

RE: P240180-01
Roof - HR Lot 121

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

Site Information:

Customer: Clayton Properties Project Name: P240180-01
Lot/Block: 121 Model:
Address: 3249 SW Arbor Tree Dr Subdivision: Hawthorne Ridge
City: Lee's Summit State: MO

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

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

This package includes 26 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I63977020	A1	3/4/2024	21	I63977040	V3	3/4/2024
2	I63977021	A2	3/4/2024	22	I63977041	V4	3/4/2024
3	I63977022	A3	3/4/2024	23	I63977042	V5	3/4/2024
4	I63977023	B1	3/4/2024	24	I63977043	V6	3/4/2024
5	I63977024	B2	3/4/2024	25	I63977044	V7	3/4/2024
6	I63977025	B3	3/4/2024	26	I63977045	V8	3/4/2024
7	I63977026	C1	3/4/2024				
8	I63977027	C2	3/4/2024				
9	I63977028	C3	3/4/2024				
10	I63977029	D1	3/4/2024				
11	I63977030	D2	3/4/2024				
12	I63977031	D3	3/4/2024				
13	I63977032	E1	3/4/2024				
14	I63977033	E2	3/4/2024				
15	I63977034	E3	3/4/2024				
16	I63977035	E4	3/4/2024				
17	I63977036	E5	3/4/2024				
18	I63977037	R1	3/4/2024				
19	I63977038	V1	3/4/2024				
20	I63977039	V2	3/4/2024				

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

Truss Design Engineer's Name: Sevier, Scott
My license renewal date for the state of Missouri is December 31, 2025.
Missouri COA: 001193

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



March 04, 2024

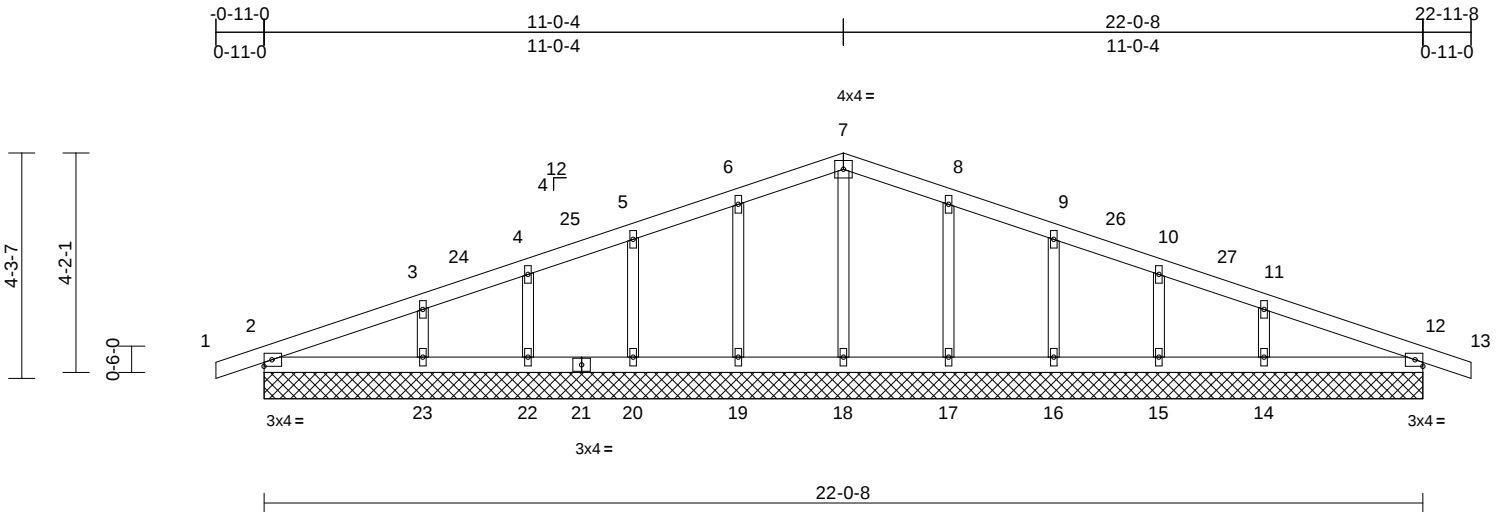
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121	RELEASE FOR CONSTRUCTION
P240180-01	A1	Common Supported Gable	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 163977020 LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09 04:13 Page: 1

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03/12/2024



Scale = 1:43.8

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	0.11	n/a	-	n/a	999	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.06	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0									Weight: 86 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x3 SPF No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS (size)	
	2=22-0-8, 12=22-0-8, 14=22-0-8, 15=22-0-8, 16=22-0-8, 17=22-0-8, 18=22-0-8, 19=22-0-8, 20=22-0-8, 22=22-0-8, 23=22-0-8
Max Horiz	2=75 (LC 20)
Max Uplift	2=-53 (LC 12), 12=-63 (LC 13), 14=-74 (LC 17), 15=-43 (LC 13), 16=-51 (LC 17), 17=-52 (LC 17), 19=-52 (LC 16), 20=-50 (LC 16), 22=-43 (LC 12), 23=-76 (LC 16)
Max Grav	2=192 (LC 1), 12=192 (LC 1), 14=267 (LC 24), 15=216 (LC 24), 16=251 (LC 24), 17=260 (LC 24), 18=161 (LC 1), 19=260 (LC 23), 20=251 (LC 23), 22=216 (LC 23), 23=267 (LC 23)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/13, 2-3=-84/56, 3-4=-50/62, 4-5=-42/87, 5-6=-42/124, 6-7=-55/159, 7-8=-55/154, 8-9=-42/110, 9-10=-42/74, 10-11=-39/42, 11-12=-58/34, 12-13=0/13
BOT CHORD	2-23=-16/68, 22-23=-16/68, 20-22=-16/68, 19-20=-16/68, 18-19=-16/68, 17-18=-16/68, 16-17=-16/68, 15-16=-16/68, 14-15=-16/68, 12-14=-16/68
WEBS	7-18=-121/2, 6-19=-221/135, 5-20=-209/129, 4-22=-186/80, 3-23=-201/126, 8-17=-221/135, 9-16=-209/129, 10-15=-186/80, 11-14=-201/125

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 11-0-4, Corner(3R) 11-0-4 to 16-0-4, Exterior(2N) 16-0-4 to 22-11-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 2, 52 lb uplift at joint 19, 50 lb uplift at joint 20, 43 lb uplift at joint 22, 76 lb uplift at joint 23, 52 lb uplift at joint 17, 51 lb uplift at joint 16, 43 lb uplift at joint 15, 74 lb uplift at joint 14 and 63 lb uplift at joint 12.

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

LOAD CASE(S) Standard



March 4, 2024

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

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

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	A3	Common	1	1	Job Reference (optional)

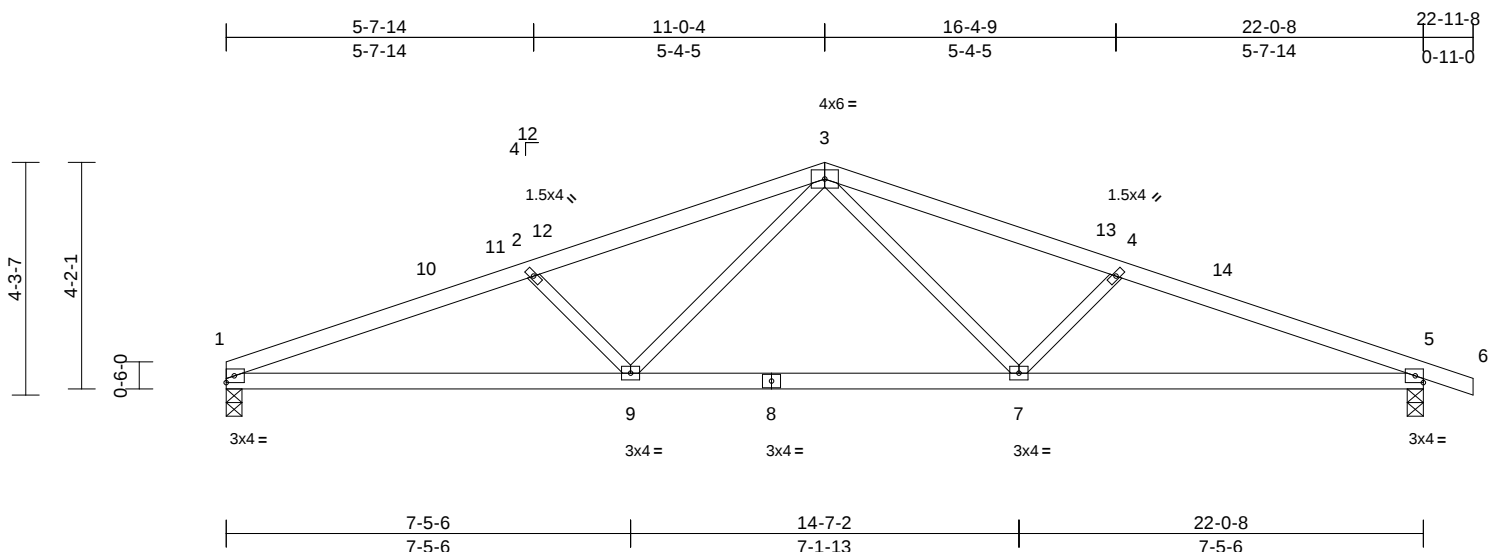
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977022
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File: Mar 01 09 04:05 Page: 1

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03/12/2024



Scale = 1:42.4

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	0.66	Vert(LL)	-0.11	7-9	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.23	1-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.06	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 81 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-0-13 oc bracing.

REACTIONS (size) 1=0-3-8, 5=0-3-9

Max Horiz 1=-77 (LC 21)
Max Uplift 1=-171 (LC 12), 5=-221 (LC 13)
Max Grav 1=1040 (LC 23), 5=1117 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-2382/630, 2-3=-2036/556,
3-4=-2025/531, 4-5=-2381/601, 5-6=0/13
BOT CHORD 1-9=-530/2191, 7-9=-284/1382,
5-7=-509/2175
WEBS 3-7=-103/720, 4-7=-511/227, 3-9=-121/731,
2-9=-519/240

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=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12,
Interior (1) 5-1-12 to 11-0-4, Exterior(2R) 11-0-4 to
16-0-4, Interior (1) 16-0-4 to 22-11-8 zone; cantilever left
and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate
DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9;
Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 171 lb uplift at joint 1 and 221 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.

LOAD CASE(S) Standard

March 4, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	B1	Monopitch Supported Gable	1	1	Job Reference (optional)

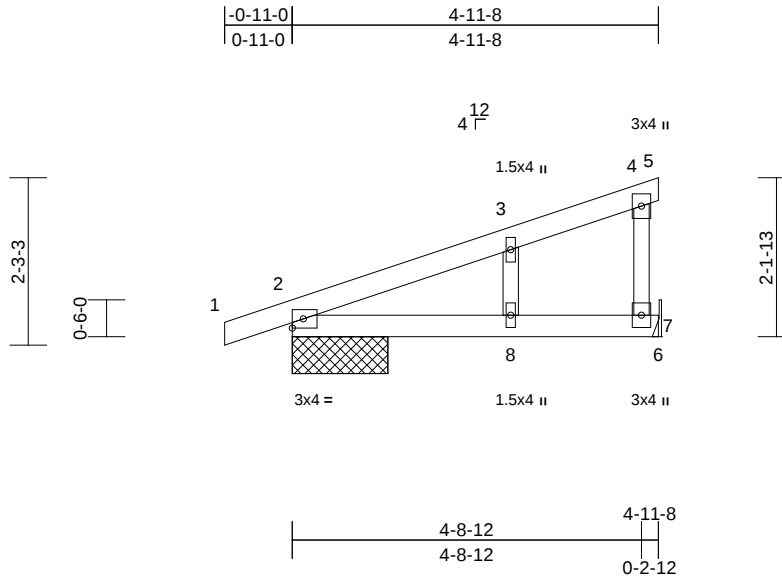
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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977023
LEE'S SUMMIT, MISSOURI

03/12/2024



Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	0.04	2-8	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.06	2-8	>955	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 19 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
OTHERS	2x3 SPF No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	(size) 2=1-3-8, 7= Mechanical
	Max Horiz 2=84 (LC 12)
	Max Uplift 2=-75 (LC 12), 7=-61 (LC 16)
	Max Grav 2=382 (LC 23), 7=301 (LC 23)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/12, 2-3=-155/0, 3-4=-83/21, 4-5=-7/0, 4-7=-167/156
BOT CHORD	2-8=-67/78, 7-8=-67/78, 6-7=0/0
WEBS	3-8=-108/168

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 4-11-8 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- 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) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 7 and 75 lb uplift at joint 2.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 4, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	B2	Monopitch	3	1	Job Reference (optional)

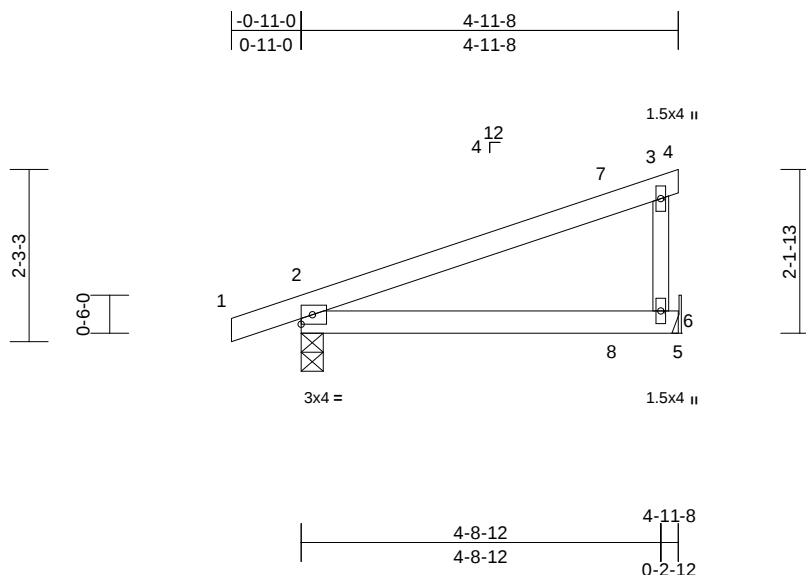
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977024
LEE'S SUMMIT, MISSOURI

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03/12/2024



Scale = 1:30.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	0.10	2-6	>549	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	0.08	2-6	>651	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 18 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 2=0-3-8, 6= Mechanical
Max Horiz 2=87 (LC 12)
Max Uplift 2=-131 (LC 12), 6=-106 (LC 12)
Max Grav 2=404 (LC 23), 6=299 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/13, 2-3=-105/64, 3-4=-7/0,
3-6=-248/242

BOT CHORD 2-6=0/0, 5-6=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0,
Interior (1) 4-1-0 to 4-11-8 zone; cantilever left and right
exposed ; end vertical left exposed; porch left and right
exposed;C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate
DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9;
Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this
design.
- 4) This truss has been designed for greater of min roof live
load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on
overhangs non-concurrent with other live loads.

- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 6) Bearings are assumed to be: Joint 2 SP No.2 crushing
capacity of 565 psi.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 106 lb uplift at
joint 6 and 131 lb uplift at joint 2.
- 9) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 4, 2024

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MiTek®

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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	B3	Monopitch	7	1	Job Reference (optional)

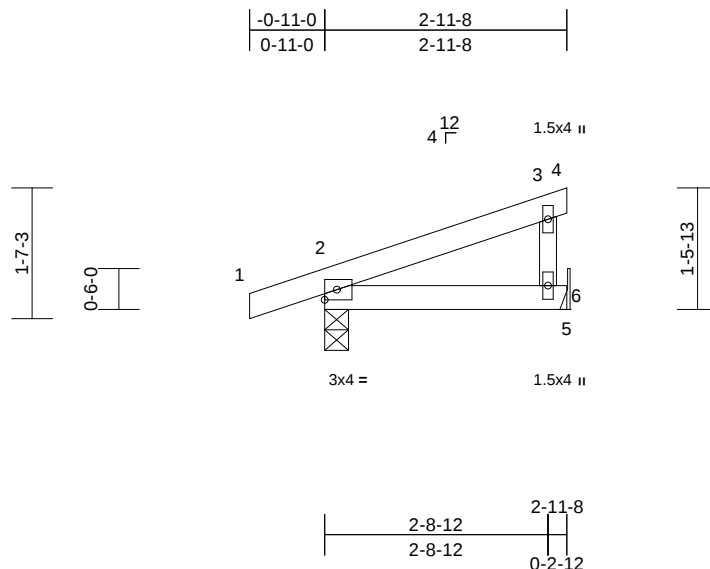
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977025
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09:04:16 Page: 1

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03/12/2024



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	0.16	Vert(LL)	0.00	2-6	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	2-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 11 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 2=0-3-8, 6= Mechanical

Max Horiz 2=57 (LC 13)
Max Uplift 2=-78 (LC 12), 6=-30 (LC 16)
Max Grav 2=281 (LC 23), 6=161 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/13, 2-3=-83/47, 3-4=-7/0, 3-6=-131/144
BOT CHORD 2-6=-23/25, 5-6=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) zone; cantilever left
and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate
DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9;
Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this
design.
- 4) This truss has been designed for greater of min roof live
load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on
overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.

- 6) Bearings are assumed to be: Joint 2 SP No.2 crushing
capacity of 565 psi.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 30 lb uplift at joint
6 and 78 lb uplift at joint 2.
- 9) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 4, 2024

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

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

MiTek®

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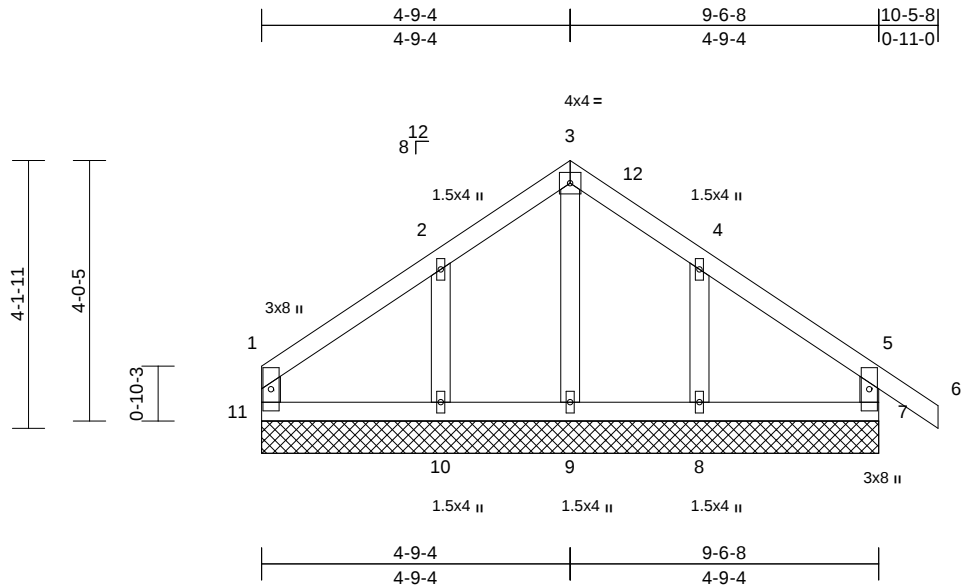
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121	RELEASE FOR CONSTRUCTION
P240180-01	C1	Common Structural Gable	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						163977026
						LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09 04:36 Page: 1

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03/12/2024



Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 43 lb	FT = 20%

LUMBER		
TOP CHORD	2x4 SP No.2	
BOT CHORD	2x4 SP No.2	
WEBS	2x4 SP No.2 *Except* 9-3:2x4 SPF No.3	
OTHERS	2x4 SPF No.3	
BRACING		
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.	
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.	
REACTIONS		(size)
		7=9-6-8, 8=9-6-8, 9=9-6-8, 10=9-6-8, 11=9-6-8
		Max Horiz 11=-121 (LC 12)
		Max Uplift 7=-49 (LC 16), 8=-110 (LC 17), 10=-114 (LC 16), 11=-41 (LC 17)
		Max Grav 7=259 (LC 24), 8=338 (LC 24), 9=124 (LC 28), 10=365 (LC 23), 11=173 (LC 23)
FORCES		(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-114/105, 2-3=-133/230, 3-4=-133/235, 4-5=-116/118, 5-6=0/69, 1-11=-154/112, 5-7=-237/213	
BOT CHORD	10-11=-51/76, 9-10=-51/76, 8-9=-51/76, 7-8=-51/76	
WEBS	3-9=-161/55, 2-10=-309/254, 4-8=-285/232	

- 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-1-12 to 4-9-4, Corner(3R) 4-9-4 to 9-9-4, Exterior(2N) 9-9-4 to 10-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 11, 49 lb uplift at joint 7, 114 lb uplift at joint 10 and 110 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 4,2024

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

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

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	C2	Common	1	1	Job Reference (optional)

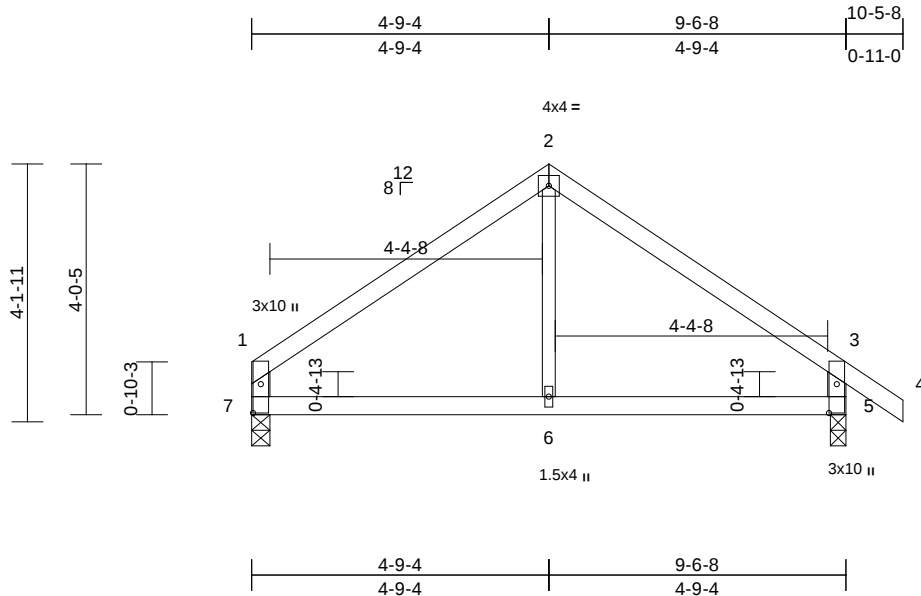
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977027
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09 04:36 Page: 1

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03/12/2024



Scale = 1:37

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	0.03	5-6	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.03	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0											
Weight: 37 lb											FT = 20%	

LUMBER

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

BRACING

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

REACTIONS

(size) 5=0-3-0, 7=0-3-8
Max Horiz 7=-114 (LC 12)
Max Uplift 5=-83 (LC 17), 7=-56 (LC 16)
Max Grav 5=613 (LC 24), 7=537 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-515/449, 2-3=-516/453, 3-4=0/71,
1-7=-485/338, 3-5=-567/411
BOT CHORD 6-7=-238/296, 5-6=-238/296
WEBS 2-6=-310/185

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-9-4, Exterior(2R) 4-9-4 to 9-9-4, Interior (1) 9-9-4 to 10-5-8 zone; cantilever left and right exposed; end vertical right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint 7 and 83 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.

LOAD CASE(S) Standard



March 4, 2024

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

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

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	C3	Common	1	1	Job Reference (optional)

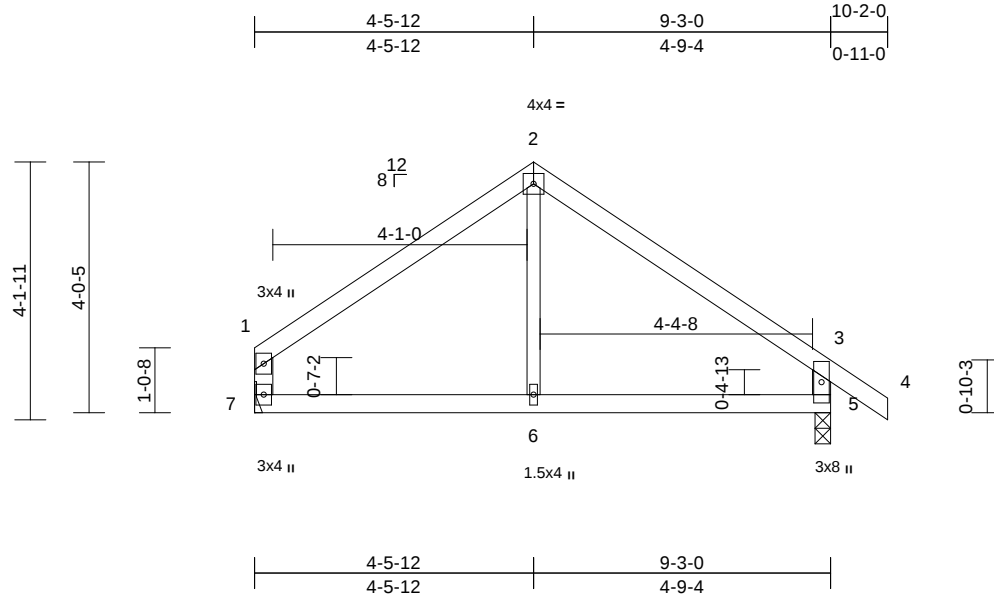
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977028
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09 04 16 Page: 1

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03/12/2024



Scale = 1:37

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	0.04	5-6	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.31	-0.04	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R							
BCDL	10.0									Weight: 37 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 5=0-3-0, 7= Mechanical
Max Horiz 7=-113 (LC 12)
Max Uplift 5=-82 (LC 17), 7=-53 (LC 16)
Max Grav 5=597 (LC 24), 7=514 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-475/433, 2-3=-488/427, 3-4=0/71,
1-7=-454/330, 3-5=-549/400
BOT CHORD 6-7=-215/270, 5-6=-215/270
WEBS 2-6=-293/171

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=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-1-12 to 4-5-12,
Exterior(2R) 4-5-12 to 9-5-12, Interior (1) 9-5-12 to
10-2-0 zone; cantilever left and right exposed; end
vertical right exposed; porch left and right exposed; C-C
for members and forces & MWFRS for reactions shown;
Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate
DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9;
Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 7 and 82 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.

LOAD CASE(S) Standard



March 4, 2024

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

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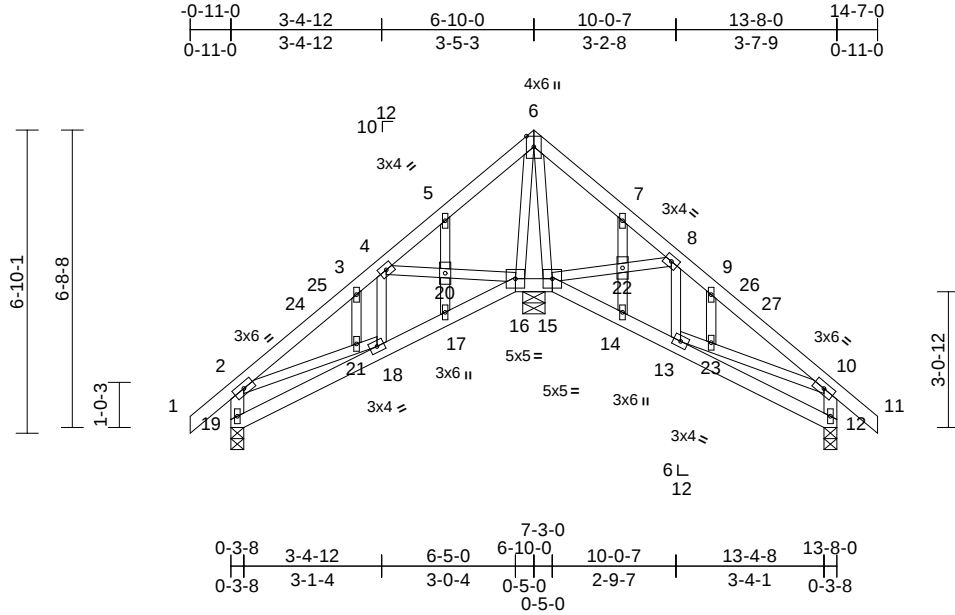
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	D1	Roof Special Structural Gable	1	1	Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09 04:17 Page: 1

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03/12/2024



Scale = 1:52

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	17-18	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	-0.02	17-18	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 79 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 19-2,12-10:2x4 SP 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 6-0-0 oc bracing.

REACTIONS (size)	12=0-3-8, 15=0-6-0, 16=0-6-0, 19=0-3-8
Max Horiz	19=-215 (LC 14)
Max Uplift	12=-106 (LC 17), 15=-55 (LC 17), 16=-112 (LC 16), 19=-84 (LC 17)
Max Grav	12=354 (LC 24), 15=588 (LC 24), 16=603 (LC 23), 19=354 (LC 23)

FORCES

TOP CHORD	(lb) - Maximum Compression/Maximum Tension 1-2=0/82, 2-3=-400/78, 3-4=-234/107, 4-5=-64/229, 5-6=-8/310, 6-7=0/312, 7-8=-38/222, 8-9=-233/107, 9-10=-379/76, 10-11=0/82, 2-19=-354/157, 10-12=-357/155
BOT CHORD	18-19=-217/270, 17-18=-149/262, 16-17=-153/301, 15-16=-219/266, 14-15=0/274, 13-14=0/229, 12-13=-40/97
WEBS	6-16=-274/38, 6-15=-276/36, 2-21=0/193, 18-21=0/185, 13-23=-16/153, 10-23=-19/157, 4-20=-412/211, 16-20=-418/213, 4-18=-37/100, 15-22=-407/200, 8-22=-399/197, 8-13=-28/120, 5-20=-122/75, 17-20=-81/57, 3-21=-15/46, 7-22=-104/60, 14-22=-70/46, 9-23=-23/37

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 6-10-0, Exterior(2R) 6-10-0 to 11-10-0, Interior (1) 11-10-0 to 14-7-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 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 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 19, 12 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 84 lb uplift at joint 19, 112 lb uplift at joint 16, 55 lb uplift at joint 15 and 106 lb uplift at joint 12.

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

LOAD CASE(S) Standard

March 4, 2024

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

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

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	D2	Roof Special Structural Gable	1	1	Job Reference (optional)

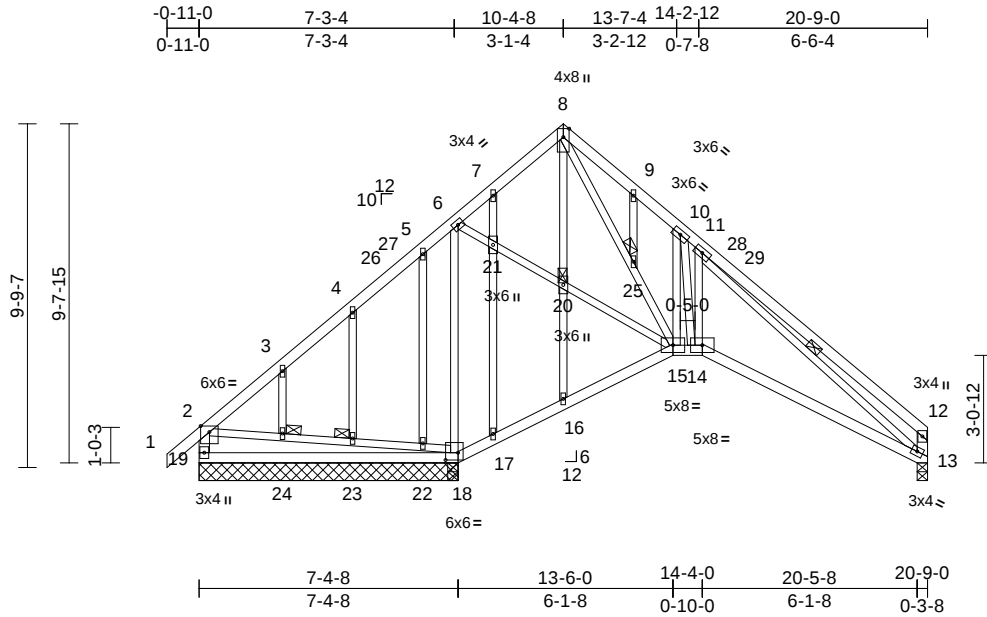
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977030
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09 04:17 Page: 1

ID:DWJnveVQ7oN6jltbUjyQYifPO-RfC?PsB70Hq3NSgPqnL8wuTXbGK1WCD0i7J42J6C1

03/12/2024



Scale = 1:65.6

Plate Offsets (X, Y): [18:0-4-4,0-2-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.08	18-19	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.17	18-19	>525	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.05	13	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
Weight: 137 lb											FT = 20%	

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 19-2,13-12:2x4 SP No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-7-3 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 11-13
JOINTS	1 Brace at Jt(s): 20, 23, 24, 25

REACTIONS

(size)	13=0-3-8, 18=7-4-8, 19=7-4-8
Max Horiz	19=280 (LC 15)
Max Uplift	13=-75 (LC 17), 18=-166 (LC 16), 19=-99 (LC 24)
Max Grav	13=476 (LC 24), 18=1326 (LC 24), 19=262 (LC 36)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/79, 2-3=-85/409, 3-4=-69/453, 4-5=-37/486, 5-6=-19/446, 6-7=-342/125, 7-8=-314/115, 8-9=-479/207, 9-10=-593/192, 10-11=-778/386, 11-12=-423/240, 12-13=-192/167, 12-13=-401/225
BOT CHORD	18-19=-338/516, 17-18=-423/175, 16-17=-394/201, 15-16=-393/195, 14-15=0/402, 13-14=0/574

WEBS

6-18=-883/177, 6-21=0/660, 20-21=0/664, 15-20=0/663, 8-25=-205/267, 15-25=-204/263, 10-15=-674/212, 10-14=-435/774, 11-14=-560/544, 2-24=-645/361, 23-24=-645/360, 22-23=-649/365, 18-22=-665/368, 11-13=-390/28, 8-20=0/100, 16-20=0/103, 7-21=-58/15, 17-21=-52/0, 5-22=-93/15, 4-23=-66/59, 3-24=-9/15, 9-25=-16/3

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-4-8, Interior (1) 4-4-8 to 10-4-8, Exterior(2R) 10-4-8 to 15-4-8, Interior (1) 15-4-8 to 20-7-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 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 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 13 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 99 lb uplift at joint 19, 166 lb uplift at joint 18 and 75 lb uplift at joint 13.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 4, 2024

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

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

MiTek®

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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	E1	Roof Special Supported Gable	1	1	Job Reference (optional)

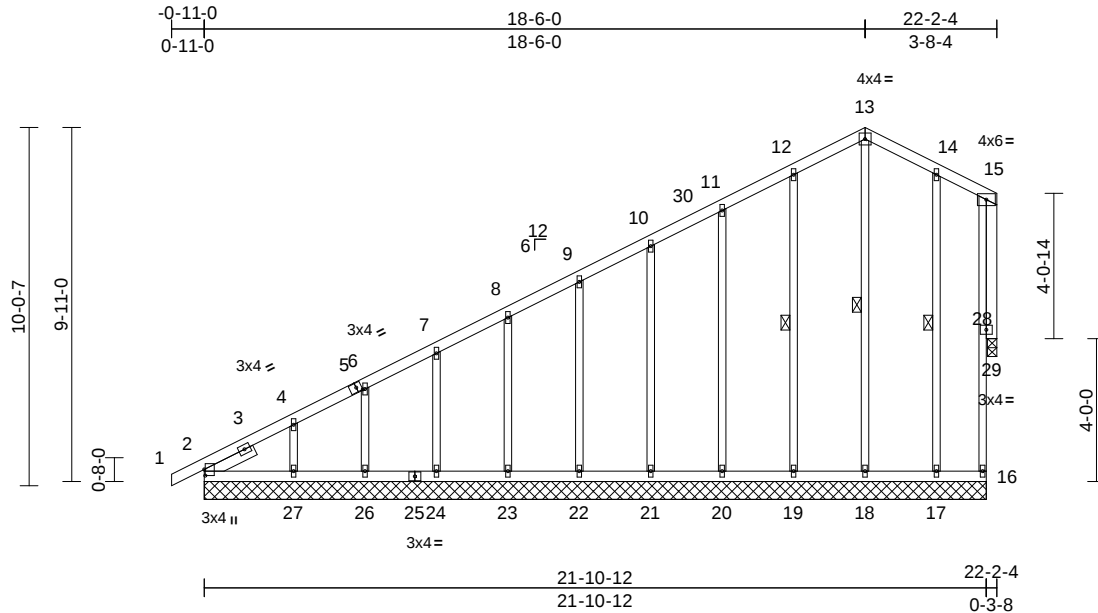
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977032
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09:04:18 Page: 1

ID:gsITprHaUglgDiJZ2YbGkylfYi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWCDoi7J423C?

03/12/2024



Scale = 1:64.5

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	0.00	2-27	>999	240	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	2-27	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.01	29	n/a	n/a	
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R							
BCDL	10.0										
Weight: 132 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
OTHERS	2x3 SPF No.2 *Except* 28-15:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 1-6-7

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 13-18, 12-19, 14-17

REACTIONS (size)	2=21-10-12, 16=21-10-12, 17=21-10-12, 18=21-10-12, 19=21-10-12, 20=21-10-12, 21=21-10-12, 22=21-10-12, 23=21-10-12, 24=21-10-12, 26=21-10-12, 27=21-10-12, 29=0-3-2
Max Horiz	2=382 (LC 16)
Max Uplift	16=-9 (LC 17), 17=-50 (LC 17), 19=-64 (LC 16), 20=-62 (LC 16), 21=-61 (LC 16), 22=-61 (LC 16), 23=-60 (LC 16), 24=-65 (LC 16), 26=-42 (LC 16), 27=-147 (LC 16), 29=-11 (LC 16)
Max Grav	2=218 (LC 28), 16=43 (LC 24), 17=240 (LC 24), 18=180 (LC 24), 19=261 (LC 23), 20=233 (LC 23), 21=183 (LC 23), 22=180 (LC 36), 23=180 (LC 23), 24=182 (LC 36), 26=171 (LC 1), 27=215 (LC 36), 29=22 (LC 24)

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

TOP CHORD	1-2=0/12, 2-4=-412/153, 4-6=-318/115, 6-7=-278/100, 7-8=-227/80, 8-9=-179/62, 9-10=-130/43, 10-11=-81/44, 11-12=-48/54, 12-13=-52/106, 13-14=-54/94, 14-15=-25/38, 16-28=-32/21, 15-28=-32/21
BOT CHORD	2-27=-1/1, 26-27=-1/1, 24-26=-1/1, 23-24=-1/1, 22-23=-1/1, 21-22=-1/1, 20-21=-1/1, 19-20=-1/1, 18-19=-1/1, 17-18=-1/1, 16-17=-1/1
WEBS	13-18=-139/20, 12-19=-222/96, 11-20=-193/98, 10-21=-143/96, 9-22=-140/97, 8-23=-140/96, 7-24=-141/100, 6-26=-135/97, 4-27=-162/242, 14-17=-206/128, 15-29=-22/20

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 18-6-0, Corner(3E) 18-6-0 to 21-9-8 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; 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.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 29 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 9 lb uplift at joint 16, 64 lb uplift at joint 19, 62 lb uplift at joint 20, 61 lb uplift at joint 21, 61 lb uplift at joint 22, 60 lb uplift at joint 23, 65 lb uplift at joint 24, 42 lb uplift at joint 26, 147 lb uplift at joint 27, 50 lb uplift at joint 17 and 11 lb uplift at joint 29.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 4, 2024

Continued on page 2

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

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

MiTek®

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	E1	Roof Special Supported Gable	1	1	Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09:04:38 Page: 2
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RELEASE FOR CONSTRUCTION

AS NOTED FOR PLAN REVIEW

DEVELOPMENT SERVICES

163977032

LEE'S SUMMIT, MISSOURI

03/12/2024

LOAD CASE(S) Standard

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

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

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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

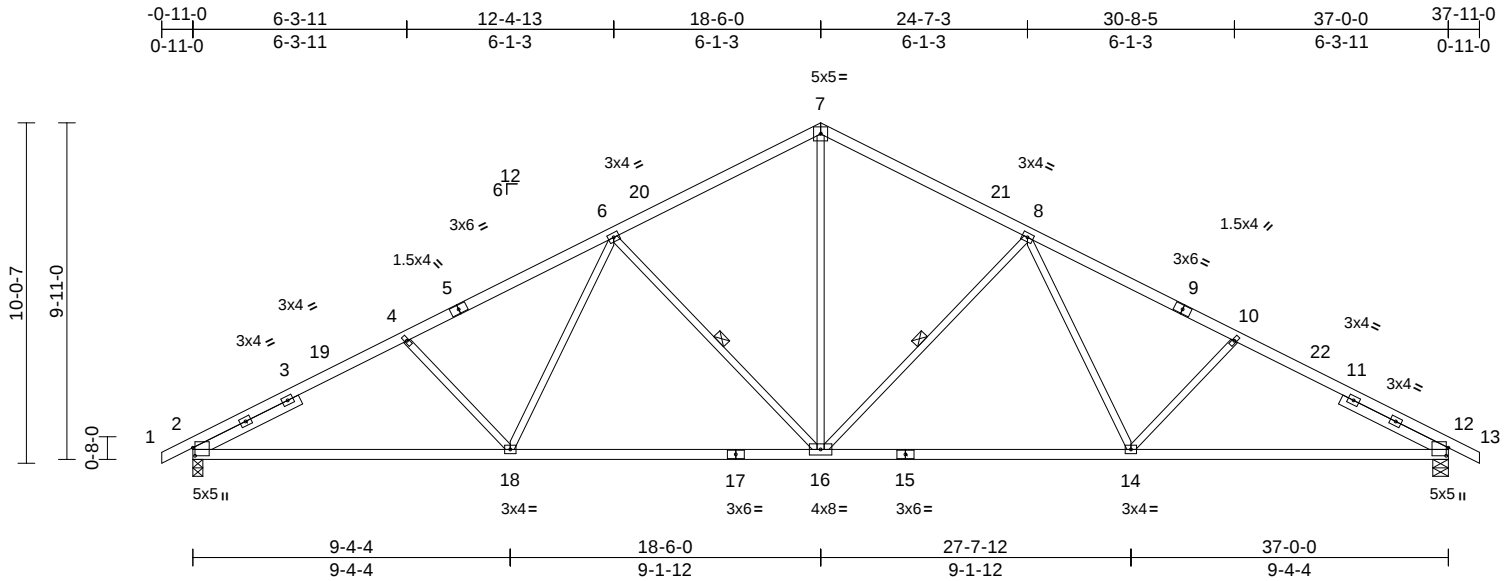
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121	RELEASE FOR CONSTRUCTION
P240180-01	E4	Common	7	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 163977035 LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09 04:19 Page: 1

ID: 8Oa_xmr2iWnAyeW9D9b2FyIfSp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCD0i734z3C?

03/12/2024



Scale = 1:67.9									
Plate Offsets (X, Y): [2:0-2-13,0-0-12], [12:0-2-13,0-0-12]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.19	2-18	>999 240
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.42	2-18	>999 180
TCDL	10.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.14	12	n/a n/a
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S					
BCDL	10.0								
Weight: 171 lb FT = 20%									

LUMBER		
TOP CHORD	2x4 SP No.2	
BOT CHORD	2x4 SP No.2	
WEBS	2x3 SPF No.2	
SLIDER	Left 2x4 SP No.2 -- 3-5-15, Right 2x4 SP No.2 -- 3-5-15	
BRACING		
TOP CHORD	Structural wood sheathing directly applied.	
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.	
WEBS	1 Row at midpt	8-16, 6-16
REACTIONS (size) 2=0-3-8, 12=0-5-8		
Max Horiz 2=183 (LC 16)		
Max Uplift 2=-276 (LC 16), 12=-276 (LC 17)		
Max Grav 2=1729 (LC 1), 12=1729 (LC 1)		
FORCES (lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-2=-0/12, 2-4=-2919/471, 4-6=-2659/458, 6-7=-1924/432, 7-8=-1924/432, 8-10=-2659/458, 10-12=-2918/471, 12-13=0/12	
BOT CHORD	2-18=-488/2482, 16-18=-309/2122, 14-16=-210/2122, 12-14=-315/2482	
WEBS	7-16=-200/1249, 8-16=-864/303, 8-14=-58/461, 10-14=-294/230, 6-16=-864/303, 6-18=-57/461, 4-18=-294/230	

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 18-6-0, Exterior(2R) 18-6-0 to 23-6-0, Interior (1) 23-6-0 to 37-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- 6) All plates are 3x4 MT20 unless otherwise indicated.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 276 lb uplift at joint 2 and 276 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



March 4, 2024

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

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MiTek®

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	E5	Common Supported Gable	1	1	Job Reference (optional)

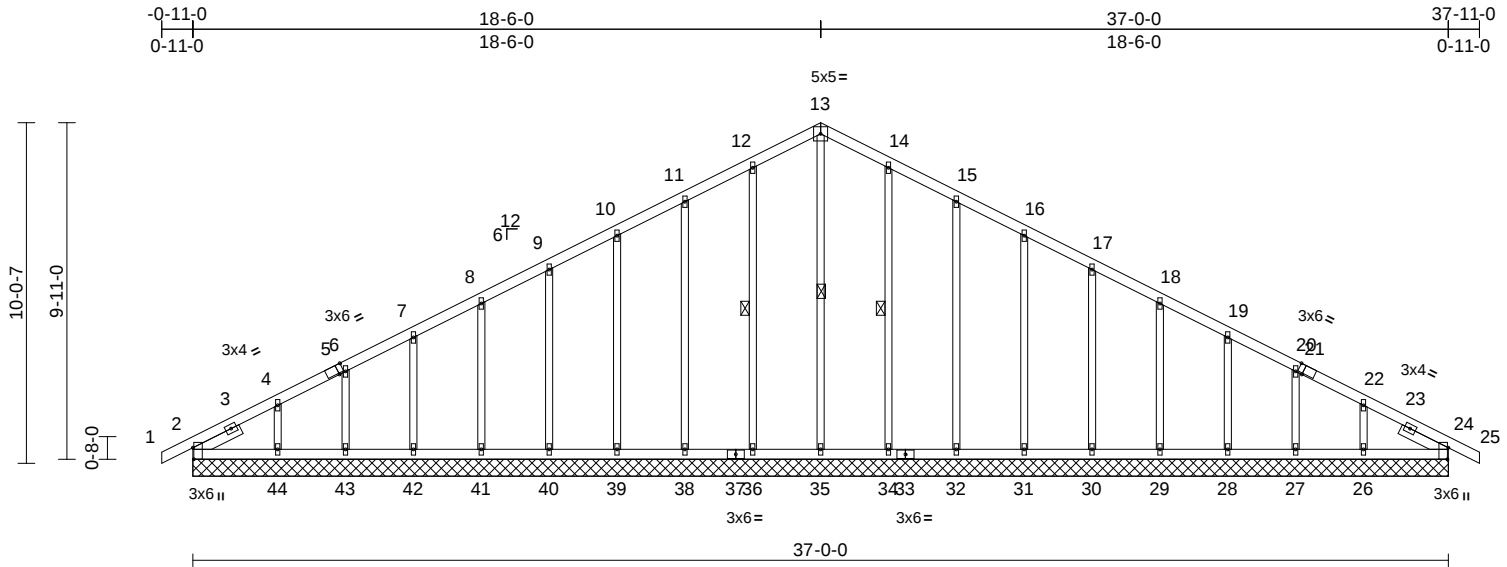
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977036
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09 05:00 Page: 1

ID: WUXtsnQTCg5xShQIN2gNtYtlfdh-RfC?PsB70Hq3NSgPqnL8w3uTXbGK?VrCDoi7J42J6Z4

03/12/2024



Scale = 1:67.9

Plate Offsets (X, Y): [2:0-4-1,Edge], [5:0-1-14,Edge], [21:0-1-14,Edge], [24:0-4-1,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.01	24	n/a	n/a	
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 195 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-7, Right 2x4 SP No.2 -- 1-6-7

BRACING

TOP CHORD Structural wood sheathing directly applied or 6'-0" oc purlins.
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.
WEBS 1 Row at midpt 13-35, 12-36, 14-34

REACTIONS

(size) 2=37-0-0, 24=37-0-0, 26=37-0-0, 27=37-0-0, 28=37-0-0, 29=37-0-0, 30=37-0-0, 31=37-0-0, 32=37-0-0, 34=37-0-0, 35=37-0-0, 36=37-0-0, 38=37-0-0, 39=37-0-0, 40=37-0-0, 41=37-0-0, 42=37-0-0, 43=37-0-0, 44=37-0-0
Max Horiz 2=183 (LC 20)
Max Uplift 2=-27 (LC 17), 26=-105 (LC 17), 27=-51 (LC 17), 28=-63 (LC 17), 29=-61 (LC 17), 30=-61 (LC 17), 31=-60 (LC 17), 32=-67 (LC 17), 34=-50 (LC 17), 36=-55 (LC 16), 38=-65 (LC 16), 39=-60 (LC 16), 40=-61 (LC 16), 41=-60 (LC 16), 42=-64 (LC 16), 43=-48 (LC 16), 44=-118 (LC 16)

Max Grav 2=188 (LC 1), 24=188 (LC 1), 26=211 (LC 37), 27=172 (LC 1), 28=182 (LC 37), 29=180 (LC 24), 30=180 (LC 37), 31=221 (LC 24), 32=265 (LC 24), 34=274 (LC 24), 35=208 (LC 29), 36=274 (LC 23), 38=265 (LC 23), 39=221 (LC 23), 40=180 (LC 36), 41=180 (LC 23), 42=182 (LC 36), 43=172 (LC 1), 44=211 (LC 36)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-4=-243/84, 4-6=-162/90, 6-7=-128/105, 7-8=-102/131, 8-9=-82/159, 9-10=-73/187, 10-11=-91/238, 11-12=-111/295, 12-13=-128/342, 13-14=-128/342, 14-15=-111/295, 15-16=-91/238, 16-17=-73/184, 17-18=-58/130, 18-19=-58/77, 19-20=-73/31, 20-22=-98/22, 22-24=-165/50, 24-25=0/12
BOT CHORD 2-44=-48/194, 43-44=-48/194, 42-43=-48/194, 41-42=-48/194, 40-41=-48/194, 39-40=-48/194, 38-39=-48/194, 36-38=-48/194, 35-36=-48/194, 34-35=-48/194, 32-34=-48/194, 31-32=-48/194, 30-31=-48/194, 29-30=-48/194, 28-29=-48/194, 27-28=-48/194, 26-27=-48/194, 24-26=-48/194
WEBS 13-35=-213/42, 12-36=-234/82, 11-38=-225/104, 10-39=-181/95, 9-40=-140/97, 8-41=-140/96, 7-42=-141/98, 6-43=-136/104, 4-44=-159/207, 14-34=-234/82, 15-32=-225/104, 16-31=-181/95, 17-30=-140/97, 18-29=-140/96, 19-28=-141/98, 20-27=-136/105, 22-26=-159/203

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 18-6-0, Corner(3R) 18-6-0 to 23-6-0, Exterior(2N) 23-6-0 to 37-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.



March 4, 2024

Continued on page 2

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

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

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121	RELEASE FOR CONSTRUCTION
P240180-01	E5	Common Supported Gable	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW DEVELOPMENT SERVICES 163977036 LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09:05:00 Page: 2
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03/12/2024

- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 1.5x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2'-0" oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 55 lb uplift at joint 36, 65 lb uplift at joint 38, 60 lb uplift at joint 39, 61 lb uplift at joint 40, 60 lb uplift at joint 41, 64 lb uplift at joint 42, 48 lb uplift at joint 43, 118 lb uplift at joint 44, 50 lb uplift at joint 34, 67 lb uplift at joint 32, 60 lb uplift at joint 31, 61 lb uplift at joint 30, 61 lb uplift at joint 29, 63 lb uplift at joint 28, 51 lb uplift at joint 27 and 105 lb uplift at joint 26.
- 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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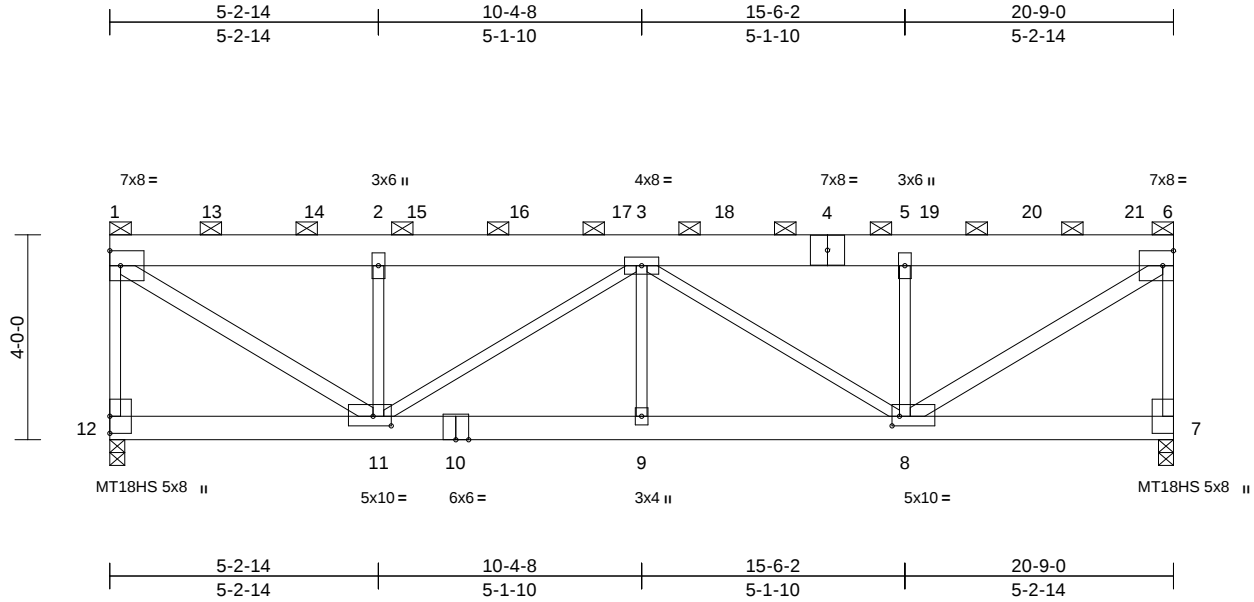
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121	RELEASE FOR CONSTRUCTION
P240180-01	R1	Flat Girder	1	2	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						163977037
						LEE'S SUMMIT, MISSOURI

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

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03/12/2024



Scale = 1:44.9									
Plate Offsets (X, Y): [8:0-1-12,0-2-4], [11:0-4-4,0-2-4]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.11	9	>999
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.21	9	>999
TCDL	10.0	Rep Stress Incr	NO	WB	0.78	Horz(CT)	0.03	7	n/a
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S					
BCDL	10.0								
									PLATES
									MT18HS
									197/144
									MT20
									197/144
									GRIP
									197/144
									Weight: 272 lb FT = 20%

LUMBER
TOP CHORD 2x8 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 11-1,8-6;2x4 SP 1650F 1.5E

BRACING
TOP CHORD 2-0-0 oc purlins (5-10-6 max.): 1-6, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 12=0-3-8
Max Horiz 12=-105 (LC 14)
Max Uplift 7=-1277 (LC 13), 12=-1149 (LC 12)
Max Grav 7=5816 (LC 1), 12=5244 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-5151/1335, 1-2=-6512/1664, 2-3=-6512/1664, 3-5=-6543/1633, 5-6=-6543/1633, 6-7=-5720/1456
BOT CHORD 11-12=-86/87, 9-11=-2151/8551, 8-9=-2151/8551, 7-8=-9/38
WEBS 1-11=-1944/7816, 2-11=-2940/830, 3-11=-2460/625, 3-9=0/199, 3-8=-2423/625, 5-8=-2985/834, 6-8=-1959/7851

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x8 - 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, 2x3 - 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- 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.
- All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1149 lb uplift at joint 12 and 1277 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 18 lb down and 20 lb up at 0-1-4, 970 lb down and 200 lb up at 2-0-0, 970 lb down and 200 lb up at 4-0-0, 970 lb down and 200 lb up at 6-0-0, 970 lb down and 200 lb up at 8-0-0, 970 lb down and 200 lb up at 10-0-0, 970 lb down and 200 lb up at 12-0-0, 970 lb down and 200 lb up at 14-0-0, 970 lb down and 200 lb up at 16-0-0, and 970 lb down and 200 lb up at 18-0-0, and 973 lb down and 206 lb up at 20-0-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.

- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-70, 7-12=-20
Concentrated Loads (lb)
Vert: 4=-920, 13=-920, 14=-920, 15=-920, 16=-920, 17=-920, 18=-920, 19=-920, 20=-920, 21=-932



March 4, 2024

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

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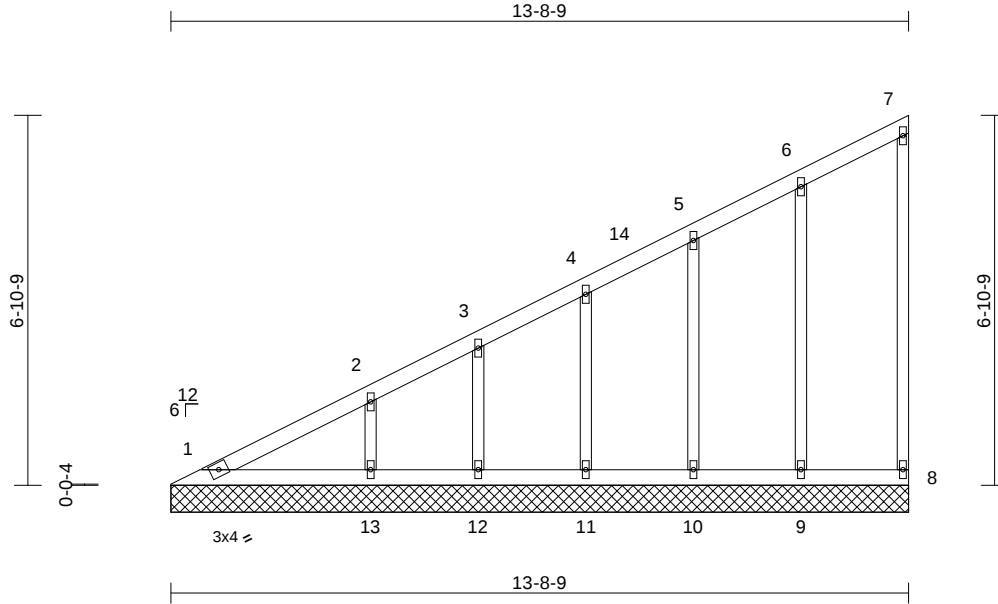
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	V1	Valley	1	1	Job Reference (optional)

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

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977038
LEE'S SUMMIT, MISSOURI

03/12/2024



Scale = 1:42.8

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.07	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.00	8	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0										
										Weight: 61 lb	FT = 20%

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

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

REACTIONS (size)
1=13-8-9, 8=13-8-9, 9=13-8-9, 10=13-8-9, 11=13-8-9, 12=13-8-9, 13=13-8-9
Max Horiz 1=276 (LC 16)
Max Uplift 8=-24 (LC 16), 9=-62 (LC 16), 10=-59 (LC 16), 11=-62 (LC 16), 12=-47 (LC 16), 13=-95 (LC 16)
Max Grav 1=134 (LC 27), 8=98 (LC 22), 9=270 (LC 22), 10=254 (LC 22), 11=224 (LC 22), 12=136 (LC 1), 13=280 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-329/139, 2-3=-249/97, 3-4=-204/83, 4-5=-149/60, 5-6=-91/48, 6-7=-54/28, 7-8=-83/42
BOT CHORD 1-13=0/1, 12-13=0/1, 11-12=0/1, 10-11=0/1, 9-10=0/1, 8-9=0/1
WEBS 6-9=-228/116, 5-10=-216/107, 4-11=-181/100, 3-12=-110/83, 2-13=-209/165

NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-9-1, Interior (1) 5-9-1 to 13-7-13 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; 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.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 8, 62 lb uplift at joint 9, 59 lb uplift at joint 10, 62 lb uplift at joint 11, 47 lb uplift at joint 12 and 95 lb uplift at joint 13.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 4, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	V2	Valley	1	1	Job Reference (optional)

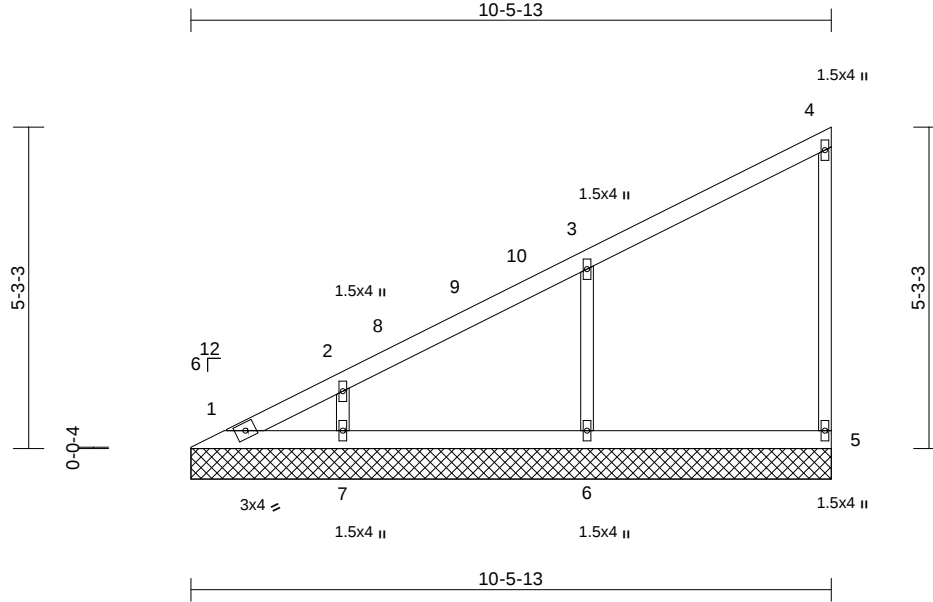
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977039
LEE'S SUMMIT, MISSOURI

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

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03/12/2024



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 39 lb	FT = 20%

LUMBER		
TOP CHORD	2x4 SP No.2	
BOT CHORD	2x4 SP No.2	
WEBS	2x3 SPF No.2	
OTHERS	2x3 SPF No.2	
BRACING		
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	
REACTIONS	(size)	1=10-5-13, 5=10-5-13, 6=10-5-13, 7=10-5-13
	Max Horiz	1=214 (LC 16)
	Max Uplift	5=-48 (LC 16), 6=-137 (LC 16), 7=-101 (LC 16)
	Max Grav	1=93 (LC 16), 5=206 (LC 22), 6=569 (LC 22), 7=302 (LC 22)
FORCES	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-299/129, 2-3=-214/95, 3-4=-120/54, 4-5=-174/99	
BOT CHORD	1-7=-2/5, 6-7=-2/5, 5-6=-2/5	
WEBS	3-6=-480/289, 2-7=-236/218	

- NOTES**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9, Interior (1) 5-7-9 to 10-5-1 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) Gable requires continuous bottom chord bearing.
 - 6) Gable studs spaced at 4-0-0 oc.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 5, 137 lb uplift at joint 6 and 101 lb uplift at joint 7.
 - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



March 4, 2024

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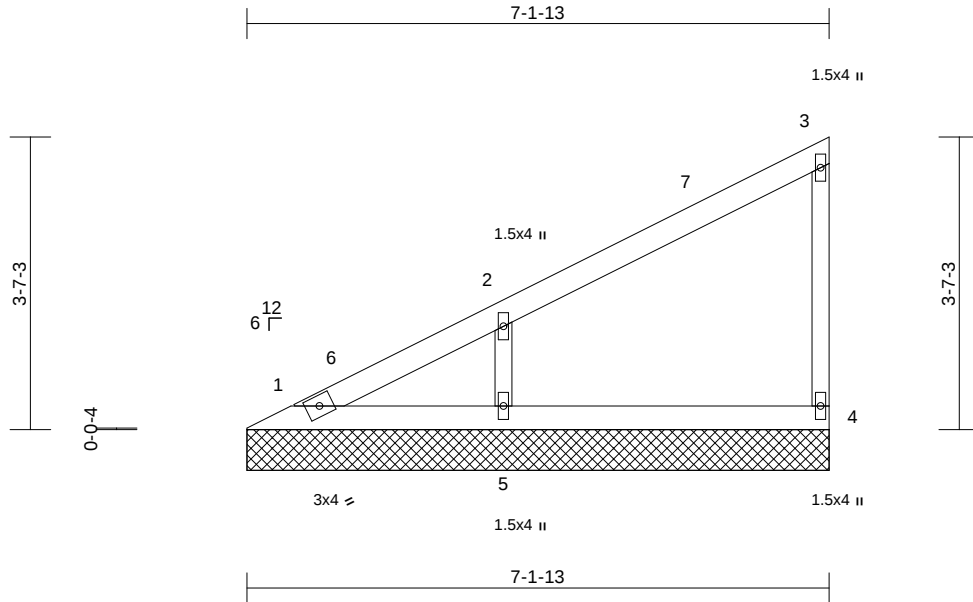
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	V3	Valley	1	1	Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Mar 01 09:05:01 Page: 1

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03/12/2024



Scale = 1:28.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 25 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=7-1-13, 4=7-1-13, 5=7-1-13
 Max Horiz 1=141 (LC 16)
 Max Uplift 4=-48 (LC 16), 5=-128 (LC 16)
 Max Grav 1=72 (LC 27), 4=206 (LC 22),
 5=541 (LC 22)

FORCES

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-227/105, 2-3=-115/59, 3-4=-175/119
BOT CHORD	1-5=0/0, 4-5=0/0
WEBS	2-5=-458/315

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCdL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9,
Interior (1) 5-7-9 to 7-1-1 zone; cantilever left and right
exposed ;C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Cable End Details as applicable,
or consult qualified building designer per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate
DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9;
Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
 - 5) Gable requires continuous bottom chord bearing.
 - 6) Gable studs spaced at 4-0-0 oc.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 4 and 128 lb uplift at joint 5.
 - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



March 4, 2024



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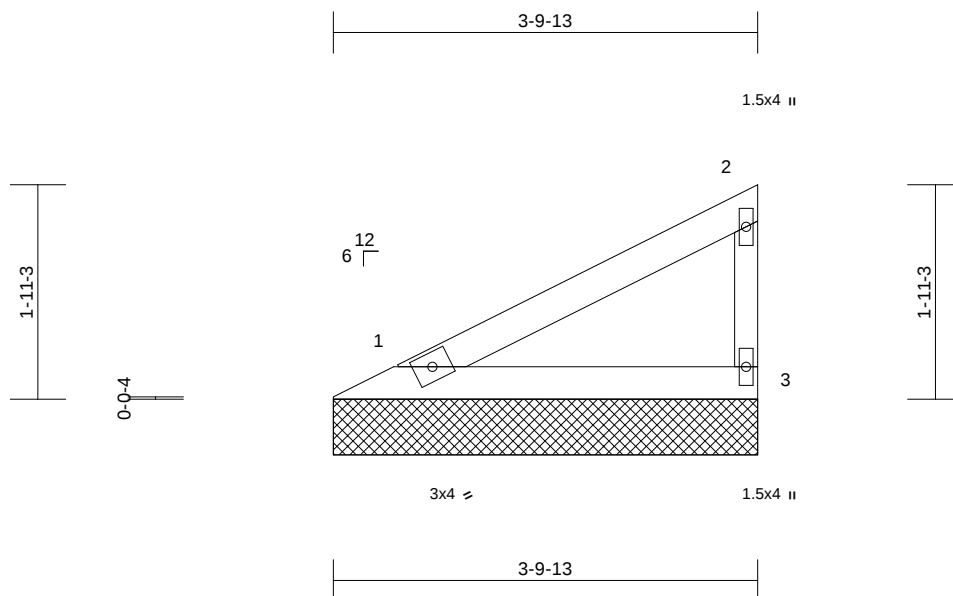
Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Mar 01 09:05:02 Page: 1

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Page: 1

03/12/2024



Scale = 1:20.7

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LUMBER

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

BRACING

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

REACTIONS

(size)	1=3-9-13, 3=3-9-13
Max Horiz	1=68 (LC 16)
Max Uplift	1=-14 (LC 16), 3=-48 (LC 16)
Max Grav	1=191 (LC 22), 3=191 (LC 22)

FORCES

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-74/57, 2-3=-160/130
BOT CHORD	1-3=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) zone; cantilever left
and right exposed ; C-C for members and forces &
MWFRS for reactions shown; Lumber DOL=1.60 plate
grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 3) TLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate
DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9;
Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this
design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1 and 48 lb uplift at joint 3.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 4, 2024



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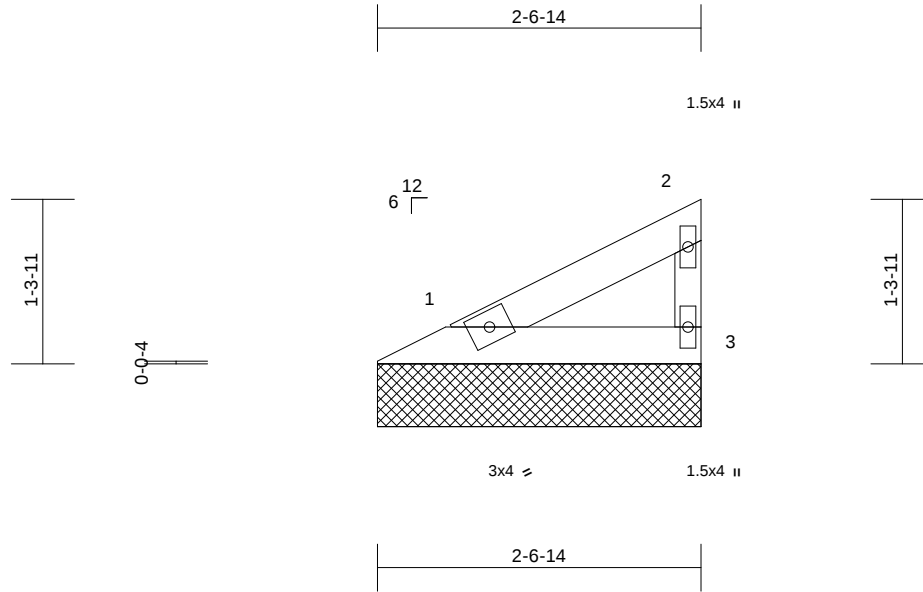
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	V5	Valley	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
163977042
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09:05:12 Page: 1
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03/12/2024



Scale = 1:18.3

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	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	n/a	-	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 8 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-7-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size)

1=2-6-14, 3=2-6-14
Max Horiz 1=41 (LC 16)
Max Uplift 1=-8 (LC 16), 3=-29 (LC 16)
Max Grav 1=108 (LC 22), 3=108 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-44/32, 2-3=-89/78
BOT CHORD 1-3=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 29 lb uplift at joint 3.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 4, 2024

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

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

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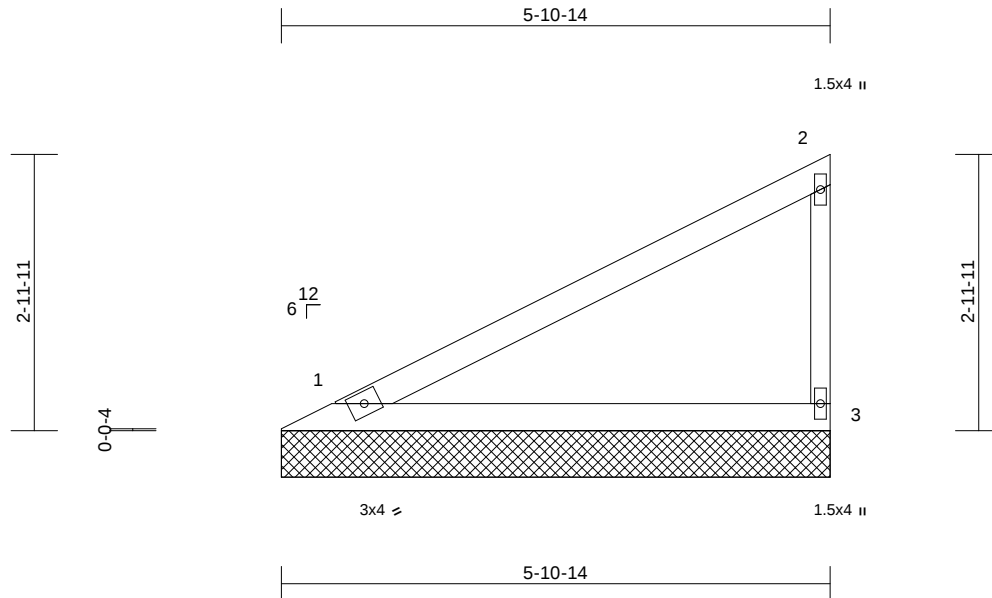
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	V6	Valley	1	1	Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09:05:12 Page: 1

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03/12/2024



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	1.00	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.34	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	n/a	-	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 20 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=5-10-14, 3=5-10-14

Max Horiz 1=114 (LC 16)
 Max Uplift 1=-23 (LC 16), 3=-80 (LC 16)
 Max Grav 1=341 (LC 22), 3=341 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-120/103, 2-3=-289/211
 BOT CHORD 1-3=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1 and 80 lb uplift at joint 3.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 4, 2024

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

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

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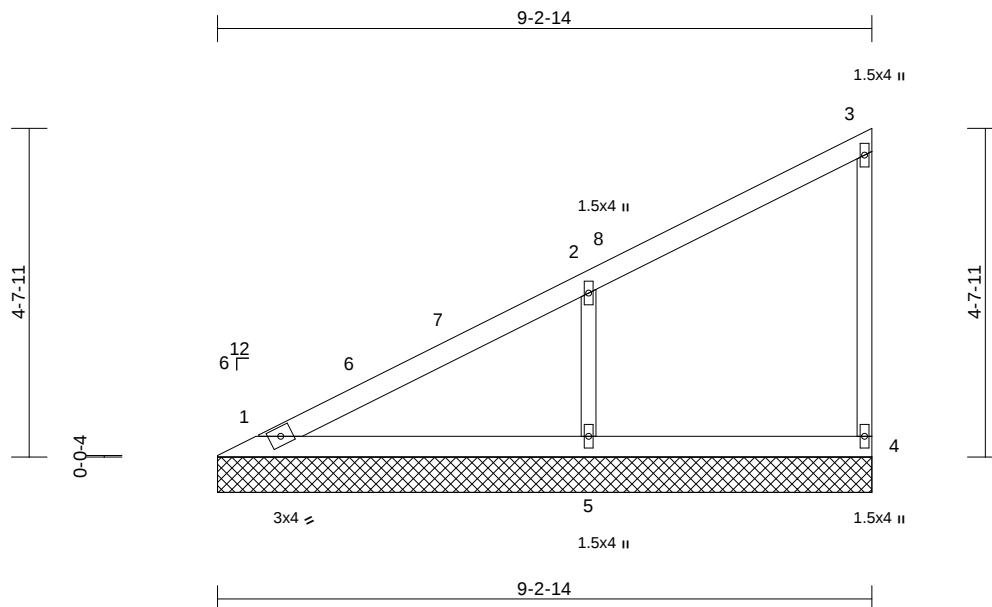
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	V7	Valley	1	1	Job Reference (optional)

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

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03/12/2024



Scale = 1:32.5

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	0.46	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 33 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size)	1=9-2-14, 4=9-2-14, 5=9-2-14
Max Horiz	1=187 (LC 16)
Max Uplift	4=-42 (LC 16), 5=-162 (LC 16)
Max Grav	1=171 (LC 22), 4=190 (LC 22), 5=645 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-240/112, 2-3=-125/49, 3-4=-163/98
BOT CHORD	1-5=-2/5, 4-5=-2/5
WEBS	2-5=-529/341

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9, Interior (1) 5-7-9 to 9-2-2 zone; cantilever left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 4 and 162 lb uplift at joint 5.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 4, 2024

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

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 121
P240180-01	V8	Valley	1	1	Job Reference (optional)

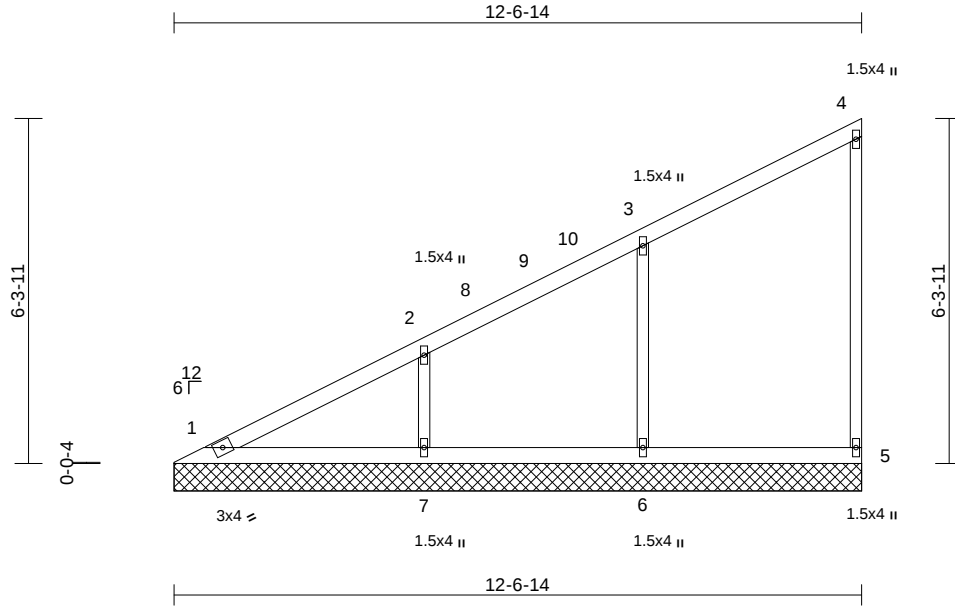
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
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Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. File Mar 01 09:05:12 Page: 1

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03/12/2024



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 48 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS	(size)	1=12-6-14, 5=12-6-14, 6=12-6-14, 7=12-6-14
	Max Horiz	1=259 (LC 16)
	Max Uplift	5=-49 (LC 16), 6=-129 (LC 16), 7=-136 (LC 16)
	Max Grav	1=147 (LC 27), 5=210 (LC 22), 6=547 (LC 22), 7=405 (LC 22)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-310/137, 2-3=-193/90, 3-4=-118/56, 4-5=-176/94
BOT CHORD	1-7=-2/4, 6-7=-2/4, 5-6=-2/4
WEBS	3-6=-465/247, 2-7=-308/243

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9, Interior (1) 5-7-9 to 12-6-2 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 5, 129 lb uplift at joint 6 and 136 lb uplift at joint 7.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 4, 2024

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

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

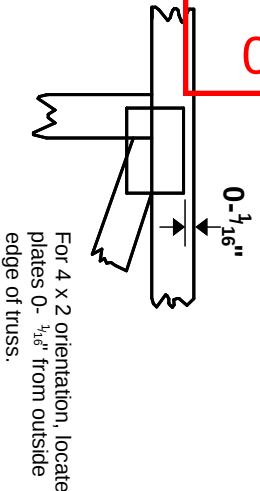
MiTek®

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

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 software or upon request.

PLATE SIZE

4 X 4

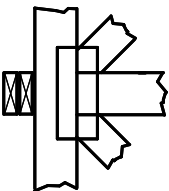
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

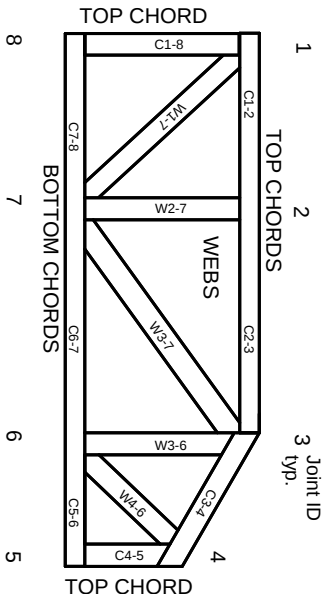


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:
ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: MIL-7473 rev. 1/12/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.