



12/02/2021

RE: RR109  
Lot 109 RR

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

**Site Information:**

Customer: Project Name: RR109  
Lot/Block:  
Address:  
City:

Model:  
Subdivision:  
State:

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

Design Code: IRC2018/TPI2014  
Wind Code: ASCE 7 - 16[Low Rise]  
Roof Load: 45.0 psf

Design Program: MiTek 20/20 8.4  
Wind Speed: 115 mph  
Floor Load: N/A psf

This package includes 40 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I48716372	A1	11/9/2021	21	I48716392	G8	11/9/2021
2	I48716373	A2	11/9/2021	22	I48716393	G9	11/9/2021
3	I48716374	B1	11/9/2021	23	I48716394	J1	11/9/2021
4	I48716375	B2	11/9/2021	24	I48716395	J2	11/9/2021
5	I48716376	C1	11/9/2021	25	I48716396	J3	11/9/2021
6	I48716377	C2	11/9/2021	26	I48716397	J4	11/9/2021
7	I48716378	C3	11/9/2021	27	I48716398	J5	11/9/2021
8	I48716379	D1	11/9/2021	28	I48716399	R1	11/9/2021
9	I48716380	D2	11/9/2021	29	I48716400	R2	11/9/2021
10	I48716381	E1	11/9/2021	30	I48716401	V1	11/9/2021
11	I48716382	E2	11/9/2021	31	I48716402	V2	11/9/2021
12	I48716383	E3	11/9/2021	32	I48716403	V3	11/9/2021
13	I48716384	E4	11/9/2021	33	I48716404	V4	11/9/2021
14	I48716385	G1	11/9/2021	34	I48716405	V5	11/9/2021
15	I48716386	G2	11/9/2021	35	I48716406	V6	11/9/2021
16	I48716387	G3	11/9/2021	36	I48716407	V7	11/9/2021
17	I48716388	G4	11/9/2021	37	I48716408	V8	11/9/2021
18	I48716389	G5	11/9/2021	38	I48716409	V9	11/9/2021
19	I48716390	G6	11/9/2021	39	I48716410	V10	11/9/2021
20	I48716391	G7	11/9/2021	40	I48716411	V11	11/9/2021

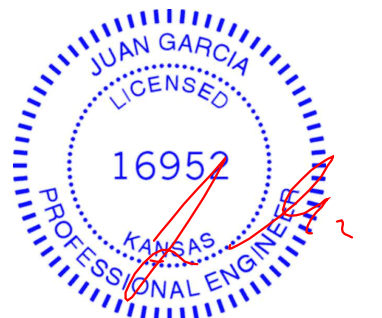
The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Kansas is April 30, 2022.

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.



November 09, 2021



12/02/2021

RE: RR109  
Lot 109 RR

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

**Site Information:**

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

Design Code: IRC2018/TPI2014  
Wind Code: ASCE 7 - 16[Low Rise]  
Roof Load: 45.0 psf

Design Program: MiTek 20/20 8.4  
Wind Speed: 115 mph  
Floor Load: N/A psf

This package includes 40 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I48716372	A1	11/9/2021	21	I48716392	G8	11/9/2021
2	I48716373	A2	11/9/2021	22	I48716393	G9	11/9/2021
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6	I48716377	C2	11/9/2021	26	I48716397	J4	11/9/2021
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9	I48716380	D2	11/9/2021	29	I48716400	R2	11/9/2021
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11	I48716382	E2	11/9/2021	31	I48716402	V2	11/9/2021
12	I48716383	E3	11/9/2021	32	I48716403	V3	11/9/2021
13	I48716384	E4	11/9/2021	33	I48716404	V4	11/9/2021
14	I48716385	G1	11/9/2021	34	I48716405	V5	11/9/2021
15	I48716386	G2	11/9/2021	35	I48716406	V6	11/9/2021
16	I48716387	G3	11/9/2021	36	I48716407	V7	11/9/2021
17	I48716388	G4	11/9/2021	37	I48716408	V8	11/9/2021
18	I48716389	G5	11/9/2021	38	I48716409	V9	11/9/2021
19	I48716390	G6	11/9/2021	39	I48716410	V10	11/9/2021
20	I48716391	G7	11/9/2021	40	I48716411	V11	11/9/2021

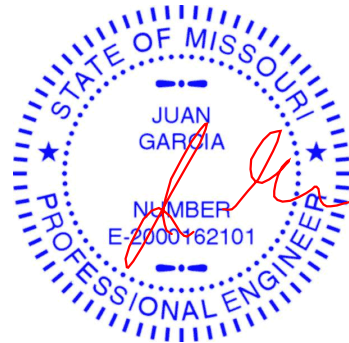
The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2022.

Missouri COA: 001193

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November 09, 2021

16023 Swingley Ridge Rd  
Chesterfield, MO 63017

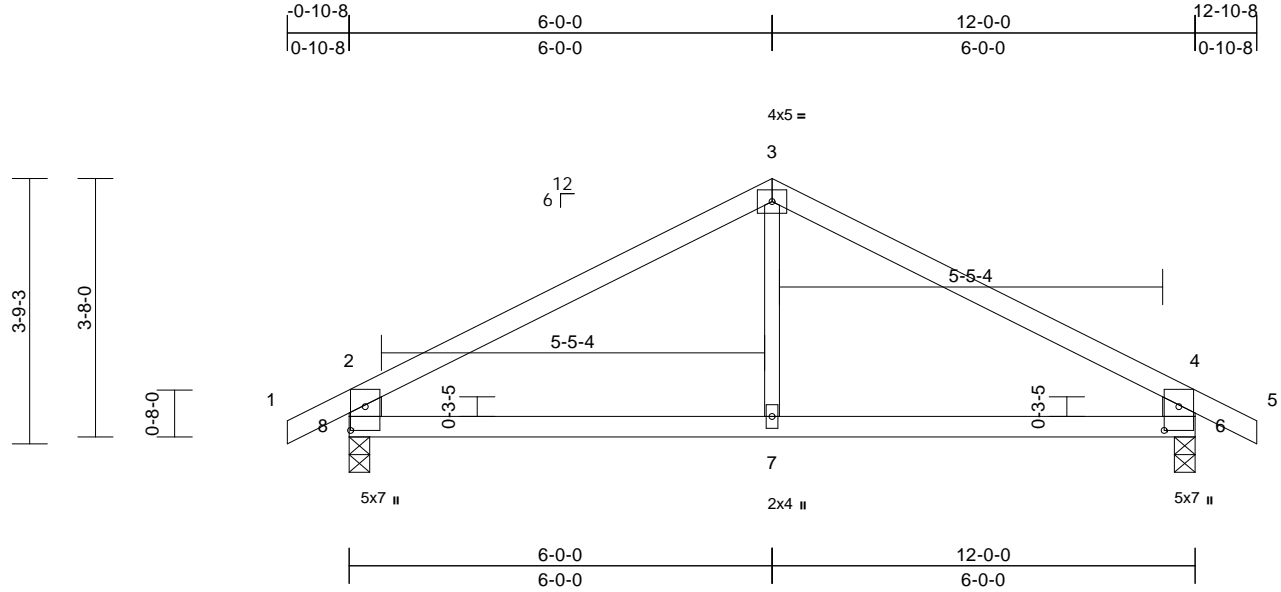
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716373 LEE'S SUMMIT, MISSOURI
RR109	A2	Common	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:36 Page: 1

ID:GaXR44uoL9ZRF6z\_IrTSOyyLCVn-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i754250f1

12/02/2021



Scale = 1:32.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.02	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.05	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	7-8	>999	240	Weight: 35 lb	FT = 10%

#### LUMBER

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

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

LOAD CASE(S) Standard

#### BRACING

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

REACTIONS (lb/size) 6=597/0-3-8, 8=597/0-3-8  
Max Horiz 8=-62 (LC 6)  
Max Uplift 6=-90 (LC 9), 8=-90 (LC 8)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/35, 2-3=-638/89, 3-4=-638/89,  
4-5=0/35, 2-8=-544/131, 4-6=-544/131  
BOT CHORD 7-8=-14/480, 6-7=-14/480  
WEBS 3-7=0/246

#### 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
- 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'-0-0 tall by 2'-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 8 and 90 lb uplift at joint 6.



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	Job Reference (optional)
RR109	B1	Monopitch	7	1		

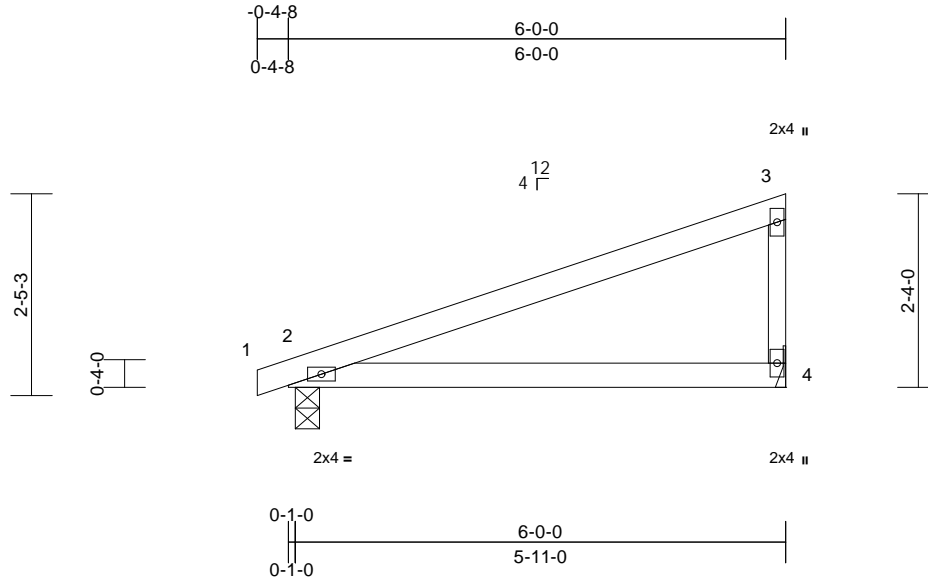
Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:38 Page: 1

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RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716374  
LEE'S SUMMIT, MISSOURI

12/02/2021



Scale = 1:27.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	L/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.07	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.13	2-4	>526	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 16 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (lb/size) 2=297/0-3-8, 4=257/ Mechanical  
Max Horiz 2=91 (LC 5)  
Max Uplift 2=-65 (LC 4), 4=-55 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-79/52, 3-4=-200/89  
BOT CHORD 2-4=-28/22

#### 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'-0" tall by 2'-0" wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 4 and 65 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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Chesterfield, MO 63017



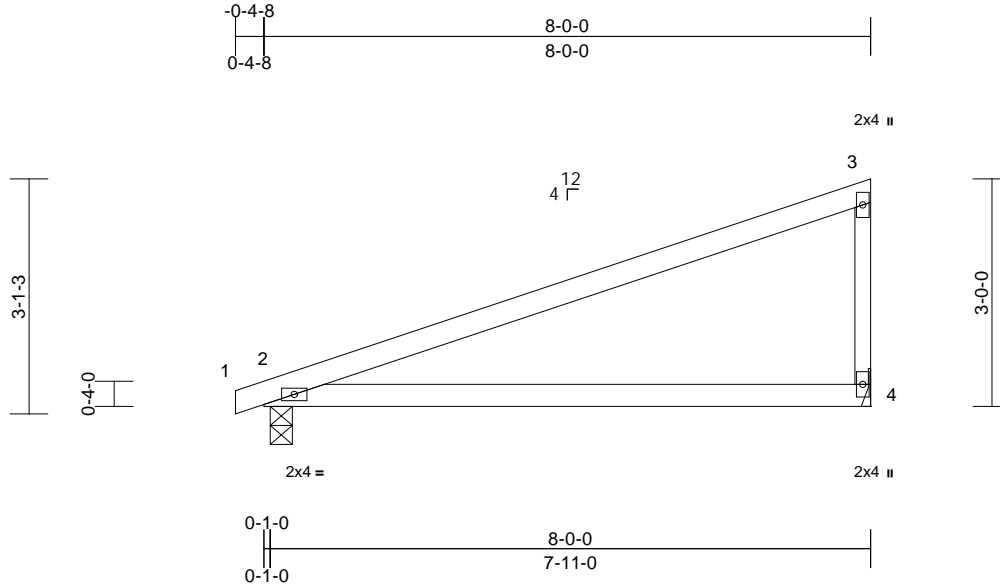
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	B2	Monopitch	3	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:35 Page: 1  
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RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716375  
LEE'S SUMMIT, MISSOURI

12/02/2021



Scale = 1:30.4

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	0.77	Vert(LL)	-0.17	2-4	>553	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.34	2-4	>276	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 21 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (lb/size) 2=386/0-3-8, 4=348/ Mechanical  
Max Horiz 2=121 (LC 5)  
Max Uplift 2=-79 (LC 4), 4=-74 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-105/70, 3-4=-270/121  
BOT CHORD 2-4=-38/29

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00" tall by 2'-00"-00" wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 4 and 79 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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Chesterfield, MO 63017

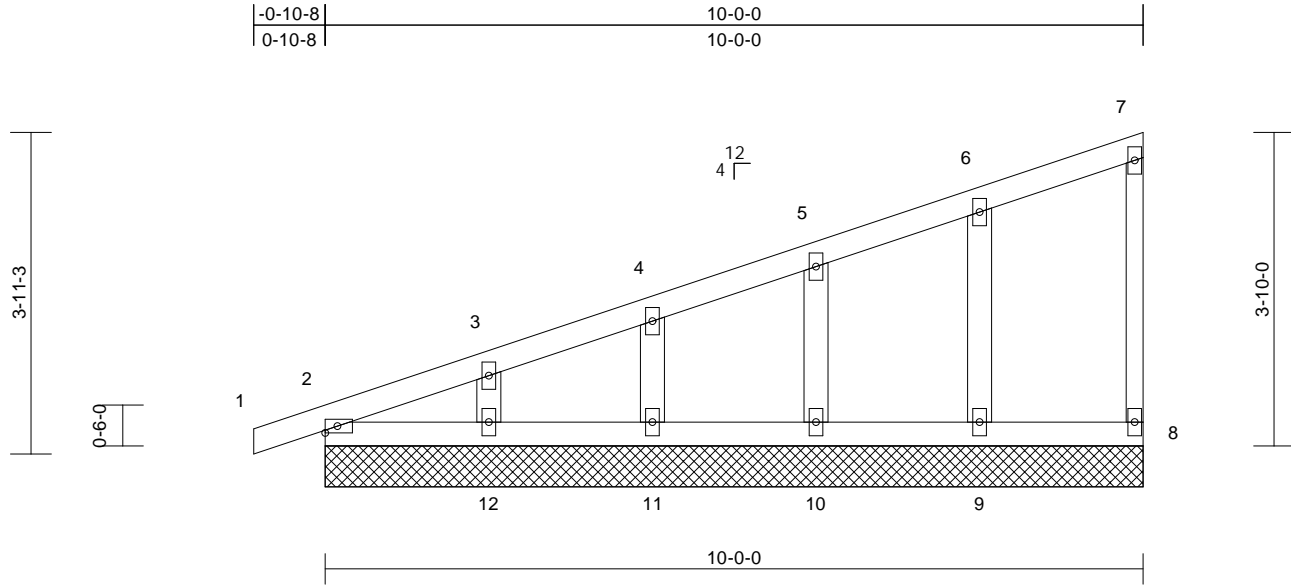
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	C1	GABLE	1	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:35 Page: 1  
ID:2ncXplsXOfbjlB6l7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwrcDoi7J4zJ6m

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716376  
LEE'S SUMMIT, MISSOURI

12/02/2021



Scale = 1:28.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	8	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 35 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

<b>REACTIONS</b> (lb/size)	2=150/10-0-0, 8=69/10-0-0, 9=194/10-0-0, 10=177/10-0-0, 11=180/10-0-0, 12=182/10-0-0
Max Horiz	2=158 (LC 5)
Max Uplift	2=-22 (LC 4), 8=-16 (LC 5), 9=-46 (LC 4), 10=-42 (LC 8), 11=-44 (LC 4), 12=-52 (LC 8)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/6, 2-3=-129/27, 3-4=-102/21, 4-5=-86/21, 5-6=-76/22, 6-7=-61/29, 7-8=-53/22
BOT CHORD	2-12=-50/37, 11-12=-50/37, 10-11=-50/37, 9-10=-50/37, 8-9=-50/37
WEBS	3-12=-140/77, 4-11=-141/67, 5-10=-138/68, 6-9=-151/62

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left 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) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 8, 22 lb uplift at joint 2, 52 lb uplift at joint 12, 44 lb uplift at joint 11, 42 lb uplift at joint 10 and 46 lb uplift at joint 9.
- 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



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	C2	Monopitch	9	1	Job Reference (optional)

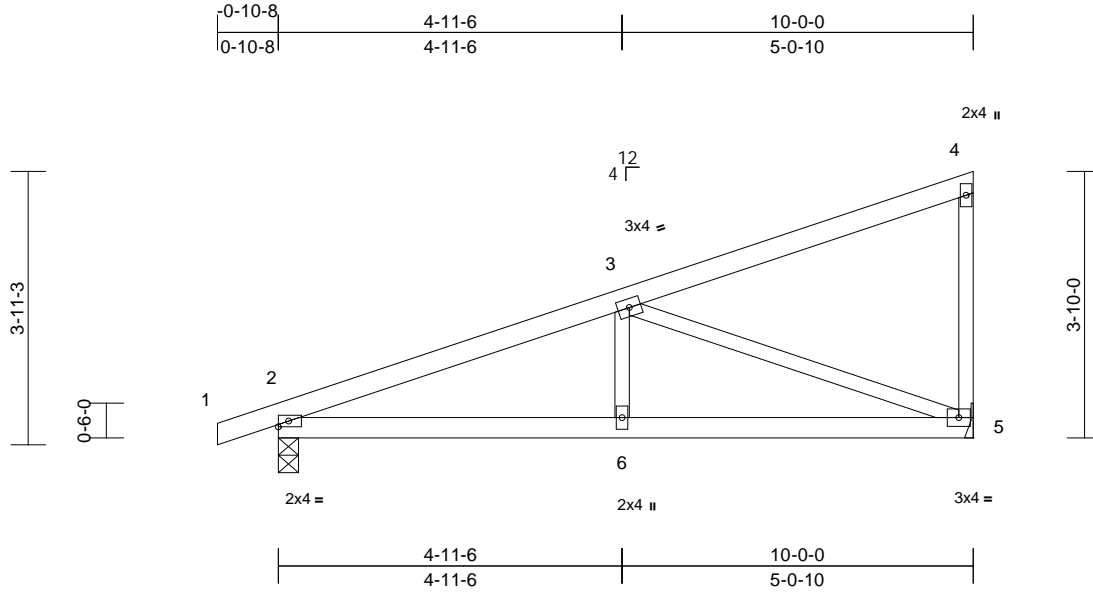
Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:35 Page: 1

ID:2ncXplsXOfbjIB6i7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJ6H

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716377  
LEE'S SUMMIT, MISSOURI

12/02/2021



Scale = 1:33.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.02	2-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.04	5-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	2-6	>999	240	Weight: 33 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (lb/size) 2=514/0-3-8, 5=435/ Mechanical  
Max Horiz 2=158 (LC 5)  
Max Uplift 2=-115 (LC 4), 5=-94 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-782/113, 3-4=-109/21,  
4-5=-141/57

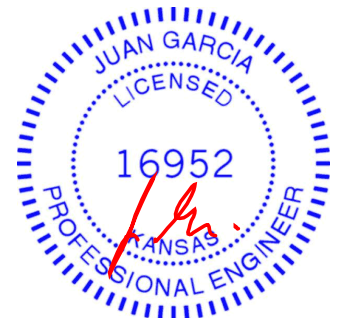
BOT CHORD 2-6=-134/682, 5-6=-134/682

WEBS 3-6=0/228, 3-5=-714/178

#### 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'-0-0 tall by 2'-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 5 and 115 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



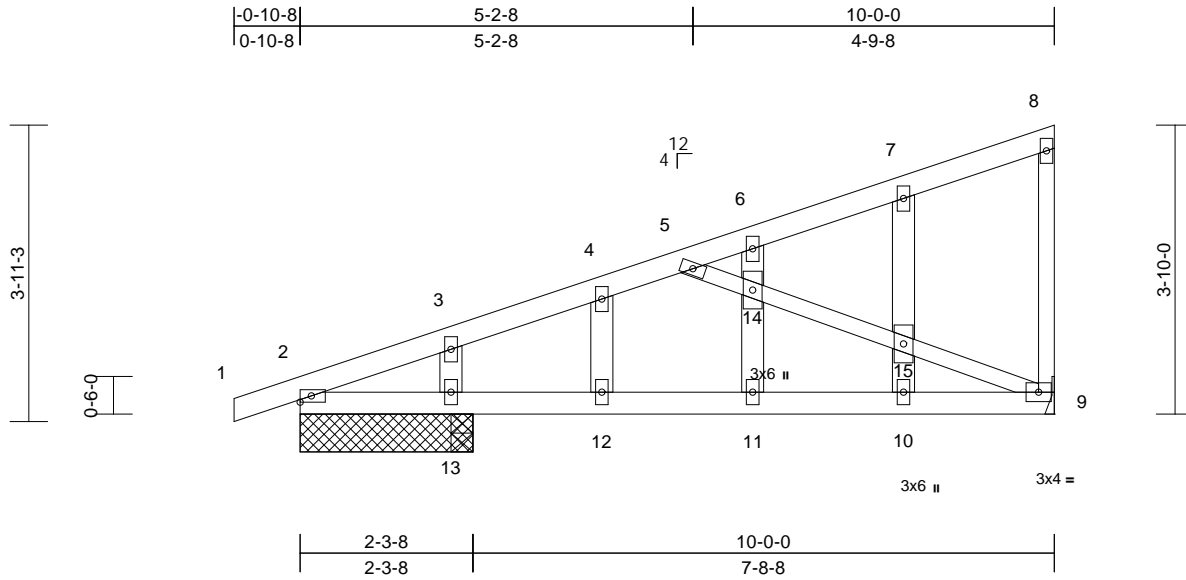
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION
RR109	C3	Monopitch Structural Gable	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						148716378
						LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:40 Page: 1

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12/02/2021



Scale = 1:30.5

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	0.18	Vert(LL)	-0.03	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.05	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.01	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	10-11	>999	240	Weight: 38 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

REACTIONS	(lb/size)	2=344/2-3-8, 9=401/ Mechanical, 13=207/2-3-8
	Max Horiz	2=158 (LC 5)
	Max Uplift	2=72 (LC 4), 9=84 (LC 8), 13=53 (LC 8)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/6, 2-3=-591/51, 3-4=-587/83, 4-5=-526/94, 5-6=-112/0, 6-7=-78/5, 7-8=-60/29, 8-9=-100/32
BOT CHORD	2-13=-94/524, 12-13=-94/524, 11-12=-94/524, 10-11=-94/524, 9-10=-94/524
WEBS	5-14=-536/134, 14-15=-540/134, 9-15=-557/138, 3-13=-147/77, 4-12=0/87, 6-14=0/83, 11-14=0/90, 7-15=-100/51, 10-15=-53/42

#### 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) All plates are 2x4 MT20 unless otherwise indicated.
- 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) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 84 lb uplift at joint 9, 72 lb uplift at joint 2 and 53 lb uplift at joint 13.
- 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



November 9, 2021

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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, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

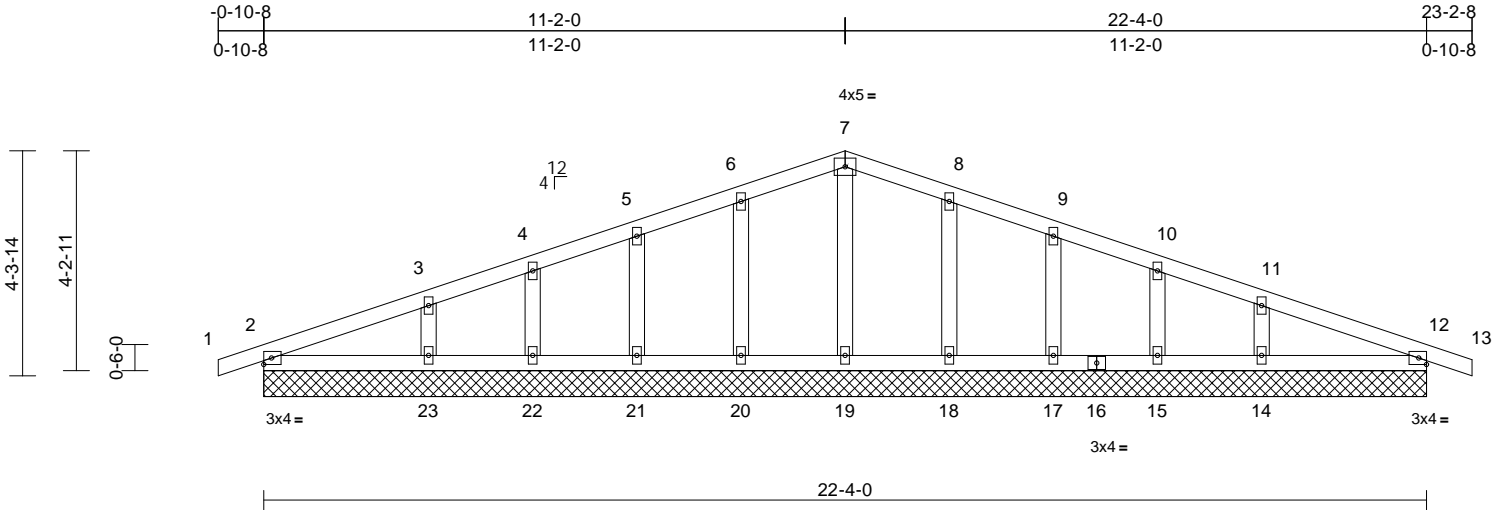
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION
RR109	D1	Common Supported Gable	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						148716379
						LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66671,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:40 Page: 1

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12/02/2021



Scale = 1:44.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	12	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 77 lb FT = 10%

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

**WEBS**  
7-19=-123/0, 6-20=-150/70, 5-21=-144/69,  
4-22=-117/57, 3-23=-205/101, 8-18=-150/69,  
9-17=-144/69, 10-15=-117/57, 11-14=-205/99

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

**REACTIONS** (lb/size)  
2=191/22-4-0, 12=191/22-4-0,  
14=275/22-4-0, 15=145/22-4-0,  
17=187/22-4-0, 18=186/22-4-0,  
19=163/22-4-0, 20=186/22-4-0,  
21=187/22-4-0, 22=145/22-4-0,  
23=275/22-4-0  
Max Horiz 2=-71 (LC 9)  
Max Uplift 2=-45 (LC 4), 12=-54 (LC 5),  
14=-68 (LC 9), 15=-36 (LC 5),  
17=-44 (LC 9), 18=-46 (LC 9),  
20=-46 (LC 8), 21=-44 (LC 8),  
22=-36 (LC 4), 23=-70 (LC 8)  
Max Grav 2=191 (LC 1), 12=191 (LC 1),  
14=275 (LC 22), 15=145 (LC 22),  
17=187 (LC 1), 18=189 (LC 22),  
19=163 (LC 1), 20=189 (LC 21),  
21=187 (LC 1), 22=145 (LC 21),  
23=275 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/6, 2-3=-81/59, 3-4=-47/60, 4-5=-28/75,  
5-6=-29/92, 6-7=-31/110, 7-8=-31/106,  
8-9=-29/77, 9-10=-28/47, 10-11=-35/28,  
11-12=-56/38, 12-13=0/6  
BOT CHORD 2-23=-3/57, 22-23=-3/57, 21-22=-3/57,  
20-21=-3/57, 19-20=-3/57, 18-19=-3/57,  
17-18=-3/57, 15-17=-3/57, 14-15=-3/57,  
12-14=-3/57

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 2, 46 lb uplift at joint 20, 44 lb uplift at joint 21, 36 lb uplift at joint 22, 70 lb uplift at joint 23, 46 lb uplift at joint 18, 44 lb uplift at joint 17, 36 lb uplift at joint 15, 68 lb uplift at joint 14 and 54 lb uplift at joint 12.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

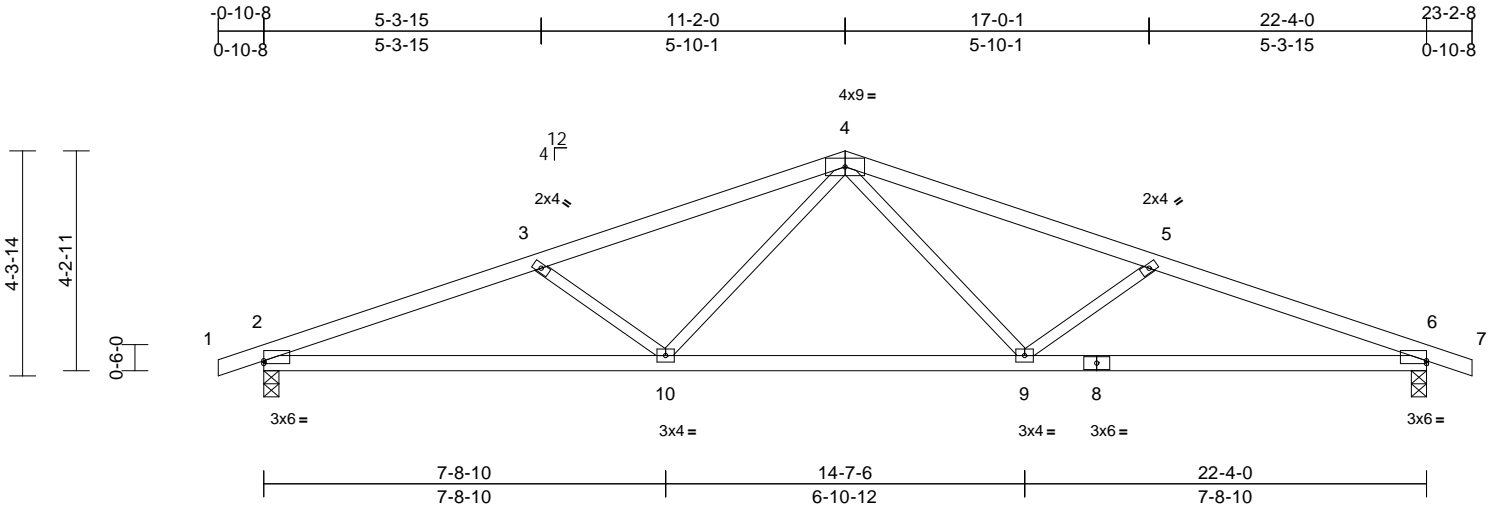
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	Job Reference (optional)
RR109	D2	Common	5	1		

Wheeler Lumber, Waverly, KS - 66671,

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RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716380  
LEE'S SUMMIT, MISSOURI

12/02/2021



Scale = 1:44.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.12	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.25	6-9	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.07	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	9-10	>999	240	Weight: 68 lb	FT = 10%

#### LUMBER

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

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

LOAD CASE(S) Standard

#### BRACING

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

REACTIONS (lb/size) 2=1063/0-3-8, 6=1063/0-3-8  
Max Horiz 2=-71 (LC 13)  
Max Uplift 2=-189 (LC 4), 6=-189 (LC 5)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/6, 2-3=-2232/355, 3-4=-1909/259, 4-5=-1909/260, 5-6=-2232/355, 6-7=0/6  
BOT CHORD 2-10=-333/2049, 9-10=-127/1406, 6-9=-280/2049  
WEBS 4-9=-59/541, 5-9=-418/221, 4-10=-58/541, 3-10=-418/221

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 189 lb uplift at joint 2 and 189 lb uplift at joint 6.



November 9, 2021

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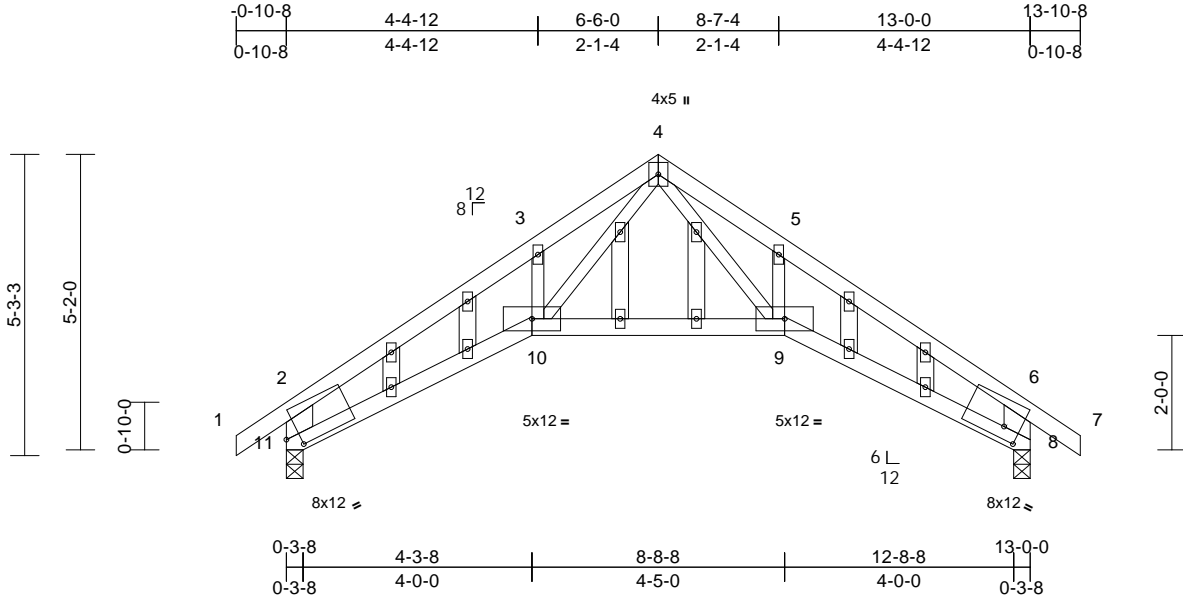
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION
RR109	E1	GABLE	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716381 LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:44 Page: 1  
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12/02/2021



Scale = 1:40.3

Plate Offsets (X, Y): [8:0-3-5,0-2-7], [11:0-2-13,0-2-7]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.16	9-10	>968	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.29	9-10	>511	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.27	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	9-10	>999	240	Weight: 55 lb	FT = 10%

#### LUMBER

TOP CHORD	2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 11-2,8-6:2x6 SP DSS
OTHERS	2x4 SPF No.2

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-3-11 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(lb/size) 8=642/0-3-8, 11=642/0-3-8

Max Horiz 11=154 (LC 6)

Max Uplift 8=-88 (LC 9), 11=-88 (LC 8)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/43, 2-3=-1287/152, 3-4=-1079/272, 4-5=-1069/195, 5-6=-1287/84, 6-7=0/43, 2-11=-1009/165, 6-8=-1009/102

BOT CHORD 10-11=-127/1104, 9-10=0/624, 8-9=-11/1029

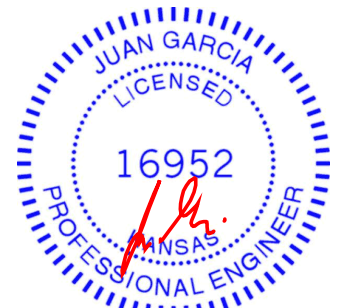
WEBS 4-9=-180/520, 5-9=-31/204, 4-10=-219/592, 3-10=0/172

#### 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.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 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.
- Bearing at joint(s) 11, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 88 lb uplift at joint 11 and 88 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



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



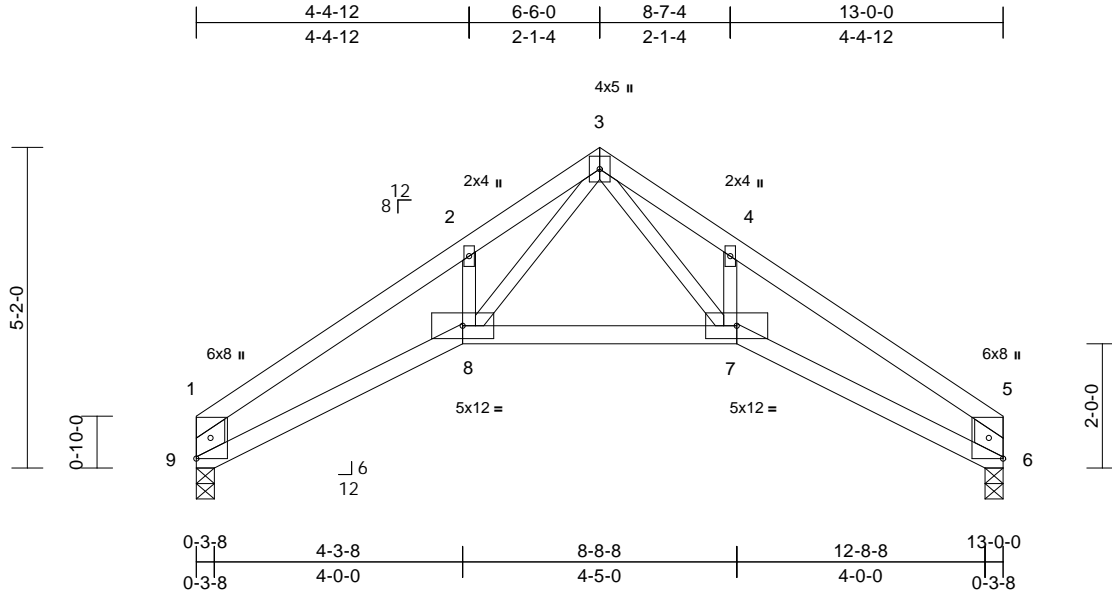
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	E2	Roof Special	5	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:44 Page: 1  
ID:2ncXplsXOfbjIB6i7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwrrCDoi7J4zJ6m

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716382  
LEE'S SUMMIT, MISSOURI

12/02/2021



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.25	7-8	>598	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.46	7-8	>325	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.41	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	7-8	>999	240	Weight: 44 lb	FT = 10%

**LUMBER**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\* 9-1,6-5:2x6 SP DSS

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

**REACTIONS** (lb/size) 6=564/0-3-8, 9=564/0-3-8  
Max Horiz 9=135 (LC 4)  
Max Uplift 6=62 (LC 9), 9=62 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1280/169, 2-3=-1096/288, 3-4=-1096/228, 4-5=-1280/101, 1-9=-899/147, 5-6=-899/100  
BOT CHORD 8-9=-153/1074, 7-8=-3/606, 6-7=-39/1026  
WEBS 3-7=-197/549, 4-7=-50/195, 3-8=-229/612, 2-8=-35/172

- 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
  - 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.
  - Bearing at joint(s) 9, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 9 and 62 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.

**LOAD CASE(S)** Standard



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



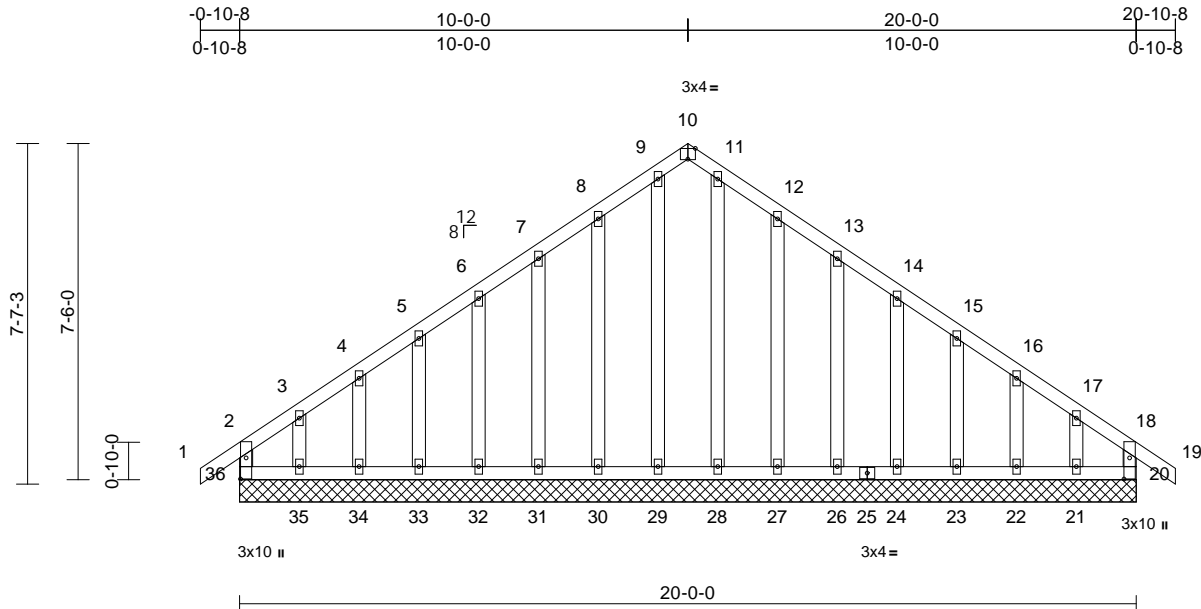
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716383 LEE'S SUMMIT, MISSOURI
RR109	E3	GABLE	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:44 Page: 1

ID:2ncXplsxObljB6l7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrcD0i7J4ZJ6m

12/02/2021



Scale = 1:51.4

Plate Offsets (X, Y): [10:0-2-0,Edge], [20:0-5-10,0-1-8], [36:0-5-10,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	20	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
Weight: 115 lb FT = 10%											

**LUMBER**

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

**BRACING**

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

**REACTIONS** (lb/size)

20=148/20-0-0, 21=83/20-0-0, 22=127/20-0-0, 23=119/20-0-0, 24=120/20-0-0, 26=120/20-0-0, 27=119/20-0-0, 28=122/20-0-0, 29=122/20-0-0, 30=119/20-0-0, 31=120/20-0-0, 32=120/20-0-0, 33=119/20-0-0, 34=127/20-0-0, 35=83/20-0-0, 36=148/20-0-0	
Max Horiz	36=-213 (LC 6)
Max Uplift	20=-53 (LC 5), 21=-120 (LC 9), 22=-31 (LC 9), 23=-50 (LC 9), 24=-45 (LC 9), 26=-47 (LC 9), 27=-66 (LC 9), 30=-64 (LC 8), 31=-47 (LC 8), 32=-45 (LC 8), 33=-51 (LC 8), 34=-28 (LC 8), 35=-133 (LC 8), 36=-96 (LC 4)
Max Grav	20=166 (LC 15), 21=137 (LC 16), 22=127 (LC 22), 23=125 (LC 16), 24=124 (LC 16), 26=125 (LC 16), 27=128 (LC 16), 28=135 (LC 17), 29=146 (LC 18), 30=125 (LC 15), 31=125 (LC 15), 32=124 (LC 15), 33=126 (LC 15), 34=127 (LC 21), 35=158 (LC 15), 36=201 (LC 16)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-36=-162/77, 1-2=0/40, 2-3=-161/143, 3-4=-110/109, 4-5=-102/100, 5-6=-89/100, 6-7=-76/125, 7-8=-64/150, 8-9=-54/184, 9-10=-39/137, 10-11=-35/133, 11-12=-34/165, 12-13=-31/128, 13-14=-40/103, 14-15=-49/79, 15-16=-59/60, 16-17=-71/69, 17-18=-129/94, 18-19=0/40, 18-20=-136/43
BOT CHORD	35-36=-93/121, 34-35=-93/121, 33-34=-93/121, 32-33=-93/121, 31-32=-93/121, 30-31=-93/121, 29-30=-93/121, 28-29=-93/121, 27-28=-93/121, 26-27=-93/121, 24-26=-93/121, 23-24=-93/121, 22-23=-93/121, 21-22=-93/121, 20-21=-93/121
WEBS	3-35=-104/103, 4-34=-99/55, 5-33=-98/64, 6-32=-98/62, 7-31=-98/63, 8-30=-98/80, 9-29=-119/9, 11-28=-108/0, 12-27=-101/82, 13-26=-98/63, 14-24=-98/62, 15-23=-98/64, 16-22=-99/57, 17-21=-94/95

**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.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 36, 53 lb uplift at joint 20, 133 lb uplift at joint 35, 28 lb uplift at joint 24, 51 lb uplift at joint 33, 45 lb uplift at joint 32, 47 lb uplift at joint 31, 64 lb uplift at joint 30, 66 lb uplift at joint 27, 47 lb uplift at joint 26, 45 lb uplift at joint 24, 50 lb uplift at joint 23, 32 lb uplift at joint 22 and 120 lb uplift at joint 21.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.1.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

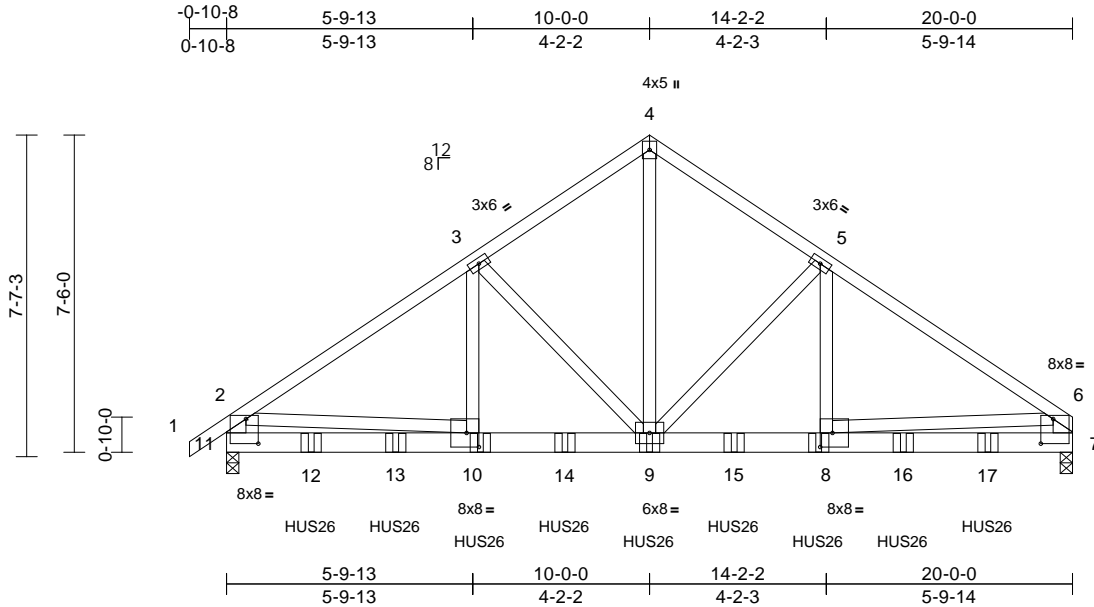
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	E4	COMMON GIRDER	1	4	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:42

ID:2ncXplsxOfbjB6l7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKw/rCDoi7J4zJ6m

12/02/2021



Scale = 1:54.5

Plate Offsets (X, Y): [6:0-3-8,0-7-0], [8:0-3-8,0-4-0], [10:0-3-8,0-4-0], [11:0-3-8,0-7-0]

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	0.49	Vert(LL)	-0.06	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.11	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.55	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	7-8	>999	240	Weight: 475 lb	FT = 10%

#### LUMBER

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x4 SPF No.2 \*Except\* 11-2,7-6:2x6 SP DSS

#### BRACING

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

#### REACTIONS

(lb/size) 7=8000/0-3-8, 11=8077/0-3-8  
Max Horiz 11=205 (LC 7)  
Max Uplift 7=402 (LC 9), 11=280 (LC 8)  
Max Grav 7=8050 (LC 16), 11=8362 (LC 15)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/43, 2-3=10231/334, 3-4=7483/331, 4-5=7487/331, 5-6=10281/386, 6-7=6433/283, 7-8=6420/277  
BOT CHORD 10-11=289/3670, 9-10=288/8523, 8-9=246/8477, 7-8=250/3157  
WEBS 4-9=278/7959, 5-9=3354/297, 5-8=106/3646, 3-9=3272/226, 3-10=35/3588, 2-10=74/4972, 6-8=52/5479

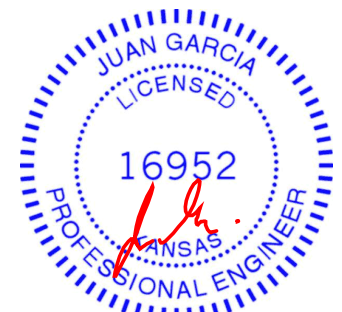
#### NOTES

- 4-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 0-4-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 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
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 280 lb uplift at joint 11 and 402 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.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss) or equivalent spaced at 6-0-0 oc max. starting at 2-0-0 from the left end to 14-0-0 to connect truss(es) to back face of bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss, Single Ply Girder) or equivalent spaced at 8-0-0 oc max. starting at 6-0-0 from the left end to 18-0-0 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, 2-4=-70, 4-6=-70, 7-11=-20  
Concentrated Loads (lb)  
Vert: 9=-1583 (B), 8=-1587 (B), 10=-1583 (B), 12=-1578 (B), 13=-1578 (B), 14=-1583 (B), 15=-1587 (B), 16=-1583 (B), 17=-1578 (B)



November 9, 2021

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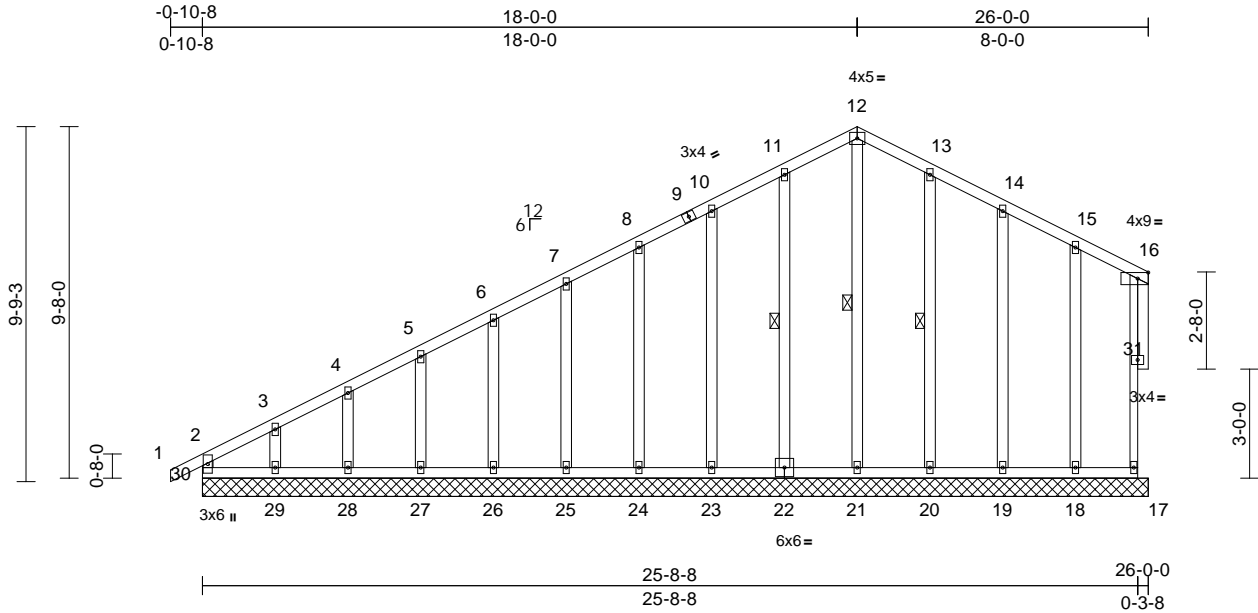
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	G1	Common Supported Gable	1	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:43  
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12/02/2021



Scale = 1:63.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	17	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
Weight: 148 lb FT = 10%											

<b>LUMBER</b>	
TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2 *Except* 16-17:2x3 SPF No.2
OTHERS	2x4 SPF No.2

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

WEBS	1 Row at midpt	12-21, 11-22, 13-20
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<b>REACTIONS</b>	(lb/size)	17=64/26-0-0, 18=177/26-0-0, 19=180/26-0-0, 20=187/26-0-0, 21=167/26-0-0, 22=187/26-0-0, 23=179/26-0-0, 24=180/26-0-0, 25=180/26-0-0, 26=180/26-0-0, 27=179/26-0-0, 28=184/26-0-0, 29=164/26-0-0, 30=161/26-0-0
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Max Horiz	30=287 (LC 5)
Max Uplift	17=43 (LC 4), 18=59 (LC 9), 19=57 (LC 9), 20=53 (LC 9), 21=14 (LC 7), 22=52 (LC 8), 23=56 (LC 8), 24=54 (LC 8), 25=54 (LC 8), 26=53 (LC 8), 27=58 (LC 8), 28=37 (LC 8), 29=128 (LC 8), 30=51 (LC 4)
Max Grav	17=89 (LC 16), 18=177 (LC 22), 19=180 (LC 22), 20=189 (LC 22), 21=188 (LC 15), 22=190 (LC 21), 23=179 (LC 21), 24=180 (LC 1), 25=180 (LC 1), 26=180 (LC 1), 27=179 (LC 21), 28=184 (LC 1), 29=166 (LC 15), 30=225 (LC 16)

<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension
---------------	--

<b>TOP CHORD</b>	2-30=-189/53, 1-2=0/32, 2-3=-259/99, 3-4=-211/92, 4-5=-195/94, 5-6=-179/107, 6-7=-164/120, 7-8=-149/134, 8-10=-135/147, 10-11=-120/161, 11-12=-102/172, 12-13=-98/166, 13-14=-99/141, 14-15=-95/110, 15-16=-114/96, 16-17=-99/71
<b>BOT CHORD</b>	29-30=-76/57, 28-29=-76/57, 27-28=-76/57, 26-27=-76/57, 25-26=-76/57, 24-25=-76/57, 23-24=-76/57, 21-23=-76/57, 20-21=-76/57, 19-20=-76/57, 18-19=-76/57, 17-18=-76/57
<b>WEBS</b>	12-21=-148/53, 11-22=-150/76, 10-23=-139/80, 8-24=-140/78, 7-25=-140/78, 6-26=-140/77, 5-27=-139/80, 4-28=-143/69, 3-29=-126/119, 13-20=-150/78, 14-19=-140/78, 15-18=-138/99

#### 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.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 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.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 30, 43 lb uplift at joint 17, 14 lb uplift at joint 21, 52 lb uplift at joint 22, 56 lb uplift at joint 23, 54 lb uplift at joint 24, 54 lb uplift at joint 25, 53 lb uplift at joint 26, 58 lb uplift at joint 27, 37 lb uplift at joint 28, 128 lb uplift at joint 29, 53 lb uplift at joint 20, 57 lb uplift at joint 19 and 59 lb uplift at joint 18.
- 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



November 9, 2021

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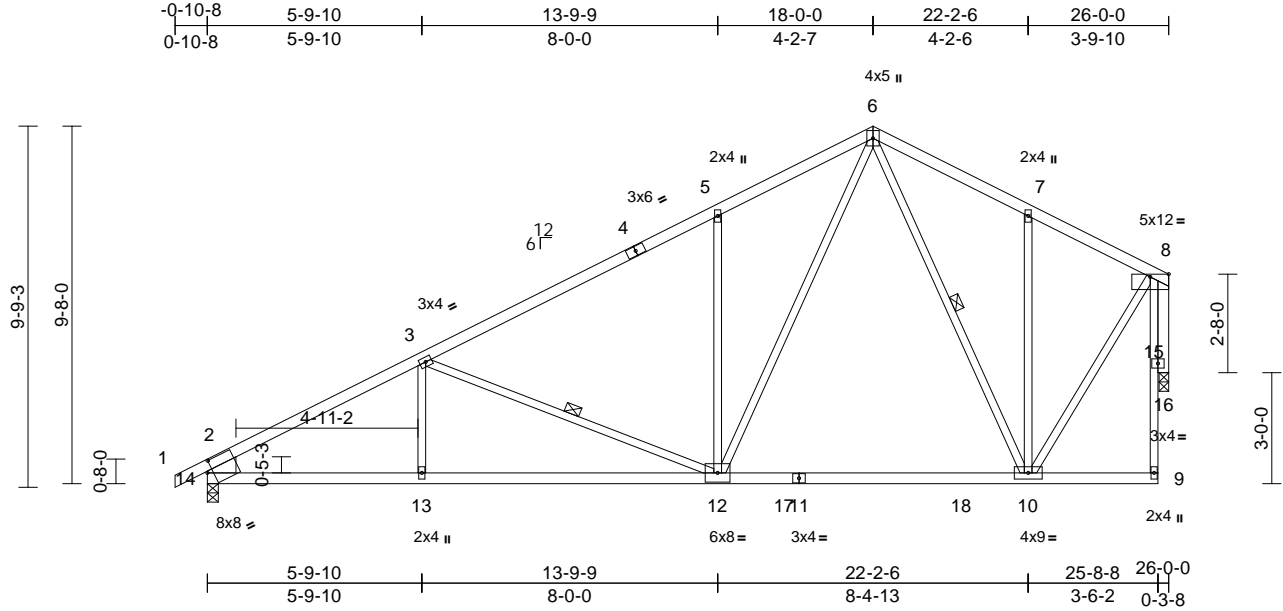
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	G2	Roof Special	6	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:43  
ID:2ncXplsXOfbjlB6l7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJ6m

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716386  
LEE'S SUMMIT, MISSOURI

12/02/2021



Scale = 1:62.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.22	10-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.37	12-13	>830	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.16	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.12	12-13	>999	240	Weight: 115 lb	FT = 10%

#### LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 1-4:2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 14-2:2x10 SP DSS
OTHERS	2x4 SPF No.2

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-8-6 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 3-12, 6-10

#### REACTIONS

(lb/size)	14=1237/0-3-8, 16=1121/0-3-2
Max Horiz	14=245 (LC 5)
Max Uplift	14=-181 (LC 8), 16=-137 (LC 8)
Max Grav	14=1275 (LC 2), 16=1202 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/39, 2-3=-1910/250, 3-5=-1374/188, 5-6=-1361/332, 6-7=-706/166, 7-8=-657/112, 9-15=-3/28, 8-15=-3/28, 2-14=-1129/200
BOT CHORD	13-14=-375/1624, 12-13=-375/1624, 10-12=-58/715, 9-10=-45/68
WEBS	8-10=-98/995, 3-13=0/228, 3-12=-524/220, 5-12=-519/272, 6-10=-378/102, 7-10=-340/183, 6-12=-277/1085, 8-16=-1207/138

#### 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
- 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, with BCDL = 10.0psf.
- Bearing at joint(s) 16 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 14 and 137 lb uplift at joint 16.
- 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



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

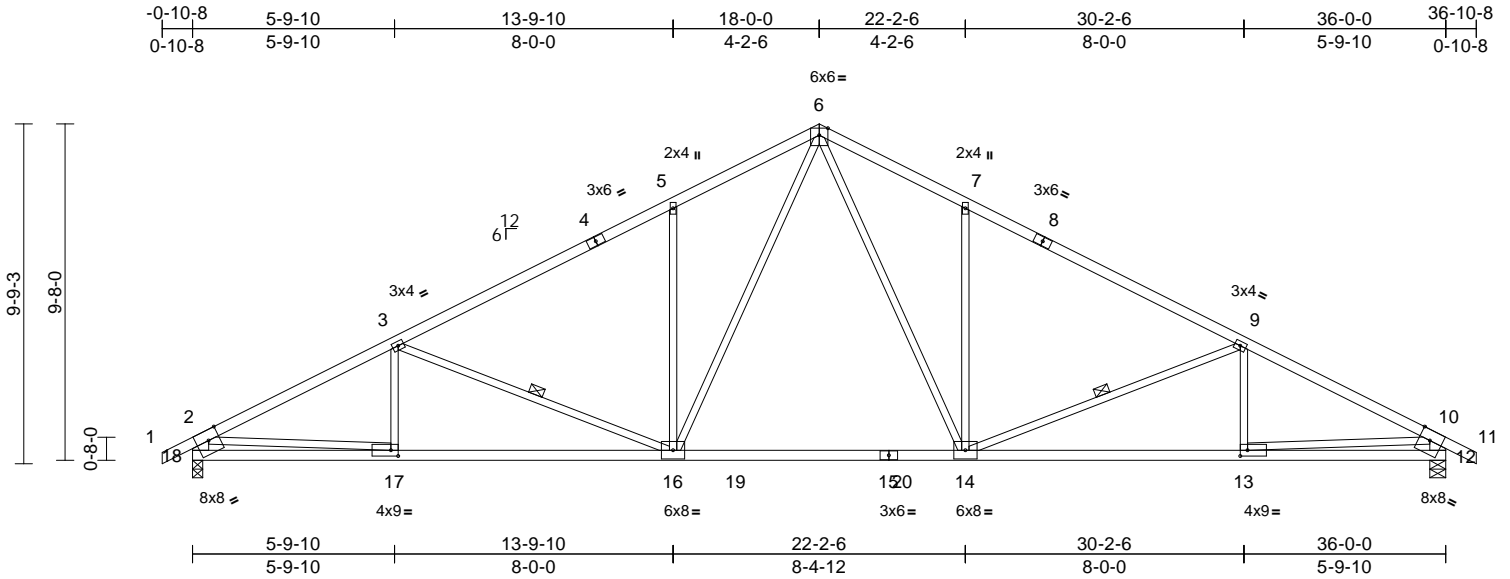


Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716387 LEE'S SUMMIT, MISSOURI
RR109	G3	Common	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:44  
ID:2ncXplsxOfbjlB6l7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKw/rCDoi7J4zJ6m

12/02/2021



Scale = 1:66.2

Plate Offsets (X, Y): [12:0-3-12,Edge], [13:0-2-8,0-2-0], [17:0-2-8,0-2-0], [18:0-3-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.26	14-16	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.43	14-16	>996	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.08	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	16-17	>999	240	Weight: 145 lb	FT = 10%

#### LUMBER

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF 2100F 1.8E  
WEBS 2x3 SPF No.2 \*Except\* 18-2,12-10:2x6 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.  
WEBS 1 Row at midpt 9-14, 3-16

**REACTIONS** (lb/size) 12=1677/0-5-8, 18=1677/0-3-8  
Max Horiz 18=150 (LC 13)  
Max Uplift 12=224 (LC 9), 18=224 (LC 8)  
Max Grav 12=1743 (LC 2), 18=1743 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/35, 2-3=-2882/343, 3-5=-2373/287, 5-6=-2351/431, 6-7=-2351/431, 7-9=-2373/287, 9-10=-2882/343, 10-11=0/35, 2-18=-1638/249, 10-12=-1638/248  
BOT CHORD 17-18=-226/675, 16-17=-383/2516, 14-16=-63/1605, 13-14=-233/2516, 12-13=-89/598  
WEBS 6-14=-284/1056, 7-14=-500/276, 9-14=-572/220, 9-13=-42/164, 6-16=-284/1056, 5-16=-500/276, 3-16=-572/220, 3-17=-42/164, 2-17=-157/1925, 10-13=-144/1925

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 224 lb uplift at joint 18 and 224 lb uplift at joint 12.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



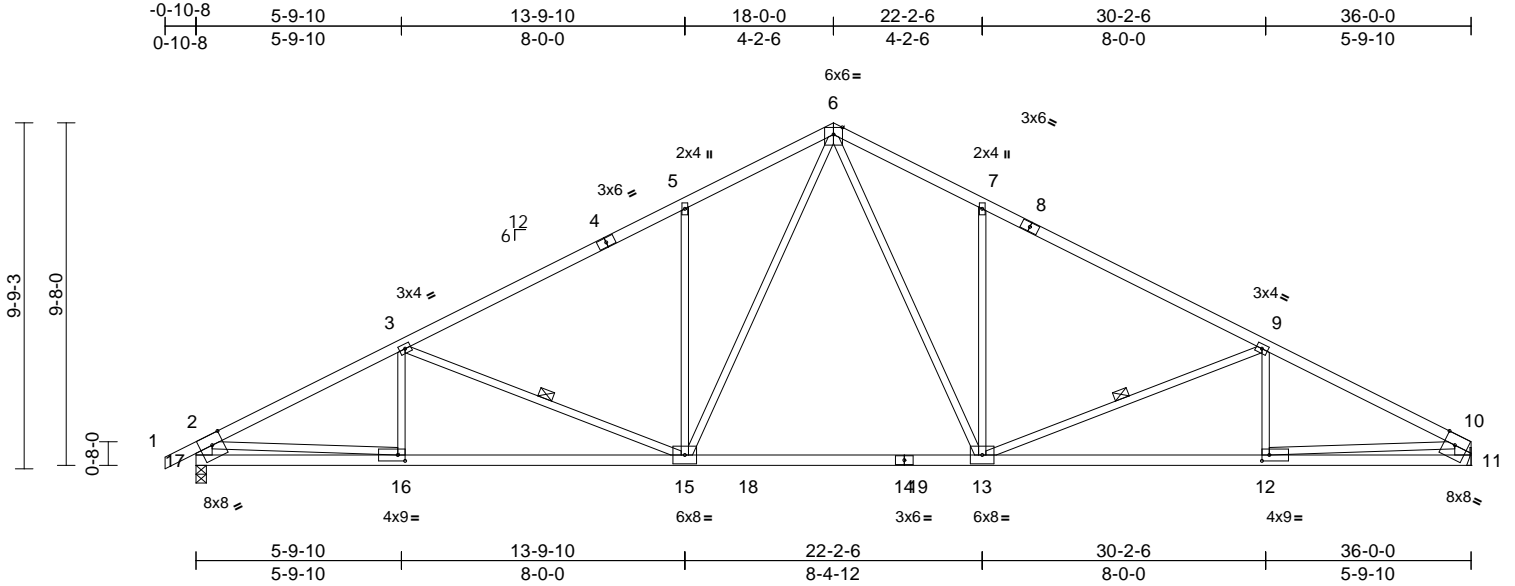
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION
RR109	G4	Common	3	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						148716388
						LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:44 Page: 1

ID:2ncXplsOOfjIB6i7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwrcDoi7J4zJ6m

12/02/2021



Scale = 1:65.1

Plate Offsets (X, Y): [11:0-3-12,Edge], [12:0-2-8,0-2-0], [16:0-2-8,0-2-0], [17:0-3-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.27	13-15	>999	360	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.43	13-15	>994	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.08	11	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	15-16	>999	240	Weight: 144 lb FT = 10%

**LUMBER**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF 2100F 1.8E  
WEBS 2x3 SPF No.2 \*Except\* 17-2,11-10:2x6 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.

**WEBS** 1 Row at midpt 9-13, 3-15  
**REACTIONS** (lb/size) 11=1598/ Mechanical, 17=1678/0-3-8  
Max Horiz 17=123 (LC 5)  
Max Uplift 11=19 (LC 9), 17=31 (LC 8)  
Max Grav 11=1679 (LC 2), 17=1744 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/35, 2-3=2884/46, 3-5=2375/55, 5-6=2353/149, 6-7=2353/150, 7-9=2377/55, 9-10=2890/47, 2-17=1639/57, 10-11=1572/45  
BOT CHORD 16-17=107/674, 15-16=80/2566, 13-15=0/1618, 12-13=0/2530, 11-12=15/514  
WEBS 6-13=117/1074, 7-13=495/165, 9-13=586/111, 9-12=52/158, 6-15=117/1073, 5-15=500/166, 3-15=572/109, 3-16=42/164, 2-16=0/1927, 10-12=0/2024

#### 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

- 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, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 11 and 31 lb uplift at joint 17.
- 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



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

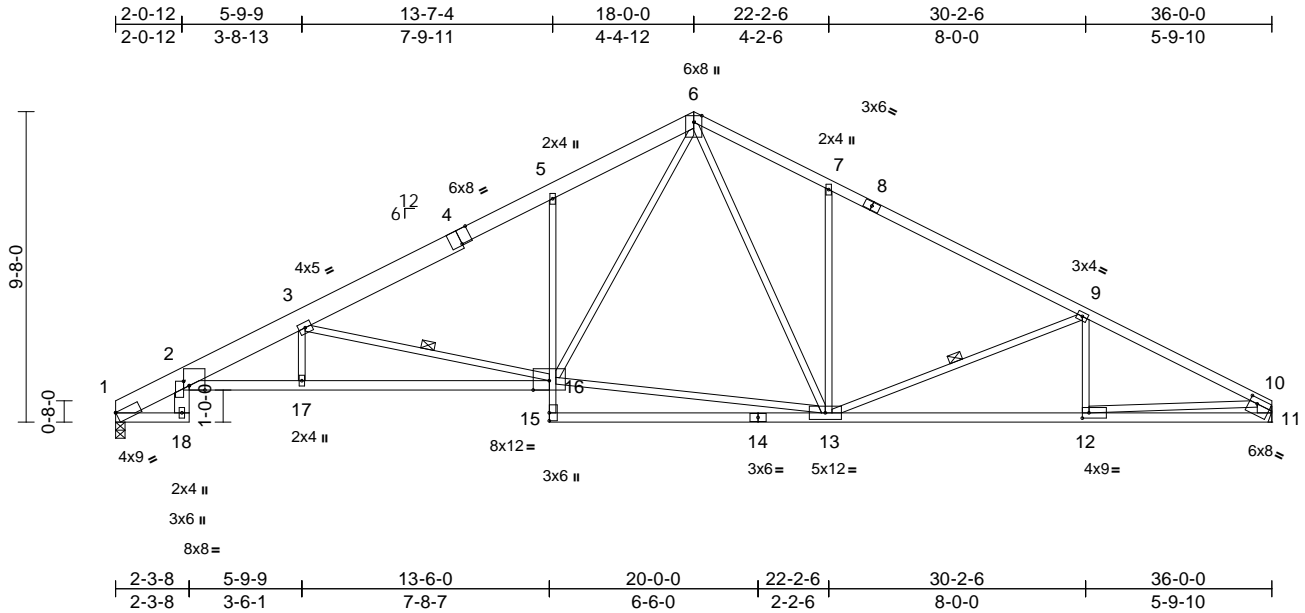
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716389 LEE'S SUMMIT, MISSOURI
RR109	G5	Roof Special	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:44 Page: 1

ID:2ncXplsxOfbjlB6i7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJ6m

12/02/2021



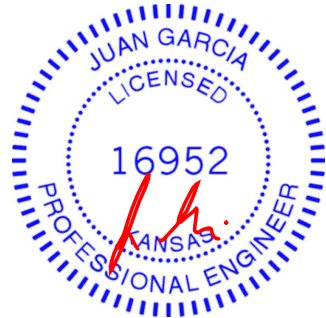
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<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.28	16-17	>999
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.58	16-17	>743
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.31	11	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	16-17	>999
							L/d		
							MT20		GRIP
									197/144
							Weight: 172 lb		
							FT = 10%		

<b>LUMBER</b>	
TOP CHORD	2x4 SPF No.2 *Except* 4-6:2x6 SPF No.2, 1-4:2x8 SP DSS
BOT CHORD	2x4 SPF No.2 *Except* 2-16:2x4 SPF 2100F 1.8E, 5-15:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 18-2,11-10:2x6 SPF No.2
<b>BRACING</b>	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 3-16, 9-13
<b>REACTIONS</b> (lb/size)	
1=1603/0-3-8, 11=1603/ Mechanical	
Max Horiz 1=116 (LC 5)	
Max Uplift 1=-19 (LC 8), 11=-19 (LC 9)	
<b>FORCES</b> (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-860/60, 2-3=-3967/81, 3-5=-2652/57, 5-6=-2598/151, 6-7=-2231/146, 7-9=-2270/53, 9-10=-2774/49, 10-11=-1537/46
BOT CHORD	1-18=0/0, 2-17=-130/3819, 16-17=-126/3814, 15-16=0/153, 5-16=-458/158, 13-15=0/93, 12-13=-1/2417, 11-12=-13/447
WEBS	2-18=0/59, 3-17=-30/183, 3-16=-1619/147, 13-16=0/1525, 6-16=-114/1348, 6-13=-124/834, 7-13=-478/164, 9-13=-581/115, 9-12=-55/149, 10-12=0/1977

- 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

- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 1 and 19 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



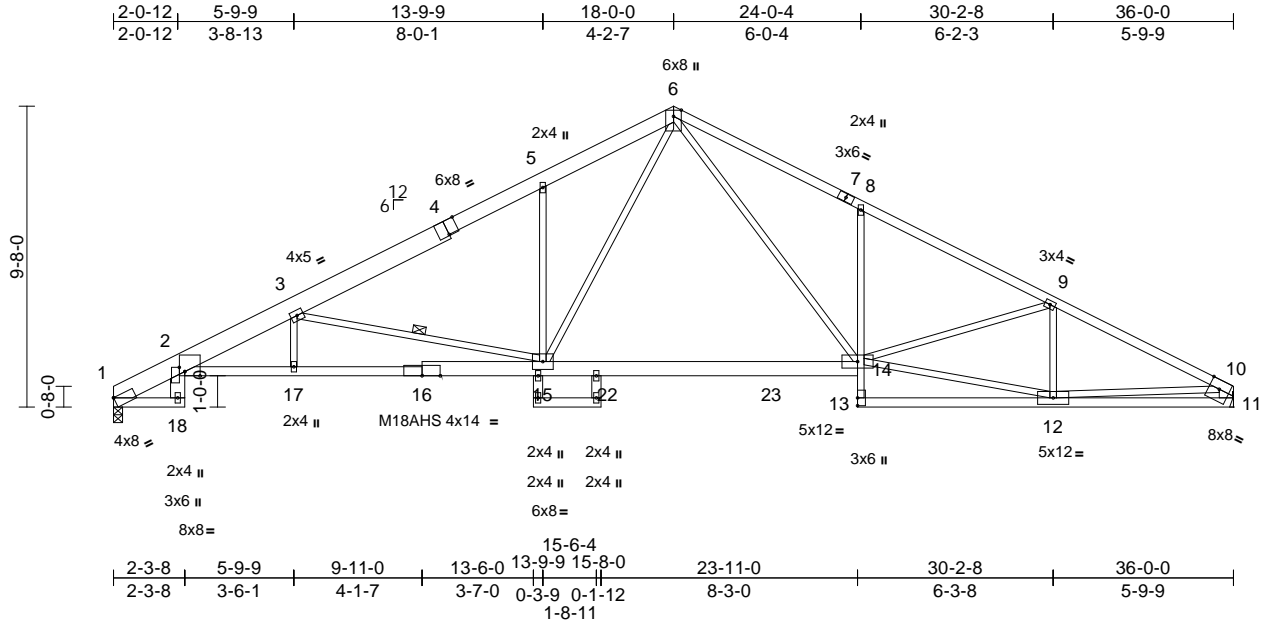
November 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716390 LEE'S SUMMIT, MISSOURI
RR109	G6	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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12/02/2021



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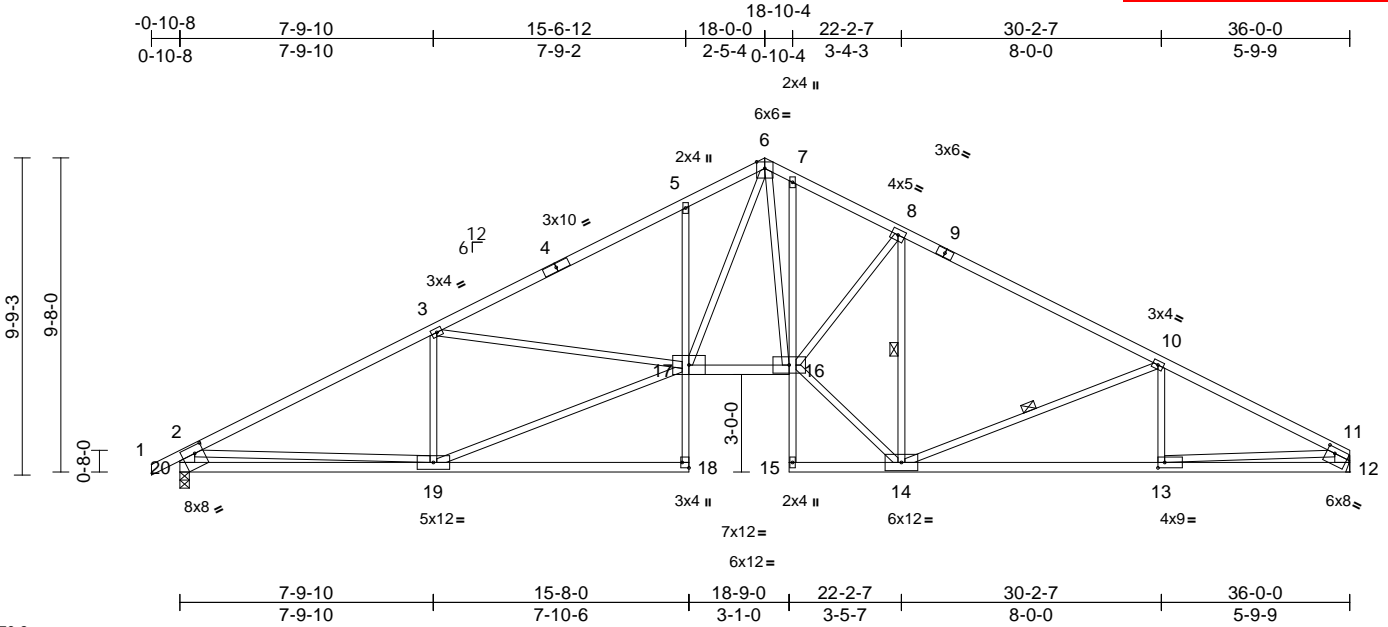


Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION
RR109	G8	Roof Special	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						148716392
						LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:46  
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12/02/2021



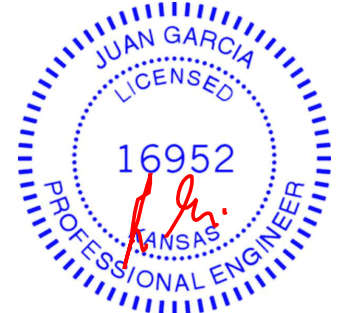
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Plate Offsets (X, Y): [12:0-3-0,0-2-0], [13:0-2-8,0-2-0], [18:Edge,0-2-8], [20:0-3-4,0-2-12]									
<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.23 16-17	>999	360
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.46 18-19	>933	240
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.24 12	n/a	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15 5-17	>999	240
							Weight: 162 lb FT = 10%		

<b>LUMBER</b>	
TOP CHORD	2x4 SPF 2100F 1.8E *Except* 6-9:2x4 SPF No.2
BOT CHORD	2x4 SPF No.2 *Except* 18-5,7-15:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 20-2,12-11:2x6 SP DSS
<b>BRACING</b>	
TOP CHORD	Structural wood sheathing directly applied or 2-8-12 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 9-7-4 oc bracing.
WEBS	1 Row at midpt 8-14, 10-14
<b>REACTIONS</b> (lb/size)	
12=1598/ Mechanical, 20=1678/0-3-8	
Max Horiz 20=160 (LC 12)	
Max Uplift 12=199 (LC 9), 20=224 (LC 8)	
<b>FORCES</b> (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/35, 2-3=-2728/327, 3-5=-3201/384, 5-6=-3137/502, 6-7=-2576/351, 7-8=-2752/345, 8-10=-2251/290, 10-11=-2770/344, 2-20=-1604/264, 11-12=-1536/221
BOT CHORD	19-20=-367/899, 18-19=0/30, 17-18=0/133, 5-17=-424/243, 16-17=-101/2235, 15-16=0/12, 7-16=-14/161, 14-15=-2/9, 13-14=-255/2412, 12-13=-75/467
WEBS	3-19=-818/241, 17-19=-376/2471, 3-17=0/448, 6-17=-361/1423, 6-16=-172/998, 8-16=-28/752, 8-14=-1339/149, 14-16=-117/2541, 10-14=-594/221, 10-13=-42/174, 2-19=7/1435, 11-13=-181/1952

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 224 lb uplift at joint 20 and 199 lb uplift at joint 12.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9,2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	G9	Common Supported Gable	1	1	Job Reference (optional)

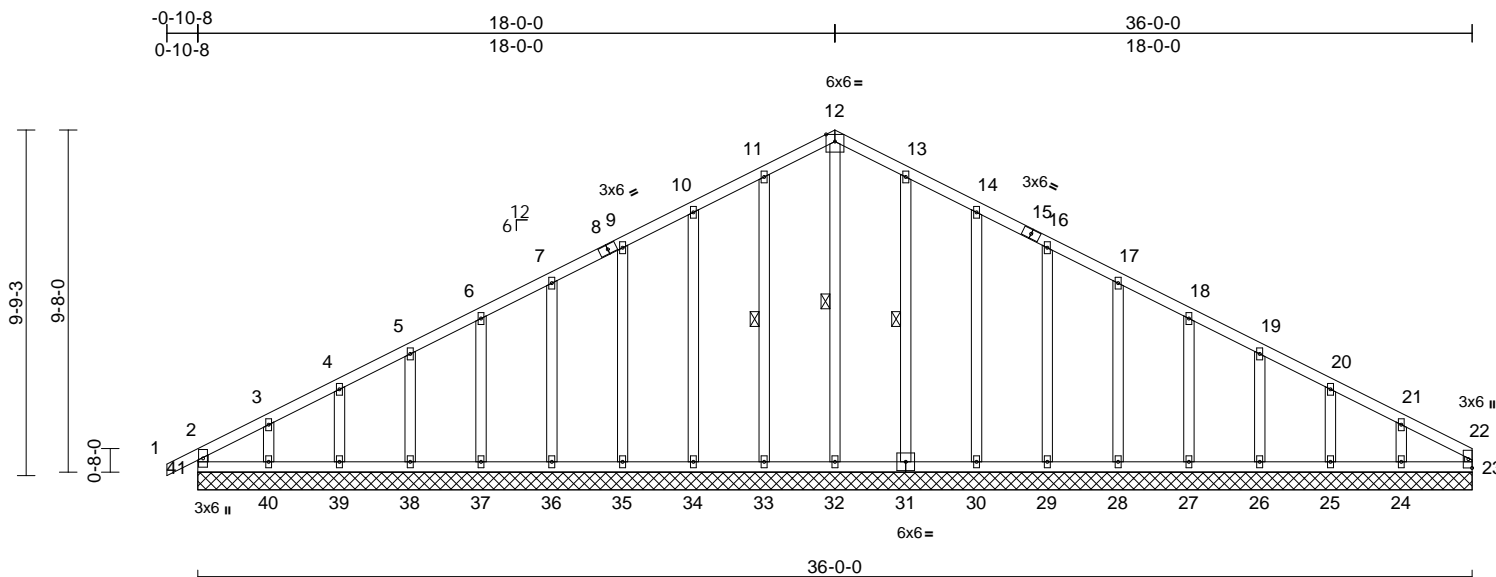
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716393  
LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:44 Page: 1

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12/02/2021



Scale = 1:65.1

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	0.07	Vert(LL)	n/a	-	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	23	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
										Weight: 183 lb	FT = 10%

**LUMBER**

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2 *Except* 22-23:2x3 SPF No.2
OTHERS	2x4 SPF No.2

**BRACING**

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

WEBS	1 Row at midpt	12-32, 11-33, 13-31
------	----------------	---------------------

<b>REACTIONS</b> (lb/size)	23=75/36-0-0, 24=194/36-0-0,
	25=177/36-0-0, 26=181/36-0-0,
Max Horiz	27=180/36-0-0, 28=180/36-0-0,
	29=180/36-0-0, 30=179/36-0-0,
Max Uplift	31=187/36-0-0, 32=158/36-0-0,
	33=187/36-0-0, 34=179/36-0-0,
	35=180/36-0-0, 36=180/36-0-0,
	37=180/36-0-0, 38=179/36-0-0,
	39=185/36-0-0, 40=161/36-0-0,
	41=169/36-0-0
	41=160 (LC 12)
	24=100 (LC 9), 25=43 (LC 9),
	26=57 (LC 9), 27=53 (LC 9),
	28=54 (LC 9), 29=53 (LC 9),
	30=58 (LC 9), 31=48 (LC 9),
	33=50 (LC 8), 34=57 (LC 8),
	35=53 (LC 8), 36=54 (LC 8),
	37=53 (LC 8), 38=57 (LC 8),
	39=40 (LC 8), 40=112 (LC 8),
	41=41 (LC 4)

**FORCES**

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	2-41=150/45, 1-2=0/32, 2-3=190/79, 3-4=132/86, 4-5=102/105, 5-6=78/131, 6-7=67/157, 7-9=56/182, 9-10=45/208, 10-11=43/235, 11-12=46/257, 12-13=46/249, 13-14=43/206, 14-16=43/159, 16-17=43/128, 17-18=43/102, 18-19=43/76, 19-20=60/50, 20-21=84/36, 21-22=133/36, 22-23=75/2
BOT CHORD	40-41=27/120, 39-40=27/120, 38-39=27/120, 37-38=27/120, 36-37=27/120, 35-36=27/120, 34-35=27/120, 33-34=27/120, 32-33=27/120, 30-32=27/120, 29-30=27/120, 28-29=27/120, 27-28=27/120, 26-27=27/120, 25-26=27/120, 24-25=27/120, 23-24=27/120
WEBS	12-32=174/0, 11-33=150/74, 10-34=139/81, 9-35=140/77, 7-36=140/78, 6-37=140/78, 5-38=139/80, 4-39=144/71, 3-40=125/110, 13-31=149/72, 14-30=139/82, 16-29=140/77, 17-28=140/78, 18-27=140/78, 19-26=141/79, 20-25=138/72, 21-24=150/103

**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.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 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.



November 9, 2021

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	G9	Common Supported Gable	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716393  
LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:47  
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12/02/2021

- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 41, 50 lb uplift at joint 33, 57 lb uplift at joint 34, 53 lb uplift at joint 35, 54 lb uplift at joint 36, 53 lb uplift at joint 37, 57 lb uplift at joint 38, 40 lb uplift at joint 39, 112 lb uplift at joint 40, 48 lb uplift at joint 31, 58 lb uplift at joint 30, 53 lb uplift at joint 29, 54 lb uplift at joint 28, 53 lb uplift at joint 27, 57 lb uplift at joint 26, 43 lb uplift at joint 25 and 100 lb uplift at joint 24.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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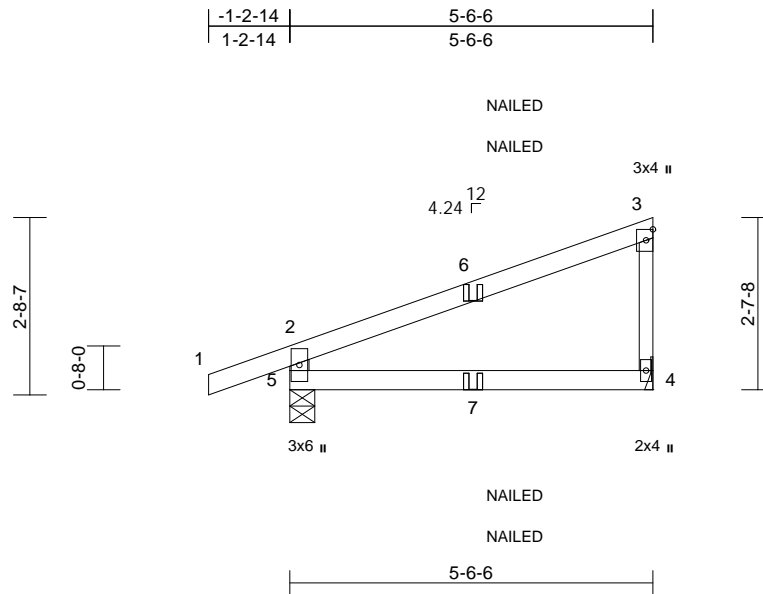


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 06 15:27:46 Page: 1  
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12/02/2021



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.07	4-5	>967	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%

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

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

(lb/size) 4=224/ Mechanical, 5=346/0-4-9  
Max Horiz 5=111 (LC 5)  
Max Uplift 4=-50 (LC 8), 5=-101 (LC 4)

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-306/140, 1-2=0/32, 2-3=-139/14,  
3-4=-160/73

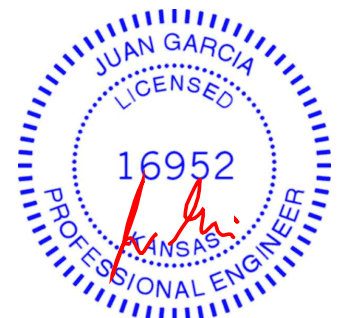
BOT CHORD 4-5=-26/45

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.  
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;  
cantilever left and right exposed ; end vertical left and  
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 101 lb uplift at  
joint 5 and 50 lb uplift at joint 4.
- 6) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.
- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d  
(0.148"x3.25") toe-nails per NDS guidelines.

8) 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=2 (F=1, B=1)



November 9, 2021



WARNING - verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MH-743.3 REV. 3/19/2020 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 ANSIT/TP1 Quality Criteria. DSB-89 and BCSI Building Co

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	J2	Jack-Open	3	1	Job Reference (optional)

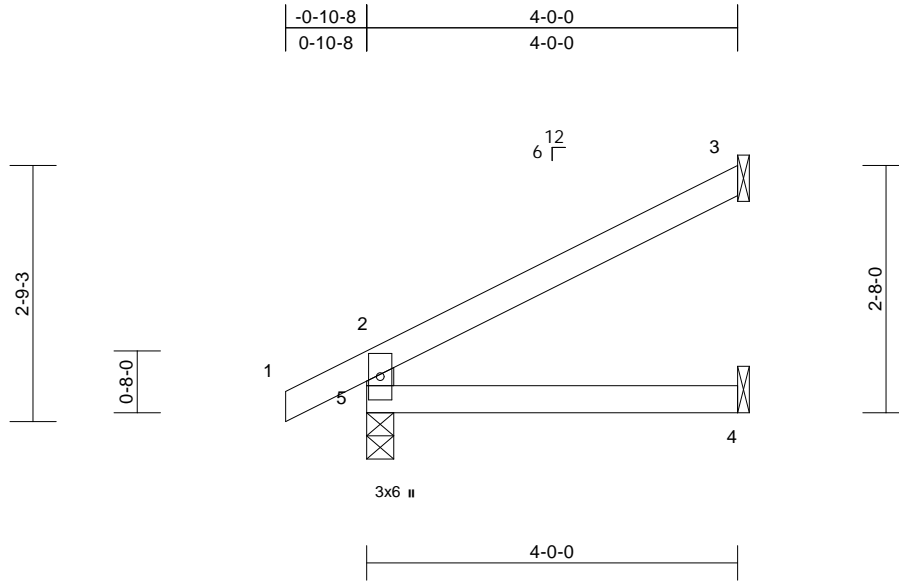
Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:46 Page: 1

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RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716395  
LEE'S SUMMIT, MISSOURI

12/02/2021



Scale = 1:24.8

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	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	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

#### BRACING

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

**REACTIONS** (lb/size) 3=116/ Mechanical, 4=45/  
Mechanical, 5=252/0-3-8  
Max Horiz 5=89 (LC 8)  
Max Uplift 3=66 (LC 8), 5=30 (LC 8)  
Max Grav 3=116 (LC 1), 4=71 (LC 3), 5=252  
(LC 1)

**FORCES** (lb) - Maximum Compression/Maximum  
Tension

TOP CHORD 2-5=-221/67, 1-2=0/32, 2-3=-75/40  
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) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 30 lb uplift at joint  
5 and 66 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



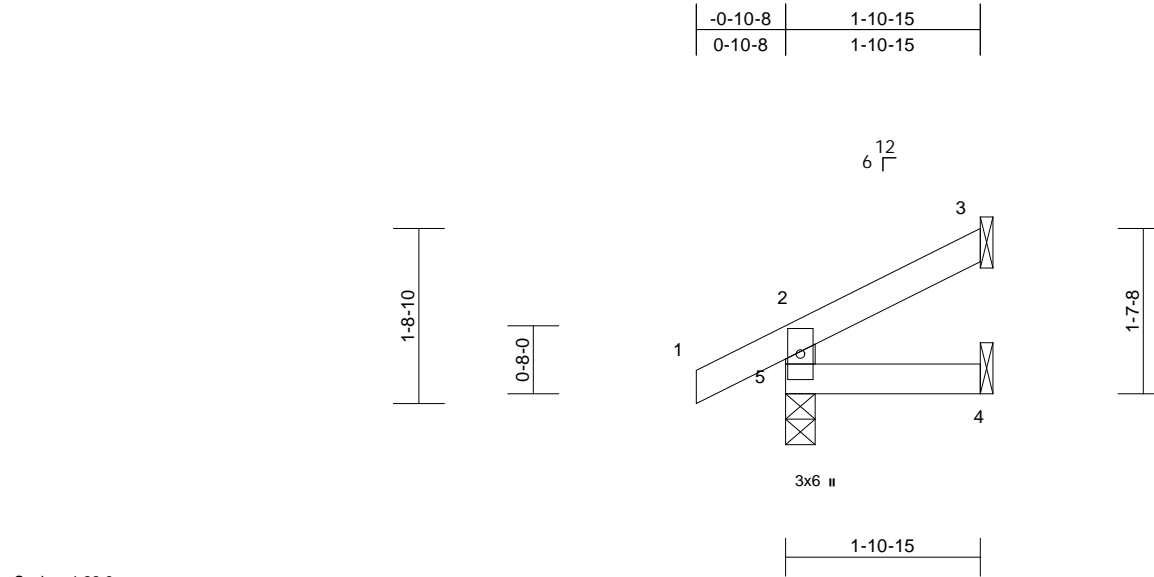
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716396 LEE'S SUMMIT, MISSOURI
RR109	J3	Jack-Open	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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12/02/2021



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>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	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

#### BRACING

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

**REACTIONS** (lb/size) 3=44/ Mechanical, 4=14/  
Mechanical, 5=171/0-3-8  
Max Horiz 5=48 (LC 8)  
Max Uplift 3=-30 (LC 8), 5=-26 (LC 8)  
Max Grav 3=44 (LC 1), 4=31 (LC 3), 5=171  
(LC 1)

**FORCES** (lb) - Maximum Compression/Maximum  
Tension

TOP CHORD 2-5=-150/44, 1-2=0/32, 2-3=-37/14  
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) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 26 lb uplift at joint  
5 and 30 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



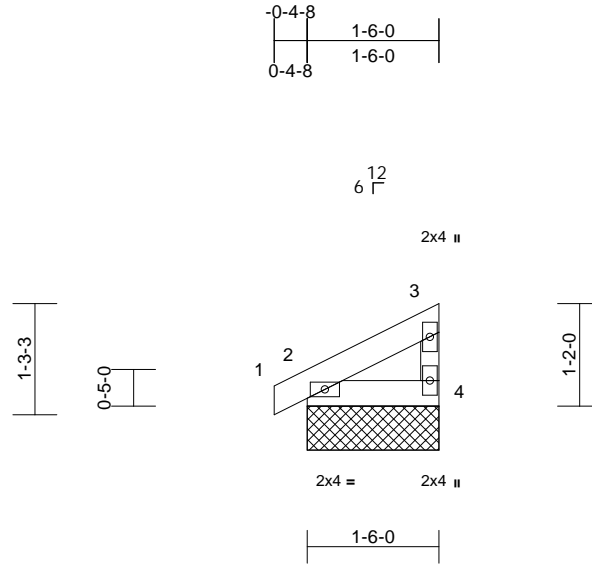
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	J4	Jack-Closed Supported Gable	2	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:48 Page: 1

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12/02/2021



Scale = 1:26.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999	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-P							Weight: 5 lb FT = 10%

**LUMBER**

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

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

LOAD CASE(S) Standard

**BRACING**

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

**REACTIONS** (lb/size) 2=93/1-6-0, 4=59/1-6-0  
 Max Horiz 2=35 (LC 5)  
 Max Uplift 2=-17 (LC 8), 4=-15 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/5, 2-3=-36/18, 3-4=-45/24  
 BOT CHORD 2-4=-11/9

**NOTES**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 4 and 17 lb uplift at joint 2.



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

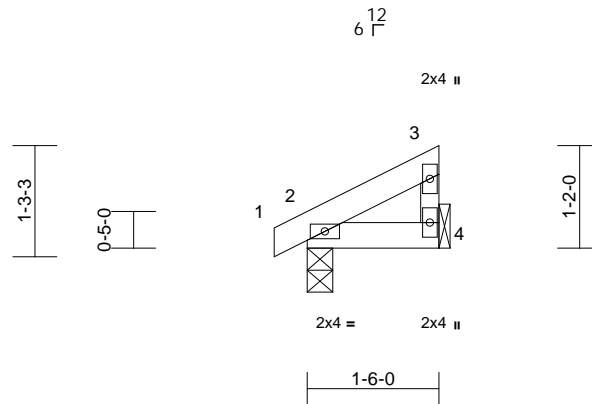
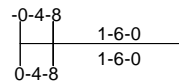


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716398 LEE'S SUMMIT, MISSOURI
RR109	J5	Jack-Closed	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:45 Page: 1  
ID:2ncXplsOofjIB6i7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKw/rCDoi7J4zJ6m



Scale = 1:26.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	0.00	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	2-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 5 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (lb/size) 2=94/0-3-8, 4=57/ Mechanical  
Max Horiz 2=35 (LC 5)  
Max Uplift 2=-17 (LC 8), 4=-15 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum  
Tension

TOP CHORD 1-2=0/5, 2-3=-36/18, 3-4=-44/23  
BOT CHORD 2-4=-11/9

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.  
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;  
cantilever left and right exposed; end vertical left and  
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 15 lb uplift at joint  
4 and 17 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

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Chesterfield, MO 63017

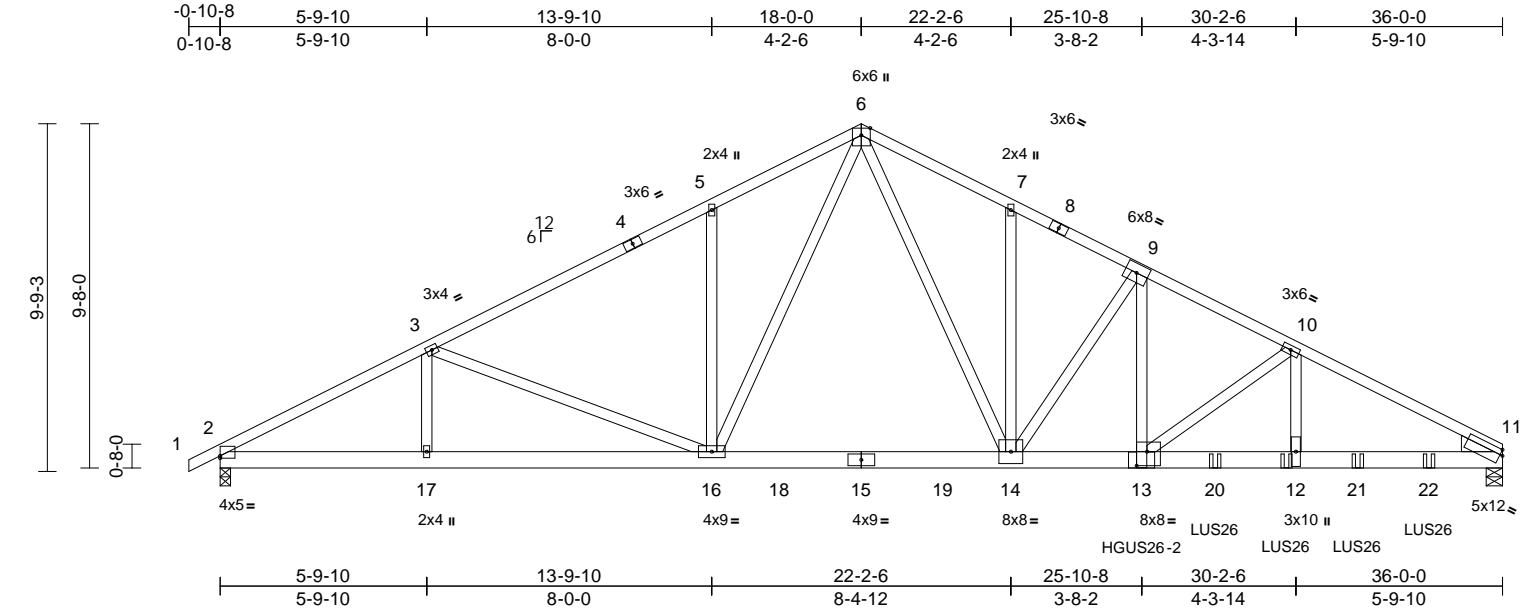
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION
RR109	R1	Common Girder	1	2	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						148716399
						LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:45 Page: 1

ID:2ncXplsxOfbjlB6l7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJ6m

12/02/2021



Scale = 1:64.7

Plate Offsets (X, Y): [2:Edge,0-0-13], [11:Edge,0-1-14], [13:0-3-8,0-4-12]

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	0.86	Vert(LL)	-0.20	13-14	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.36	13-14	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.76	Horz(CT)	0.09	11	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	13	>999	240	Weight: 411 lb FT = 10%

<b>LUMBER</b>	
TOP CHORD	2x4 SPF No.2 *Except* 1-4,8-11:2x4 SPF 2100F 1.8E
BOT CHORD	2x6 SP 2400F 2.0E
WEBS	2x4 SPF No.2
WEDGE	Right: 2x6 SP No.2
<b>BRACING</b>	
TOP CHORD	Structural wood sheathing directly applied or 4-2-15 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
<b>REACTIONS</b>	
(lb/size)	2=3060/0-3-8, 11=6329/0-5-8
Max Horiz	2=108 (LC 7)
Max Uplift	2=-191 (LC 8), 11=-591 (LC 9)
Max Grav	2=3222 (LC 13), 11=6606 (LC 14)
<b>FORCES</b>	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/11, 2-3=-6053/371, 3-5=-5541/395, 5-6=-5513/490, 6-7=-7411/688, 7-9=-7404/621, 9-10=-10562/927, 10-11=-12029/1069
BOT CHORD	2-17=-367/5300, 16-17=-367/5300, 14-16=-242/4520, 13-14=-694/9386, 12-13=-872/10400, 11-12=-872/10400
WEBS	6-14=-542/5153, 7-14=-274/113, 10-13=-1404/221, 10-12=-150/1684, 6-16=-154/996, 5-16=-473/165, 3-16=-427/230, 3-17=0/258, 9-14=-4970/572, 9-13=-550/5266

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 2 rows staggered at 0-6-0 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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 2 and 591 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Use Simpson Strong-Tie HGUS26-2 (20-16d Girder, 8-16d Truss) or equivalent at 25-10-7 from the left end to connect truss(es) to front face of bottom chord.
- Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 27-11-4 from the left end to 33-11-4 to connect truss(es) to front 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: 1-6=-70, 6-11=-70, 2-11=-20  
Concentrated Loads (lb)

Vert: 13=-3933 (F), 12=-544 (F), 20=-544 (F), 21=-544 (F), 22=-544 (F)



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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Chesterfield, MO 63017

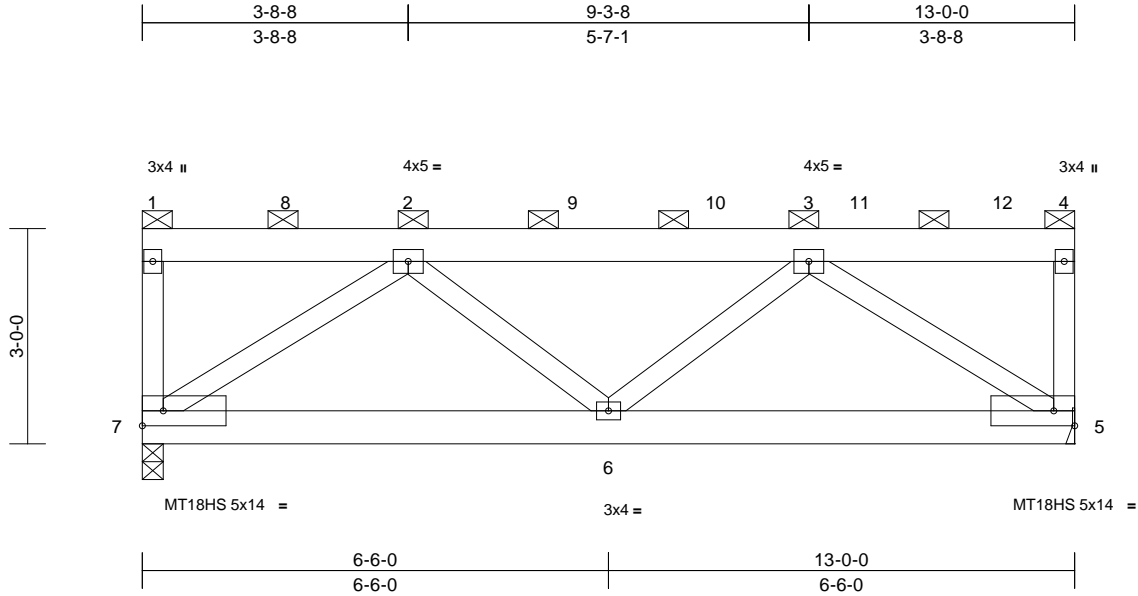
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716400 LEE'S SUMMIT, MISSOURI
RR109	R2	Flat Girder	1	2	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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12/02/2021



Scale = 1:32.1

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	0.71	Vert(LL)	-0.04	6	>999	360	MT18HS 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.07	6	>999	240	MT20 197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.50	Horz(CT)	0.03	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	6	>999	240	Weight: 137 lb FT = 10%

#### LUMBER

TOP CHORD 2x6 SPF No.2  
BOT CHORD 2x6 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING

TOP CHORD 2-0-0 oc purlins (5-8-7 max.): 1-4, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 5=3953/ Mechanical, 7=3598/0-3-8  
Max Horiz 7=77 (LC 6)  
Max Uplift 5=425 (LC 5), 7=416 (LC 4)  
Max Grav 5=4392 (LC 13), 7=4056 (LC 14)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-7=595/97, 1-2=91/26, 2-3=4844/430, 3-4=102/27, 4-5=913/105  
BOT CHORD 6-7=520/4807, 5-6=509/4830  
WEBS 2-6=0/201, 2-7=5802/599, 3-6=0/174, 3-5=5830/601

#### 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.
- 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.

- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 416 lb uplift at joint 7 and 425 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.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 205 lb down and 67 lb up at 0-1-12, 1235 lb down and 121 lb up at 2-0-0, 1235 lb down and 121 lb up at 4-0-0, 1235 lb down and 121 lb up at 6-0-0, 1235 lb down and 121 lb up at 8-0-0, and 1235 lb down and 121 lb up at 10-0-0, and 1239 lb down and 122 lb up at 12-0-0 on top 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, 5-7=-20  
Concentrated Loads (lb)  
Vert: 1=-97, 2=-1051, 8=-1051, 9=-1051, 10=-1051, 11=-1051, 12=-1056



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



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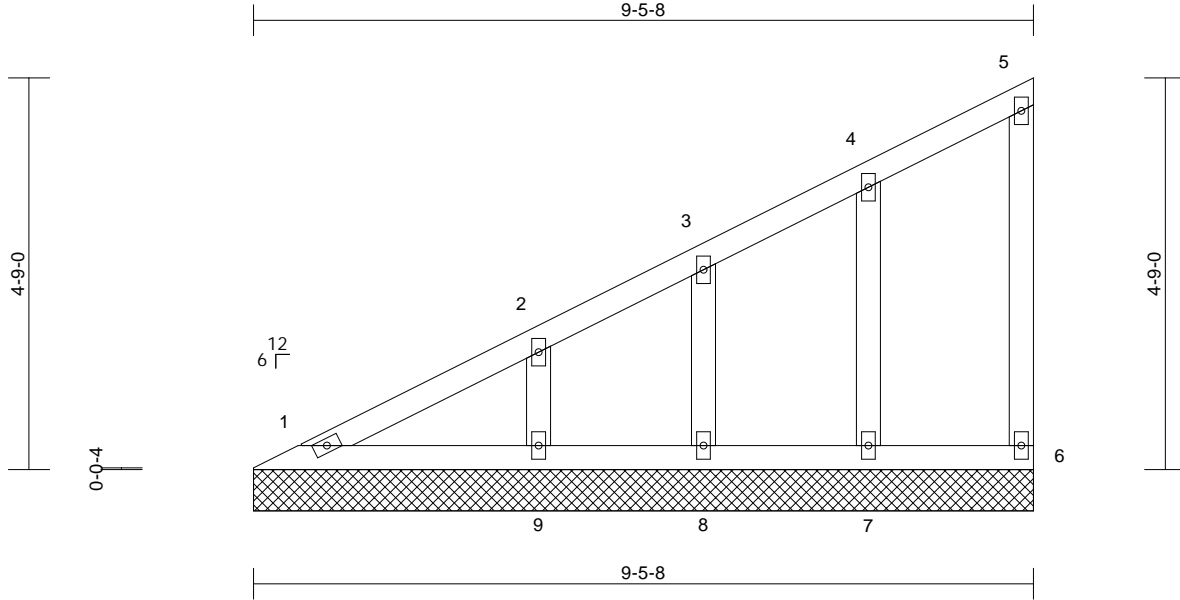
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	V1	Valley	1	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716401  
LEE'S SUMMIT, MISSOURI

12/02/2021



Scale = 1:27.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	6	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 34 lb FT = 10%

#### LUMBER

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

#### BRACING

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

<b>REACTIONS</b> (lb/size)	1=106/9-5-8, 6=67/9-5-8, 7=196/9-5-8, 8=149/9-5-8, 9=267/9-5-8
Max Horiz	1=182 (LC 5)
Max Uplift	6=-25 (LC 5), 7=-58 (LC 8), 8=-45 (LC 8), 9=-80 (LC 8)
Max Grav	1=121 (LC 16), 6=67 (LC 1), 7=196 (LC 1), 8=149 (LC 1), 9=267 (LC 1)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-151/58, 2-3=-114/36, 3-4=-101/44, 4-5=-80/46, 5-6=-52/24
BOT CHORD	1-9=-62/47, 8-9=-62/47, 7-8=-62/47, 6-7=-62/47
WEBS	2-9=-200/108, 3-8=-119/70, 4-7=-152/71

#### 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) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 6, 80 lb uplift at joint 9, 45 lb uplift at joint 8 and 58 lb uplift at joint 7.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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Chesterfield, MO 63017

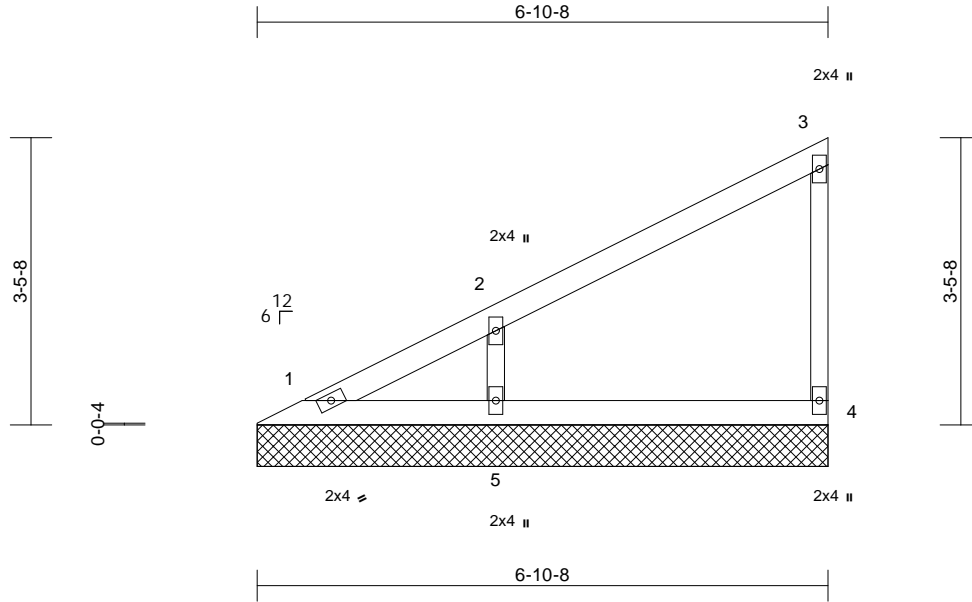
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	V2	Valley	1	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716402  
LEE'S SUMMIT, MISSOURI

12/02/2021



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

<b>REACTIONS</b>	(lb/size)	1=47/6-10-8, 4=142/6-10-8, 5=368/6-10-8
	Max Horiz	1=129 (LC 5)
	Max Uplift	4=-27 (LC 8), 5=-110 (LC 8)
	Max Grav	1=66 (LC 16), 4=142 (LC 1), 5=368 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-110/58, 2-3=-105/43, 3-4=-111/46
BOT CHORD	1-5=-44/33, 4-5=-44/33
WEBS	2-5=-286/159

#### NOTES

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

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 4 and 110 lb uplift at joint 5.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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

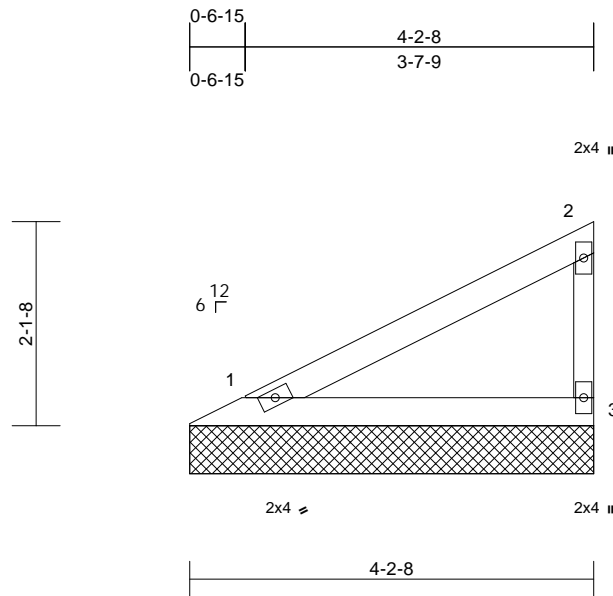
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

12/02/2021



Scale = 1:24

<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	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: 11 lb	FT = 10%

**LUMBER**

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

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

## LOAD CASE(S) Standard

## BRACING

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

## REACTIONS

(lb/size) 1=158/4-2-8, 3=158/4-2-8  
 Max Horiz 1=73 (LC 5)  
 Max Uplift 1=-20 (LC 8), 3=-39 (LC 8)

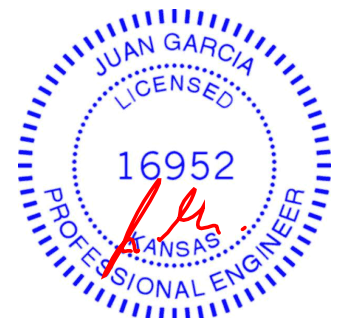
## FORCES

(Ib) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-67/44, 2-3=-123/60  
BOT CHORD 1-3=-25/19

## NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2'-0" o.c.
- 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'-6" tall by 2'-0" wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1 and 39 lb uplift at joint 3.



November 9, 2021



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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



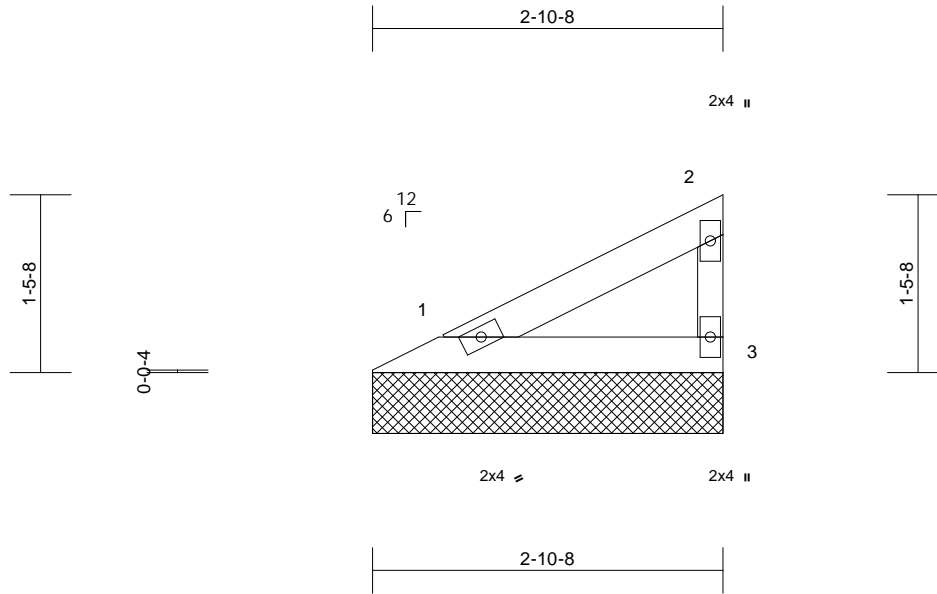
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716404 LEE'S SUMMIT, MISSOURI
RR109	V4	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:50 Page: 1  
ID:2ncXplsXOfbjIB6i7Q?gPMzrYWU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJ6H

12/02/2021



Scale = 1:18.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.04	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: 7 lb FT = 10%

#### LUMBER

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

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

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=98/2-10-8, 3=98/2-10-8  
Max Horiz 1=46 (LC 5)  
Max Uplift 1=-13 (LC 8), 3=-24 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-42/27, 2-3=-76/37  
BOT CHORD 1-3=-16/12

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1 and 24 lb uplift at joint 3.



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

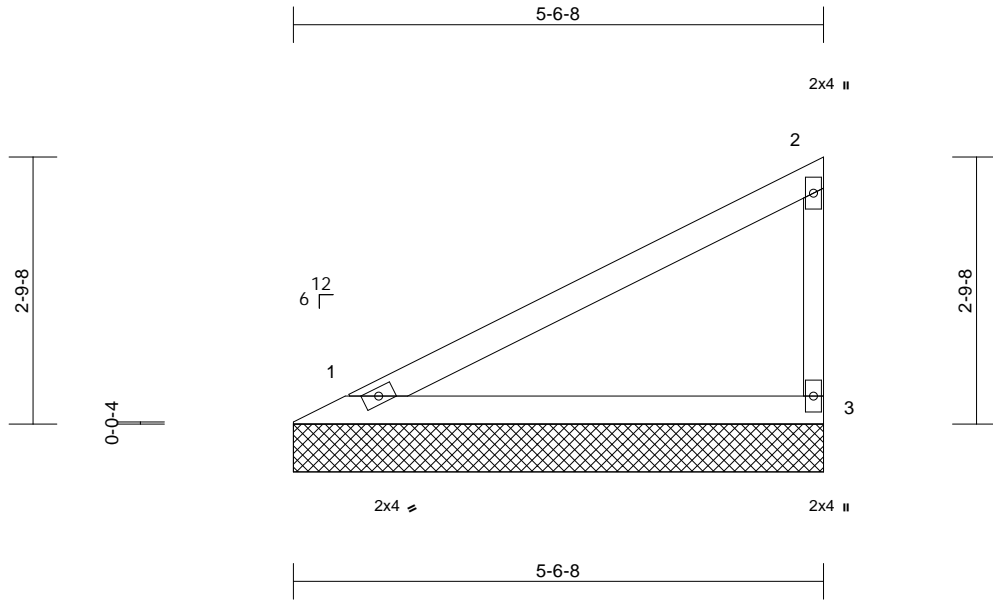


Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716405 LEE'S SUMMIT, MISSOURI
RR109	V5	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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12/02/2021



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	0.45	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.24	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: 14 lb FT = 10%

#### LUMBER

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

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

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=218/5-6-8, 3=218/5-6-8  
Max Horiz 1=101 (LC 5)  
Max Uplift 1=-28 (LC 8), 3=-53 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-92/61, 2-3=-170/83  
BOT CHORD 1-3=-35/26

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1 and 53 lb uplift at joint 3.



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

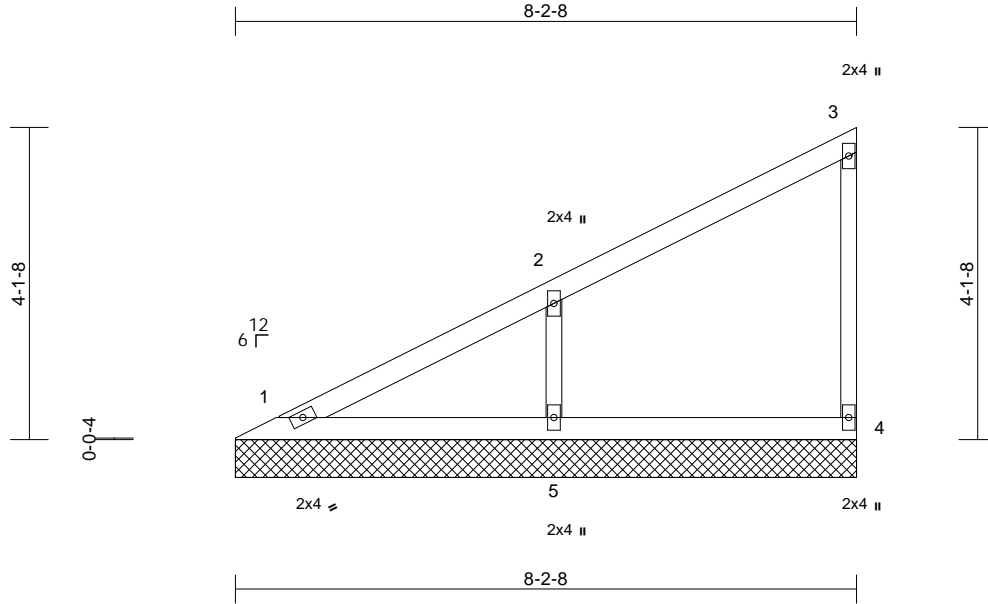
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	V6	Valley	1	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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ID:DdCVaoyvmklWX2oorm\_ILUyf4?s-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRcDoi7J4z0Ct

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716406  
LEE'S SUMMIT, MISSOURI

12/02/2021



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 23 lb	FT = 10%

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

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

**REACTIONS** (lb/size) 1=119/8-2-8, 4=135/8-2-8, 5=423/8-2-8  
Max Horiz 1=157 (LC 5)  
Max Uplift 4=-26 (LC 5), 5=-127 (LC 8)  
Max Grav 1=125 (LC 16), 4=135 (LC 1), 5=423 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-127/74, 2-3=-115/44, 3-4=-105/44  
BOT CHORD 1-5=-53/41, 4-5=-53/41  
WEBS 2-5=-329/183

#### NOTES

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

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 4 and 127 lb uplift at joint 5.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

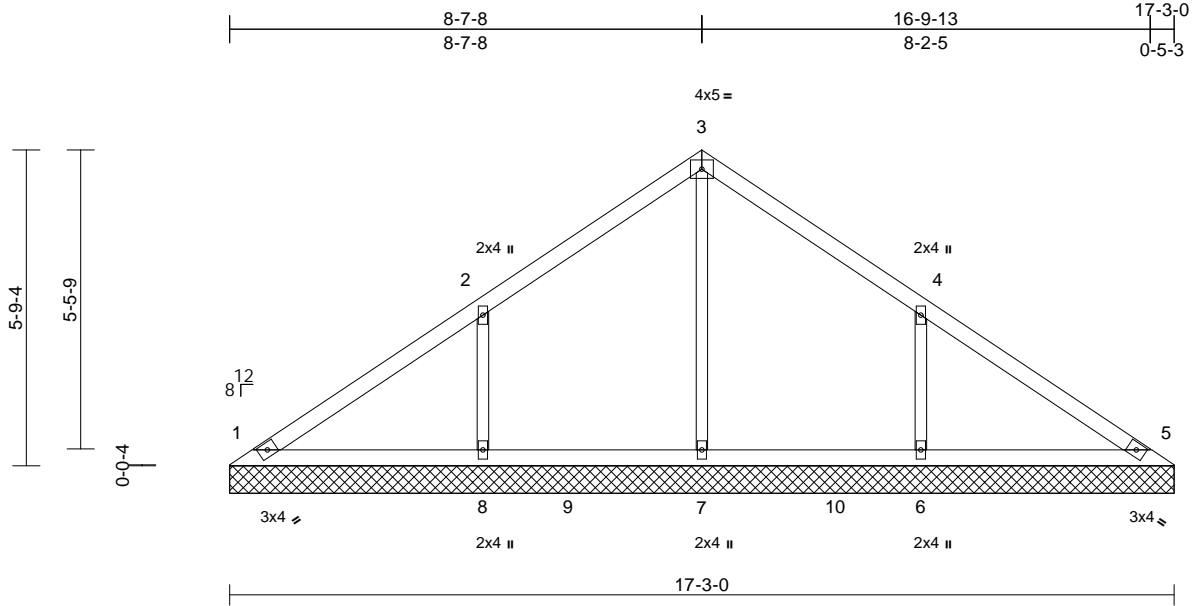
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716407 LEE'S SUMMIT, MISSOURI
RR109	V7	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 08 15:27:52 Page: 1

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12/02/2021



Scale = 1:42.1

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	0.23	Vert(LL)	n/a	-	n/a	999	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
										Weight: 50 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(lb/size)	1=174/17-3-0, 5=174/17-3-0, 6=437/17-3-0, 7=249/17-3-0, 8=437/17-3-0
Max Horiz	1=142 (LC 5)
Max Uplift	1=-15 (LC 9), 6=-175 (LC 9), 8=-176 (LC 8)
Max Grav	1=198 (LC 16), 5=177 (LC 15), 6=535 (LC 16), 7=350 (LC 15), 8=535 (LC 15)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-150/108, 2-3=-149/129, 3-4=-140/107, 4-5=-114/72
BOT CHORD	1-8=-42/97, 7-8=-42/97, 6-7=-42/97, 5-6=-42/97
WEBS	3-7=-181/0, 2-8=-355/222, 4-6=-355/222

#### 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.
- 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, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 1, 176 lb uplift at joint 8 and 175 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.

LOAD CASE(S) Standard



November 9, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

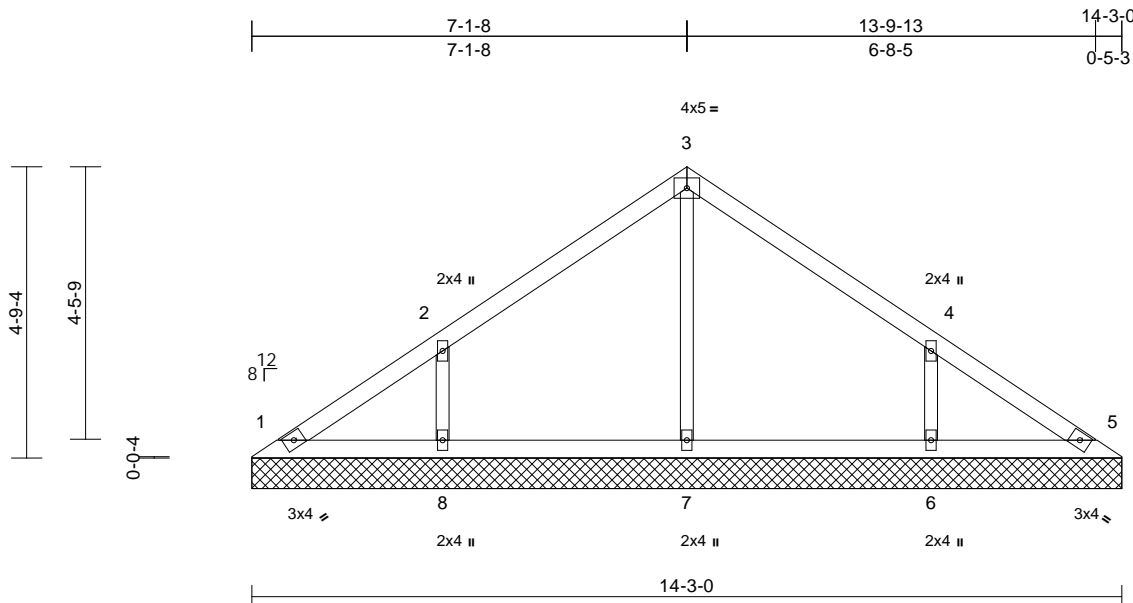
Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	AS NOTED FOR PLAN REVIEW
RR109	V8	Valley	1	1	Job Reference (optional)	DEVELOPMENT SERVICES
						148716408
						LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871,

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12/02/2021



Scale = 1:37.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 40 lb FT = 10%

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(lb/size)	1=109/14-3-0, 5=109/14-3-0, 6=352/14-3-0, 7=280/14-3-0, 8=352/14-3-0
Max Horiz	1=116 (LC 4)
Max Uplift	1=13 (LC 4), 6=146 (LC 9), 8=146 (LC 8)
Max Grav	1=120 (LC 16), 5=109 (LC 1), 6=370 (LC 16), 7=280 (LC 1), 8=370 (LC 15)

**FORCES**

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-126/86, 2-3=-145/107, 3-4=-140/84, 4-5=-97/47
BOT CHORD	1-8=-30/77, 7-8=-30/77, 6-7=-30/77, 5-6=-30/77
WEBS	3-7=-198/13, 2-8=-294/187, 4-6=-294/187

**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.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1, 146 lb uplift at joint 8 and 146 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.

LOAD CASE(S) Standard



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

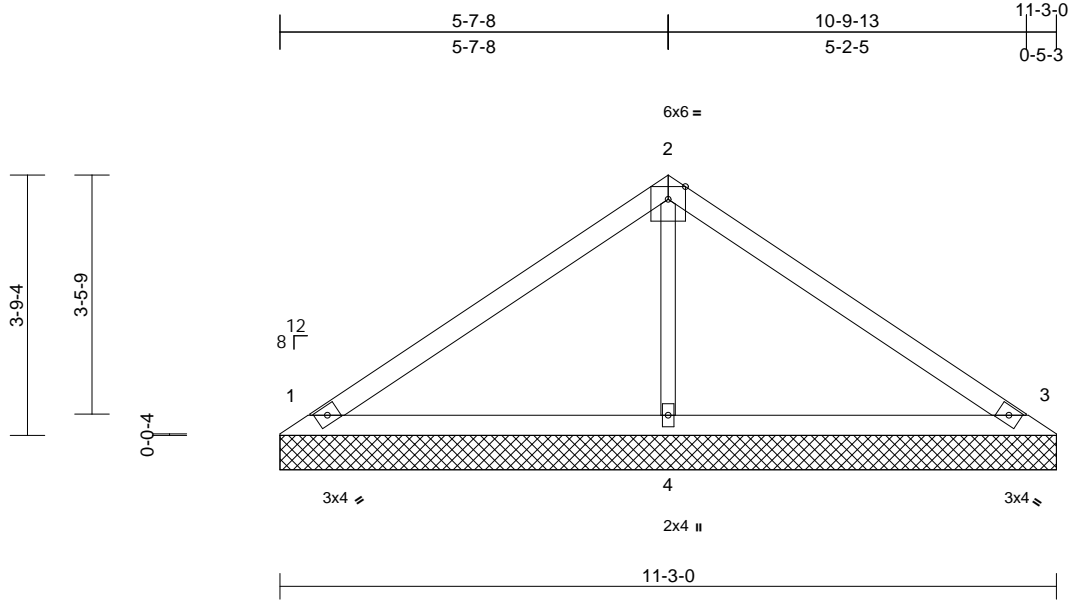


Job	Truss	Truss Type	Qty	Ply	Lot 109 RR	RELEASE FOR CONSTRUCTION AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 148716409 LEE'S SUMMIT, MISSOURI
RR109	V9	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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12/02/2021



Scale = 1:33.4

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	0.38	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	3	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 30 lb	FT = 10%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (lb/size) 1=239/11-3-0, 3=239/11-3-0, 4=453/11-3-0  
Max Horiz 1=-90 (LC 4)  
Max Uplift 1=-45 (LC 8), 3=-57 (LC 9), 4=-18 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension

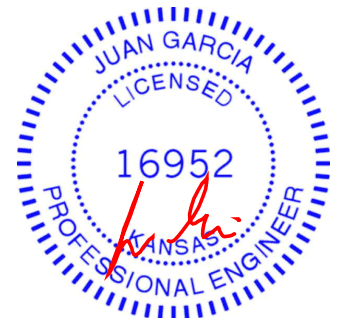
TOP CHORD 1-2=-179/85, 2-3=-178/65  
BOT CHORD 1-4=-18/83, 3-4=-18/83  
WEBS 2-4=-295/75

#### 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.
- 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.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 1, 57 lb uplift at joint 3 and 18 lb uplift at joint 4.
- 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



November 9, 2021

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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

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	V10	Valley	1	1	Job Reference (optional)

AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
148716410  
LEE'S SUMMIT, MISSOURI

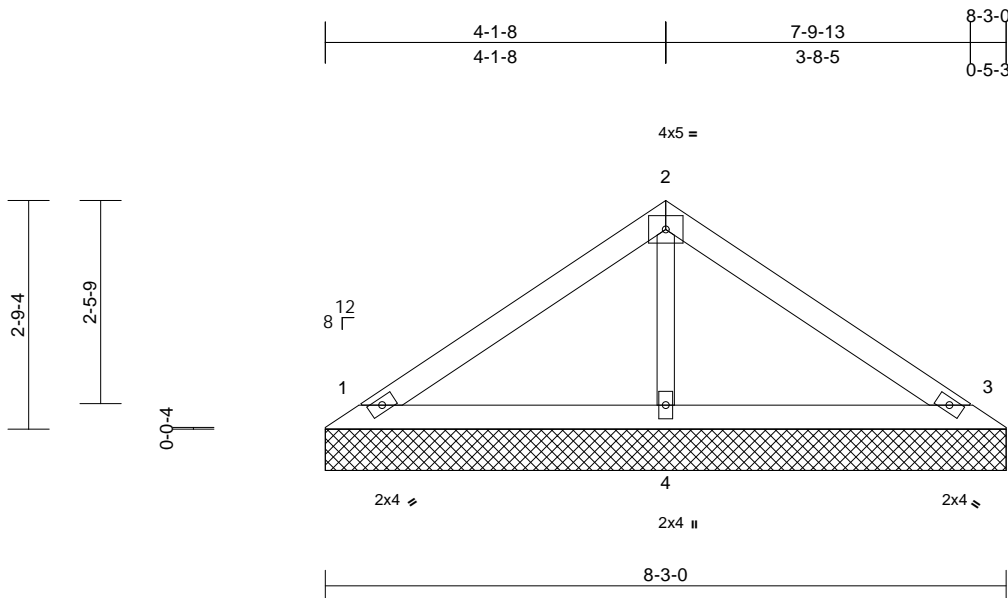
Wheeler Lumber, Waverly, KS - 66871,

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Page: 1

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Scale = 1:27.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	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  
OTHERS 2x3 SPF No.2

**BRACING**

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

**REACTIONS** (lb/size) 1=186/8-3-0, 3=186/8-3-0, 4=289/8-3-0  
Max Horiz 1=-64 (LC 4)  
Max Uplift 1=-41 (LC 8), 3=-49 (LC 9)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-115/59, 2-3=-111/44  
BOT CHORD 1-4=-13/54, 3-4=-13/54  
WEBS 2-4=-197/50

**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.
- 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.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 1 and 49 lb uplift at joint 3.
- 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



November 9, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



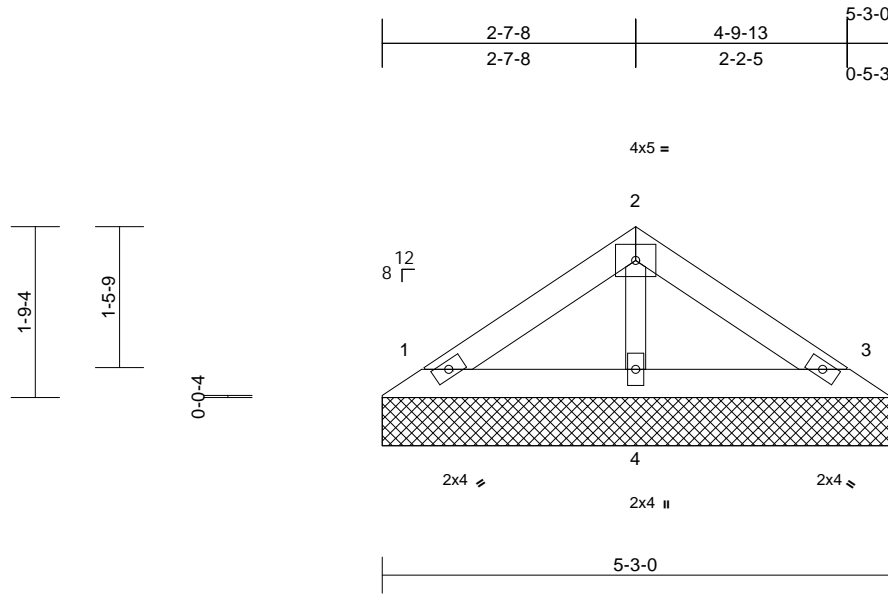
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 109 RR
RR109	V11	Valley	1	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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12/02/2021



Scale = 1:23.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 10%

**LUMBER**

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

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 5-3-12 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

<b>REACTIONS</b>	(lb/size)	1=110/5-3-0, 3=110/5-3-0, 4=171/5-3-0
	Max Horiz	1=-38 (LC 4)
	Max Uplift	1=-24 (LC 8), 3=-29 (LC 9)

**FORCES**

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-68/35, 2-3=-66/26
BOT CHORD	1-4=-8/32, 3-4=-8/32
WEBS	2-4=-117/29

**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.
- 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.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 1 and 29 lb uplift at joint 3.
- 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

November 9, 2021

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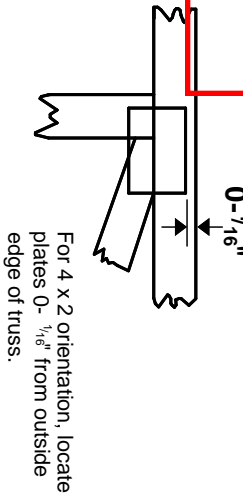
**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component****Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 2060116023 Swingley Ridge Rd  
Chesterfield, MO 63017

12/02/2021

# Symbols

## PLATE LOCATION AND ORIENTATION

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



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

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

## PLATE SIZE

4 X 4

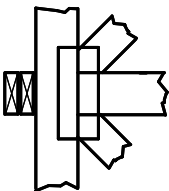
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



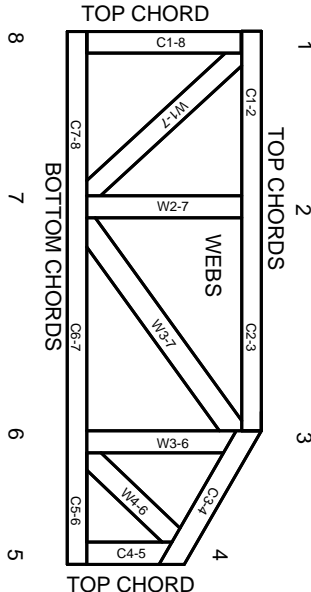
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

6-4-8 dimensions shown in ft-in-sixteenths  
(Drawings not to scale)



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

Lumber design values are in accordance with ANSI/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. 5/19/2020

# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor1 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.