



RE: 240615
Lot 124 MN

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

Site Information:

Customer: Avital Homes Project Name: 240615
Lot/Block: Model: Serenity - Contemporary 3rd Car
Address: Subdivision:
City: State:

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

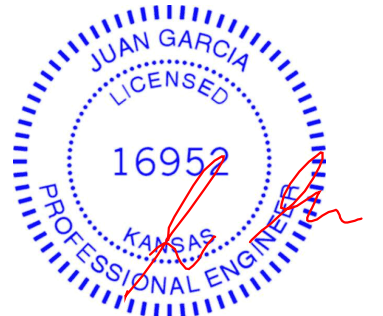
Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 49 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I64133390	B1	3/11/2024	21	I64133410	J9	3/11/2024
2	I64133391	B2	3/11/2024	22	I64133411	J11	3/11/2024
3	I64133392	B3	3/11/2024	23	I64133412	J12	3/11/2024
4	I64133393	G1	3/11/2024	24	I64133413	J13	3/11/2024
5	I64133394	G1A	3/11/2024	25	I64133414	J14	3/11/2024
6	I64133395	G2	3/11/2024	26	I64133415	J15	3/11/2024
7	I64133396	G2A	3/11/2024	27	I64133416	J16	3/11/2024
8	I64133397	G3	3/11/2024	28	I64133417	K1	3/11/2024
9	I64133398	G3A	3/11/2024	29	I64133418	K2	3/11/2024
10	I64133399	G4	3/11/2024	30	I64133419	K3	3/11/2024
11	I64133400	G5	3/11/2024	31	I64133420	K4	3/11/2024
12	I64133401	G6	3/11/2024	32	I64133421	K5	3/11/2024
13	I64133402	H2	3/11/2024	33	I64133422	K6	3/11/2024
14	I64133403	J3	3/11/2024	34	I64133423	K7	3/11/2024
15	I64133404	J4	3/11/2024	35	I64133424	K8	3/11/2024
16	I64133405	J4A	3/11/2024	36	I64133425	K9	3/11/2024
17	I64133406	J5	3/11/2024	37	I64133426	K10	3/11/2024
18	I64133407	J6	3/11/2024	38	I64133427	K11	3/11/2024
19	I64133408	J7	3/11/2024	39	I64133428	K12	3/11/2024
20	I64133409	J8	3/11/2024	40	I64133429	LAY2	3/11/2024

The truss drawing(s) referenced above have been prepared by
MiTek USA, Inc. under my direct supervision
based on the parameters provided by Wheeler - Waverly.
Truss Design Engineer's Name: Garcia, Juan
My license renewal date for the state of Kansas is April 30, 2024.
Kansas COA: E-943

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



March 11, 2024



RE: 240615 - Lot 124 MN

MiTek, Inc.

16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Site Information:

Project Customer: Avital Homes Project Name: 240615

Lot/Block: _____ Subdivision: _____

Address:

State:

City, County:

No.	Seal#	Truss Name	Date
41	I64133430	LAY3	3/11/2024
42	I64133431	LAY4	3/11/2024
43	I64133432	LAY5	3/11/2024
44	I64133433	LAY6	3/11/2024
45	I64133434	V6	3/11/2024
46	I64133435	V7	3/11/2024
47	I64133436	V8	3/11/2024
48	I64133437	V9	3/11/2024
49	I64133438	V10	3/11/2024

RE: 240615
Lot 124 MN

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

Site Information:

Customer: Avital Homes Project Name: 240615
Lot/Block: Model: Serenity - Contemporary 3rd Car
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 49 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I64133390	B1	3/11/2024	21	I64133410	J9	3/11/2024
2	I64133391	B2	3/11/2024	22	I64133411	J11	3/11/2024
3	I64133392	B3	3/11/2024	23	I64133412	J12	3/11/2024
4	I64133393	G1	3/11/2024	24	I64133413	J13	3/11/2024
5	I64133394	G1A	3/11/2024	25	I64133414	J14	3/11/2024
6	I64133395	G2	3/11/2024	26	I64133415	J15	3/11/2024
7	I64133396	G2A	3/11/2024	27	I64133416	J16	3/11/2024
8	I64133397	G3	3/11/2024	28	I64133417	K1	3/11/2024
9	I64133398	G3A	3/11/2024	29	I64133418	K2	3/11/2024
10	I64133399	G4	3/11/2024	30	I64133419	K3	3/11/2024
11	I64133400	G5	3/11/2024	31	I64133420	K4	3/11/2024
12	I64133401	G6	3/11/2024	32	I64133421	K5	3/11/2024
13	I64133402	H2	3/11/2024	33	I64133422	K6	3/11/2024
14	I64133403	J3	3/11/2024	34	I64133423	K7	3/11/2024
15	I64133404	J4	3/11/2024	35	I64133424	K8	3/11/2024
16	I64133405	J4A	3/11/2024	36	I64133425	K9	3/11/2024
17	I64133406	J5	3/11/2024	37	I64133426	K10	3/11/2024
18	I64133407	J6	3/11/2024	38	I64133427	K11	3/11/2024
19	I64133408	J7	3/11/2024	39	I64133428	K12	3/11/2024
20	I64133409	J8	3/11/2024	40	I64133429	LAY2	3/11/2024

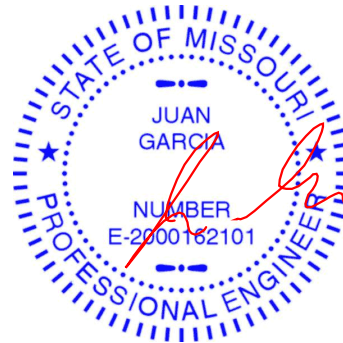
The truss drawing(s) referenced above have been prepared by
MiTek USA, Inc. under my direct supervision
based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2024.

Missouri COA: 001193

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



March 11, 2024



RE: 240615 - Lot 124 MN

MiTek, Inc.

16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Site Information:

Project Customer: Avital Homes Project Name: 240615

Lot/Block: _____ Subdivision: _____

Address:

State:

City, County:

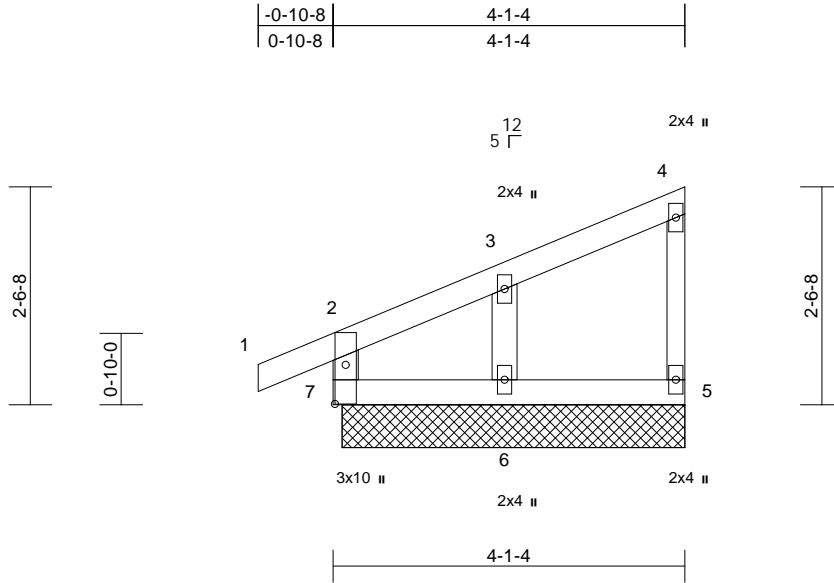
No.	Seal#	Truss Name	Date
41	I64133430	LAY3	3/11/2024
42	I64133431	LAY4	3/11/2024
43	I64133432	LAY5	3/11/2024
44	I64133433	LAY6	3/11/2024
45	I64133434	V6	3/11/2024
46	I64133435	V7	3/11/2024
47	I64133436	V8	3/11/2024
48	I64133437	V9	3/11/2024
49	I64133438	V10	3/11/2024

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133390
240615	B1	Monopitch Supported Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:25
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Page: 1



Scale = 1:26.9

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

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	0.07	Vert(LL)	n/a	-	n/a	999	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
										Weight: 14 lb	FT = 10%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-1-4 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	5=4-0-0, 6=4-0-0, 7=4-0-0
Max Horiz	7=102 (LC 5)
Max Uplift	5=-11 (LC 5), 6=-67 (LC 8), 7=-29 (LC 4)
Max Grav	5=76 (LC 1), 6=183 (LC 1), 7=159 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	2-7=-141/41, 1-2=0/27, 2-3=-67/21, 3-4=-54/18, 4-5=-59/22
BOT CHORD	6-7=-32/23, 5-6=-32/23
WEBS	3-6=-141/84

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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) All bearings are assumed to be SPF No.2 .
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 7, 11 lb uplift at joint 5 and 67 lb uplift at joint 6.
- 9) Non Standard bearing condition. Review required.
- 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



March 11, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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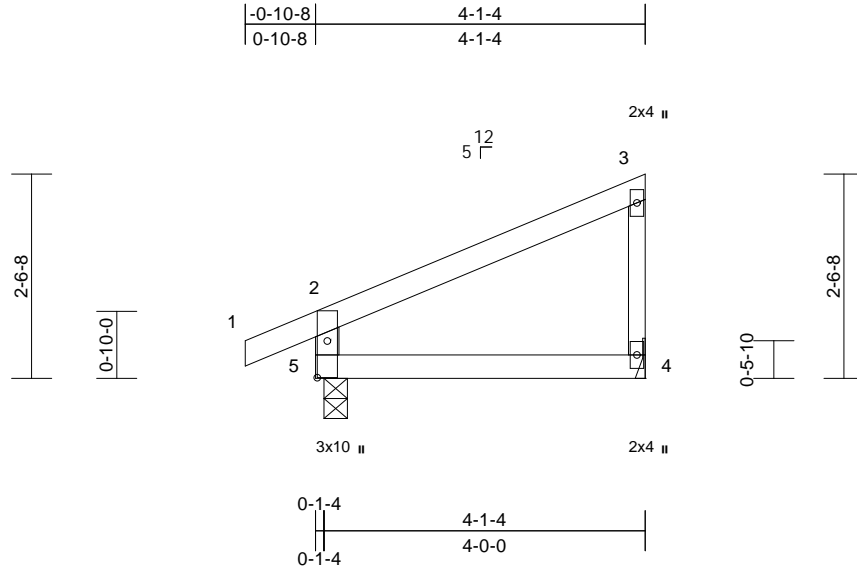
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133391
240615	B2	Monopitch	5	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:26
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Page: 1



Scale = 1:28.7

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

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	0.18	Vert(LL)	-0.01	4-5	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.02	4-5	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 13 lb FT = 10%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or
4-1-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=102 (LC 5)
Max Uplift 4=41 (LC 8), 5=47 (LC 8)
Max Grav 4=164 (LC 1), 5=254 (LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-2=0/27, 2-3=-94/26, 3-4=-118/57,
2-5=-223/78
BOT CHORD 4-5=-30/22

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) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 41 lb uplift at joint
4 and 47 lb uplift at joint 5.
- 7) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.



March 11, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

MiTek®

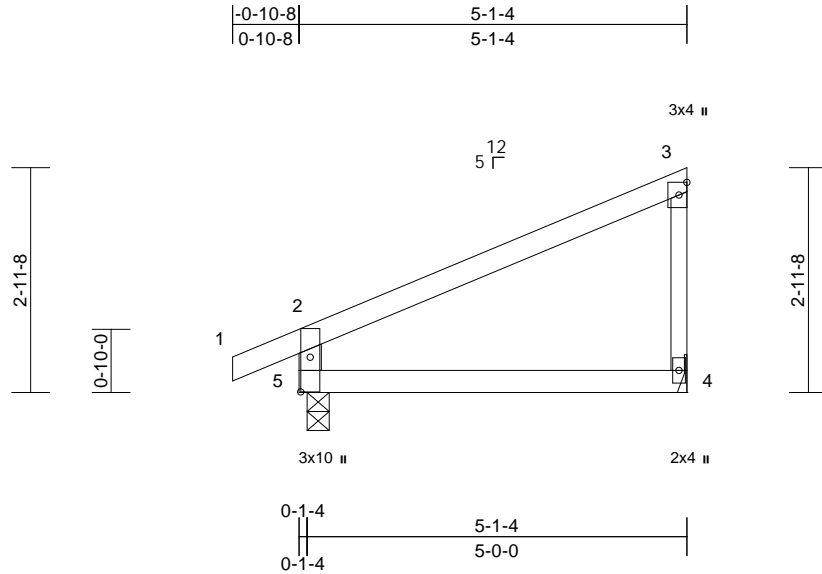
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133392
240615	B3	Monopitch	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:26
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Page: 1



Scale = 1:30.3

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

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	0.31	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.05	4-5	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 16 lb	FT = 10%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or
5-1-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=120 (LC 5)
Max Uplift 4=52 (LC 8), 5=53 (LC 8)
Max Grav 4=211 (LC 1), 5=297 (LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-2=0/27, 2-3=119/30, 3-4=151/71,
2-5=260/92
BOT CHORD 4-5=33/31

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed ; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 52 lb uplift at joint
4 and 53 lb uplift at joint 5.
- 7) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 11, 2024

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MiTek®

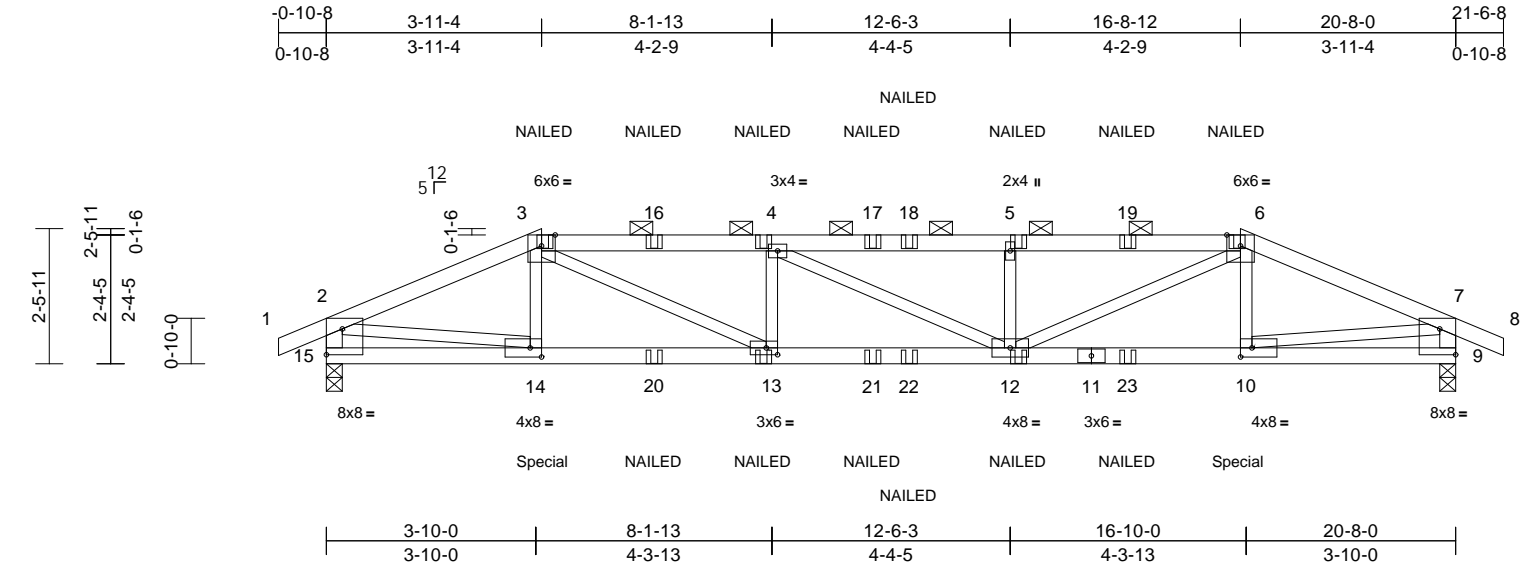
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	164133393
240615	G1	Hip Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:26
ID:MFFJF9zd6mh_Qey?lyBj2dzdKf7-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:42.2

Plate Offsets (X, Y): [9:Edge,0-5-11], [10:0-2-8,0-2-0], [13:0-2-8,0-1-8], [14:0-2-8,0-2-0], [15:Edge,0-5-11]

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)	-0.18	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.33	12-13	>732	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.06	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.16	12-13	>999	240	Weight: 74 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,9-7:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-6-11 oc purlins, except end verticals, and 2-0-0 oc purlins (2-8-8 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 6-9-14 oc bracing.

REACTIONS

(size) 9=0-3-8, 15=0-3-8
Max Horiz 15=18 (LC 6)
Max Uplift 9=319 (LC 5), 15=319 (LC 4)
Max Grav 9=1451 (LC 1), 15=1451 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-2384/537, 3-4=-3397/806, 4-5=-3392/803, 5-6=-3395/804, 6-7=-2384/537, 7-8=0/27, 2-15=-1399/332, 7-9=-1399/332
BOT CHORD 14-15=-93/303, 13-14=-459/2155, 12-13=-753/3394, 10-12=-461/2155, 9-10=-79/303
WEBS 3-14=-10/97, 6-10=-10/97, 2-14=-408/1875, 7-10=-409/1875, 3-13=-328/1421, 6-12=-327/1418, 4-13=-489/226, 4-12=-28/23, 5-12=-478/225

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 319 lb uplift at joint 15 and 319 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 214 lb down and 55 lb up at 3-11-4, and 214 lb down and 55 lb up at 16-8-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-6=-70, 6-7=-70, 7-8=-70, 9-15=-20
Concentrated Loads (lb)
Vert: 3=-45 (F), 6=-45 (F), 14=-214 (F), 10=-214 (F), 13=-23 (F), 12=-23 (F), 4=-45 (F), 5=-45 (F), 16=-45 (F), 17=-45 (F), 18=-45 (F), 19=-45 (F), 20=-23 (F), 21=-23 (F), 22=-23 (F), 23=-23 (F)



March 11, 2024

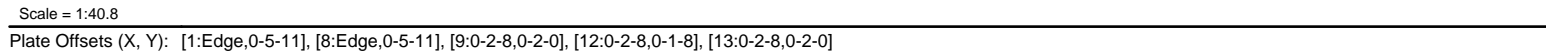
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of the design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)

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Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:27 Page: 1
ID:cnietT?Q8sxbkJr4KHkInWzdK3e-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCdofJ74zJC?f



LUMBER		
TOP CHORD	2x4 SPF No.2	
BOT CHORD	2x4 SPF No.2	
WEBS	2x3 SPF No.2 "Except" 14-1,8-6:2x4 SPF No.2	
BRACING		
TOP CHORD	Structural wood sheathing directly applied or 3-6-11 oc purlins, except end verticals, and 2-0-0 oc purlins (2-8-8 max.): 2-5.	
BOT CHORD	Rigid ceiling directly applied or 6-9-14 oc bracing.	
REACTIONS		
(size)	8=0-3-8, 14= Mechanical	
Max Horiz	14=-28 (LC 6)	
Max Uplift	8=-319 (LC 5), 14=-287 (LC 4)	
Max Grav	8=1453 (LC 1), 14=1378 (LC 1)	
FORCES		
(lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-2=-2395/540, 2-3=-3406/808, 3-4=-3399/805, 4-5=-3402/806, 5-6=-2388/538, 6-7=0/27, 1-14=-1325/299, 6-8=-1401/332	
BOT CHORD	13-14=-68/263, 12-13=-461/2173, 11-12=-753/3404, 9-11=-461/2159, 8-9=-79/303	
WEBS	2-13=-21/91, 5-9=-10/97, 1-13=-427/1933, 6-9=-410/1878, 2-12=-327/1417, 5-11=-328/1423, 3-12=-487/225, 3-11=-31/23, 4-11=-478/226	

- NOTES**

 - 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCDF=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) Provide adequate drainage to prevent water ponding.

Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 1-2=-70, 2-5=-70, 5-6=-70, 6-7=-70, 8-14=-20
 Concentrated Loads (lb)
 Vert: 2=-45 (F), 5=-45 (F), 13=-214 (F), 9=-214 (F), 12=-23 (F), 11=-23 (F), 3=-45 (F), 4=-45 (F), 15=-45 (F), 16=-45 (F), 17=-45 (F), 18=-45 (F), 19=-23 (F), 20=-23 (F), 21=-23 (F), 22=-23 (F)

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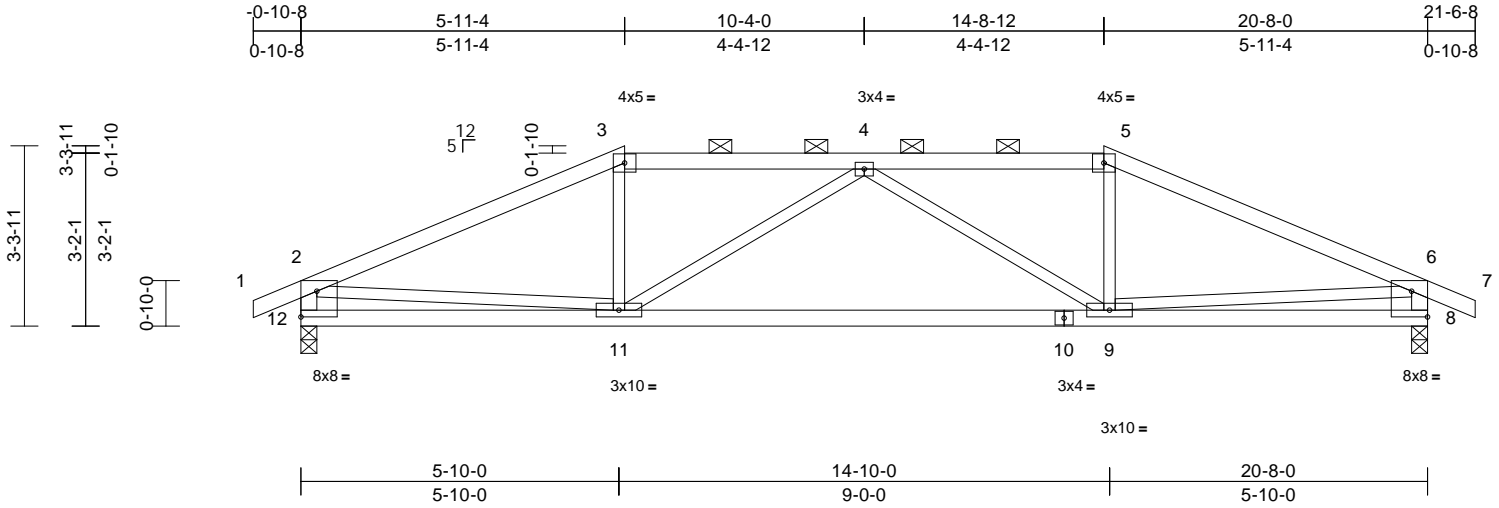
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133395
240615	G2	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:27
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Page: 1



Scale = 1:42.3

Plate Offsets (X, Y): [8:Edge,0-5-11], [12:Edge,0-5-11]

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	0.46	Vert(LL)	-0.15	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.34	9-11	>723	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	9-11	>999	240	Weight: 73 lb	FT = 10%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-3-7 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-15 max.): 3-5.
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=29 (LC 13)
Max Uplift 8=135 (LC 5), 12=135 (LC 4)
Max Grav 8=988 (LC 1), 12=988 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

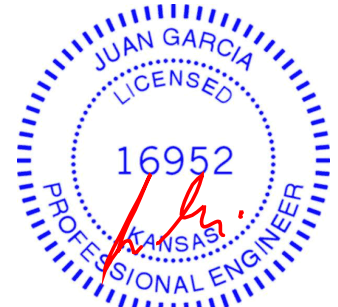
TOP CHORD 1-2=0/27, 2-3=-1533/188, 3-4=-1333/194, 4-5=-1333/194, 5-6=-1533/188, 6-7=0/27, 2-12=-943/157, 6-8=-943/157
BOT CHORD 11-12=-163/422, 9-11=-226/1613, 8-9=-136/422
WEBS 3-11=0/310, 4-11=-427/136, 4-9=-427/136, 5-9=0/310, 2-11=-38/932, 6-9=-38/932

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * 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.
- All bearings are assumed to be SPF No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 12 and 135 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11, 2024

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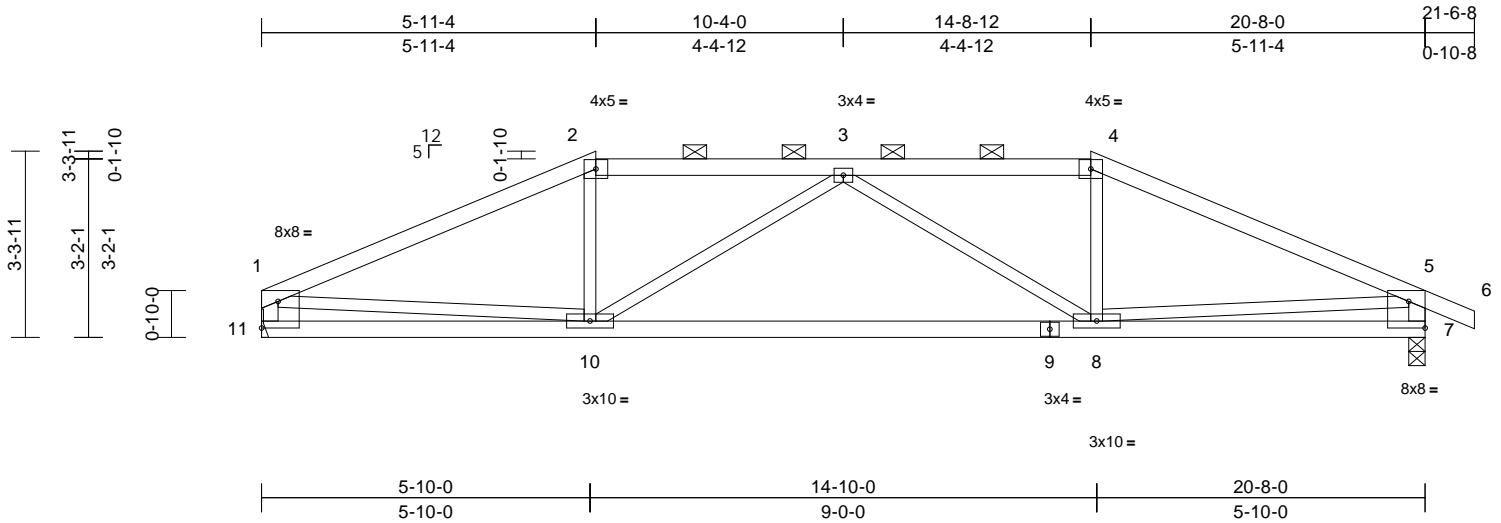
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133396
240615	G2A	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:27

Page: 1

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Scale = 1:40.9

Plate Offsets (X, Y): [1:Edge,0-5-11], [7:Edge,0-5-11]

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)	-0.15	8-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.34	8-10	>720	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	8-10	>999	240	Weight: 72 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 11-1,7-5:2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-9-12 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-12 max.): 2-4.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	7=0-3-8, 11= Mechanical
Max Horiz	11=36 (LC 9)
Max Uplift	7=135 (LC 5), 11=103 (LC 4)
Max Grav	7=990 (LC 1), 11=915 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=1540/189, 2-3=1347/198, 3-4=1337/195, 4-5=1537/188, 5-6=0/27, 1-11=-869/125, 5-7=-944/158
BOT CHORD	10-11=-108/321, 8-10=-226/1618, 7-8=-136/422
WEBS	2-10=0/302, 3-10=423/134, 3-8=-428/136, 4-8=0/310, 1-10=-72/1037, 5-8=-39/936

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * 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.
- All bearings are assumed to be SPF No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 11 and 135 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11,2024

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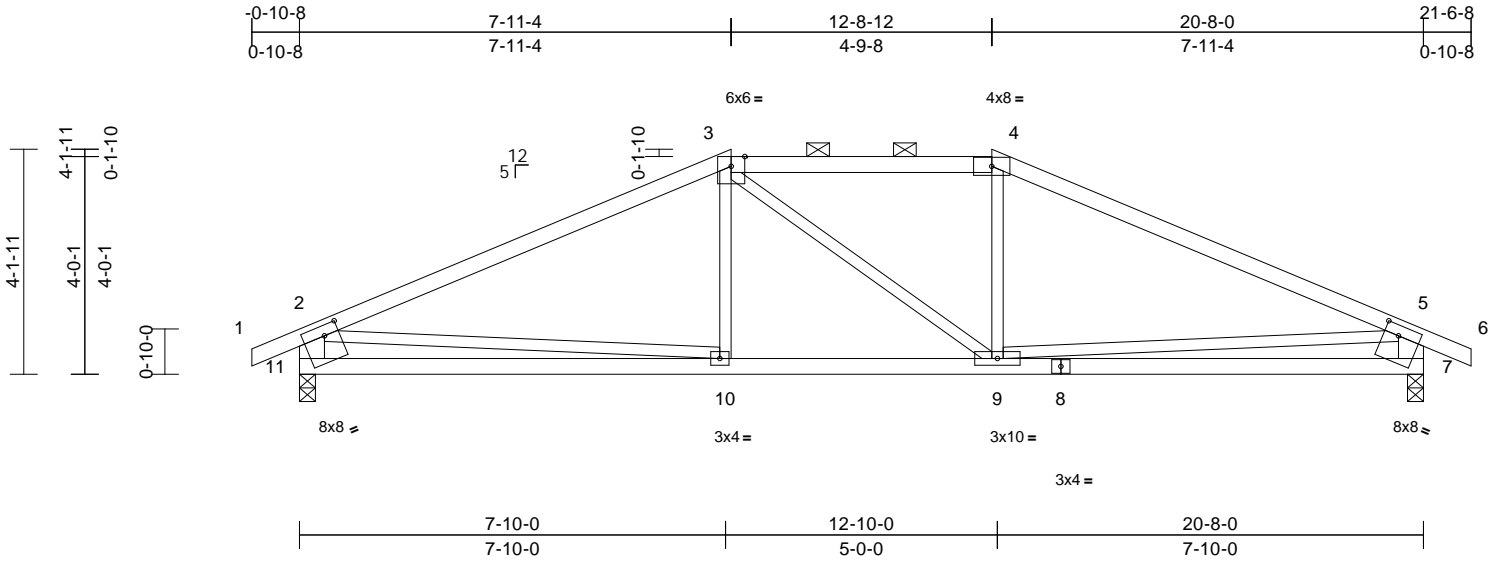
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133397
240615	G3	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:27
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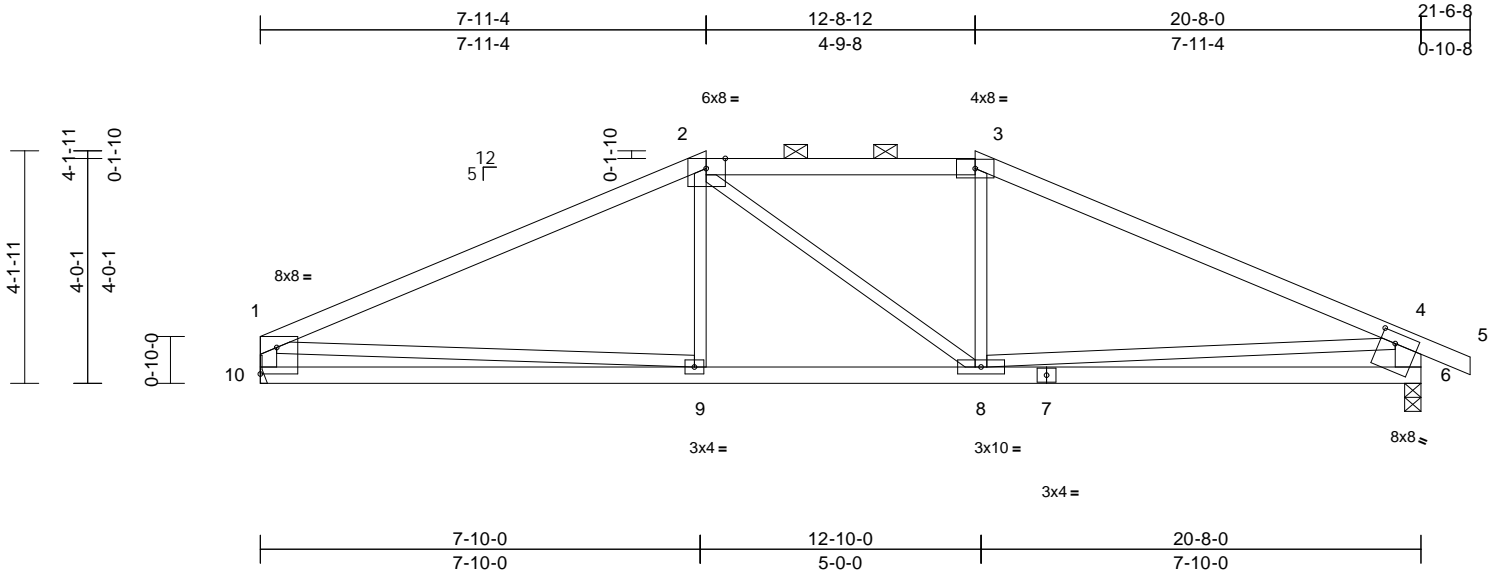


Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133398
240615	G3A	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:27
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Page: 1



Scale = 1:41

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

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	0.81	Vert(LL)	-0.10	9-10	>999	360	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.21	9-10	>999	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.03	6	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	8-9	>999	240	Weight: 74 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-2:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-1:2x4 SPF 2400F 2.0E, 6-4:2x6 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 (5-1-10 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 6=0-3-8, 10= Mechanical
Max Horiz 10=50 (LC 13)
Max Uplift 6=122 (LC 9), 10=97 (LC 8)
Max Grav 6=993 (LC 1), 10=911 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-1423/153, 2-3=-1200/170, 3-4=-1417/153, 4-5=0/30, 1-10=-833/142, 4-6=-917/168
BOT CHORD 9-10=-164/550, 8-9=-66/1216, 6-8=-237/734
WEBS 2-9=0/221, 2-8=-170/140, 3-8=0/225, 1-9=-19/681, 4-8=0/627

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * 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.
- All bearings are assumed to be SPF No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 97 lb uplift at joint 10 and 122 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11, 2024

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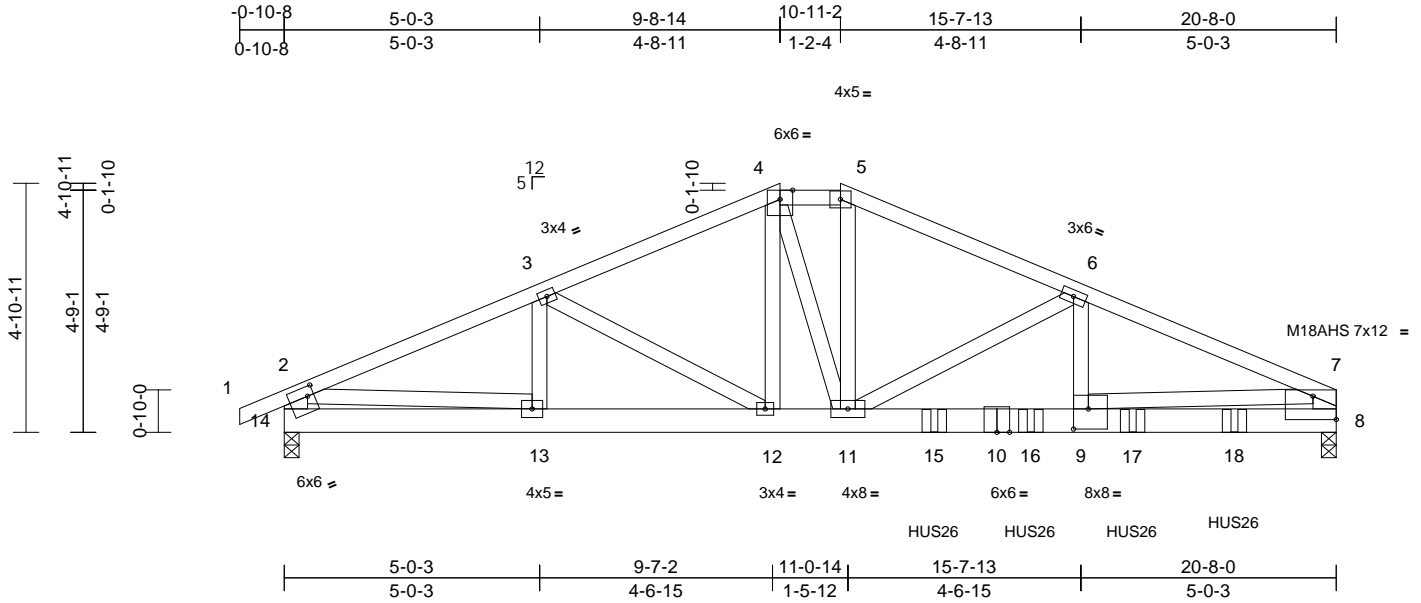
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	
240615	G4	Hip Girder	1	2	Job Reference (optional)	I64133399

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 E Jan 4 2024 Print: 8.730 E Jan 4 2024 MiTek Industries, Inc. Mon Mar 11 10:00:13
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Page: 1



Scale = 1:45.3

Plate Offsets (X, Y): [7:Edge,0-5-8], [9:0-3-8,0-4-12], [14:0-1-8,0-2-4]

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	0.34	Vert(LL)	-0.09	9-11	>999	360	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.16	9-11	>999	240	M18AHS 142/136
BCLL	0.0*	Rep Stress Incr	NO	WB	0.46	Horz(CT)	0.03	8	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	9-11	>999	240	Weight: 210 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x6 SPF No.2
WEBS	2x4 SPF No.2 *Except* 14-2,8-7:2x6 SP 2400F 2.0E

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-9-15 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	(lb/size) 8=4066/0-3-8, 14=1869/0-3-8 Max Horiz 14=66 (LC 12) Max Uplift 8=633 (LC 9), 14=264 (LC 8)
-----------	--

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/30, 2-3=-3262/431, 3-4=-3228/436, 4-5=-3310/482, 5-6=-3672/496, 6-7=-6205/876, 2-14=-1747/281, 7-8=-2964/444

BOT CHORD	13-14=-175/709, 12-13=-405/2943, 11-12=-330/2941, 8-18=-768/5664, 10-15=-768/5664, 10-16=-768/5664, 9-16=-768/5664, 9-17=-343/1921, 17-18=-343/1921, 8-18=-343/1921
WEBS	3-13=-271/101, 3-12=-129/297, 4-12=-345/108, 4-11=-230/1423, 5-11=-162/1158, 6-11=-2690/496, 6-9=-247/2031, 2-13=-231/2248, 7-9=-428/3767

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 3 rows staggered at 0-8-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.

- 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.
- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 264 lb uplift at joint 14 and 633 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 12-9-4 from the left end to 18-8-0 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (lb/ft)

Vert: 1-2=-70, 2-4=-70, 4-5=-70, 5-7=-70, 8-14=-20

Concentrated Loads (lb)

Vert: 15=-895 (B), 16=-891 (B), 17=-895 (B), 18=-1358 (B)



March 11, 2024

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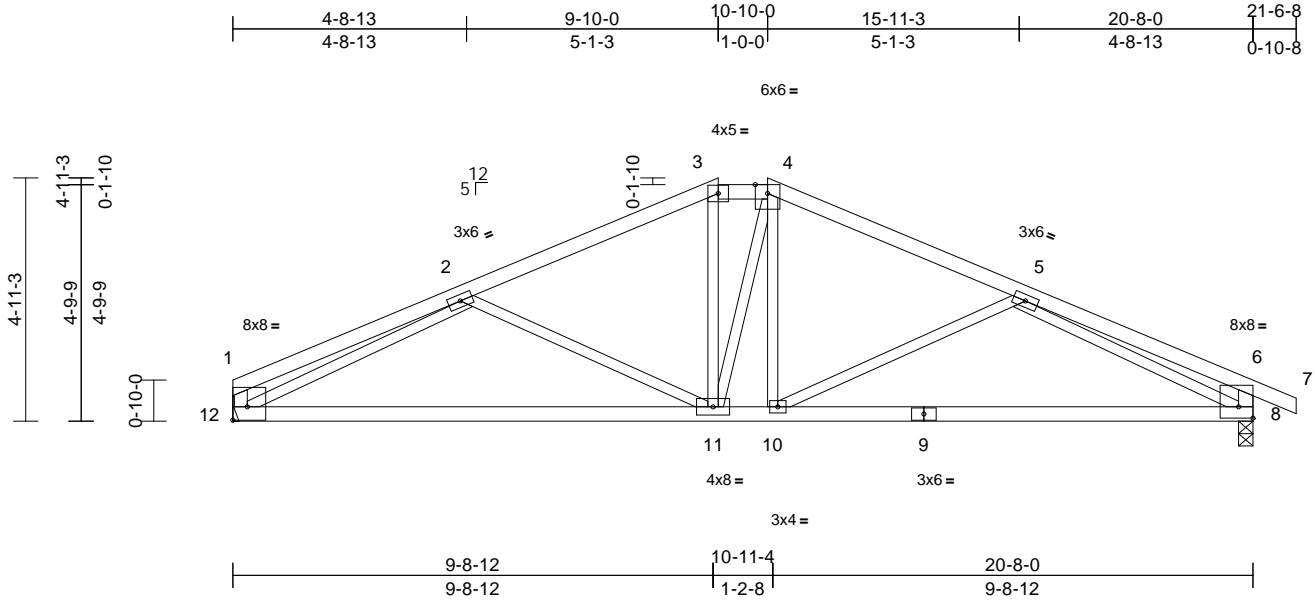
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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133400
240615	G5	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:27
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Page: 1



Scale = 1:46.7									
Plate Offsets (X, Y): [1:Edge,0-3-4], [6:Edge,0-2-12]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.20 8-10	>999	360
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.41 8-10	>589	240
BCLL	0.0*	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.04 8	n/a	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03 11	>999	240
							Weight: 79 lb	FT = 10%	

LUMBER		
TOP CHORD	2x4 SPF No.2	
BOT CHORD	2x4 SPF No.2	
WEBS	2x3 SPF No.2 *Except* 12-1,8-6:2x4 SPF No.2	
BRACING		
TOP CHORD	Structural wood sheathing directly applied or 4-8-3 oc purlins, except end verticals, and 2-0-0 oc purlins (5-6-0 max.): 3-4.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	
REACTIONS		(size) 8=0-3-8, 12= Mechanical
		Max Horiz 12=65 (LC 9)
		Max Uplift 8=137 (LC 9), 12=113 (LC 8)
		Max Grav 8=990 (LC 1), 12=915 (LC 1)
FORCES		(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-377/12, 2-3=-1230/125, 3-4=-1066/147, 4-5=-1227/126, 5-6=-420/37, 6-7=0/27, 1-12=-263/53, 6-8=-365/91	
BOT CHORD	11-12=-223/1317, 10-11=-19/1064, 8-10=-161/1303	
WEBS	2-11=-312/208, 3-11=-33/283, 4-11=-158/171, 4-10=-14/241, 5-10=-299/204, 2-12=-1163/232, 5-8=-1107/203	

- 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) 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.
- 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 113 lb uplift at joint 12 and 137 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.
- 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



March 11,2024

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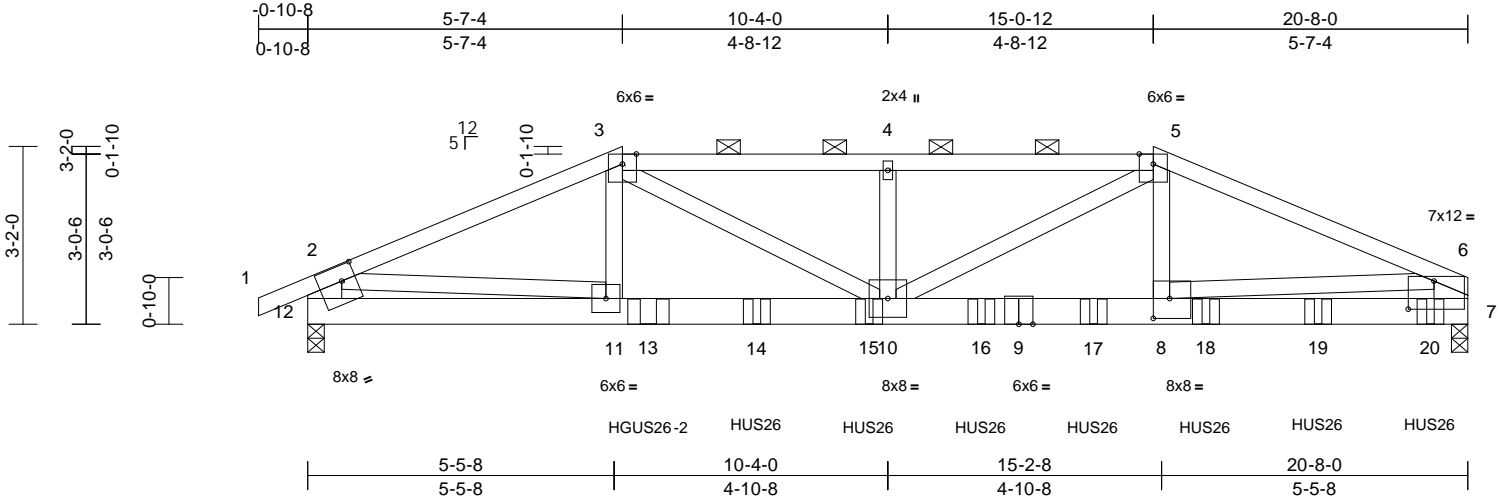
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133401
240615	G6	Hip Girder	1	3	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:27

Page: 1

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Scale = 1:41

Plate Offsets (X, Y): [6:0-5-8,0-6-0], [8:0-3-8,0-4-4], [12:0-3-0,0-3-4]

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	0.82	Vert(LL)	-0.18	10-11	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.32	10-11	>747	240	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.04	7	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	10-11	>999	240	Weight: 307 lb FT = 10%

LUMBER	
TOP CHORD	2x4 SPF No.2
BOT CHORD	2x6 SP 2400F 2.0E *Except* 9-7:2x6 SPF No.2
WEBS	2x4 SPF No.2 *Except* 12-2,7-6:2x8 SP 2400F 2.0E
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 5-8-3 oc purlins, except end verticals, and 2-0-0 oc purlins (5-0-8 max.): 3-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS (size) 7=0-3-8, (req. 0-4-0), 12=0-3-8	
Max Horiz 12=36 (LC 8)	
Max Uplift 7=542 (LC 5), 12=787 (LC 4)	
Max Grav 7=7662 (LC 1), 12=5556 (LC 1)	
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/32, 2-3=-11199/1599, 3-4=-14106/1693, 4-5=-14106/1693, 5-6=-11777/1016, 2-12=-5429/820, 6-7=-5493/504
BOT CHORD	11-12=-337/2075, 10-11=-1419/10188, 8-10=-915/10715, 7-8=-217/2893
WEBS	3-11=-424/1844, 3-10=-255/4595, 4-10=-706/192, 5-10=-844/3995, 5-8=0/2511, 2-11=-1164/8270, 6-8=-709/7995

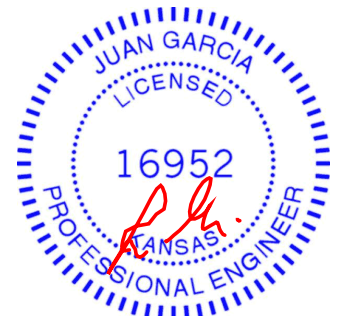
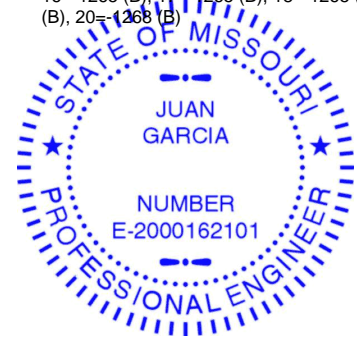
NOTES

- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-6-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 3 rows staggered at 0-4-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.

- 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.
- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- WARNING: Required bearing size at joint(s) 7 greater than input bearing size.
- All bearings are assumed to be SPF No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 787 lb uplift at joint 12 and 542 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie HGUS26-2 (20-10d Girder, 8-10d Truss) or equivalent at 6-0-13 from the left end to connect truss(es) to back face of bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 8-0-0 from the left end to 20-0-0 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 7-12=-20
Concentrated Loads (lb)
Vert: 13=-2455 (B), 14=-1274 (B), 15=-1274 (B), 16=-1265 (B), 17=-1265 (B), 18=-1265 (B), 19=-1265 (B), 20=-1265 (B)



March 11,2024

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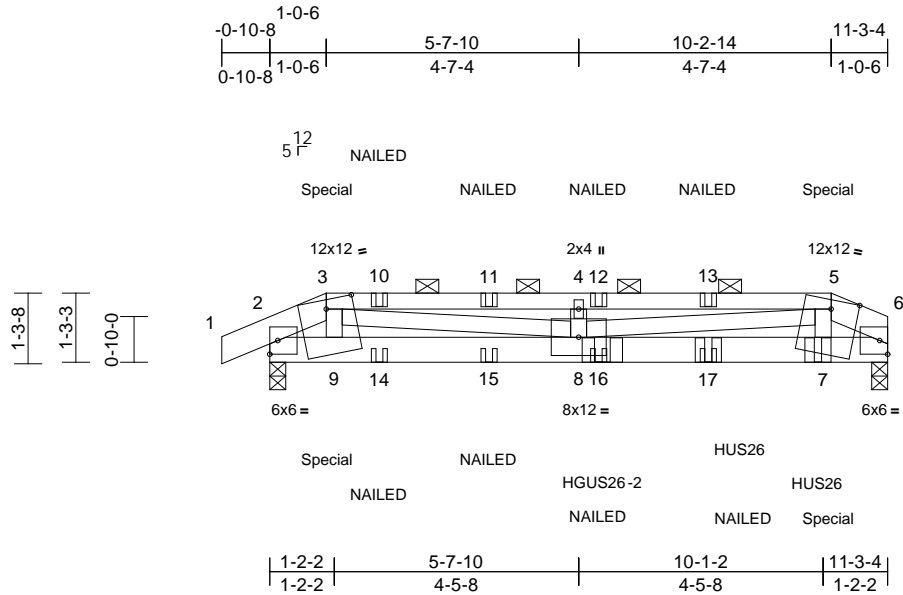
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	164133402
240615	H2	Hip Girder	1	2	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:42
Plate Offsets (X, Y): [3:0-6-0,0-2-0], [5:0-6-0,0-2-0]

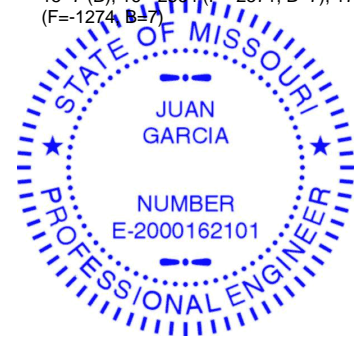
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.17	7-8	>774	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.30	7-8	>435	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.78	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	7-8	>956	240	Weight: 109 lb	FT = 10%

LUMBER		
TOP CHORD	2x6 SPF No.2 *Except* 3-5:2x4 SPF 2100F 1.8E	
BOT CHORD	2x6 SP 2400F 2.0E	
WEBS	2x4 SPF No.2	
BRACING		
TOP CHORD	Structural wood sheathing directly applied or 5-6-9 oc purlins, except 2-0-0 oc purlins (4-7-12 max.): 3-5.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	
REACTIONS		
(size)	2=0-3-8, 6=0-3-8	
Max Horiz	2=16 (LC 8)	
Max Uplift	2=-450 (LC 4), 6=-652 (LC 5)	
Max Grav	2=2229 (LC 1), 6=3907 (LC 22)	
FORCES		
(lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-2=0/1, 2-3=-4556/891, 3-4=-9864/1896, 4-5=-9864/1896, 5-6=-7849/1366	
BOT CHORD	2-9=-648/3349, 8-9=-693/3606, 7-8=-1093/6372, 6-7=-979/5639	
WEBS	3-9=-277/1584, 3-8=-1203/6377, 4-8=-109/159, 5-8=-791/3562, 5-7=-703/4520	

- NOTES**
- 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 0-4-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - 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.
 - Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 652 lb uplift at joint 6 and 450 lb uplift at joint 2.
- 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie HGUS26-2 (20-10d Girder, 8-10d Truss) or equivalent at 6-0-13 from the left end to connect truss(es) to front face of bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 8-0-0 from the left end to 10-0-0 to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 107 lb down and 123 lb up at 1-0-6, and 138 lb down and 160 lb up at 10-2-14 on top chord, and 12 lb down and 17 lb up at 1-0-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

- LOAD CASE(S)** Standard
- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-5=-70, 5-6=-70, 2-6=-20
Concentrated Loads (lb)
Vert: 9=7 (B), 7=-1264 (F=-1278, B=14), 14=7 (B), 15=7 (B), 16=-2564 (F=-2571, B=7), 17=-1267 (F=-1274, B=7)



March 11, 2024

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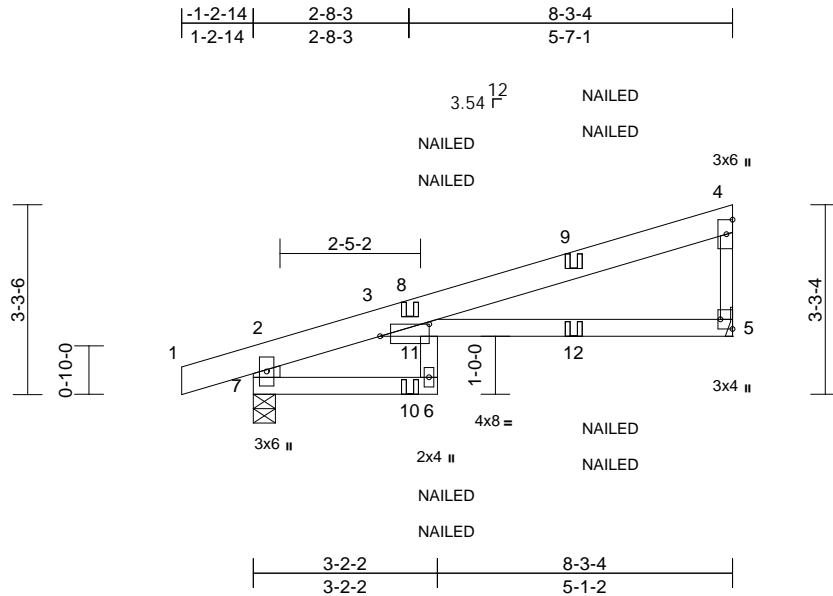
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133403
240615	J3	Diagonal Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:28
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Page: 1



Scale = 1:39.8

Plate Offsets (X, Y): [3:0-10-3,0-2-8], [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	0.67	Vert(LL)	-0.13	6	>721	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.25	6	>375	240	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.02	Horz(CT)	0.10	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.13	6	>728	240	Weight: 31 lb FT = 10%

LUMBER

TOP CHORD	2x6 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x6 SPF No.2 *Except* 4-5:2x3 SPF No.2, 6-3:2x4 SPF No.2

BRACING

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

REACTIONS

(size)	5= Mechanical, 7=0-4-9
Max Horiz	7=115 (LC 5)
Max Uplift	5=-71 (LC 8), 7=-115 (LC 4)
Max Grav	5=403 (LC 1), 7=505 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	2-7=-481/136, 1-2=0/29, 2-3=-137/19, 3-4=-156/19, 4-5=-291/107
BOT CHORD	6-7=-47/0, 3-5=-19/91
WEBS	3-6=0/73

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 115 lb uplift at joint 7 and 71 lb uplift at joint 5.

- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 8) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
 - 9) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-4=-70, 6-7=-20, 3-5=-20
Concentrated Loads (lb)
Vert: 9=-18 (F=-9, B=-9), 10=4 (F=2, B=2), 12=-59 (F=-29, B=-29)



March 11, 2024

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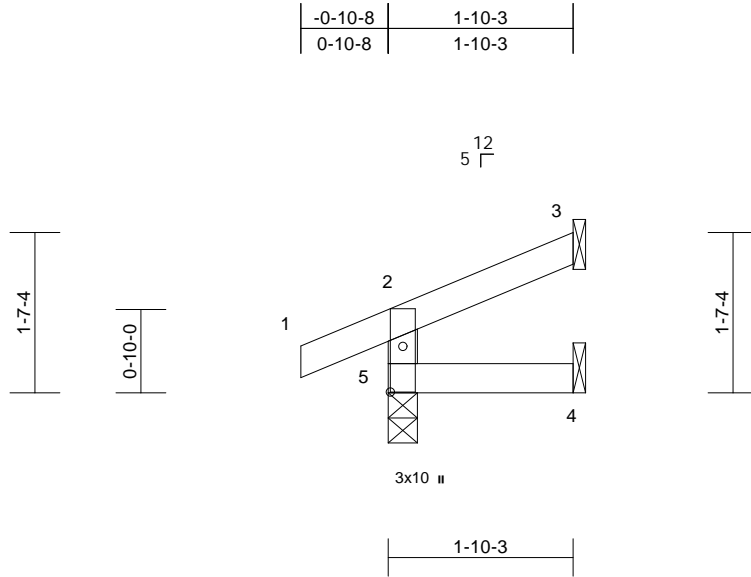
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133404
240615	J4	Jack-Open	15	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:28
ID:jb4Q2qcqFnefobcSC6TCAzyQYV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:23

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

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	0.07	Vert(LL)	0.00	4-5	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

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

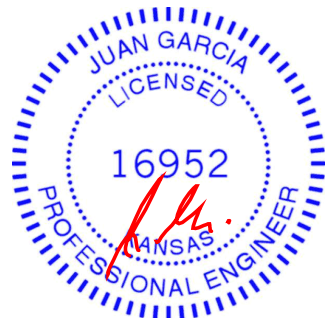
REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=41 (LC 5)
Max Uplift 3=-28 (LC 8), 5=-32 (LC 4)
Max Grav 3=41 (LC 1), 4=30 (LC 3), 5=169 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-148/46, 1-2=0/27, 2-3=-31/11
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5 and 28 lb uplift at joint 3.



March 11, 2024

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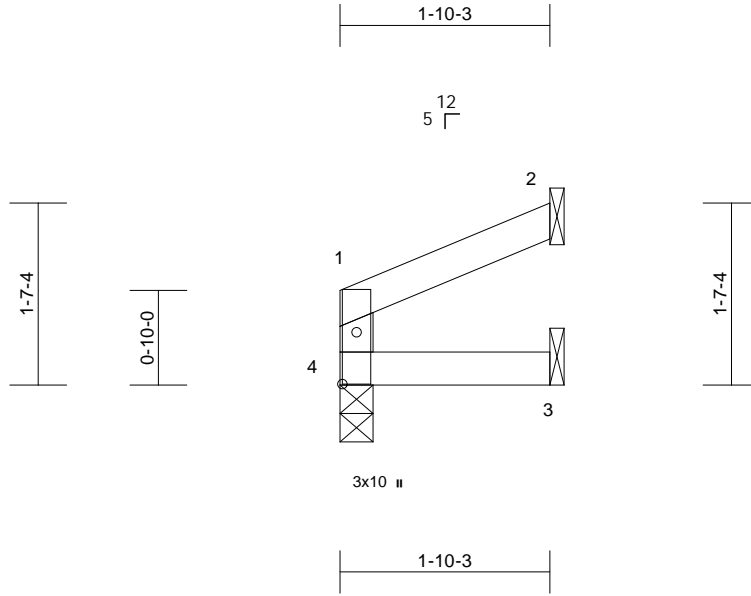
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133405
240615	J4A	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:28
ID:AEDpsViFuU?Yx6KZCOJl4SzdK6c-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?i

Page: 1



Scale = 1:20.3

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

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	0.04	Vert(LL)	0.00	3-4	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	3-4	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	3-4	>999	240	Weight: 5 lb FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

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

REACTIONS (size) 2= Mechanical, 3= Mechanical, 4=0-3-8
Max Horiz 4=32 (LC 5)
Max Uplift 2=-31 (LC 8)
Max Grav 2=55 (LC 1), 3=33 (LC 3), 4=76 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-4=-63/18, 1-2=-28/17
BOT CHORD 3-4=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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 2.



March 11,2024

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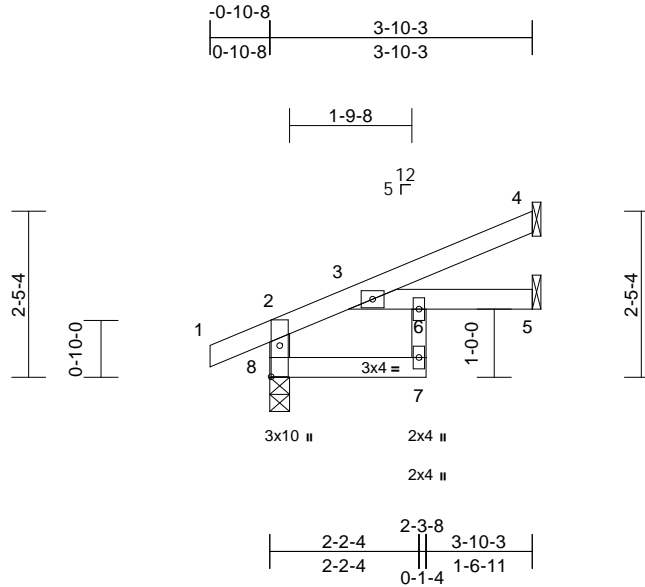
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133406
240615	J5	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:28
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Page: 1



Scale = 1:33.8

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

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	0.15	Vert(LL)	-0.01	3-6	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	3-6	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.02	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	3-6	>999	240	Weight: 13 lb FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-10-3 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=68 (LC 8)
Max Uplift 4=-48 (LC 8), 8=-26 (LC 8)
Max Grav 4=105 (LC 1), 5=76 (LC 3), 8=257 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-244/51, 1-2=0/27, 2-3=-72/0, 3-4=-33/33
BOT CHORD 7-8=0/0, 3-6=0/0, 5-6=0/0
WEBS 6-7=0/45

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 8 and 48 lb uplift at joint 4.



March 11, 2024

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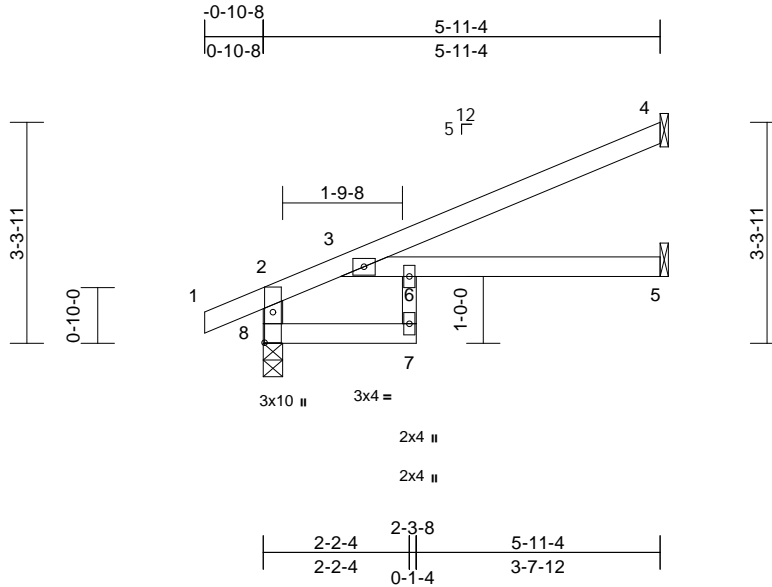
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133407
240615	J6	Jack-Open	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:28

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Scale = 1:34.5

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

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	0.46	Vert(LL)	-0.07	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.14	5-6	>500	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.08	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	5-6	>854	240	Weight: 18 lb	FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-11-4 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=104 (LC 8)
Max Uplift	4=-80 (LC 8), 8=-34 (LC 8)
Max Grav	4=172 (LC 1), 5=111 (LC 3), 8=351 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	2-8=-350/68, 1-2=0/27, 2-3=-114/0, 3-4=-62/54
BOT CHORD	7-8=0/0, 3-6=0/0, 5-6=0/0
WEBS	6-7=-10/51

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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 8 and 80 lb uplift at joint 4.



March 11,2024

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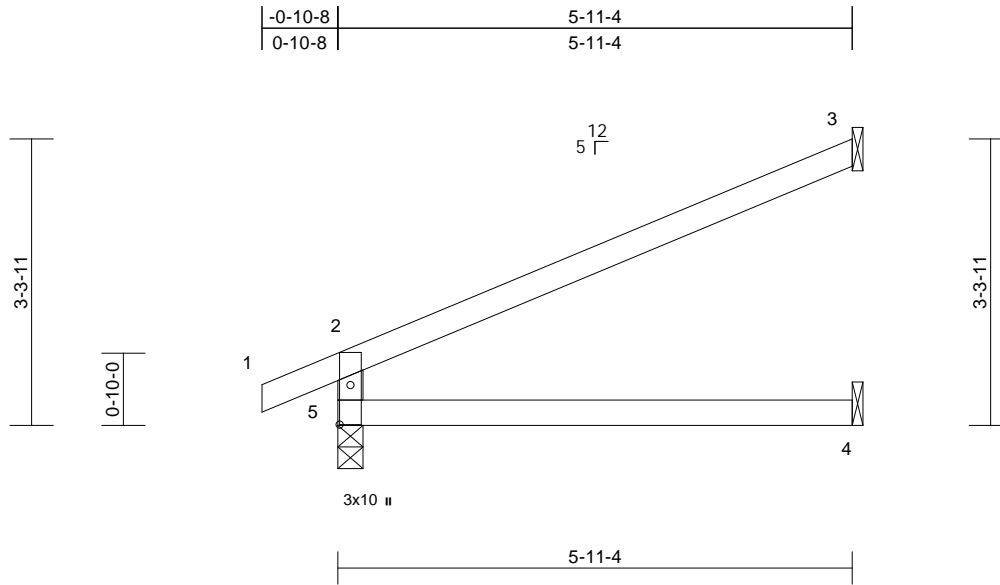
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133408
240615	J7	Jack-Open	18	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:26.6

Plate Offsets (X, Y): [5:0-5-8, 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	0.52	Vert(LL)	-0.05	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.11	4-5	>613	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.04	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.05	4-5	>999	240	Weight: 16 lb	FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 5'-11-4" oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10'-0-0" oc bracing.

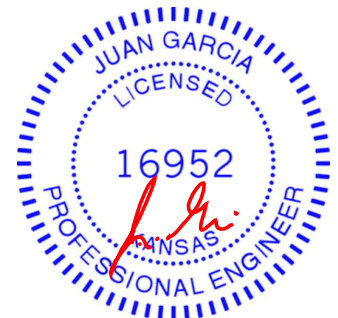
REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=104 (LC 8)
Max Uplift 3=92 (LC 8), 5=43 (LC 8)
Max Grav 3=180 (LC 1), 4=108 (LC 3), 5=336 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-292/97, 1-2=0/27, 2-3=-95/54
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00" tall by 2'-00"-00" wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 5 and 92 lb uplift at joint 3.



March 11, 2024

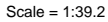
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:28 Page: 1
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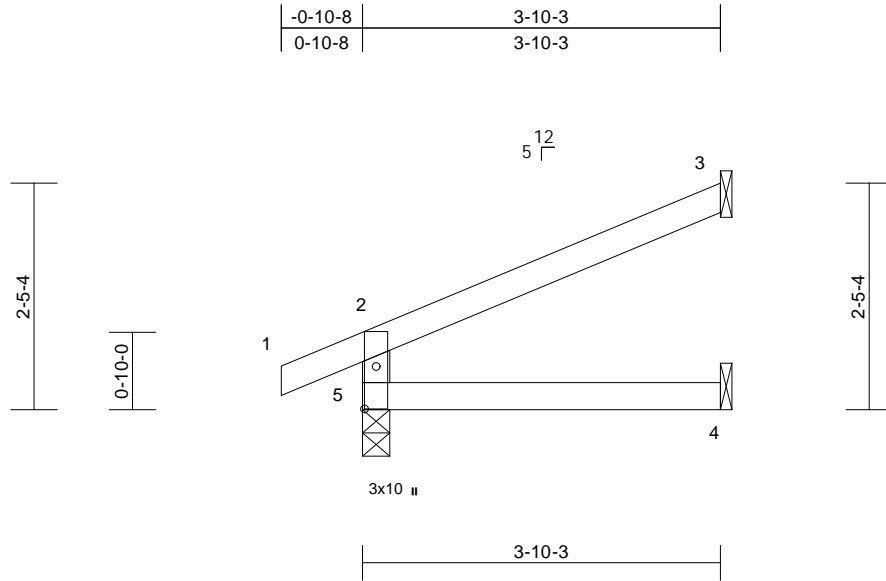
March 11, 2024

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133410
240615	J9	Jack-Open	2	1	Job Reference (optional)	

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Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:28
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Page: 1



Scale = 1:24.8

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

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	0.19	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 11 lb	FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-10-3 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=68 (LC 8)
Max Uplift 3=60 (LC 8), 5=33 (LC 8)
Max Grav 3=112 (LC 1), 4=68 (LC 3), 5=245 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-215/69, 1-2=0/27, 2-3=-61/33
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 5 and 60 lb uplift at joint 3.



March 11, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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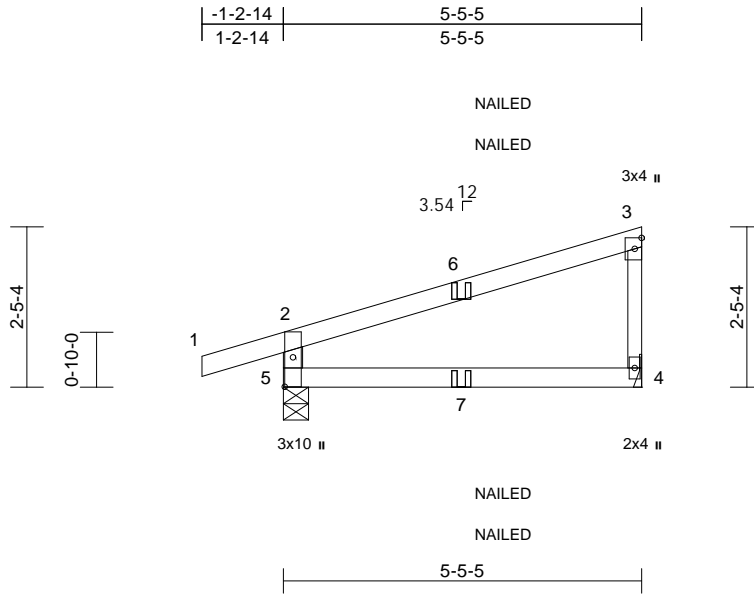
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133411
240615	J11	Diagonal Hip Girder	6	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:35

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

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	0.38	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 16 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS

(size) 4= Mechanical, 5=0-4-9
Max Horiz 5=98 (LC 5)
Max Uplift 4=48 (LC 8), 5=102 (LC 4)
Max Grav 4=219 (LC 1), 5=342 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-302/140, 1-2=0/27, 2-3=-126/14,
3-4=-158/71
BOT CHORD 4-5=-26/49

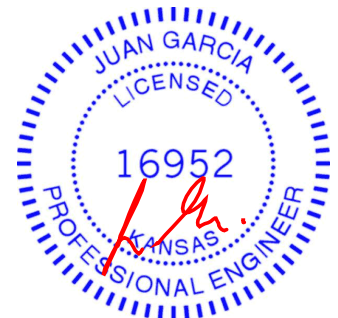
NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 102 lb uplift at joint 5 and 48 lb uplift at joint 4.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 8) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 9) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=4 (F=2, B=2)



March 11, 2024

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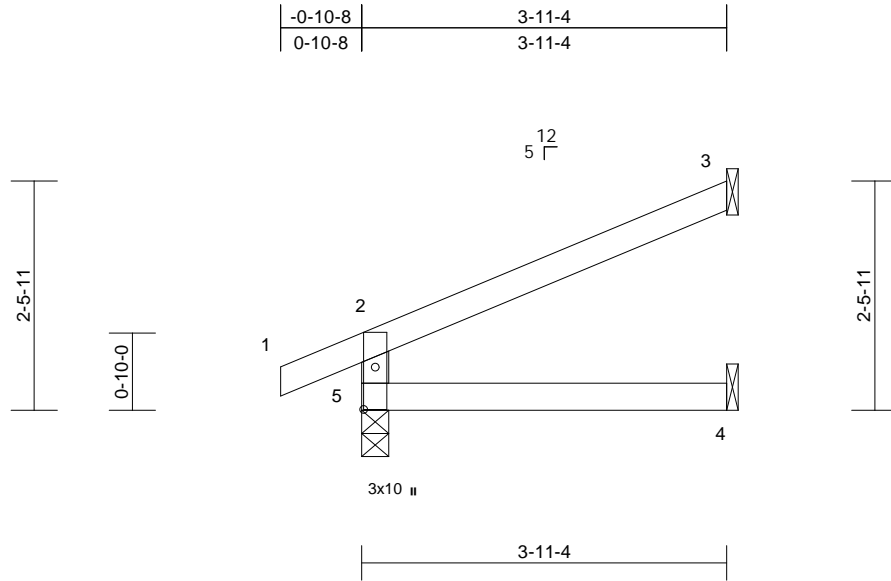
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133412
240615	J12	Jack-Open	24	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:24.9

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

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	0.20	Vert(LL)	-0.01	4-5	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.02	4-5	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 11 lb FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

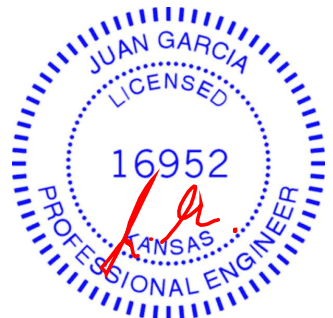
REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=70 (LC 8)
Max Uplift 3=61 (LC 8), 5=34 (LC 8)
Max Grav 3=115 (LC 1), 4=70 (LC 3), 5=249 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-218/70, 1-2=0/27, 2-3=-63/34
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 5 and 61 lb uplift at joint 3.



March 11, 2024

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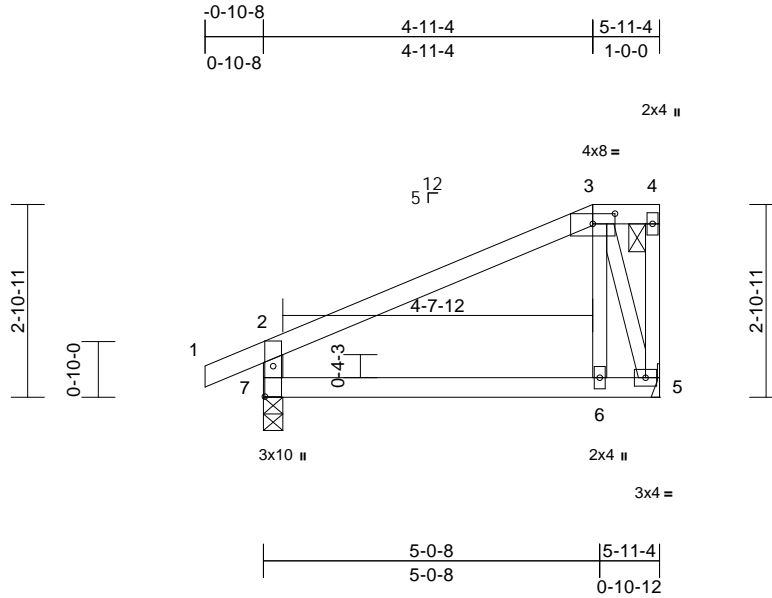
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133413
240615	J13	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:29
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Page: 1



Scale = 1:34.5

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

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	0.25	Vert(LL)	-0.01	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.03	6-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.01	6-7	>999	240	Weight: 21 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 5-11-4 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=119 (LC 5)
Max Uplift 5=-46 (LC 5), 7=-60 (LC 8)
Max Grav 5=250 (LC 1), 7=334 (LC 1)

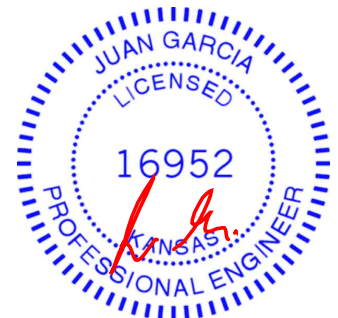
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-295/96, 1-2=0/27, 2-3=-194/27, 3-4=-37/28, 4-5=-39/47
BOT CHORD 6-7=-44/117, 5-6=-42/122
WEBS 3-6=0/225, 3-5=-368/91

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) Provide adequate drainage to prevent water ponding.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) All bearings are assumed to be SPF No.2 .
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 7 and 46 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.
- 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



March 11, 2024

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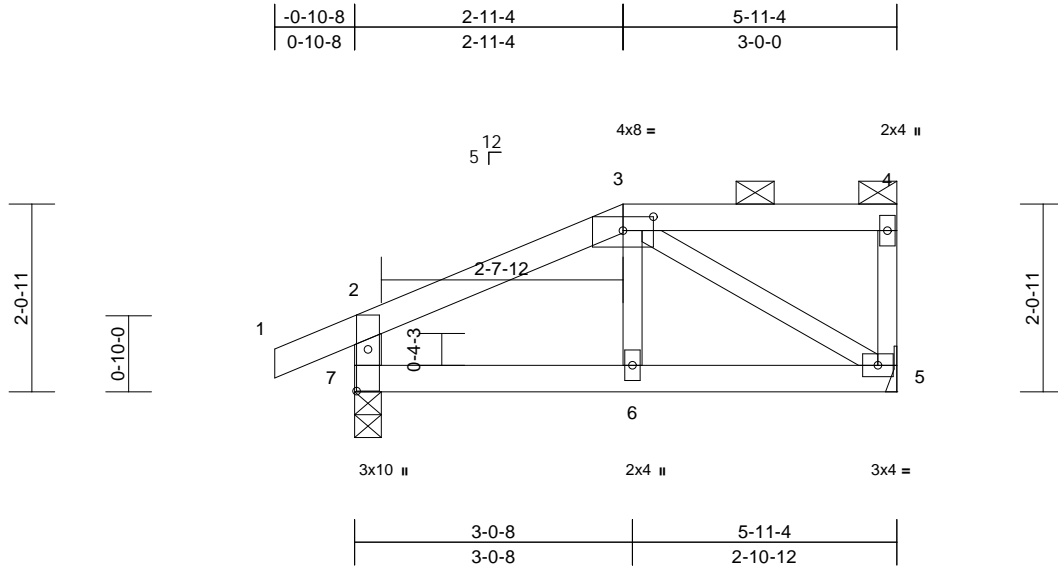
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133414
240615	J14	Jack-Closed	1	1	Job Reference (optional)	

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Page: 1



Scale = 1:25.2

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

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	0.18	Vert(LL)	-0.01	5-6	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.01	5-6	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.00	6	>999	240	Weight: 20 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 5-11-4 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=83 (LC 5)
Max Uplift 5=-50 (LC 5), 7=-56 (LC 4)
Max Grav 5=250 (LC 1), 7=334 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-7=-284/74, 1-2=0/27, 2-3=-264/36,
3-4=-29/22, 4-5=-103/41

BOT CHORD 6-7=-59/197, 5-6=-57/198

WEBS 3-6=0/108, 3-5=-215/46

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) Provide adequate drainage to prevent water ponding.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- 5) All bearings are assumed to be SPF No.2 .
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint 7 and 50 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.
- 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



March 11, 2024

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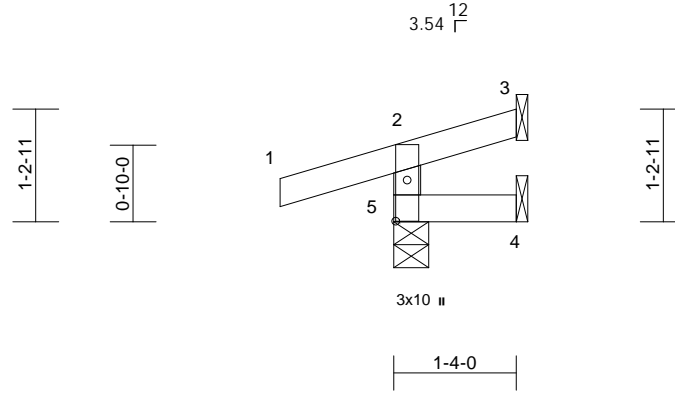
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133415
240615	J15	Diagonal Hip Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1

-1-2-14	1-4-0
1-2-14	1-4-0



Scale = 1:25.1

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

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	0.14	Vert(LL)	0.00	4-5	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	4-5	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 5 lb FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-4-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-4-9
Max Horiz 5=31 (LC 5)
Max Uplift 3=-8 (LC 8), 4=-3 (LC 1), 5=-89 (LC 4)
Max Grav 3=3 (LC 19), 4=18 (LC 3), 5=207 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-180/94, 1-2=0/27, 2-3=-23/0
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 5, 3 lb uplift at joint 4 and 8 lb uplift at joint 3.



March 11, 2024

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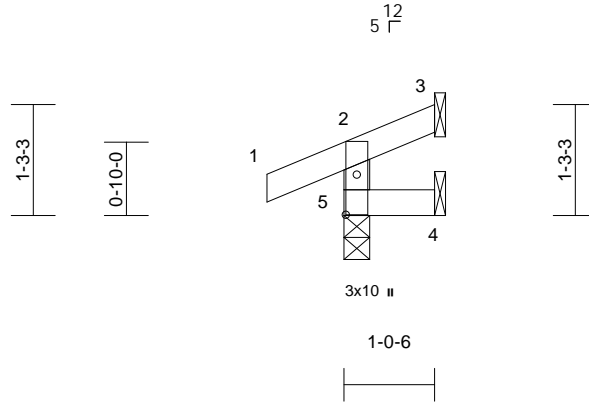
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133416
240615	J16	Jack-Open	7	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:29
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Page: 1

-0-10-8	1-0-6
0-10-8	1-0-6



Scale = 1:26.2

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

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	0.07	Vert(LL)	0.00	5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	5	>999	240	Weight: 4 lb	FT = 10%

LUMBER

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

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-0-6 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=32 (LC 5)
Max Uplift 3=-10 (LC 8), 4=-3 (LC 5), 5=-38 (LC 4)
Max Grav 3=3 (LC 19), 4=14 (LC 3), 5=153 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-134/46, 1-2=0/27, 2-3=-24/1
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) All bearings are assumed to be SPF No.2.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 5, 3 lb uplift at joint 4 and 10 lb uplift at joint 3.



March 11, 2024

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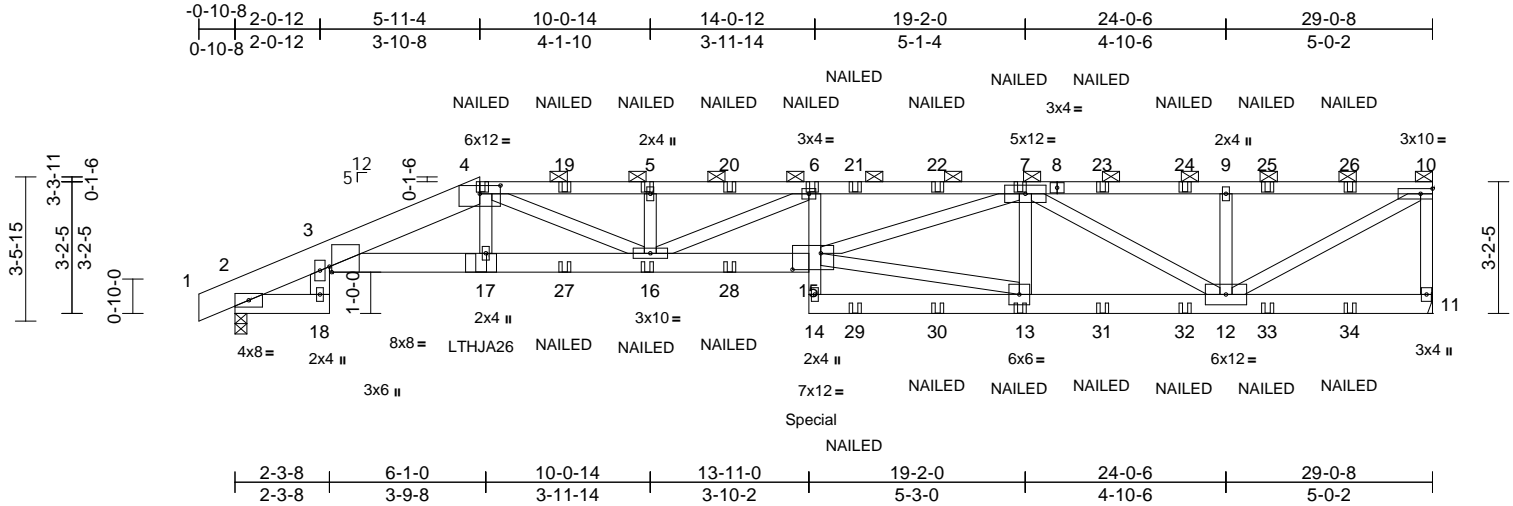
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133417
240615	K1	Half Hip Girder	1	2	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:29

Page: 1

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Scale = 1:55.9

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

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	0.88	Vert(LL)	-0.39	15	>876	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.71	15	>483	240	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.25	11	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.34	15	>999	240	Weight: 312 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 1-4:2x8 SP 2400F 2.0E
BOT CHORD	2x6 SPF No.2 *Except* 3-15:2x6 SP 2400F 2.0E
WEBS	2x4 SPF No.2 *Except* 18-3:2x6 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 (2-11-4 max.): 4-10.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	2=0-3-8, 11= Mechanical
Max Horiz	2=125 (LC 5)
Max Uplift	2=461 (LC 4), 11=519 (LC 5)
Max Grav	2=2516 (LC 1), 11=2475 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/6, 2-3=-1334/235, 3-4=-7584/1465, 4-5=-9202/1819, 5-6=-9200/1819, 6-7=-10184/2105, 7-9=-3734/805, 9-10=-3734/805, 10-11=-2357/544
BOT CHORD	2-18=0/0, 3-17=-1480/7267, 16-17=-1484/7338, 15-16=-2204/10479, 13-14=-108/554, 12-13=-1271/6020, 11-12=-44/71
WEBS	3-18=-30/210, 14-15=0/216, 6-15=0/193, 4-17=-53/812, 6-16=-1406/380, 5-16=-377/196, 4-16=-428/2028, 10-12=-880/4235, 7-13=-788/349, 13-15=-1184/5564, 7-12=-2642/537, 7-15=-933/4406, 9-12=-623/308

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
- 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.
- 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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 519 lb uplift at joint 11 and 461 lb uplift at joint 2.
- 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie LTHJA26 (LTHJA26 on 2 ply, Left Hand Hip) or equivalent at 5-11-10 from the left end to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 68 lb down at 14-0-12 on bottom chord. The design selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-10=-70, 2-9=20, 3-15=-20, 11-14=-20
Concentrated Loads (lb)
Vert: 4=-102 (F), 6=-110 (F), 7=-140 (F), 5=-102 (F), 16=-65 (F), 13=-51 (F), 7-11=110 (F), 15=-51 (F), 19=-102 (F), 20=-102 (F), 21=-110 (F), 22=-110 (F), 23=-110 (F), 24=-110 (F), 25=-110 (F), 26=-110 (F), 27=-65 (F), 28=-65 (F), 29=-51 (F), 30=-51 (F), 31=-51 (F), 32=-51 (F), 33=-51 (F), 34=-51 (F)



March 11, 2024

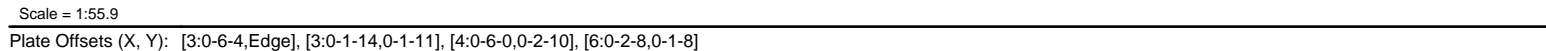
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of the design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcscomponents.com)

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LUMBER		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.
TOP CHORD	2x4 SPF No.2 *Except* 4-1:2x8 SP 2400F 2.0E	6) All bearings are assumed to be SPF No.2 .
BOT CHORD	2x4 SPF No.2 *Except* 5-11:2x3 SPF No.2	7) Refer to girder(s) for truss to truss connections.
WEBS	2x3 SPF No.2 *Except* 14-3:2x6 SPF No.2	8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 195 lb uplift at joint 2 and 214 lb uplift at joint 9.
BRACING		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.
TOP CHORD	Structural wood sheathing directly applied or 5-1-3 oc purlins, except end verticals, and 2-0-0 oc purlins (2-4-15 max.): 4-7.	10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
BOT CHORD	Rigid ceiling directly applied or 8-4-7 oc bracing.	
REACTIONS		
(size)	2=0-3-8, 9= Mechanical	
Max Horiz	2=134 (LC 5)	
Max Uplift	2=-195 (LC 4), 9=-214 (LC 5)	
Max Grav	2=1368 (LC 1), 9=1294 (LC 1)	
LOAD CASE(S)		Standard

FORCES	(lb) - Maximum Compression/Maximum Tension	LOAD CASE(S)	Standard
TOP CHORD	4-5=-3486/628, 5-6=-3451/625, 6-7=-2184/413, 7-8=-71/36, 8-9=-42/27, 1-2=0/0, 2-3=-693/86, 3-4=-2987/451		
BOT CHORD	2-14=0/0, 3-13=-498/2825, 12-13=-493/2826, 11-12=0/100, 5-12=-426/181, 10-11=-33/167, 9-10=-153/600		
WEBS	3-14=0/53, 4-13=0/228, 4-12=-191/866, 6-12=-272/1377, 6-10=-1051/312, 7-10=-289/1829, 7-9=-1333/311, 10-12=-376/2038		

- 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) 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.



March 11, 2024

 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

WARNING – Verify design parameters and READ NOTES ON THIS and INCLUDED MITER KNOT REFERENCE ASSEMBLY PHOTO. 1/2/2023 BCI ONE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcscomponents.com)

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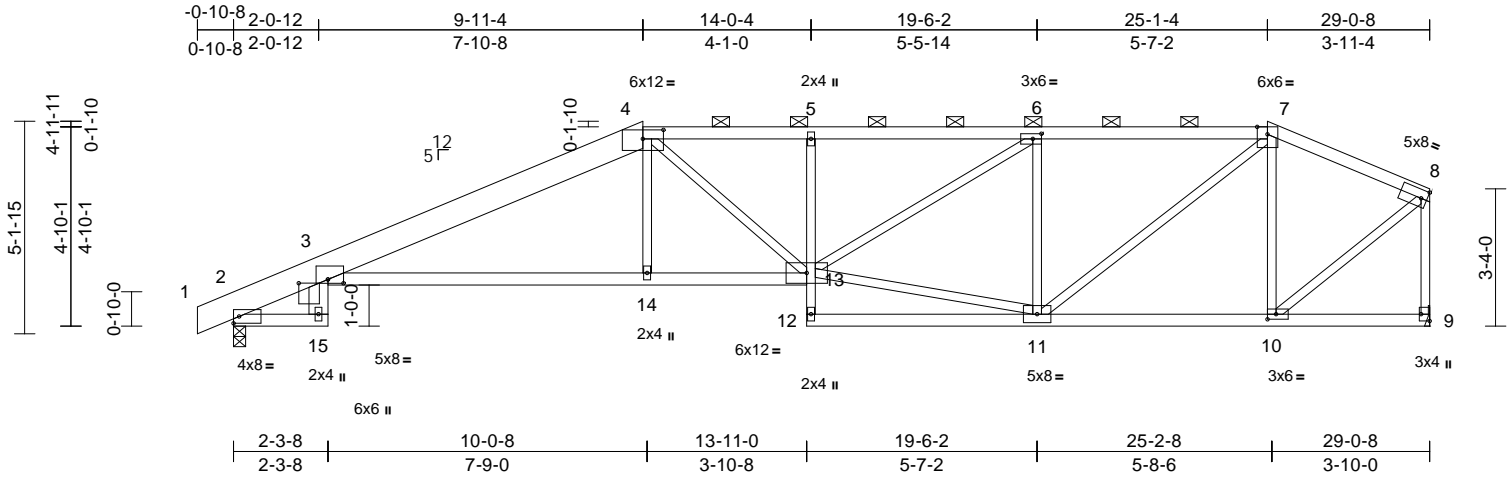
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133419
240615	K3	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:30
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Page: 1



Scale = 1:55.9

Plate Offsets (X, Y): [3:0-4-8,0-1-2], [3:0-1-1,0-8-8], [4:0-6-0,0-2-10], [6:0-2-8,0-1-8], [9:Edge,0-2-8], [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	0.61	Vert(LL)	-0.28	3-14	>999	360	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.59	3-14	>588	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.32	9	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	3-14	>999	240	Weight: 132 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* 5-12:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 15-3:2x6 SPF No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-3-11 max.): 4-7.
BOT CHORD	Rigid ceiling directly applied or 9-5-1 oc bracing.
REACTIONS (size) 2=0-3-8, 9= Mechanical	
Max Horiz 2=132 (LC 7)	
Max Uplift 2=176 (LC 4), 9=185 (LC 5)	
Max Grav 2=1368 (LC 1), 9=1294 (LC 1)	
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/0, 2-3=-693/74, 3-4=-2649/358, 4-5=-2629/454, 5-6=-2622/455, 6-7=-1862/353, 7-8=-1061/196, 8-9=-1266/198
BOT CHORD	2-15=0/0, 3-14=-382/2454, 13-14=-378/2456, 12-13=0/99, 5-13=-306/131, 11-12=-7/139, 10-11=-174/960, 9-10=-42/32
WEBS	3-15=0/53, 4-14=0/284, 4-13=-106/391, 11-13=-326/1749, 6-13=-152/912, 6-11=-952/262, 7-11=-200/1192, 7-10=-666/180, 8-10=-184/1210

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 176 lb uplift at joint 2 and 185 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11,2024

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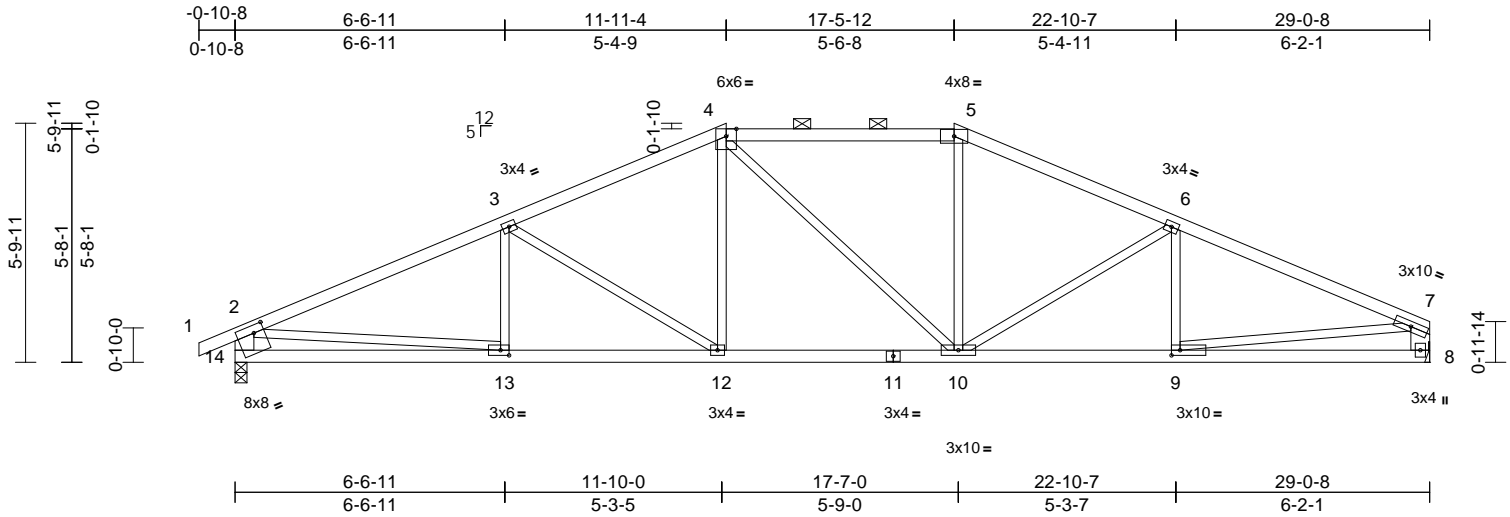
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133420
240615	K4	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:56									
Plate Offsets (X, Y): [9:0-2-8,0-1-8], [13:0-2-8,0-1-8], [14:0-3-0,0-2-4]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.11 12-13	>999	360
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.21 10-12	>999	240
BCLL	0.0*	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.06 8	n/a	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05 12-13	>999	240
					Weight: 110 lb FT = 10%				

LUMBER	
TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 14-2,8-7:2x6 SPF No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 3-4-10 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-8 max.): 4-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS (size) 8= Mechanical, 14=0-3-8	
Max Horiz 14=47 (LC 8)	
Max Uplift 8=-4 (LC 9), 14=-17 (LC 8)	
Max Grav 8=1285 (LC 1), 14=1365 (LC 1)	
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/30, 2-3=-2255/15, 3-4=-1870/35, 4-5=-1641/44, 5-6=-1854/35, 6-7=-2161/13, 2-14=-1294/54, 7-8=-1217/37
BOT CHORD	13-14=-91/534, 12-13=-4/1996, 10-12=0/1656, 9-10=0/1924, 8-9=-16/282
WEBS	3-13=-40/135, 3-12=-422/82, 4-12=0/353, 4-10=-192/158, 5-10=0/341, 6-10=-363/83, 6-9=-118/80, 2-13=0/1469, 7-9=0/1656

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=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) 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.
- 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 17 lb uplift at joint 14 and 4 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.
- 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



March 11, 2024

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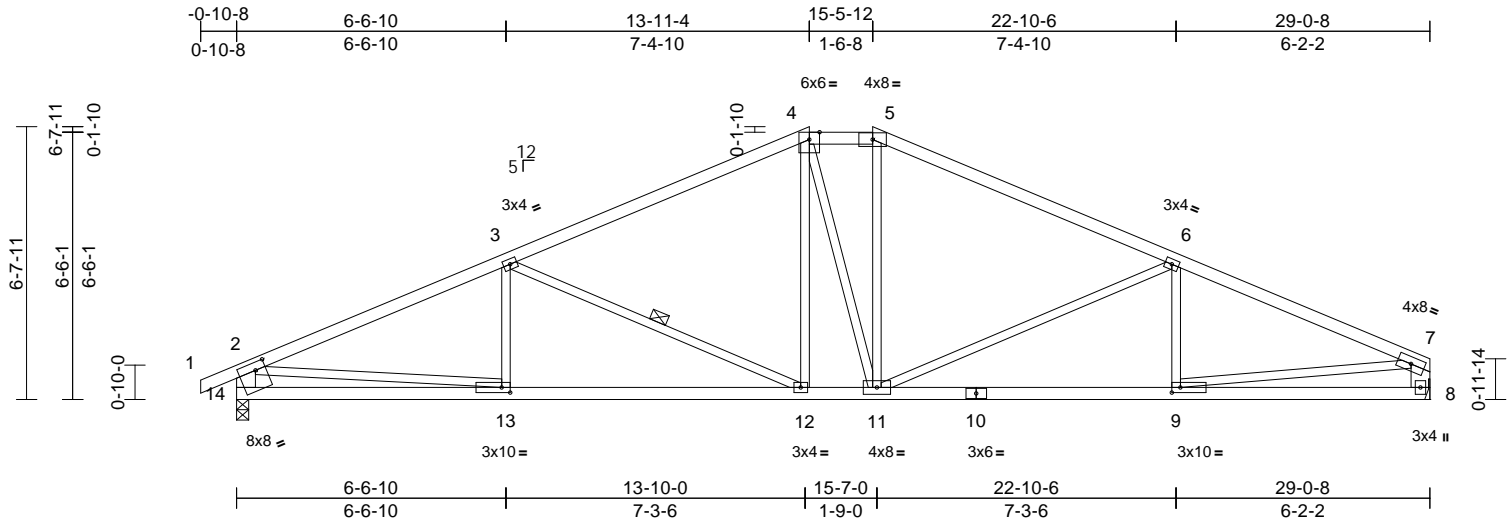
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133421
240615	K5	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:30
ID:5lcudmkRfBA5omalyFujEyyKyAd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:56.1

Plate Offsets (X, Y): [9:0-2-8,0-1-8], [13:0-2-8,0-1-8], [14:0-3-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.12	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.26	12-13	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	12-13	>999	240	Weight: 114 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2,8-7:2x6 SPF No.2

BRACING

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

WEBS 1 Row at midpt 3-12
REACTIONS (size) 8= Mechanical, 14=0-3-8
Max Horiz 14=56 (LC 8)
Max Uplift 8=14 (LC 9), 14=27 (LC 8)
Max Grav 8=1285 (LC 1), 14=1365 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 4-5=-1491/55, 5-6=-1723/34, 6-7=-2198/35, 2-14=-1299/60, 7-8=-1222/43, 1-2=0/30, 2-3=-2293/37, 3-4=-1724/34
BOT CHORD 13-14=-88/450, 12-13=-36/2041, 11-12=0/1493, 9-11=0/1967, 8-9=-13/238
WEBS 3-13=-26/181, 3-12=-640/99, 4-12=0/345, 4-11=-240/229, 5-11=0/394, 6-11=-573/100, 6-9=-103/127, 2-13=0/1599, 7-9=0/1744

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * 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.
- All bearings are assumed to be SPF No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 14 and 14 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11, 2024

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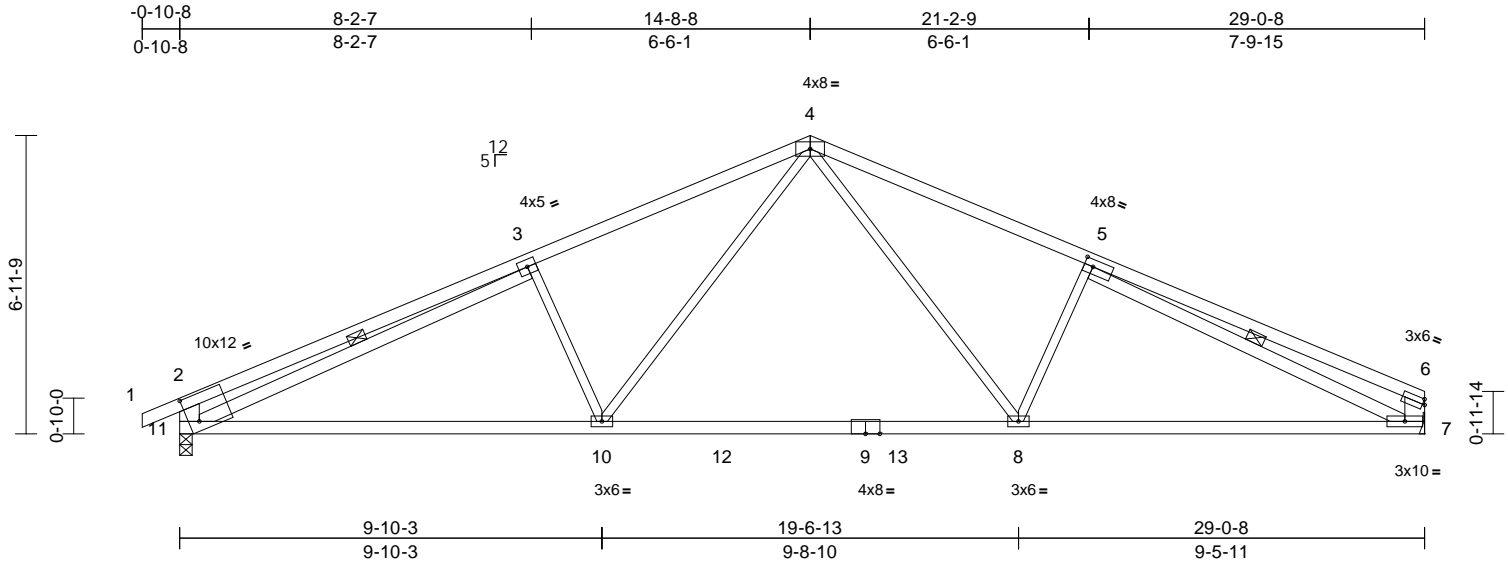
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133422
240615	K6	Common	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:30
ID:5lcudmkRfBA5omalyFujEyyKyAd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:53.8

Plate Offsets (X, Y): [2:0-2-14,0-7-6], [5:0-2-8,0-2-0]

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	0.72	Vert(LL)	-0.27	8-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.43	8-10	>805	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.07	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	8-10	>999	240	Weight: 111 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 11-2,7-6:2x6 SPF No.2, 11-3,7-5:2x4 SPF No.2

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

REACTIONS (size) 7= Mechanical, 11=0-3-8
Max Horiz 11=60 (LC 8)
Max Uplift 7=-17 (LC 9), 11=-30 (LC 8)
Max Grav 7=1352 (LC 2), 11=1417 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-907/142, 3-4=-2188/80, 4-5=-2151/80, 5-6=-530/68, 2-11=-671/123, 6-7=-412/74
BOT CHORD 10-11=-41/2063, 8-10=0/1461, 7-8=0/2012
WEBS 4-8=-35/797, 5-8=-401/161, 4-10=-33/850, 3-10=-431/162, 3-11=-1481/0, 5-7=-1798/0

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) 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) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 11 and 17 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 11, 2024

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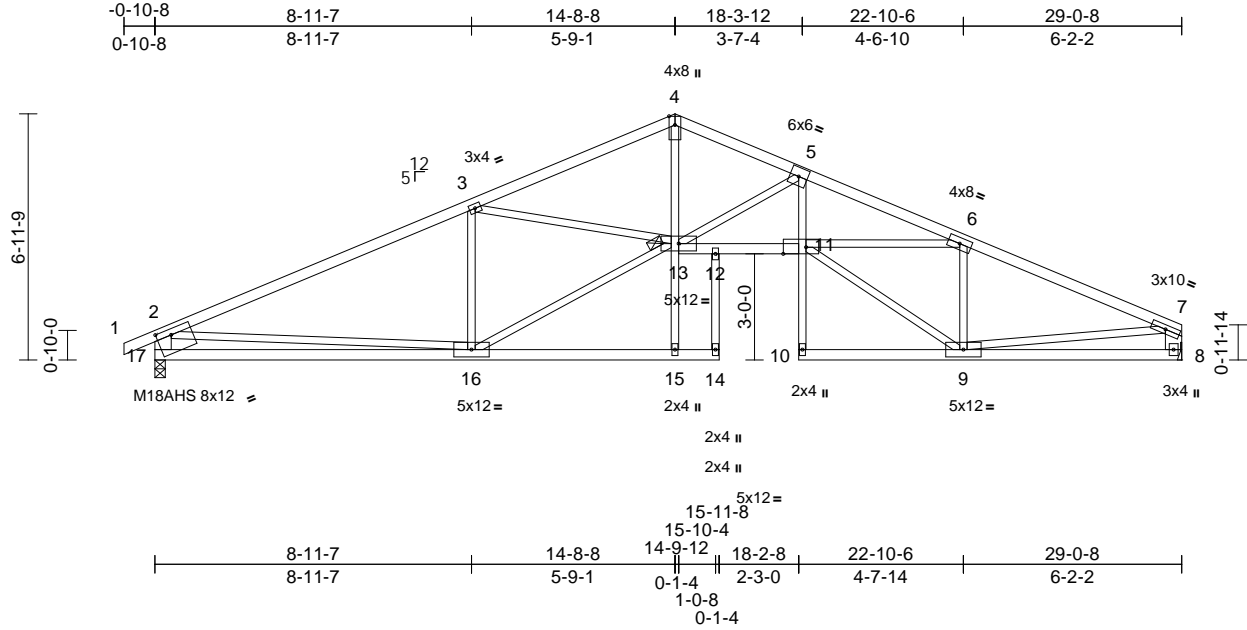
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133423
240615	K7	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:30
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Page: 1



Scale = 1:65.2

Plate Offsets (X, Y): [11:0-7-12,Edge], [17:0-5-0,0-2-0]

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	0.97	Vert(LL)	-0.32	10	>999	360	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.57	10	>600	240	M18AHS 142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.33	8	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	10	>999	240	Weight: 123 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2 *Except* 13-11:2x4 SPF 2100F 1.8E, 5-10:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 17-2:2x6 SP 2400F 2.0E, 8-7:2x6 SPF No.2

BRACING

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

JOINTS 1 Brace at Jt(s): 13

REACTIONS	(size) 8= Mechanical, 17=0-3-8
	Max Horiz 17=60 (LC 10)
	Max Uplift 8=17 (LC 9), 17=30 (LC 8)
	Max Grav 8=1285 (LC 1), 17=1365 (LC 1)

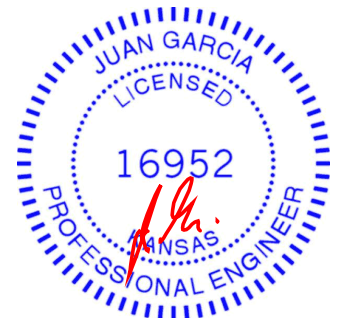
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/30, 2-3=-2211/39, 3-4=-2794/6, 4-5=-2792/15, 5-6=-4626/0, 6-7=-2157/36, 2-17=-1280/81, 7-8=-1217/49
BOT CHORD	16-17=-173/890, 15-16=0/8, 14-15=0/0, 12-13=0/4188, 11-12=0/4192, 10-11=0/75, 5-11=0/1471, 9-10=0/40, 8-9=-22/288
WEBS	12-14=-5/21, 3-16=-889/98, 3-13=0/596, 13-15=0/124, 4-13=0/1800, 5-13=-1927/45, 9-11=0/2285, 6-11=0/2281, 6-9=-1418/65, 2-16=0/1038, 7-9=0/1645, 13-16=-23/2155

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- All plates are MT20 plates unless otherwise indicated.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 17 and 17 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 11, 2024

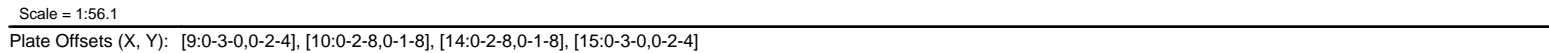
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:30 Page: 1
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NUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,9-7:2x6 SPF No.2

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

REACTIONS (size) 9=0-3-8, 15=0-3-8
 Max Horiz 15=86 (LC 8)
 Max Uplift 9=-186 (LC 9), 15=-186 (LC 8)
 Max Grav 9=1380 (LC 1), 15=1380 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-2325/281, 3-4=-1761/206,
 4-5=-1529/233, 5-6=-1763/206,
 6-7=-2324/281, 7-8=0/30, 2-15=-1314/218,
 7-9=-1313/218

BOT CHORD 14-15=-179/453, 13-14=-276/2071,
 12-13=-80/1527, 10-12=-189/2069,
 9-10=-99/455

WEBS 3-14=-29/179, 3-13=-637/214, 4-13=-35/345,
 4-12=-230/244, 5-12=-55/401,
 6-12=-634/214, 6-10=-31/177,
 2-14=-97/1625, 7-10=-91/1622

- LOAD CASE(S) Standard



March 11, 2024

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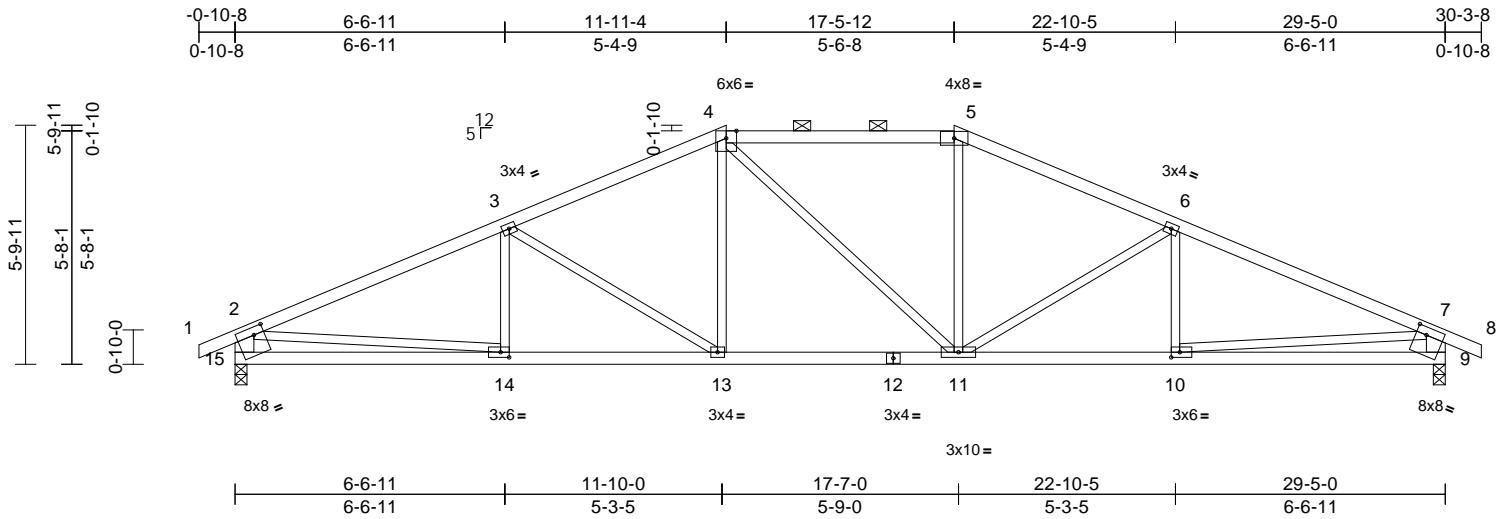
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-USA.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133425
240615	K9	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:30
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Page: 1



Scale = 1:56

Plate Offsets (X, Y): [9:0-3-0,0-2-4], [10:0-2-8,0-1-8], [14:0-2-8,0-1-8], [15:0-3-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.11	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.22	11-13	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.06	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	13-14	>999	240	Weight: 112 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,9-7:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-4-3 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-12 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 9=0-3-8, 15=0-3-8
Max Horiz 15=72 (LC 12)
Max Uplift 9=170 (LC 9), 15=170 (LC 8)
Max Grav 9=1380 (LC 1), 15=1380 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-2287/239, 3-4=-1905/231, 4-5=-1690/234, 5-6=-1906/231, 6-7=-2287/239, 7-8=0/30, 2-15=-1309/205, 7-9=-1309/205
BOT CHORD 14-15=-189/538, 13-14=-218/2026, 11-13=-80/1690, 10-11=-146/2025, 9-10=-122/538
WEBS 3-14=-43/132, 3-13=-419/167, 4-13=-24/352, 4-11=-177/178, 5-11=0/353, 6-11=-418/167, 6-10=-44/132, 2-14=-71/1495, 7-10=-71/1495

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * 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.
- All bearings are assumed to be SPF No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 170 lb uplift at joint 15 and 170 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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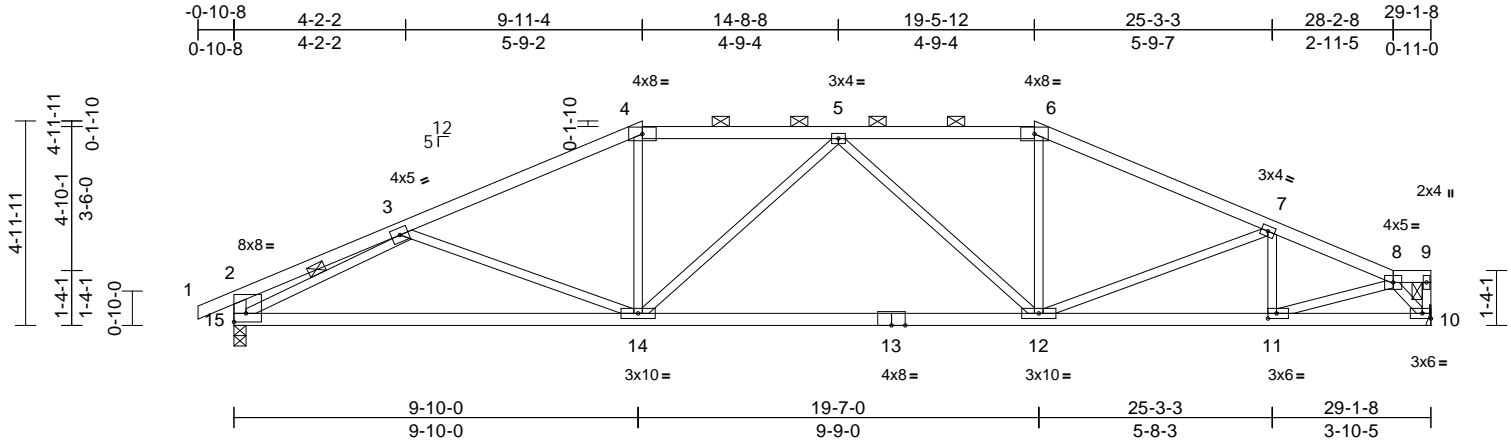
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	
240615	K10	Roof Special	1	1	Job Reference (optional)	I64133426

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:31
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Page: 1



Scale = 1:56.1

Plate Offsets (X, Y): [2:Edge,0-2-8], [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	0.67	Vert(LL)	-0.20	14-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.41	14-15	>837	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.09	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	12-14	>999	240	Weight: 106 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-10-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-1-1 max.): 4-6, 8-9.

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

WEBS 1 Row at midpt 3-15

REACTIONS (size) 10= Mechanical, 15=0-3-8
Max Horiz 15=67 (LC 8)
Max Uplift 10=138 (LC 5), 15=159 (LC 4)
Max Grav 10=1298 (LC 1), 15=1372 (LC 1)

FORCES

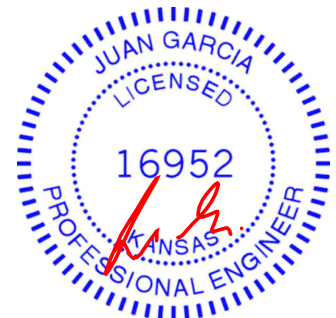
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-413/1, 3-4=-2113/258, 4-5=-1875/261, 5-6=-1841/267, 6-7=-2075/266, 7-8=-2118/236, 8-9=-38/9, 9-10=-69/19, 2-15=-343/58
BOT CHORD 14-15=-269/1981, 12-14=-256/2067, 11-12=-219/1949, 10-11=-116/963
WEBS 3-14=-139/220, 4-14=0/439, 5-14=-398/126, 5-12=-440/116, 6-12=0/424, 7-12=-147/156, 3-15=-1896/320, 7-11=-279/88, 8-11=-109/1046, 8-10=-1506/178

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * 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.
- All bearings are assumed to be SPF No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 138 lb uplift at joint 10 and 159 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11, 2024

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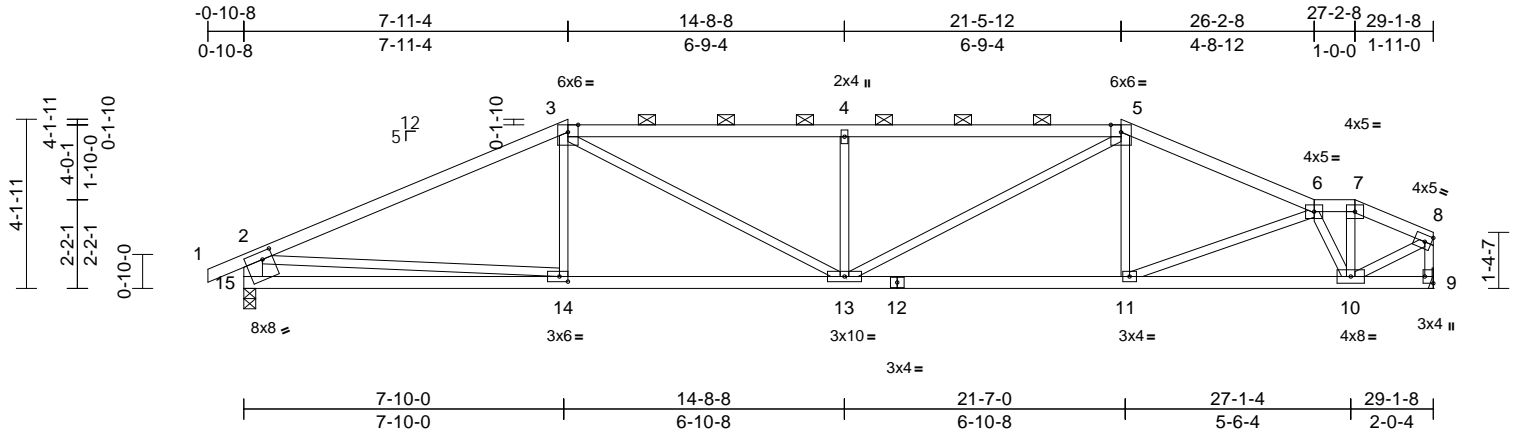
Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133427
240615	K11	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:31

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Scale = 1:56.4

Plate Offsets (X, Y): [9:Edge,0-2-8], [14:0-2-8,0-1-8], [15:0-3-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.16	13-14	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.29	11-13	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.07	9	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.12	13-14	>999	240	Weight: 106 lb FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2:2x6 SPF No.2

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

REACTIONS (size) 9= Mechanical, 15=0-3-8
Max Horiz 15=52 (LC 8)
Max Uplift 9=164 (LC 5), 15=186 (LC 4)
Max Grav 9=1294 (LC 1), 15=1374 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-2267/311, 3-4=-2607/446, 4-5=-2607/446, 5-6=-2166/321, 6-7=-1244/164, 7-8=-1348/167, 2-15=-1299/228, 8-9=-1268/160
BOT CHORD 14-15=-291/789, 13-14=-250/1988, 11-13=-261/1956, 10-11=-247/1764, 9-10=-15/31
WEBS 3-14=0/228, 3-13=-157/834, 4-13=-587/229, 5-13=-157/851, 5-11=0/201, 6-11=-25/345, 6-10=-1204/203, 7-10=-49/453, 2-14=-87/1331, 8-10=-164/1373

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) 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.

- * 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.
- All bearings are assumed to be SPF No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 186 lb uplift at joint 15 and 164 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11, 2024

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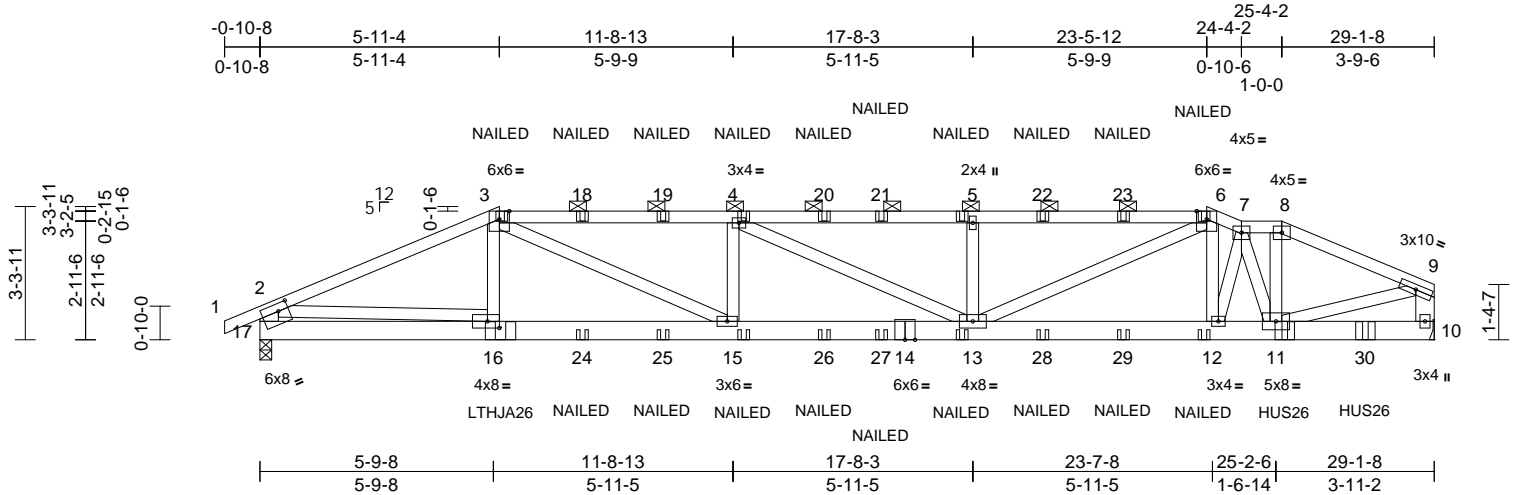
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133428
240615	K12	Roof Special Girder	1	2	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:57.1

Plate Offsets (X, Y): [16:0-3-8,0-2-0], [17:0-3-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.21	13-15	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.37	13-15	>922	240	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.41	Horz(CT)	0.05	10	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.18	13-15	>999	240	Weight: 279 lb FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x4 SPF No.2 *Except* 17-2,10-9:2x6 SPF No.2

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

REACTIONS (size) 10= Mechanical, 17=0-3-8
Max Horiz 17=50 (LC 5)
Max Uplift 10=528 (LC 5), 17=516 (LC 4)
Max Grav 10=2591 (LC 1), 17=2498 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=4723/1000, 3-4=6497/1438, 4-5=6343/1396, 5-6=6347/1398, 6-7=4215/896, 7-8=3261/712, 8-9=3521/745, 2-17=2381/526, 9-10=2328/495
BOT CHORD 16-17=287/1006, 15-16=914/4283, 13-15=1404/6493, 12-13=859/4074, 11-12=803/3860, 10-11=70/283
WEBS 3-16=0/310, 3-15=547/2532, 4-15=812/379, 4-13=214/67, 5-13=828/388, 6-13=570/2579, 6-12=424/248, 7-12=172/798, 7-11=1896/369, 8-11=221/1146, 2-16=679/3350, 9-11=633/3039

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=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
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 516 lb uplift at joint 17 and 528 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

- Use Simpson Strong-Tie LTHJA26 (LTHJA26 on 2 ply, Right Hand Hip) or equivalent at 5-11-10 from the left end to connect truss(es) to back face of bottom chord.
 - Use Simpson Strong-Tie HUS26 (HUS26 on 4-10d Truss) or equivalent spaced at 2'-0" oc max, starting at 25'-5" from the left end to 27'-5" to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.
 - "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- LOAD CASE(S)** Standard
- Dead + Roof Live (balanced): Lumber Increase=1, 15, Plate Increase=1, 15
Uniform Loads (lb/ft)
Vert: 1-2=70, 2-3=70, 3-6=70, 6-7=70, 7-8=70, 8-9=70, 10-17=20
Concentrated Loads (lb)
Vert: 3=110 (B), 6=110 (B), 16=410 (B), 15=51 (B), 4=110 (B), 5=110 (B), 13=51 (B), 12=51 (B), 11=230 (B), 18=110 (B), 19=110 (B), 20=110 (B), 21=110 (B), 22=110 (B), 23=110 (B), 24=51 (B), 25=51 (B), 26=51 (B), 27=51 (B), 28=51 (B), 29=51 (B), 30=230 (B)



March 11, 2024

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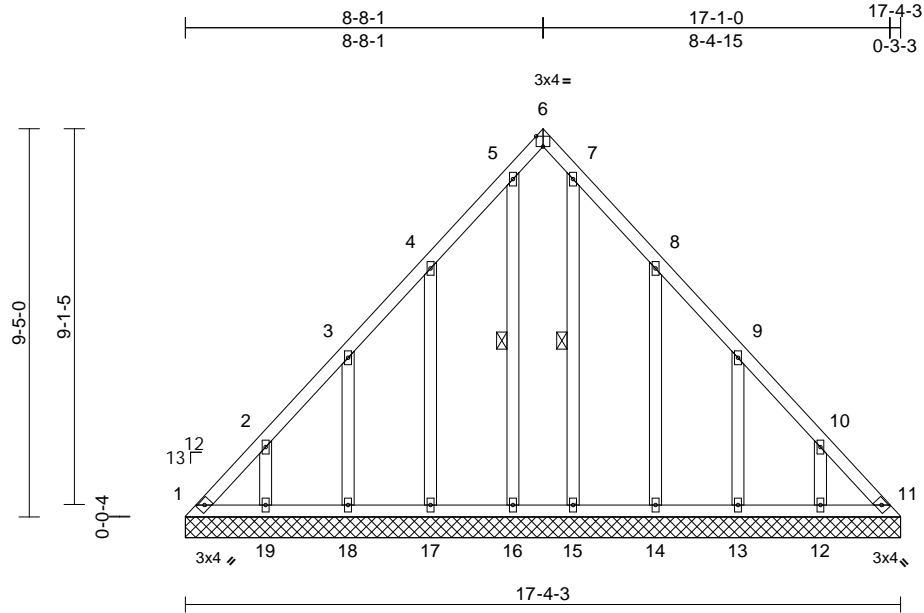
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	
240615	LAY2	Lay-In Gable	1	1	Job Reference (optional)	I64133429

Wheeler Lumber, Waverly, KS - 66871,

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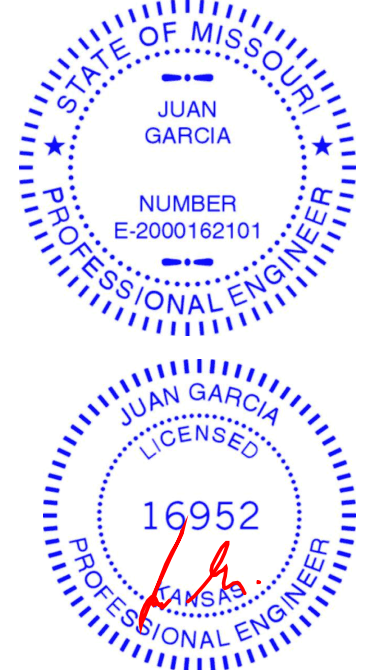
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Scale = 1:55.9												
Plate Offsets (X, Y): [6:Edge,0-3-0]												
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 92 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.	
WEBS	1 Row at midpt	5-16, 7-15
REACTIONS (size)		1=17-4-3, 11=17-4-3, 12=17-4-3, 13=17-4-3, 14=17-4-3, 15=17-4-3, 16=17-4-3, 17=17-4-3, 18=17-4-3, 19=17-4-3
Max Horiz	1=242 (LC 5)	
Max Uplift	1=-110 (LC 6), 11=-81 (LC 7), 12=-131 (LC 9), 13=-125 (LC 9), 14=-153 (LC 9), 16=-22 (LC 5), 17=-149 (LC 8), 18=-126 (LC 8), 19=-131 (LC 8)	
Max Grav	1=270 (LC 8), 11=251 (LC 9), 12=208 (LC 16), 13=203 (LC 16), 14=217 (LC 16), 15=137 (LC 16), 16=161 (LC 15), 17=214 (LC 15), 18=203 (LC 15), 19=207 (LC 15)	
FORCES (lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-2=-382/209, 2-3=-259/161, 3-4=-131/112, 4-5=-106/105, 5-6=-50/71, 6-7=-46/67, 7-8=-75/77, 8-9=-112/75, 9-10=-233/122, 10-11=-357/170	
BOT CHORD	1-19=-116/268, 18-19=-116/268, 17-18=-116/268, 16-17=-116/268, 15-16=-116/268, 14-15=-116/268, 13-14=-116/268, 12-13=-116/268, 11-12=-116/268	

- WEBS**
- 2-19=-162/149, 3-18=-165/151, 4-17=-172/174, 5-16=-128/42, 10-12=-162/149, 9-13=-164/150, 8-14=-176/177, 7-15=-103/9
- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - 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
 - 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.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * 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.
 - All bearings are assumed to be SPF No.2 .
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 1, 81 lb uplift at joint 11, 131 lb uplift at joint 19, 126 lb uplift at joint 18, 149 lb uplift at joint 17, 22 lb uplift at joint 16, 131 lb uplift at joint 12, 125 lb uplift at joint 13 and 153 lb uplift at joint 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



March 11,2024

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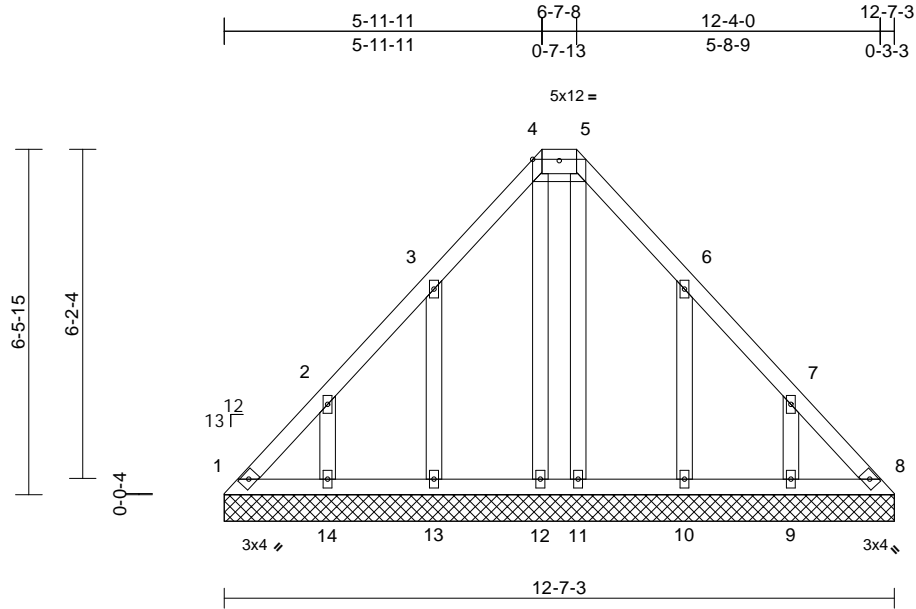
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133430
240615	LAY3	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:43.3

Plate Offsets (X, Y): [4:0-6-0-0-0-5]

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	8	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 60 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 4-5:2x6 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.): 4-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	1=12-7-3, 8=12-7-3, 9=12-7-3, 10=12-7-3, 11=12-7-3, 12=12-7-3, 13=12-7-3, 14=12-7-3
Max Horiz	1=164 (LC 5)
Max Uplift	1=-63 (LC 6), 8=-29 (LC 7), 9=-130 (LC 9), 10=-135 (LC 9), 12=-18 (LC 5), 13=-136 (LC 8), 14=-130 (LC 8)
Max Grav	1=132 (LC 17), 8=115 (LC 18), 9=204 (LC 16), 10=218 (LC 16), 11=111 (LC 17), 12=127 (LC 18), 13=219 (LC 15), 14=204 (LC 15)

FORCES

(lb) - Maximum Compression/Maximum Tension

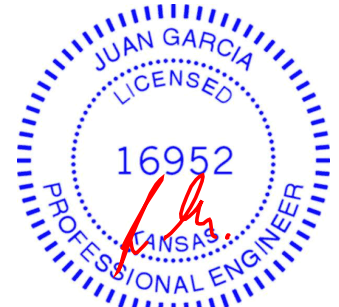
TOP CHORD	1-2=-188/145, 2-3=-129/99, 3-4=-104/144, 4-5=-31/117, 5-6=-85/119, 6-7=-94/54, 7-8=-158/99
BOT CHORD	1-14=-68/133, 13-14=-68/133, 12-13=-68/133, 11-12=-68/133, 10-11=-68/133, 9-10=-68/133, 8-9=-68/133
WEBS	2-14=-159/148, 3-13=-178/162, 4-12=-102/41, 7-9=-160/148, 6-10=-177/162, 5-11=-85/8

NOTES

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) All bearings are assumed to be SPF No.2 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 1, 29 lb uplift at joint 8, 130 lb uplift at joint 14, 136 lb uplift at joint 13, 18 lb uplift at joint 12, 130 lb uplift at joint 9 and 135 lb uplift at joint 10.
- 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



March 11, 2024

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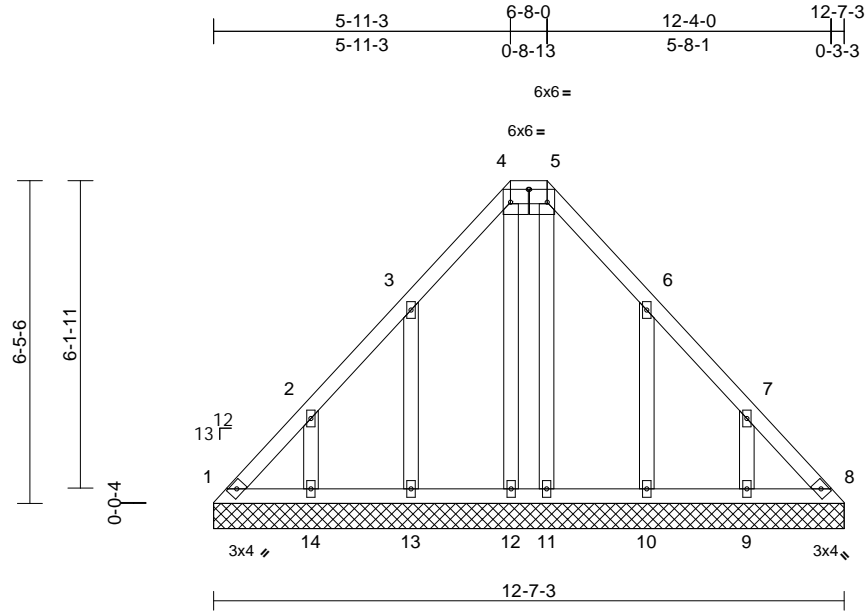
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	
240615	LAY4	Lay-In Gable	1	1	Job Reference (optional)	I64133431

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:32
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Page: 1



Scale = 1:46

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

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	0.05	Vert(LL)	n/a	-	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	8	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 60 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 4-5:2x6 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.): 4-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	1=12-7-3, 8=12-7-3, 9=12-7-3, 10=12-7-3, 11=12-7-3, 12=12-7-3, 13=12-7-3, 14=12-7-3
Max Horiz	1=163 (LC 5)
Max Uplift	1=-62 (LC 6), 8=-28 (LC 7), 9=-131 (LC 9), 10=-133 (LC 9), 12=-18 (LC 5), 13=-134 (LC 8), 14=-130 (LC 8)
Max Grav	1=132 (LC 17), 8=115 (LC 18), 9=205 (LC 16), 10=216 (LC 16), 11=111 (LC 17), 12=128 (LC 18), 13=217 (LC 15), 14=205 (LC 15)

FORCES

(lb) - Maximum Compression/Maximum Tension

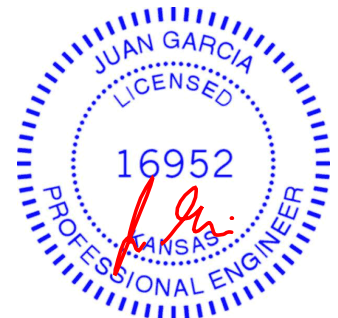
TOP CHORD	1-2=-187/144, 2-3=-128/98, 3-4=-102/143, 4-5=-31/116, 5-6=-84/119, 6-7=-93/53, 7-8=-157/98
BOT CHORD	1-14=-68/132, 13-14=-68/132, 12-13=-68/132, 11-12=-68/132, 10-11=-68/132, 9-10=-68/132, 8-9=-68/132
WEBS	2-14=-160/148, 3-13=-176/160, 4-12=-102/41, 7-9=-160/149, 6-10=-175/159, 5-11=-85/8

NOTES

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) All bearings are assumed to be SPF No.2 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 1, 28 lb uplift at joint 8, 130 lb uplift at joint 14, 134 lb uplift at joint 13, 18 lb uplift at joint 12, 131 lb uplift at joint 9 and 133 lb uplift at joint 10.
- 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



March 11, 2024

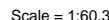
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of the design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcscomponents.com)

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Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:32 Page: 1
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 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

WARNING – Verify design parameters and/or notes on this and included literature reference page. (M-147-16) 1/22/23 before use.

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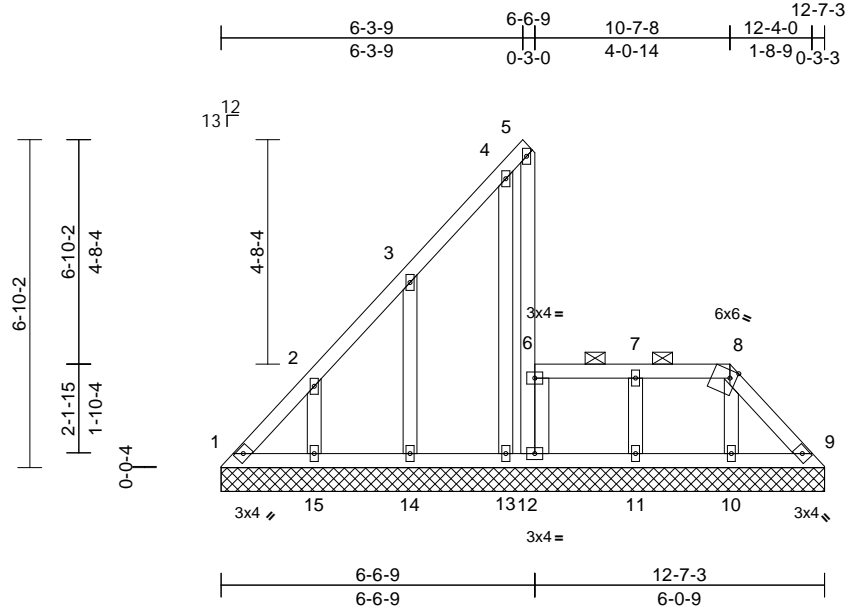
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-LLS.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	164133433
240615	LAY6	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:32
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Page: 1



Scale = 1:48.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	9	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 57 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.): 6-12, 6-8.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(size)	1=12-7-3, 9=12-7-3, 10=12-7-3, 11=12-7-3, 12=12-7-3, 13=12-7-3, 14=12-7-3, 15=12-7-3
Max Horiz		1=335 (LC 8)
Max Uplift		1=-41 (LC 6), 9=-130 (LC 9), 10=-39 (LC 5), 11=-43 (LC 9), 12=-39 (LC 9), 13=-117 (LC 8), 14=-141 (LC 8), 15=-128 (LC 8)
Max Grav		1=301 (LC 8), 9=140 (LC 16), 10=154 (LC 18), 11=207 (LC 1), 12=87 (LC 22), 13=132 (LC 15), 14=217 (LC 15), 15=205 (LC 15)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-425/116, 2-3=-304/83, 3-4=-182/84, 4-5=-78/51, 6-12=-69/45, 5-6=-15/22, 6-7=-97/148, 7-8=-98/147, 8-9=-139/170
BOT CHORD	1-15=-32/47, 14-15=-32/47, 13-14=-32/47, 12-13=-32/47, 11-12=-71/70, 10-11=-71/70, 9-10=-72/71
WEBS	2-15=-160/145, 3-14=-177/167, 4-13=-99/138, 8-10=-114/67, 7-11=-165/70

NOTES

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) All bearings are assumed to be SPF No.2 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 1, 39 lb uplift at joint 12, 130 lb uplift at joint 9, 128 lb uplift at joint 15, 141 lb uplift at joint 14, 117 lb uplift at joint 13, 39 lb uplift at joint 10 and 43 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.
- 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



March 11, 2024

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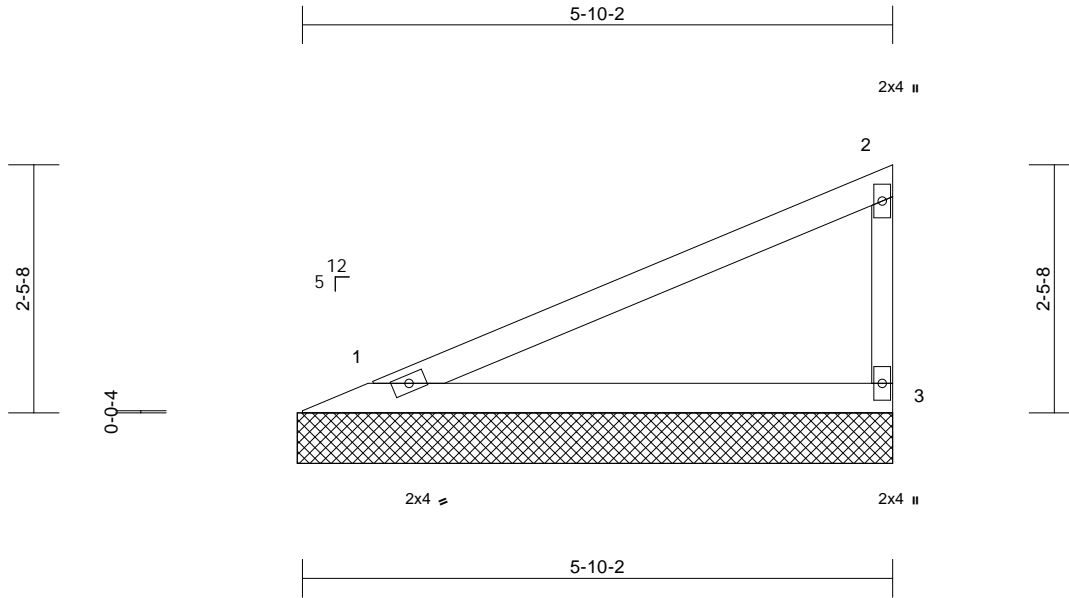
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133434
240615	V6	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:32
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Page: 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	0.49	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 10%

LUMBER

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-10-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-10-12, 3=5-10-12

Max Horiz 1=92 (LC 5)
Max Uplift 1=-33 (LC 8), 3=-52 (LC 8)
Max Grav 1=227 (LC 1), 3=227 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-82/54, 2-3=-176/82
BOT CHORD 1-3=-30/23

NOTES

- 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
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 1 and 52 lb uplift at joint 3.



March 11, 2024

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MiTek®

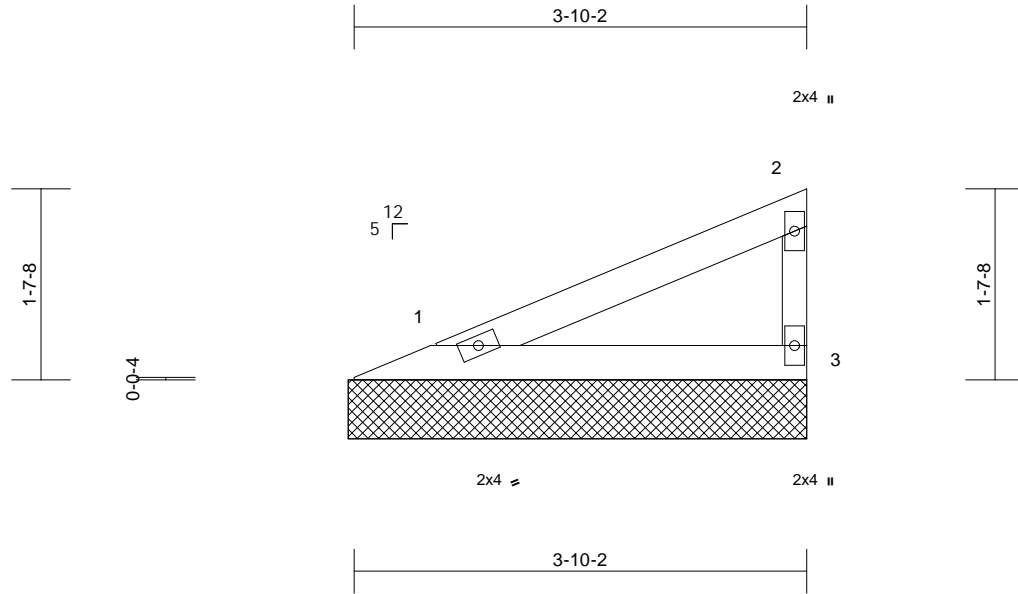
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133435
240615	V7	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 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	0.16	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 9 lb	FT = 10%

LUMBER

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-10-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-10-12, 3=3-10-12

Max Horiz 1=56 (LC 5)
Max Uplift 1=-20 (LC 8), 3=-31 (LC 8)
Max Grav 1=137 (LC 1), 3=137 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-50/33, 2-3=-106/49
BOT CHORD 1-3=-18/14

NOTES

- 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
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SPF No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1 and 31 lb uplift at joint 3.



March 11, 2024

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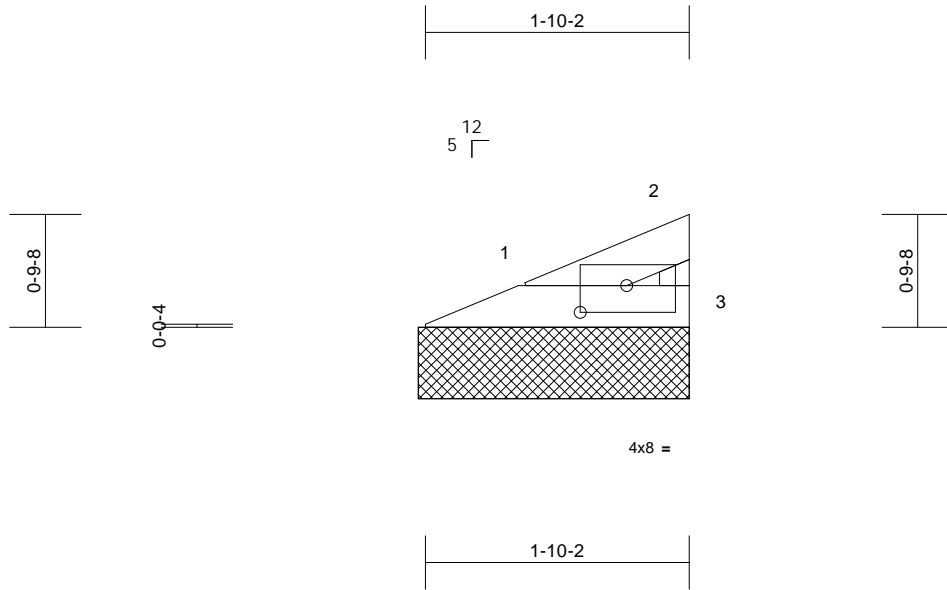
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Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	I64133436
240615	V8	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:32
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Page: 1



Scale = 1:16.1

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

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	0.02	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 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
1-10-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS

(size) 1=1-10-12, 3=1-10-12
Max Horiz 1=19 (LC 5)
Max Uplift 1=7 (LC 8), 3=11 (LC 8)
Max Grav 1=47 (LC 1), 3=47 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum

Tension

TOP CHORD 1-2=-17/11, 2-3=-36/17
BOT CHORD 1-3=-6/5

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 7) All bearings are assumed to be SPF No.2 .

- 8) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 7 lb uplift at joint 1
and 11 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



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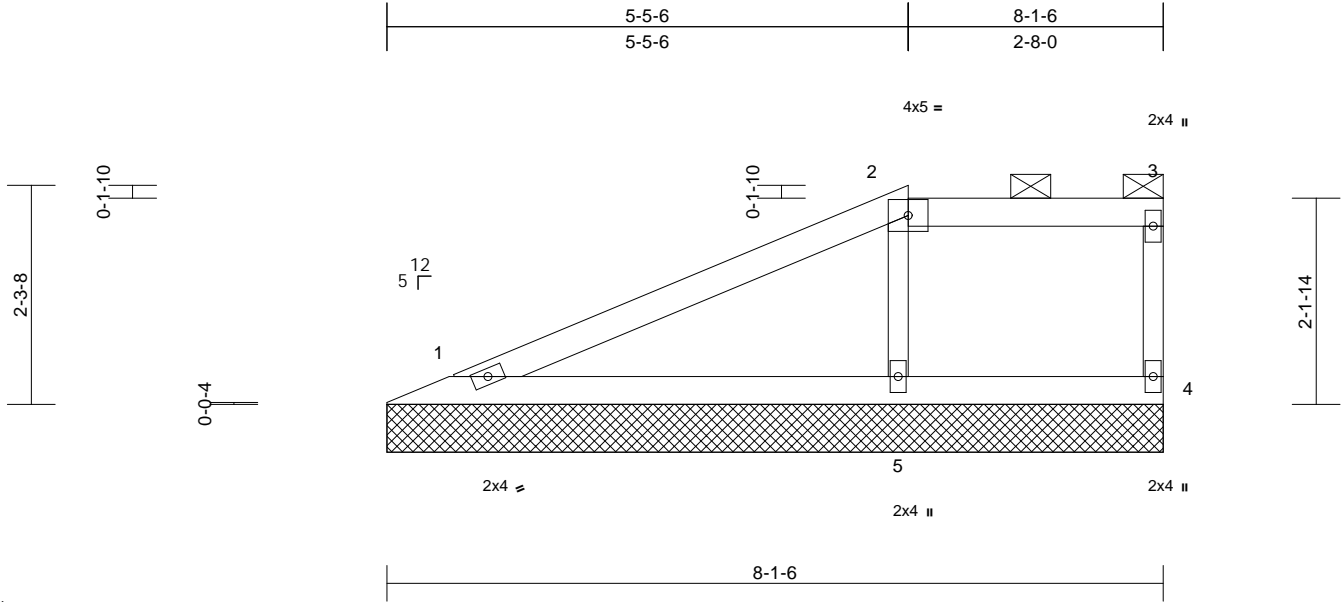
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 124 MN	
240615	V9	Valley	1	1	Job Reference (optional)	I64133437

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:32
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Page: 1



Scale = 1:24.1

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	0.43	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 21 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 8-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-3.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS	(size)	1=8-1-6, 4=8-1-6, 5=8-1-6
	Max Horiz	1=81 (LC 5)
	Max Uplift	1=-36 (LC 8), 4=-31 (LC 4), 5=-34 (LC 8)
	Max Grav	1=198 (LC 1), 4=101 (LC 1), 5=359 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-64/65, 2-3=-26/22, 3-4=-90/37
BOT CHORD	1-5=-28/25, 4-5=-26/20
WEBS	2-5=-262/92

NOTES

- Unbalanced roof live loads have been considered for this design.
- 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
- 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.
- Provide adequate drainage to prevent water ponding.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * 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.
- All bearings are assumed to be SPF No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 1, 31 lb uplift at joint 4 and 34 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 11, 2024

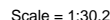
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 22 2024 Print: 8.730 S Feb 22 2024 MiTek Industries, Inc. Fri Mar 08 13:08:32 Page: 1
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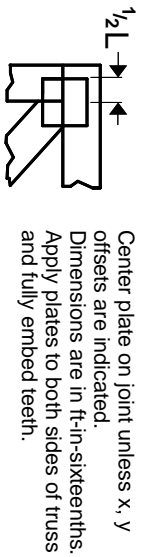
LOAD CASE(S) Standard

WARNING – verify design parameters and noted notes on this and included MiTek Reference Tag M-7473 Rev. 1/2/2023 before use. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

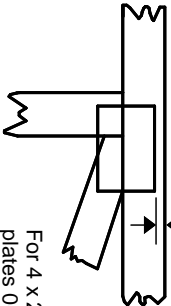
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Symbols

PLATE LOCATION AND ORIENTATION



0-¹/₁₆"



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.

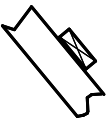
* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

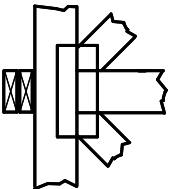
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

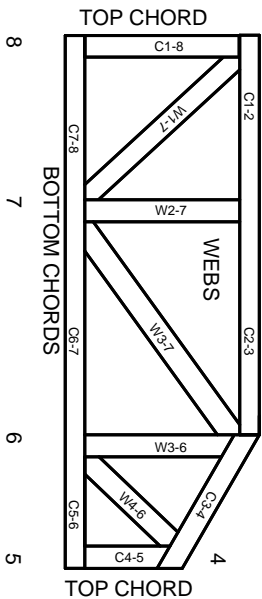
Industry Standards:

ANSI/TP1: 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



1 2 3 Joint ID typ.



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/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.