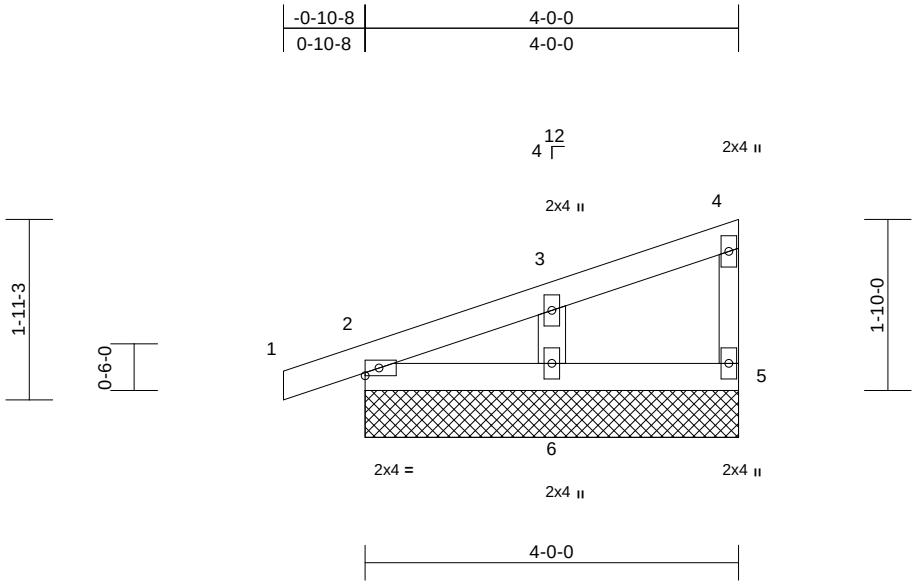

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 12 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS (size) 2=4-0-0, 5=4-0-0, 6=4-0-0
Max Horiz 2=69 (LC 5)
Max Uplift 2=-47 (LC 4), 5=-11 (LC 4), 6=-50 (LC 8)
Max Grav 2=147 (LC 1), 5=67 (LC 1), 6=198 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-3=-54/28, 3-4=-41/12, 4-5=-53/20
BOT CHORD	2-6=-21/16, 5-6=-21/16
WEBS	3-6=-150/79

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 5, 47 lb uplift at joint 2 and 50 lb uplift at joint 6.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	B5	GABLE	1	1	I45424714
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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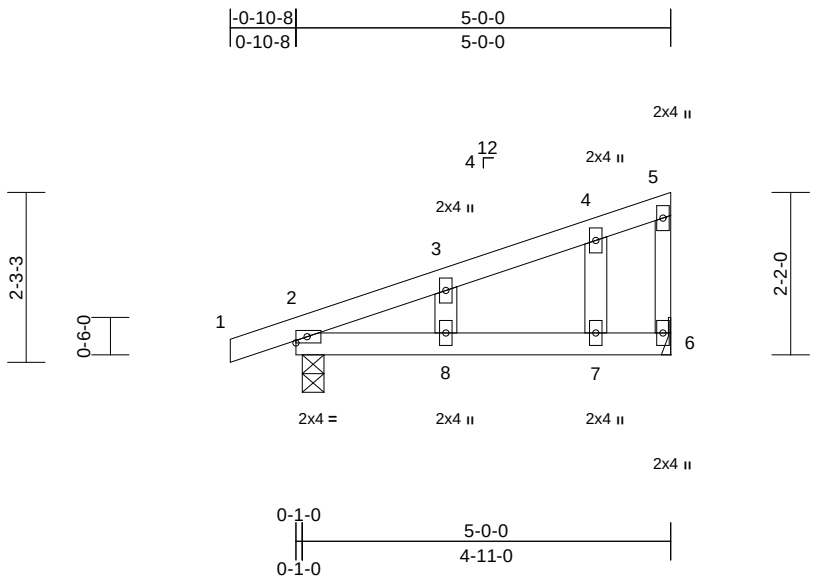

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.02	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.05	7-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	7-8	>999	240	Weight: 16 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS (size) 2=0-3-8, 6= Mechanical
Max Horiz 2=84 (LC 5)
Max Uplift 2=-81 (LC 4), 6=-45 (LC 8)
Max Grav 2=293 (LC 1), 6=206 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-121/0, 3-4=-78/9, 4-5=-51/24, 5-6=-95/25
BOT CHORD 2-8=-21/55, 7-8=-21/55, 6-7=-21/55
WEBS 3-8=-46/49, 4-7=-44/34

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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 2-0-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 6 and 81 lb uplift at joint 2.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	I45424715
Lot 27 OS	B6	Monopitch	7	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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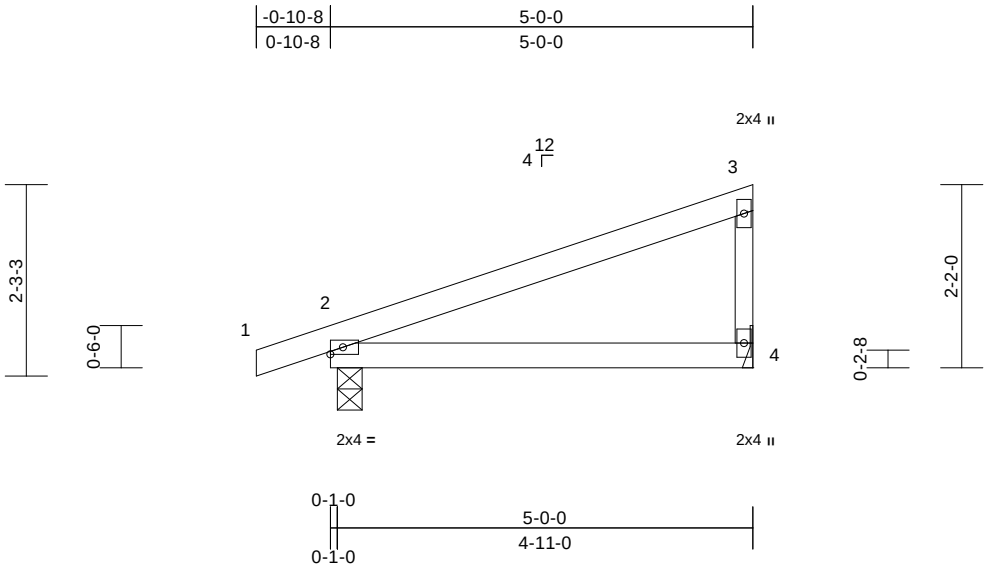

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	-0.03	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.06	2-4	>933	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 lb	FT = 10%

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

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

REACTIONS (size) 2=0-3-8, 4= Mechanical
Max Horiz 2=84 (LC 5)
Max Uplift 2=-81 (LC 4), 4=-45 (LC 8)
Max Grav 2=293 (LC 1), 4=206 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-74/45, 3-4=-159/73
BOT CHORD 2-4=-26/20

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) * 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.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 4 and 81 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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	C1	GABLE	1	1	Job Reference (optional)	I45424716

Wheeler Lumber, Waverly, KS - 66871,

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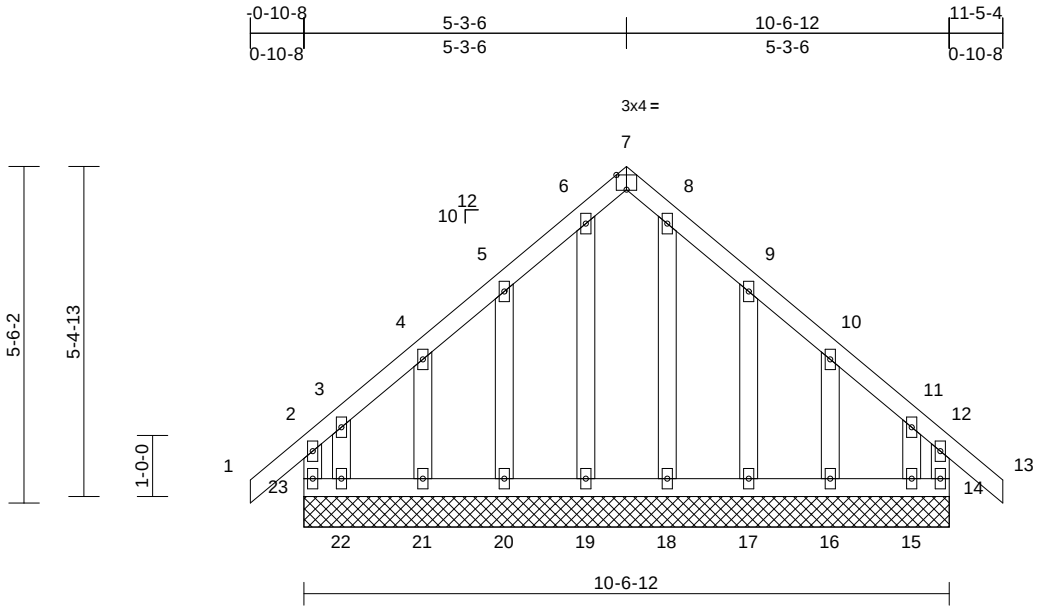

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Plate Offsets (X, Y): [7:0-2-0,Edge]

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	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 56 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2
OTHERS	2x4 SPF No.2

BRACING

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

REACTIONS (size) 14=10-6-12, 15=10-6-12, 16=10-6-12, 17=10-6-12, 18=10-6-12, 19=10-6-12, 20=10-6-12, 21=10-6-12, 22=10-6-12, 23=10-6-12
Max Horiz 23=-164 (LC 6)
Max Uplift 14=-107 (LC 5), 15=-166 (LC 9), 16=-55 (LC 9), 17=-82 (LC 9), 20=-81 (LC 8), 21=-55 (LC 8), 22=-176 (LC 8), 23=-141 (LC 4)
Max Grav 14=200 (LC 15), 15=158 (LC 7), 16=129 (LC 16), 17=131 (LC 16), 18=129 (LC 17), 19=133 (LC 18), 20=129 (LC 15), 21=129 (LC 15), 22=184 (LC 6), 23=228 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-23=-163/88, 1-2=0/46, 2-3=-130/110, 3-4=-75/78, 4-5=-60/75, 5-6=-47/119, 6-7=-33/84, 7-8=-28/79, 8-9=-32/111, 9-10=-46/68, 10-11=-58/64, 11-12=-109/85, 12-13=0/46, 12-14=-146/67
BOT CHORD	22-23=-80/90, 21-22=-80/90, 20-21=-80/90, 19-20=-80/90, 18-19=-80/90, 17-18=-80/90, 16-17=-80/90, 15-16=-80/90, 14-15=-80/90
WEBS	3-22=-81/97, 4-21=-105/77, 5-20=-102/95, 6-19=-106/5, 8-18=-102/0, 9-17=-104/96, 10-16=-105/77, 11-15=-70/92

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 23, 107 lb uplift at joint 14, 176 lb uplift at joint 22, 55 lb uplift at joint 21, 81 lb uplift at joint 20, 82 lb uplift at joint 17, 55 lb uplift at joint 16 and 166 lb uplift at joint 15.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	C2	GABLE	1	1	Job Reference (optional)	I45424717

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Mar 22 2021 Print: 8.430 S Mar 22 2021 MiTek Industries, Inc. Tue Mar 30 12:58:44 Page: 1
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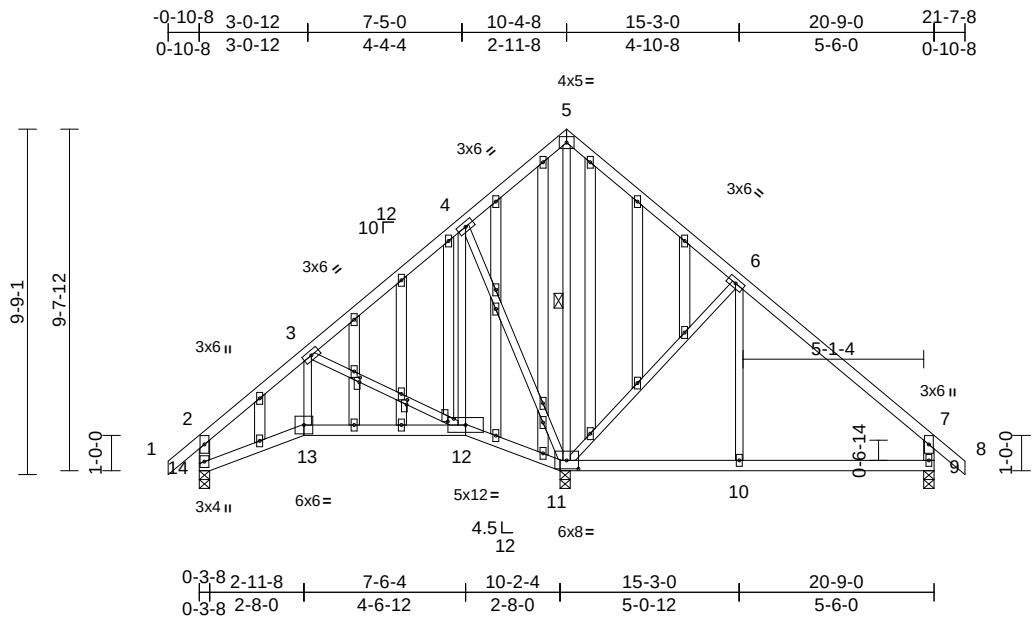

Scale = 1:65.1

Plate Offsets (X, Y): [11:0-4-0,0-2-13], [12:0-0-15,0-2-0], [17:0-1-9,0-0-4], [20:0-1-9,0-0-4]

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	0.37	Vert(LL)	-0.02	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.02	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	12-13	>999	240	Weight: 144 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2,9-7:2x4 SPF 2400F 2.0E
OTHERS 2x4 SPF No.2

BRACING

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

REACTIONS (size) 9=0-3-8, 11=0-3-8, 14=0-3-8
Max Horiz 14=-276 (LC 6)
Max Uplift 9=-143 (LC 9), 11=-120 (LC 8), 14=-109 (LC 9)
Max Grav 9=434 (LC 22), 11=1285 (LC 1), 14=365 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-370/112, 3-4=-98/230, 4-5=-30/372, 5-6=-7/371, 6-7=-326/160, 7-8=0/46, 2-14=-387/122, 7-9=-386/180
BOT CHORD 13-14=-229/393, 12-13=-206/359, 11-12=-167/150, 10-11=-48/162, 9-10=-48/162
WEBS 3-13=-37/193, 3-12=-355/190, 4-12=-43/251, 4-11=-463/212, 5-11=-549/0, 6-11=-437/212, 6-10=0/238

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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 2x4 MT20 unless otherwise indicated.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 109 lb uplift at joint 14, 143 lb uplift at joint 9 and 120 lb uplift at joint 11.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	C3	Roof Special	3	1	Job Reference (optional)	I45424718

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Mar 22 2021 Print: 8.430 S Mar 22 2021 MiTek Industries, Inc. Tue Mar 30 12:58:45 Page: 1
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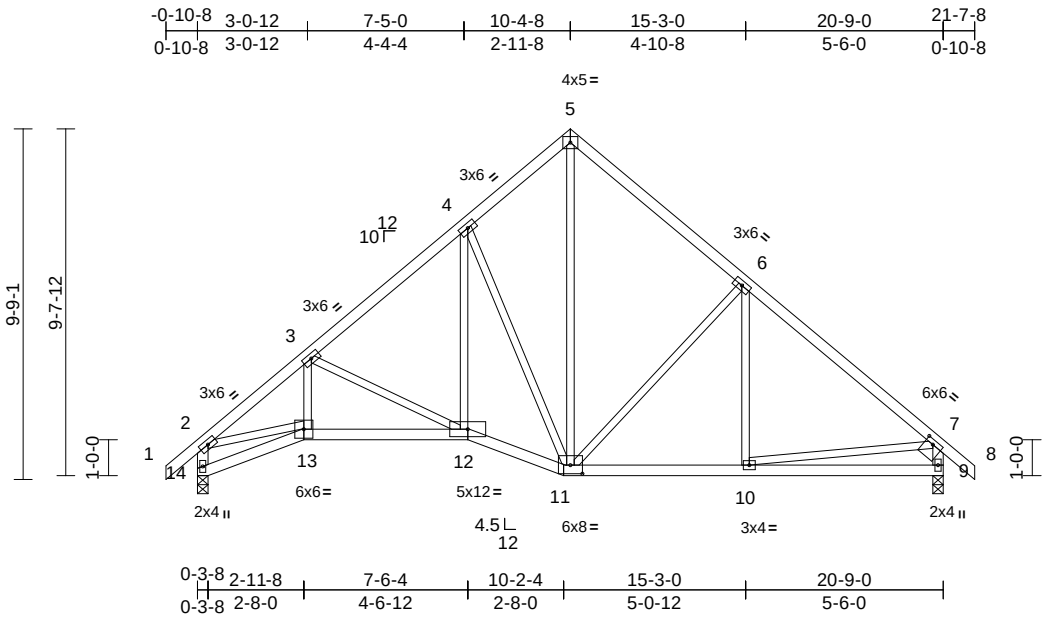

Scale = 1:64.1

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

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	0.30	Vert(LL)	-0.04	12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.09	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	12	>999	240	Weight: 99 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2,9-7:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 9=0-3-8, 14=0-3-8
Max Horiz 14=-276 (LC 6)
Max Uplift 9=-114 (LC 9), 14=-114 (LC 8)
Max Grav 9=992 (LC 1), 14=992 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-1444/214, 3-4=-1066/162, 4-5=-735/227, 5-6=-788/217, 6-7=-1064/140, 7-8=0/46, 2-14=-974/177, 7-9=-940/142
BOT CHORD 13-14=-261/316, 12-13=-235/1182, 11-12=-68/871, 10-11=-11/727, 9-10=-94/198
WEBS 3-13=-35/226, 3-12=-422/197, 4-12=-63/547, 4-11=-684/232, 5-11=-200/606, 6-11=-364/208, 6-10=0/175, 2-13=-98/1021, 7-10=0/534

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 114 lb uplift at joint 14 and 114 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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	C4	Roof Special	2	1	Job Reference (optional)	I45424719

Wheeler Lumber, Waverly, KS - 66871,

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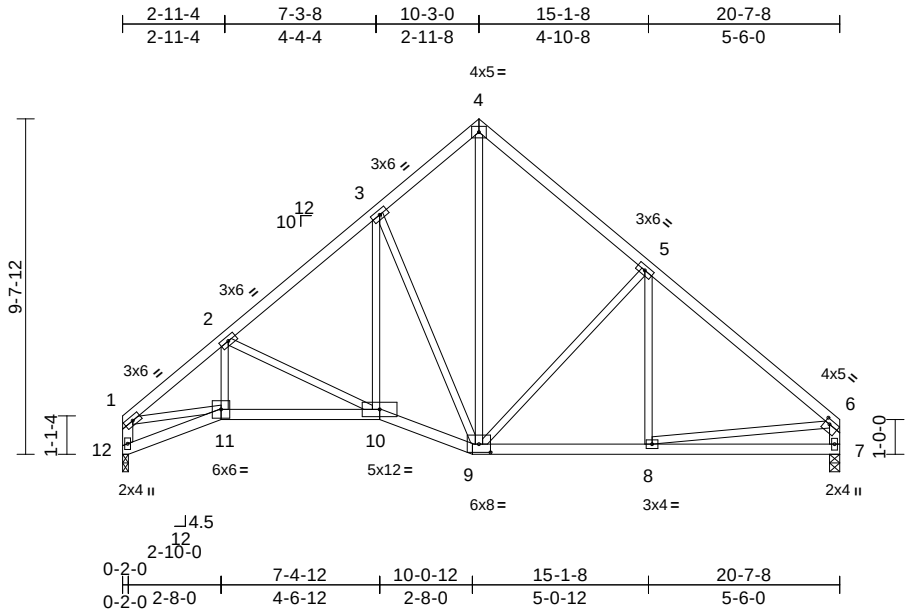

Scale = 1:66.3

Plate Offsets (X, Y): [6:0-1-12,0-1-8], [9:0-4-0,0-2-13]

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)	-0.04	10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.09	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	10	>999	240	Weight: 96 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-1,7-6:2x4 SPF 2400F 2.0E

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

REACTIONS (size) 7=0-3-8, 12=0-2-0
Max Horiz 12=-254 (LC 4)
Max Uplift 7=-90 (LC 9), 12=-89 (LC 8)
Max Grav 7=915 (LC 1), 12=915 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1401/211, 2-3=-1058/162, 3-4=-733/227, 4-5=-787/216, 5-6=-1060/136, 1-12=-900/149, 6-7=-862/118
BOT CHORD 11-12=-258/293, 10-11=-249/1142, 9-10=-84/849, 8-9=-25/731, 7-8=-69/164
WEBS 2-11=-40/194, 2-10=-400/196, 3-10=-67/528, 3-9=-668/236, 4-9=-200/607, 5-9=-374/212, 5-8=0/173, 1-11=-117/990, 6-8=-8/574

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 12.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 12 and 90 lb uplift at joint 7.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	C5	Roof Special Girder	1	3	I45424720 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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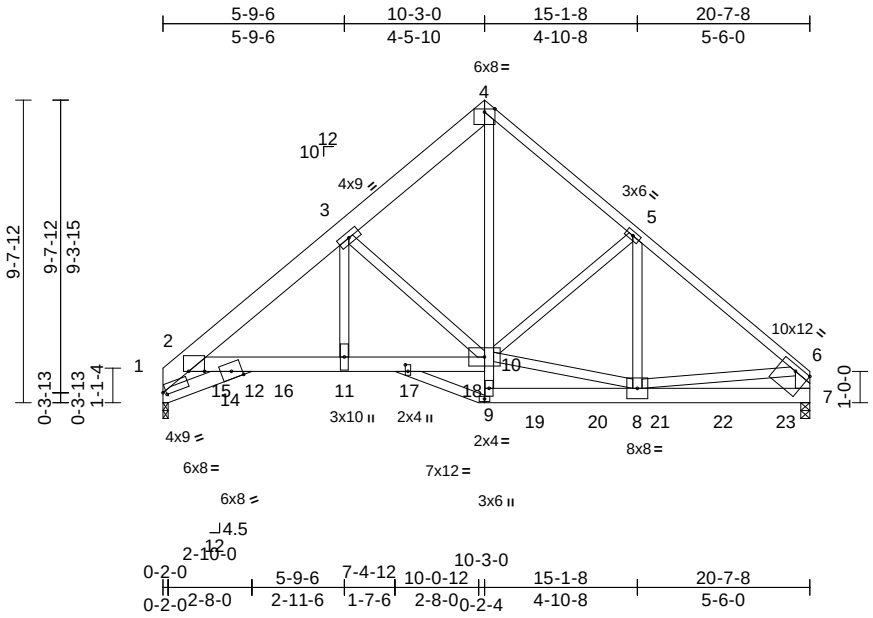

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Plate Offsets (X, Y): [1:0-1-4,0-1-2], [2:0-6-1,Edge], [6:Edge,0-2-0], [13:0-2-8,0-1-0]

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	0.30	Vert(LL)	-0.07	11-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.12	11-12	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.07	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	11-12	>999	240	Weight: 473 lb	FT = 10%

LUMBER
TOP CHORD 2x8 SP DSS *Except* 4-6:2x4 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 4-9,0-0,13-9:2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 7-6:2x6 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. Except:
10-0-0 oc bracing: 9-10

REACTIONS (size) 1=0-2-0, 7=0-3-8
Max Horiz 1=249 (LC 5)
Max Uplift 1=-188 (LC 8)
Max Grav 1=5682 (LC 15), 7=6218 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-7163/274, 2-3=-8058/175, 3-4=-5011/0, 4-5=-5075/7, 5-6=-6426/0, 6-7=-4739/0
BOT CHORD 1-14=-275/3589, 12-14=-304/3956, 2-15=0/2842, 12-15=0/2842, 12-16=-179/6373, 11-16=-179/6373, 11-17=-182/6415, 17-18=-182/6415, 10-18=-182/6415, 9-10=0/895, 4-10=0/6068, 9-19=0/594, 19-20=0/594, 8-20=0/594, 8-21=0/1282, 21-22=0/1282, 22-23=0/1282, 7-23=0/1282
WEBS 3-11=-272/3799, 3-10=-3485/483, 8-10=0/4382, 5-10=-1434/0, 5-8=0/1559, 6-8=0/3666

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc, 2x4 - 1 row at 0-7-0 oc.
Web connected as follows: 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) 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 1.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 1.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1033 lb down and 103 lb up at 2-0-0, 1033 lb down and 103 lb up at 4-0-0, 1033 lb down and 103 lb up at 6-0-0, 1033 lb down and 103 lb up at 8-0-0, 1033 lb down and 103 lb up at 10-0-0, 1062 lb down at 12-0-0, 1062 lb down at 14-0-0, 1062 lb down at 16-0-0, and 1062 lb down at 18-0-0, and 943 lb down at 20-0-0 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
12) Filler applied to ply: 1(Front)

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-6=-70, 1-12=-20, 10-12=-20, 7-9=-20
Concentrated Loads (lb)
Vert: 11=-910 (B), 14=-910 (B), 16=-910 (B), 17=-910 (B), 18=-910 (B), 19=-938 (B), 20=-938 (B), 21=-938 (B), 22=-938 (B), 23=-943 (B)

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	D1	Common Supported Gable	1	1	I45424721 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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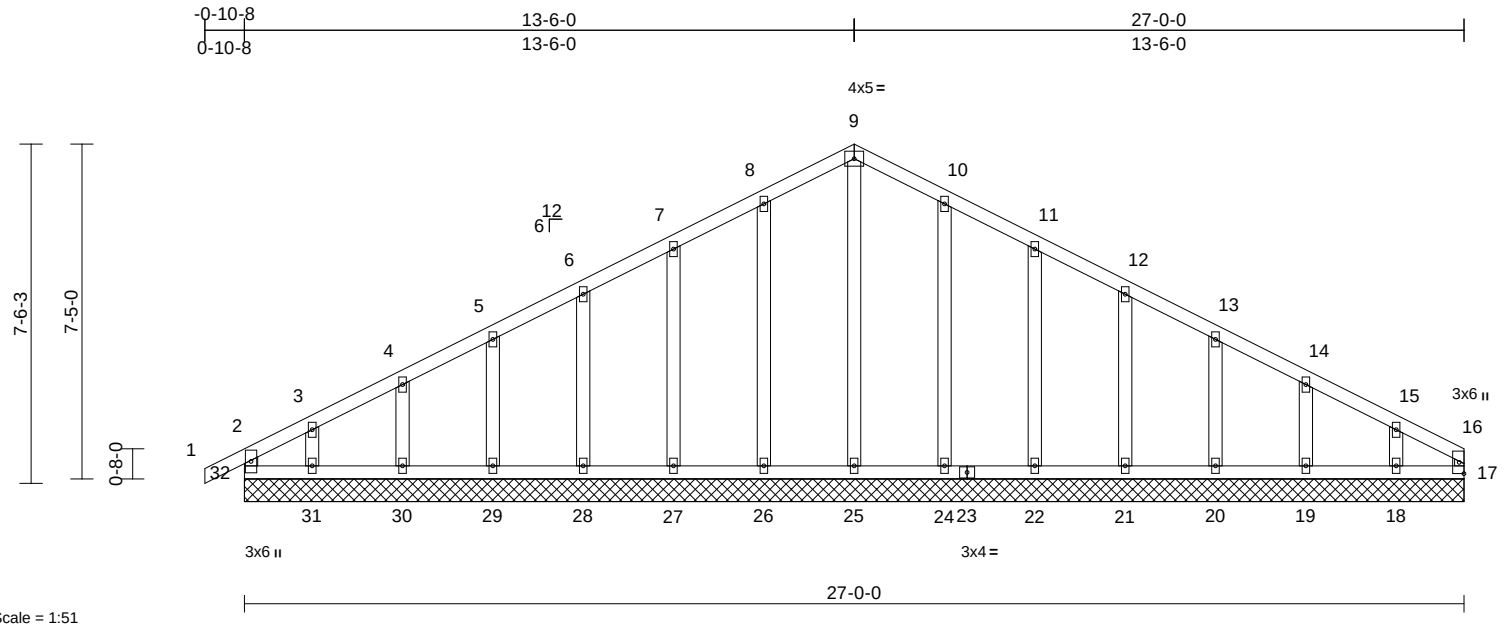

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 121 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 16-17:2x3 SPF No.2
OTHERS 2x4 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) 17=27-0-0, 18=27-0-0, 19=27-0-0, 20=27-0-0, 21=27-0-0, 22=27-0-0, 24=27-0-0, 25=27-0-0, 26=27-0-0, 27=27-0-0, 28=27-0-0, 29=27-0-0, 30=27-0-0, 31=27-0-0, 32=27-0-0
Max Horiz 32=121 (LC 12)
Max Uplift 18=-88 (LC 9), 19=-49 (LC 9), 20=-55 (LC 9), 21=-53 (LC 9), 22=-56 (LC 9), 24=-52 (LC 9), 26=-54 (LC 8), 27=-56 (LC 8), 28=-53 (LC 8), 29=-56 (LC 8), 30=-48 (LC 8), 31=-96 (LC 8), 32=-41 (LC 4)
Max Grav 17=76 (LC 18), 18=167 (LC 1), 19=183 (LC 22), 20=179 (LC 1), 21=181 (LC 22), 22=178 (LC 1), 24=190 (LC 22), 25=190 (LC 18), 26=190 (LC 21), 27=178 (LC 1), 28=181 (LC 21), 29=178 (LC 21), 30=190 (LC 1), 31=131 (LC 15), 32=151 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-32=-134/41, 1-2=0/32, 2-3=-144/61, 3-4=-96/69, 4-5=-72/91, 5-6=-57/116, 6-7=-46/142, 7-8=-37/169, 8-9=-41/192, 9-10=-42/184, 10-11=-38/139, 11-12=-38/102, 12-13=-38/76, 13-14=-41/50, 14-15=-64/38, 15-16=-101/29, 16-17=-56/1
BOT CHORD 31-32=-23/87, 30-31=-23/87, 29-30=-23/87, 28-29=-23/87, 27-28=-23/87, 26-27=-23/87, 25-26=-23/87, 24-25=-23/87, 23-24=-23/87, 22-23=-23/87, 21-22=-23/87, 20-21=-23/87, 19-20=-23/87, 18-19=-23/87, 17-18=-23/87
WEBS 9-25=-150/0, 8-26=-150/78, 7-27=-138/79, 6-28=-141/78, 5-29=-138/79, 4-30=-147/76, 3-31=-101/94, 10-24=-150/76, 11-22=-138/80, 12-21=-140/77, 13-20=-139/78, 14-19=-143/77, 15-18=-130/90

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 32, 54 lb uplift at joint 26, 56 lb uplift at joint 27, 53 lb uplift at joint 28, 56 lb uplift at joint 29, 48 lb uplift at joint 30, 96 lb uplift at joint 31, 52 lb uplift at joint 24, 56 lb uplift at joint 22, 53 lb uplift at joint 21, 55 lb uplift at joint 20, 49 lb uplift at joint 19 and 88 lb uplift at joint 18.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

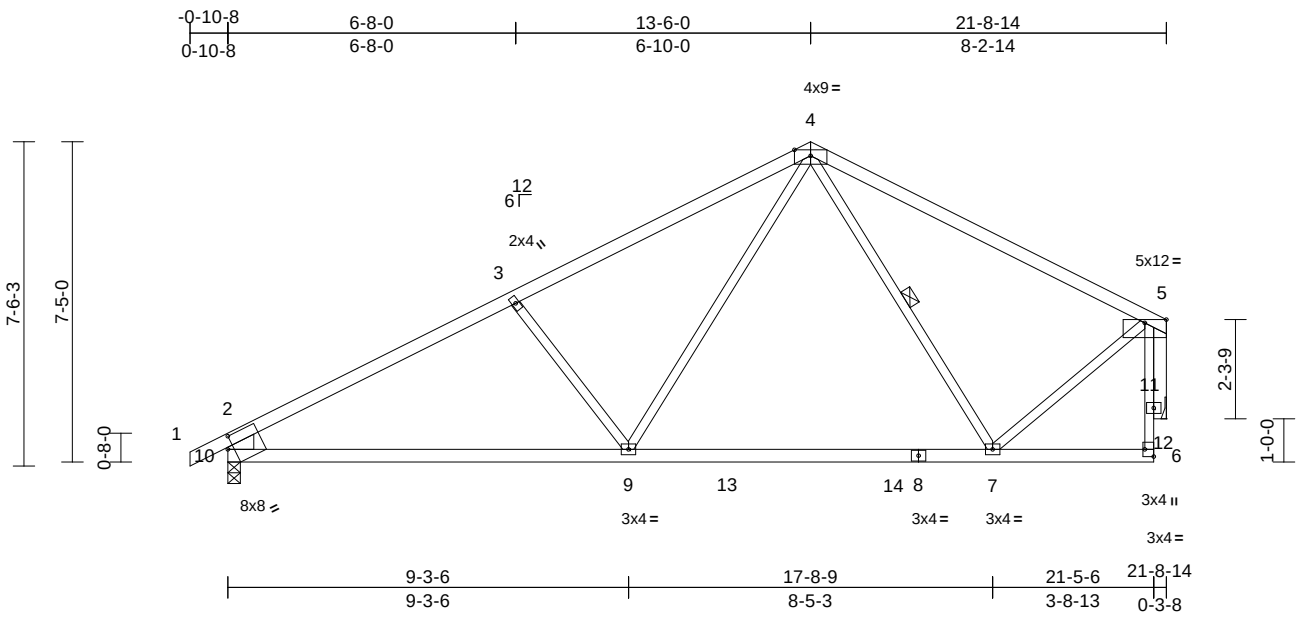
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	D2	Roof Special	5	1	Job Reference (optional)	I45424722

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Mar 22 2021 Print: 8.430 S Mar 22 2021 MiTek Industries, Inc. Tue Mar 30 12:58:48 ID:hquPfxpp0CdNHWhMuPizeLzNEki-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:53.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.21	7-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.33	7-9	>772	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.06	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	7-9	>999	240	Weight: 80 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2:2x8 SP DSS
OTHERS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-7

REACTIONS (size) 10=0-3-8, 12= Mechanical
Max Horiz 10=175 (LC 8)
Max Uplift 10=-154 (LC 8), 12=-91 (LC 9)
Max Grav 10=1080 (LC 2), 12=992 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-1503/220, 3-4=-1291/213, 4-5=-824/116, 6-12=0/35, 5-12=0/35, 2-10=-948/202
BOT CHORD 9-10=-282/1255, 9-13=-80/737, 13-14=-80/737, 8-14=-80/737, 7-8=-80/737, 6-7=-64/177
WEBS 5-7=-17/648, 4-9=-101/693, 3-9=-403/253, 4-7=-256/109, 5-12=-1010/98

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 154 lb uplift at joint 10 and 91 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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	D3	Common	4	1	Job Reference (optional)	I45424723

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Mar 22 2021 Print: 8.430 S Mar 22 2021 MiTek Industries, Inc. Tue Mar 30 12:58:48

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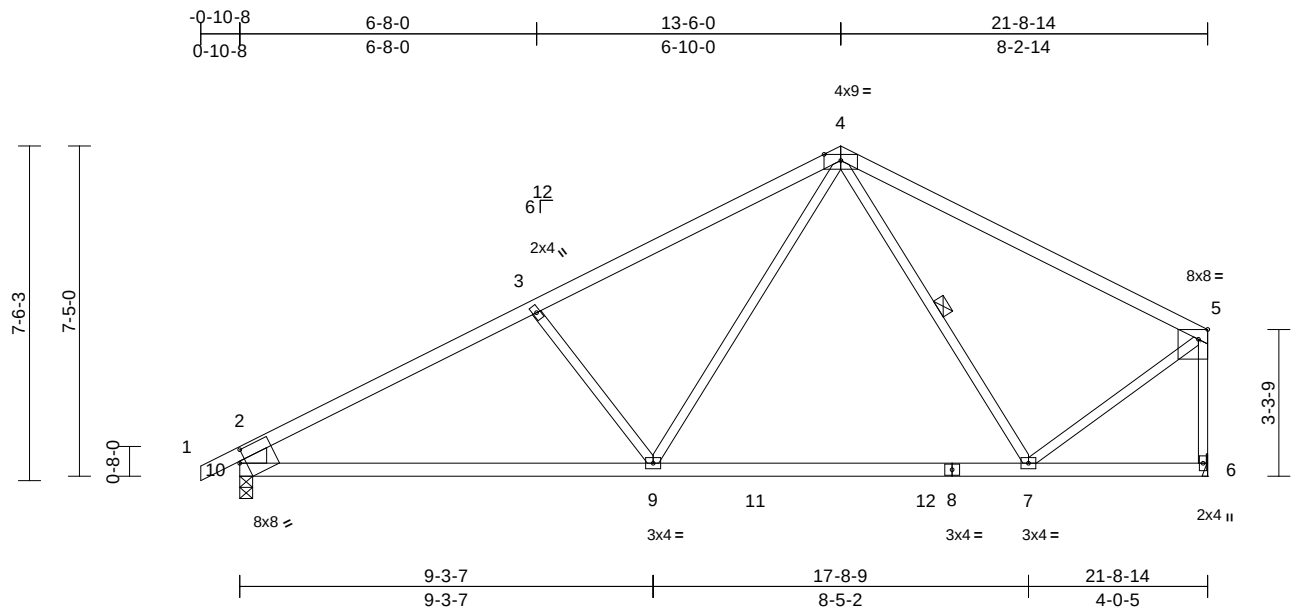

Scale = 1:51.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.20	7-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.33	7-9	>786	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	7-9	>999	240	Weight: 78 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 4-5:2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 10-2:2x8 SP DSS

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-3-12 oc purlins, except end verticals.

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

WEBS 1 Row at midpt 4-7

REACTIONS (size) 6= Mechanical, 10=0-3-8
Max Horiz 10=153 (LC 5)
Max Uplift 10=-31 (LC 8)
Max Grav 6=1020 (LC 2), 10=1078 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/37, 2-3=-1499/66, 3-4=-1287/76, 4-5=-807/49, 5-6=-999/7, 2-10=-946/80

BOT CHORD 9-10=-71/1291, 9-11=0/754, 11-12=0/754, 8-12=0/754, 7-8=0/754, 6-7=-31/53

WEBS 4-7=-290/58, 5-7=0/767, 4-9=-12/691, 3-9=-402/155

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 10.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	D4	Roof Special	1	1	Job Reference (optional)	I45424724

Wheeler Lumber, Waverly, KS - 66871,

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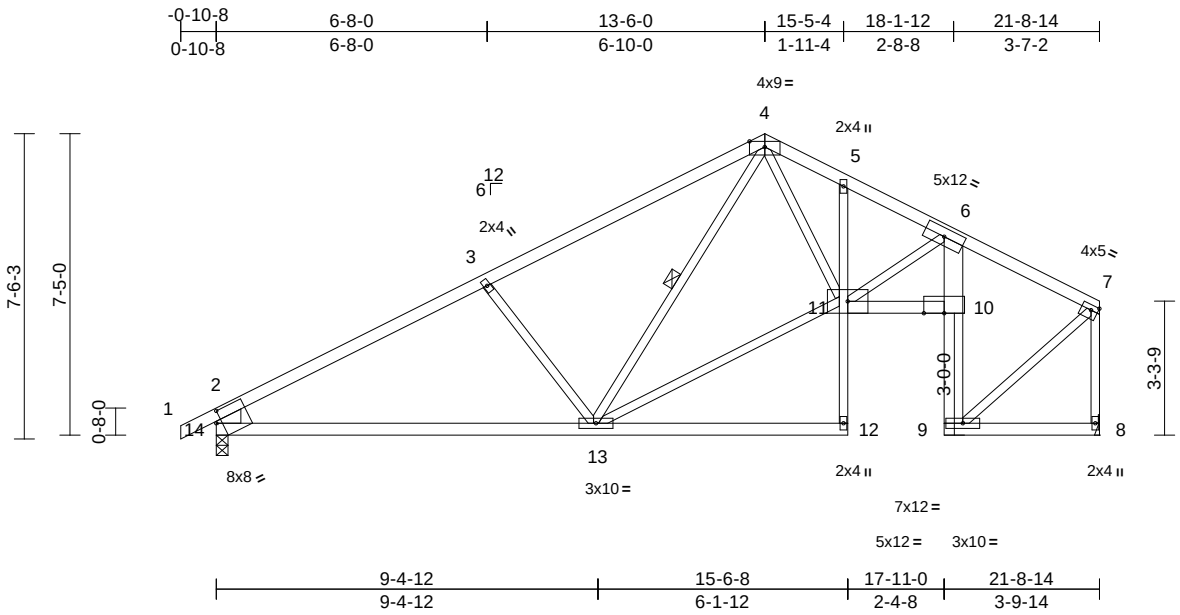

Scale = 1:56.7

Plate Offsets (X, Y): [7:0-2-0,0-1-8], [14:0-1-10,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.17	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.36	13-14	>717	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.38	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	10-11	>999	240	Weight: 97 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 4-7:2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF No.2 *Except* 12-5:2x3 SPF No.2, 6-9:2x6 SP DSS

WEBS 2x3 SPF No.2 *Except* 14-2:2x8 SP DSS

BRACING

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

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 9-10.

WEBS 1 Row at midpt 4-13

REACTIONS (size) 8= Mechanical, 14=0-3-8
Max Horiz 14=153 (LC 5)
Max Uplift 14=-31 (LC 8)
Max Grav 8=958 (LC 1), 14=1045 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/37, 2-3=-1454/70, 3-4=-1183/77, 4-5=-1463/50, 5-6=-1551/21, 6-7=-721/39, 7-8=-961/18, 2-14=-942/82

BOT CHORD 13-14=-73/1196, 12-13=0/11, 11-12=0/83, 5-11=-100/87, 10-11=-7/1552, 9-10=-410/18, 6-10=-422/36, 8-9=-31/29

WEBS 3-13=-402/156, 4-13=-80/131, 11-13=0/1068, 4-11=-15/832, 6-11=-266/53, 7-9=0/735

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 14.
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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	D5	Roof Special	1	1	I45424725
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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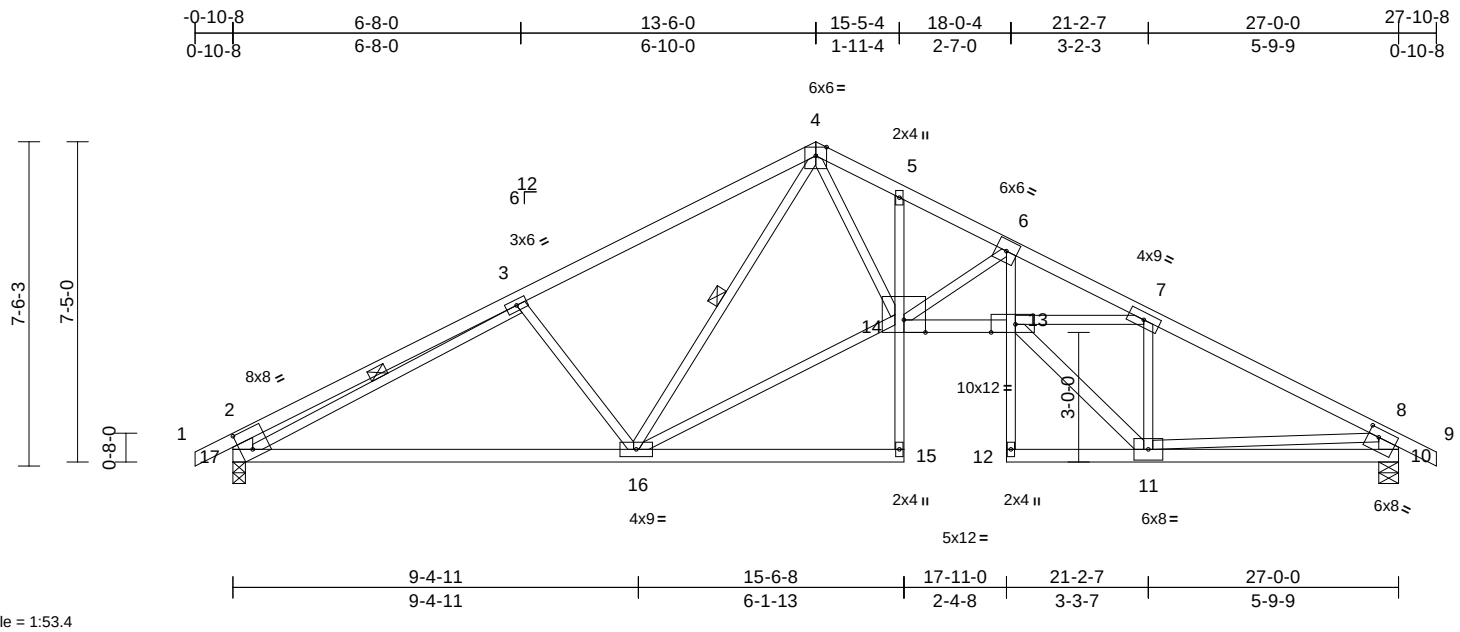

Scale = 1:53.4

Plate Offsets (X, Y): [2:0-3-5,0-5-12], [10:0-3-0,0-2-4], [13:0-6-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.26	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.46	13-14	>690	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.31	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	13-14	>999	240	Weight: 118 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 15-5,6-12:2x3 SPF No.2, 14-13:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 17-2,10-8:2x6 SPF No.2, 11-13:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-5-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-16, 3-17

REACTIONS (size) 10=0-5-8, 17=0-3-8
Max Horiz 17=111 (LC 8)
Max Uplift 10=-174 (LC 9), 17=-174 (LC 8)
Max Grav 10=1272 (LC 1), 17=1272 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-836/189, 3-4=-1679/256, 4-5=-2714/267, 5-6=-2771/259, 6-7=-4570/325, 7-8=-1931/232, 8-9=0/35, 2-17=-625/185, 8-10=-1208/205
BOT CHORD 16-17=-260/1629, 15-16=0/18, 14-15=0/80, 5-14=-140/75, 13-14=-164/4035, 12-13=0/44, 6-13=-98/1768, 11-12=-2/30, 10-11=-138/574
WEBS 3-16=-401/254, 4-16=-362/0, 14-16=-80/1732, 4-14=-113/2031, 6-14=-1935/194, 7-13=-96/2387, 7-11=-1602/182, 3-17=-1117/110, 8-11=-21/1068, 11-13=-170/2262

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 174 lb uplift at joint 10 and 174 lb uplift at joint 17.
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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	D6	Common	2	1	I45424726
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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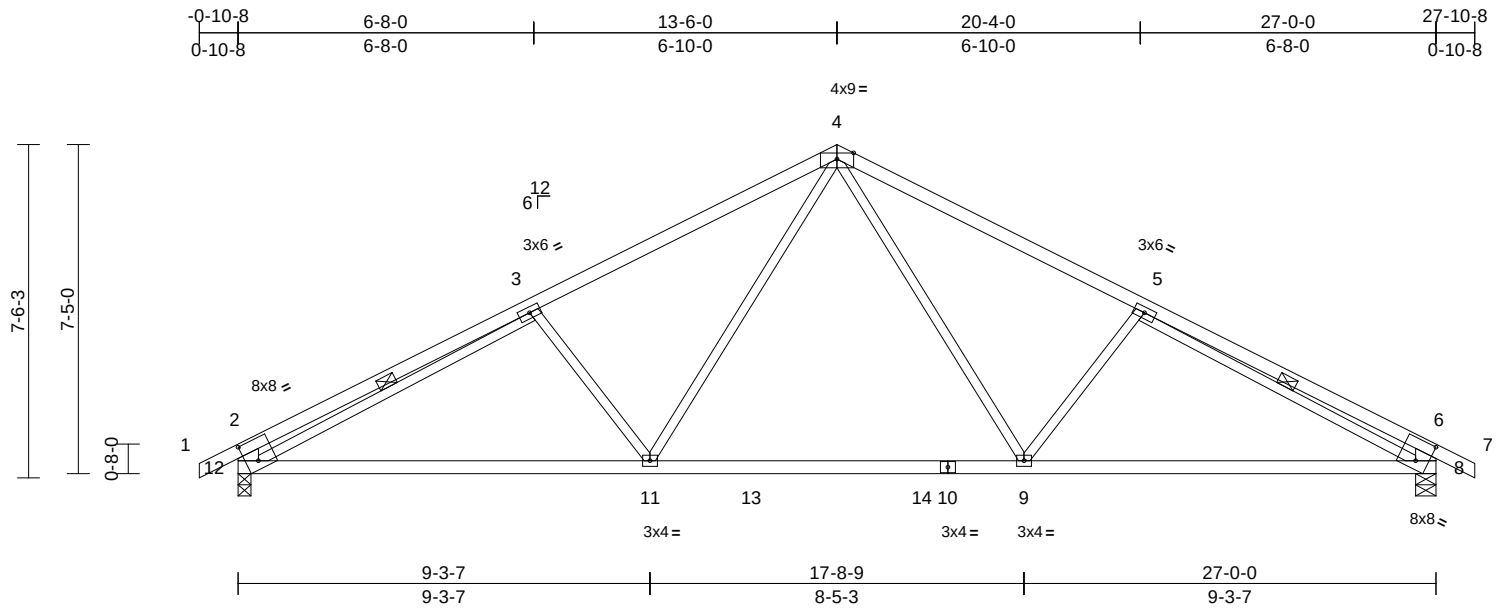

Scale = 1:51.9

Plate Offsets (X, Y): [2:0-3-5,0-5-12], [8:0-3-5,0-5-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.20	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.34	11-12	>926	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	9-11	>999	240	Weight: 100 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,8-6:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-12, 5-8

REACTIONS (size) 8=0-5-8, 12=0-3-8
Max Horiz 12=111 (LC 8)
Max Uplift 8=-174 (LC 9), 12=-174 (LC 8)
Max Grav 8=1320 (LC 2), 12=1320 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-874/191, 3-4=-1808/260, 4-5=-1808/260, 5-6=-874/190, 6-7=0/35, 2-12=-630/186, 6-8=-630/186
BOT CHORD 11-12=-259/1707, 11-13=-51/1190, 13-14=-51/1190, 10-14=-51/1190, 9-10=-51/1190, 8-9=-149/1705
WEBS 4-9=-111/695, 5-9=-403/255, 4-11=-111/695, 3-11=-403/255, 3-12=-1150/97, 5-8=-1149/97

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 174 lb uplift at joint 12 and 174 lb uplift at joint 8.
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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	D7	Common Supported Gable	1	1	I45424727 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Mar 22 2021 Print: 8.430 S Mar 22 2021 MiTek Industries, Inc. Tue Mar 30 12:58:51 Page: 1
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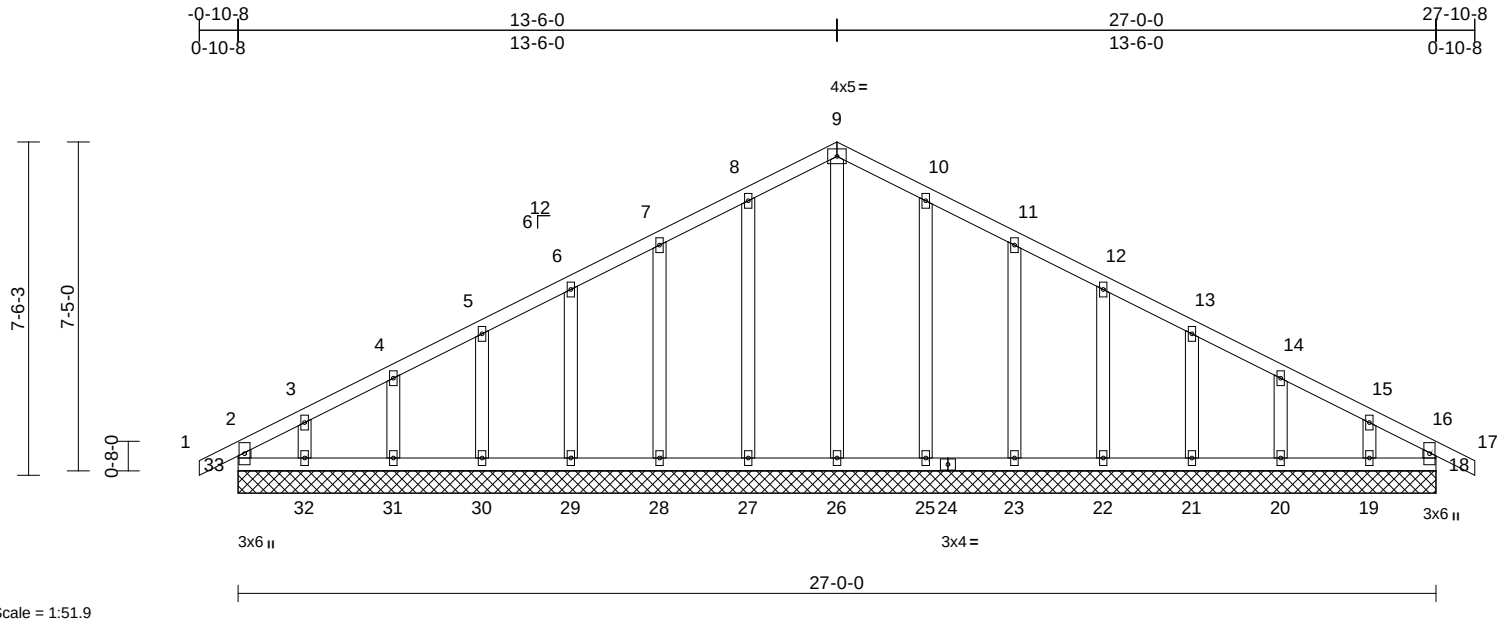

Scale = 1:51.9

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	18	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 122 lb	FT = 10%

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

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

REACTIONS (size) 18=27-0-0, 19=27-0-0, 20=27-0-0, 21=27-0-0, 22=27-0-0, 23=27-0-0, 25=27-0-0, 26=27-0-0, 27=27-0-0, 28=27-0-0, 29=27-0-0, 30=27-0-0, 31=27-0-0, 32=27-0-0, 33=27-0-0
Max Horiz 33=112 (LC 8)
Max Uplift 18=-15 (LC 5), 19=-81 (LC 9), 20=-50 (LC 9), 21=-55 (LC 9), 22=-53 (LC 9), 23=-56 (LC 9), 25=-53 (LC 9), 27=-54 (LC 8), 28=-56 (LC 8), 29=-53 (LC 8), 30=-56 (LC 8), 31=-48 (LC 8), 32=-96 (LC 8), 33=-40 (LC 4)
Max Grav 18=146 (LC 22), 19=131 (LC 1), 20=189 (LC 22), 21=178 (LC 1), 22=181 (LC 22), 23=178 (LC 1), 25=190 (LC 22), 26=194 (LC 18), 27=190 (LC 21), 28=178 (LC 1), 29=181 (LC 21), 30=178 (LC 1), 31=189 (LC 21), 32=133 (LC 15), 33=146 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-33=-129/41, 1-2=0/32, 2-3=-141/63, 3-4=-92/73, 4-5=-64/89, 5-6=-50/115, 6-7=-39/140, 7-8=-30/167, 8-9=-35/191, 9-10=-35/183, 10-11=-30/138, 11-12=-31/104, 12-13=-31/78, 13-14=-37/54, 14-15=-59/46, 15-16=-101/29, 16-17=0/32, 16-18=-129/20
BOT CHORD 32-33=-24/105, 31-32=-24/105, 30-31=-24/105, 29-30=-24/105, 28-29=-24/105, 27-28=-24/105, 26-27=-24/105, 25-26=-24/105, 24-25=-24/105, 23-24=-24/105, 22-23=-24/105, 21-22=-24/105, 20-21=-24/105, 19-20=-24/105, 18-19=-24/105
WEBS 9-26=-154/0, 8-27=-150/78, 7-28=-138/79, 6-29=-141/78, 5-30=-138/78, 4-31=-147/76, 3-32=-101/94, 10-25=-150/77, 11-23=-138/80, 12-22=-141/78, 13-21=-138/78, 14-20=-147/77, 15-19=-101/86

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 33, 15 lb uplift at joint 18, 54 lb uplift at joint 27, 56 lb uplift at joint 28, 53 lb uplift at joint 29, 56 lb uplift at joint 30, 48 lb uplift at joint 31, 96 lb uplift at joint 32, 53 lb uplift at joint 25, 56 lb uplift at joint 23, 53 lb uplift at joint 22, 55 lb uplift at joint 21, 50 lb uplift at joint 20 and 81 lb uplift at joint 19.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	D8	Roof Special	4	1	I45424728 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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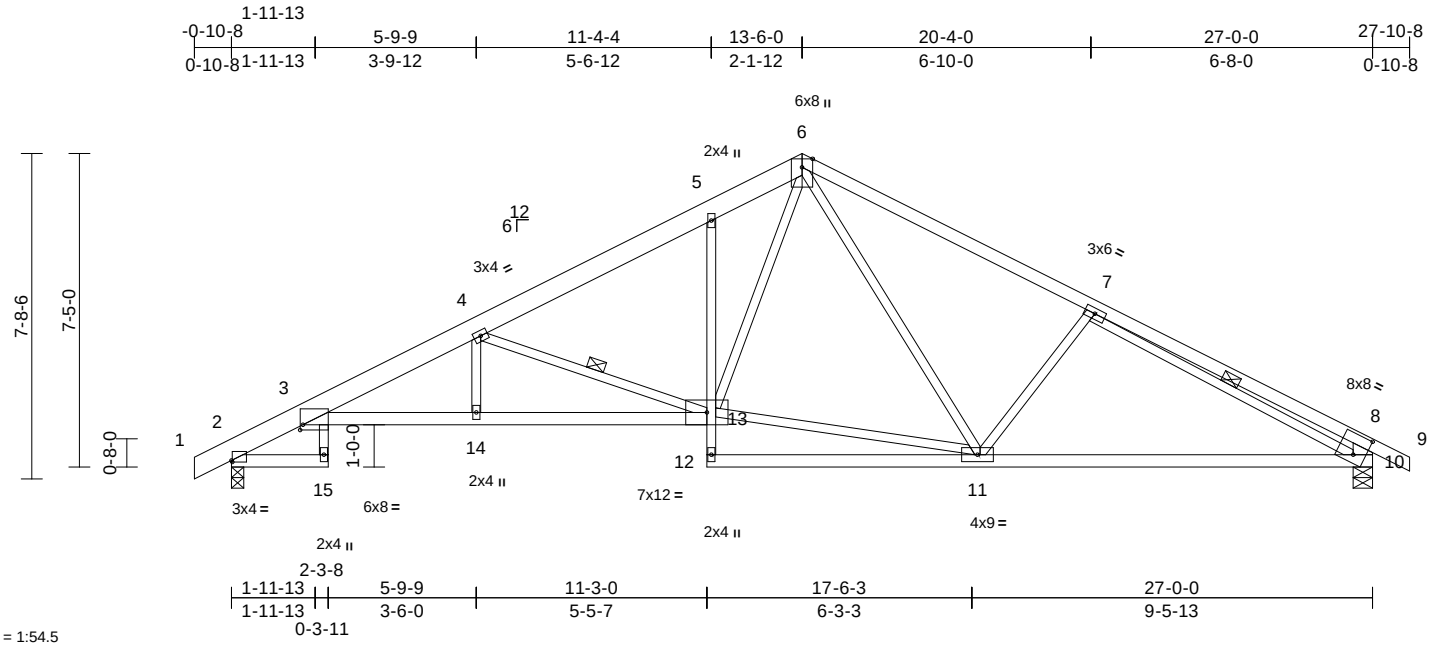

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Plate Offsets (X, Y): [2:0-0-4,0-0-7], [3:0-0-13,0-1-8], [8:0-3-5,0-5-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.18	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.39	10-11	>817	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.25	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	15	>999	240	Weight: 125 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP DSS *Except* 6-9:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 3-13:2x4 SPF 2100F 1.8E, 5-12:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-8:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-15.
WEBS 1 Row at midpt 4-13, 7-10

REACTIONS (size) 2=0-3-8, 10=0-5-8
Max Horiz 2=122 (LC 8)
Max Uplift 2=-166 (LC 8), 10=-173 (LC 9)
Max Grav 2=1281 (LC 1), 10=1276 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-3=-698/152, 3-4=-2838/362, 4-5=-1867/235, 5-6=-1753/311, 6-7=-1690/256, 7-8=-847/194, 8-9=0/35, 8-10=-632/188
BOT CHORD 2-15=-33/0, 3-14=-379/2648, 13-14=-378/2648, 12-13=0/90, 5-13=-214/142, 11-12=-8/63, 10-11=-147/1634
WEBS 3-15=0/68, 4-14=0/243, 4-13=-1161/276, 11-13=-45/1207, 6-13=-205/906, 6-11=-116/397, 7-11=-388/249, 7-10=-1113/106

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 166 lb uplift at joint 2 and 173 lb uplift at joint 10.
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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	V1	Valley	1	1	Job Reference (optional)	I45424729

Wheeler Lumber, Waverly, KS - 66871,

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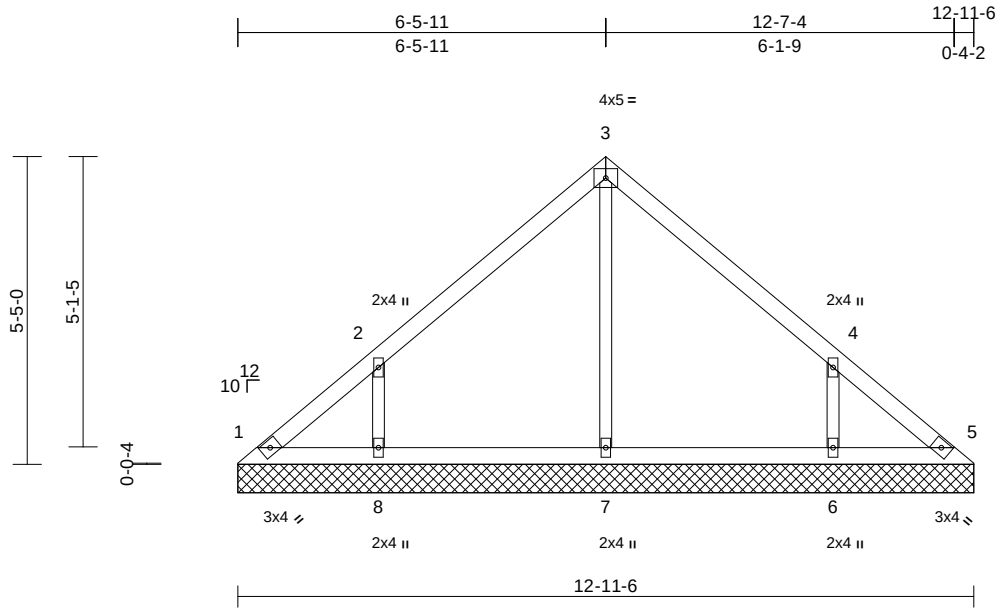

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 39 lb	FT = 10%

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

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

REACTIONS (size) 1=12-11-6, 5=12-11-6, 6=12-11-6, 7=12-11-6, 8=12-11-6
Max Horiz 1=-133 (LC 4)
Max Uplift 1=-34 (LC 4), 5=-11 (LC 5), 6=-178 (LC 9), 8=-178 (LC 8)
Max Grav 1=119 (LC 16), 5=102 (LC 15), 6=360 (LC 16), 7=257 (LC 1), 8=360 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-141/103, 2-3=-171/112, 3-4=-167/88, 4-5=-123/67
BOT CHORD 1-8=-39/95, 7-8=-39/95, 6-7=-39/95, 5-6=-39/95
WEBS 3-7=-172/2, 2-8=-293/219, 4-6=-293/219

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 1, 11 lb uplift at joint 5, 178 lb uplift at joint 8 and 178 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS	
Lot 27 OS	V2	Valley	1	1	Job Reference (optional)	I45424730

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Mar 22 2021 Print: 8.430 S Mar 22 2021 MiTek Industries, Inc. Tue Mar 30 12:58:52
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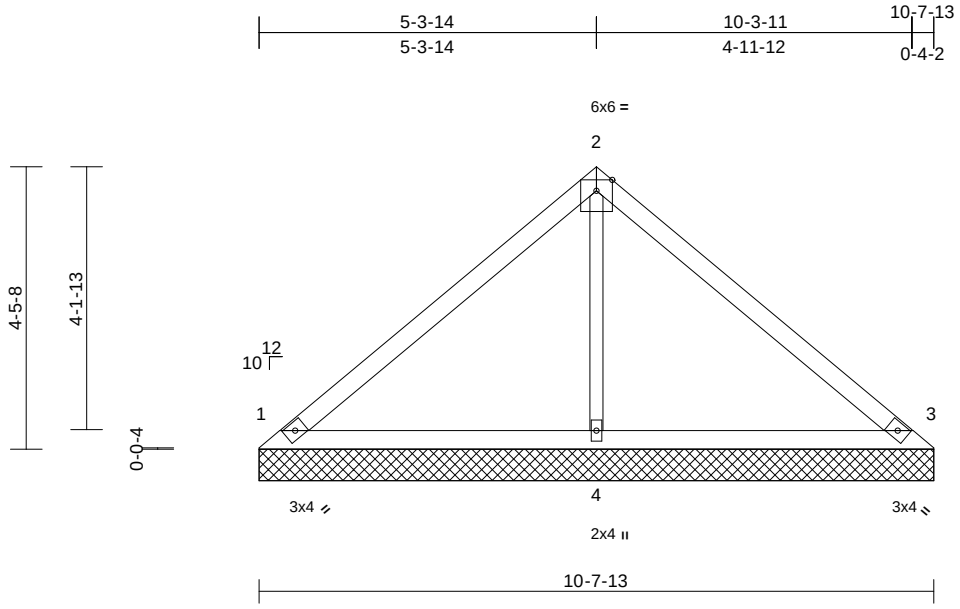

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 30 lb	FT = 10%

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

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

REACTIONS (size) 1=10-7-13, 3=10-7-13, 4=10-7-13
Max Horiz 1=-108 (LC 4)
Max Uplift 1=-42 (LC 8), 3=-54 (LC 9), 4=-9 (LC 8)
Max Grav 1=248 (LC 1), 3=248 (LC 1), 4=394 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-205/95, 2-3=-204/76
BOT CHORD 1-4=-24/95, 3-4=-24/95
WEBS 2-4=-242/60

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 1, 54 lb uplift at joint 3 and 9 lb uplift at joint 4.
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

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	V3	Valley	1	1	I45424731

Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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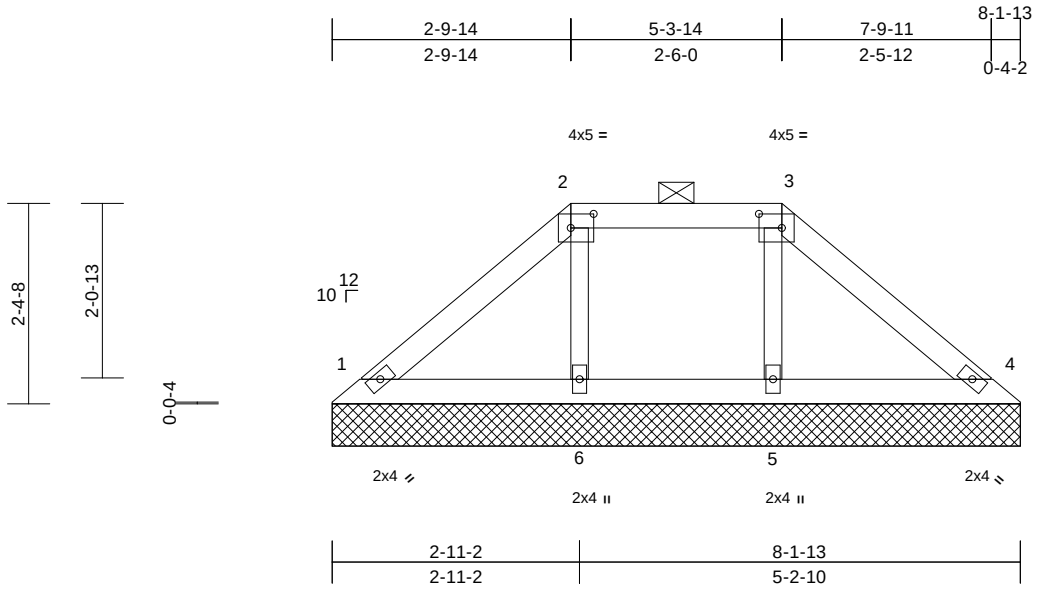

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Plate Offsets (X, Y): [2:0-3-4,0-2-0], [3:0-3-4,0-2-0]

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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 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 2-0-0 oc purlins (6-0-0 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=8-1-13, 4=8-1-13, 5=8-1-13, 6=8-1-13
Max Horiz 1=-54 (LC 4)
Max Uplift 1=-24 (LC 9), 4=-32 (LC 9), 5=-14 (LC 4), 6=-27 (LC 5)
Max Grav 1=136 (LC 1), 4=136 (LC 1), 5=201 (LC 22), 6=201 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-90/45, 2-3=-28/51, 3-4=-90/30
BOT CHORD 1-6=-19/46, 5-6=-18/40, 4-5=-16/44
WEBS 3-5=-148/46, 2-6=-148/59

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) Provide adequate drainage to prevent water ponding.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 1, 32 lb uplift at joint 4, 14 lb uplift at joint 5 and 27 lb uplift at joint 6.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

March 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 27 OS
Lot 27 OS	V4	Valley	1	1	I45424732
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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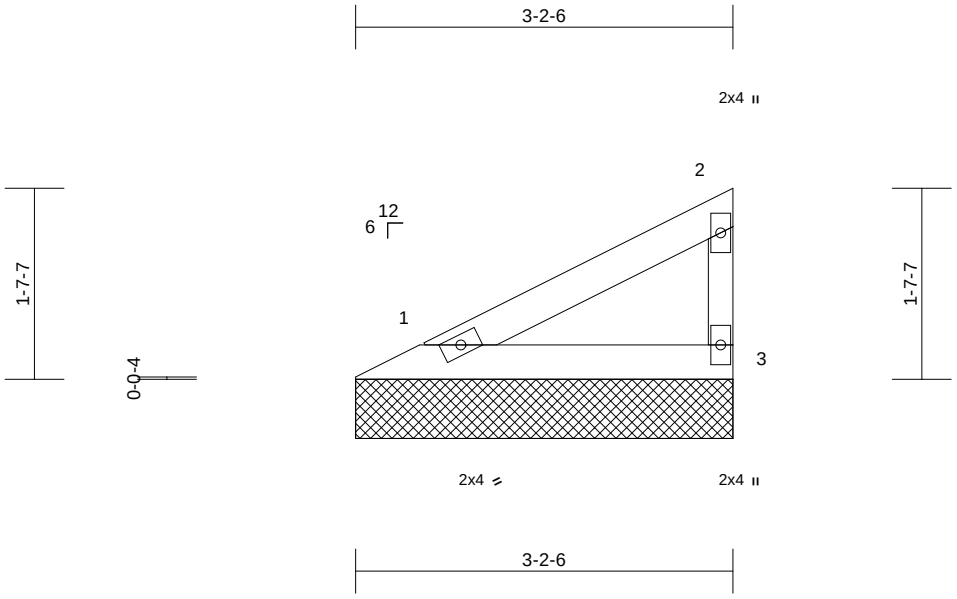


Scale = 1:19.5

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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	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: 8 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-2-6, 3=3-2-6
Max Horiz 1=52 (LC 5)
Max Uplift 1=-14 (LC 8), 3=-28 (LC 8)
Max Grav 1=113 (LC 1), 3=113 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-48/31, 2-3=-88/43
BOT CHORD 1-3=-18/14

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1 and 28 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

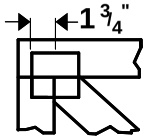
LOAD CASE(S) Standard

March 31,2021

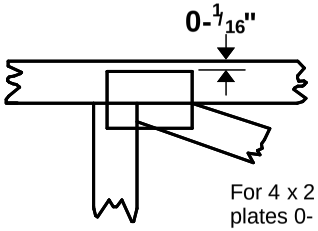
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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.

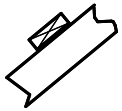
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

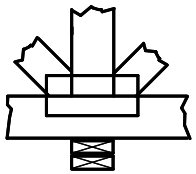
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

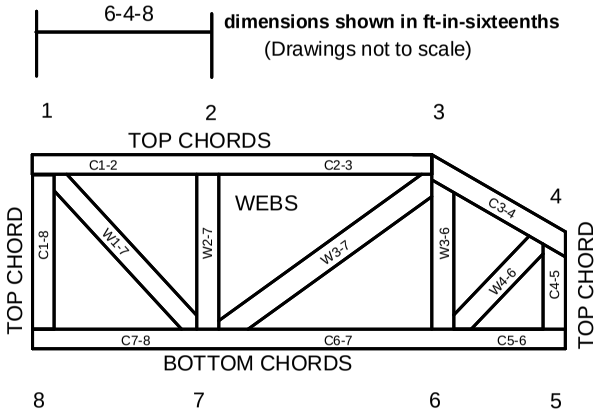


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.