MiTek®

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

Re: 230872
Lot 17 TCR

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

Pages or sheets covered by this seal: I63476752 thru I63476869

My license renewal date for the state of Missouri is December 31, 2025.

Missouri COA: Engineering 001193

February 8,2024

Sevier, Scott ,Engineer

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476752
230872	A1	Hip Girder	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:08 Page: 1
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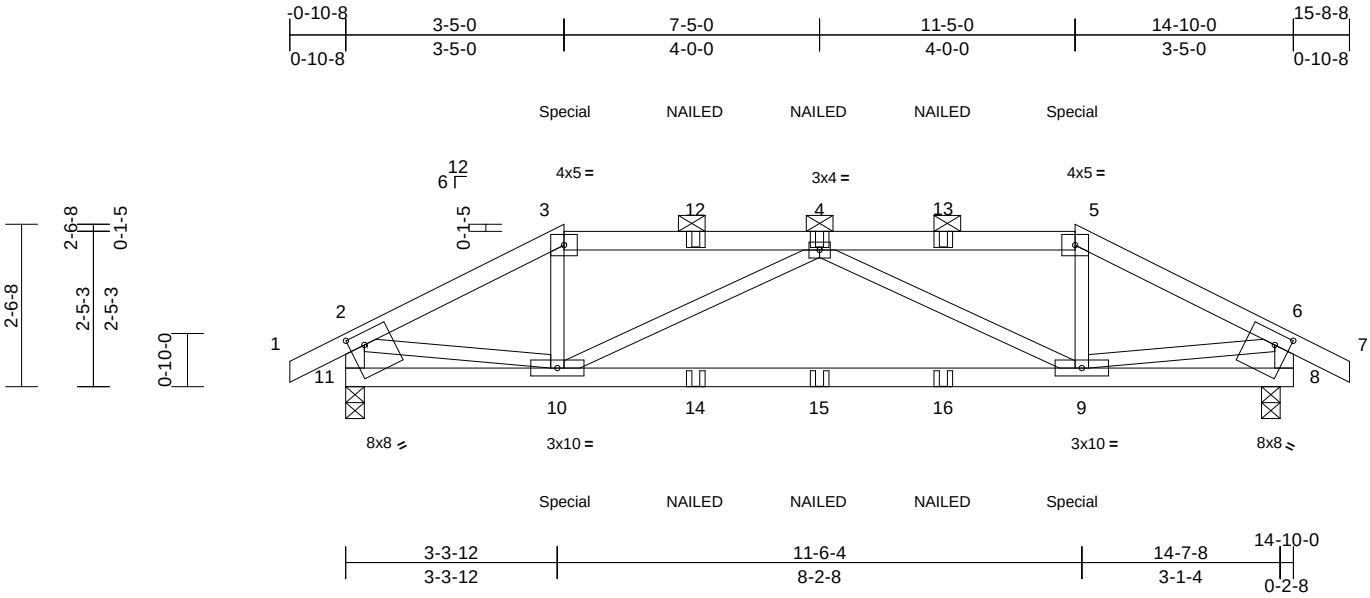

Scale = 1:36.1

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

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	0.32	Vert(LL)	-0.14	9-10	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.29	9-10	>597	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.39	Horz(CT)	0.02	8	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	9-10	>999	240		
BCDL	10.0										Weight: 53 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-2,8-6:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-5 oc purlins, except end verticals, and 2-0-0 oc purlins (5-1-13 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 9-1-3 oc bracing.

REACTIONS (size) 8=0-3-8, 11=0-3-8
Max Horiz 11=-50 (LC 10)
Max Uplift 8=-195 (LC 13), 11=-195 (LC 12)
Max Grav 8=973 (LC 47), 11=973 (LC 45)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-1422/248, 3-4=-1239/237, 4-5=-1239/237, 5-6=-1422/248, 6-7=0/40, 2-11=-982/187, 6-8=-982/186
BOT CHORD 10-11=-78/145, 9-10=-403/1663, 8-9=-62/130
WEBS 3-10=0/341, 5-9=0/340, 2-10=-174/1241, 6-9=-177/1242, 4-10=-512/231, 4-9=-512/231

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 195 lb uplift at joint 11 and 195 lb uplift at joint 8.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 184 lb down and 134 lb up at 3-5-0, and 184 lb down and 134 lb up at 11-5-0 on top chord, and 61 lb down at 3-5-0, and 61 lb down at 11-4-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51, 2-3=-51, 3-5=-61, 5-6=-51, 6-7=-51, 8-11=-20
Concentrated Loads (lb)
Vert: 3=-119 (F), 5=-119 (F), 10=-41 (F), 9=-41 (F), 4=-46 (F), 12=-46 (F), 13=-46 (F), 14=-17 (F), 15=-17 (F), 16=-17 (F)

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476753
230872	A2	Hip	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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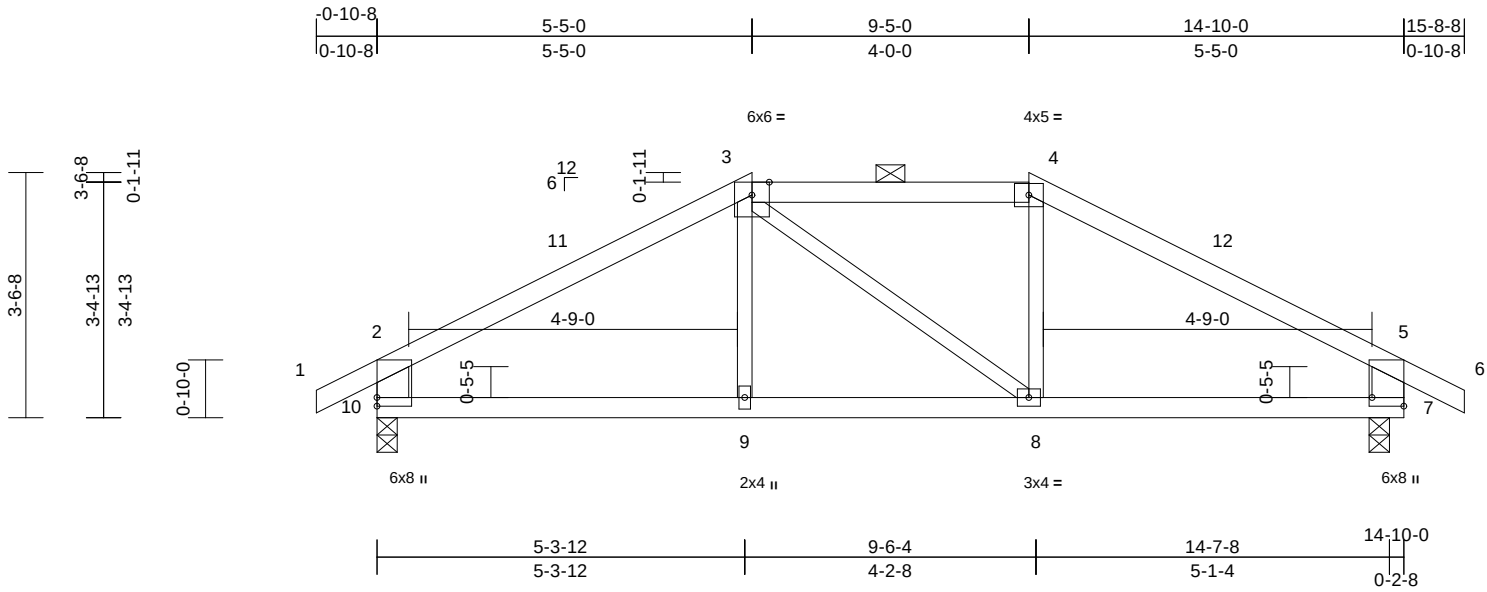

Scale = 1:33.3

Plate Offsets (X, Y): [7:Edge,0-5-8]

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	0.62	Vert(LL)	-0.07	8-9	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.13	8-9	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.02	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	8-9	>999	240		
BCDL	10.0										Weight: 48 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2,7-5:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-15 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 10=0-3-8
Max Horiz 10=64 (LC 11)
Max Uplift 7=-89 (LC 13), 10=-89 (LC 12)
Max Grav 7=752 (LC 37), 10=752 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-869/71, 3-4=-695/104, 4-5=-869/70, 5-6=0/43, 2-10=-684/128, 5-7=-685/128
BOT CHORD 9-10=-39/699, 8-9=-41/694, 7-8=-7/699
WEBS 3-9=0/168, 3-8=-96/97, 4-8=0/177

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 10 and 89 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476754
230872	A3	Common	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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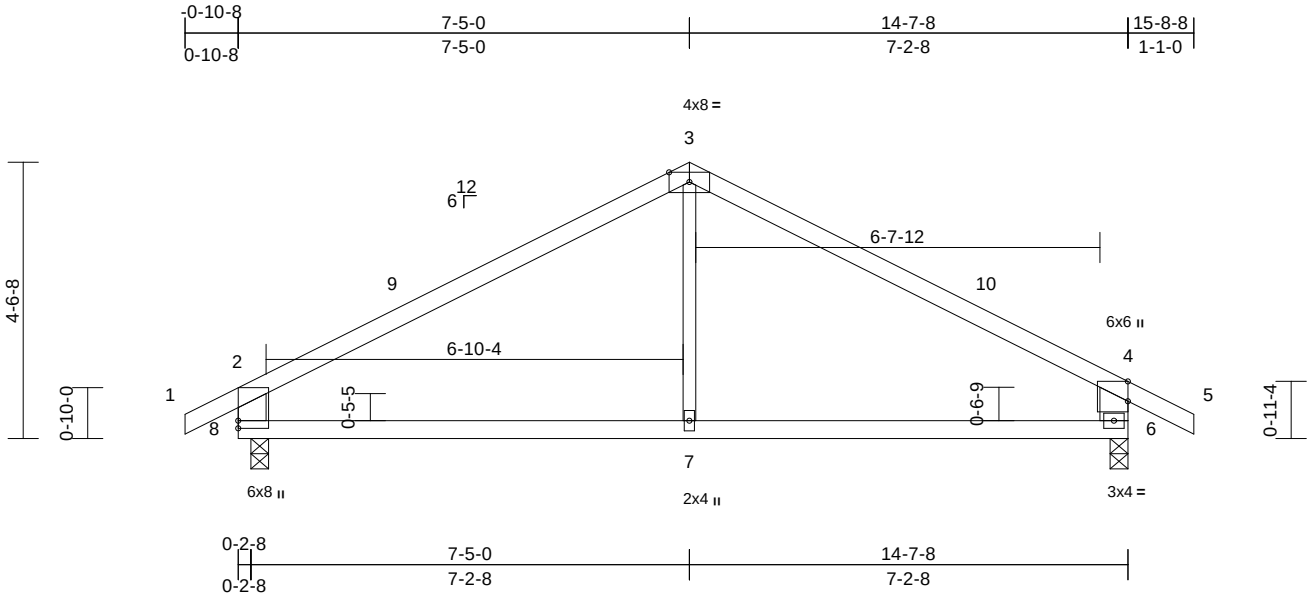

Scale = 1:37.9

Plate Offsets (X, Y): [4:0-3-15,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	0.71	Vert(LL)	-0.08	7-8	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.16	7-8	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.03	7-8	>999	240		
BCDL	10.0										Weight: 43 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 7-3:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6=0-3-8, 8=0-3-8
Max Horiz 8=80 (LC 11)
Max Uplift 6=-108 (LC 13), 8=-104 (LC 12)
Max Grav 6=732 (LC 3), 8=718 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-773/109, 3-4=-774/112, 4-5=0/41, 2-8=-647/157, 4-6=-660/158
BOT CHORD 7-8=-18/603, 6-7=-18/603
WEBS 3-7=0/297

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 104 lb uplift at joint 8 and 108 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.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476755
230872	A4	Common	5	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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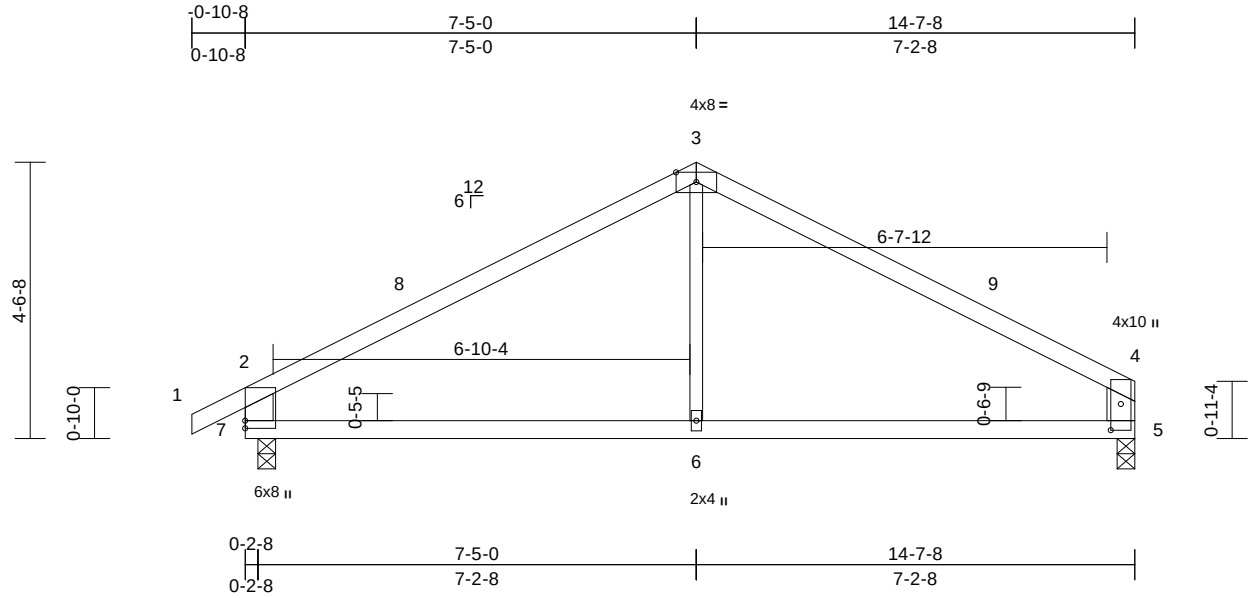

Scale = 1:37.9

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

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	0.71	Vert(LL)	-0.09	6-7	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.18	6-7	>957	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.04	6-7	>999	240		
BCDL	10.0										Weight: 42 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 6-3:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=0-3-8, 7=0-3-8
Max Horiz 7=84 (LC 9)
Max Uplift 5=-77 (LC 13), 7=-104 (LC 12)
Max Grav 5=653 (LC 3), 7=721 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-775/109, 3-4=-769/110, 2-7=-646/156, 4-5=-551/124
BOT CHORD 6-7=-29/600, 5-6=-29/600
WEBS 3-6=0/288

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 104 lb uplift at joint 7 and 77 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476756
230872	A5	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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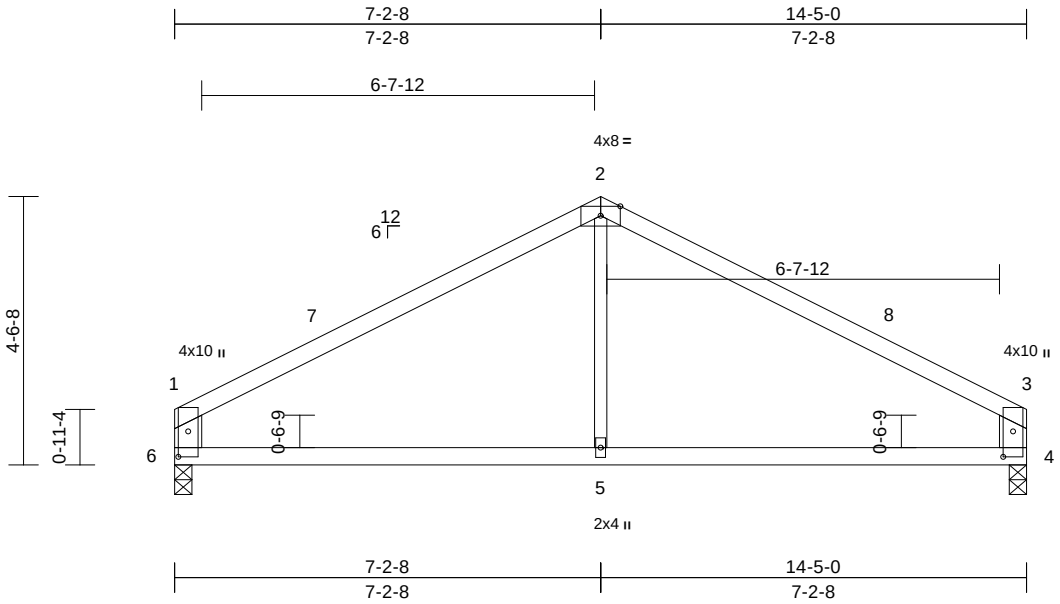

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Plate Offsets (X, Y): [1:0-5-3,0-2-0], [3:0-5-3,0-2-0]

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	0.72	Vert(LL)	-0.08	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.15	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	4	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.03	5-6	>999	240		
BCDL	10.0										Weight: 40 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 5-2:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4=0-3-8, 6=0-3-8
Max Horiz 6=-73 (LC 8)
Max Uplift 4=-76 (LC 13), 6=-76 (LC 12)
Max Grav 4=646 (LC 3), 6=646 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-745/107, 2-3=-745/107, 1-6=-540/123, 3-4=-540/123
BOT CHORD 5-6=-26/579, 4-5=-26/579
WEBS 2-5=0/271

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 6 and 76 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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	B1	Roof Special Girder	1	2	Job Reference (optional) I63476757

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 E Jan 4 2024 Print: 8.730 E Jan 4 2024 MiTek Industries, Inc. Wed Feb 07 11:10:45 Page: 1
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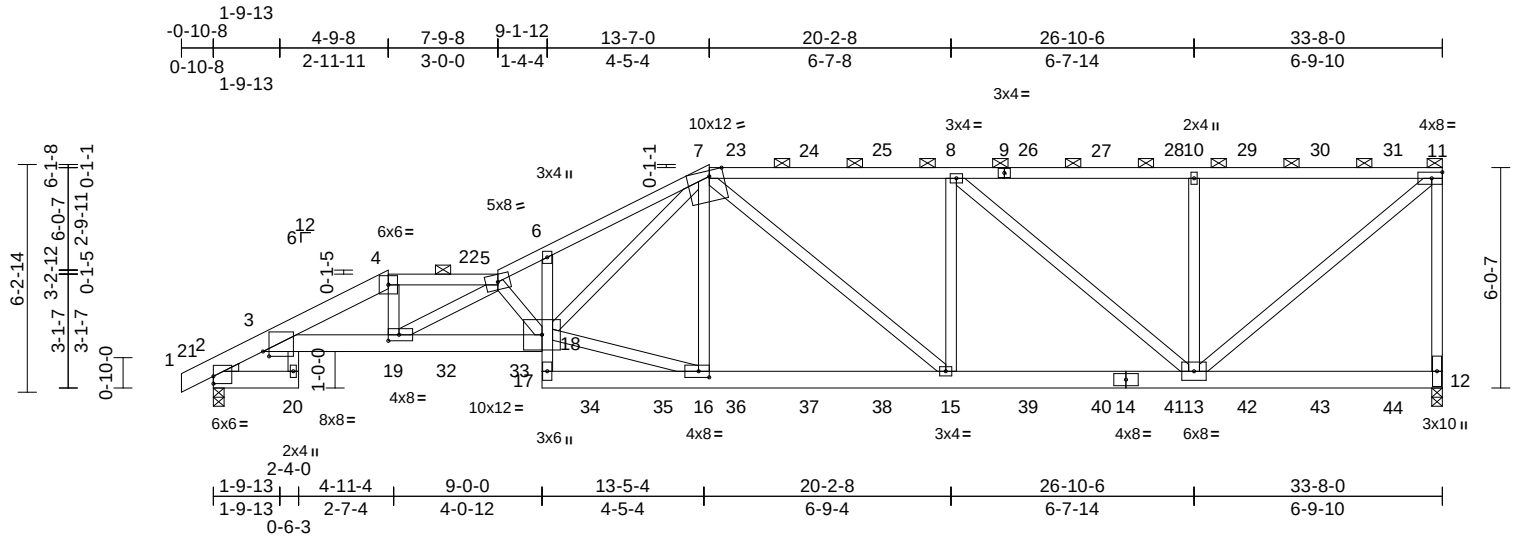

Scale = 1:63.1

Plate Offsets (X, Y): [2:Edge,0-2-7], [3:0-2-0,0-1-10], [7:0-4-9,Edge], [16:0-3-8,0-2-0], [19:0-3-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.27	17	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.46	17	>865	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.57	Horz(CT)	0.21	12	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.29	17	>999	240		
BCDL	10.0										Weight: 382 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-4:2x6 SP 2400F 2.0E
BOT CHORD 2x6 SPF No.2 *Except* 3-18:2x6 SP 2400F 2.0E, 6-17:2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE Left: 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-3 oc purlins, except end verticals, and 2-0-0 oc purlins (4-6-3 max.): 4-5, 7-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-20.

REACTIONS (lb/size) 2=2495/0-3-8, 12=2124/0-3-8
Max Horiz 2=237 (LC 9)
Max Uplift 2=-929 (LC 12), 12=-1028 (LC 9)
Max Grav 2=3028 (LC 29), 12=2925 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-21=0/5, 2-21=0/8, 2-3=-2019/546, 3-4=-8015/2603, 4-22=-7612/2512, 5-22=-7609/2512, 5-6=-8931/2970, 6-7=-8633/2951, 7-23=-4363/1476, 23-24=-4365/1476, 24-25=-4365/1477, 8-25=-4367/1477, 8-9=-2954/1028, 9-26=-2954/1028, 26-27=-2954/1028, 27-28=-2954/1028, 10-28=-2954/1028, 10-29=-2954/1028, 29-30=-2954/1028, 30-31=-2954/1028, 11-31=-2954/1028, 11-12=-2737/1026
BOT CHORD 2-20=-193/45, 3-19=-2447/7422, 19-32=-3292/9874, 32-33=-3292/9874, 18-33=-3292/9874, 17-18=-96/265, 6-18=-159/445, 17-34=-339/961, 34-35=-339/961, 16-35=-339/961, 16-36=-1522/4347, 36-37=-1522/4347, 37-38=-1522/4347, 15-38=-1522/4347, 15-39=-1548/4276, 39-40=-1548/4276, 14-40=-1548/4276, 14-41=-1548/4276, 13-41=-1548/4276, 13-42=-67/58, 42-43=-67/58, 43-44=-67/58, 12-44=-67/58
WEBS 3-20=-69/292, 4-19=-843/2751, 5-19=-2711/915, 5-18=-3329/1116, 16-18=-1213/3471, 7-18=-1706/4950, 7-16=-324/184, 7-15=-371/147, 8-15=-2/586, 8-13=-1854/638, 10-13=-757/472, 11-13=-1307/3759

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-6-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.

February 8,2024

Continued on page 2

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	B1	Roof Special Girder	1	2	Job Reference (optional) I63476757

12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1028 lb uplift at joint 12 and 929 lb uplift at joint 2.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 127 lb down and 92 lb up at 14-4-0, 131 lb down and 92 lb up at 16-4-0, 131 lb down and 92 lb up at 18-4-0, 131 lb down and 92 lb up at 20-4-0, 131 lb down and 92 lb up at 22-4-0, 131 lb down and 92 lb up at 24-4-0, 131 lb down and 92 lb up at 26-4-0, 131 lb down and 92 lb up at 28-4-0, and 131 lb down and 92 lb up at 30-4-0, and 131 lb down and 92 lb up at 32-4-0 on top chord, and 519 lb down and 171 lb up at 4-9-8, 187 lb down and 66 lb up at 6-4-12, 187 lb down and 83 lb up at 8-4-12, 197 lb down and 105 lb up at 10-4-0, 255 lb down and 131 lb up at 12-4-0, 63 lb down and 17 lb up at 14-4-0, 63 lb down and 17 lb up at 16-4-0, 63 lb down and 17 lb up at 18-4-0, 63 lb down and 17 lb up at 20-4-0, 63 lb down and 17 lb up at 22-4-0, 63 lb down and 17 lb up at 24-4-0, 63 lb down and 17 lb up at 26-4-0, 63 lb down and 17 lb up at 28-4-0, and 63 lb down and 17 lb up at 30-4-0, and 63 lb down and 17 lb up at 32-4-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-4=-51, 4-5=-61, 5-7=-51, 7-11=-61, 2-20=-20, 3-18=-20, 12-17=-20
   Concentrated Loads (lb)
   Vert: 19=-492 (F), 15=-33 (F), 8=-43 (F), 23=-44 (F), 24=-43 (F), 25=-43 (F), 26=-43 (F), 27=-43 (F), 28=-43 (F), 29=-43 (F), 30=-43 (F), 31=-43 (F), 32=-162 (F), 33=-153 (F), 34=-183 (F), 35=-209 (F), 36=-33 (F), 37=-33 (F), 38=-33 (F), 39=-33 (F), 40=-33 (F), 41=-33 (F), 42=-33 (F), 43=-33 (F), 44=-33 (F)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476758
230872	B2	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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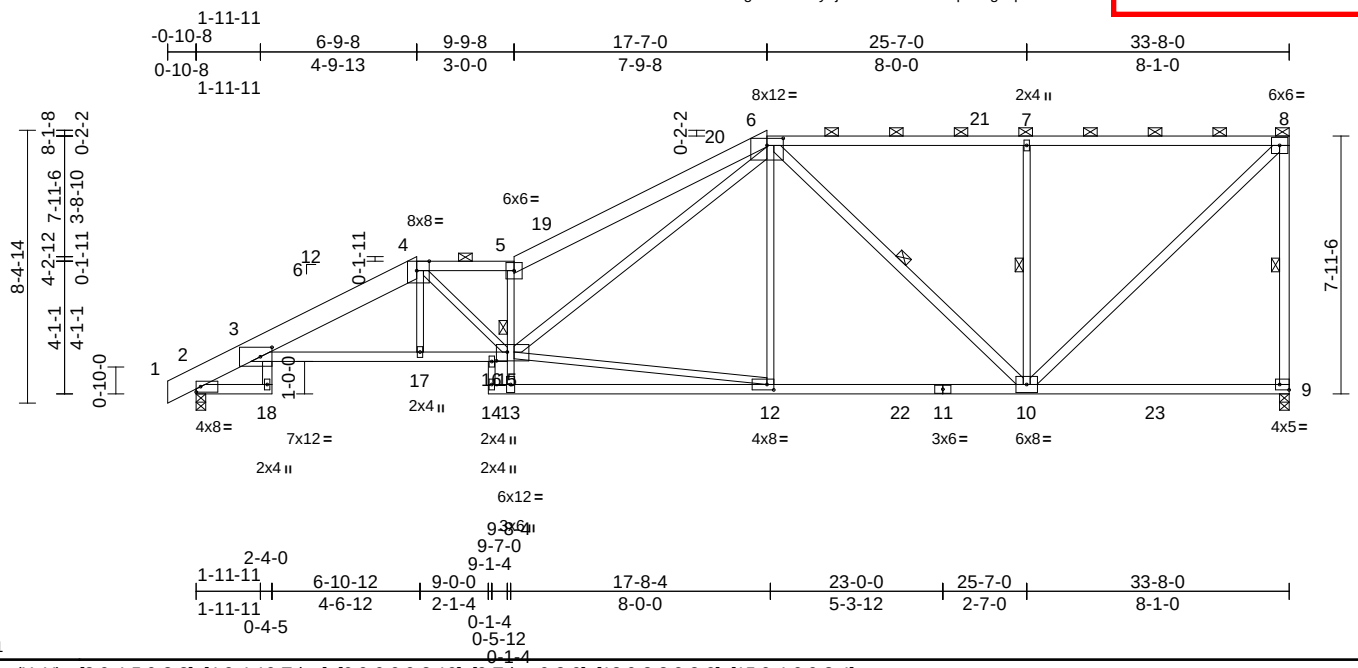

Scale = 1:71

Plate Offsets (X, Y): [3:0-4-5,0-3-8], [4:0-4-10,Edge], [6:0-6-0,0-2-10], [9:Edge,0-2-0], [12:0-2-8,0-2-0], [15:0-4-0,0-3-4]

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	0.71	Vert(LL)	-0.42	12-13	>943	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.68	12-13	>589	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.29	9	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	15	>999	240		
BCDL	10.0										Weight: 181 lb	FT = 10%

LUMBER

TOP CHORD 2x8 SP 2400F 2.0E *Except* 4-5:2x4 SPF No.2, 5-6:2x6 SP 2400F 2.0E, 6-8:2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 2-18:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 8-9,18-3,6-10,8-10,6-15:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-5 oc purlins, except end verticals, and 2-0-0 oc purlins (2-5-2 max.): 4-5, 6-8.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-18.

WEBS 1 Row at midpt 8-9, 5-13, 6-10, 7-10

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=320 (LC 9)
Max Uplift 2=-211 (LC 12), 9=-243 (LC 9)
Max Grav 2=1917 (LC 3), 9=1940 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/8, 2-3=-1197/65, 3-4=-3907/413, 4-5=-4464/483, 5-6=-5204/678, 6-7=-1574/197, 7-8=-1574/197, 8-9=-1726/276

BOT CHORD 2-18=-40/0, 3-17=-447/3623, 16-17=-445/3627, 15-16=-445/3627, 13-14=0/0, 12-13=0/139, 10-12=-292/2089, 9-10=-106/80

WEBS 3-18=0/81, 14-16=-300/0, 4-17=0/199, 4-15=-60/1176, 6-12=-21/371, 13-15=0/563, 5-15=-2442/445, 6-10=-791/136, 8-10=-272/2151, 7-10=-807/273, 6-15=-525/3280, 12-15=-301/1962

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 243 lb uplift at joint 9 and 211 lb uplift at joint 2.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	
230872	B3	Roof Special	1	1	Job Reference (optional)	I63476759

Wheeler Lumber, Waverly, KS - 66871,
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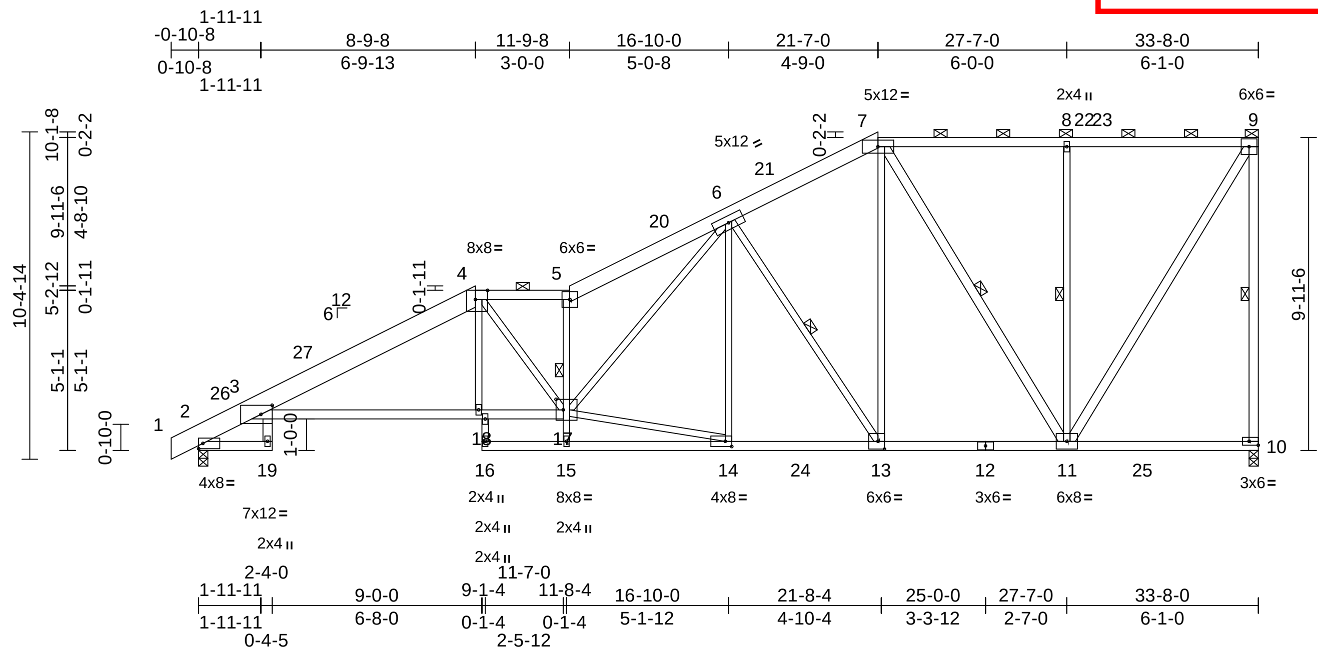

Scale = 1:73.2

Plate Offsets (X, Y): [3:0-4-5,0-3-8], [4:0-4-10,Edge], [10:Edge,0-1-8], [13:0-2-8,0-3-0], [14:0-2-8,0-2-0], [17:0-2-12,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.40	3-18	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.63	3-18	>638	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.33	10	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	17	>999	240		
BCDL	10.0										Weight: 199 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 5-7:2x6 SPF No.2, 4-1:2x8 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except* 3-17:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 9-10:2x4 SPF 2100F 1.8E, 19-3,11-7,11-9:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-14 oc purlins, except end verticals, and 2-0-0 oc purlins (2-6-10 max.): 4-5, 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-19.
WEBS 1 Row at midpt 9-10, 5-15, 6-13, 7-11, 8-11

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=403 (LC 11)
Max Uplift 2=-231 (LC 12), 10=-228 (LC 9)
Max Grav 2=1988 (LC 48), 10=1908 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 4-5=-3691/467, 5-6=-4262/603, 6-7=-1745/266, 7-8=-999/182, 8-9=-998/181, 9-10=-1748/244, 1-2=0/8, 2-3=-1285/51, 3-4=-3615/412
BOT CHORD 2-19=-40/0, 3-18=-462/3296, 17-18=-458/3306, 15-16=0/6, 14-15=-1/80, 13-14=-272/2179, 11-13=-238/1519, 10-11=-136/103
WEBS 3-19=0/81, 16-18=0/58, 15-17=0/239, 5-17=-1946/339, 6-17=-407/2512, 6-13=-1294/281, 7-13=-166/1375, 7-11=-1034/166, 8-11=-608/215, 9-11=-219/1884, 4-17=-37/636, 4-18=0/408, 6-14=-200/113, 14-17=-278/2137

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 228 lb uplift at joint 10 and 231 lb uplift at joint 2.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476760
230872	B4	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:17 Page: 1
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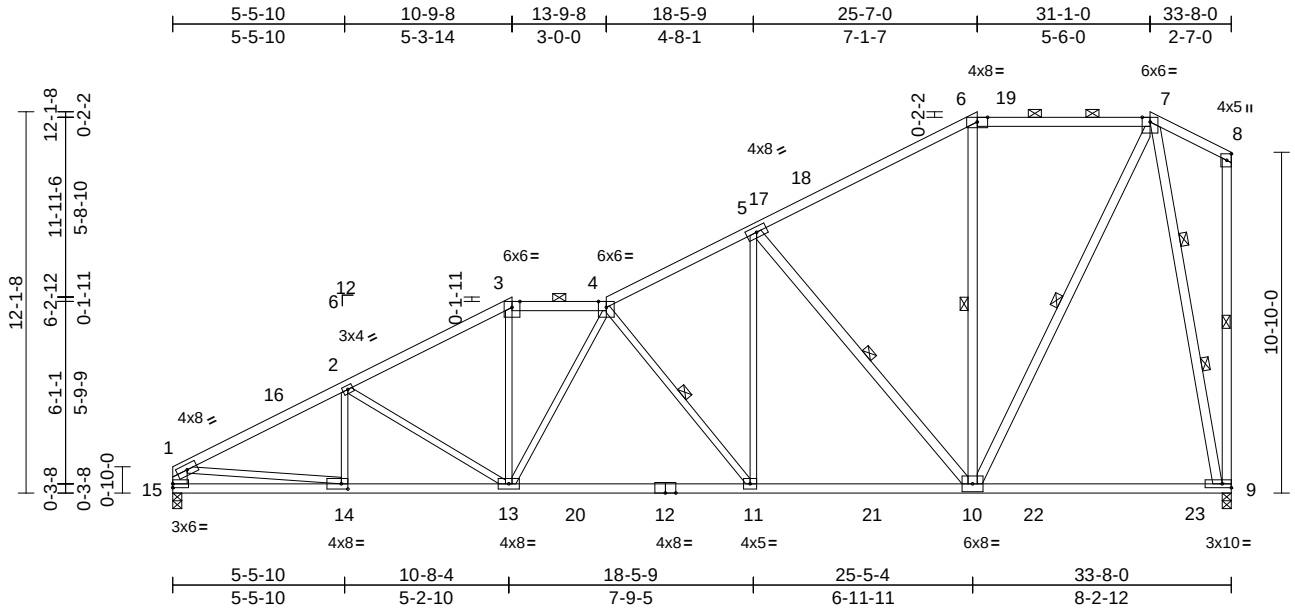

Scale = 1:73.3

Plate Offsets (X, Y): [14:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.28	9-10	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.43	11-13	>931	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.06	9	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	11-13	>999	240		
BCDL	10.0										Weight: 179 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 12-9:2x4 SPF 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 10-5,10-6,10-7,9-7:2x4 SPF No.2, 9-8:2x4 SPF 2100F 1.8E, 15-1:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-4 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-2 max.): 3-4, 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-11, 5-10, 6-10, 7-10, 8-9
WEBS 2 Rows at 1/3 pts 7-9

REACTIONS (size) 9=0-3-8, 15=0-3-8
Max Horiz 15=456 (LC 9)
Max Uplift 9=-198 (LC 12), 15=-221 (LC 12)
Max Grav 9=1911 (LC 3), 15=1942 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3070/365, 2-3=-2774/357, 3-4=-2395/355, 4-5=-2281/314, 5-6=-1269/236, 6-7=-1032/263, 7-8=-219/164, 8-9=-215/117, 1-15=-1788/249
BOT CHORD 14-15=-426/525, 13-14=-481/2675, 11-13=-376/2601, 10-11=-235/2003, 9-10=-138/366
WEBS 2-14=-161/90, 2-13=-336/145, 3-13=-33/940, 4-11=-967/226, 5-11=-84/1172, 5-10=-1507/329, 6-10=-61/259, 7-10=-233/1610, 7-9=-1667/265, 1-14=-218/2241, 4-13=-446/40

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 221 lb uplift at joint 15 and 198 lb uplift at joint 9.
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

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	C1	Roof Special	1	1	I63476761 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:22:17 Page: 1

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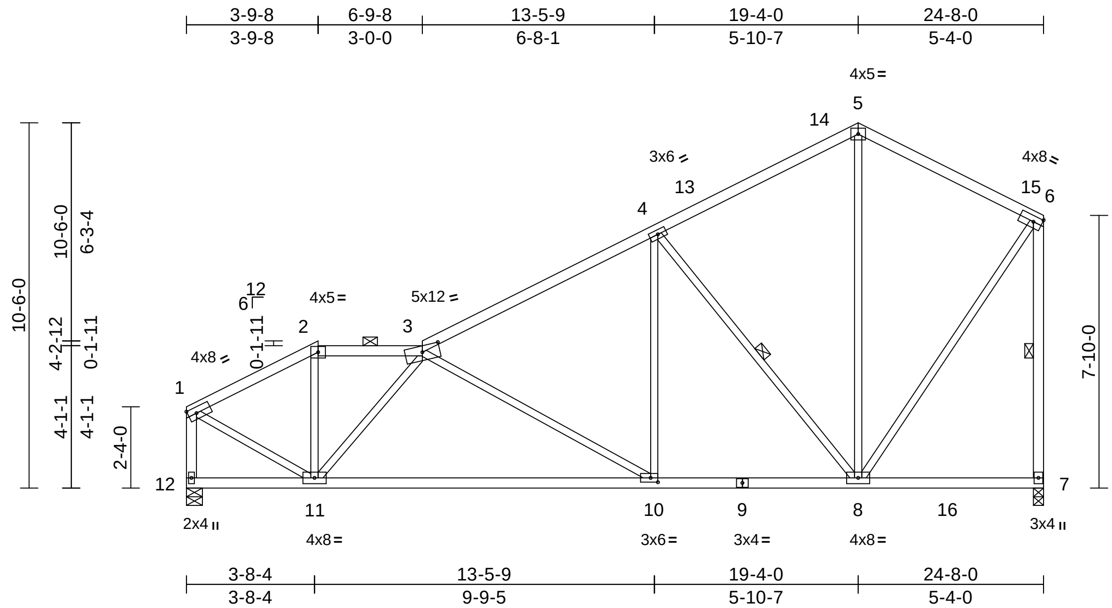

Scale = 1:66.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.32	10-11	>915	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.50	10-11	>583	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.03	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	10-11	>999	240		
BCDL	10.0										Weight: 114 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 9-7:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-6,12-1:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-9-1 oc purlins, except end verticals, and 2-0-0 oc purlins (5-4-1 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 11-12.
WEBS 1 Row at midpt 6-7, 4-8

REACTIONS (size) 7=0-3-8, 12=0-5-8
Max Horiz 12=342 (LC 11)
Max Uplift 7=-160 (LC 12), 12=-159 (LC 12)
Max Grav 7=1370 (LC 3), 12=1355 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-1335/135, 2-3=-1139/150, 3-4=-1492/190, 4-5=-741/175, 5-6=-693/197, 6-7=-1225/197, 1-12=-1360/153
BOT CHORD 11-12=-333/144, 10-11=-297/1667, 8-10=-142/1264, 7-8=-104/81
WEBS 2-11=0/418, 6-8=-101/976, 1-11=-88/1320, 5-8=-61/378, 4-8=-1101/248, 4-10=0/719, 3-10=-510/184, 3-11=-843/160

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 159 lb uplift at joint 12 and 160 lb uplift at joint 7.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476762
230872	C2	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:18 Page: 1
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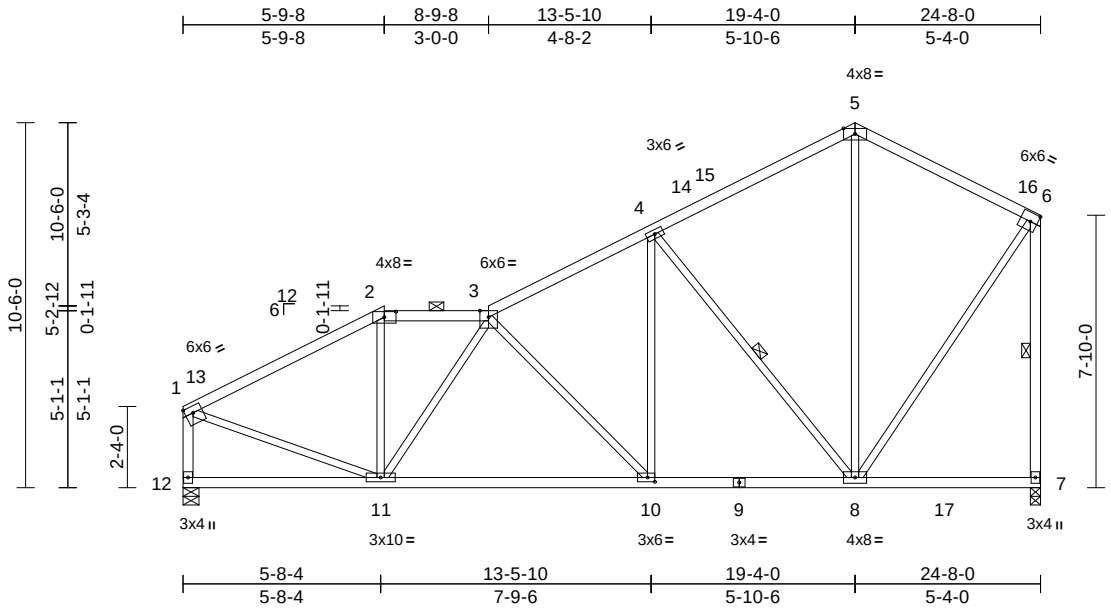

Scale = 1:66.3

Plate Offsets (X, Y): [1:Edge,0-2-4], [2:0-4-0,0-1-15], [10:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.17	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.28	10-11	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.03	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	10-11	>999	240		
BCDL	10.0										Weight: 117 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-8 oc purlins, except end verticals, and 2-0-0 oc purlins (5-1-5 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 4-8

REACTIONS (size) 7=0-3-8, 12=0-5-8
Max Horiz 12=342 (LC 9)
Max Uplift 7=-160 (LC 12), 12=-159 (LC 12)
Max Grav 7=1370 (LC 3), 12=1370 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1485/176, 2-3=-1246/202, 3-4=-1403/202, 4-5=-744/171, 5-6=-696/197, 6-7=-1231/196, 1-12=-1261/182
BOT CHORD 11-12=-328/179, 10-11=-243/1524, 8-10=-142/1222, 7-8=-105/81
WEBS 2-11=0/395, 3-11=-523/64, 6-8=-101/983, 1-11=-84/1258, 5-8=-50/349, 4-8=-1036/244, 4-10=-25/730, 3-10=-481/156

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 159 lb uplift at joint 12 and 160 lb uplift at joint 7.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476763
230872	C3	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:18 Page: 1
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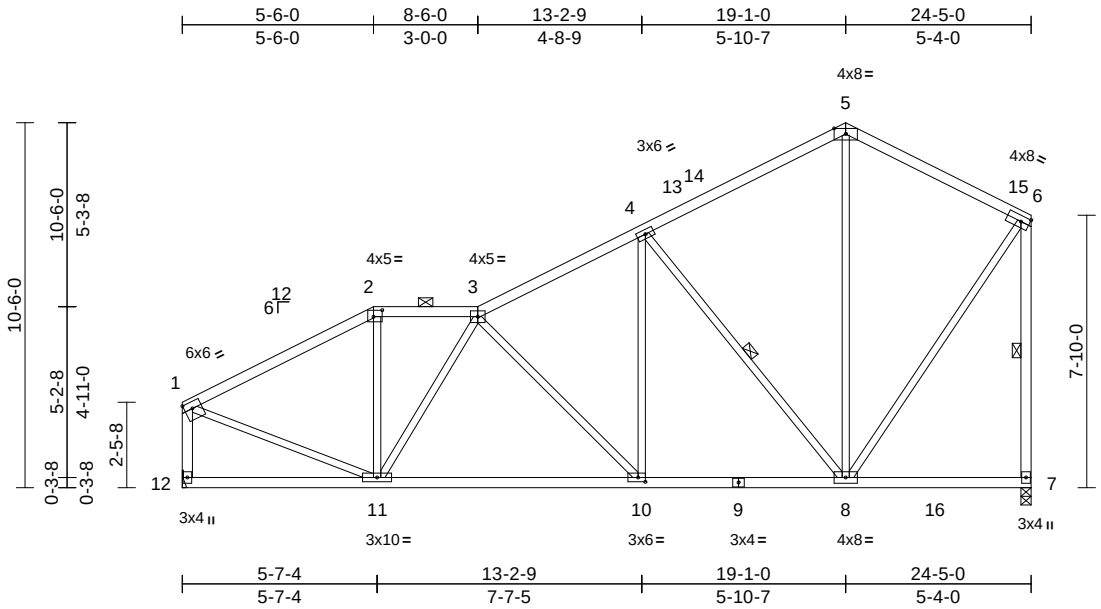

Scale = 1:66.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.55	Vert(LL)	-0.16	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.26	10-11	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.03	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	10-11	>999	240		
BCDL	10.0										Weight: 116 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-4 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-13 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 4-8

REACTIONS (size) 7=0-3-8, 12= Mechanical
Max Horiz 12=342 (LC 9)
Max Uplift 7=-157 (LC 12), 12=-157 (LC 12)
Max Grav 7=1359 (LC 3), 12=1355 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1418/171, 2-3=-1198/193, 3-4=-1373/199, 4-5=-738/170, 5-6=-691/195, 6-7=-1221/193, 1-12=-1247/180
BOT CHORD 11-12=-324/169, 10-11=-233/1466, 8-10=-143/1205, 7-8=-105/81
WEBS 2-11=0/388, 3-11=-531/70, 6-8=-99/973, 1-11=-87/1216, 5-8=-49/344, 4-8=-1014/241, 4-10=-19/688, 3-10=-427/146

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 12 and 157 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476764
230872	C4	Common	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:19 Page: 1
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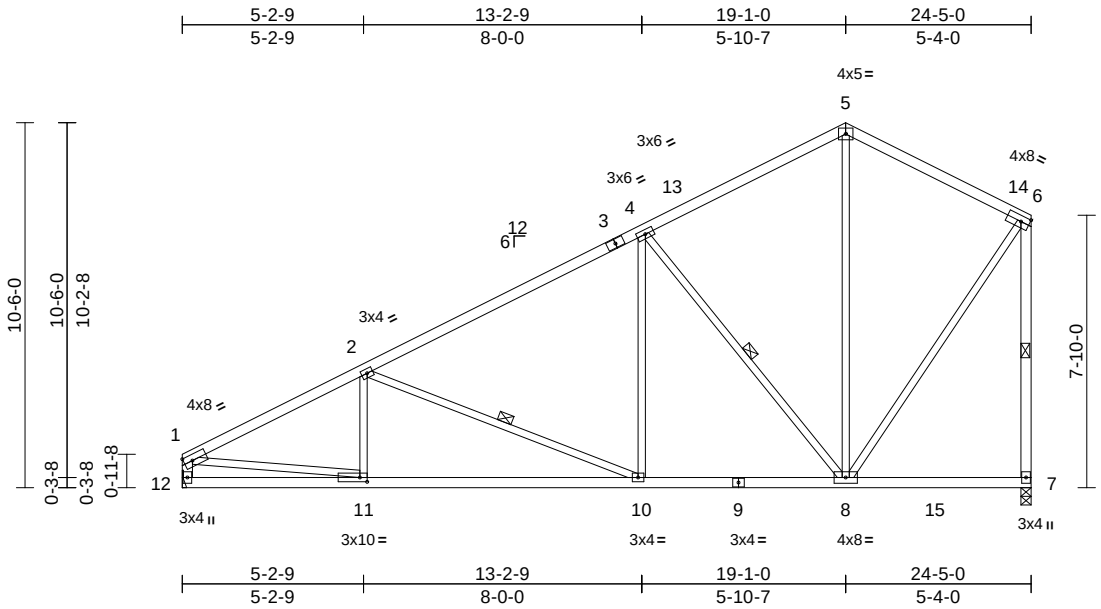

Scale = 1:66.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.20	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.34	10-11	>863	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.04	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	10-11	>999	240		
BCDL	10.0										Weight: 110 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 4-8, 2-10

REACTIONS (size) 7=0-3-8, 12= Mechanical
Max Horiz 12=347 (LC 9)
Max Uplift 7=-162 (LC 12), 12=-152 (LC 12)
Max Grav 7=1359 (LC 3), 12=1316 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2013/240, 2-4=-1415/198, 4-5=-723/178, 5-6=-689/198, 6-7=-1219/198, 1-12=-1215/171
BOT CHORD 11-12=-326/256, 10-11=-338/1796, 8-10=-150/1212, 7-8=-105/81
WEBS 6-8=-102/981, 1-11=-147/1597, 5-8=-66/329, 4-8=-993/265, 2-11=-54/255, 2-10=-631/205, 4-10=0/657

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 152 lb uplift at joint 12 and 162 lb uplift at joint 7.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476765
230872	C5	Common	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:19 Page: 1
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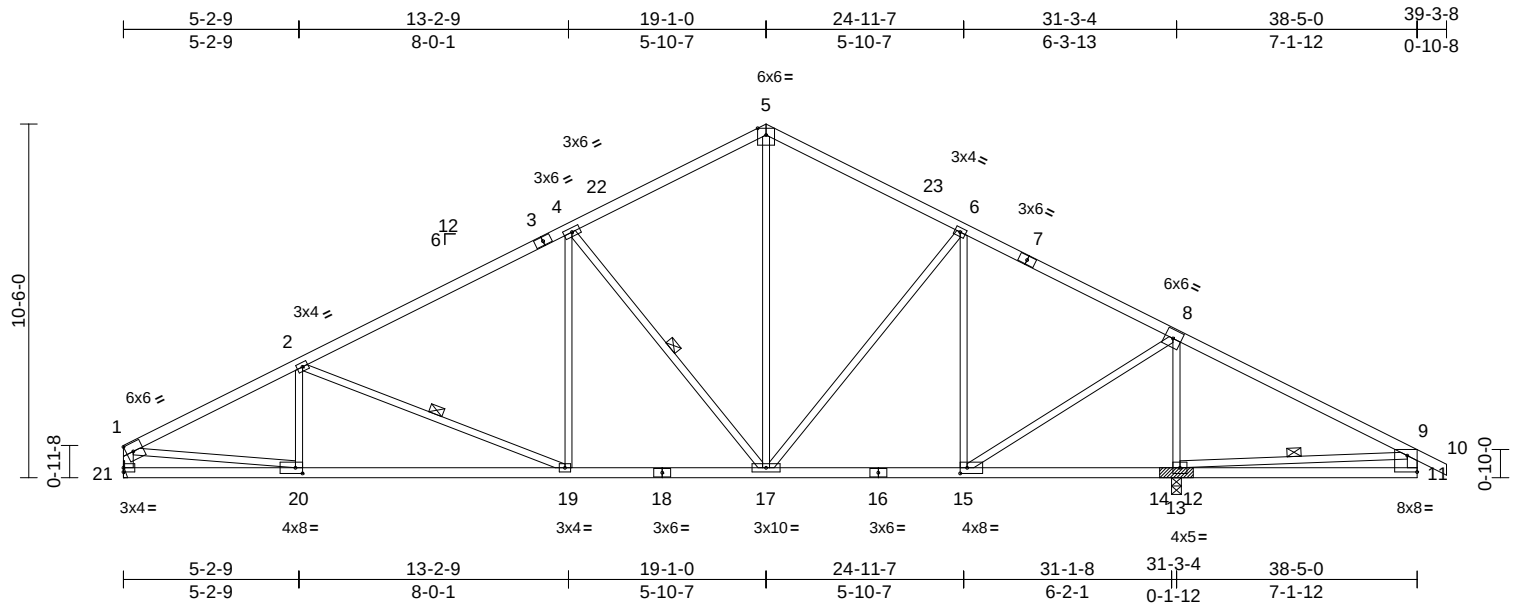

Scale = 1:68.4

Plate Offsets (X, Y): [11:Edge,0-5-13], [15:0-2-8,0-2-0], [20:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.25	19-20	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.40	19-20	>927	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.05	13	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	19-20	>999	240		
BCDL	10.0										Weight: 158 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-1,11-9:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 9-13, 4-17, 2-19

REACTIONS (size) 13=(0-3-8 + bearing block), (req. 0-4-2), 21= Mechanical
Max Horiz 21=-167 (LC 13)
Max Uplift 13=-291 (LC 13), 21=-190 (LC 12)
Max Grav 13=2631 (LC 3), 21=1606 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2516/307, 2-4=-1999/275, 4-5=-1316/256, 5-6=-1308/275, 6-8=-1103/189, 8-9=-138/798, 9-10=0/32, 1-21=-1502/209, 9-11=-28/184
BOT CHORD 20-21=-166/307, 19-20=-366/2261, 17-19=-186/1749, 15-17=-14/939, 13-15=-629/186, 11-13=-131/335
WEBS 1-20=-202/2022, 9-13=-968/318, 5-17=-130/810, 8-13=-2172/346, 4-17=-969/262, 2-20=-103/204, 2-19=-559/194, 4-19=0/635, 6-17=-41/337, 6-15=-717/118, 8-15=-81/1831

NOTES
1) 2x4 SPF No.2 bearing block 12" long at jt. 13 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
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, with BCDL = 10.0psf.
9) All bearings are assumed to be SPF No.2 .
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 190 lb uplift at joint 21 and 291 lb uplift at joint 13.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476766
230872	C6	Common	6	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:20 Page: 1
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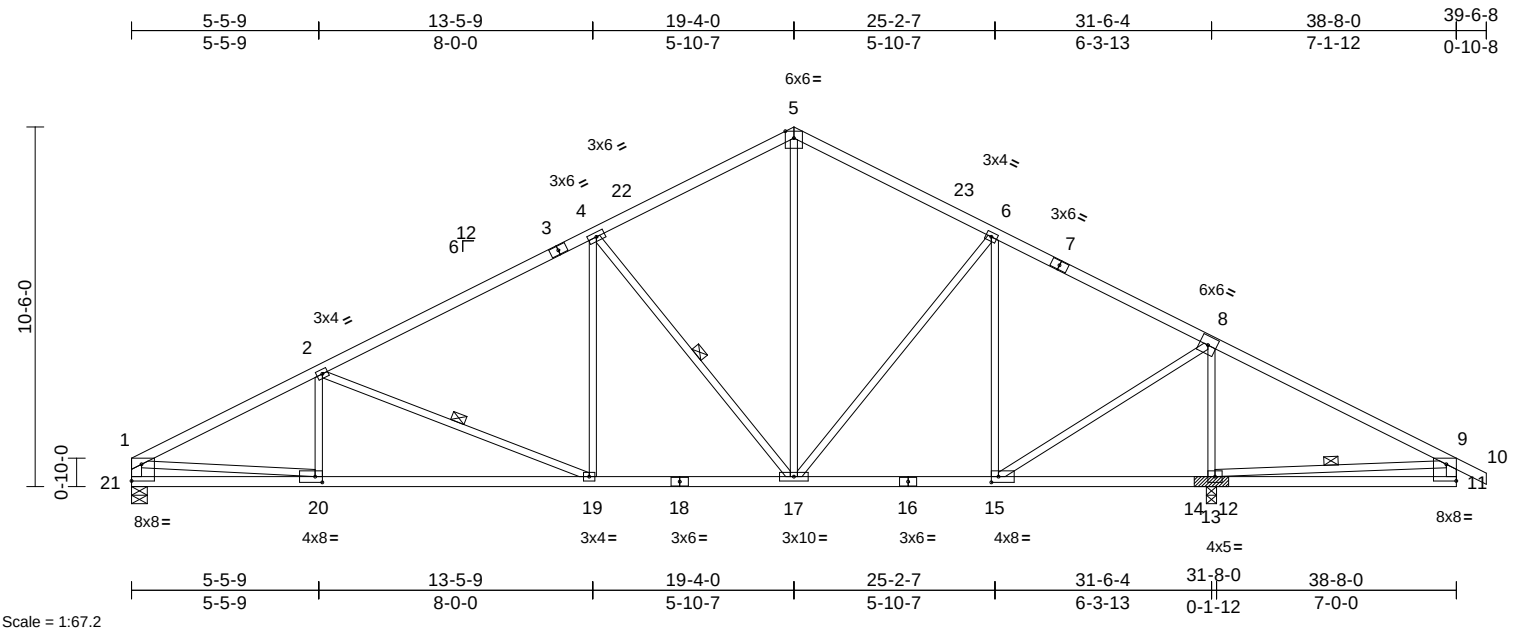

Scale = 1:67.2

Plate Offsets (X, Y): [11:Edge,0-5-13], [15:0-2-8,0-2-0], [20:0-2-8,0-2-0], [21:Edge,0-5-13]

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	0.69	Vert(LL)	-0.26	19-20	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.42	19-20	>903	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.05	13	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	19-20	>999	240		
BCDL	10.0										Weight: 159 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-1,11-9:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 9-13, 4-17, 2-19

REACTIONS (size) 13=(0-3-8 + bearing block), (req. 0-4-2), 21=0-5-8
Max Horiz 21=-167 (LC 13)
Max Uplift 13=-291 (LC 13), 21=-192 (LC 12)
Max Grav 13=2642 (LC 3), 21=1618 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2633/321, 2-4=-2031/280, 4-5=-1330/258, 5-6=-1322/277, 6-8=-1113/190, 8-9=-138/798, 9-10=0/32, 1-21=-1504/213, 9-11=-28/184
BOT CHORD 20-21=-184/400, 19-20=-380/2359, 17-19=-190/1777, 15-17=-15/948, 13-15=-629/186, 11-13=-131/335
WEBS 1-20=-196/2018, 9-13=-967/318, 5-17=-132/822, 6-17=-41/342, 6-15=-723/118, 8-15=-83/1842, 8-13=-2183/346, 4-17=-992/265, 2-20=-55/254, 2-19=-634/205, 4-19=0/654

NOTES
1) 2x4 SPF No.2 bearing block 12" long at jt. 13 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
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, with BCDL = 10.0psf.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 192 lb uplift at joint 21 and 291 lb uplift at joint 13.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476767
230872	C7	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:20 Page: 1
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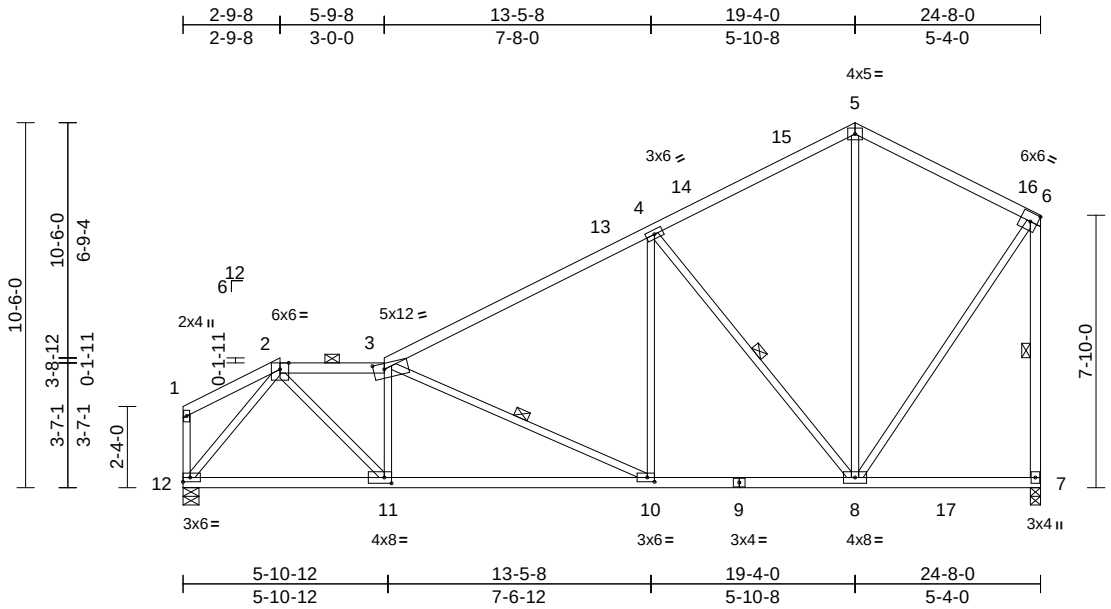

Scale = 1:66.3

Plate Offsets (X, Y): [3:0-3-12,0-2-0], [10:0-2-8,0-1-8], [11:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.17	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.28	10-11	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.04	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	10-11	>999	240		
BCDL	10.0										Weight: 114 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-6:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-11-12 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 4-8, 3-10

REACTIONS (size) 7=0-3-8, 12=0-5-8
Max Horiz 12=342 (LC 9)
Max Uplift 7=-160 (LC 12), 12=-159 (LC 12)
Max Grav 7=1372 (LC 3), 12=1345 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-108/46, 2-3=-1882/232, 3-4=-1497/192, 4-5=-738/177, 5-6=-697/197, 6-7=-1233/196, 1-12=-137/43
BOT CHORD 11-12=-262/951, 10-11=-294/1861, 8-10=-149/1259, 7-8=-105/81
WEBS 2-11=-120/1417, 3-11=-704/179, 6-8=-99/985, 2-12=-1430/180, 5-8=-68/408, 4-8=-1093/265, 4-10=0/671, 3-10=-699/160

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 160 lb uplift at joint 7 and 159 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476768
230872	C8	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:21 Page: 1
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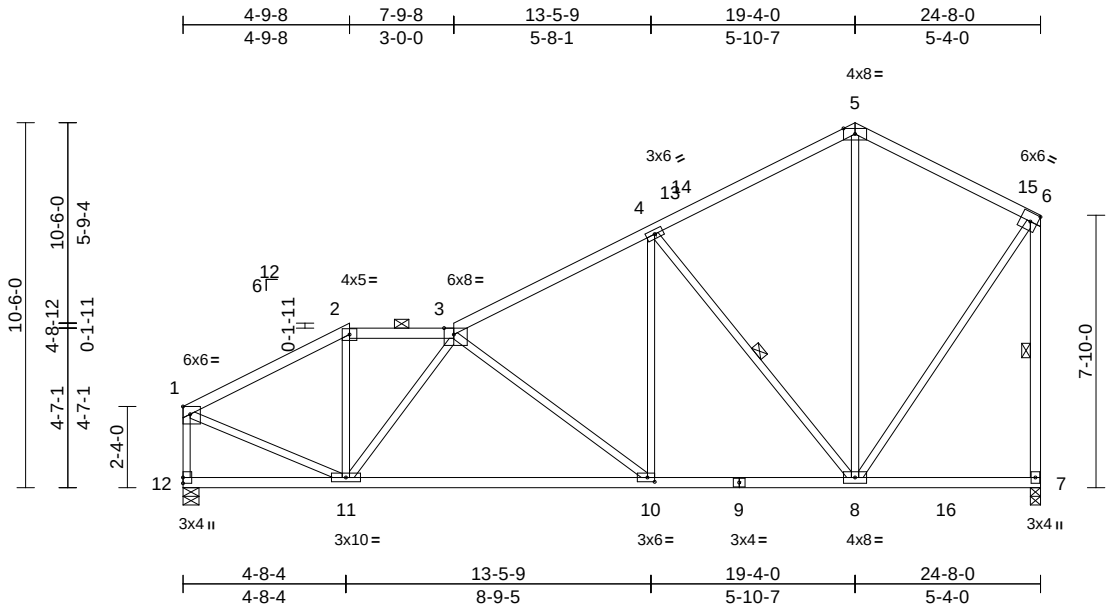

Scale = 1:66.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.27	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.43	10-11	>676	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.04	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	10-11	>999	240		
BCDL	10.0										Weight: 115 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-6:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-10 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-13 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-7, 4-8

REACTIONS (size) 7=0-3-8, 12=0-5-8
Max Horiz 12=342 (LC 9)
Max Uplift 7=-160 (LC 12), 12=-159 (LC 12)
Max Grav 7=1372 (LC 3), 12=1368 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1440/161, 2-3=-1221/183, 3-4=-1463/197, 4-5=-748/173, 5-6=-696/197, 6-7=-1230/197, 1-12=-1305/170
BOT CHORD 11-12=-328/146, 10-11=-271/1610, 8-10=-141/1250, 7-8=-104/81
WEBS 2-11=0/412, 6-8=-102/987, 1-11=-97/1316, 5-8=-55/357, 4-8=-1071/246, 4-10=-7/726, 3-10=-499/170, 3-11=-670/107

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 159 lb uplift at joint 12 and 160 lb uplift at joint 7.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476769
230872	C9	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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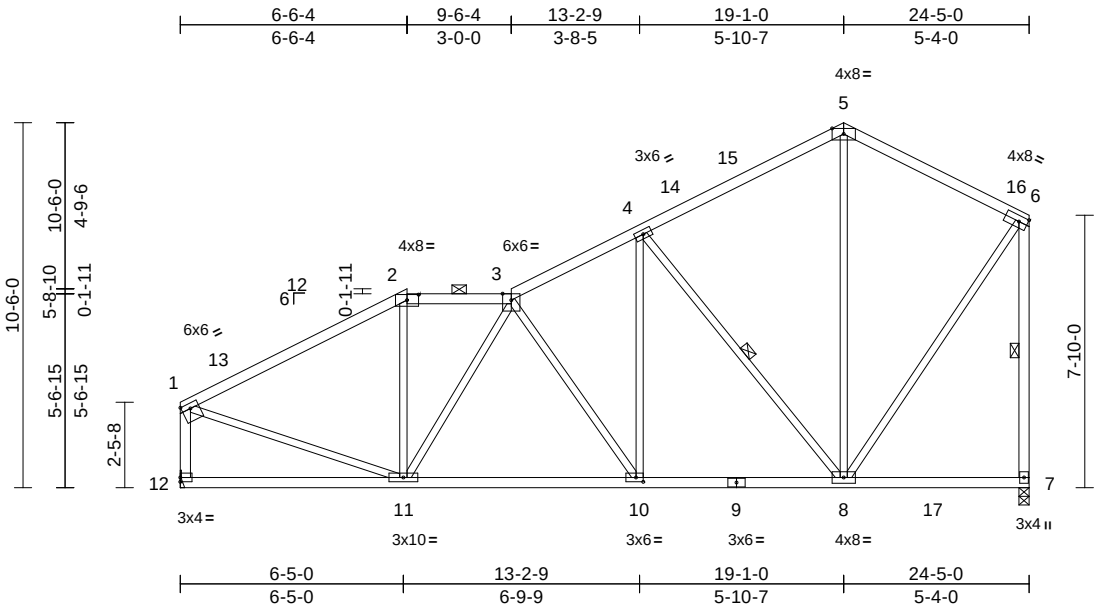

Scale = 1:66.3

Plate Offsets (X, Y): [1:Edge,0-1-12], [2:0-4-0,0-1-15], [10:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.11	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.18	10-11	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.03	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	10-11	>999	240		
BCDL	10.0										Weight: 117 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-0-8 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-8, 6-7

REACTIONS (size) 7=0-3-8, 12= Mechanical
Max Horiz 12=342 (LC 9)
Max Uplift 7=-157 (LC 12), 12=-157 (LC 12)
Max Grav 7=1359 (LC 3), 12=1361 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1457/178, 2-3=-1213/210, 3-4=-1346/204, 4-5=-735/169, 5-6=-692/195, 6-7=-1223/193, 1-12=-1222/187
BOT CHORD 11-12=-326/202, 10-11=-211/1409, 8-10=-143/1184, 7-8=-105/81
WEBS 2-11=0/356, 3-11=-414/28, 4-8=-989/241, 5-8=-46/339, 6-8=-99/974, 1-11=-73/1192, 3-10=-446/138, 4-10=-36/714

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 12 and 157 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	C10	Roof Special	2	1	Job Reference (optional) I63476770

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:21 Page: 1
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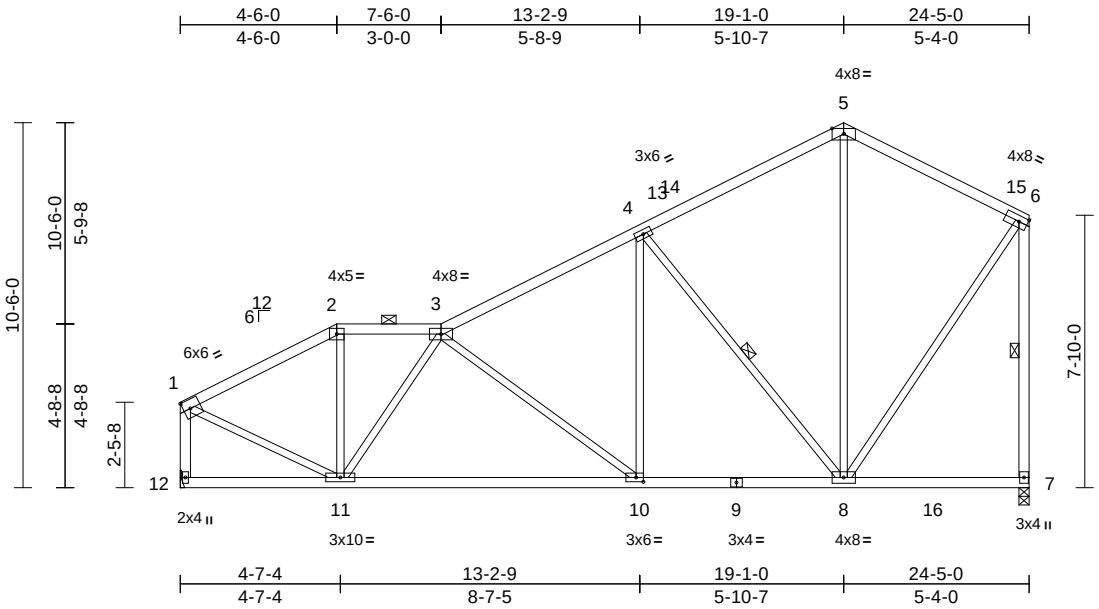


Scale = 1:66.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.25	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.40	10-11	>726	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.03	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	10-11	>999	240		
BCDL	10.0										Weight: 115 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-4-14 oc purlins, except end verticals, and 2-0-0 oc purlins (5-4-13 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 4-8

REACTIONS (size) 7=0-3-8, 12= Mechanical
Max Horiz 12=342 (LC 11)
Max Uplift 7=-157 (LC 12), 12=-157 (LC 12)
Max Grav 7=1359 (LC 3), 12=1350 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1357/154, 2-3=-1159/171, 3-4=-1430/193, 4-5=-742/171, 5-6=-689/196, 6-7=-1217/194, 1-12=-1290/168
BOT CHORD 11-12=-327/149, 10-11=-258/1532, 8-10=-143/1229, 7-8=-104/81
WEBS 2-11=0/405, 6-8=-99/977, 1-11=-92/1245, 5-8=-53/351, 4-8=-1045/242, 4-10=-1/682, 3-10=-433/158, 3-11=-679/113

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 12 and 157 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

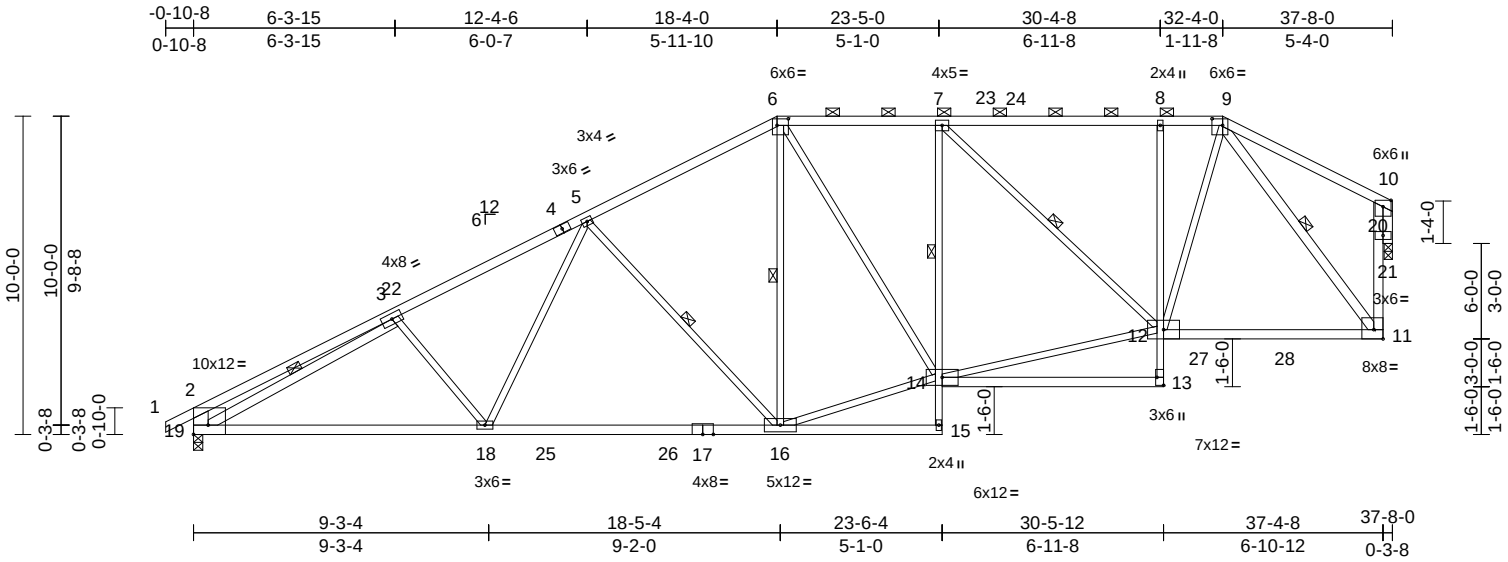
February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	D1	Piggyback Base	2	1	Job Reference (optional) I63476771

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:22 Page: 1
ID:WFyq9TSMClESMGmBo9U8iSy6jdX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDon7J4JJC?I



Scale = 1:72.4

Plate Offsets (X, Y): [2:Edge,0-3-8], [6:0-4-4,0-2-8], [9:0-4-0,0-2-8], [11:Edge,0-3-8], [13: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	0.71	Vert(LL)	-0.39	16-18	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.58	16-18	>770	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.16	21	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	16-18	>999	240		
BCDL	10.0										Weight: 182 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 15-7,13-8:2x3 SPF No.2, 14-13,12-11:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-10:2x4 SPF 2100F 1.8E, 11-9,19-3:2x4 SPF No.2, 19-2:2x6 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-3 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-12 max.): 6-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 15-16.
1 Row at midpt 7-14
WEBS 1 Row at midpt 6-16, 7-12, 9-11, 3-19, 5-16

REACTIONS (size) 19=0-3-8, 21=0-3-2
Max Horiz 19=218 (LC 9)
Max Uplift 19=-22 (LC 12)
Max Grav 19=2112 (LC 3), 21=2027 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-850/92, 3-5=-3198/49, 5-6=-2329/59, 6-7=-2221/62, 7-8=-1802/45, 8-9=-1806/43, 9-10=-290/55, 11-20=0/1799, 10-20=0/1799, 2-19=-603/94
BOT CHORD 18-19=-155/2842, 16-18=-87/2521, 15-16=-62/5, 14-15=0/72, 7-14=-307/295, 13-14=0/44, 12-13=0/207, 8-12=-486/98, 11-12=-42/1360
WEBS 6-16=-23/542, 14-16=-40/2135, 6-14=-65/549, 12-14=-76/2233, 7-12=-621/35, 9-12=-49/1627, 9-11=-1977/44, 3-19=-2538/0, 3-18=-187/134, 5-18=0/662, 5-16=-887/133, 10-21=-2083/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) WARNING: Required bearing size at joint(s) 21 greater than input bearing size.
10) All bearings are assumed to be SPF No.2 .
11) Bearing at joint(s) 21 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 19.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476772
230872	D2	Piggyback Base	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:23 Page: 1
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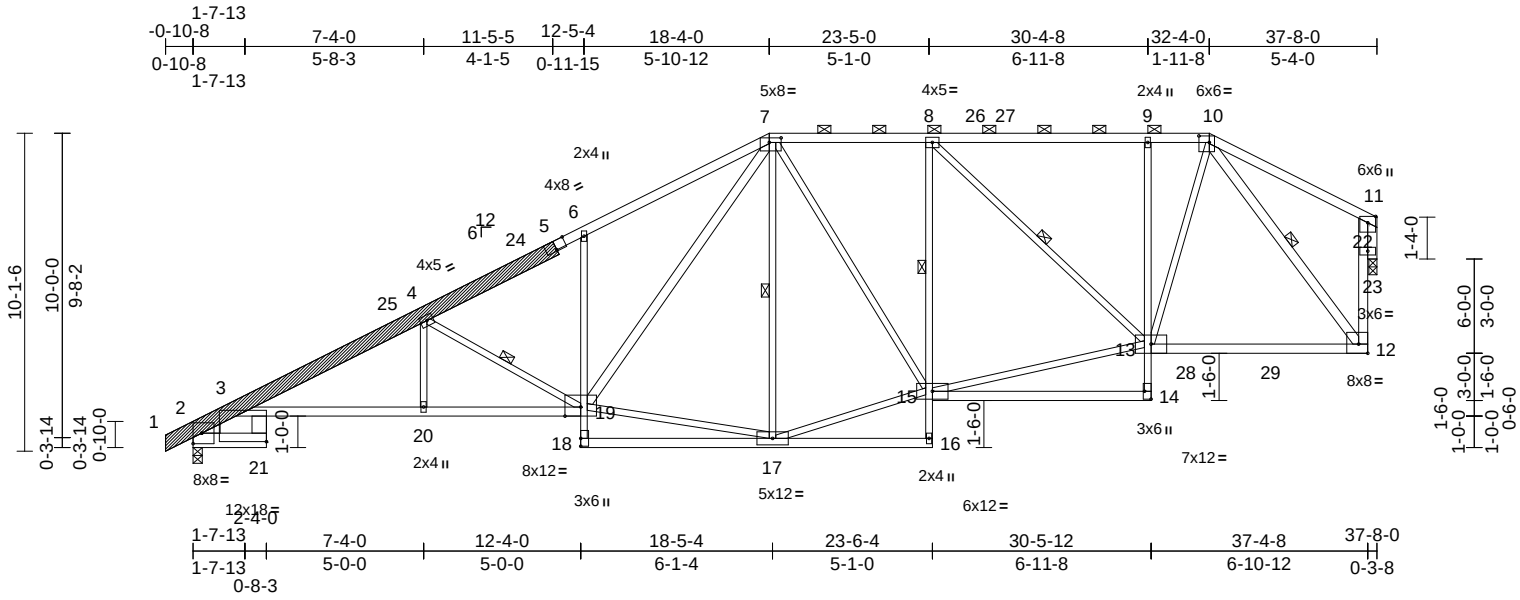

Scale = 1:73.3

Plate Offsets (X, Y): [5:0-4-0,Edge], [7:0-4-8,0-1-12], [10:0-4-0,0-2-8], [12:Edge,0-3-8], [14:Edge,0-2-8], [21:Edge,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	0.99	Vert(LL)	-0.33	14-15	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.53	14-15	>852	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.31	23	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.12	6	>999	240		
BCDL	10.0										Weight: 239 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x6 SP 2400F 2.0E
BOT CHORD 2x3 SPF No.2 *Except* 2-21:2x6 SPF No.2, 3-19:2x4 SPF 2100F 1.8E, 18-16,15-14,13-12:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-3:2x6 SPF No.2, 19-7,12-10:2x4 SPF No.2, 12-11:2x4 SPF 2100F 1.8E
OTHERS 2x4 SPF No.2
LBR SCAB 1-5 SP 2400F 2.0E one side
WEDGE Left: 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-7-2 max.): 7-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-21,16-17.
1 Row at midpt 8-15
WEBS 1 Row at midpt 4-19, 7-17, 8-13, 10-12

REACTIONS (size) 2=0-3-8, 23=0-3-2
Max Horiz 2=211 (LC 9)
Max Uplift 2=-12 (LC 12)
Max Grav 2=2115 (LC 3), 23=2013 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-1297/0, 3-4=-4328/58, 4-6=-3376/66, 6-7=-3335/158, 7-8=-2197/60, 8-9=-1788/44, 9-10=-1792/42, 10-11=-289/55, 12-22=0/1786, 11-22=0/1786
BOT CHORD 2-21=-99/0, 3-20=-166/3967, 19-20=-166/3966, 18-19=0/159, 6-19=-443/131, 17-18=0/141, 16-17=-38/13, 15-16=0/113, 8-15=-303/289, 14-15=0/44, 13-14=0/208, 9-13=-487/98, 12-13=-41/1350
WEBS 3-21=0/151, 4-19=-1244/105, 17-19=-64/1859, 7-19=-156/1754, 7-17=-621/102, 15-17=-44/2072, 7-15=-61/574, 13-15=-74/2209, 8-13=-607/35, 10-13=-48/1614, 10-12=-1961/43, 4-20=0/387, 11-23=-2070/0

NOTES

1) Attached 14-0-0 scab 1 to 5, front face(s) 2x6 SP 2400F 2.0E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 0-2-14 from end at joint 1, nail 2 row(s) at 4" o.c. for 3-5-2.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
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, with BCDL = 10.0psf.
10) WARNING: Required bearing size at joint(s) 23 greater than input bearing size.
11) All bearings are assumed to be SPF No.2 .
12) Bearing at joint(s) 23 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 2.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	D3	Piggyback Base	6	1	Job Reference (optional) I63476773

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:23 Page: 1
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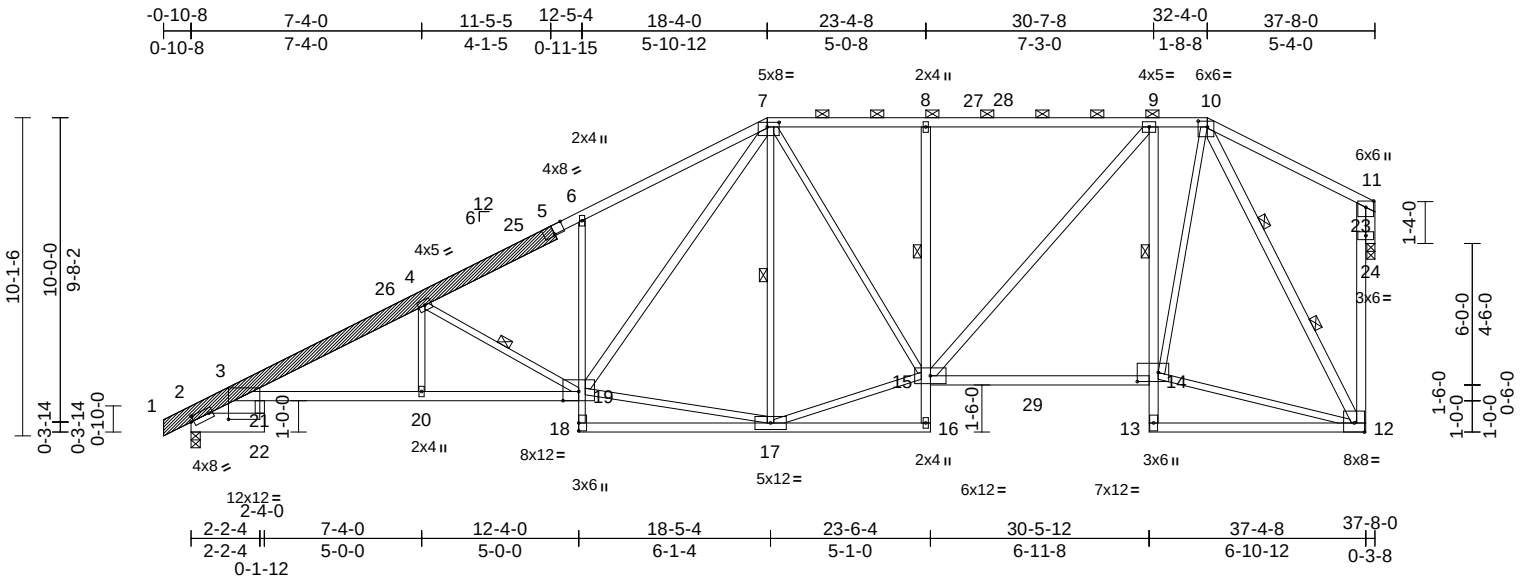

Scale = 1:73.3

Plate Offsets (X, Y): [2:0-1-0,0-2-0], [5:0-4-0,Edge], [7:0-4-8,0-1-12], [10:0-3-8,0-2-4], [14:0-8-0,0-3-8], [22:0-7-7,0-2-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.39	14-15	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.61	14-15	>731	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.40	24	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	6	>999	240		
BCDL	10.0										Weight: 260 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except* 2-22:2x8 SP 2400F 2.0E, 3-19:2x4 SPF 2100F 1.8E, 6-18:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 22-21,19-7,15-9,12-10:2x4 SPF No.2, 12-11:2x4 SPF 2100F 1.8E
OTHERS 2x4 SPF No.2
LBR SCAB 1-5 SP 2400F 2.0E one side

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-2-5 max.): 7-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 16-17
2-2-0 oc bracing: 14-15.
1 Row at midpt 8-15, 9-14
WEBS 1 Row at midpt 4-19, 7-17
WEBS 2 Rows at 1/3 pts 10-12

REACTIONS (size) 2=0-3-8, 24=0-3-2
Max Horiz 2=248 (LC 9)
Max Uplift 2=-24 (LC 12)
Max Grav 2=2095 (LC 3), 24=2021 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/11, 2-3=-1339/0, 3-4=-4373/52, 4-6=-3389/61, 6-7=-3349/155, 7-8=-2221/61, 8-9=-2235/62, 9-10=-1436/32, 10-11=-199/88, 12-23=-8/1868, 11-23=-8/1868
BOT CHORD 2-22=0/0, 3-21=-161/3983, 20-21=-161/3983, 19-20=-161/3983, 18-19=0/161, 6-19=-444/135, 17-18=0/149, 16-17=-39/32, 15-16=0/116, 8-15=-591/113, 14-15=-83/1456, 13-14=0/195, 9-14=-1167/136, 12-13=-2/39
WEBS 21-22=-23/335, 4-19=-1252/96, 17-19=-96/1864, 7-19=-144/1754, 7-17=-620/116, 15-17=-76/2076, 7-15=-45/601, 9-15=-44/1194, 12-14=-70/1068, 10-14=-65/1814, 10-12=-2163/66, 4-20=0/434, 11-24=-2072/0

NOTES

1) Attached 14-0-0 scab 1 to 5, front face(s) 2x6 SP 2400F 2.0E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 0-3-0 from end at joint 1, nail 2 row(s) at 3" o.c. for 3-5-9.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
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, with BCDL = 10.0psf.
10) WARNING: Required bearing size at joint(s) 24 greater than input bearing size.
11) All bearings are assumed to be SPF No.2 .
12) Bearing at joint(s) 24 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 2.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476774
230872	D4	Piggyback Base	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:24 Page: 1
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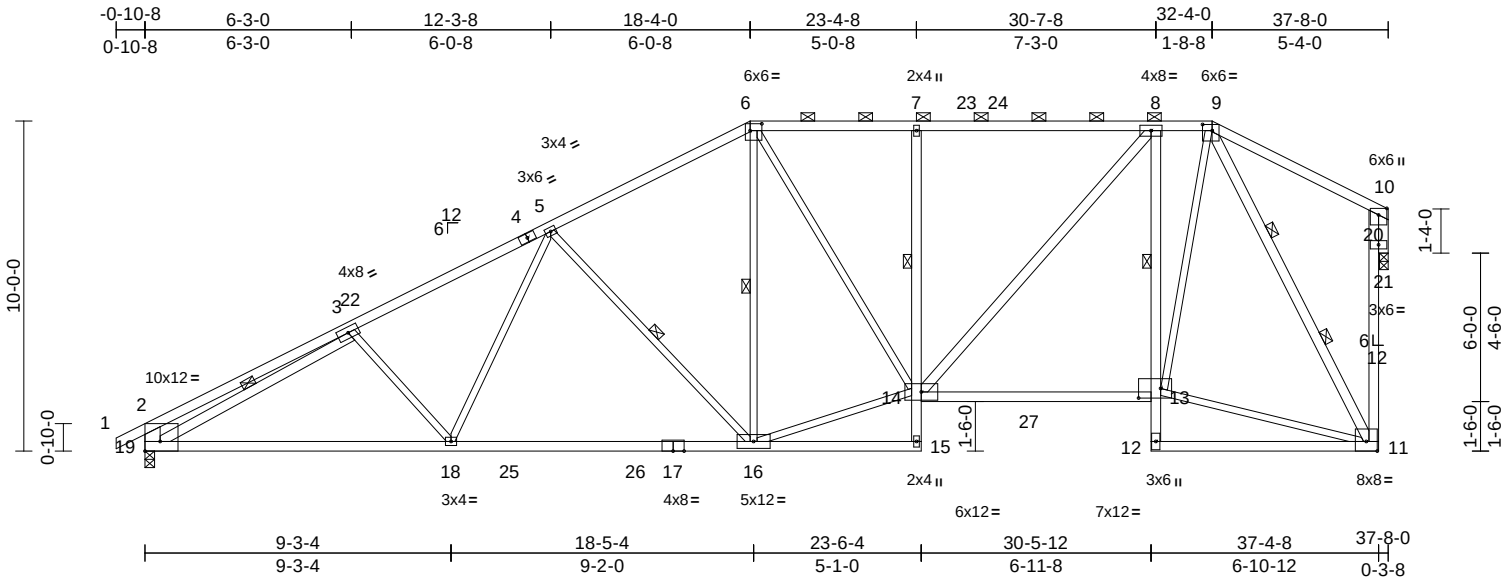

Scale = 1:69.8

Plate Offsets (X, Y): [2:Edge,0-3-8], [6:0-4-4,0-2-8], [9:0-3-8,0-2-4], [13:0-8-0,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.40	16-18	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.59	16-18	>756	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.27	21	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	7-14	>999	240		
BCDL	10.0										Weight: 201 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 19-17,17-15:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 14-8,11-9,19-3:2x4 SPF No.2, 11-10:2x4 SPF 2100F 1.8E, 19-2:2x6 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-1 oc purlins, except end verticals, and 2-0-0 oc purlins (3-2-0 max.): 6-9.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except:
1 Row at midpt 7-14, 8-13
WEBS 1 Row at midpt 5-16, 6-16, 3-19
WEBS 2 Rows at 1/3 pts 9-11

REACTIONS (size) 19=0-3-8, 21=0-3-2, (req. 0-3-3)
Max Horiz 19=255 (LC 9)
Max Uplift 19=-24 (LC 12)
Max Grav 19=2121 (LC 3), 21=2035 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-846/87, 3-5=-3210/50, 5-6=-2346/62, 6-7=-2248/64, 7-8=-2261/64, 8-9=-1448/33, 9-10=-200/88, 11-20=-9/1882, 10-20=-9/1882, 2-19=-599/91
BOT CHORD 18-19=-151/2851, 16-18=-121/2545, 15-16=-69/22, 14-15=0/75, 7-14=-593/113, 13-14=-84/1468, 12-13=0/194, 8-13=-1181/137, 11-12=-2/39
WEBS 3-18=-182/133, 5-18=0/651, 5-16=-893/132, 6-16=-25/519, 14-16=-72/2147, 6-14=-48/570, 8-14=-46/1215, 11-13=-71/1076, 9-13=-67/1830, 9-11=-2181/67, 3-19=-2552/0, 10-21=-2086/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) WARNING: Required bearing size at joint(s) 21 greater than input bearing size.
10) All bearings are assumed to be SPF No.2 .
11) Bearing at joint(s) 21 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 19.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476775
230872	D5	Piggyback Base Supported Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:25 Page: 1
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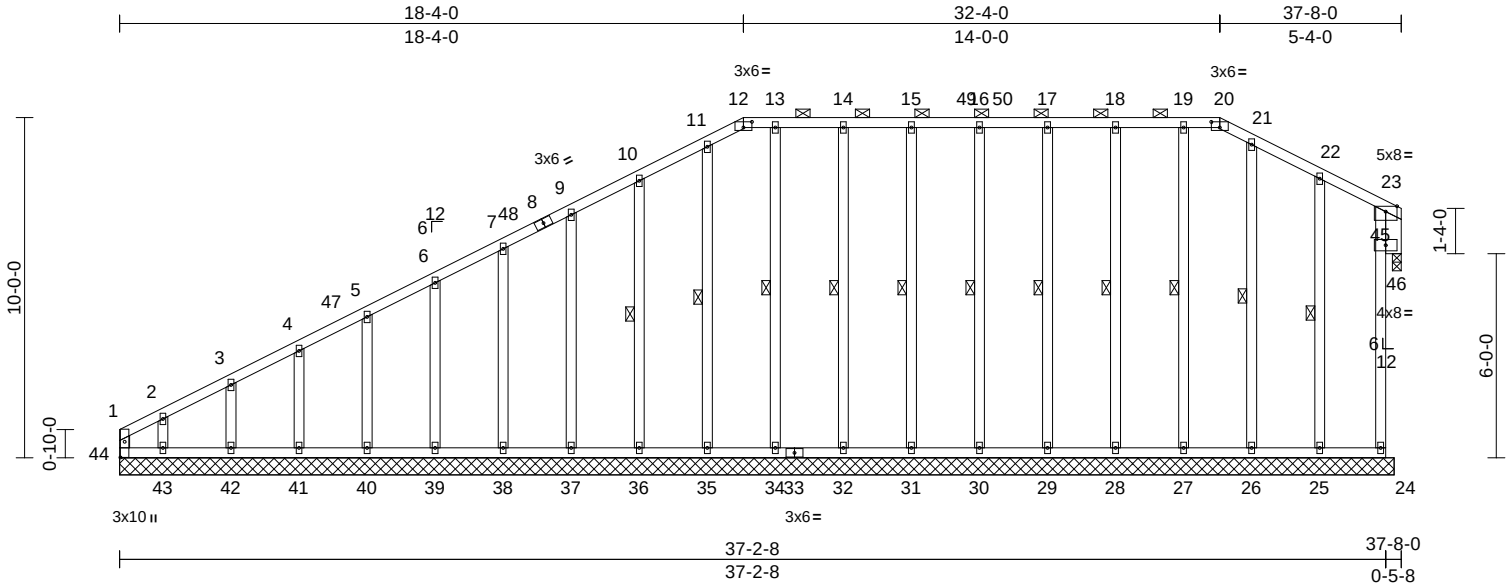

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Plate Offsets (X, Y): [12:0-3-0,0-2-0], [20:0-3-0,0-2-0], [44:0-5-9,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	0.00	24-25	>999	240	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	0.00	24-25	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	-0.03	46	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 245 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 *Except* 0-0,45-23:2x6 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 12-20.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 10-36, 11-35, 13-34, 14-32, 15-31, 16-30, 17-29, 18-28, 19-27, 21-26, 22-25

REACTIONS (size) 24=37-5-8, 25=37-5-8, 26=37-5-8, 27=37-5-8, 28=37-5-8, 29=37-5-8, 30=37-5-8, 31=37-5-8, 32=37-5-8, 34=37-5-8, 35=37-5-8, 36=37-5-8, 37=37-5-8, 38=37-5-8, 39=37-5-8, 40=37-5-8, 41=37-5-8, 42=37-5-8, 43=37-5-8, 44=37-5-8, 46=0-3-2
Max Horiz 44=309 (LC 9)
Max Uplift 24=-270 (LC 17), 25=-54 (LC 13), 26=-31 (LC 13), 27=-35 (LC 9), 28=-41 (LC 8), 29=-34 (LC 9), 30=-34 (LC 8), 31=-34 (LC 9), 32=-43 (LC 8), 34=-39 (LC 9), 35=-22 (LC 9), 36=-62 (LC 12), 37=-53 (LC 12), 38=-54 (LC 12), 39=-54 (LC 12), 40=-53 (LC 12), 41=-59 (LC 12), 42=-34 (LC 12), 43=-222 (LC 12), 44=-57 (LC 10), 46=-250 (LC 8)
Max Grav 24=218 (LC 8), 25=229 (LC 46), 26=201 (LC 36), 27=205 (LC 35), 28=217 (LC 35), 29=215 (LC 35), 30=215 (LC 35), 31=215 (LC 35), 32=217 (LC 35), 34=201 (LC 35), 35=211 (LC 44), 36=217 (LC 36), 37=215 (LC 36), 38=214 (LC 36), 39=217 (LC 36), 40=202 (LC 36), 41=184 (LC 25), 42=190 (LC 3), 43=195 (LC 25), 44=282 (LC 9), 46=326 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-44=-192/41, 1-2=-312/80, 2-3=-250/74, 3-4=-226/74, 4-5=-197/76, 5-6=-179/81, 6-7=-164/90, 7-9=-149/104, 9-10=-134/117, 10-11=-122/133, 11-12=-95/128, 12-13=-85/125, 13-14=-85/125, 14-15=-85/125, 15-16=-85/125, 16-17=-85/125, 17-18=-85/125, 18-19=-85/125, 19-20=-85/125, 20-21=-92/126, 21-22=-105/117, 22-23=-112/96, 24-45=-186/257, 23-45=-186/257
BOT CHORD	43-44=-81/61, 42-43=-81/61, 41-42=-81/61, 40-41=-81/61, 39-40=-81/61, 38-39=-81/61, 37-38=-81/61, 36-37=-81/61, 35-36=-81/61, 34-35=-81/61, 32-34=-81/61, 31-32=-81/61, 30-31=-81/61, 29-30=-81/61, 28-29=-81/61, 27-28=-81/61, 26-27=-81/61, 25-26=-81/61, 24-25=-81/61
WEBS	2-43=-122/149, 3-42=-144/71, 4-41=-139/80, 5-40=-162/78, 6-39=-177/78, 7-38=-174/78, 9-37=-175/77, 10-36=-177/86, 11-35=-164/46, 13-34=-161/63, 14-32=-177/67, 15-31=-175/58, 16-30=-175/58, 17-29=-175/58, 18-28=-177/65, 19-27=-165/60, 21-26=-161/51, 22-25=-179/99, 23-46=-350/269

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.

February 8,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	D5	Piggyback Base Supported Gable	2	1	Job Reference (optional)

4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) All bearings are assumed to be SPF No.2 .
13) Bearing at joint(s) 46 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 44, 270 lb uplift at joint 24, 222 lb uplift at joint 43, 34 lb uplift at joint 42, 59 lb uplift at joint 41, 53 lb uplift at joint 40, 54 lb uplift at joint 39, 54 lb uplift at joint 38, 53 lb uplift at joint 37, 62 lb uplift at joint 36, 22 lb uplift at joint 35, 39 lb uplift at joint 34, 43 lb uplift at joint 32, 34 lb uplift at joint 31, 34 lb uplift at joint 30, 34 lb uplift at joint 29, 41 lb uplift at joint 28, 35 lb uplift at joint 27, 31 lb uplift at joint 26, 54 lb uplift at joint 25 and 250 lb uplift at joint 46.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476776
230872	E1	Piggyback Base Supported Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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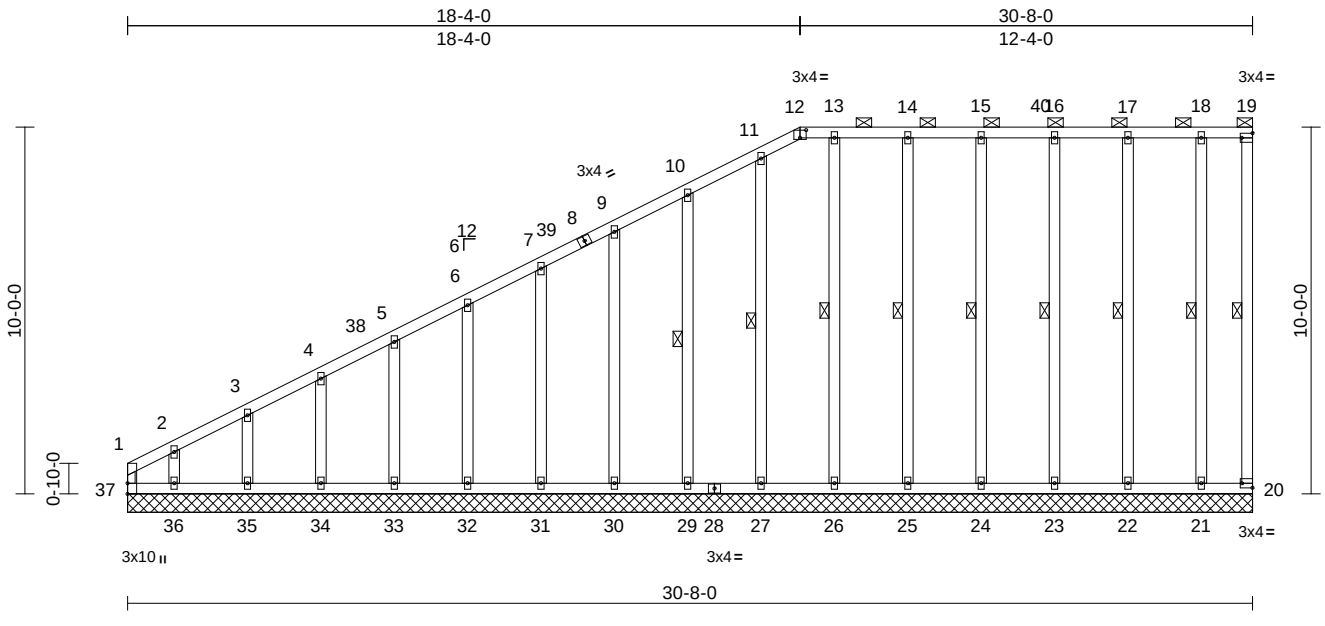

Scale = 1:62.8

Plate Offsets (X, Y): [12:0-2-0,0-2-8], [19:Edge,0-1-8], [20: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	0.43	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	-0.01	20	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 199 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 19-20:2x4 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, and 2-0-0 oc purlins (6-0-0 max.): 12-19.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 19-20, 10-29, 11-27, 13-26, 14-25, 15-24, 16-23, 17-22, 18-21

REACTIONS (size) 20=30-8-0, 21=30-8-0, 22=30-8-0, 23=30-8-0, 24=30-8-0, 25=30-8-0, 26=30-8-0, 27=30-8-0, 29=30-8-0, 30=30-8-0, 31=30-8-0, 32=30-8-0, 33=30-8-0, 34=30-8-0, 35=30-8-0, 36=30-8-0, 37=30-8-0
Max Horiz 37=402 (LC 11)
Max Uplift 20=-23 (LC 9), 21=-52 (LC 8), 22=-47 (LC 9), 23=-39 (LC 8), 24=-35 (LC 9), 25=-42 (LC 8), 26=-59 (LC 9), 27=-38 (LC 9), 29=-61 (LC 12), 30=-53 (LC 12), 31=-54 (LC 12), 32=-54 (LC 12), 33=-53 (LC 12), 34=-60 (LC 12), 35=-32 (LC 12), 36=-226 (LC 12), 37=-39 (LC 10)
Max Grav 20=49 (LC 32), 21=193 (LC 42), 22=223 (LC 32), 23=214 (LC 32), 24=215 (LC 32), 25=217 (LC 32), 26=201 (LC 32), 27=209 (LC 37), 29=217 (LC 33), 30=215 (LC 33), 31=214 (LC 33), 32=217 (LC 33), 33=202 (LC 33), 34=184 (LC 25), 35=190 (LC 3), 36=189 (LC 25), 37=336 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-37=-235/29, 1-2=-381/63, 2-3=-316/63, 3-4=-293/63, 4-5=-264/66, 5-6=-237/70, 6-7=-222/70, 7-9=-207/81, 9-10=-192/94, 10-11=-181/110, 11-12=-148/108, 12-13=-137/104, 13-14=-137/104, 14-15=-137/104, 15-16=-137/104, 16-17=-137/104, 17-18=-137/104, 18-19=-137/104, 19-20=-108/100
BOT CHORD 36-37=-139/105, 35-36=-139/105, 34-35=-139/105, 33-34=-139/105, 32-33=-139/105, 31-32=-139/105, 30-31=-139/105, 29-30=-139/105, 27-29=-139/105, 26-27=-139/105, 25-26=-139/105, 24-25=-139/105, 23-24=-139/105, 22-23=-139/105, 21-22=-139/105, 20-21=-139/105
WEBS 2-36=-123/153, 3-35=-144/70, 4-34=-139/80, 5-33=-162/78, 6-32=-177/78, 7-31=-174/78, 9-30=-175/77, 10-29=-177/85, 11-27=-165/62, 13-26=-161/83, 14-25=-177/66, 15-24=-175/58, 16-23=-174/58, 17-22=-182/63, 18-21=-150/133

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.

February 8,2024

Continued on page 2

MiTek®
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476776
230872	E1	Piggyback Base Supported Gable	2	1	Job Reference (optional)	

11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * 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.
13) All bearings are assumed to be SPF No.2 .
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 37, 23 lb uplift at joint 20, 226 lb uplift at joint 36, 32 lb uplift at joint 35, 60 lb uplift at joint 34, 53 lb uplift at joint 33, 54 lb uplift at joint 32, 54 lb uplift at joint 31, 53 lb uplift at joint 30, 61 lb uplift at joint 29, 38 lb uplift at joint 27, 59 lb uplift at joint 26, 42 lb uplift at joint 25, 35 lb uplift at joint 24, 39 lb uplift at joint 23, 47 lb uplift at joint 22 and 52 lb uplift at joint 21.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476777
230872	E2	Piggyback Base Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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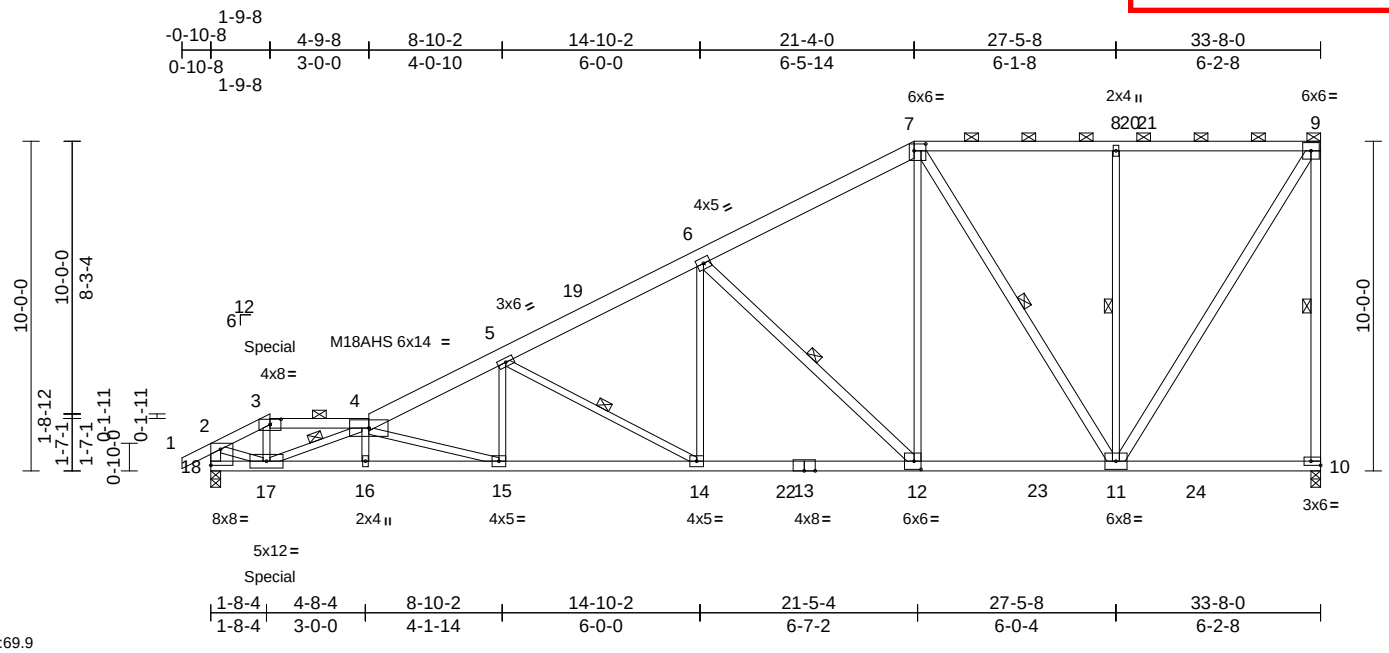

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Plate Offsets (X, Y): [3:0-4-0,0-1-15], [7:0-4-4,0-2-8], [10:Edge,0-1-8], [12:0-2-8,0-3-0], [18:Edge,0-5-13]

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	0.71	Vert(LL)	-0.30	15-16	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.47	14-15	>851	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.12	10	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.16	15-16	>999	240		
BCDL	10.0										Weight: 176 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 4-7:2x6 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 13-10:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-10:2x4 SPF 2100F 1.8E, 12-6,11-7,11-9,18-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-7 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-11 max.): 3-4, 7-9.
BOT CHORD Rigid ceiling directly applied or 9-1-3 oc bracing.
WEBS 1 Row at midpt 9-10, 5-14, 6-12, 7-11, 8-11, 4-17

REACTIONS (size) 10=0-3-8, 18=0-3-8
Max Horiz 18=413 (LC 60)
Max Uplift 10=-233 (LC 9), 18=-237 (LC 12)
Max Grav 10=1901 (LC 3), 18=1911 (LC 48)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-2377/274, 3-4=-2075/257, 4-5=-4150/450, 5-6=-2884/334, 6-7=-1798/252, 7-8=-1005/181, 8-9=-1004/181, 9-10=-1736/252, 2-18=-1894/244
BOT CHORD 17-18=-385/209, 16-17=-748/5431, 15-16=-752/5428, 14-15=-506/3684, 12-14=-297/2504, 11-12=-246/1535, 10-11=-137/103
WEBS 3-17=-94/873, 4-15=-1877/258, 5-15=-24/886, 5-14=-1352/244, 6-14=-40/1017, 6-12=-1446/302, 7-12=-131/1359, 7-11=-1066/167, 8-11=-611/217, 9-11=-226/1873, 2-17=-234/2144, 4-17=-3665/383, 4-16=-42/105

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 233 lb uplift at joint 10 and 237 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 121 lb down and 69 lb up at 1-9-8 on top chord, and 11 lb down and 8 lb up at 1-9-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51, 2-3=-51, 3-4=-61, 4-7=-51, 7-9=-61, 10-18=-20
Concentrated Loads (lb)
Vert: 17=1 (F)

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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476778
230872	E3	Piggyback Base	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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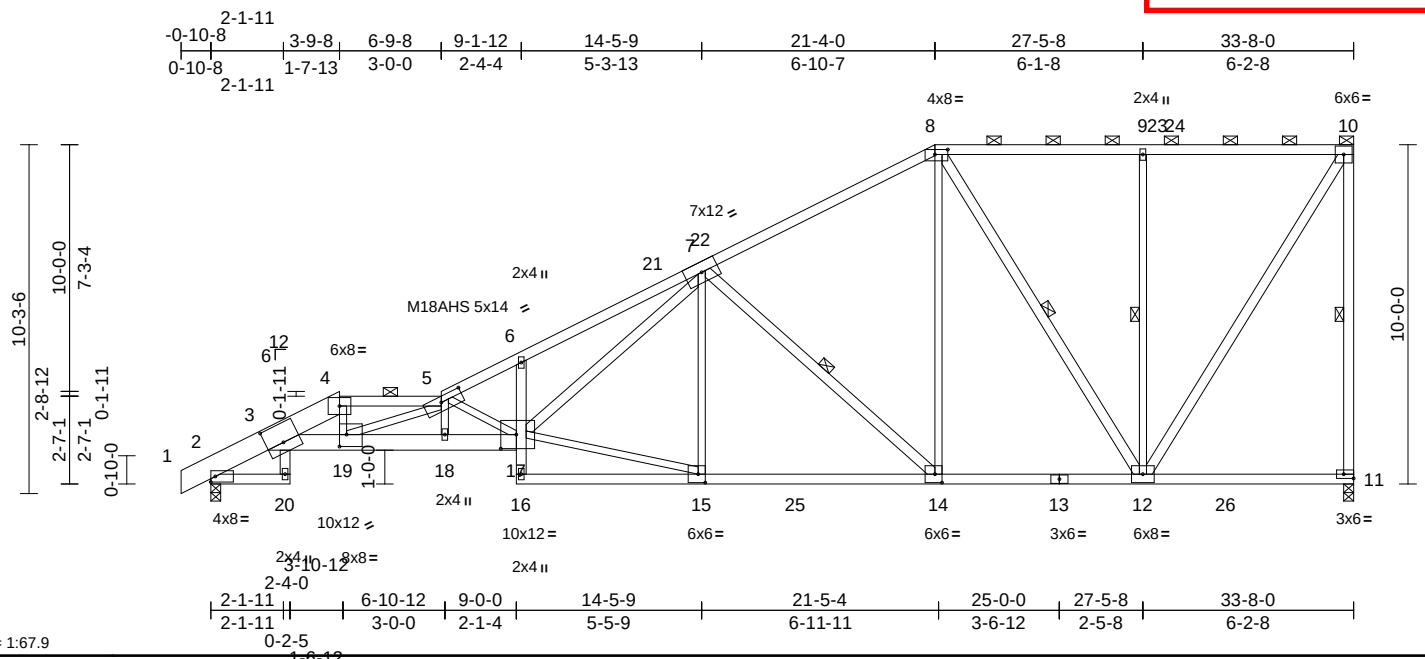

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Plate Offsets (X, Y): [3:0-6-0,0-6-8], [5:0-7-12,0-2-0], [8:0-4-8,0-1-12], [11:Edge,0-1-8], [14:0-2-8,0-3-0], [15:0-2-8,0-3-0], [17:0-5-8,0-5-0], [19:0-2-8,0-4-4]

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	0.78	Vert(LL)	-0.44	17	>906	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.69	15-16	>576	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.29	11	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.25	17	>999	240		
BCDL	10.0										Weight: 190 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-4:2x8 SP 2400F 2.0E, 5-8:2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF No.2 *Except* 3-17:2x6 SP 2400F 2.0E

WEBS 2x3 SPF No.2 *Except* 10-11:2x4 SPF 2100F 1.8E, 20-3,6-16,17-7,14-7,12-8,12-10:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-10-14 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 4-5, 8-10.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-20
2-2-0 oc bracing: 14-15.

WEBS 1 Row at midpt 10-11, 7-14, 8-12, 9-12

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=406 (LC 9)
Max Uplift 2=-230 (LC 12), 11=-232 (LC 9)
Max Grav 2=1944 (LC 48), 11=1900 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/8, 2-3=-1258/59, 3-4=-5303/717, 4-5=-5189/737, 5-6=-5608/694, 6-7=-5469/770, 7-8=-1793/249, 8-9=-1003/181, 9-10=-1003/181, 10-11=-1734/250

BOT CHORD 2-20=-40/0, 3-19=-836/5063, 18-19=-1023/7168, 17-18=-1015/7137, 15-16=-30/236, 14-15=-303/2519, 12-14=-243/1529, 11-12=-137/103

WEBS 3-20=0/81, 16-17=0/135, 6-17=-162/135, 4-19=-89/1369, 5-19=-2196/196, 5-17=-2561/370, 15-17=-283/2327, 7-17=-530/3217, 7-15=-226/140, 7-14=-1436/303, 8-14=-121/1324, 8-12=-1058/169, 9-12=-621/217, 10-12=-224/1871, 5-18=-386/97

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 232 lb uplift at joint 11 and 230 lb uplift at joint 2.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476779
230872	E4	Piggyback Base	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:28 Page: 1
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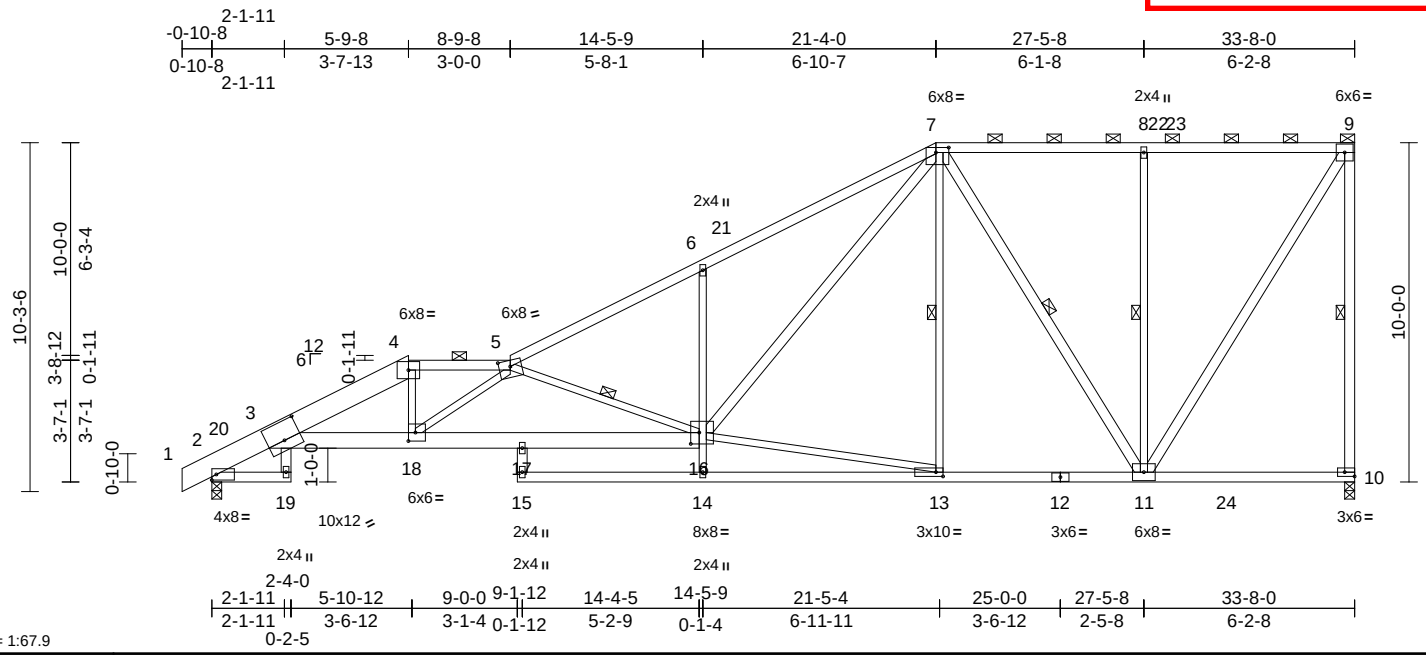

Scale = 1:67.9

Plate Offsets (X, Y): [3:0-6-0,0-6-8], [5:0-4-0,0-2-3], [7:0-4-8,0-1-12], [10:Edge,0-1-8], [13:0-2-8,0-1-8], [16:0-3-0,0-4-0], [18:0-2-8,0-3-0]

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	0.66	Vert(LL)	-0.36	14-15	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.56	14-15	>721	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.26	10	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.18	14-15	>999	240		
BCDL	10.0										Weight: 202 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-4:2x8 SP 2400F 2.0E, 5-7:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 3-16:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 9-10:2x4 SPF 2100F 1.8E, 19-3,17-15,11-7,11-9,16-7:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-4-2 oc purlins, except end verticals, and 2-0-0 oc purlins (2-7-13 max.): 4-5, 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-19.
WEBS 1 Row at midpt 9-10, 5-16, 7-13, 7-11, 8-11

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=406 (LC 11)
Max Uplift 2=-228 (LC 12), 10=-231 (LC 9)
Max Grav 2=1986 (LC 48), 10=1910 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/8, 2-3=-1285/55, 3-4=-4479/511, 4-5=-4209/531, 5-6=-3511/408, 6-7=-3564/579, 7-8=-1008/181, 8-9=-1008/181, 9-10=-1743/249
BOT CHORD 2-19=-40/0, 3-18=-596/4144, 17-18=-743/5200, 16-17=-743/5200, 14-15=0/0, 13-14=0/63, 11-13=-243/1542, 10-11=-137/103
WEBS 3-19=0/81, 15-17=0/117, 4-18=-38/1260, 5-18=-1267/185, 5-16=-2280/407, 14-16=0/415, 6-16=-627/287, 13-16=-251/1495, 7-13=-45/264, 7-11=-1064/170, 8-11=-620/217, 9-11=-223/1881, 7-16=-465/2563

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 231 lb uplift at joint 10 and 228 lb uplift at joint 2.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	E5	Piggyback Base	2	1	Job Reference (optional) I63476780

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:28 Page: 1
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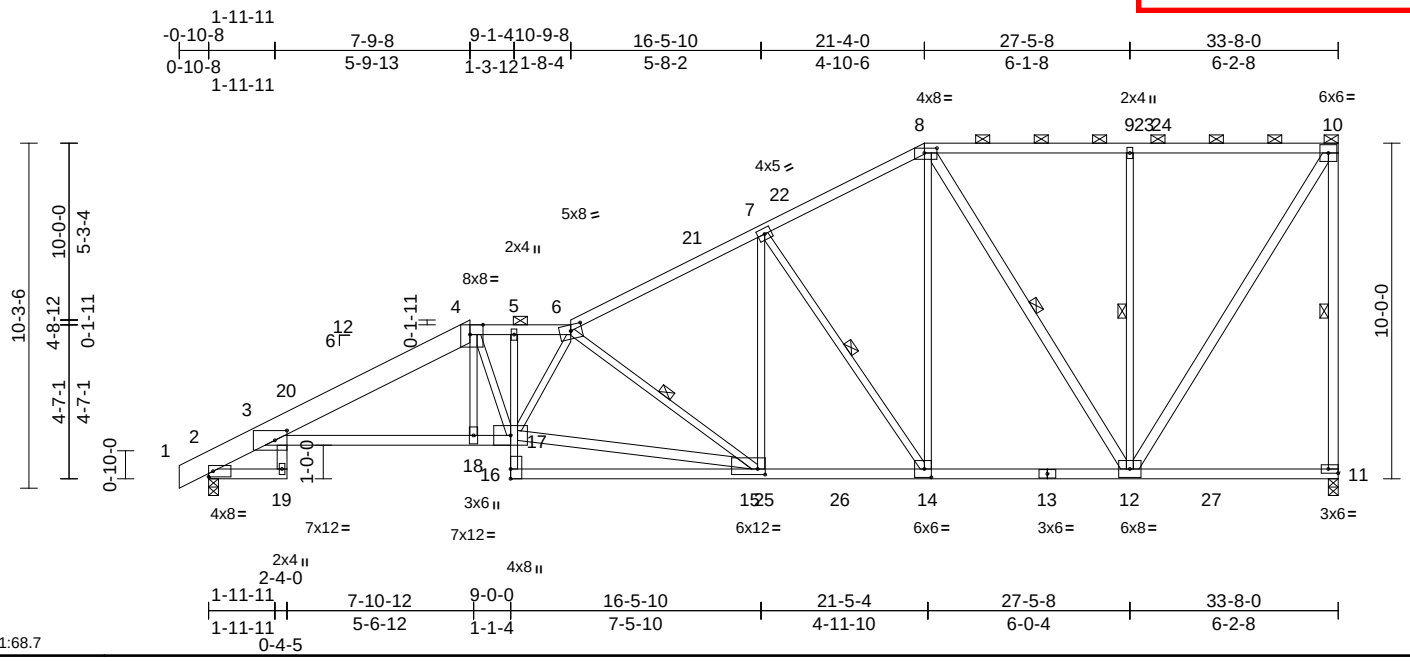

Scale = 1:68.7

Plate Offsets (X, Y): [3:0-4-5,0-3-8], [4:0-4-10,Edge], [6:0-4-0,0-2-3], [8:0-4-8,0-1-12], [11:Edge,0-1-8], [14:0-2-8,0-3-0], [15:0-2-11,0-2-0]

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	0.66	Vert(LL)	-0.37	15-16	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.60	15-16	>670	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.29	11	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.18	16	>999	240		
BCDL	10.0										Weight: 190 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-4:2x8 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except* 3-17:2x4 SPF 2100F 1.8E, 5-16:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-11:2x4 SPF 2100F 1.8E, 19-3,15-17,12-8,12-10:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-1 oc purlins, except end verticals, and 2-0-0 oc purlins (2-7-5 max.): 4-6, 8-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-19.
WEBS 1 Row at midpt 10-11, 6-15, 7-14, 8-12, 9-12

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=406 (LC 11)
Max Uplift 2=-228 (LC 12), 11=-231 (LC 9)
Max Grav 2=1959 (LC 48), 11=1901 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/8, 2-3=-1268/52, 3-4=-3758/442, 4-5=-3589/477, 5-6=-3577/476, 6-7=-2568/311, 7-8=-1756/266, 8-9=-1005/181, 9-10=-1005/181, 10-11=-1737/248
BOT CHORD 2-19=-40/0, 3-18=-503/3455, 17-18=-500/3469, 16-17=0/198, 5-17=-47/243, 15-16=-10/371, 14-15=-277/2183, 12-14=-243/1520, 11-12=-137/103
WEBS 3-19=0/81, 4-18=0/559, 4-17=-83/342, 15-17=-508/3299, 6-17=-218/48, 6-15=-1816/360, 7-15=-72/1032, 7-14=-1269/276, 8-14=-165/1354, 8-12=-1015/167, 9-12=-624/220, 10-12=-223/1877

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 231 lb uplift at joint 11 and 228 lb uplift at joint 2.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476781
230872	E6	Piggyback Base	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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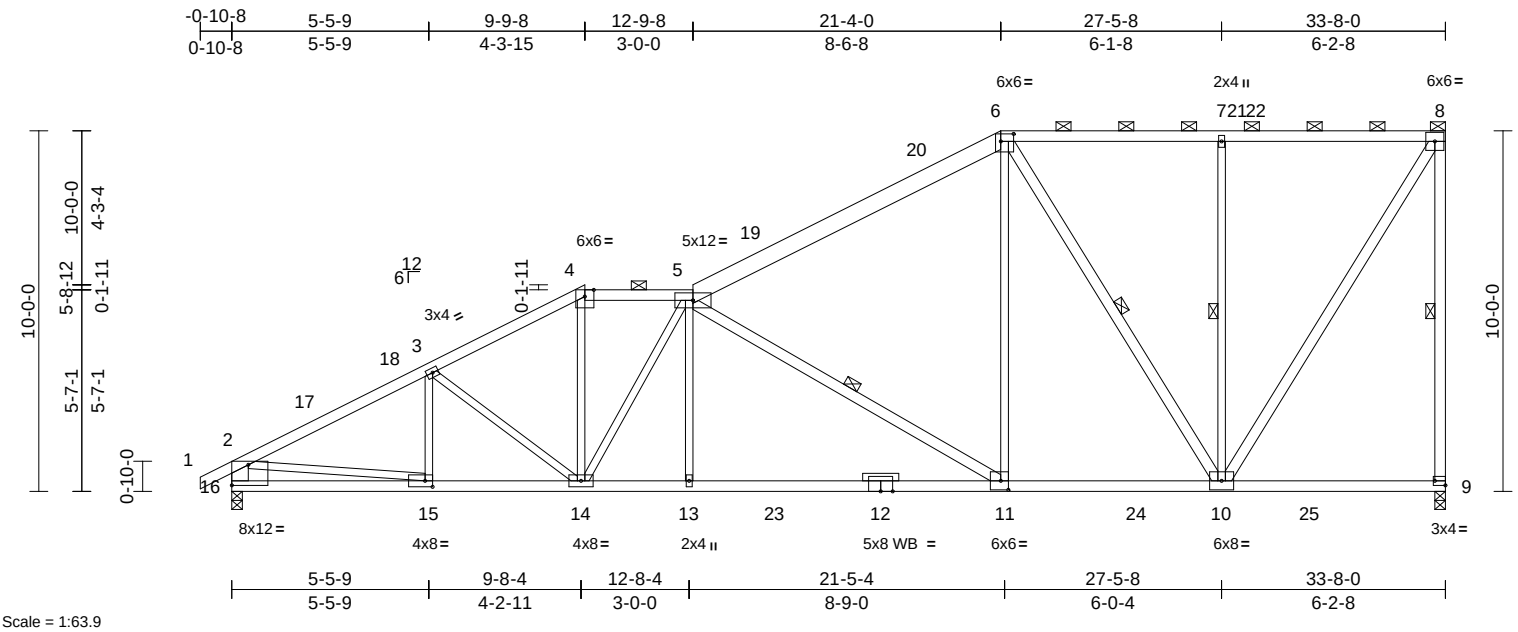

Scale = 1:63.9

Plate Offsets (X, Y): [6:0-4-4,0-2-8], [9:Edge,0-1-8], [11:0-2-8,0-3-0], [15:0-2-8,0-2-0], [16:Edge,0-6-13]

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	0.78	Vert(LL)	-0.32	11-13	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.51	11-13	>784	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.07	9	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	11-13	>999	240		
BCDL	10.0										Weight: 175 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 5-6:2x6 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 8-9:2x4 SPF 2100F 1.8E, 10-6,10-8,5-11:2x4 SPF No.2, 16-2:2x6 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-9 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-13 max.): 4-5, 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 8-9, 6-10, 7-10, 5-11

REACTIONS (size) 9=0-3-8, 16=0-3-8
Max Horiz 16=413 (LC 9)
Max Uplift 9=-231 (LC 9), 16=-237 (LC 12)
Max Grav 9=1892 (LC 3), 16=1942 (LC 48)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-2920/340, 3-4=-2680/353, 4-5=-2342/342, 5-6=-1821/227, 6-7=-996/181, 7-8=-994/181, 8-9=-1722/249, 2-16=-1798/264
BOT CHORD 15-16=-405/590, 14-15=-414/2526, 13-14=-344/2796, 11-13=-346/2788, 10-11=-242/1539, 9-10=-138/104
WEBS 3-14=-306/109, 4-14=-86/1001, 5-14=-904/36, 5-13=0/495, 6-11=-68/1220, 6-10=-1060/169, 7-10=-606/213, 8-10=-222/1855, 2-15=-136/2024, 5-11=-1504/315, 3-15=-123/112

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 231 lb uplift at joint 9 and 237 lb uplift at joint 16.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476782
230872	G1	Flat	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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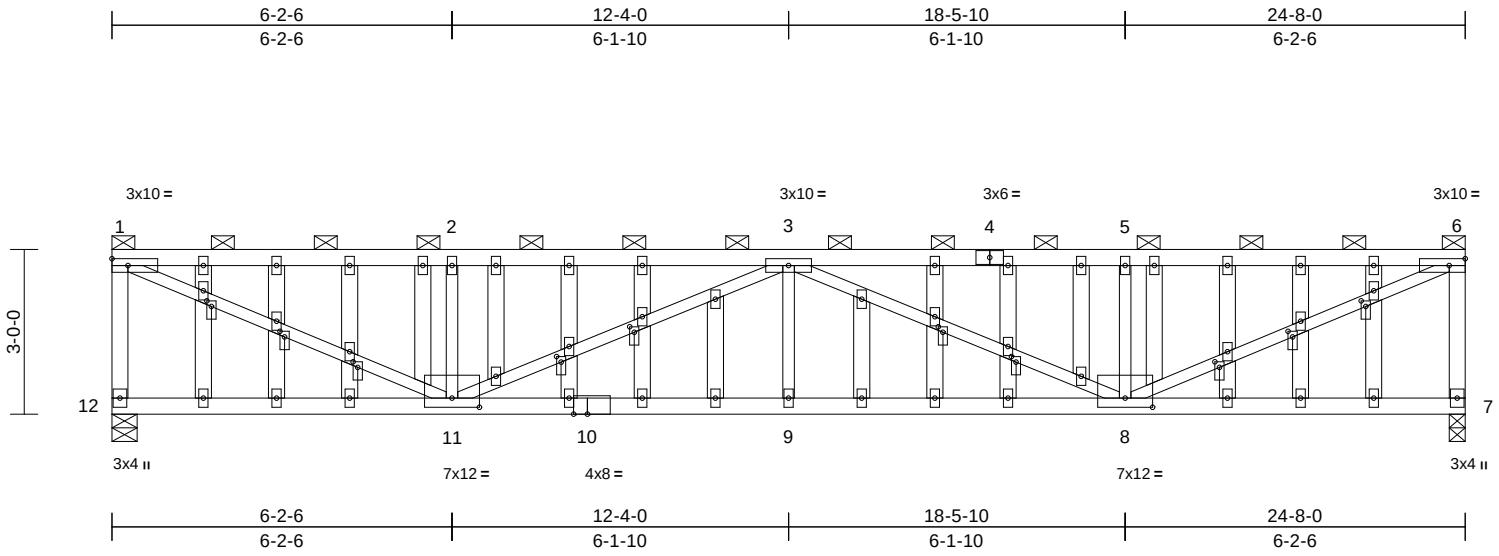

Scale = 1:42

Plate Offsets (X, Y): [8:0-6-0,0-2-0], [10:0-3-0,Edge], [11:0-6-0,0-2-0], [15:0-1-3,0-1-0], [18:0-1-3,0-1-0], [25:0-1-4,0-1-0], [28:0-1-4,0-1-0], [31:0-1-4,0-1-0], [38:0-1-3,0-1-0], [41:0-1-3,0-1-0], [48:0-1-4,0-1-0], [51:0-1-4,0-1-0], [54:0-1-4,0-1-0]

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	0.52	Vert(LL)	-0.18	9-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.33	9-11	>886	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.05	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	9	>999	240		
BCDL	10.0										Weight: 129 lb	FT = 10%

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

BRACING
TOP CHORD 2-0-0 oc purlins (3-7-5 max.): 1-6, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-1-7 oc bracing.

REACTIONS (size) 7=0-3-8, 12=0-5-8
Max Horiz 12=-103 (LC 8)
Max Uplift 7=-211 (LC 7), 12=-211 (LC 6)
Max Grav 7=1127 (LC 3), 12=1127 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-1036/239, 1-2=-1998/379, 2-3=-1998/379, 3-5=-1998/379, 5-6=-1998/379, 6-7=-1036/239
BOT CHORD 11-12=-84/90, 9-11=-525/2623, 8-9=-525/2623, 7-8=-33/54
WEBS 6-8=-401/2129, 2-11=-455/190, 1-11=-400/2129, 3-11=-684/140, 3-9=0/237, 3-8=-684/139, 5-8=-455/190

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 12 and 211 lb uplift at joint 7.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	H1	Piggyback Base	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

I63476783

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:30 Page: 1
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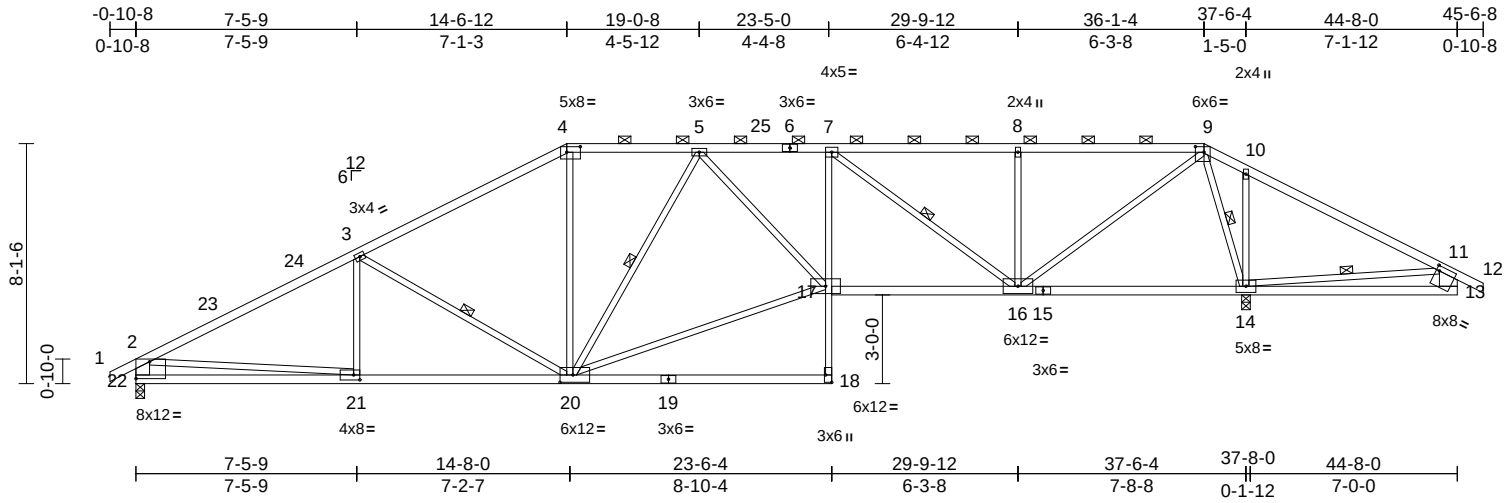

Scale = 1:77.9

Plate Offsets (X, Y): [4:0-5-8,0-2-4], [9:0-3-8,0-2-4], [13:0-1-4,0-2-0], [18:Edge,0-2-8], [20:0-5-4,0-3-0], [21:0-2-8,0-2-0], [22:Edge,0-6-13]

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	0.88	Vert(LL)	-0.34	18-20	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.65	18-20	>686	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.14	14	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.16	18	>999	240		
BCDL	10.0										Weight: 185 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 18-7:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 22-2:2x6 SPF No.2, 13-11:2x8 SP 2400F 2.0E

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-1-0 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-20, 5-20, 11-14, 9-14, 7-16

REACTIONS (size) 14=0-3-8, (req. 0-3-15), 22=0-3-8
Max Horiz 22=184 (LC 12)
Max Uplift 14=-318 (LC 9), 22=-197 (LC 12)
Max Grav 14=2496 (LC 3), 22=1749 (LC 54)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-2748/275, 3-4=-2234/285, 4-5=-1920/280, 5-7=-3026/478, 7-8=-2130/332, 8-9=-2130/332, 9-10=-57/701, 10-11=-145/908, 11-12=0/46, 2-22=-1647/238, 11-13=-30/114
BOT CHORD 21-22=-326/640, 20-21=-331/2372, 18-20=0/39, 17-18=0/153, 7-17=0/508, 16-17=-424/3040, 14-16=-336/342, 13-14=-137/349
WEBS 3-21=-23/176, 3-20=-709/236, 4-20=-17/660, 5-20=-1254/250, 17-20=-367/2488, 5-17=-121/971, 9-16=-344/2400, 2-21=-78/1760, 11-14=-1045/333, 9-14=-1905/338, 10-14=-572/242, 8-16=-610/202, 7-16=-1245/184

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) WARNING: Required bearing size at joint(s) 14 greater than input bearing size.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 197 lb uplift at joint 22 and 318 lb uplift at joint 14.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476784
230872	H2	Piggyback Base	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 E Jan 4 2024 Print: 8.730 E Jan 4 2024 MiTek Industries, Inc. Wed Feb 07 11:13:10 Page: 1
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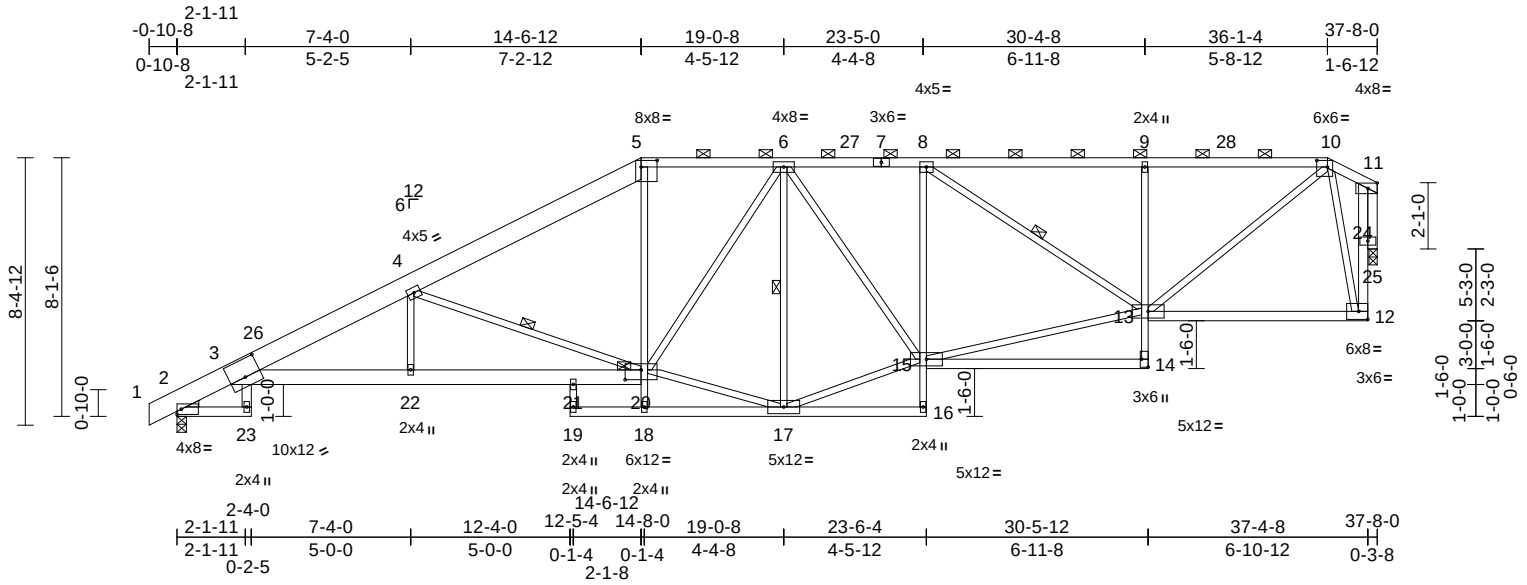

Scale = 1:72.3

Plate Offsets (X, Y): [3:0-6-0,0-6-8], [5:0-6-0,0-2-8], [10:0-4-0,0-2-8], [14:Edge,0-2-8], [20:0-6-0,0-3-12]

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	0.87	Vert(LL)	-0.26	14-15	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.49	14-15	>912	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.28	25	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.17	20	>999	240		
BCDL	10.0										Weight: 216 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 1-5:2x8 SP 2400F 2.0E
BOT CHORD	2x4 SPF No.2 *Except* 3-20:2x6 SPF No.2, 16-8,14-9:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 23-3,12-11:2x4 SPF No.2
OTHERS	2x4 SPF No.2
WEDGE	Left: 2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-9-2 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-11 max.): 5-10.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 4-20, 8-13, 6-17
JOINTS	1 Brace at Jt(s): 20

REACTIONS (lb/size) 2=1459/0-3-8, 25=1447/0-3-2
Max Horiz 2=265 (LC 12)
Max Uplift 2=-180 (LC 12), 25=-256 (LC 9)
Max Grav 2=1810 (LC 3), 25=1773 (LC 42)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-3=-1055/0, 3-26=-3917/384, 4-26=-3886/412, 4-5=-2727/346, 5-6=-2325/334, 6-27=-2502/387, 7-27=-2502/387, 7-8=-2502/387, 8-9=-2235/358, 9-28=-2243/356, 10-28=-2243/356, 10-11=-162/25, 12-25=-294/1742, 11-25=-294/1742
BOT CHORD	2-23=-30/0, 3-22=-554/3602, 21-22=-553/3605, 20-21=-553/3605, 18-19=0/0, 17-18=0/30, 16-17=-22/26, 15-16=0/75, 8-15=-342/168, 14-15=-9/70, 13-14=0/141, 9-13=-612/202, 12-13=-115/532
WEBS	3-23=0/60, 19-21=0/14, 4-20=-1466/367, 18-20=0/163, 5-20=-43/864, 13-15=-416/2497, 8-13=-395/67, 10-13=-351/2239, 10-12=-1701/340, 4-22=0/324, 6-17=-1081/250, 17-20=-354/2121, 15-17=-339/2200, 6-15=-128/748, 6-20=-139/550, 11-25=-1792/259

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
10) Bearing at joint(s) 25 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 180 lb uplift at joint 2 and 256 lb uplift at joint 25.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	H3	Hip	1	1	Job Reference (optional) I63476785

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:32 Page: 1
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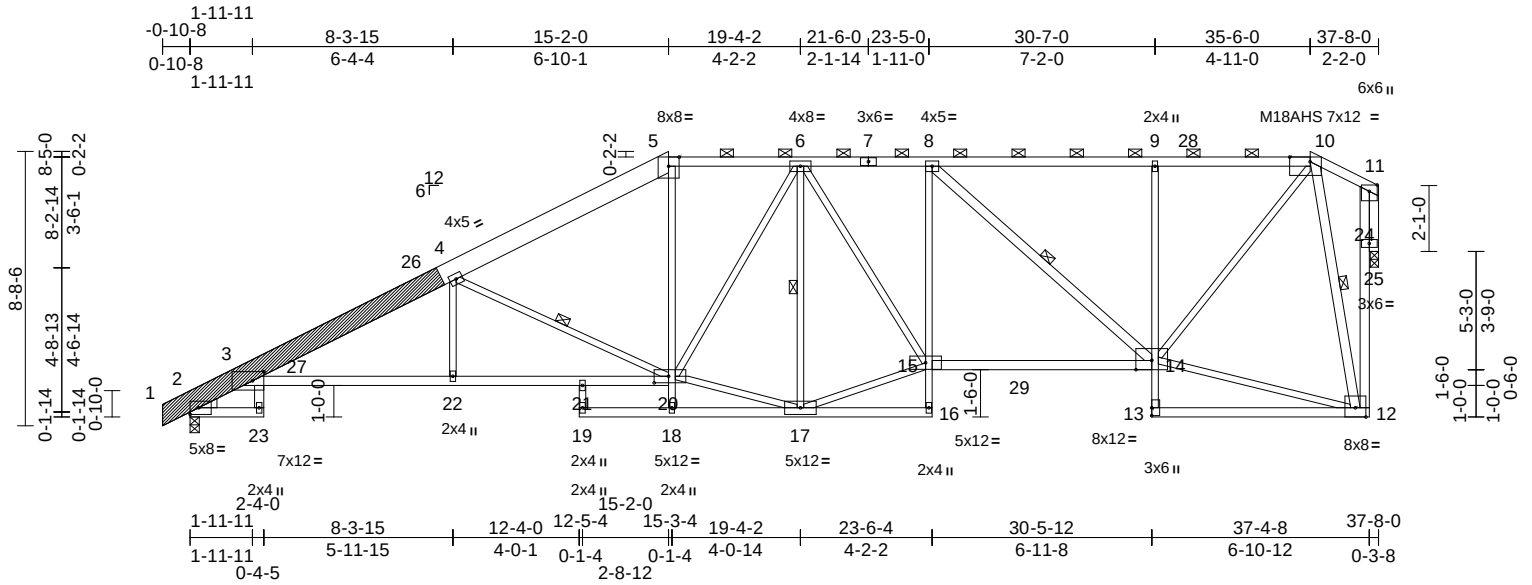

Scale = 1:73

Plate Offsets (X, Y): [3:0-4-5,0-3-8], [10:0-7-12,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)	-0.36	14-15	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.57	14-15	>785	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.35	25	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	20	>999	240		
BCDL	10.0										Weight: 255 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 1-5:2x8 SP 2400F 2.0E
BOT CHORD	2x4 SPF No.2 *Except* 3-20,15-14:2x4 SPF 2100F 1.8E, 16-8,9-13:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 23-3,14-8,12-10,12-11:2x4 SPF No.2
OTHERS	2x4 SPF No.2
LBR SCAB	1-4 SP 2400F 2.0E one side
WEDGE	Left: 2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-12 max.): 5-10.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 4-20, 8-14, 10-12, 6-17

REACTIONS (size) 2=0-3-8, 25=0-3-2, (req. 0-3-3)
Max Horiz 2=281 (LC 9)
Max Uplift 2=-188 (LC 12), 25=-247 (LC 9)
Max Grav 2=2140 (LC 3), 25=2044 (LC 42)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-3=-1265/22, 3-4=-4250/353, 4-5=-3131/330, 5-6=-2705/317, 6-8=-2901/373, 8-9=-1931/248, 9-10=-1927/252, 10-11=-212/85, 12-24=-300/2009, 11-24=-301/2003
BOT CHORD	2-23=-35/0, 3-22=-514/3909, 21-22=-512/3909, 20-21=-512/3909, 18-19=0/0, 17-18=0/44, 16-17=-39/23, 15-16=0/105, 8-15=0/645, 14-15=-455/2914, 13-14=0/185, 9-14=-643/204, 12-13=-7/13
WEBS	3-23=0/72, 19-21=0/35, 4-20=-1441/312, 18-20=0/273, 5-20=-44/1061, 6-15=-150/879, 8-14=-1359/170, 12-14=-135/526, 10-14=-326/2347, 10-12=-1988/367, 4-22=0/426, 6-17=-1273/270, 15-17=-375/2622, 17-20=-387/2473, 6-20=-116/638, 11-25=-2064/247

NOTES

1) Attached 10-0-0 scab 1 to 4, front face(s) 2x8 SP 2400F 2.0E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 0-3-13 from end at joint 1, nail 2 row(s) at 7" o.c. for 3-9-2.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) All plates are MT20 plates unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) WARNING: Required bearing size at joint(s) 25 greater than input bearing size.
12) All bearings are assumed to be SPF No.2 .
13) Bearing at joint(s) 25 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 2 and 247 lb uplift at joint 25.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476786
230872	H4	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:33 Page: 1
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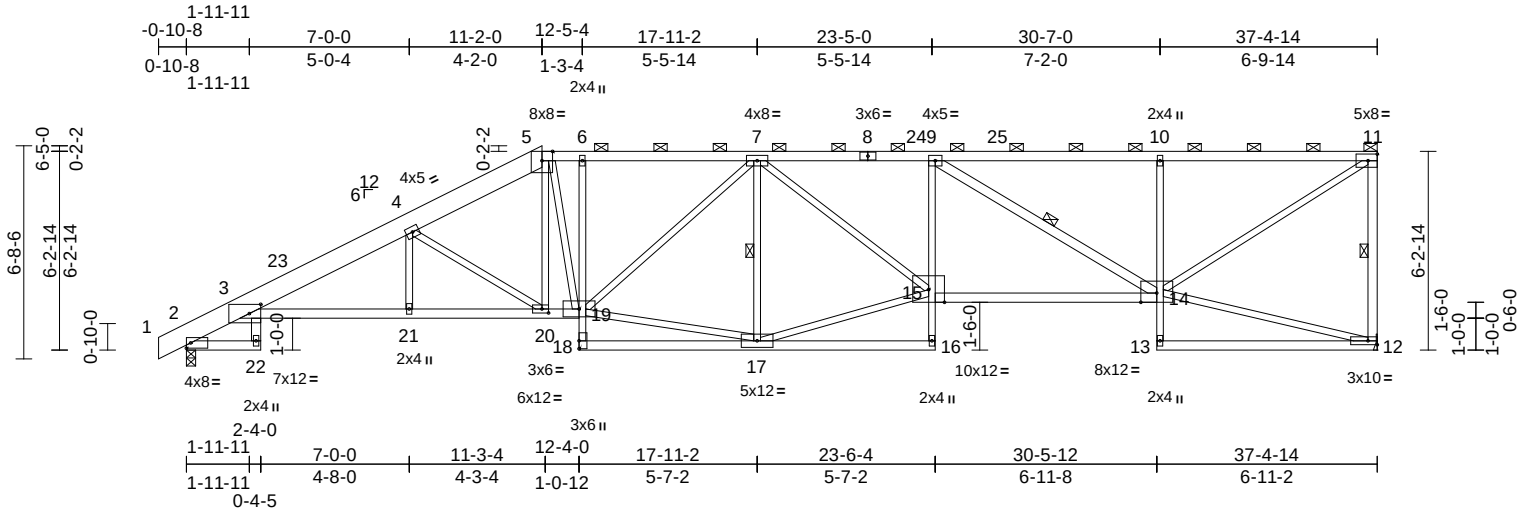

Scale = 1:72.4

Plate Offsets (X, Y): [3:0-4-5,0-3-8], [20:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.33	14-15	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.60	14-15	>739	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.38	12	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.23	16	>999	240		
BCDL	10.0										Weight: 196 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x8 SP 2400F 2.0E

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 2-22,18-16:2x4 SPF No.2, 6-18,16-9,10-13:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 11-12,22-3,14-9:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-10 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-11.

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

WEBS 1 Row at midpt 11-12, 7-17, 9-14

REACTIONS (size) 2=0-3-8, 12= Mechanical
Max Horiz 2=249 (LC 11)
Max Uplift 2=-157 (LC 12), 12=-305 (LC 9)
Max Grav 2=1797 (LC 3), 12=1843 (LC 35)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/8, 2-3=-1085/93, 3-4=-3808/469, 4-5=-3102/455, 5-6=-2843/450, 6-7=-2841/451, 7-9=-3654/595, 9-10=-2326/372, 10-11=-2313/373, 11-12=-1770/353

BOT CHORD 2-22=-29/0, 3-21=-631/3539, 20-21=-629/3538, 19-20=-513/2705, 18-19=0/99, 6-19=-370/130, 17-18=-27/231, 16-17=-19/48, 15-16=0/94, 9-15=0/484, 14-15=-697/3676, 13-14=0/133, 10-14=-659/226, 12-13=-5/17

WEBS 3-22=0/60, 7-19=-82/323, 7-17=-1175/324, 15-17=-522/2880, 7-15=-223/1096, 9-14=-1588/270, 12-14=-89/68, 11-14=-499/2748, 5-19=-194/756, 17-19=-500/2605, 4-21=0/180, 4-20=-1059/229, 5-20=-84/794

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 305 lb uplift at joint 12 and 157 lb uplift at joint 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	H5	Half Hip Girder	1	2	Job Reference (optional) I63476787

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 E Jan 4 2024 Print: 8.730 E Jan 4 2024 MiTek Industries, Inc. Wed Feb 07 11:13:38 Page: 1
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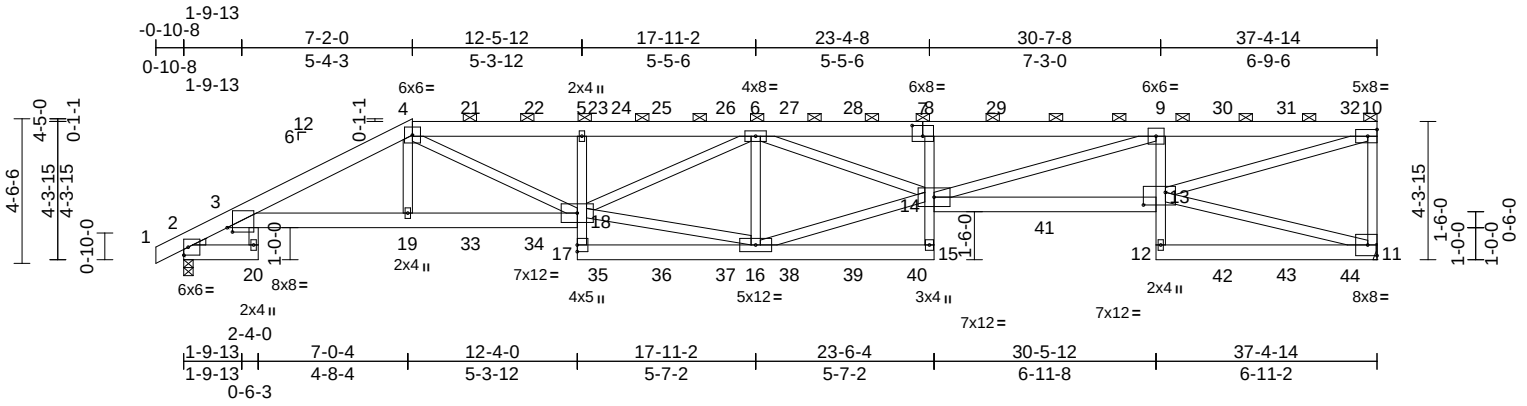

Scale = 1:72.2

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

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	0.54	Vert(LL)	-0.34	15	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.60	15	>741	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.32	11	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.43	15	>999	240		
BCDL	10.0										Weight: 444 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2 *Except* 1-4:2x6 SP 2400F 2.0E
BOT CHORD 2x6 SPF No.2 *Except* 5-17,15-8,9-12:2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE Left: 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-3-13 max.): 4-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-20
9-11-10 oc bracing: 13-14.

REACTIONS (lb/size) 2=1863/0-3-8, 11=1759/ Mechanical
Max Horiz 2=162 (LC 9)
Max Uplift 2=-839 (LC 9), 11=-930 (LC 9)
Max Grav 2=2436 (LC 29), 11=2380 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/8, 2-3=-1595/553, 3-4=-5727/2341, 4-21=-6902/2871, 21-22=-6903/2872, 5-22=-6905/2872, 5-23=-6823/2836, 23-24=-6823/2836, 24-25=-6823/2836, 25-26=-6823/2836, 6-26=-6823/2836, 6-27=-8295/3362, 27-28=-8295/3362, 7-28=-8295/3362, 7-8=-8295/3362, 8-29=-8437/3411, 9-29=-8437/3411, 9-30=-6007/2401, 30-31=-6007/2401, 31-32=-6007/2401, 10-32=-6007/2401, 10-11=-2181/937
BOT CHORD 2-20=-157/45, 3-19=-2244/5129, 19-33=-2234/5091, 33-34=-2234/5091, 18-34=-2234/5091, 17-18=-25/180, 5-18=-482/335, 17-35=-311/733, 35-36=-311/733, 36-37=-311/733, 16-37=-311/733, 16-38=-148/370, 38-39=-148/370, 39-40=-148/370, 15-40=-148/370, 14-15=-23/171, 8-14=-392/212, 14-41=-2531/6212, 13-41=-2534/6221, 12-13=0/155, 9-13=-1298/638, 12-42=-44/159, 42-43=-44/159, 43-44=-44/159, 11-44=-44/159
WEBS 3-20=-68/237, 4-19=-207/770, 4-18=-866/2104, 16-18=-2097/5071, 6-18=-596/1219, 6-16=-2201/1060, 14-16=-2308/5555, 6-14=-1148/2783, 9-14=-994/2480, 11-13=-149/67, 10-13=-2533/6234

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

February 8,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	H5	Half Hip Girder	1	**2**	Job Reference (optional)

I63476787

10) * 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.
11) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
12) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 930 lb uplift at joint 11 and 839 lb uplift at joint 2.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 124 lb down and 121 lb up at 7-2-0, 142 lb down and 121 lb up at 9-0-0, 142 lb down and 121 lb up at 11-0-0, 84 lb down and 66 lb up at 13-0-0, 84 lb down and 66 lb up at 15-0-0, 84 lb down and 66 lb up at 17-0-0, 84 lb down and 66 lb up at 19-0-0, 84 lb down and 66 lb up at 21-0-0, 84 lb down and 66 lb up at 23-0-0, 84 lb down and 66 lb up at 30-7-0, 84 lb down and 66 lb up at 32-7-0, and 84 lb down and 66 lb up at 34-7-0, and 84 lb down and 64 lb up at 36-7-0 on top chord, and 277 lb down and 170 lb up at 7-2-0, at 9-0-0, at 11-0-0, 27 lb down and 18 lb up at 13-0-0, 27 lb down and 18 lb up at 15-0-0, 27 lb down and 18 lb up at 17-0-0, 27 lb down and 18 lb up at 19-0-0, 27 lb down and 18 lb up at 21-0-0, 27 lb down and 18 lb up at 23-0-0, 128 lb down and 140 lb up at 27-0-0, 27 lb down and 18 lb up at 30-7-8, 27 lb down and 18 lb up at 32-7-0, and 27 lb down and 18 lb up at 34-7-0, and 33 lb down and 16 lb up at 36-7-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-4=-51, 4-10=-61, 2-20=-20, 3-18=-20, 15-17=-20, 13-14=-20, 11-12=-20
   Concentrated Loads (lb)
   Vert: 4=-34 (B), 7=-6 (B), 9=-6 (B), 19=-242 (B), 13=-10 (B), 21=-30 (B), 22=-30 (B), 23=-6 (B), 25=-6 (B), 26=-6 (B), 27=-6 (B), 28=-6 (B), 30=-6 (B), 31=-6 (B), 32=-13 (B), 35=-10 (B), 36=-10 (B), 37=-10 (B), 38=-10 (B), 39=-10 (B), 40=-10 (B), 41=-112 (B), 42=-10 (B), 43=-10 (B), 44=-14 (B)

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J1	Diagonal Hip Girder	6	1	Job Reference (optional) I63476788

Wheeler Lumber, Waverly, KS - 66871,

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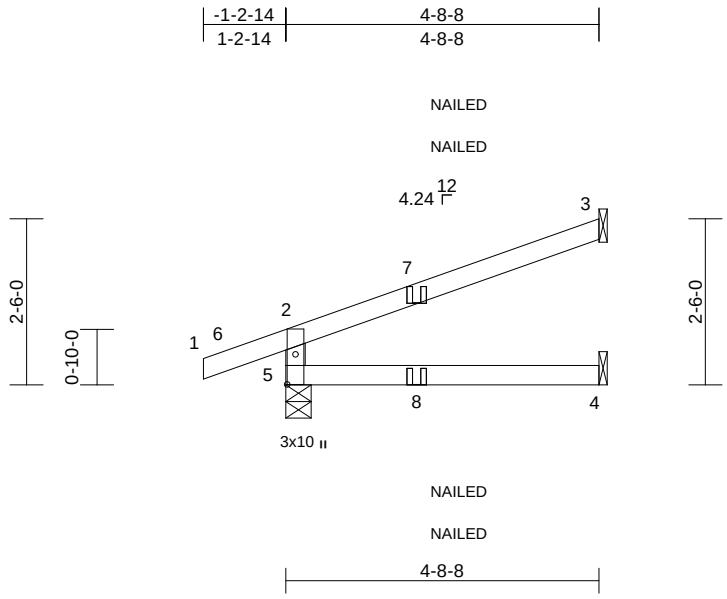

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Plate Offsets (X, Y): [5:0-5-7,0-1-8]

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	0.36	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.05	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.02	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	4-5	>999	240		
BCDL	10.0										Weight: 13 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-4-9
Max Horiz 5=82 (LC 8)
Max Uplift 3=-68 (LC 12), 5=-92 (LC 8)
Max Grav 3=147 (LC 19), 4=84 (LC 7), 5=322 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-286/122, 1-2=0/32, 2-3=-82/38
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 5 and 68 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51, 2-3=-51, 4-5=-20
Concentrated Loads (lb)
Vert: 8=2 (F=1, B=1)

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

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476789
230872	J2	Jack-Open	12	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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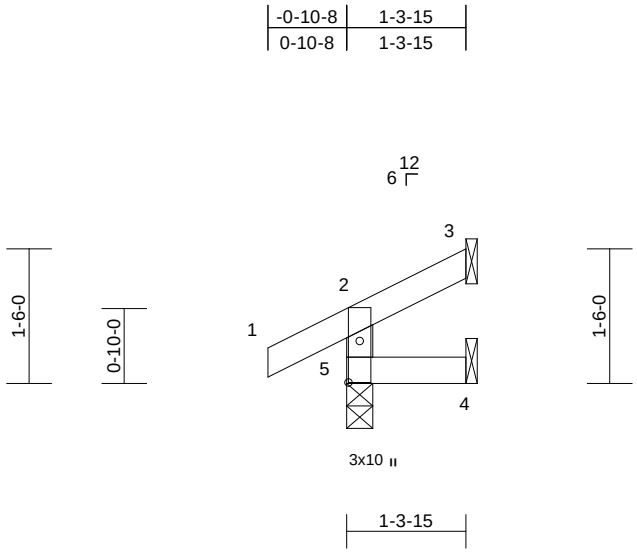

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Plate Offsets (X, Y): [5:0-5-9,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240		
BCDL	10.0										Weight: 5 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-3-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=37 (LC 9)
Max Uplift 3=-20 (LC 12), 4=-1 (LC 9), 5=-22 (LC 12)
Max Grav 3=17 (LC 2), 4=20 (LC 7), 5=155 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-136/37, 1-2=0/32, 2-3=-29/5
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 5, 1 lb uplift at joint 4 and 20 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476790
230872	J3	Jack-Open	15	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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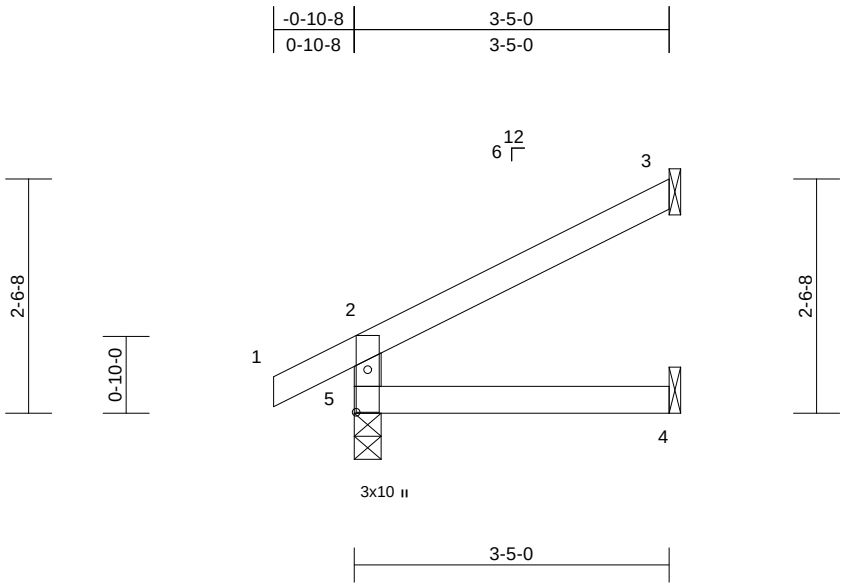

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Plate Offsets (X, Y): [5:0-5-9,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.01	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240		
BCDL	10.0										Weight: 10 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=75 (LC 12)
Max Uplift 3=-58 (LC 12), 5=-24 (LC 12)
Max Grav 3=107 (LC 19), 4=60 (LC 7), 5=248 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-220/58, 1-2=0/35, 2-3=-63/37
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 5 and 58 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476791
230872	J4	Diagonal Hip Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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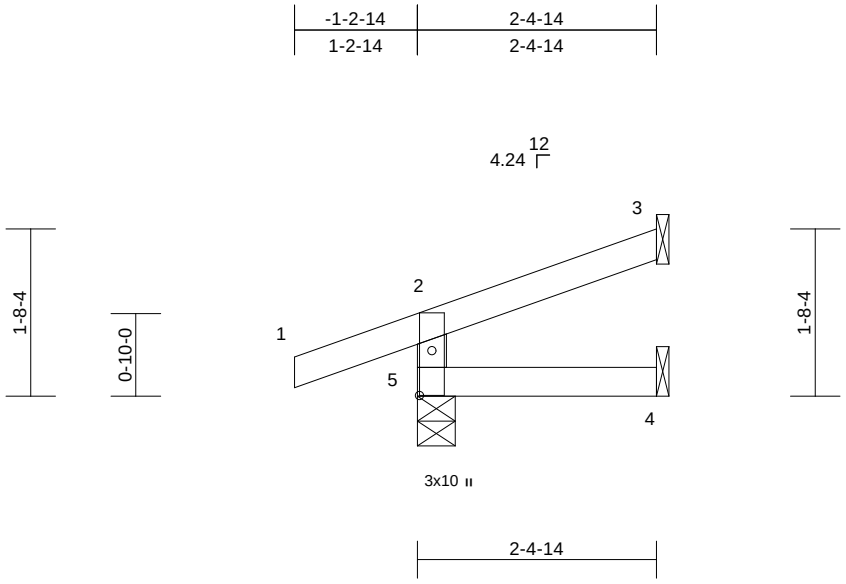

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Plate Offsets (X, Y): [5:0-5-7,0-1-8]

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	0.15	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240		
BCDL	10.0										Weight: 8 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-4-9
Max Horiz 5=49 (LC 8)
Max Uplift 3=-31 (LC 12), 5=-79 (LC 8)
Max Grav 3=54 (LC 19), 4=39 (LC 7), 5=230 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-202/96, 1-2=0/33, 2-3=-34/13
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 5 and 31 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476792
230872	J5	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:38 Page: 1
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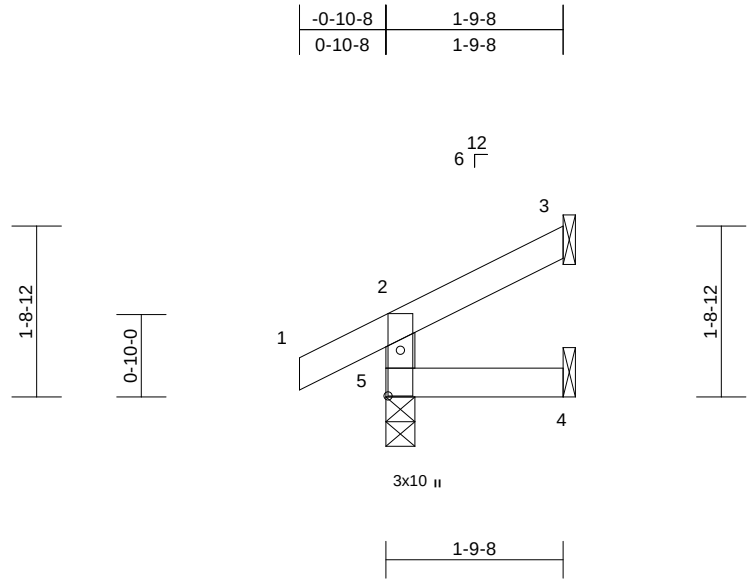

Scale = 1:23.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240		
BCDL	10.0										Weight: 6 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-9-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=43 (LC 9)
Max Uplift 3=-30 (LC 12), 5=-22 (LC 12)
Max Grav 3=40 (LC 19), 4=29 (LC 7), 5=171 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-151/40, 1-2=0/33, 2-3=-35/13
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 5 and 30 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476793
230872	J6	Diagonal Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:38 Page: 1
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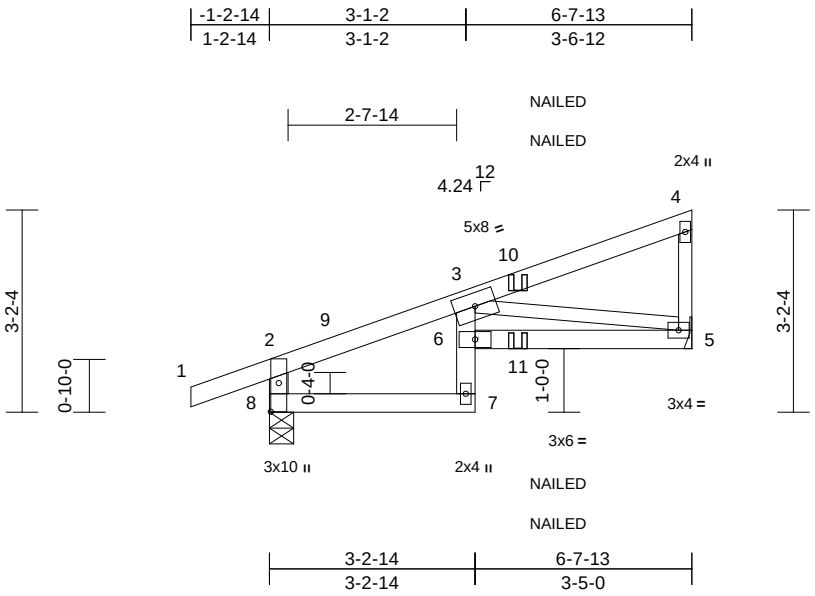

Scale = 1:36.3

Plate Offsets (X, Y): [8:0-5-7,0-1-8]

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	0.33	Vert(LL)	-0.04	5-6	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.07	5-6	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.27	Horz(CT)	0.03	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	5-6	>999	240		
BCDL	10.0										Weight: 23 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-3:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 8-2:2x4 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) 5= Mechanical, 8=0-4-9
Max Horiz 8=118 (LC 9)
Max Uplift 5=-87 (LC 12), 8=-121 (LC 8)
Max Grav 5=335 (LC 5), 8=414 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-372/139, 1-2=0/32, 2-3=-379/70, 3-4=-99/20, 4-5=-121/47
BOT CHORD 7-8=-91/284, 6-7=0/52, 3-6=0/145, 5-6=-251/842
WEBS 3-5=-825/265

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 8 and 87 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51, 2-4=-51, 7-8=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 10=-3 (F=-1, B=-1), 11=-48 (F=-24, B=-24)

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476794
230872	J7	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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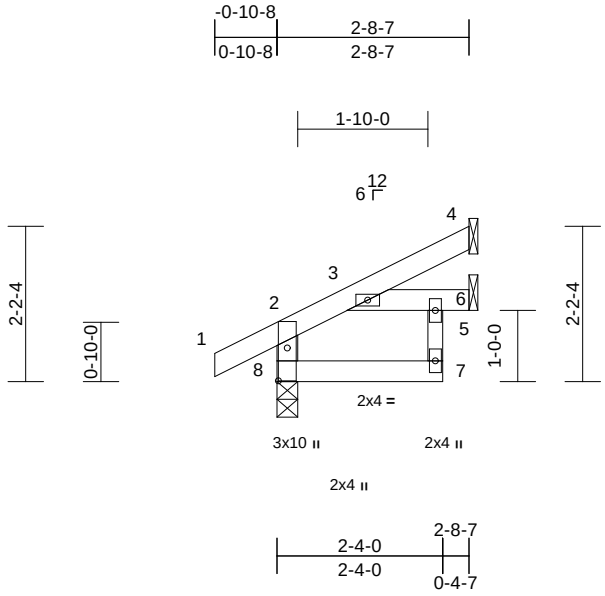

Scale = 1:32.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	3-6	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	3-6	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	3	>999	240		
BCDL	10.0										Weight: 10 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 8=0-3-8
Max Horiz 8=60 (LC 12)
Max Uplift 4=-31 (LC 12), 5=-2 (LC 12), 8=-17 (LC 12)
Max Grav 4=65 (LC 19), 5=77 (LC 26), 8=221 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-201/38, 1-2=0/34, 2-3=-74/0, 3-4=-25/24
BOT CHORD 7-8=-16/26, 6-7=0/42, 3-6=-26/16, 5-6=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 8, 31 lb uplift at joint 4 and 2 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J8	Diagonal Hip Girder	1	1	Job Reference (optional) I63476795

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:39 Page: 1
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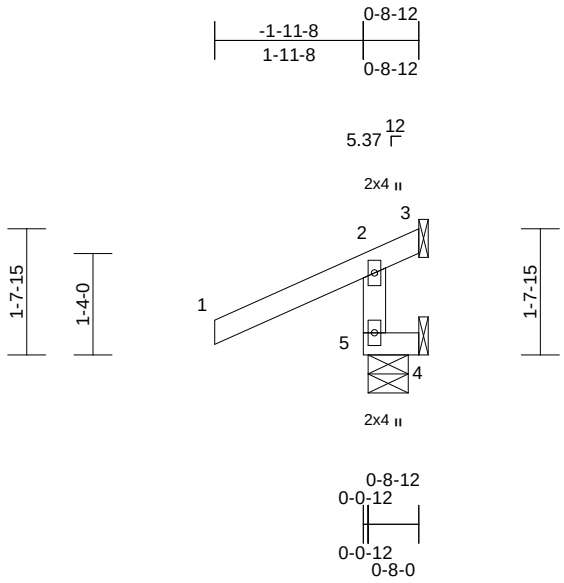

Scale = 1:30.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	0.00	5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	5	>999	240		
BCDL	10.0										Weight: 5 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 0-8-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-6-5
Max Horiz 5=49 (LC 9)
Max Uplift 3=-209 (LC 19), 4=-39 (LC 19), 5=-113 (LC 8)
Max Grav 3=68 (LC 8), 4=8 (LC 30), 5=448 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/61, 2-3=-102/28, 2-5=-398/126
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 4, 209 lb uplift at joint 3 and 113 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J9	Jack-Closed Girder	1	1	I63476796 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:22:39 Page: 1

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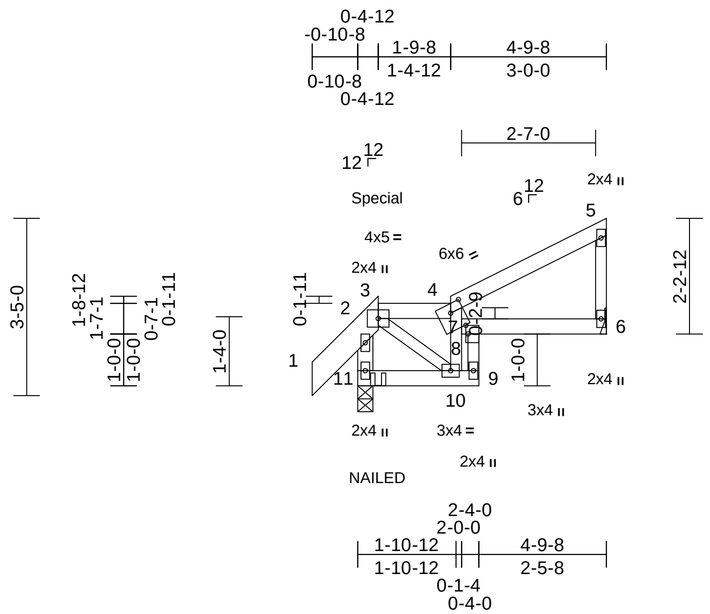


Scale = 1:44.4

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

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	0.21	Vert(LL)	-0.03	6-7	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.05	6-7	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.05	Horz(CT)	0.02	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	9	>999	240		
BCDL	10.0										Weight: 21 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-3:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 9-7:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-2:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 7-8.

REACTIONS (size) 6= Mechanical, 11=0-3-8
Max Horiz 11=114 (LC 9)
Max Uplift 6=-54 (LC 75), 11=-150 (LC 59)
Max Grav 6=219 (LC 45), 11=314 (LC 47)

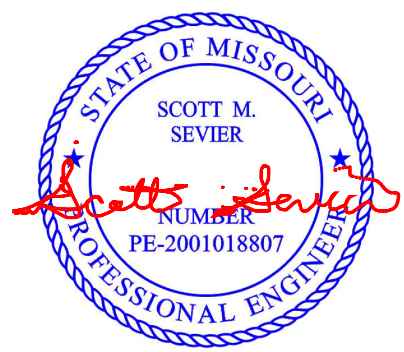
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/73, 2-3=-130/22, 3-4=-110/13, 4-5=-92/28, 5-6=-129/49, 2-11=-255/139
BOT CHORD 10-11=-85/55, 9-10=-32/86, 7-9=-113/290, 7-8=-50/39, 6-7=-22/43
WEBS 3-10=-13/128, 8-10=-350/122, 4-8=-118/51

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 6 and 150 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 108 lb down and 285 lb up at 0-4-12 on top chord, and 5 lb down and 52 lb up at 0-1-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51, 2-3=-51, 3-4=-61, 4-5=-51, 9-11=-20, 6-7=-20
Concentrated Loads (lb)
Vert: 11=18 (B), 2=58 (B)



February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J10	Jack-Closed	1	1	Job Reference (optional) I63476797

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:39 Page: 1
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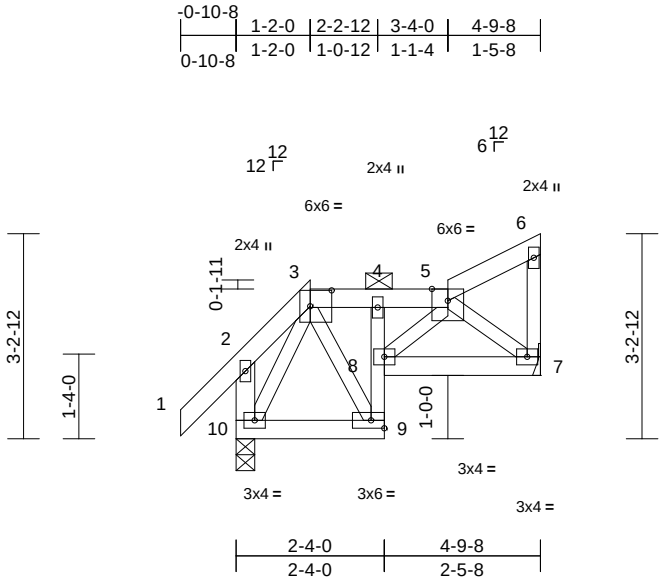

Scale = 1:36.3

Plate Offsets (X, Y): [3:0-4-1,0-3-0]

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	0.13	Vert(LL)	-0.01	8	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.01	7-8	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.02	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.01	9	>999	240		
BCDL	10.0										Weight: 23 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 9-4:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7= Mechanical, 10=0-3-8
Max Horiz 10=115 (LC 9)
Max Uplift 7=-54 (LC 12), 10=-46 (LC 12)
Max Grav 7=203 (LC 3), 10=307 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-10=-181/80, 1-2=0/74, 2-3=-67/55, 3-4=-114/32, 4-5=-178/46, 5-6=-54/22, 6-7=-54/18
BOT CHORD 9-10=-64/93, 8-9=-52/43, 4-8=-24/71, 7-8=-48/162
WEBS 3-10=-197/27, 3-9=-29/88, 5-7=-206/75, 5-8=-20/35

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 10 and 54 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476798
230872	J11	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:40 Page: 1
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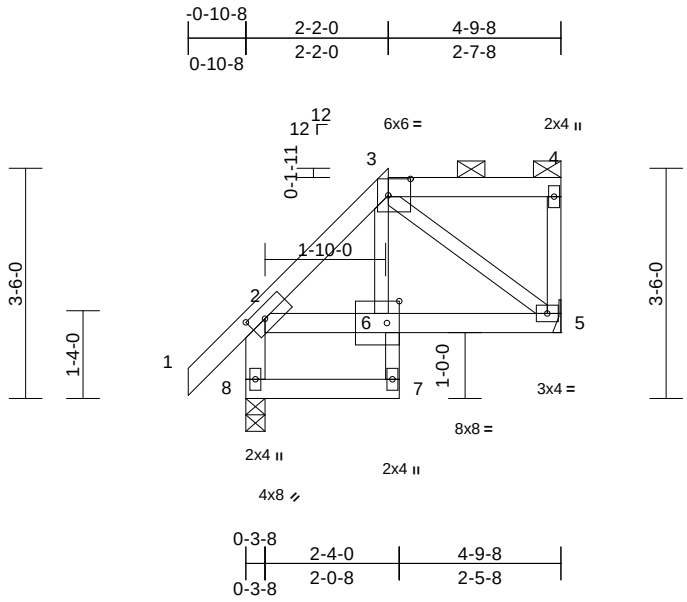

Scale = 1:35

Plate Offsets (X, Y): [2:0-2-15,0-2-0], [3:0-4-1,0-3-0], [6:0-2-4,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	5-6	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	5-6	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	-0.01	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.00	5-6	>999	240		
BCDL	10.0										Weight: 23 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 8=0-3-8
Max Horiz 8=121 (LC 7)
Max Uplift 5=-71 (LC 7), 8=-30 (LC 10)
Max Grav 5=203 (LC 3), 8=284 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-262/57, 1-2=0/51, 2-3=-205/27, 3-4=-29/24, 4-5=-86/38
BOT CHORD 7-8=-51/38, 6-7=-12/48, 2-6=-22/111, 5-6=-73/136
WEBS 3-5=-160/71, 3-6=-2/97

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 8 and 71 lb uplift at joint 5.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476799
230872	J12	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:40 Page: 1
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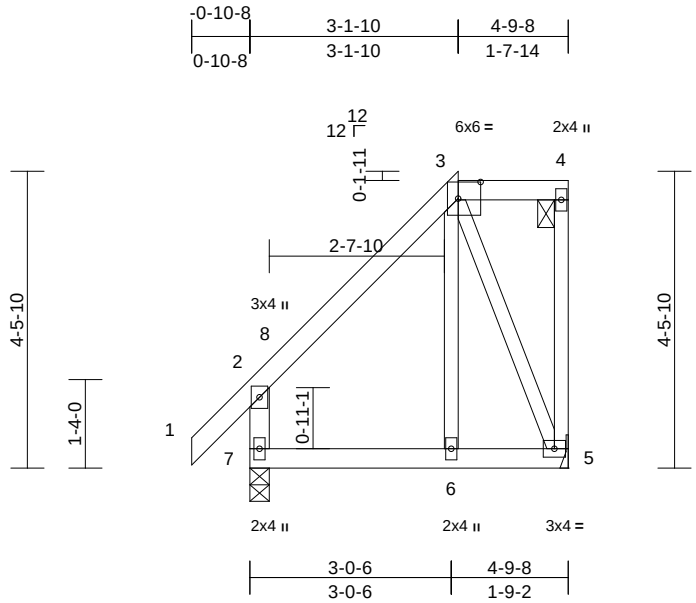

Scale = 1:34.7

Plate Offsets (X, Y): [3:0-4-1,0-3-0]

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	0.17	Vert(LL)	0.00	5-6	>999	240	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.01	6-7	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 25 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=176 (LC 9)
Max Uplift 5=-93 (LC 9), 7=-24 (LC 12)
Max Grav 5=227 (LC 37), 7=376 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-339/68, 1-2=0/74, 2-3=-220/42, 3-4=-58/45, 4-5=-77/43
BOT CHORD 6-7=-80/97, 5-6=-81/94
WEBS 3-6=-25/100, 3-5=-222/123

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 7 and 93 lb uplift at joint 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476800
230872	J13	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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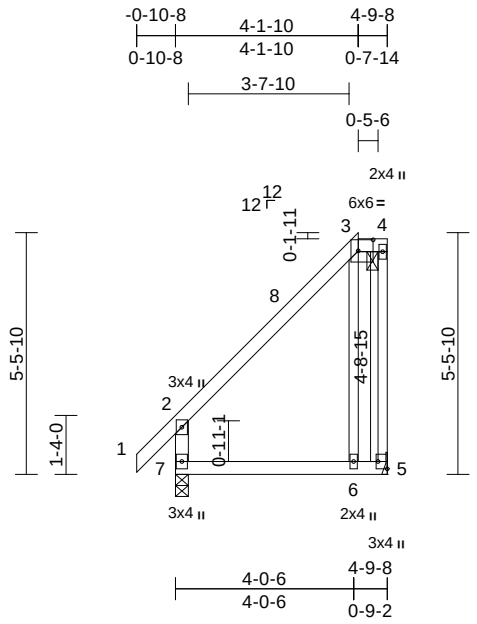

Scale = 1:52.1

Plate Offsets (X, Y): [3:0-4-1,0-3-0], [5: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	0.33	Vert(LL)	-0.03	6-7	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.05	6-7	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.04	6-7	>999	240		
BCDL	10.0										Weight: 23 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=216 (LC 11)
Max Uplift 5=-119 (LC 9), 7=-9 (LC 8)
Max Grav 5=290 (LC 38), 7=407 (LC 40)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-340/46, 1-2=0/74, 2-3=-242/118, 3-4=-69/64, 4-5=-98/34
BOT CHORD 6-7=-74/62, 5-6=-77/63
WEBS 3-6=-141/145

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 7 and 119 lb uplift at joint 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476801
230872	J14	Jack-Open	10	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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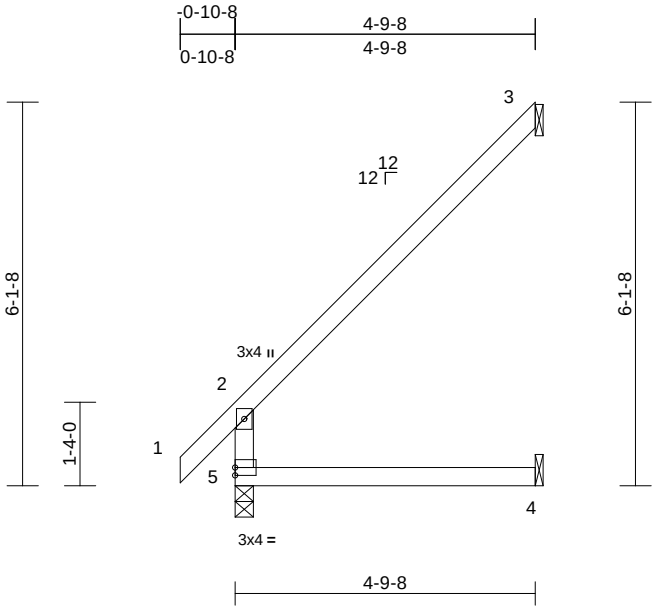

Scale = 1:36.8

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	0.33	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.08	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.05	4-5	>999	240		
BCDL	10.0										Weight: 16 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=145 (LC 10)
Max Uplift 3=-103 (LC 10), 4=-5 (LC 10)
Max Grav 3=164 (LC 20), 4=98 (LC 20), 5=286 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-251/0, 1-2=0/51, 2-3=-141/97
BOT CHORD 4-5=0/0

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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 3 and 5 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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J15	Jack-Open	1	1	Job Reference (optional) I63476802

Wheeler Lumber, Waverly, KS - 66871,

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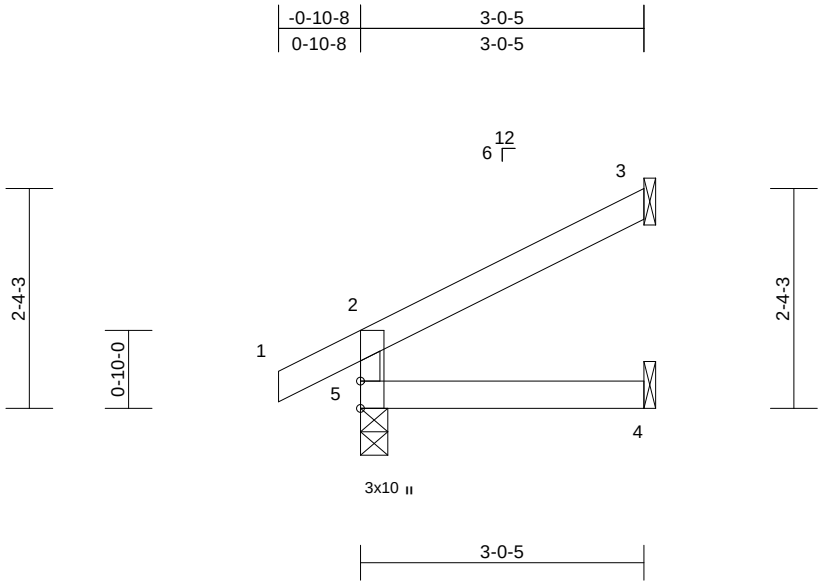

Scale = 1:24.6

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	0.12	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240		
BCDL	10.0										Weight: 9 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 3-0-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=67 (LC 12)
Max Uplift 3=-54 (LC 12), 5=-23 (LC 12)
Max Grav 3=94 (LC 19), 4=55 (LC 7), 5=225 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-198/51, 1-2=0/33, 2-3=-57/32
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 5 and 54 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J16	Jack-Open	10	1	Job Reference (optional) I63476803

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:42 Page: 1
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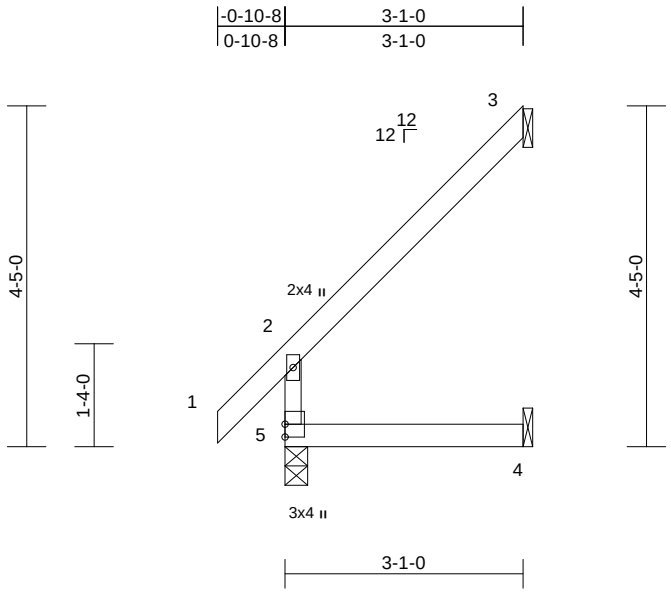

Scale = 1:29.9

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	0.18	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.01	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240		
BCDL	10.0										Weight: 11 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 3-1-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=97 (LC 10)
Max Uplift 3=-74 (LC 10), 4=-6 (LC 10)
Max Grav 3=106 (LC 20), 4=62 (LC 20), 5=211 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-184/0, 1-2=0/48, 2-3=-93/63
BOT CHORD 4-5=0/0

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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 3 and 6 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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J17	Diagonal Hip Girder	2	1	Job Reference (optional) I63476804

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:42 Page: 1
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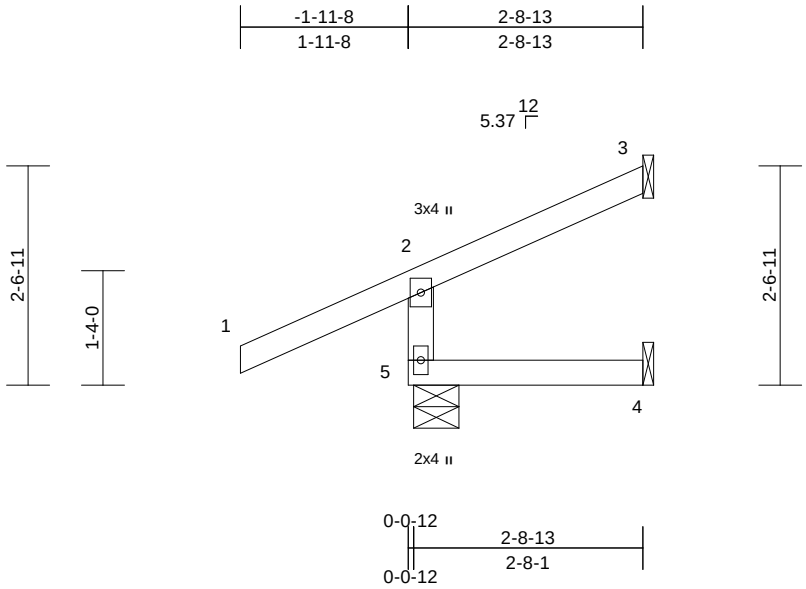

Scale = 1:26.8

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	0.39	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	0.00	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240		
BCDL	10.0										Weight: 10 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-6-5
Max Horiz 5=71 (LC 11)
Max Uplift 3=-58 (LC 16), 4=-9 (LC 30), 5=-63 (LC 16)
Max Grav 3=26 (LC 8), 4=17 (LC 21), 5=284 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-261/85, 1-2=0/66, 2-3=-40/10
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 5, 58 lb uplift at joint 3 and 9 lb uplift at joint 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51
Trapezoidal Loads (lb/ft)
Vert: 2=-2 (F=24, B=24)-to-3=-35 (F=8, B=8), 5=0 (F=10, B=10)-to-4=-14 (F=3, B=3)

February 8,2024

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J18	Half Hip Girder	1	1	Job Reference (optional) I63476805

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:22:42 Page: 1
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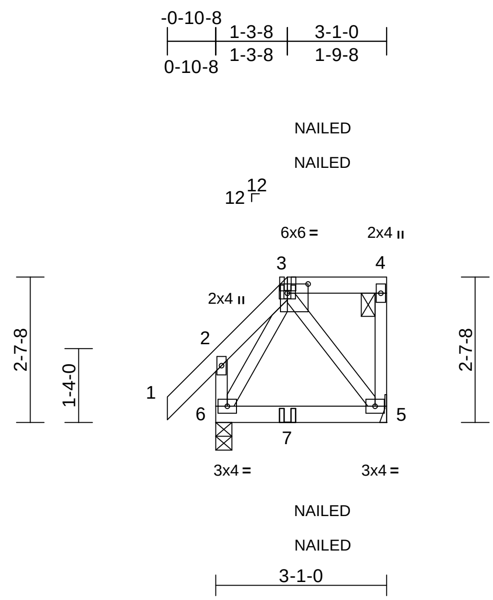

Scale = 1:41.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	0.00	5-6	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	5-6	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.00	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	0.00	5-6	>999	240		
BCDL	10.0										Weight: 16 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 3-1-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 6=0-3-8
Max Horiz 6=109 (LC 9)
Max Uplift 5=-136 (LC 9), 6=-134 (LC 12)
Max Grav 5=156 (LC 37), 6=260 (LC 40)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/71, 2-3=-98/94, 3-4=-34/25, 4-5=-87/25, 2-6=-206/116
BOT CHORD 5-6=-97/56
WEBS 3-5=-59/130, 3-6=-145/139

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 136 lb uplift at joint 5 and 134 lb uplift at joint 6.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51, 2-3=-51, 3-4=-61, 5-6=-20
Concentrated Loads (lb)
Vert: 3=45 (F=22, B=22), 7=7 (F=4, B=4)

February 8,2024

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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J19	Jack-Open	3	1	Job Reference (optional) I63476806

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:43 Page: 1
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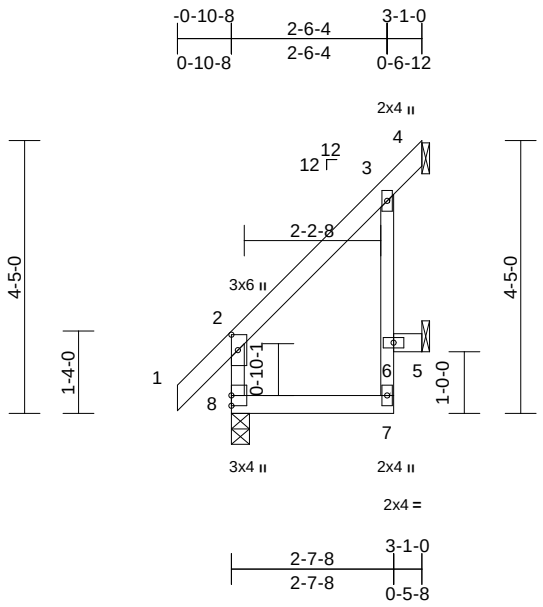

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Plate Offsets (X, Y): [2:0-3-0,0-1-4]

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	0.22	Vert(LL)	0.02	7	>999	240	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.02	7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	-0.07	4	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										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 3-1-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 8=0-3-8
Max Horiz 8=138 (LC 10)
Max Uplift 4=-132 (LC 10)
Max Grav 4=165 (LC 22), 5=10 (LC 5), 8=211 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-189/0, 1-2=0/48, 2-3=-120/41, 3-4=-97/115
BOT CHORD 7-8=0/0, 5-6=0/0
WEBS 6-7=-21/56, 3-6=-18/65

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 132 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

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476807
230872	J20	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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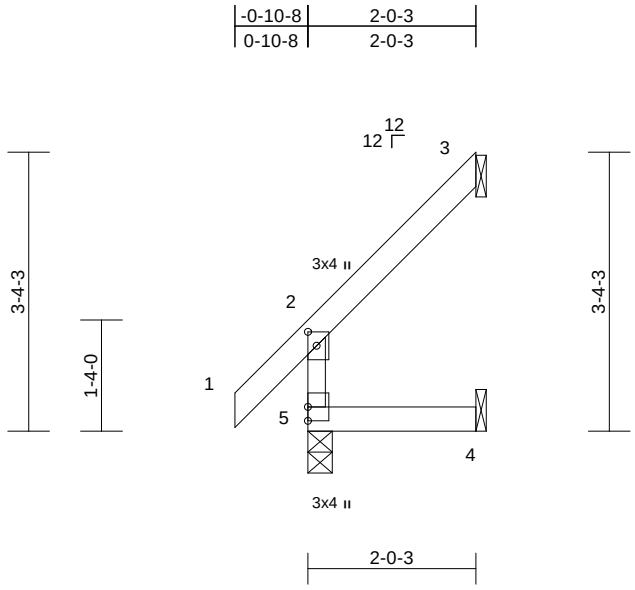

Scale = 1:27.6

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

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	0.15	Vert(LL)	0.00	4-5	>999	240	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										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 2-0-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=94 (LC 10)
Max Uplift 3=-77 (LC 10), 4=-21 (LC 10)
Max Grav 3=66 (LC 22), 4=44 (LC 18), 5=170 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-150/0, 1-2=0/48, 2-3=-78/39
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 3 and 21 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

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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476808
230872	J21	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:43 Page: 1
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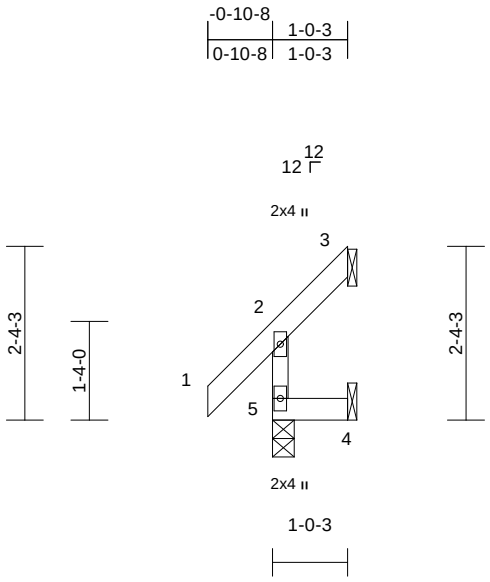

Scale = 1:31.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	0.00	4-5	>999	240	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 5 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 1-0-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=61 (LC 7)
Max Uplift 3=-41 (LC 10), 4=-30 (LC 10)
Max Grav 3=23 (LC 8), 4=33 (LC 8), 5=146 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-133/7, 1-2=0/48, 2-3=-49/15
BOT CHORD 4-5=0/0

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 4 and 41 lb uplift at joint 3.
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 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	J22	Diagonal Hip Girder	1	1	Job Reference (optional) I63476809

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:43 Page: 1
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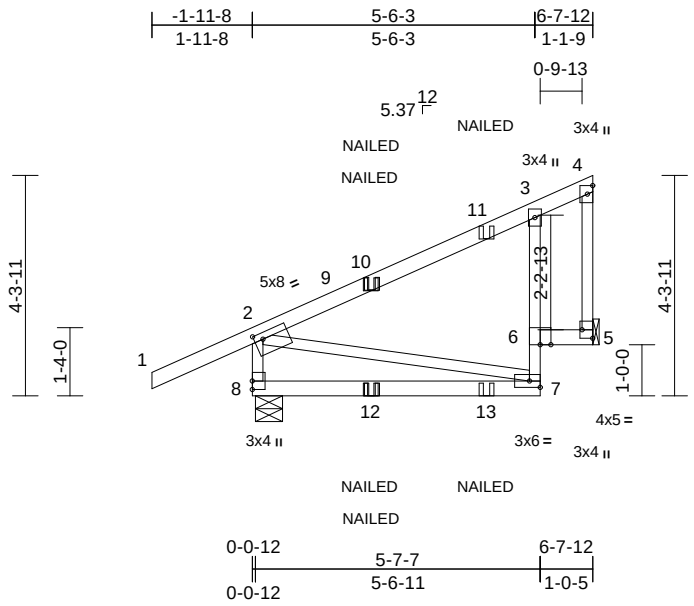

Scale = 1:45

Plate Offsets (X, Y): [2:0-2-0,0-1-8], [5: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	0.36	Vert(LL)	-0.04	7-8	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.08	7-8	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.03	Horz(CT)	-0.01	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	7-8	>999	240		
BCDL	10.0										Weight: 28 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-3:2x3 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 6-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 8=0-6-5
Max Horiz 8=167 (LC 9)
Max Uplift 5=-143 (LC 9), 8=-140 (LC 12)
Max Grav 5=314 (LC 26), 8=470 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-387/145, 1-2=0/59, 2-3=-261/66, 3-4=-56/39, 4-5=-94/26
BOT CHORD 7-8=-195/114, 6-7=-34/113, 3-6=-144/107, 5-6=-41/45
WEBS 2-7=-22/124

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 140 lb uplift at joint 8 and 143 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51, 2-4=-51, 7-8=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 10=23 (B), 12=-1 (F=-3, B=2), 13=0 (B)

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	K1	Common Supported Gable	3	1	Job Reference (optional) I63476810

Wheeler Lumber, Waverly, KS - 66871,

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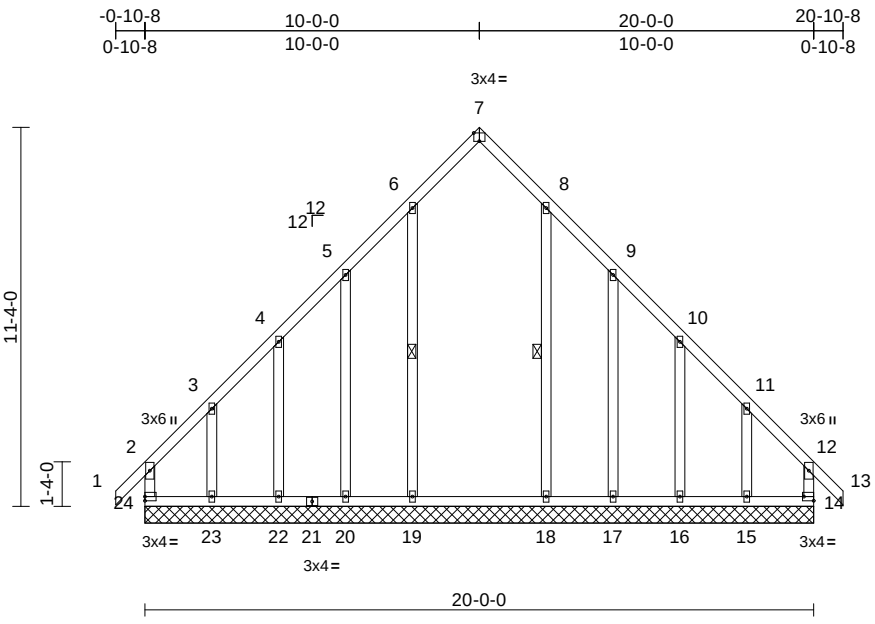

Scale = 1:68.9

Plate Offsets (X, Y): [7:0-2-0,Edge], [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	0.24	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	14	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 113 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 10-0-0 oc bracing.
WEBS	1 Row at midpt 8-18, 6-19

REACTIONS (size) 14=20-0-0, 15=20-0-0, 16=20-0-0, 17=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0
Max Horiz 24=-327 (LC 8)
Max Uplift 14=-139 (LC 9), 15=-381 (LC 11), 16=-41 (LC 11), 17=-193 (LC 11), 20=-191 (LC 10), 22=-41 (LC 10), 23=-384 (LC 10), 24=-149 (LC 8)
Max Grav 14=421 (LC 25), 15=322 (LC 23), 16=257 (LC 23), 17=211 (LC 23), 18=397 (LC 23), 19=404 (LC 22), 20=209 (LC 22), 22=256 (LC 22), 23=326 (LC 22), 24=425 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	12-14=-311/101, 7-8=-131/100, 8-9=-129/122, 9-10=-163/86, 10-11=-211/118, 11-12=-420/204, 12-13=0/51, 1-2=0/51, 2-3=-425/214, 3-4=-215/126, 4-5=-169/94, 5-6=-137/127, 6-7=-131/102, 2-24=-313/110
BOT CHORD	23-24=-162/292, 22-23=-162/292, 20-22=-162/292, 19-20=-162/292, 18-19=-162/292, 17-18=-162/292, 16-17=-162/292, 15-16=-162/292, 14-15=-162/292
WEBS	8-18=-183/24, 9-17=-152/201, 10-16=-155/99, 11-15=-184/274, 6-19=-190/33, 5-20=-149/199, 4-22=-155/99, 3-23=-186/275

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) All bearings are assumed to be SPF No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 139 lb uplift at joint 14, 149 lb uplift at joint 24, 193 lb uplift at joint 17, 41 lb uplift at joint 16, 381 lb uplift at joint 15, 191 lb uplift at joint 20, 41 lb uplift at joint 22 and 384 lb uplift at joint 23.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476811
230872	K2	Common	7	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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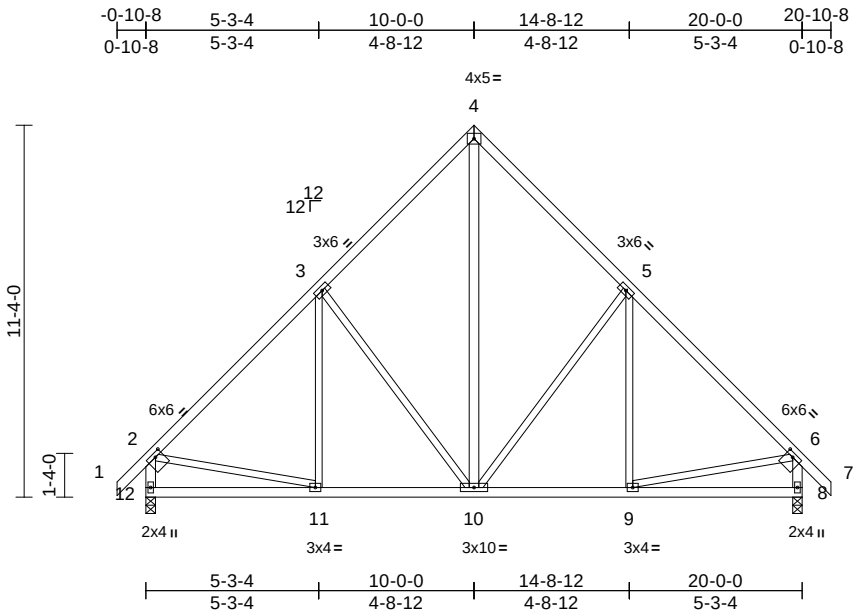

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Plate Offsets (X, Y): [2:0-2-12,0-1-8], [6:0-2-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.03	9-10	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	9-10	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.01	8	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	10-11	>999	240		
BCDL	10.0										Weight: 103 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,8-6,10-4:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=-327 (LC 8)
Max Uplift 8=-93 (LC 11), 12=-93 (LC 10)
Max Grav 8=981 (LC 22), 12=981 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/51, 2-3=-961/154, 3-4=-735/247, 4-5=-735/247, 5-6=-961/154, 6-7=0/51, 2-12=-908/120, 6-8=-908/120
BOT CHORD 11-12=-314/386, 10-11=-107/760, 9-10=0/649, 8-9=-76/127
WEBS 2-11=0/551, 6-9=0/556, 3-11=0/142, 5-9=0/142, 3-10=-371/245, 4-10=-211/606, 5-10=-371/245

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 12 and 93 lb uplift at joint 8.
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 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	K3	Common	7	1	I63476812
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:45 Page: 1
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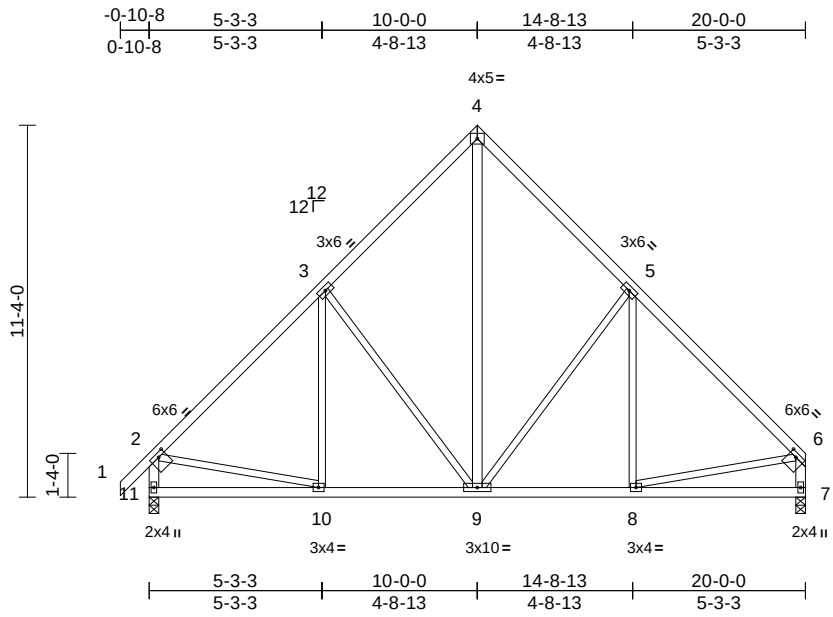

Scale = 1:70.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.03	8-9	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	9-10	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.01	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	9-10	>999	240		
BCDL	10.0										Weight: 101 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-2,7-6,9-4:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-8-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 11=0-3-8
Max Horiz 11=318 (LC 7)
Max Uplift 7=-88 (LC 10), 11=-93 (LC 10)
Max Grav 7=934 (LC 22), 11=983 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/51, 2-3=-963/153, 3-4=-737/247, 4-5=-739/248, 5-6=-962/150, 2-11=-910/120, 6-7=-850/115
BOT CHORD 10-11=-324/369, 9-10=-117/748, 8-9=-13/641, 7-8=-59/103
WEBS 2-10=0/553, 6-8=-2/566, 3-10=0/142, 3-9=-371/245, 4-9=-213/612, 5-9=-379/247, 5-8=-4/140

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 11 and 88 lb uplift at joint 7.
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 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476813
230872	L1	Monopitch	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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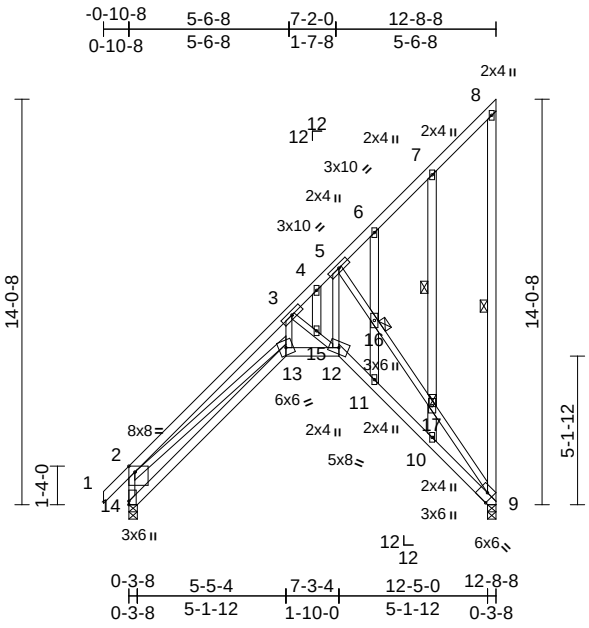

Scale = 1:79.8

Plate Offsets (X, Y): [2:0-2-8,Edge], [9:0-2-7,Edge], [14:0-1-7,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.14	13	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.25	13-14	>601	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.48	9	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	13	>697	240		
BCDL	10.0										Weight: 95 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-9:2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-7-2 oc bracing.
WEBS 1 Row at midpt 8-9, 7-17
JOINTS 1 Brace at Jt(s): 16, 17

REACTIONS (size) 9=0-3-8, 14=0-3-8
Max Horiz 14=526 (LC 10)
Max Uplift 9=-409 (LC 10)
Max Grav 9=726 (LC 22), 14=635 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-14=-861/451, 1-2=0/48, 2-3=-2513/1121, 3-4=-1059/357, 4-5=-905/277, 5-6=-240/52, 6-7=-188/80, 7-8=-71/78, 8-9=-114/80
BOT CHORD 13-14=-872/533, 12-13=-1103/1682, 11-12=-711/1205, 10-11=-710/1202, 9-10=-684/1161
WEBS 2-13=-705/1813, 3-13=-934/1507, 3-15=-1197/852, 12-15=-1097/777, 5-12=-971/1576, 5-16=-1429/850, 16-17=-1468/874, 9-17=-1585/941, 4-15=-123/163, 6-16=-16/55, 11-16=0/64, 7-17=-134/141, 10-17=-14/62

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 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SPF No.2 .
10) Bearing at joint(s) 14, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 409 lb uplift at joint 9.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	L2	Monopitch	6	1	Job Reference (optional) I63476814

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:46 Page: 1
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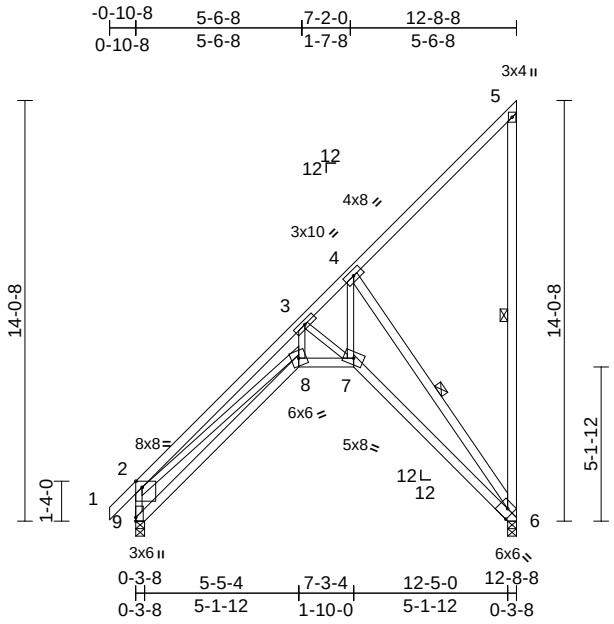

Scale = 1:76.9

Plate Offsets (X, Y): [2:0-2-8,Edge], [6:0-2-7,Edge], [9:0-1-7,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.14	8-9	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.25	8-9	>605	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.47	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	8	>713	240		
BCDL	10.0										Weight: 79 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 5-6,6-4:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-7-9 oc bracing.
WEBS 1 Row at midpt 5-6, 4-6

REACTIONS (size) 6=0-3-8, 9=0-3-8
Max Horiz 9=526 (LC 10)
Max Uplift 6=-409 (LC 10)
Max Grav 6=726 (LC 22), 9=635 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-9=-866/456, 1-2=0/48, 2-3=-2494/1102, 3-4=-999/305, 4-5=-199/126, 5-6=-185/162
BOT CHORD 8-9=-879/540, 7-8=-1086/1667, 6-7=-745/1275
WEBS 2-8=-679/1787, 3-8=-946/1492, 3-7=-1099/761, 4-7=-961/1706, 4-6=-1555/942

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 exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Bearing at joint(s) 9, 6 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 capable of withstanding 409 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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476815
230872	L3	Monopitch	6	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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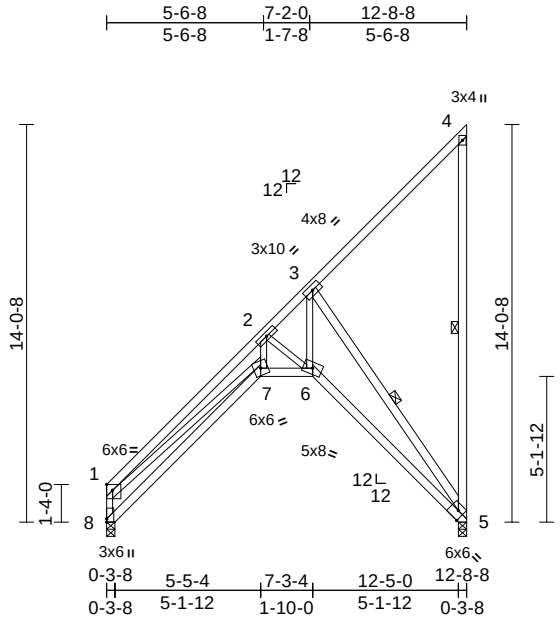

Scale = 1:81.3

Plate Offsets (X, Y): [1:Edge,0-2-7], [5:0-2-7,Edge], [8:0-1-7,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.14	7	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.25	7-8	>593	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.48	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	7	>698	240		
BCDL	10.0										Weight: 78 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 4-5,5-3:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-7-5 oc bracing.
WEBS 1 Row at midpt 4-5, 3-5

REACTIONS (size) 5=0-3-8, 8=0-3-8
Max Horiz 8=491 (LC 10)
Max Uplift 5=-407 (LC 10)
Max Grav 5=728 (LC 21), 8=601 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-762/384, 1-2=-2523/1102, 2-3=-1014/309, 3-4=-199/127, 4-5=-185/162
BOT CHORD 7-8=-807/485, 6-7=-1093/1695, 5-6=-741/1279
WEBS 1-7=-751/1873, 2-7=-938/1505, 2-6=-1132/773, 3-6=-966/1730, 3-5=-1560/937

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 exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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) All bearings are assumed to be SPF No.2 .
6) Bearing at joint(s) 8, 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 407 lb uplift at joint 5.
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 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476816
230872	LAY1	Lay-In Gable	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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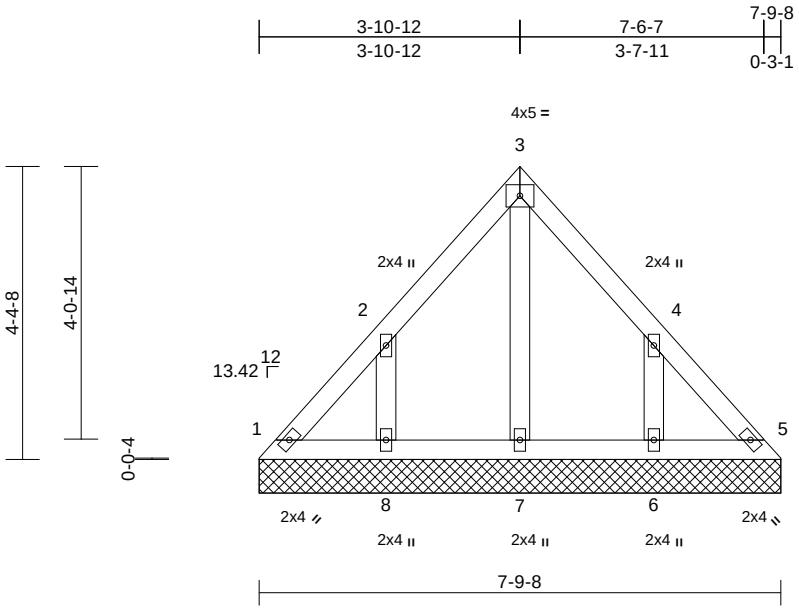

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 29 lb	FT = 10%

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

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

REACTIONS (size) 1=7-9-8, 5=7-9-8, 6=7-9-8, 7=7-9-8, 8=7-9-8
Max Horiz 1=108 (LC 9)
Max Uplift 1=-27 (LC 6), 5=-10 (LC 7), 6=-154 (LC 11), 8=-154 (LC 10)
Max Grav 1=108 (LC 23), 5=100 (LC 24), 6=258 (LC 22), 7=152 (LC 24), 8=259 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-121/92, 2-3=-101/79, 3-4=-92/64, 4-5=-106/69
BOT CHORD 1-8=-45/94, 7-8=-45/94, 6-7=-45/94, 5-6=-45/94
WEBS 3-7=-82/0, 2-8=-189/178, 4-6=-189/178

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1, 10 lb uplift at joint 5, 154 lb uplift at joint 8 and 154 lb uplift at joint 6.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	
230872	LAY2	Lay-In Gable	1	1	Job Reference (optional)	I63476817

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:22:47 Page: 1
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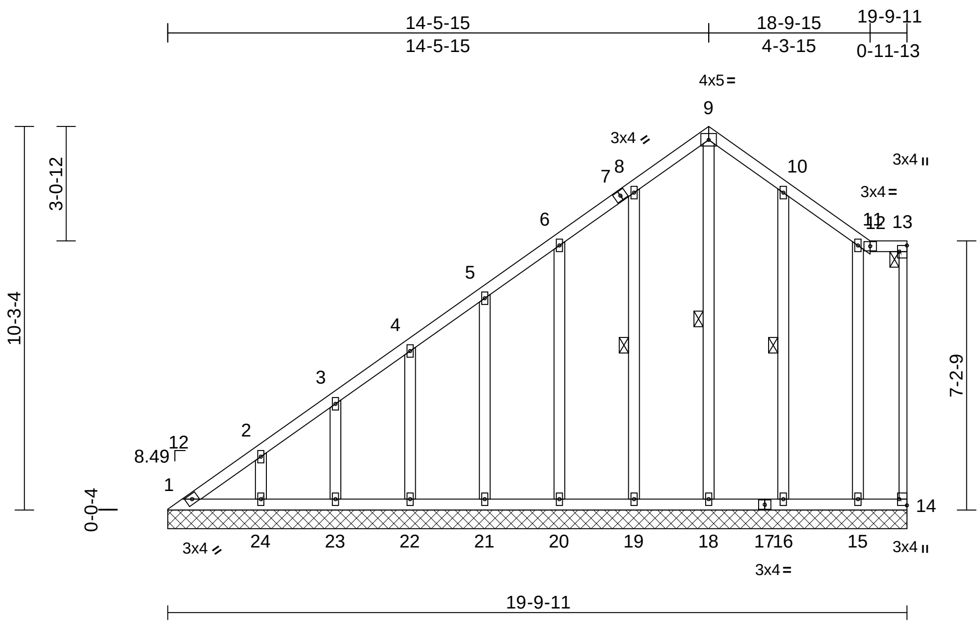

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Plate Offsets (X, Y): [13:Edge,0-2-8], [14:Edge,0-2-8]

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	0.42	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	14	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 116 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, and 2-0-0 oc purlins (6-0-0 max.): 12-13.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 9-18, 8-19, 10-16

REACTIONS (size) 1=19-9-11, 14=19-9-11, 15=19-9-11, 16=19-9-11, 18=19-9-11, 19=19-9-11, 20=19-9-11, 21=19-9-11, 22=19-9-11, 23=19-9-11, 24=19-9-11
Max Horiz 1=355 (LC 7)
Max Uplift 1=-101 (LC 8), 14=-9 (LC 7), 15=-70 (LC 6), 16=-84 (LC 11), 18=-107 (LC 9), 19=-71 (LC 10), 20=-78 (LC 10), 21=-74 (LC 10), 22=-75 (LC 10), 23=-71 (LC 10), 24=-86 (LC 10)
Max Grav 1=201 (LC 22), 14=38 (LC 3), 15=230 (LC 22), 16=222 (LC 22), 18=244 (LC 21), 19=231 (LC 21), 20=215 (LC 21), 21=218 (LC 21), 22=220 (LC 21), 23=209 (LC 21), 24=252 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-351/265, 2-3=-308/234, 3-4=-275/210, 4-5=-256/202, 5-6=-235/196, 6-8=-218/194, 8-9=-192/180, 9-10=-174/163, 10-11=-146/123, 11-12=-124/93, 12-13=-98/74, 13-14=-70/62
BOT CHORD 1-24=-98/75, 23-24=-98/75, 22-23=-98/75, 21-22=-98/75, 20-21=-98/75, 19-20=-98/75, 18-19=-98/75, 16-18=-98/75, 15-16=-98/75, 14-15=-98/75
WEBS 9-18=-187/150, 8-19=-161/96, 6-20=-145/101, 5-21=-148/98, 4-22=-149/99, 3-23=-143/96, 2-24=-167/108, 10-16=-159/102, 11-15=-120/84

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 14, 101 lb uplift at joint 1, 107 lb uplift at joint 18, 71 lb uplift at joint 19, 78 lb uplift at joint 20, 74 lb uplift at joint 21, 75 lb uplift at joint 22, 71 lb uplift at joint 23, 86 lb uplift at joint 24, 84 lb uplift at joint 16 and 70 lb uplift at joint 15.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) 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

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

February 8,2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476818
230872	LAY3	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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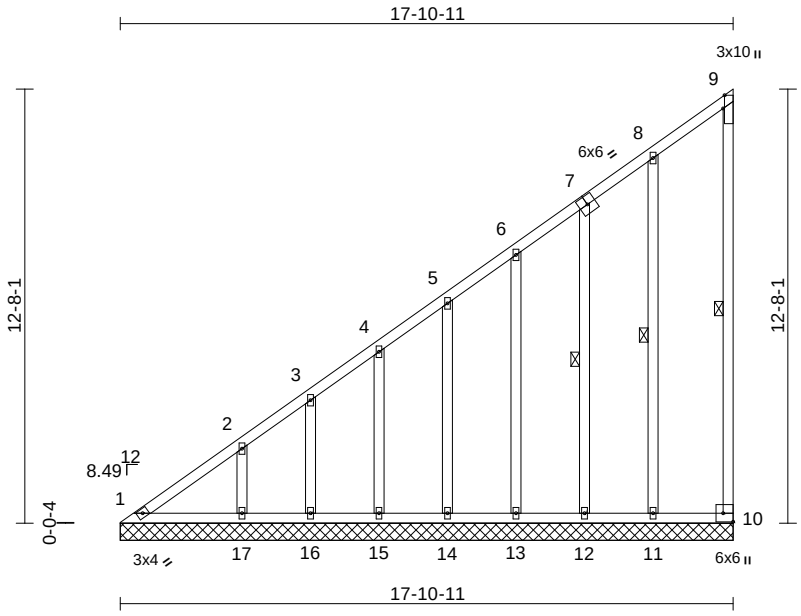

Scale = 1:67.3

Plate Offsets (X, Y): [9:0-4-10,Edge], [10:Edge,0-3-8]

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	0.40	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.29	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	10	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 108 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 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 10-0-0 oc bracing.
WEBS 1 Row at midpt 9-10, 7-12, 8-11

REACTIONS (size) 1=17-10-11, 10=17-10-11, 11=17-10-11, 12=17-10-11, 13=17-10-11, 14=17-10-11, 15=17-10-11, 16=17-10-11, 17=17-10-11
Max Horiz 1=488 (LC 7)
Max Uplift 1=-90 (LC 8), 10=-113 (LC 9), 11=-97 (LC 10), 12=-63 (LC 10), 13=-80 (LC 10), 14=-72 (LC 10), 15=-78 (LC 10), 16=-59 (LC 10), 17=-119 (LC 10)
Max Grav 1=268 (LC 22), 10=136 (LC 21), 11=247 (LC 21), 12=215 (LC 21), 13=218 (LC 21), 14=216 (LC 21), 15=230 (LC 21), 16=170 (LC 21), 17=349 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-452/296, 2-3=-392/244, 3-4=-356/228, 4-5=-315/201, 5-6=-295/186, 6-8=-270/187, 8-9=-174/122, 9-10=-73/36
BOT CHORD 1-17=-175/133, 16-17=-175/133, 15-16=-175/133, 14-15=-175/133, 13-14=-175/133, 12-13=-175/133, 11-12=-175/133, 10-11=-175/133
WEBS 2-17=-228/147, 3-16=-120/82, 4-15=-155/102, 5-14=-146/98, 6-13=-150/96, 7-12=-136/117, 8-11=-204/130

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 113 lb uplift at joint 10, 90 lb uplift at joint 1, 119 lb uplift at joint 17, 59 lb uplift at joint 16, 78 lb uplift at joint 15, 72 lb uplift at joint 14, 80 lb uplift at joint 13, 63 lb uplift at joint 12 and 97 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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476819
230872	LAY4	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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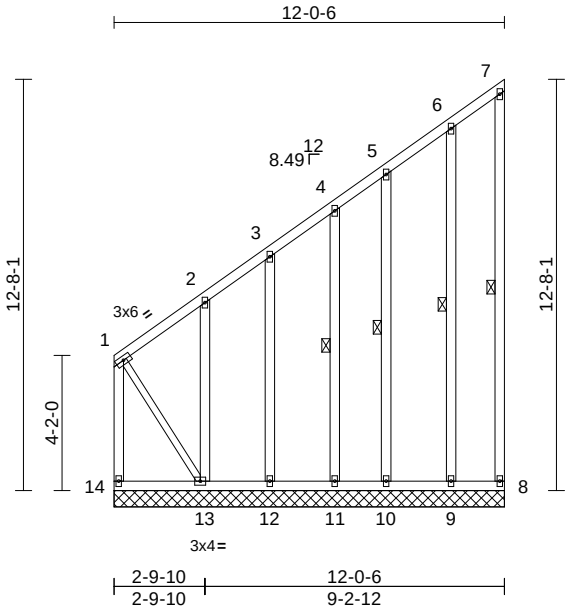

Scale = 1:71

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
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	8	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 100 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF 2400F 2.0E
WEBS	2x4 SPF 2100F 1.8E *Except* 7-8:2x4 SPF No.2, 13-1:2x3 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.
WEBS	1 Row at midpt 7-8, 6-9, 5-10, 4-11

REACTIONS (size) 8=12-0-6, 9=12-0-6, 10=12-0-6, 11=12-0-6, 12=12-0-6, 13=12-0-6, 14=12-0-6
Max Horiz 14=339 (LC 10)
Max Uplift 8=-25 (LC 10), 9=-66 (LC 10), 10=-69 (LC 10), 11=-65 (LC 10), 12=-71 (LC 10), 13=-601 (LC 10), 14=-198 (LC 8)
Max Grav 8=64 (LC 21), 9=208 (LC 21), 10=196 (LC 21), 11=194 (LC 21), 12=203 (LC 21), 13=429 (LC 21), 14=700 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-14=-683/220, 1-2=-380/151, 2-3=-289/111, 3-4=-221/90, 4-5=-157/67, 5-6=-94/56, 6-7=-42/20, 7-8=-44/30
BOT CHORD	13-14=-338/124, 12-13=0/0, 11-12=0/0, 10-11=0/0, 9-10=0/0, 8-9=0/0
WEBS	2-13=-193/128, 3-12=-139/94, 6-9=-139/92, 5-10=-135/90, 4-11=-131/87, 1-13=-221/604

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 ; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 198 lb uplift at joint 14, 25 lb uplift at joint 8, 601 lb uplift at joint 13, 71 lb uplift at joint 12, 66 lb uplift at joint 9, 69 lb uplift at joint 10 and 65 lb uplift at joint 11.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476820
230872	LAY5	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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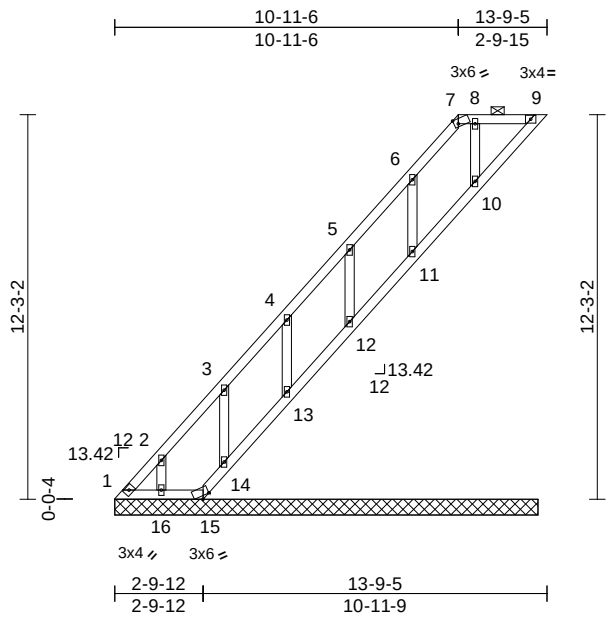

Scale = 1:73.4

Plate Offsets (X, Y): [7:0-1-9,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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	-0.01	9	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 58 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 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.): 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 9-10.

REACTIONS (size) 1=13-5-13, 9=13-5-13, 10=13-5-13, 11=13-5-13, 12=13-5-13, 13=13-5-13, 14=13-5-13, 15=13-5-13, 16=13-5-13
Max Horiz 1=488 (LC 10)
Max Uplift 1=-134 (LC 8), 9=-120 (LC 10), 10=-24 (LC 6), 11=-113 (LC 10), 12=-143 (LC 10), 13=-132 (LC 10), 14=-154 (LC 10), 15=-40 (LC 8), 16=-122 (LC 10)
Max Grav 1=409 (LC 10), 9=95 (LC 21), 10=218 (LC 23), 11=226 (LC 21), 12=241 (LC 21), 13=239 (LC 21), 14=232 (LC 21), 15=129 (LC 10), 16=203 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-556/219, 2-3=-444/177, 3-4=-303/123, 4-5=-169/79, 5-6=-64/41, 6-7=-81/108, 7-8=-42/101, 8-9=-42/101
BOT CHORD 1-16=-101/42, 15-16=-101/42, 14-15=-159/77, 13-14=-160/81, 12-13=-161/79, 11-12=-160/80, 10-11=-161/81, 9-10=-160/76
WEBS 2-16=-147/136, 3-14=-172/164, 4-13=-166/157, 5-12=-171/167, 6-11=-158/137, 8-10=-148/48

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 1, 120 lb uplift at joint 9, 40 lb uplift at joint 15, 122 lb uplift at joint 16, 154 lb uplift at joint 14, 132 lb uplift at joint 13, 143 lb uplift at joint 12, 113 lb uplift at joint 11 and 24 lb uplift at joint 10.
12) Non Standard bearing condition. Review required.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476821
230872	LAY6	Lay-In Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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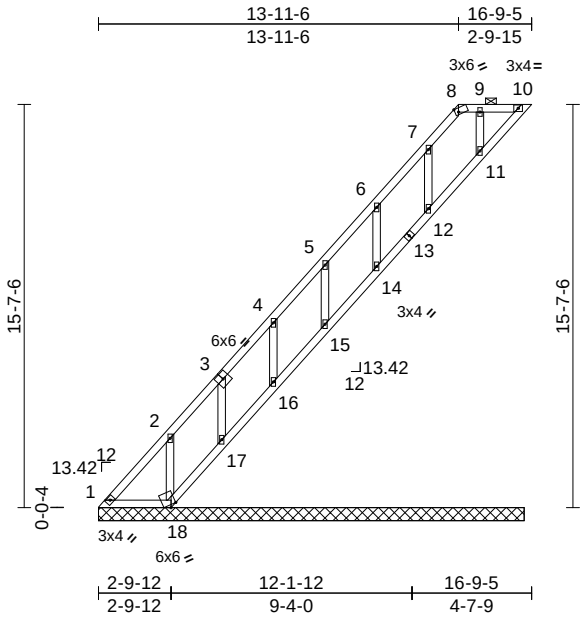

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Plate Offsets (X, Y): [8:0-1-9,Edge]

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	-0.01	10	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 73 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 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.): 8-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 12-14,10-11.

REACTIONS (size) 1=16-5-13, 10=16-5-13, 11=16-5-13, 12=16-5-13, 14=16-5-13, 15=16-5-13, 16=16-5-13, 17=16-5-13, 18=16-5-13
Max Horiz 1=625 (LC 10)
Max Uplift 1=-133 (LC 8), 10=-150 (LC 10), 11=-30 (LC 6), 12=-75 (LC 10), 14=-152 (LC 10), 15=-130 (LC 10), 16=-142 (LC 10), 17=-125 (LC 10), 18=-34 (LC 10)
Max Grav 1=493 (LC 10), 10=94 (LC 21), 11=214 (LC 23), 12=214 (LC 21), 14=244 (LC 21), 15=235 (LC 21), 16=245 (LC 21), 17=224 (LC 21), 18=244 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-683/275, 2-4=-521/205, 4-5=-255/107, 5-6=-122/66, 6-7=-67/51, 7-8=-87/131, 8-9=-47/120, 9-10=-47/120
BOT CHORD 1-18=-126/52, 17-18=-191/92, 16-17=-189/88, 15-16=-189/88, 14-15=-189/88, 12-14=-188/88, 11-12=-189/88, 10-11=-186/79
WEBS 9-11=-144/53, 7-12=-144/100, 6-14=-174/176, 5-15=-165/155, 4-16=-175/166, 3-17=-151/146, 2-18=-206/190

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Bearing at joint(s) 10, 11, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 150 lb uplift at joint 10, 133 lb uplift at joint 1, 30 lb uplift at joint 11, 75 lb uplift at joint 12, 152 lb uplift at joint 14, 130 lb uplift at joint 15, 142 lb uplift at joint 16, 125 lb uplift at joint 17 and 34 lb uplift at joint 18.
13) Non Standard bearing condition. Review required.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476822
230872	LAY7	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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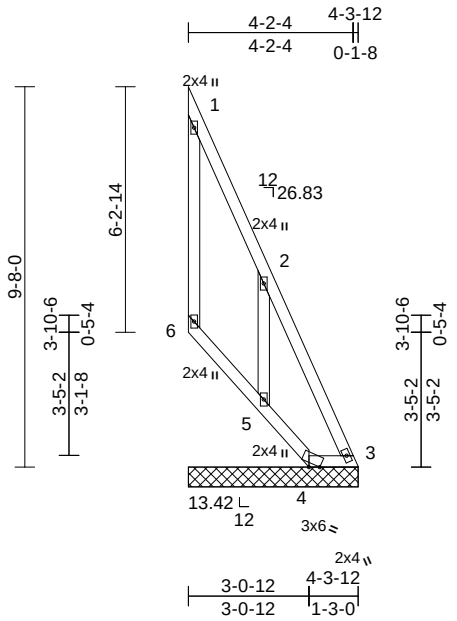

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 29 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 4-3-14 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3=4-3-12, 4=4-3-12, 5=4-3-12, 6=4-3-12
Max Horiz 6=-290 (LC 6)
Max Uplift 3=-339 (LC 9), 4=-351 (LC 11), 5=-531 (LC 11), 6=-74 (LC 9)
Max Grav 3=487 (LC 11), 4=268 (LC 9), 5=432 (LC 22), 6=329 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-6=-174/201, 1-2=-248/181, 2-3=-561/445
BOT CHORD	5-6=-335/464, 4-5=-333/481, 3-4=-213/306
WEBS	2-5=-376/573

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 6, 339 lb uplift at joint 3, 351 lb uplift at joint 4 and 531 lb uplift at joint 5.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 6, 5.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	M1	Piggyback Base Structural Gable	2	1	Job Reference (optional) I63476823

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:49 Page: 1
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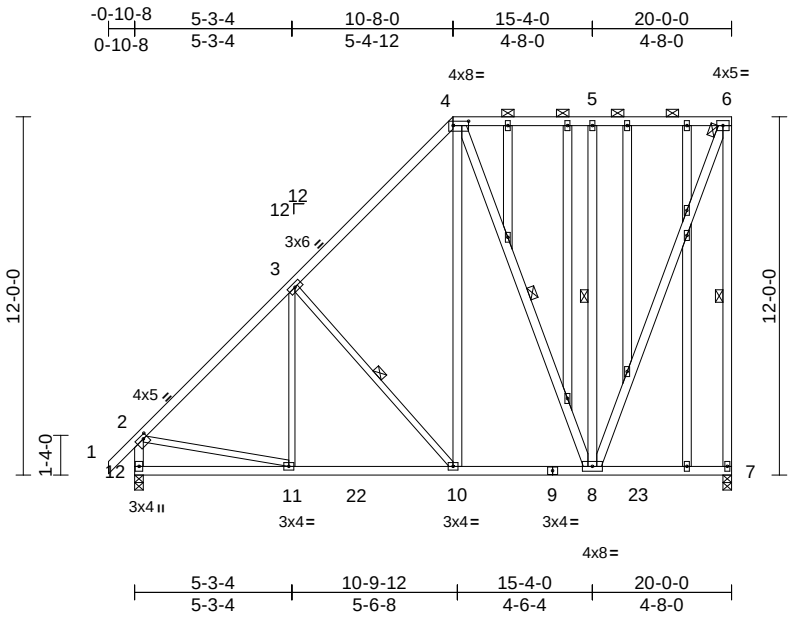

Scale = 1:77.2

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

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	0.58	Vert(LL)	-0.06	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.10	10-11	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.01	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	10-11	>999	240		
BCDL	10.0										Weight: 174 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-11,10-3,11-2:2x3 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-3 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-3-10 oc bracing: 11-12.
WEBS 1 Row at midpt 6-7, 3-10, 5-8, 4-8

REACTIONS (size) 7=0-3-8, 12=0-3-8
Max Horiz 12=451 (LC 10)
Max Uplift 7=-197 (LC 7), 12=-11 (LC 10)
Max Grav 7=1139 (LC 3), 12=1170 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/51, 2-3=-1117/8, 3-4=-804/91, 4-5=-355/70, 5-6=-354/70, 6-7=-1015/219, 2-12=-1058/38
BOT CHORD 11-12=-507/269, 10-11=-327/803, 8-10=-148/502, 7-8=-1/4
WEBS 3-11=0/277, 3-10=-466/272, 4-10=-144/634, 6-8=-194/972, 2-11=0/651, 5-8=-363/164, 4-8=-447/212

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 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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 197 lb uplift at joint 7 and 11 lb uplift at joint 12.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	M2	Piggyback Base	6	1	Job Reference (optional) I63476824

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:49 Page: 1
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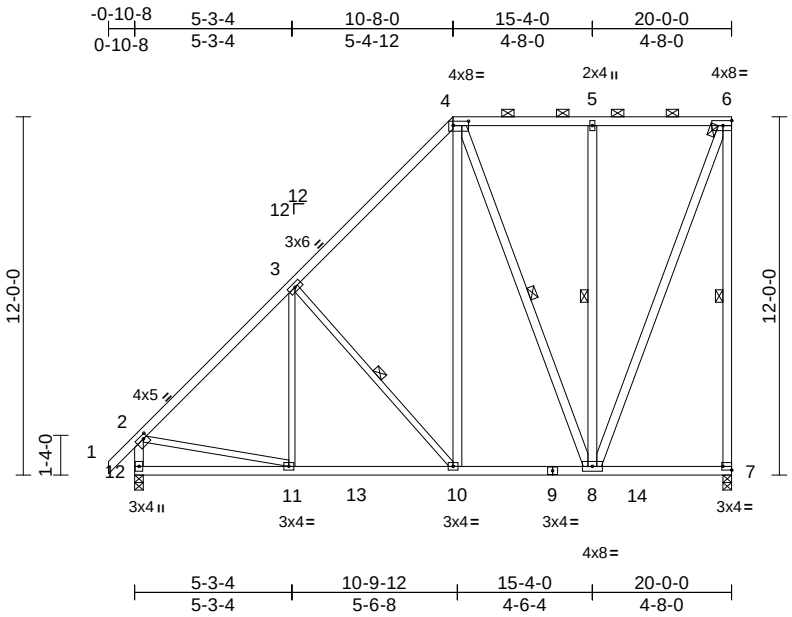

Scale = 1:77.2

Plate Offsets (X, Y): [2:0-1-12,0-1-8], [4:0-6-4,0-1-12], [7: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	0.44	Vert(LL)	-0.06	10-11	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.09	10-11	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	-0.01	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.03	7-8	>999	240		
BCDL	10.0										Weight: 136 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 6-7:2x4 SPF 2400F 2.0E, 3-11,10-3,11-2:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-3 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-5-13 oc bracing: 11-12.
WEBS 1 Row at midpt 6-7, 3-10, 5-8, 4-8

REACTIONS (size) 7=0-3-8, 12=0-3-8
Max Horiz 12=483 (LC 7)
Max Uplift 7=-255 (LC 7), 12=-80 (LC 10)
Max Grav 7=1139 (LC 3), 12=1163 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/51, 2-3=-1143/89, 3-4=-834/179, 4-5=-405/160, 5-6=-404/160, 6-7=-1015/251, 2-12=-1051/107
BOT CHORD 11-12=-485/359, 10-11=-318/868, 8-10=-238/565, 7-8=-166/126
WEBS 3-11=0/277, 3-10=-469/263, 4-10=-128/639, 6-8=-239/970, 2-11=-6/681, 5-8=-361/179, 4-8=-475/146

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 255 lb uplift at joint 7 and 80 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	M3	Piggyback Base	14	1	Job Reference (optional) I63476825

Wheeler Lumber, Waverly, KS - 66871,

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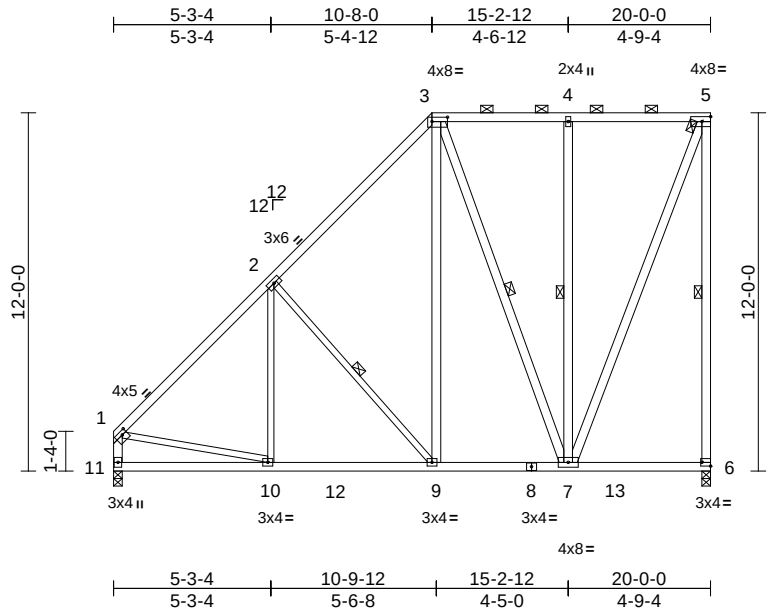

Scale = 1:77.2

Plate Offsets (X, Y): [1:0-2-0,0-1-8], [3:0-6-4,0-1-12], [6: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	0.44	Vert(LL)	-0.06	9-10	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.09	9-10	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.67	Horz(CT)	-0.01	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.03	6-7	>999	240		
BCDL	10.0										Weight: 134 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 5-6:2x4 SPF 2400F 2.0E, 2-10,9-2,10-1:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-8 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-8-5 oc bracing: 10-11.
WEBS 1 Row at midpt 5-6, 2-9, 4-7, 3-7

REACTIONS (size) 6=0-3-8, 11=0-3-8
Max Horiz 11=465 (LC 9)
Max Uplift 6=-255 (LC 7), 11=-57 (LC 10)
Max Grav 6=1141 (LC 3), 11=1116 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1145/82, 2-3=-836/180, 3-4=-410/161, 4-5=-409/161, 5-6=-1013/252, 1-11=-1004/83
BOT CHORD 10-11=-462/339, 9-10=-318/874, 7-9=-238/566, 6-7=-166/126
WEBS 2-10=0/276, 2-9=-477/265, 3-9=-130/641, 5-7=-238/967, 1-10=-4/690, 4-7=-361/179, 3-7=-467/144

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 255 lb uplift at joint 6 and 57 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	N1	Roof Special	4	1	Job Reference (optional) I63476826

Wheeler Lumber, Waverly, KS - 66871,

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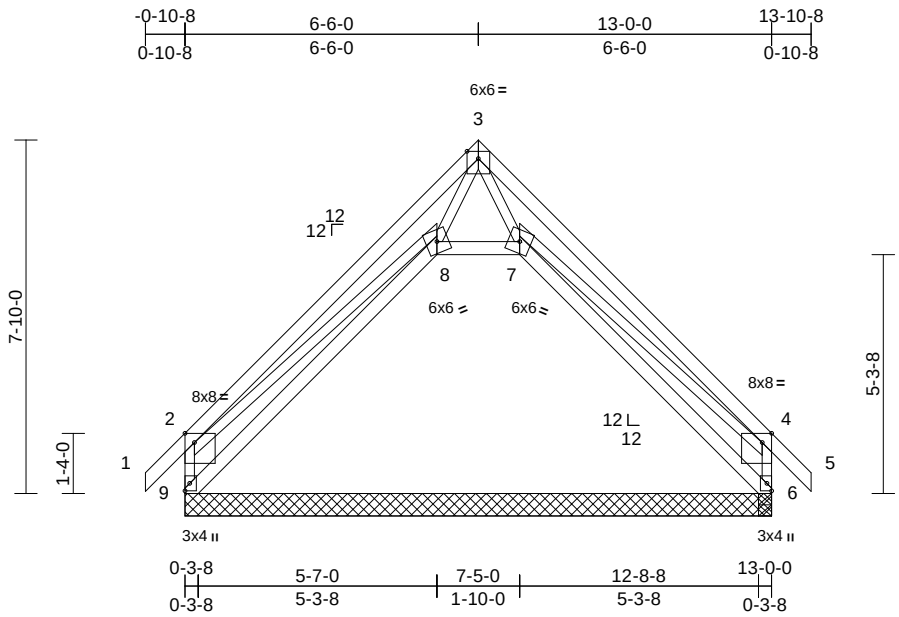

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Plate Offsets (X, Y): [2:0-2-8,Edge], [4:0-2-8,Edge]

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	0.62	Vert(LL)	-0.04	6-7	>999	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.09	6-7	>755	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.01	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.01	6-7	>999	240		
BCDL	10.0										Weight: 62 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 9-2-14 oc bracing.

REACTIONS (size) 6=13-0-0, 7=13-0-0, 8=13-0-0, 9=13-0-0
Max Horiz 9=-239 (LC 8)
Max Uplift 6=-202 (LC 11), 7=-71 (LC 7), 9=-193 (LC 11)
Max Grav 6=425 (LC 23), 7=449 (LC 22), 8=366 (LC 22), 9=422 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-9=-505/362, 1-2=0/48, 2-3=-272/170, 3-4=-272/173, 4-5=0/48, 4-6=-511/364
BOT CHORD 8-9=-398/572, 7-8=-82/201, 6-7=-205/327
WEBS 3-7=-227/119, 4-7=-205/232, 3-8=-222/112, 2-8=-204/231

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 193 lb uplift at joint 9, 202 lb uplift at joint 6 and 71 lb uplift at joint 7.
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 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476827
230872	N2	Roof Special	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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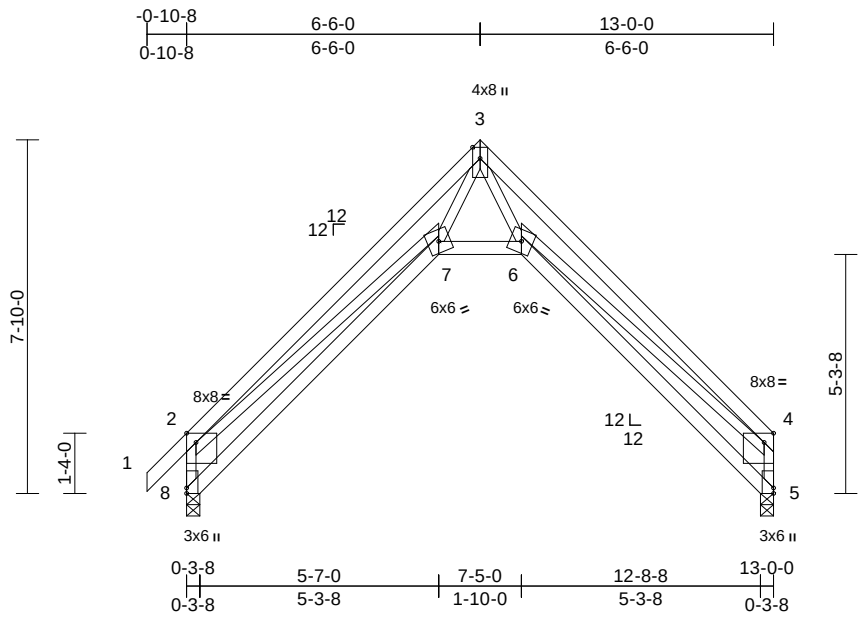

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Plate Offsets (X, Y): [2:0-2-8,Edge], [4:0-2-8,Edge], [8:0-1-7,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.18	6-7	>875	360	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.31	6-7	>492	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.63	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	6-7	>999	240		
BCDL	10.0										Weight: 60 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-2-3 oc bracing.

REACTIONS (size) 5=0-3-8, 8=0-3-8
Max Horiz 8=230 (LC 7)
Max Uplift 5=-61 (LC 10), 8=-64 (LC 11)
Max Grav 5=611 (LC 22), 8=659 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-923/309, 1-2=0/48, 2-3=-2536/172, 3-4=-2558/215, 4-5=-657/156
BOT CHORD 7-8=-404/590, 6-7=-138/1130, 5-6=-135/281
WEBS 3-6=-83/1611, 4-6=-253/2031, 3-7=-195/1702, 2-7=0/1762

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 8, 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 8 and 61 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476828
230872	P1	Piggyback	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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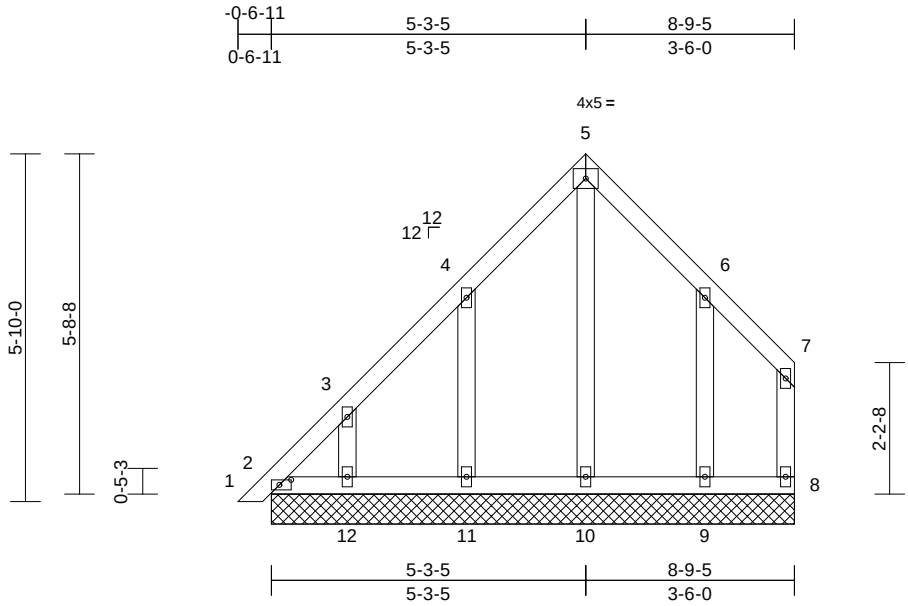

Scale = 1:38.7

Plate Offsets (X, Y): [2:0-2-6,0-1-0]

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	8	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 42 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 10-0-0 oc bracing.

REACTIONS (size) 2=8-9-5, 8=8-9-5, 9=8-9-5, 10=8-9-5, 11=8-9-5, 12=8-9-5
Max Horiz 2=172 (LC 7)
Max Uplift 2=-109 (LC 6), 8=-32 (LC 6), 9=-122 (LC 11), 10=-75 (LC 9), 11=-133 (LC 10), 12=-107 (LC 10)
Max Grav 2=160 (LC 23), 8=71 (LC 23), 9=233 (LC 23), 10=238 (LC 22), 11=255 (LC 22), 12=204 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/15, 2-3=-206/186, 3-4=-173/163, 4-5=-141/152, 5-6=-117/131, 6-7=-54/55, 7-8=-55/38
BOT CHORD	2-12=-28/22, 11-12=-28/22, 10-11=-28/22, 9-10=-28/22, 8-9=-28/22
WEBS	5-10=-182/116, 4-11=-184/157, 3-12=-141/129, 6-9=-168/144

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 8, 109 lb uplift at joint 2, 75 lb uplift at joint 10, 133 lb uplift at joint 11, 107 lb uplift at joint 12 and 122 lb uplift at joint 9.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	P2	Piggyback	16	1	Job Reference (optional) I63476829

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:51 Page: 1
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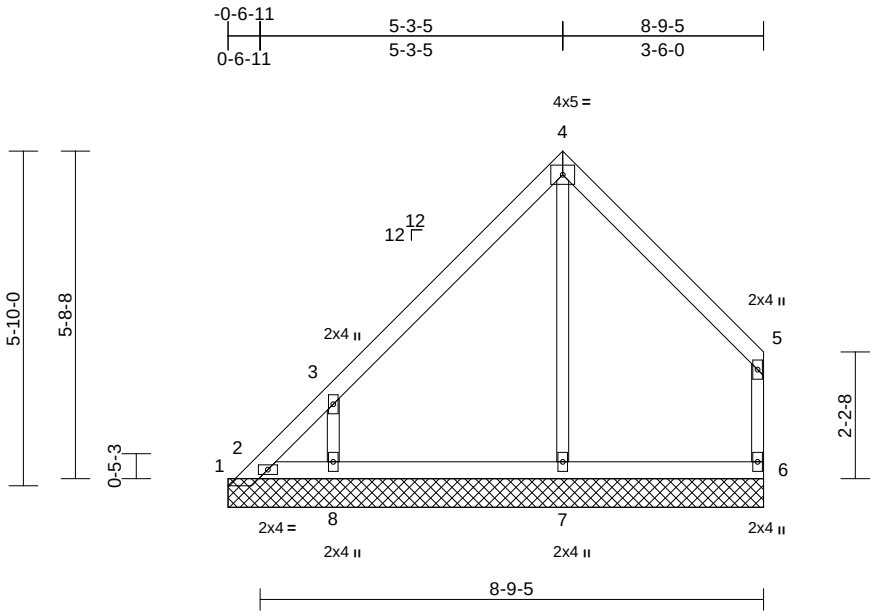

Scale = 1:40.2

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	0.23	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.00	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 32 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 end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=9-4-0, 2=9-4-0, 6=9-4-0, 7=9-4-0, 8=9-4-0
Max Horiz 1=173 (LC 7)
Max Uplift 1=-81 (LC 6), 2=-169 (LC 22), 6=-89 (LC 11), 7=-26 (LC 7), 8=-284 (LC 10)
Max Grav 1=157 (LC 23), 2=173 (LC 10), 6=200 (LC 23), 7=417 (LC 22), 8=487 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-215/164, 2-3=-240/245, 3-4=-199/158, 4-5=-111/97, 5-6=-156/104
BOT CHORD 2-8=-28/21, 7-8=-28/21, 6-7=-28/21
WEBS 4-7=-269/77, 3-8=-371/324

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
9) All bearings are assumed to be SPF No.2 .
10) Bearing at joint(s) 1, 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 1, 89 lb uplift at joint 6, 169 lb uplift at joint 2, 26 lb uplift at joint 7 and 284 lb uplift at joint 8.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476830
230872	P3	Piggyback	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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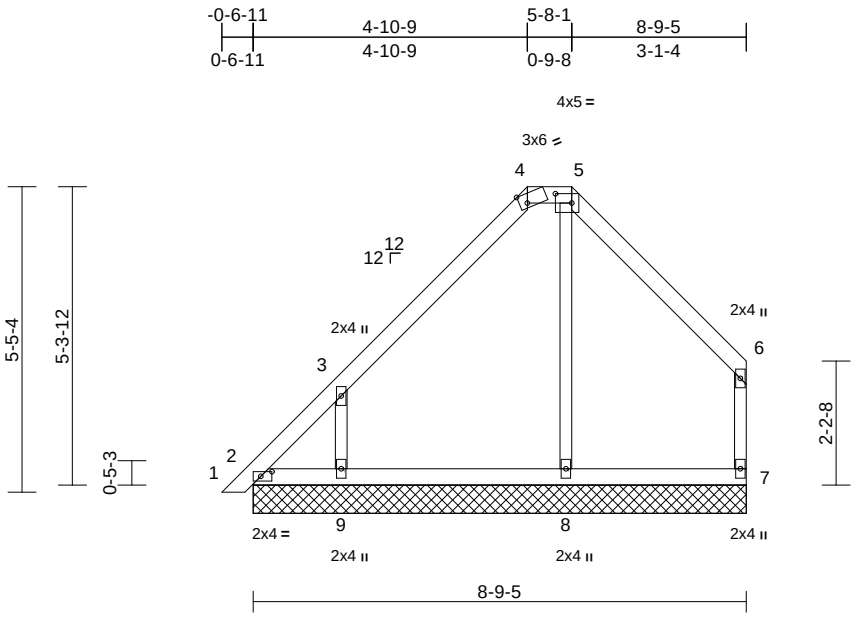

Scale = 1:41

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 31 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 end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=8-9-5, 7=8-9-5, 8=8-9-5, 9=8-9-5
Max Horiz 2=161 (LC 7)
Max Uplift 2=-120 (LC 6), 7=-77 (LC 11), 8=-20 (LC 7), 9=-191 (LC 10)
Max Grav 2=152 (LC 9), 7=188 (LC 23), 8=352 (LC 22), 9=424 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-3=-204/187, 3-4=-181/124, 4-5=-69/111, 5-6=-128/94, 6-7=-148/92
BOT CHORD 2-9=-29/27, 8-9=-29/27, 7-8=-30/30
WEBS 5-8=-222/74, 3-9=-311/236

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 7, 120 lb uplift at joint 2, 20 lb uplift at joint 8 and 191 lb uplift at joint 9.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476831
230872	P4	Piggyback	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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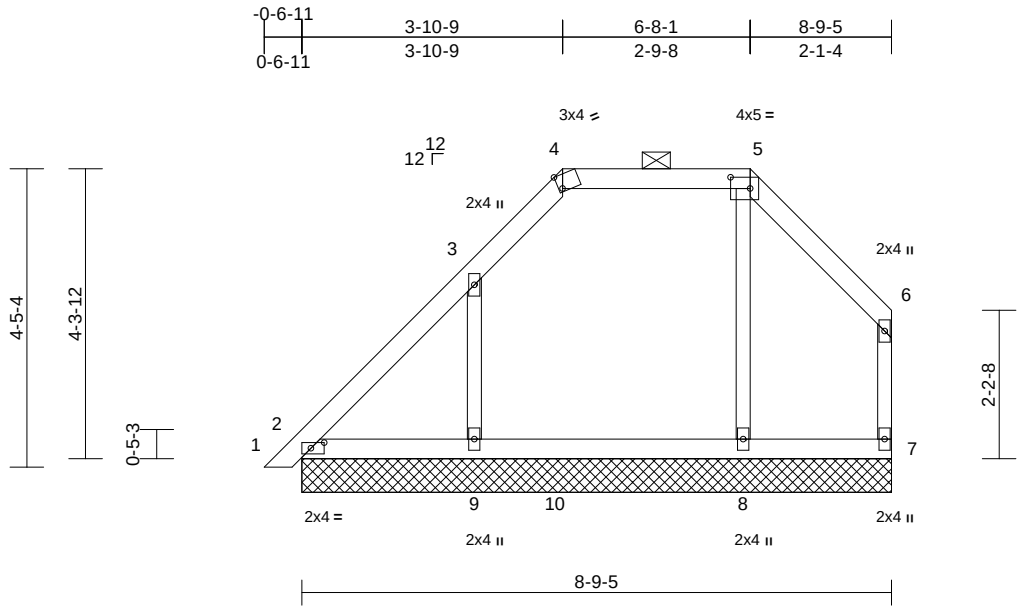

Scale = 1:34.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 30 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 end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=8-9-5, 7=8-9-5, 8=8-9-5, 9=8-9-5
Max Horiz 2=135 (LC 9)
Max Uplift 2=-56 (LC 6), 7=-41 (LC 10), 9=-107 (LC 7)
Max Grav 2=176 (LC 23), 7=121 (LC 23), 8=356 (LC 31), 9=489 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-3=-146/134, 3-4=-128/77, 4-5=-48/66, 5-6=-91/64, 6-7=-101/51
BOT CHORD 2-9=-37/25, 8-9=-37/25, 7-8=-37/25
WEBS 5-8=-185/53, 3-9=-277/150

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 7, 56 lb uplift at joint 2 and 107 lb uplift at joint 9.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
15) 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

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

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476832
230872	P8	Piggyback	12	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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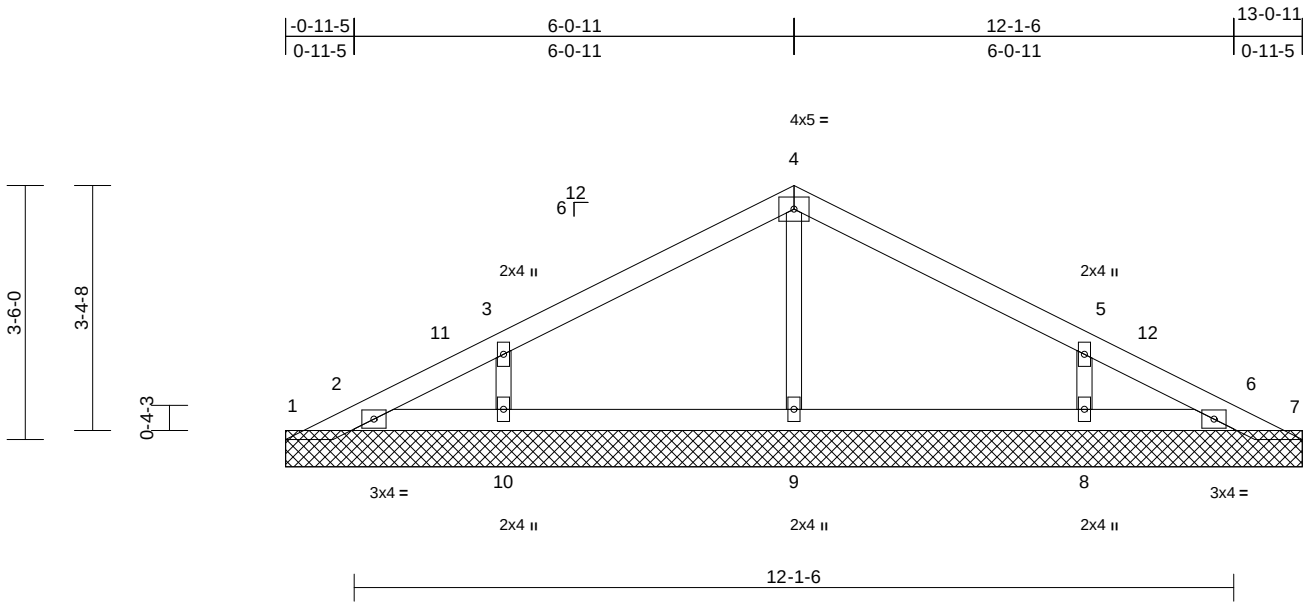

Scale = 1:31.7

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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 35 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=14-0-0, 2=14-0-0, 6=14-0-0, 7=14-0-0, 8=14-0-0, 9=14-0-0, 10=14-0-0
Max Horiz 1=59 (LC 12)
Max Uplift 1=-26 (LC 13), 2=-3 (LC 12), 7=-10 (LC 13), 8=-111 (LC 13), 10=-112 (LC 12)
Max Grav 1=42 (LC 19), 2=84 (LC 2), 6=84 (LC 2), 7=42 (LC 20), 8=366 (LC 20), 9=336 (LC 3), 10=366 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-63/70, 2-3=-73/40, 3-4=-110/84, 4-5=-110/68, 5-6=-55/29, 6-7=-15/12
BOT CHORD 2-10=0/55, 9-10=0/55, 8-9=0/55, 6-8=0/55
WEBS 4-9=-227/38, 3-10=-300/153, 5-8=-300/152

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 1, 10 lb uplift at joint 7, 3 lb uplift at joint 2, 112 lb uplift at joint 10 and 111 lb uplift at joint 8.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476833
230872	P9	Piggyback	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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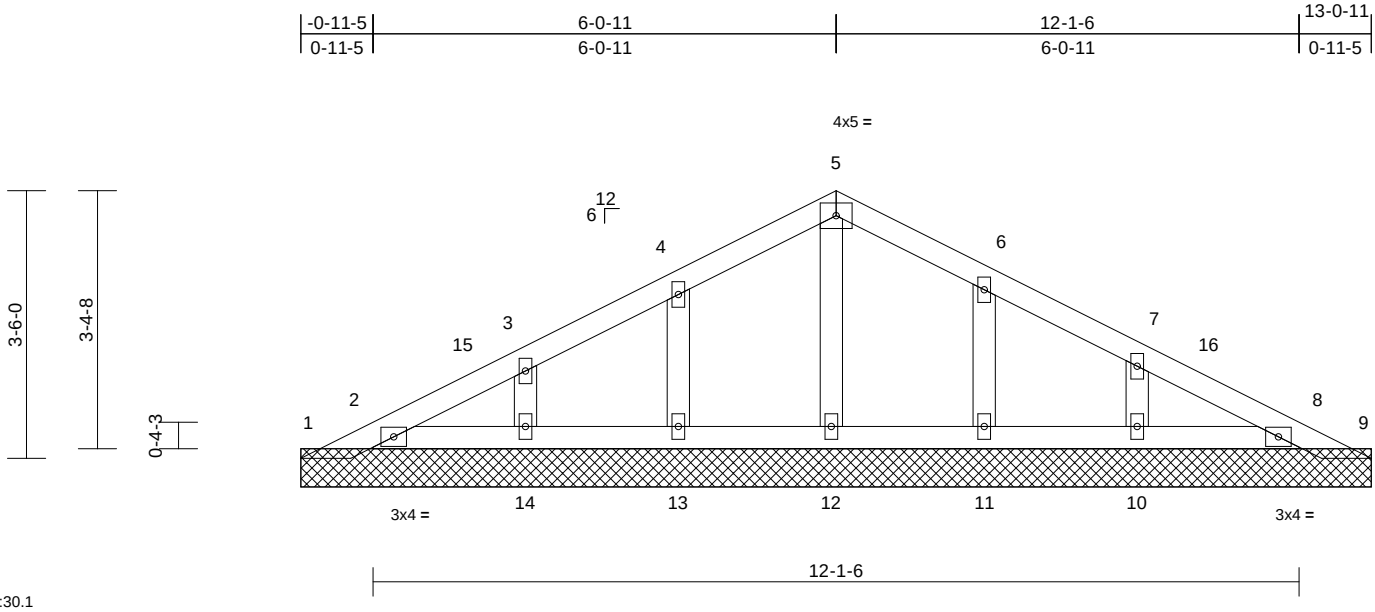

Scale = 1:30.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 41 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 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=14-0-0, 2=14-0-0, 8=14-0-0, 9=14-0-0, 10=14-0-0, 11=14-0-0, 12=14-0-0, 13=14-0-0, 14=14-0-0
Max Horiz 1=59 (LC 16)
Max Uplift 1=-23 (LC 17), 2=-34 (LC 12), 8=-24 (LC 13), 9=-10 (LC 35), 10=-57 (LC 13), 11=-56 (LC 13), 13=-60 (LC 12), 14=-55 (LC 12)
Max Grav 1=31 (LC 12), 2=149 (LC 2), 8=161 (LC 2), 9=8 (LC 13), 10=205 (LC 6), 11=207 (LC 20), 12=174 (LC 29), 13=216 (LC 19), 14=195 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-66/74, 2-3=-69/41, 3-4=-46/58, 4-5=-51/84, 5-6=-50/76, 6-7=-46/35, 7-8=-53/26, 8-9=-2/26
BOT CHORD 2-14=-4/54, 13-14=-4/54, 12-13=-4/54, 11-12=-4/55, 10-11=-4/55, 8-10=-4/55
WEBS 3-14=-145/79, 4-13=-177/84, 5-12=-115/0, 6-11=-169/80, 7-10=-153/82

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1, 10 lb uplift at joint 9, 34 lb uplift at joint 2, 24 lb uplift at joint 8, 55 lb uplift at joint 14, 60 lb uplift at joint 13, 56 lb uplift at joint 11 and 57 lb uplift at joint 10.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476834
230872	P10	Piggyback	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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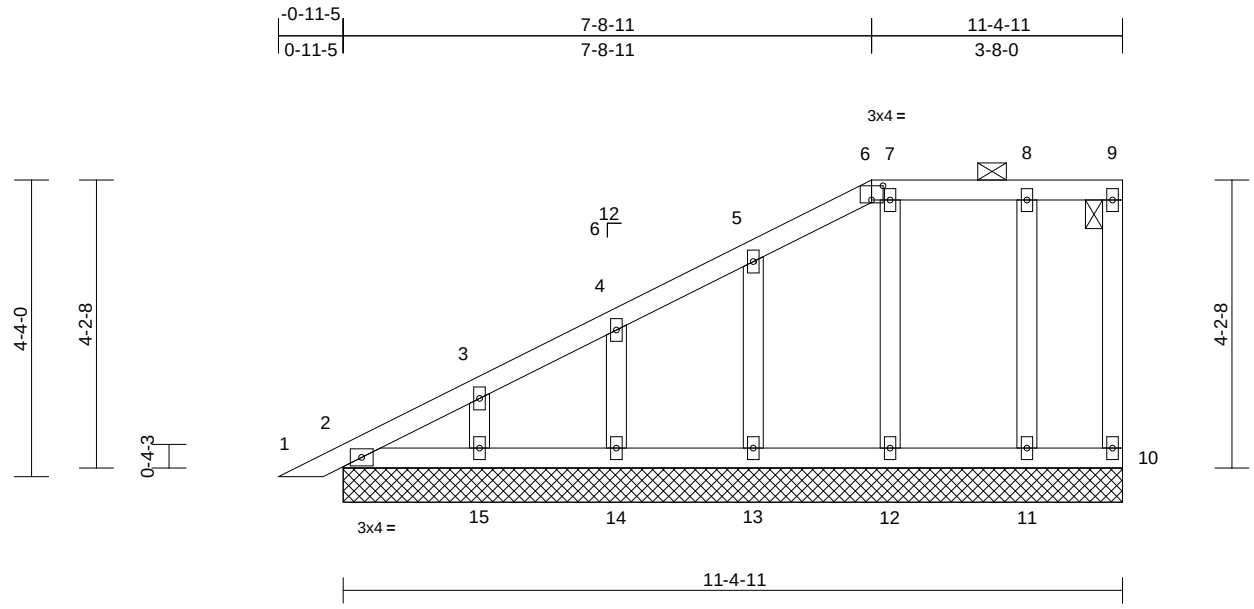

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Plate Offsets (X, Y): [6:0-2-0,0-2-8]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	10	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 47 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, and 2-0-0 oc purlins (6-0-0 max.): 6-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=11-4-11, 10=11-4-11, 11=11-4-11, 12=11-4-11, 13=11-4-11, 14=11-4-11, 15=11-4-11
Max Horiz 2=168 (LC 9)
Max Uplift 2=-1 (LC 8), 10=-10 (LC 9), 11=-37 (LC 8), 12=-44 (LC 9), 13=-55 (LC 12), 14=-53 (LC 12), 15=-59 (LC 12)
Max Grav 2=156 (LC 40), 10=45 (LC 33), 11=199 (LC 33), 12=188 (LC 3), 13=221 (LC 34), 14=210 (LC 34), 15=230 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-138/50, 3-4=-108/46, 4-5=-93/48, 5-6=-84/44, 6-7=-55/42, 7-8=-55/42, 8-9=-55/42, 9-10=-37/25
BOT CHORD 2-15=-56/42, 14-15=-56/42, 13-14=-56/42, 12-13=-56/42, 11-12=-56/42, 10-11=-56/42
WEBS 3-15=-182/82, 4-14=-172/78, 5-13=-181/78, 7-12=-141/66, 8-11=-163/62

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 2x4 MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * 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.
13) All bearings are assumed to be SPF No.2 .
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 10, 1 lb uplift at joint 2, 59 lb uplift at joint 15, 53 lb uplift at joint 14, 55 lb uplift at joint 13, 44 lb uplift at joint 12 and 37 lb uplift at joint 11.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476835
230872	P11	Piggyback	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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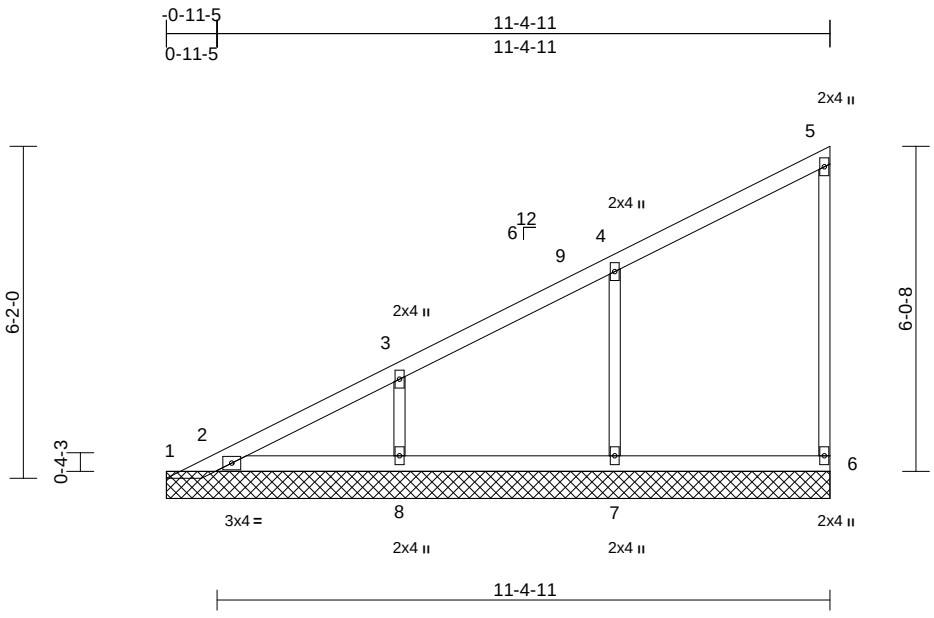

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 37 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 end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-4-0, 2=12-4-0, 6=12-4-0, 7=12-4-0, 8=12-4-0
Max Horiz 1=243 (LC 9)
Max Uplift 1=-88 (LC 26), 2=-51 (LC 12), 6=-35 (LC 9), 7=-120 (LC 12), 8=-101 (LC 12)
Max Grav 1=120 (LC 9), 2=292 (LC 26), 6=209 (LC 5), 7=516 (LC 5), 8=401 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-270/92, 2-3=-197/65, 3-4=-154/73, 4-5=-135/61, 5-6=-128/46
BOT CHORD 2-8=-80/62, 7-8=-80/62, 6-7=-80/62
WEBS 4-7=-317/161, 3-8=-258/149

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Bearing at joint(s) 1, 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 88 lb uplift at joint 1, 35 lb uplift at joint 6, 51 lb uplift at joint 2, 120 lb uplift at joint 7 and 101 lb uplift at joint 8.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476836
230872	P12	Piggyback	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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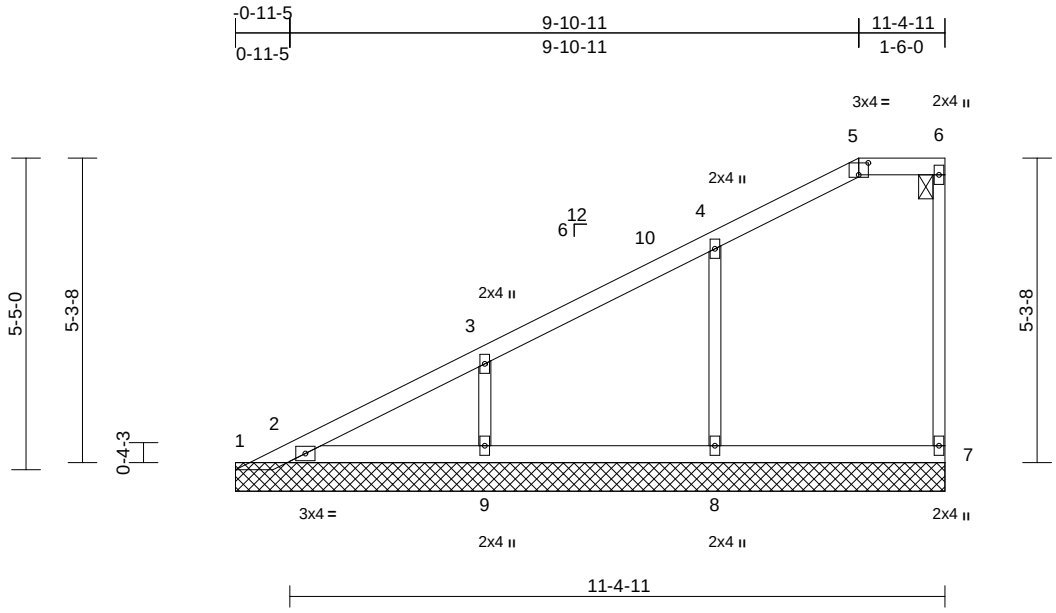

Scale = 1:40.1

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

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	0.25	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 36 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 end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-4-0, 2=12-4-0, 7=12-4-0, 8=12-4-0, 9=12-4-0
Max Horiz 1=215 (LC 9)
Max Uplift 1=-95 (LC 38), 2=-51 (LC 12), 7=-35 (LC 9), 8=-96 (LC 12), 9=-107 (LC 12)
Max Grav 1=110 (LC 9), 2=328 (LC 38), 7=196 (LC 35), 8=552 (LC 36), 9=452 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-240/93, 2-3=-169/72, 3-4=-153/80, 4-5=-122/54, 5-6=-70/53, 6-7=-109/46
BOT CHORD 2-9=-72/54, 8-9=-72/54, 7-8=-72/54
WEBS 4-8=-367/141, 3-9=-326/154

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Bearing at joint(s) 1, 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 1, 35 lb uplift at joint 7, 51 lb uplift at joint 2, 96 lb uplift at joint 8 and 107 lb uplift at joint 9.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476837
230872	P13	Piggyback	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:55 Page: 1
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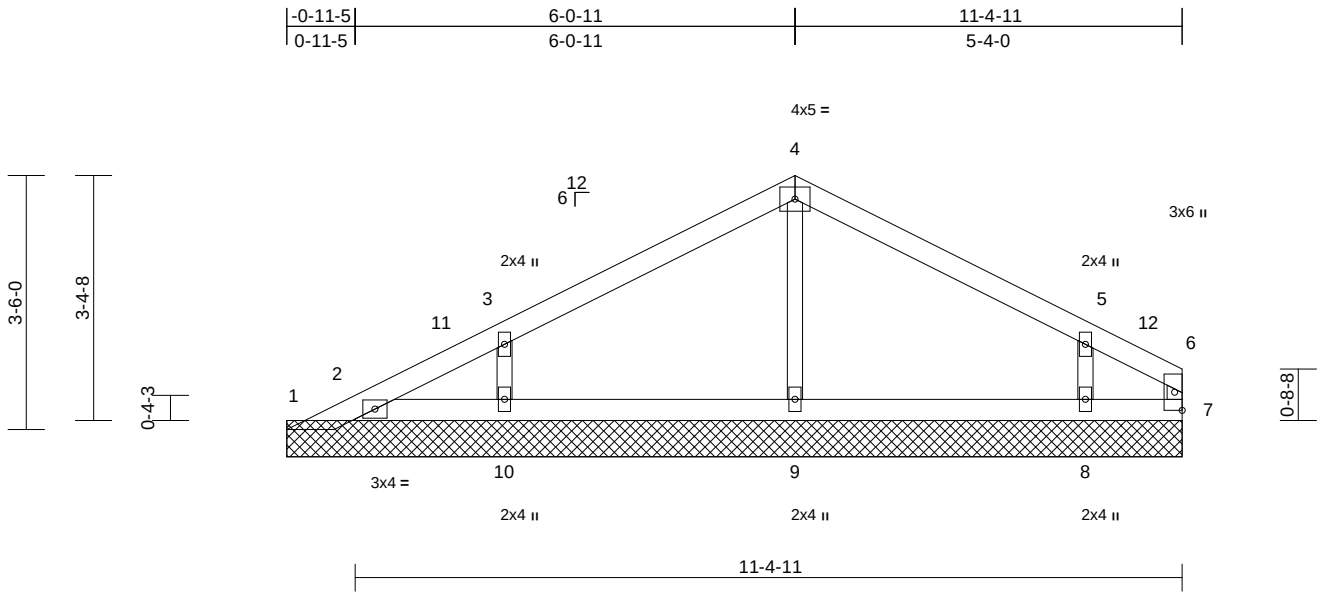

Scale = 1:31.7

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 33 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 end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-4-0, 2=12-4-0, 7=12-4-0, 8=12-4-0, 9=12-4-0, 10=12-4-0
Max Horiz 1=67 (LC 12)
Max Uplift 1=-11 (LC 8), 2=-5 (LC 12), 7=-49 (LC 20), 8=-122 (LC 13), 10=-112 (LC 12)
Max Grav 1=42 (LC 19), 2=73 (LC 2), 7=38 (LC 13), 8=371 (LC 20), 9=354 (LC 3), 10=366 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-68/45, 2-3=-61/53, 3-4=-95/75, 4-5=-87/59, 5-6=-40/52, 6-7=-38/50
BOT CHORD	2-10=-11/22, 9-10=-11/22, 8-9=-11/22, 7-8=-11/22
WEBS	4-9=-248/41, 3-10=-300/153, 5-8=-311/159

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1, 49 lb uplift at joint 7, 5 lb uplift at joint 2, 112 lb uplift at joint 10 and 122 lb uplift at joint 8.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476838
230872	P18	Piggyback	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:55 Page: 1
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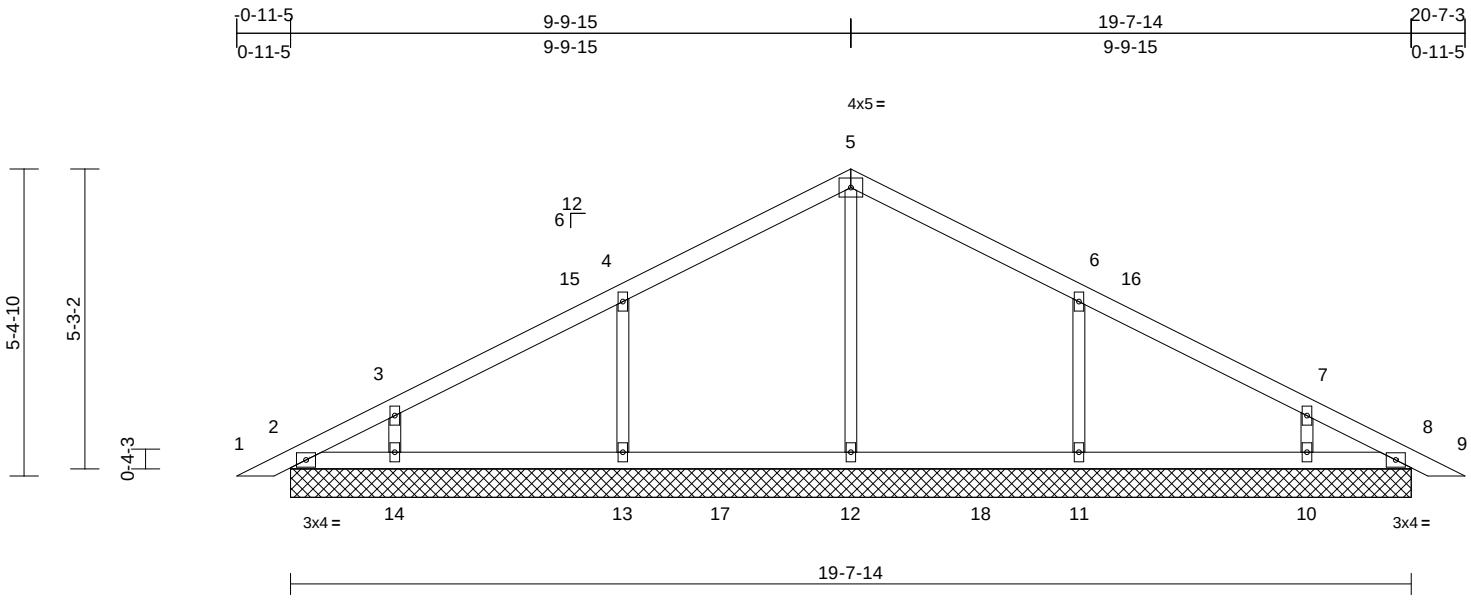

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	8	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 59 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) 2=19-7-14, 8=19-7-14, 10=19-7-14, 11=19-7-14, 12=19-7-14, 13=19-7-14, 14=19-7-14
Max Horiz 2=92 (LC 16)
Max Uplift 2=-16 (LC 8), 8=-4 (LC 9), 10=-85 (LC 13), 11=-124 (LC 13), 13=-124 (LC 12), 14=-85 (LC 12)
Max Grav 2=103 (LC 2), 8=103 (LC 2), 10=347 (LC 3), 11=473 (LC 6), 12=435 (LC 26), 13=473 (LC 5), 14=347 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-110/46, 3-4=-103/78, 4-5=-109/131, 5-6=-109/116, 6-7=-94/46, 7-8=-80/20, 8-9=0/17
BOT CHORD 2-14=-2/81, 13-14=-2/81, 12-13=-2/81, 11-12=-2/81, 10-11=-2/81, 8-10=-2/81
WEBS 5-12=-216/3, 4-13=-315/173, 3-14=-224/128, 6-11=-315/173, 7-10=-224/127

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 4-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) All bearings are assumed to be SPF No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 2, 4 lb uplift at joint 8, 124 lb uplift at joint 13, 85 lb uplift at joint 14, 124 lb uplift at joint 11 and 85 lb uplift at joint 10.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476839
230872	P19	Piggyback	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:55 Page: 1
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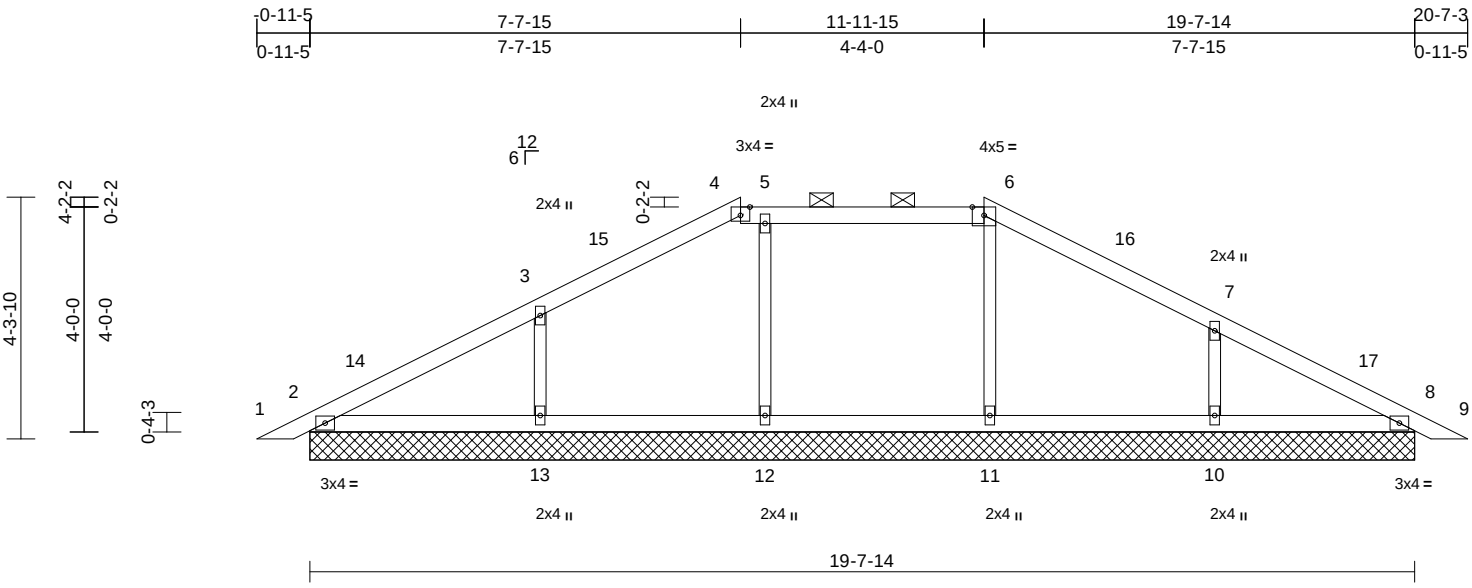

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Plate Offsets (X, Y): [4:0-2-0,Edge]

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	0.26	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	8	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 58 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, except 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=19-7-14, 8=19-7-14, 10=19-7-14, 11=19-7-14, 12=19-7-14, 13=19-7-14
Max Horiz 2=-72 (LC 17)
Max Uplift 2=-21 (LC 12), 8=-19 (LC 13), 10=-125 (LC 13), 11=-27 (LC 8), 12=-43 (LC 9), 13=-123 (LC 12)
Max Grav 2=260 (LC 37), 8=226 (LC 37), 10=480 (LC 37), 11=365 (LC 55), 12=367 (LC 5), 13=498 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-134/79, 3-4=-143/91, 4-5=-71/89, 5-6=-56/92, 6-7=-144/84, 7-8=-112/92, 8-9=0/22
BOT CHORD 2-13=-26/82, 12-13=-26/82, 11-12=-26/82, 10-11=-33/79, 8-10=-33/79
WEBS 6-11=-277/76, 5-12=-286/91, 3-13=-394/169, 7-10=-390/170

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 4-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) All bearings are assumed to be SPF No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 2, 19 lb uplift at joint 8, 27 lb uplift at joint 11, 43 lb uplift at joint 12, 123 lb uplift at joint 13 and 125 lb uplift at joint 10.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	P20	Piggyback	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I63476840
05/07/2024

Wheeler Lumber, Waverly, KS - 66871,

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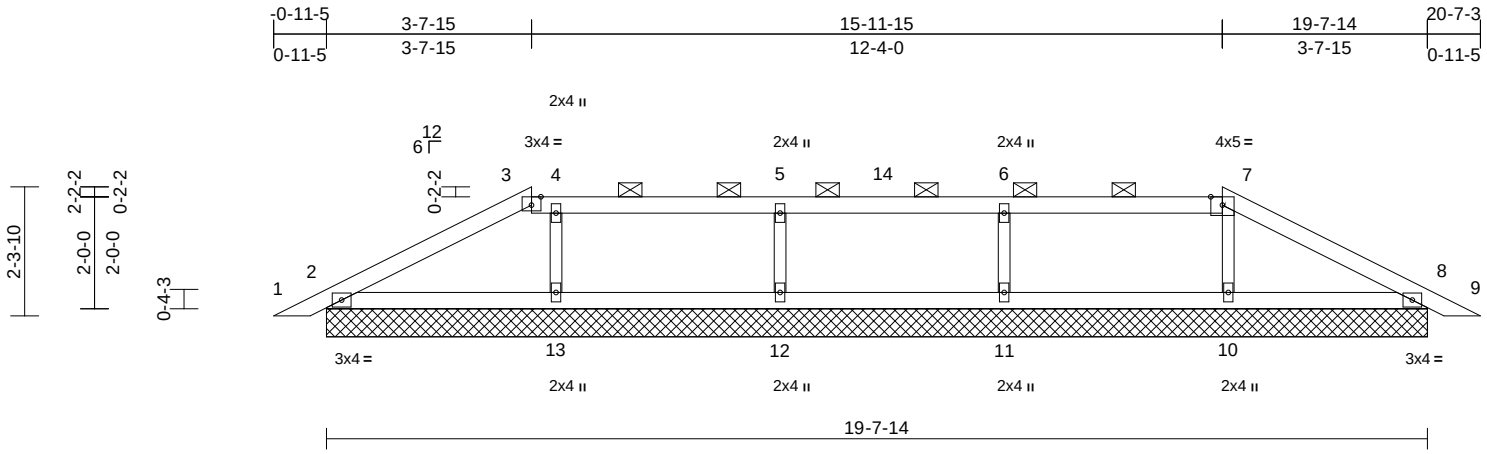

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Plate Offsets (X, Y): [3:0-2-0,Edge]

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	0.24	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	8	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 53 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, except 2-0-0 oc purlins (6-0-0 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=19-7-14, 8=19-7-14, 10=19-7-14, 11=19-7-14, 12=19-7-14, 13=19-7-14
Max Horiz 2=-36 (LC 13)
Max Uplift 2=-52 (LC 12), 8=-49 (LC 13), 10=-38 (LC 8), 11=-76 (LC 9), 12=-77 (LC 8), 13=-45 (LC 9)
Max Grav 2=277 (LC 37), 8=262 (LC 37), 10=375 (LC 55), 11=448 (LC 36), 12=437 (LC 36), 13=402 (LC 54)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-154/55, 3-4=-94/58, 4-5=-74/51, 5-6=-74/51, 6-7=-75/52, 7-8=-142/89, 8-9=0/22
BOT CHORD 2-13=-19/83, 12-13=-19/83, 11-12=-19/83, 10-11=-19/83, 8-10=-29/78
WEBS 7-10=-270/83, 6-11=-369/124, 5-12=-360/123, 4-13=-286/94

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 4-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) All bearings are assumed to be SPF No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 2, 49 lb uplift at joint 8, 38 lb uplift at joint 10, 76 lb uplift at joint 11, 77 lb uplift at joint 12 and 45 lb uplift at joint 13.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	R1	Roof Special Girder	1	2	Job Reference (optional) I63476841

Wheeler Lumber, Waverly, KS - 66871,

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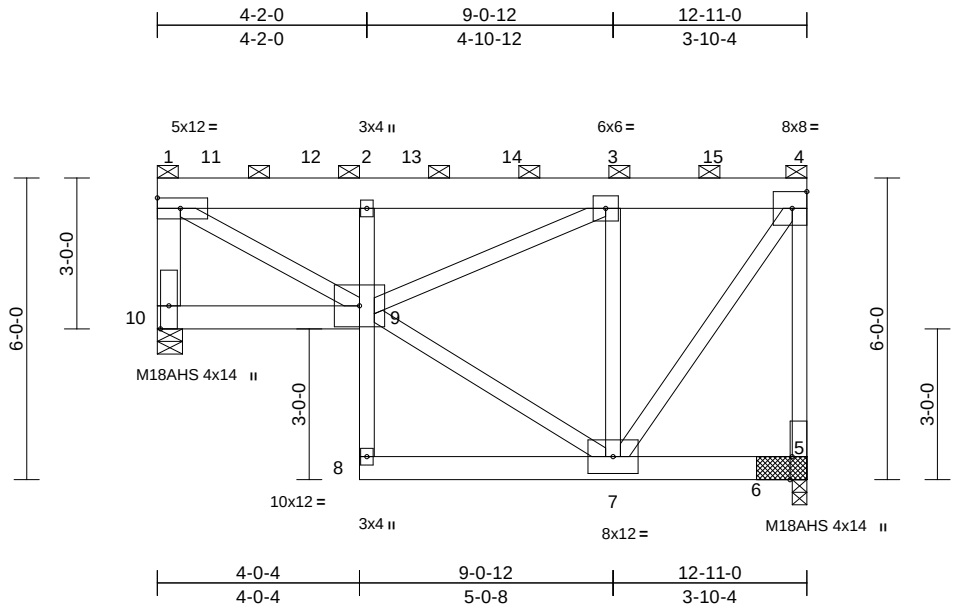

Scale = 1:45.8

Plate Offsets (X, Y): [5:0-5-8,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	0.80	Vert(LL)	-0.08	2	>999	360	M18AHS	142/136
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.13	2	>999	240	MT20	197/144
TCDL	10.0	Rep Stress Incr	NO	WB	0.82	Horz(CT)	0.04	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.01	2	>999	240		
BCDL	10.0										Weight: 221 lb	FT = 10%

LUMBER
TOP CHORD 2x8 SP 2400F 2.0E
BOT CHORD 2x6 SPF No.2 *Except* 2-8:2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 10-1:2x6 SPF No.2, 9-1:2x4 SPF 2100F 1.8E

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-4, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=(0-3-8 + bearing block), (req. 0-5-2), 10=0-6-0
Max Horiz 10=147 (LC 9)
Max Grav 5=6552 (LC 19), 10=7162 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-6941/0, 1-2=-7937/0, 2-3=-7963/0, 3-4=-3641/0, 4-5=-6430/0
BOT CHORD 9-10=-20/417, 8-9=0/141, 2-9=-4764/0, 7-8=0/139, 5-7=-51/61
WEBS 1-9=0/8916, 7-9=0/4067, 3-9=0/4908, 3-7=-7346/0, 4-7=0/6344

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 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) 2x6 SPF No.2 bearing block 12" long at jt. 5 attached to each face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners per block. Bearing is assumed to be SPF No.2.
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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 338 lb down and 238 lb up at 12-9-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-61, 9-10=-20, 5-8=-20
Concentrated Loads (lb)
Vert: 3=-1393, 11=-1396, 12=-1394, 13=-1393, 14=-1393, 15=-1390

February 8,2024

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	R2	Roof Special Girder	1	2	Job Reference (optional) I63476842

Wheeler Lumber, Waverly, KS - 66871,

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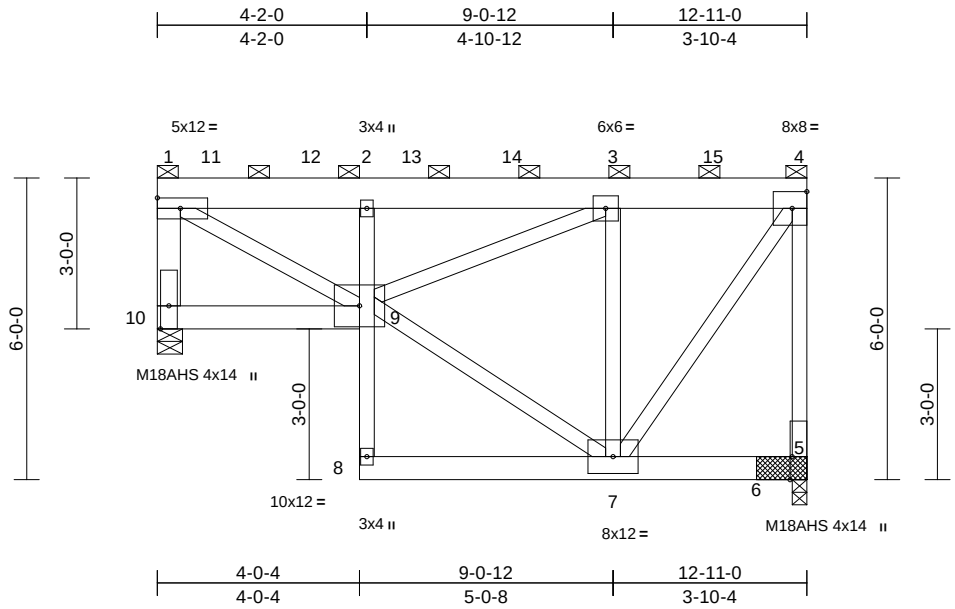

Scale = 1:45.8

Plate Offsets (X, Y): [5:0-5-8,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	0.80	Vert(LL)	-0.08	2	>999	360	M18AHS	142/136
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.13	2	>999	240	MT20	197/144
TCDL	10.0	Rep Stress Incr	NO	WB	0.82	Horz(CT)	0.04	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.01	2	>999	240		
BCDL	10.0										Weight: 221 lb	FT = 10%

LUMBER
TOP CHORD 2x8 SP 2400F 2.0E
BOT CHORD 2x6 SPF No.2 *Except* 2-8:2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 10-1:2x6 SPF No.2, 9-1:2x4 SPF 2100F 1.8E

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-4, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=(0-3-8 + bearing block), (req. 0-5-2), 10=0-6-0
Max Horiz 10=147 (LC 9)
Max Grav 5=6552 (LC 19), 10=7162 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-6941/0, 1-2=-7937/0, 2-3=-7963/0, 3-4=-3641/0, 4-5=-6430/0
BOT CHORD 9-10=-20/417, 8-9=0/141, 2-9=-4764/0, 7-8=0/139, 5-7=-51/61
WEBS 1-9=0/8916, 7-9=0/4067, 3-9=0/4908, 3-7=-7346/0, 4-7=0/6344

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 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) 2x6 SPF No.2 bearing block 12" long at jt. 5 attached to each face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners per block. Bearing is assumed to be SPF No.2.
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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 338 lb down and 238 lb up at 12-9-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-61, 9-10=-20, 5-8=-20
Concentrated Loads (lb)
Vert: 3=-1393, 11=-1396, 12=-1394, 13=-1393, 14=-1393, 15=-1390

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	R3	Half Hip Girder	1	2	Job Reference (optional) I63476843

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:57 Page: 1
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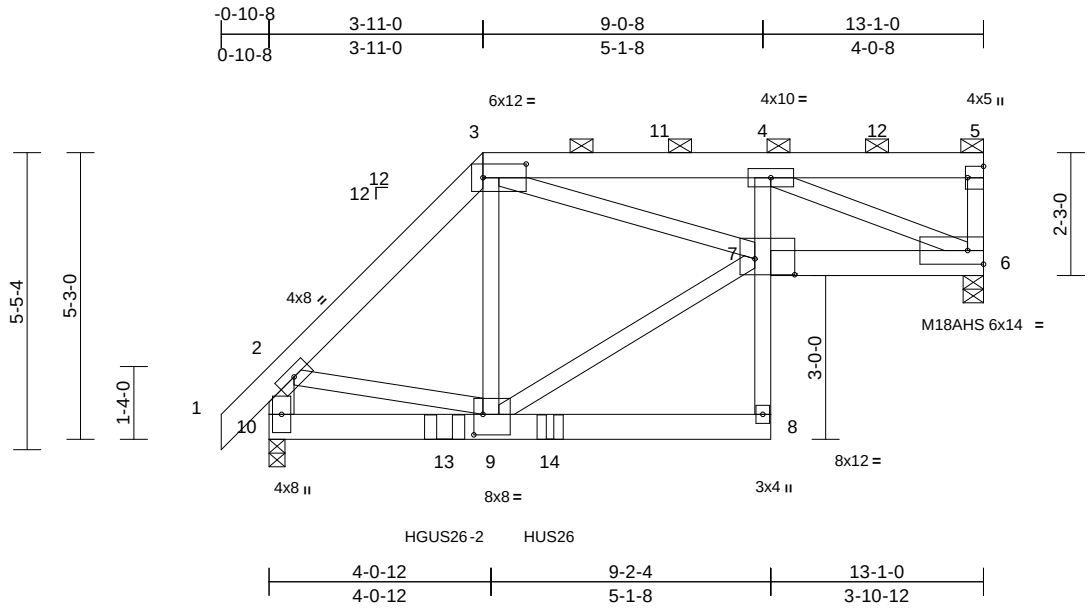

Scale = 1:42.2

Plate Offsets (X, Y): [3:0-9-8,0-3-0], [5:Edge,0-3-8], [7:0-8-12,0-3-8], [9:0-2-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.12	8	>999	360	MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.19	8	>785	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.11	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	8	>999	240		
BCDL	10.0										Weight: 196 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 3-5:2x6 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E *Except* 8-4:2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 10-2:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-4-14 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6=0-4-8, 10=0-3-8, (req. 0-4-4)
Max Horiz 10=132 (LC 7)
Max Uplift 6=-890 (LC 7), 10=-1127 (LC 10)
Max Grav 6=5782 (LC 16), 10=5405 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/55, 2-3=-5660/1134, 3-4=-11340/1803, 4-5=-413/73, 5-6=-1085/172, 2-10=-5027/983
BOT CHORD 9-10=-269/487, 8-9=-31/219, 7-8=0/280, 4-7=-243/829, 6-7=-1779/11077
WEBS 3-9=-381/719, 7-9=-982/4515, 3-7=-1010/7676, 4-6=-11744/1878, 2-9=-682/3722

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc, 2x4 - 1 row at 0-9-0 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) 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
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
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, with BCDL = 10.0psf.
10) WARNING: Required bearing size at joint(s) 6, 10 greater than input bearing size.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 890 lb uplift at joint 6 and 1127 lb uplift at joint 10.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Use Simpson Strong-Tie HGUS26-2 (20-10d Girder, 8-10d Truss) or equivalent at 3-2-9 from the left end to connect truss(es) to front face of bottom chord.
16) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss) or equivalent at 5-1-12 from the left end to connect truss(es) to front face of bottom chord.
17) Fill all nail holes where hanger is in contact with lumber.
18) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2098 lb down and 241 lb up at 7-1-12, and 1828 lb down and 250 lb up at 9-1-12, and 1828 lb down and 250 lb up at 11-1-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-51, 2-3=-51, 3-5=-61, 8-10=-20, 6-7=-20
Concentrated Loads (lb)
Vert: 4=-1689, 11=-1637, 12=-1689, 13=-2064 (F), 14=-1818 (F)

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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476844
230872	V3	Valley	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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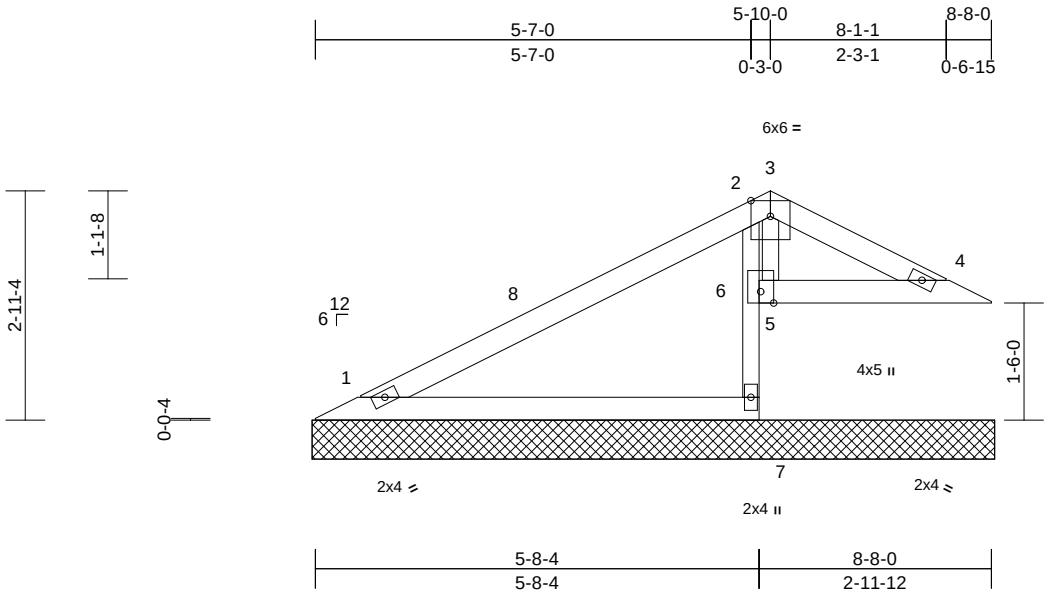

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 22 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 3-4:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-2:2x3 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 6-0-0 oc bracing.

REACTIONS (size) 1=8-9-0, 4=8-9-0, 5=8-9-0, 6=8-9-0, 7=8-9-0
Max Horiz 1=81 (LC 12)
Max Uplift 1=-7 (LC 12), 4=-32 (LC 13), 5=-543 (LC 31), 6=-511 (LC 12)
Max Grav 1=202 (LC 33), 4=105 (LC 19), 5=408 (LC 12), 6=837 (LC 2), 7=100 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-66/98, 2-3=-290/184, 3-4=-28/44
BOT CHORD 1-7=-4/3, 6-7=0/0, 2-6=-880/485, 5-6=-11/6, 4-5=-11/6
WEBS 3-5=-362/618

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 1, 32 lb uplift at joint 4, 511 lb uplift at joint 6 and 543 lb uplift at joint 5.
13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 4, 5.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476845
230872	V4	Valley	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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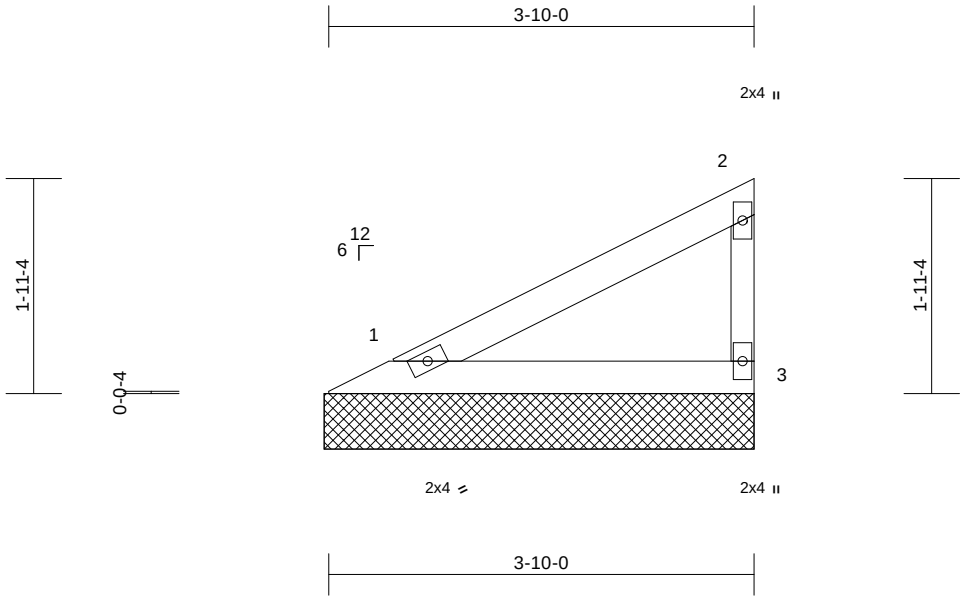

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 10 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 3-10-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-10-8, 3=3-10-8
Max Horiz 1=66 (LC 9)
Max Uplift 1=-18 (LC 12), 3=-35 (LC 12)
Max Grav 1=150 (LC 5), 3=150 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-60/41, 2-3=-116/54
BOT CHORD 1-3=-22/17

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1 and 35 lb uplift at joint 3.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476846
230872	V5	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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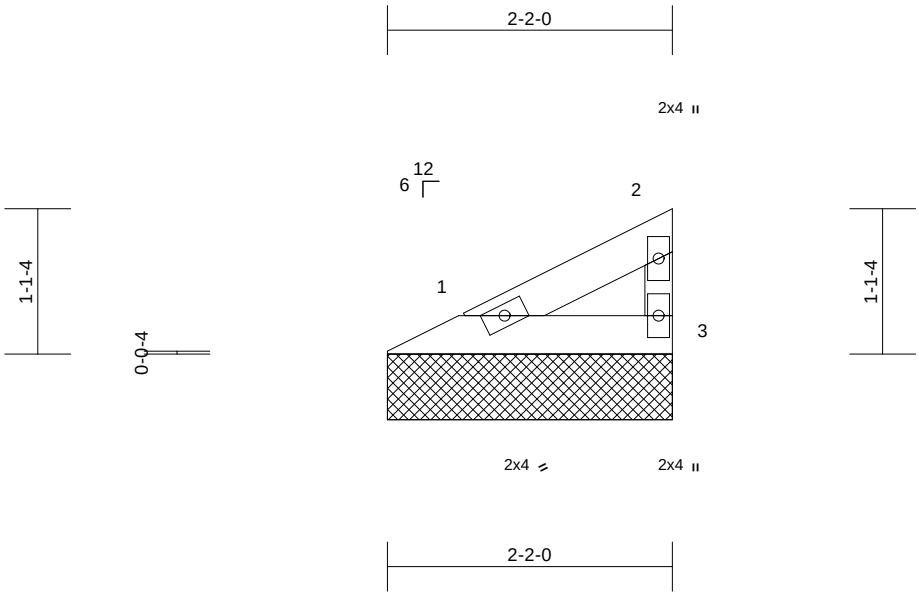

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 5 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 2-2-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-2-0, 3=2-2-0
Max Horiz 1=31 (LC 9)
Max Uplift 1=-8 (LC 12), 3=-16 (LC 12)
Max Grav 1=68 (LC 3), 3=69 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-28/19, 2-3=-52/25
BOT CHORD 1-3=-11/8

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 16 lb uplift at joint 3.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476847
230872	V6	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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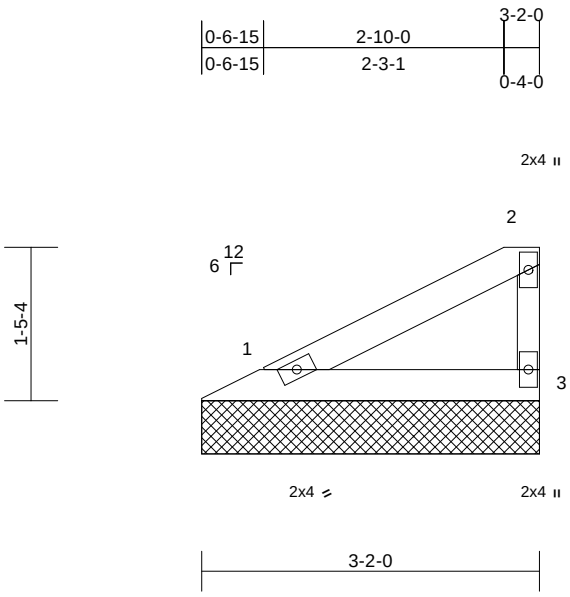

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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 3-2-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-2-0, 3=3-2-0
Max Horiz 1=52 (LC 11)
Max Uplift 1=-14 (LC 12), 3=-27 (LC 12)
Max Grav 1=115 (LC 5), 3=116 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-47/32, 2-3=-88/42
BOT CHORD 1-3=-18/13

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1 and 27 lb uplift at joint 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476848
230872	V7	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:59 Page: 1
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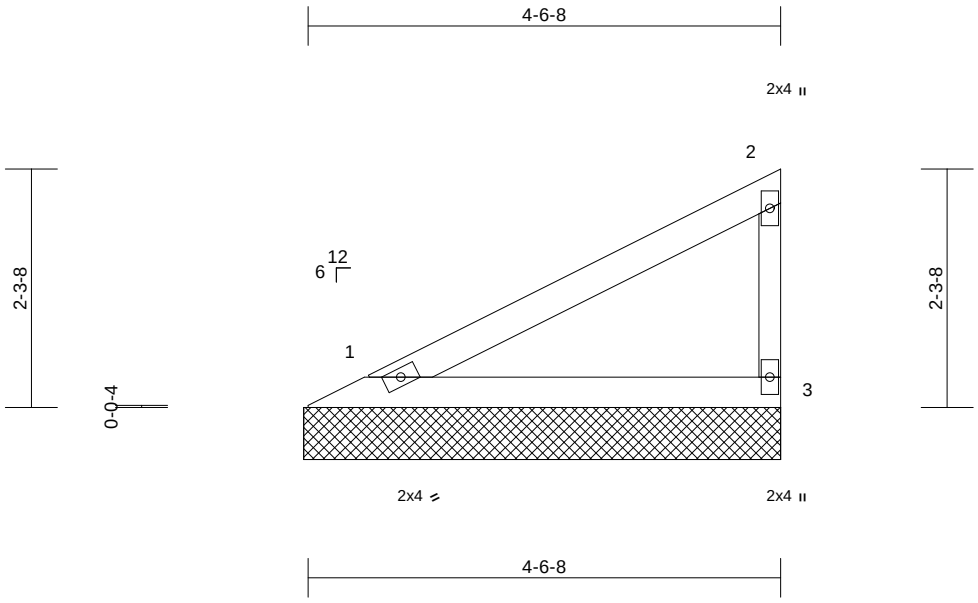

Scale = 1:22.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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 4-7-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-7-0, 3=4-7-0
Max Horiz 1=80 (LC 9)
Max Uplift 1=-22 (LC 12), 3=-42 (LC 12)
Max Grav 1=187 (LC 5), 3=187 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-73/53, 2-3=-146/66
BOT CHORD 1-3=-27/21

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 1 and 42 lb uplift at joint 3.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476849
230872	V8	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:42:59 Page: 1
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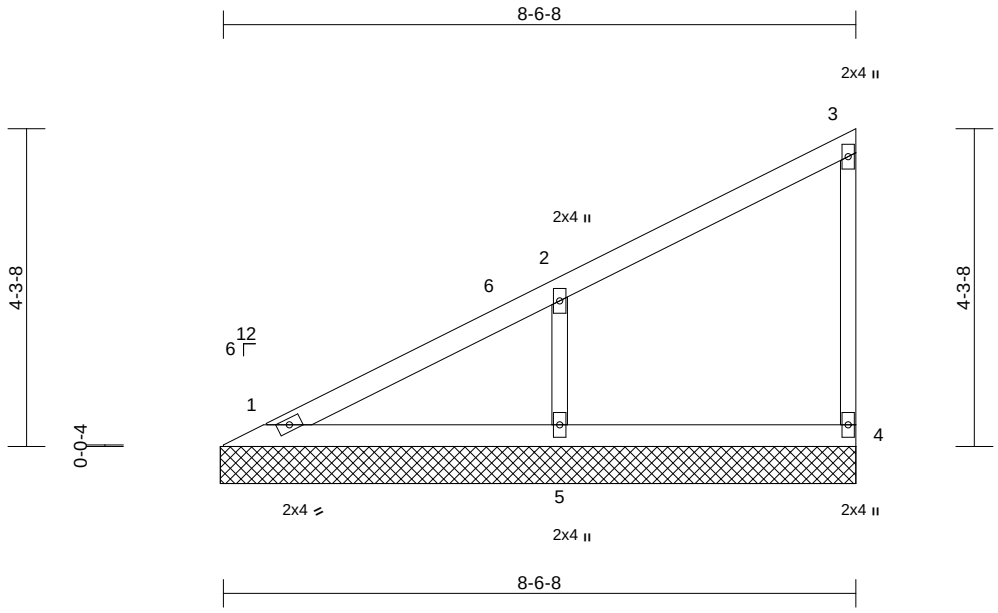

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 24 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 end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=8-7-0, 4=8-7-0, 5=8-7-0
Max Horiz 1=164 (LC 11)
Max Uplift 4=-27 (LC 9), 5=-132 (LC 12)
Max Grav 1=160 (LC 26), 4=152 (LC 18), 5=453 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-131/79, 2-3=-118/43, 3-4=-123/44
BOT CHORD	1-5=-56/42, 4-5=-56/42
WEBS	2-5=-343/191

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 4 and 132 lb uplift at joint 5.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476850
230872	V9	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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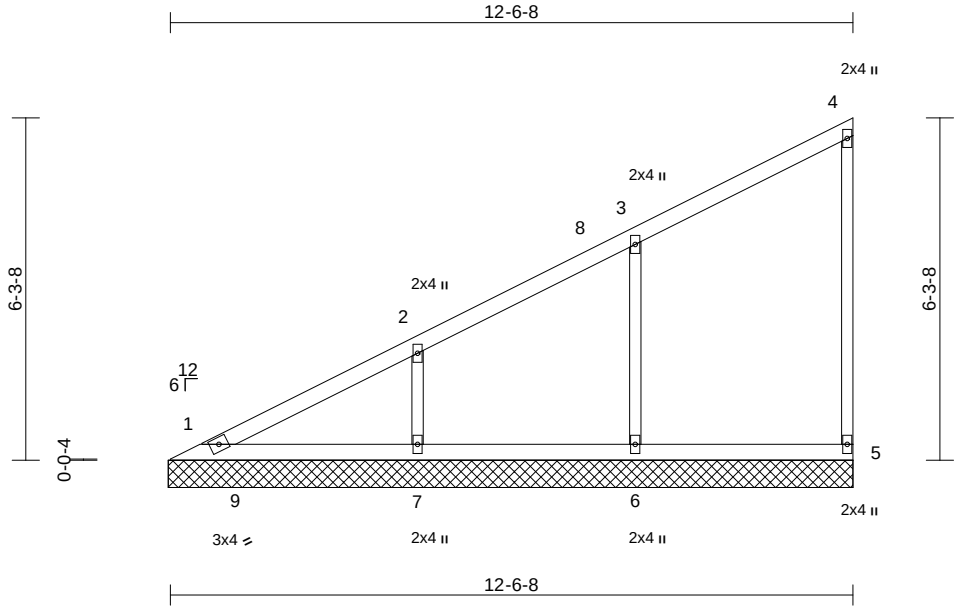

Scale = 1:42.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 39 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 end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-7-0, 5=12-7-0, 6=12-7-0, 7=12-7-0
Max Horiz 1=247 (LC 9)
Max Uplift 5=-37 (LC 9), 6=-115 (LC 12), 7=-119 (LC 12)
Max Grav 1=205 (LC 26), 5=212 (LC 5), 6=502 (LC 5), 7=467 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-205/79, 2-3=-160/71, 3-4=-137/64, 4-5=-130/46
BOT CHORD	1-7=-84/64, 6-7=-84/64, 5-6=-84/64
WEBS	3-6=-309/155, 2-7=-301/168

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 5, 115 lb uplift at joint 6 and 119 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476851
230872	V10	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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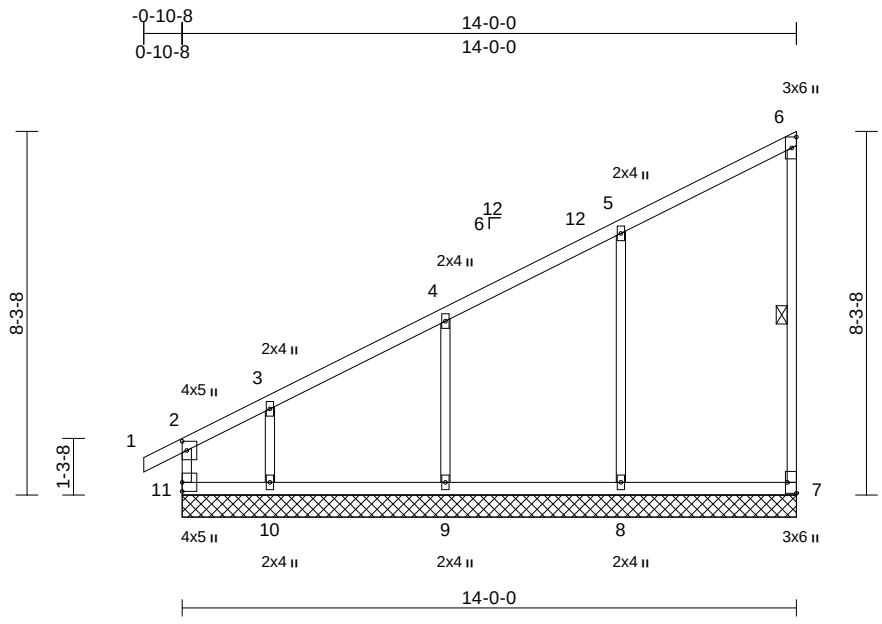

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Plate Offsets (X, Y): [2:0-2-8,0-1-4], [7:Edge,0-2-8]

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	0.55	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.00	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 51 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
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 6-7

REACTIONS (size) 7=14-0-0, 8=14-0-0, 9=14-0-0, 10=14-0-0, 11=14-0-0
Max Horiz 11=336 (LC 11)
Max Uplift 7=-46 (LC 9), 8=-120 (LC 12), 9=-95 (LC 12), 10=-229 (LC 12), 11=-15 (LC 10)
Max Grav 7=206 (LC 26), 8=545 (LC 5), 9=463 (LC 3), 10=369 (LC 26), 11=275 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-11=-202/20, 1-2=0/31, 2-3=-298/65, 3-4=-218/82, 4-5=-190/83, 5-6=-154/83, 6-7=-129/47
BOT CHORD 10-11=-114/86, 9-10=-114/86, 8-9=-114/86, 7-8=-114/86
WEBS 5-8=-313/147, 4-9=-284/157, 3-10=-219/197

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF 2100F 1.8E .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 11, 46 lb uplift at joint 7, 120 lb uplift at joint 8, 95 lb uplift at joint 9 and 229 lb uplift at joint 10.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476852
230872	V11	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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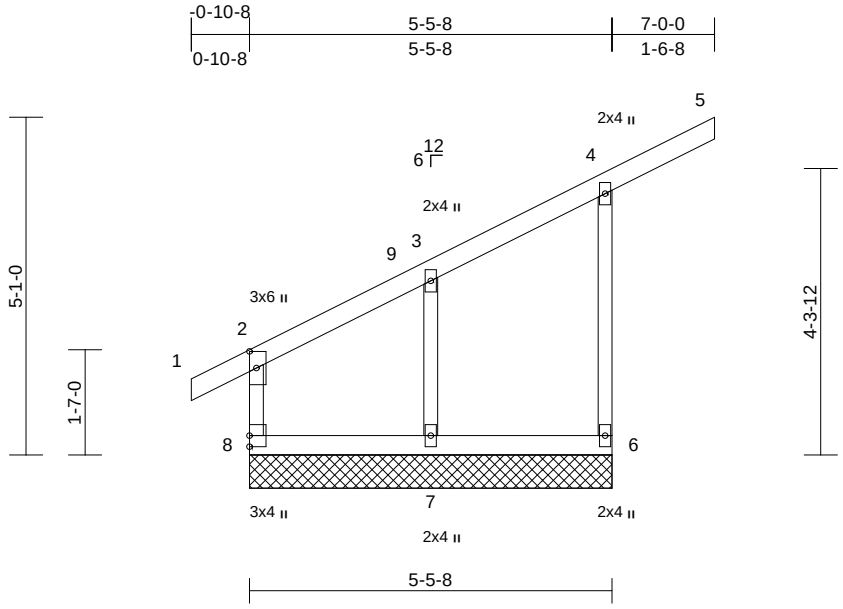

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Plate Offsets (X, Y): [2:0-3-0,0-1-4]

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	0.28	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										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 5-5-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=5-5-8, 7=5-5-8, 8=5-5-8
Max Horiz 8=201 (LC 9)
Max Uplift 6=-95 (LC 9), 7=-121 (LC 12), 8=-14 (LC 8)
Max Grav 6=285 (LC 19), 7=264 (LC 26), 8=227 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-8=-169/26, 1-2=0/31, 2-3=-150/48, 3-4=-95/61, 4-5=-59/0, 4-6=-265/105
BOT CHORD	7-8=-60/42, 6-7=-60/42
WEBS	3-7=-161/121

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 8, 95 lb uplift at joint 6 and 121 lb uplift at joint 7.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476853
230872	V12	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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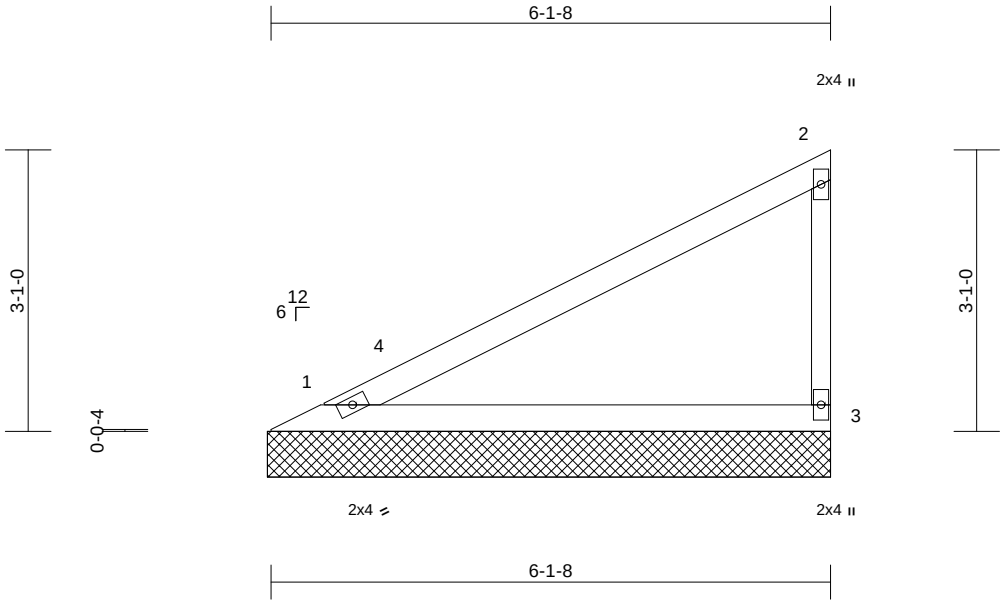

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 16 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) 1=6-2-0, 3=6-2-0
Max Horiz 1=113 (LC 9)
Max Uplift 1=-31 (LC 12), 3=-60 (LC 12)
Max Grav 1=255 (LC 5), 3=270 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-104/77, 2-3=-215/92
BOT CHORD 1-3=-39/29

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 1 and 60 lb uplift at joint 3.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476854
230872	V13	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:23:01 Page: 1
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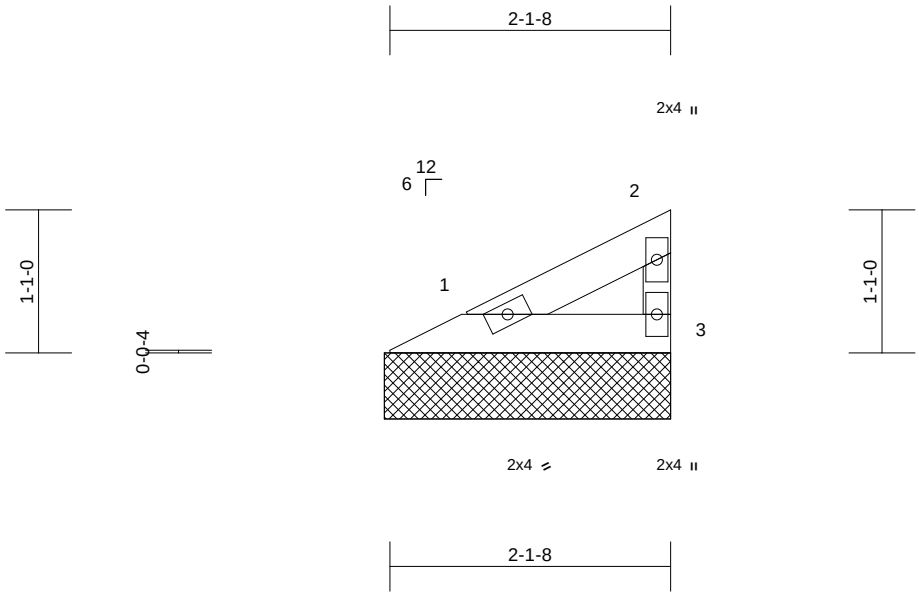

Scale = 1:17.4

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	0.03	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 5 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 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-2-0, 3=2-2-0
Max Horiz 1=30 (LC 9)
Max Uplift 1=-8 (LC 12), 3=-16 (LC 12)
Max Grav 1=66 (LC 3), 3=67 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-27/18, 2-3=-50/24
BOT CHORD 1-3=-10/8

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 16 lb uplift at joint 3.
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

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	V14	Valley	2	1	Job Reference (optional) I63476855

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:13:01 Page: 1
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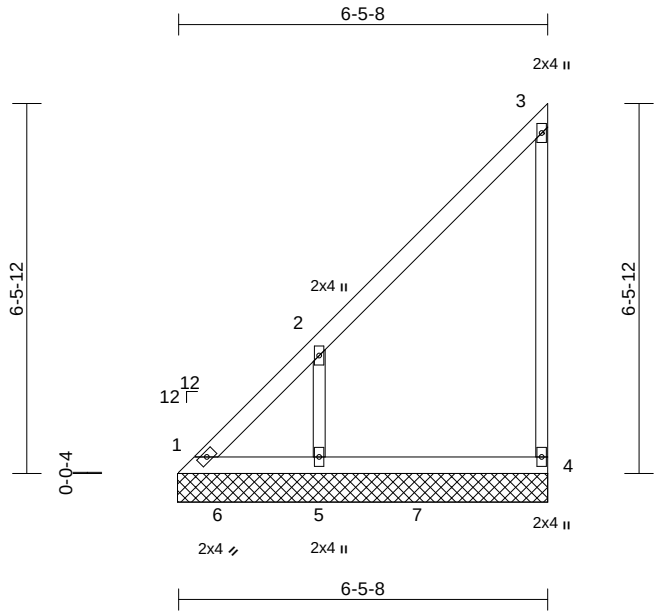

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 24 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 end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=6-5-12, 4=6-5-12, 5=6-5-12
Max Horiz 1=240 (LC 9)
Max Uplift 1=-90 (LC 8), 4=-86 (LC 7), 5=-232 (LC 10)
Max Grav 1=181 (LC 7), 4=248 (LC 21), 5=539 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-257/189, 2-3=-204/108, 3-4=-148/105
BOT CHORD	1-5=-86/65, 4-5=-86/65
WEBS	2-5=-321/280

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 1, 86 lb uplift at joint 4 and 232 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/07/2024

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	V15	Valley	2	1	Job Reference (optional) I63476856

Wheeler Lumber, Waverly, KS - 66871,

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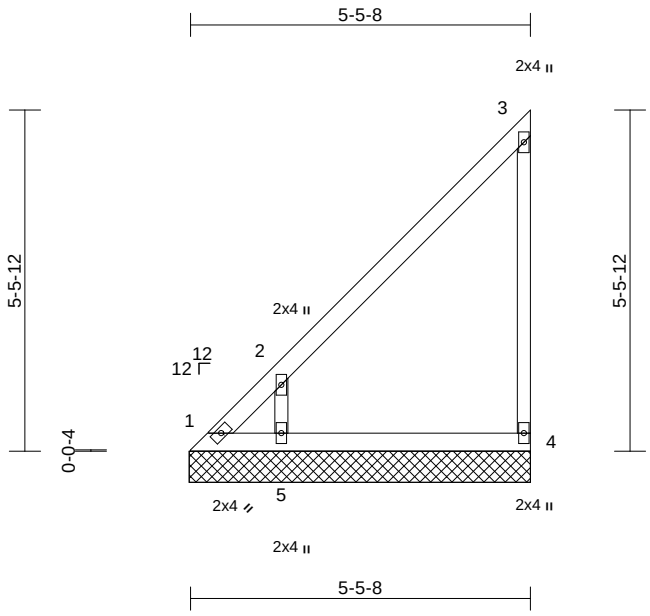

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 19 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 5-5-12 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-5-12, 4=5-5-12, 5=5-5-12
Max Horiz 1=200 (LC 9)
Max Uplift 1=-161 (LC 21), 4=-77 (LC 7), 5=-242 (LC 10)
Max Grav 1=198 (LC 10), 4=198 (LC 21), 5=483 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-255/193, 2-3=-189/98, 3-4=-143/96
BOT CHORD	1-5=-71/54, 4-5=-71/54
WEBS	2-5=-335/293

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 1, 77 lb uplift at joint 4 and 242 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476857
230872	V16	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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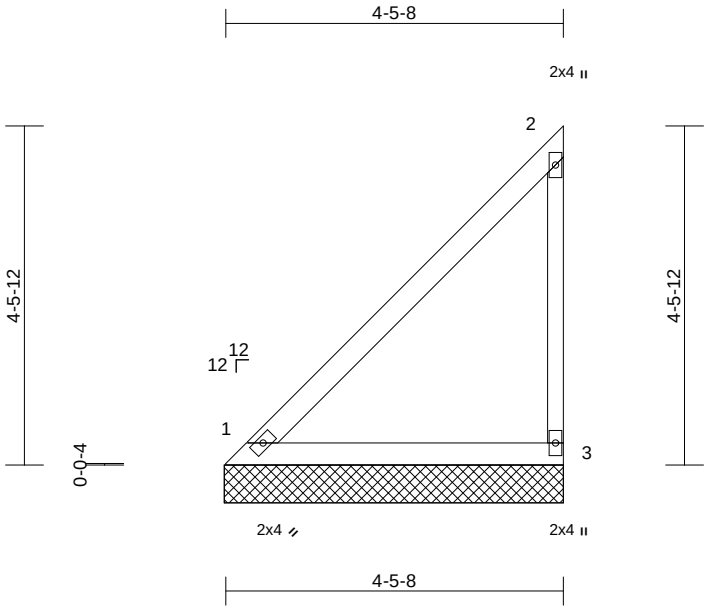

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 15 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 4-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-5-12, 3=4-5-12
Max Horiz 1=160 (LC 7)
Max Uplift 3=-78 (LC 7)
Max Grav 1=229 (LC 22), 3=245 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-150/118, 2-3=-175/103
BOT CHORD 1-3=-57/43

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	V17	Valley	2	1	Job Reference (optional) I63476858

Wheeler Lumber, Waverly, KS - 66871,

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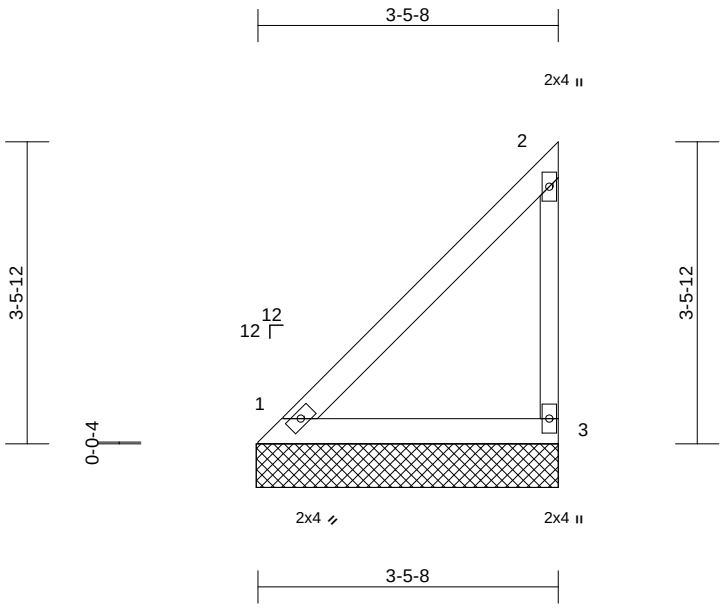

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 11 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 3-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-5-12, 3=3-5-12
Max Horiz 1=120 (LC 9)
Max Uplift 3=-59 (LC 7)
Max Grav 1=172 (LC 22), 3=184 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-113/88, 2-3=-131/77
BOT CHORD 1-3=-43/33

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476859
230872	V18	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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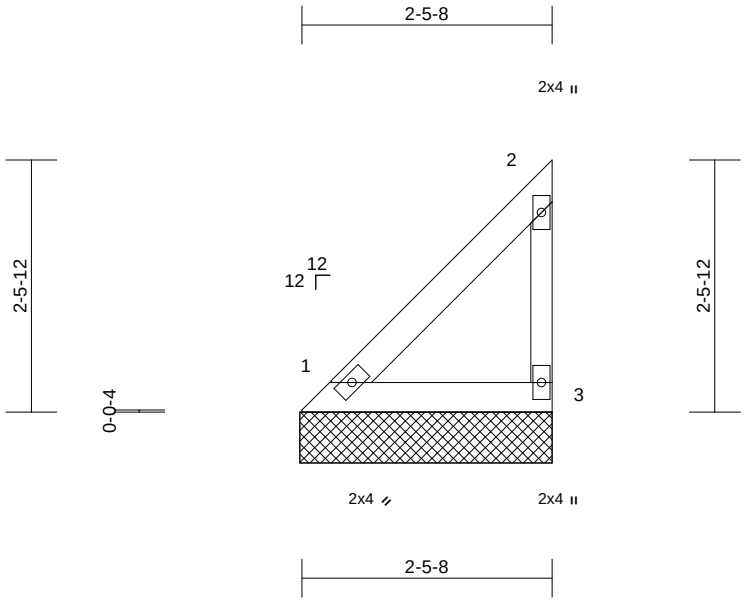

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										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 2-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-5-12, 3=2-5-12
Max Horiz 1=81 (LC 7)
Max Uplift 3=-39 (LC 7)
Max Grav 1=115 (LC 22), 3=123 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-76/59, 2-3=-88/52
BOT CHORD 1-3=-29/22

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476860
230872	V19	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:23:03 Page: 1
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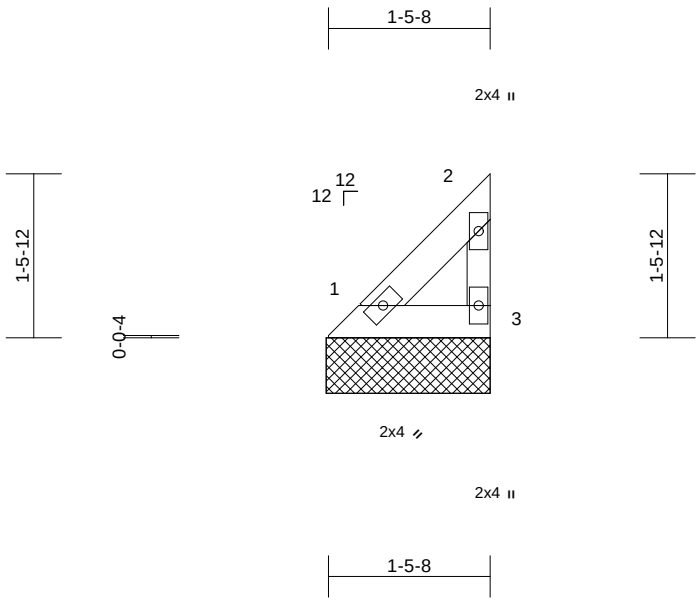

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.01	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 4 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 1-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=1-5-12, 3=1-5-12
Max Horiz 1=41 (LC 7)
Max Uplift 3=-20 (LC 7)
Max Grav 1=58 (LC 22), 3=62 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-38/30, 2-3=-44/26
BOT CHORD 1-3=-15/11

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476861
230872	V20	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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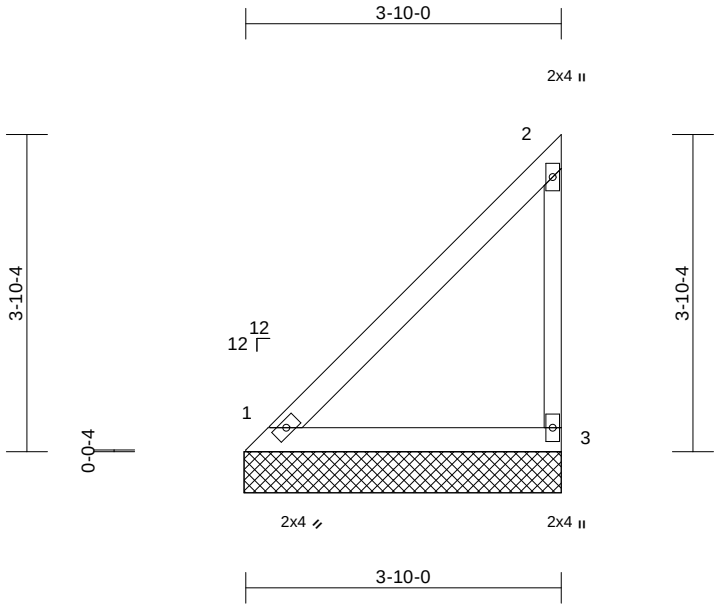

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 13 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 3-10-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-10-4, 3=3-10-4
Max Horiz 1=135 (LC 7)
Max Uplift 3=-66 (LC 7)
Max Grav 1=193 (LC 22), 3=207 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-127/99, 2-3=-148/87
BOT CHORD 1-3=-48/37

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476862
230872	V21	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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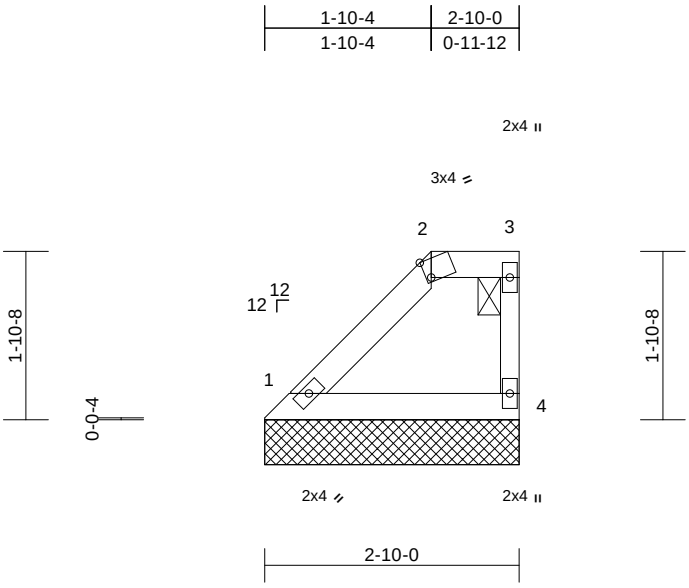

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Plate Offsets (X, Y): [2:0-0-11,Edge]

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
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										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 2-10-4 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-10-0, 4=2-10-0
Max Horiz 1=63 (LC 9)
Max Uplift 1=-6 (LC 10), 4=-32 (LC 7)
Max Grav 1=115 (LC 24), 4=111 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-81/22, 2-3=-27/24, 3-4=-74/39
BOT CHORD 1-4=-26/27

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Provide adequate drainage to prevent water ponding.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 1 and 32 lb uplift at joint 4.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476863
230872	V22	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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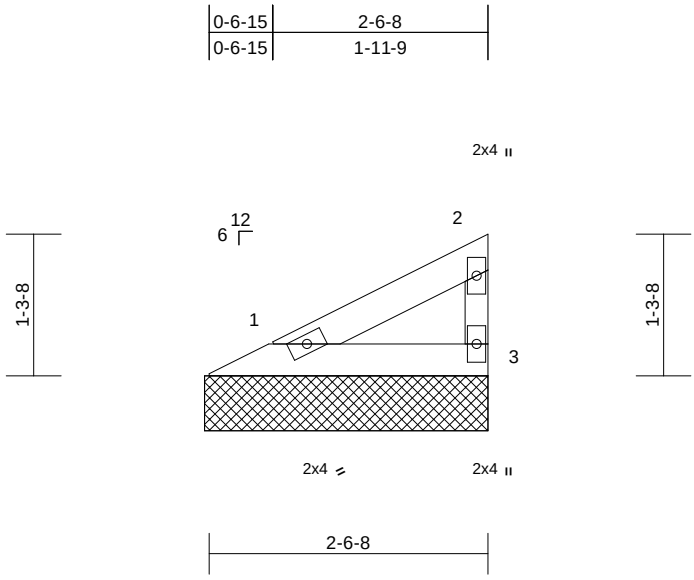

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 6 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 2-7-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-7-0, 3=2-7-0
Max Horiz 1=39 (LC 9)
Max Uplift 1=-11 (LC 12), 3=-20 (LC 12)
Max Grav 1=86 (LC 3), 3=87 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-35/23, 2-3=-65/32
BOT CHORD 1-3=-13/10

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1 and 20 lb uplift at joint 3.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476864
230872	V23	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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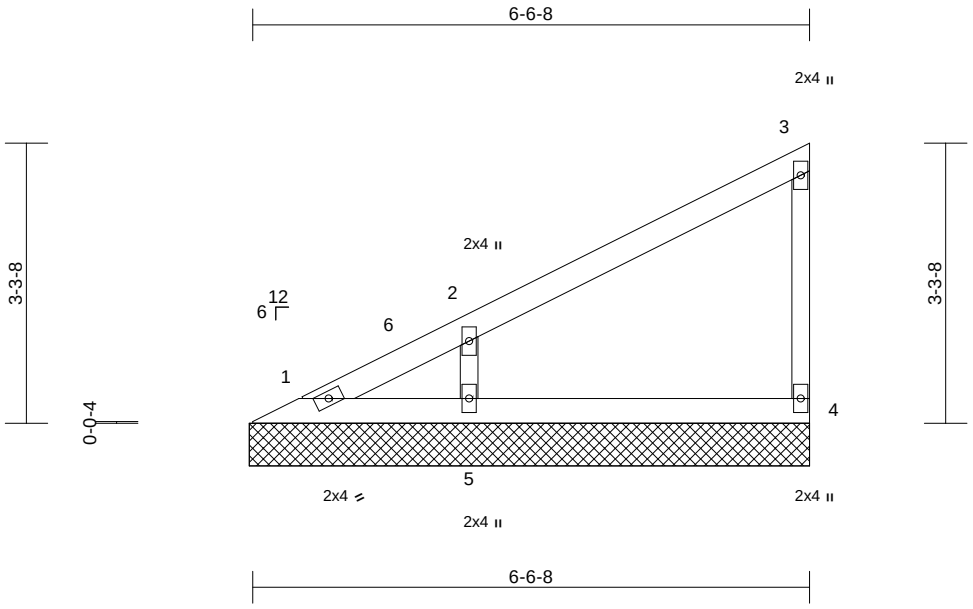

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 18 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 end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=6-7-0, 4=6-7-0, 5=6-7-0
Max Horiz 1=122 (LC 9)
Max Uplift 4=-28 (LC 12), 5=-108 (LC 12)
Max Grav 1=50 (LC 26), 4=159 (LC 18), 5=391 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-106/55, 2-3=-103/43, 3-4=-127/47
BOT CHORD	1-5=-42/32, 4-5=-42/32
WEBS	2-5=-307/157

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 4 and 108 lb uplift at joint 5.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476865
230872	V24	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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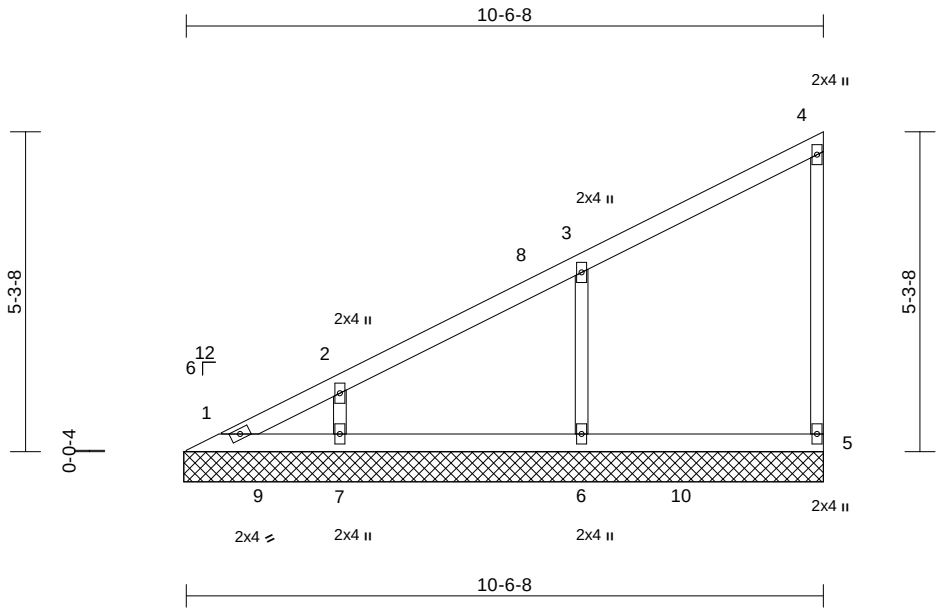

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 31 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 end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=10-7-0, 5=10-7-0, 6=10-7-0, 7=10-7-0
Max Horiz 1=205 (LC 11)
Max Uplift 5=-32 (LC 9), 6=-121 (LC 12), 7=-89 (LC 12)
Max Grav 1=94 (LC 26), 5=204 (LC 5), 6=502 (LC 5), 7=347 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-178/51, 2-3=-145/70, 3-4=-128/53, 4-5=-128/44
BOT CHORD	1-7=-69/54, 6-7=-69/54, 5-6=-69/54
WEBS	3-6=-321/167, 2-7=-230/131

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5, 121 lb uplift at joint 6 and 89 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476866
230872	V25	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:23:04 Page: 1
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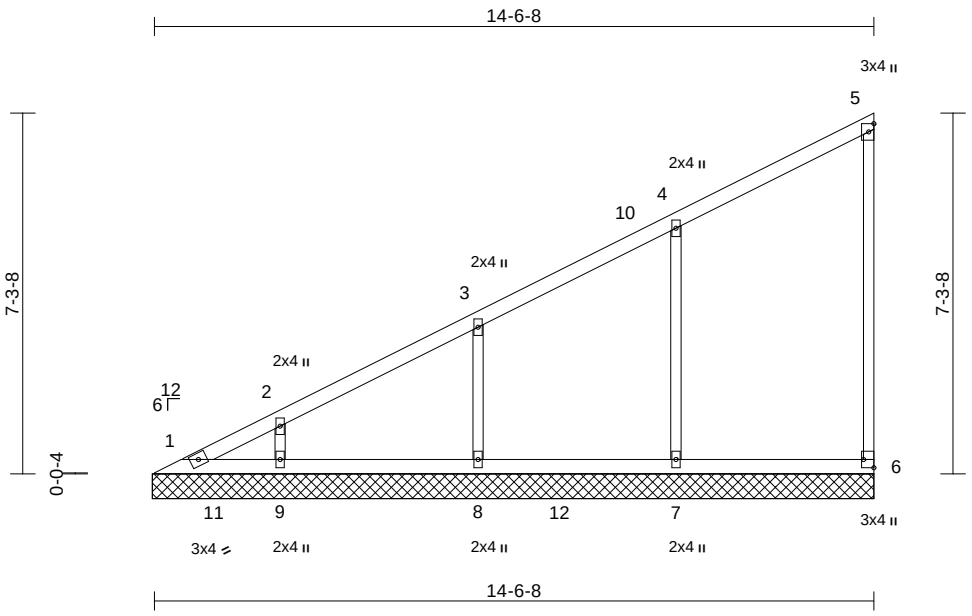

Scale = 1:46.6

Plate Offsets (X, Y): [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	0.43	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	6	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 46 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 end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=14-7-0, 6=14-7-0, 7=14-7-0, 8=14-7-0, 9=14-7-0
Max Horiz 1=288 (LC 9)
Max Uplift 6=-41 (LC 9), 7=-118 (LC 12), 8=-109 (LC 12), 9=-94 (LC 12)
Max Grav 1=113 (LC 9), 6=208 (LC 5), 7=539 (LC 5), 8=439 (LC 3), 9=366 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-253/62, 2-3=-213/77, 3-4=-174/78, 4-5=-146/74, 5-6=-129/47
BOT CHORD	1-9=-98/75, 8-9=-98/75, 7-8=-98/75, 6-7=-98/75
WEBS	4-7=-313/152, 3-8=-282/162, 2-9=-241/133

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 6, 118 lb uplift at joint 7, 109 lb uplift at joint 8 and 94 lb uplift at joint 9.
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

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476867
230872	V26	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:23:05 Page: 1
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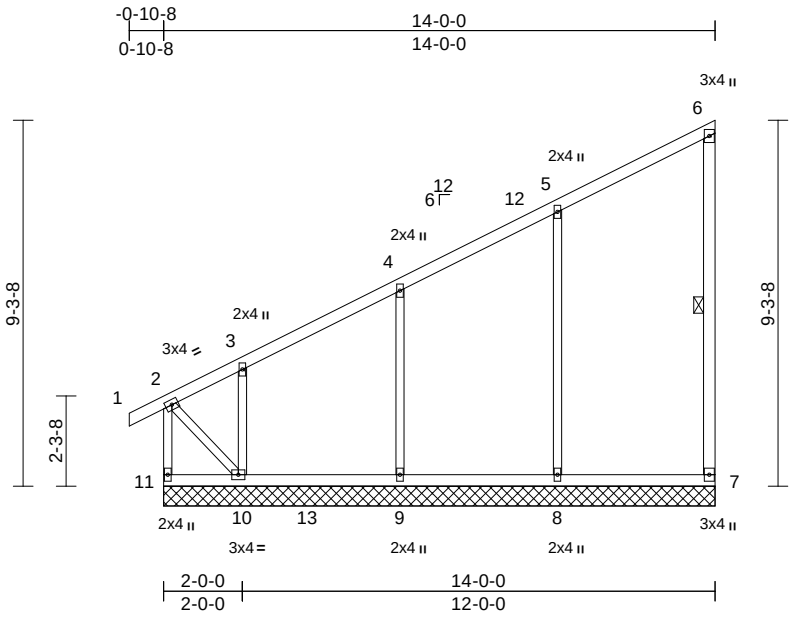

Scale = 1:58.5

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	0.38	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.00	7	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 60 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 6-7:2x4 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, Except:
6-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 6-7

REACTIONS (size) 7=14-0-0, 8=14-0-0, 9=14-0-0, 10=14-0-0, 11=14-0-0
Max Horiz 11=373 (LC 9)
Max Uplift 7=-50 (LC 9), 8=-116 (LC 12), 9=-110 (LC 12), 10=-316 (LC 9), 11=-57 (LC 10)
Max Grav 7=210 (LC 26), 8=532 (LC 5), 9=493 (LC 3), 10=410 (LC 26), 11=405 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-11=-396/62, 1-2=0/31, 2-3=-269/62, 3-4=-231/85, 4-5=-206/85, 5-6=-166/94, 6-7=-130/50
BOT CHORD 10-11=-360/114, 9-10=-126/97, 8-9=-126/97, 7-8=-126/97
WEBS 5-8=-307/141, 4-9=-285/166, 3-10=-220/124, 2-10=-95/400

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) All bearings are assumed to be SPF No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 11, 50 lb uplift at joint 7, 116 lb uplift at joint 8, 110 lb uplift at joint 9 and 316 lb uplift at joint 10.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR	I63476868
230872	V28	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:23:05 Page: 1
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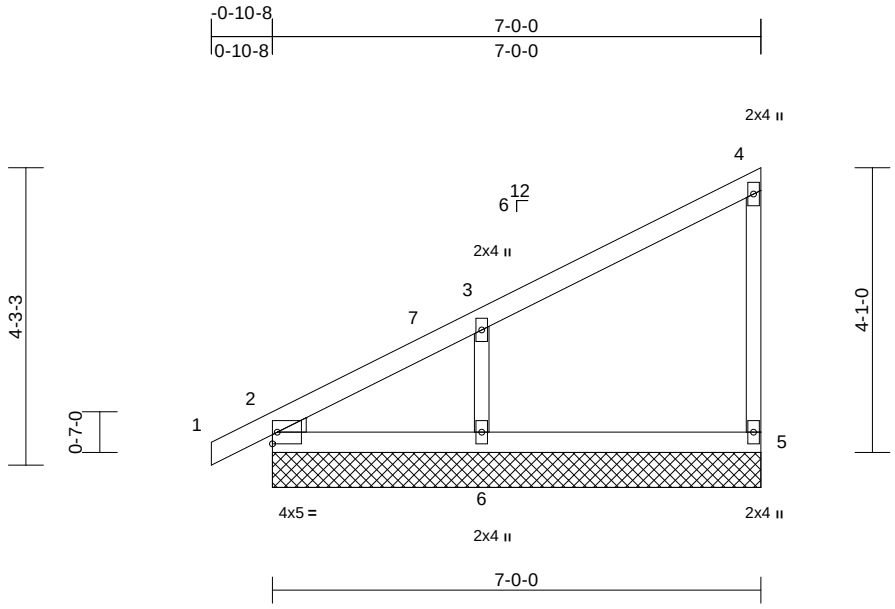

Scale = 1:33

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 23 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
WEDGE	Left: 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=7-0-0, 5=7-0-0, 6=7-0-0
Max Horiz 2=158 (LC 9)
Max Uplift 2=-4 (LC 8), 5=-27 (LC 9), 6=-124 (LC 12)
Max Grav 2=167 (LC 27), 5=159 (LC 19), 6=404 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/11, 2-3=-130/70, 3-4=-113/45, 4-5=-128/45
BOT CHORD	2-6=-53/40, 5-6=-53/40
WEBS	3-6=-307/177

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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, with BCDL = 10.0psf.
10) All bearings are assumed to be SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 5, 4 lb uplift at joint 2 and 124 lb uplift at joint 6.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

February 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 17 TCR
230872	V29	Valley	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I63476869
05/07/2024

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Jan 4 2024 Print: 8.730 S Jan 4 2024 MiTek Industries, Inc. Tue Feb 06 14:23:05 Page: 1
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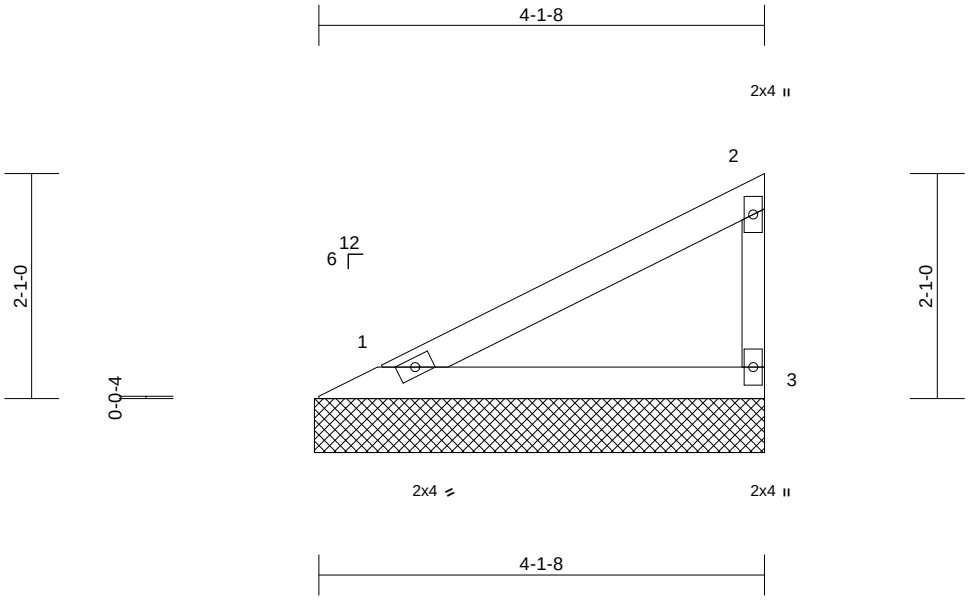


Scale = 1:21.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	10.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 10 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 4-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-2-0, 3=4-2-0
Max Horiz 1=72 (LC 9)
Max Uplift 1=-20 (LC 12), 3=-38 (LC 12)
Max Grav 1=165 (LC 5), 3=165 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-65/46, 2-3=-128/58
BOT CHORD 1-3=-24/19

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) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1 and 38 lb uplift at joint 3.
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

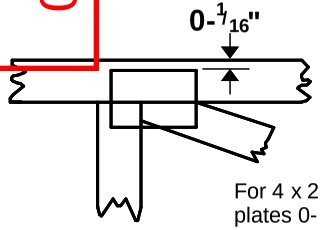
February 8,2024

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

Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

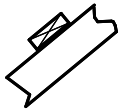
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

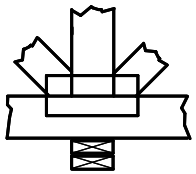
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

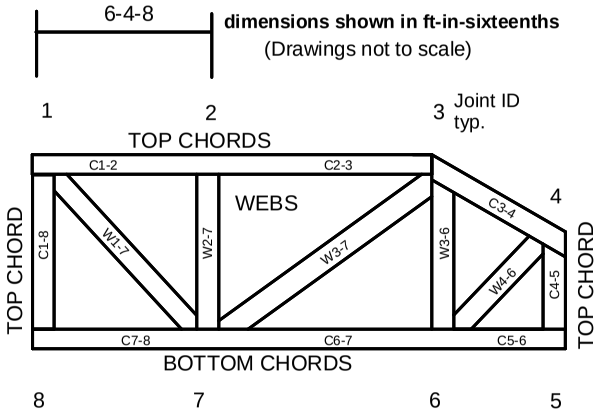


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

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.