

RE: Basswood Farmhouse 2 Car -

Site Information:

Project Customer: Clayton Properties Project Name: Basswood Farmhouse 2 Car

Lot/Block: 2090

Subdivision: BAILEY FARMS

Model: Basswood Farmhouse 2 Car

Address: 1152 SE CRONIN ST

City: LEE'S SUMMIT

State: MO

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

Design Code: IRC2018/TPI2014

Wind Code: ASCE 7-16

Wind Speed: 115 mph

Roof Load: 45.0 psf

Mean Roof Height (feet): 35

Design Program: MiTek 20/20 8.6

Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16

Floor Load: N/A psf

Exposure Category: C

MiTek, Inc.

16023 Swingley Ridge Rd.

Chesterfield, MO 63017

314.434.1200

No.	Seal#	Truss Name	Date
1	I74271789	B1	6/18/25
2	I74271790	B2	6/18/25
3	I74271791	B3	6/18/25
4	I74271792	C1	6/18/25
5	I74271793	C2	6/18/25
6	I74271794	D1	6/18/25
7	I74271795	D2	6/18/25
8	I74271796	D3	6/18/25
9	I74271797	E1	6/18/25
10	I74271798	E2	6/18/25
11	I74271799	E3	6/18/25
12	I74271800	E4	6/18/25
13	I74271801	E5	6/18/25
14	I74271802	R1	6/18/25
15	I74271803	V1	6/18/25
16	I74271804	V2	6/18/25
17	I74271805	V3	6/18/25
18	I74271806	V4	6/18/25
19	I74271807	V5	6/18/25
20	I74271808	V6	6/18/25
21	I74271809	V7	6/18/25
22	I74271810	V8	6/18/25

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Premier Building Supply (Springhill, KS)20300 W 207th Street.

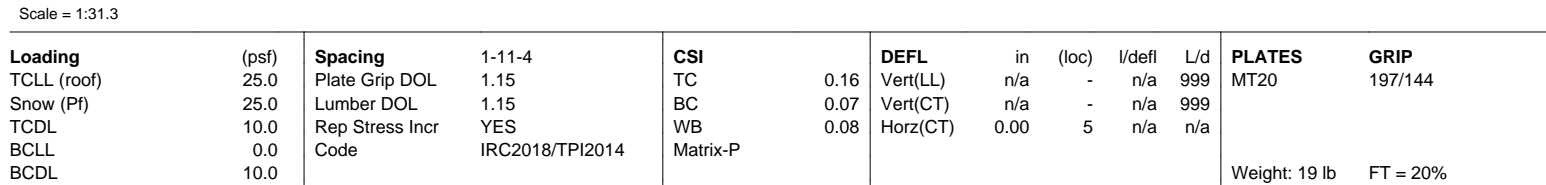
Truss Design Engineer's Name: Lu, Jie

My license renewal date for the state of Missouri is December 31, 2026.

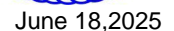
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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



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LOAD CASE(S) Standard



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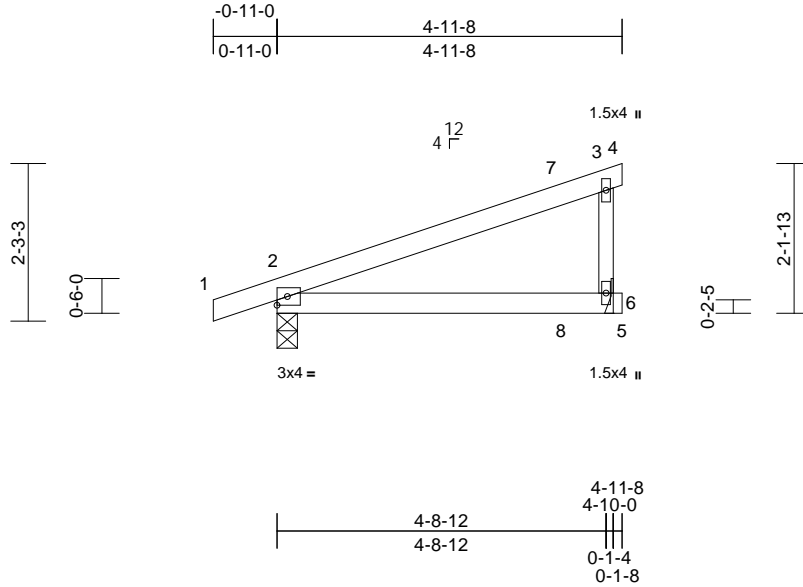
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	B2	Monopitch	3	1	Job Reference (optional)
					I74271790

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Scale = 1:33.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	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



June 18, 2025

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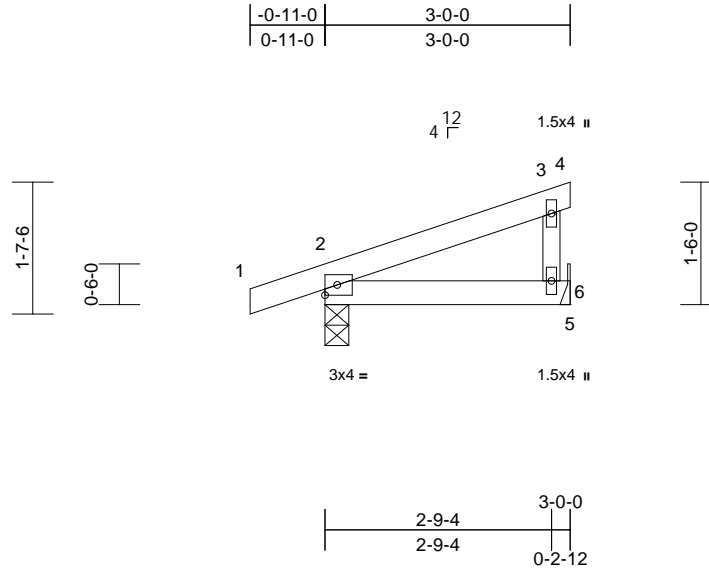
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	B3	Monopitch	7	1	Job Reference (optional)
					I74271791

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	0.00	2-6	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.08	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=58 (LC 13)
Max Uplift 2=-78 (LC 12), 6=-30 (LC 16)
Max Grav 2=283 (LC 23), 6=164 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-84/47, 3-4=-7/0, 3-6=-133/147
BOT CHORD 2-6=-23/25, 5-6=0/0

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) 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.

- Bearings are assumed to be: Joint 2 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 30 lb uplift at joint
6 and 78 lb uplift at joint 2.
- This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



June 18, 2025

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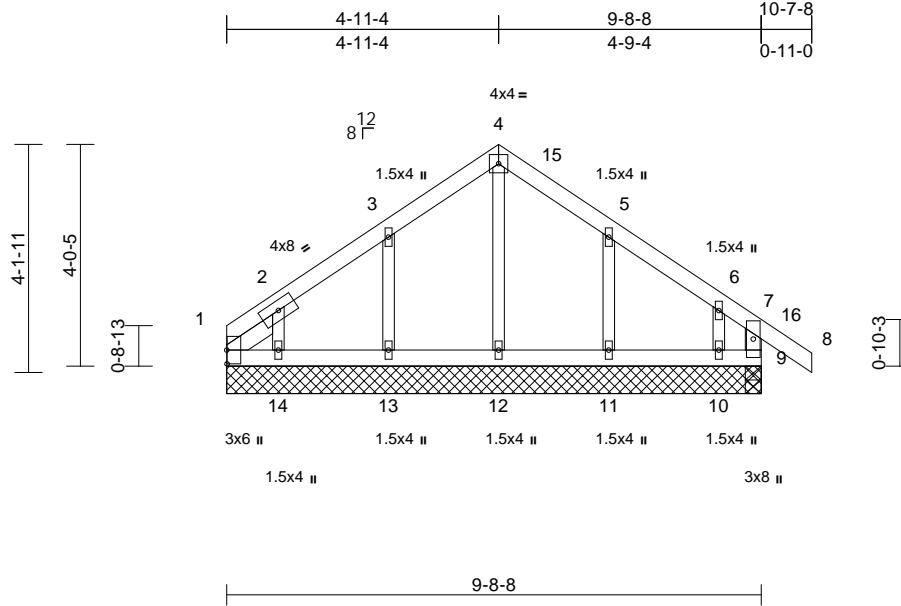
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	C1	Common Structural Gable	1	1	Job Reference (optional)
					I74271792

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Scale = 1:41.8

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

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)	0.00	13-14	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	9	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 44 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
OTHERS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 1-0-10

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)	1=9-8-8, 9=9-8-8, 10=9-8-8, 11=9-8-8, 12=9-8-8, 13=9-8-8, 14=9-8-8
Max Horiz	1=116 (LC 15)
Max Uplift	1=66 (LC 14), 9=23 (LC 13), 10=84 (LC 17), 11=81 (LC 17), 13=81 (LC 16), 14=100 (LC 16)
Max Grav	1=85 (LC 13), 9=207 (LC 22), 10=133 (LC 24), 11=295 (LC 24), 12=161 (LC 24), 13=288 (LC 23), 14=222 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-118/114, 2-3=-87/78, 3-4=-89/170, 4-5=-88/169, 5-6=-65/67, 6-7=-51/29, 7-8=0/69, 7-9=-195/90
BOT CHORD	1-14=-38/95, 13-14=-38/95, 12-13=-38/95, 11-12=-38/95, 10-11=-38/95, 9-10=-38/95
WEBS	4-12=-123/4, 3-13=-248/197, 2-14=-186/198, 5-11=-254/199, 6-10=-118/116

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) 0-0-0 to 4-11-4, Corner(3R) 4-11-4 to 9-11-4, Exterior(2N) 9-11-4 to 10-7-8 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 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 66 lb uplift at joint 1, 23 lb uplift at joint 9, 81 lb uplift at joint 13, 100 lb uplift at joint 14, 81 lb uplift at joint 11 and 84 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



June 18, 2025

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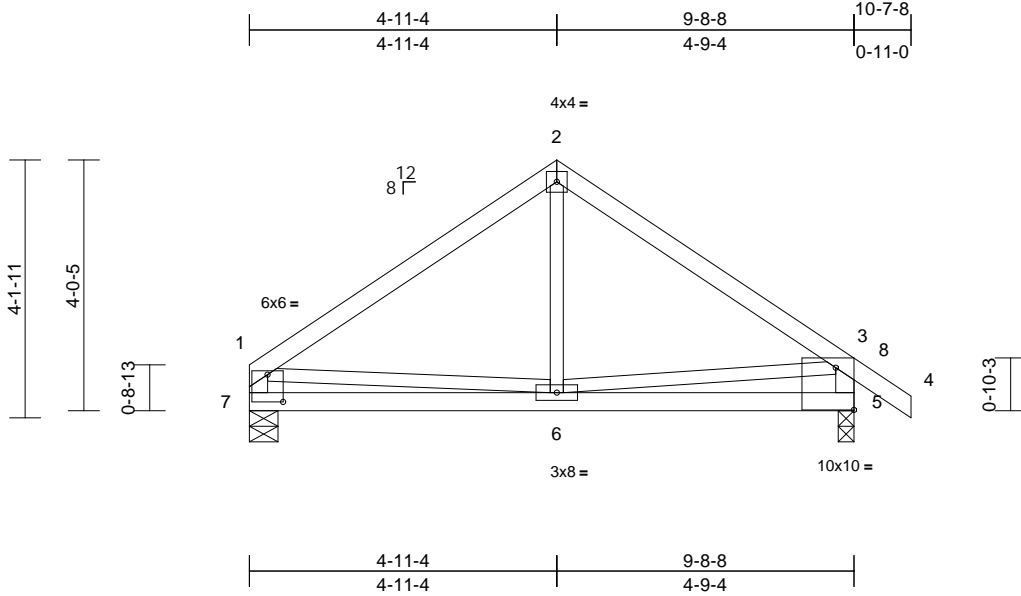
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	C2	Common	2	1	Job Reference (optional)
					I74271793

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Scale = 1:37

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

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	0.60	Vert(LL)	0.03	6-7	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.02	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 45 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-1,5-3:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-9-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 5=0-3-0, 7=0-5-8
Max Horiz 7=114 (LC 12)
Max Uplift 5=-84 (LC 17), 7=-58 (LC 16)
Max Grav 5=638 (LC 24), 7=550 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-550/461, 2-3=-540/469, 3-4=0/71, 1-7=-507/346, 3-5=-597/422
BOT CHORD 6-7=-219/317, 5-6=-195/322
WEBS 2-6=-317/187, 1-6=-74/197, 3-6=-106/244

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 4-11-4, Exterior(2R) 4-11-4 to 9-11-4, Interior (1) 9-11-4 to 10-7-8 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 58 lb uplift at joint 7 and 84 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



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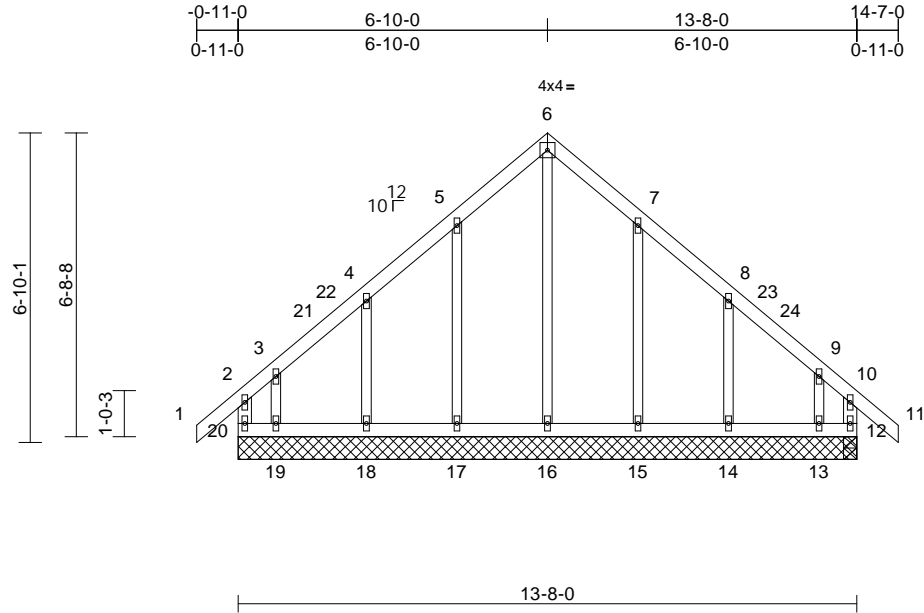
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	D1	Common Structural Gable	1	1	174271794
Job Reference (optional)					

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

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Scale = 1:50.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	0.00	18-19	>999	240	MT20	197/144
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	13-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0										Weight: 71 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	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=13-8-0, 13=13-8-0, 14=13-8-0, 15=13-8-0, 16=13-8-0, 17=13-8-0, 18=13-8-0, 19=13-8-0, 20=13-8-0
	Max Horiz	20=-213 (LC 14)
	Max Uplift	12=-126 (LC 13), 13=-181 (LC 17), 14=-101 (LC 17), 15=-98 (LC 17), 17=-99 (LC 16), 18=-101 (LC 16), 19=-194 (LC 16), 20=-168 (LC 12)
	Max Grav	12=203 (LC 30), 13=195 (LC 15), 14=263 (LC 24), 15=306 (LC 24), 16=214 (LC 29), 17=306 (LC 23), 18=263 (LC 23), 19=224 (LC 14), 20=237 (LC 31)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/82, 2-3=-166/151, 3-4=-105/103, 4-5=-88/145, 5-6=-138/229, 6-7=-138/223, 7-8=-83/137, 8-9=-84/83, 9-10=-133/114, 10-11=0/82, 2-20=-184/116, 10-12=-184/87
BOT CHORD	19-20=-100/120, 18-19=-100/120, 17-18=-100/120, 16-17=-100/120, 15-16=-100/120, 14-15=-100/120, 13-14=-100/120, 12-13=-100/120
WEBS	6-16=-210/68, 5-17=-266/134, 4-18=-221/145, 3-19=-134/139, 7-15=-266/134, 8-14=-221/145, 9-13=-132/133

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.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 168 lb uplift at joint 20, 126 lb uplift at joint 12, 99 lb uplift at joint 17, 101 lb uplift at joint 18, 194 lb uplift at joint 19, 98 lb uplift at joint 15, 101 lb uplift at joint 14 and 181 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



June 18,2025

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, 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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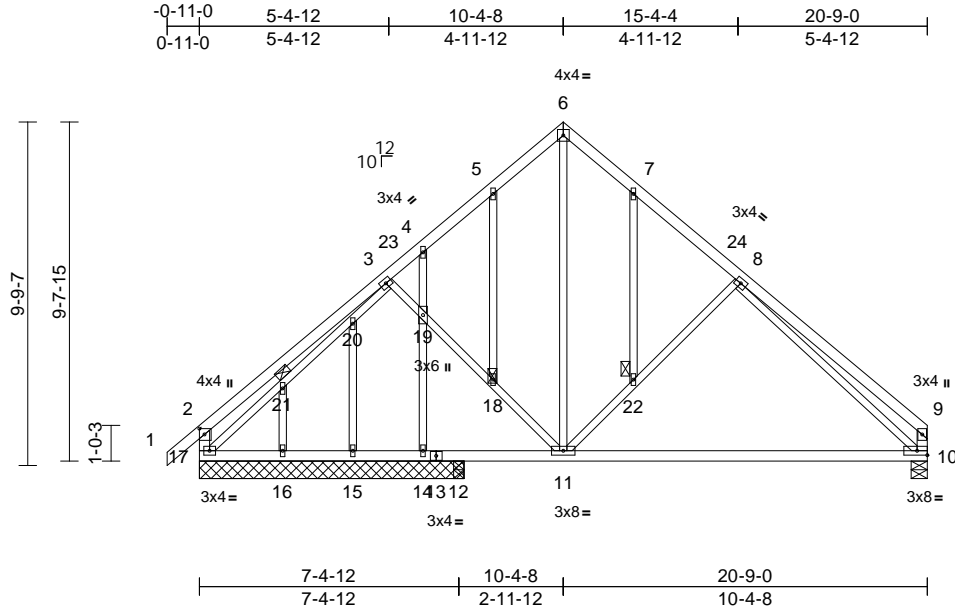
Job	Truss	Truss Type	Qty	Ply	174271795
Basswood Farmhouse	D2	Common Structural Gable	1	1	Job Reference (optional)

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Scale = 1:65.7

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

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	0.48	Vert(LL)	-0.25	10-11	>622	240	MT20
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.52	10-11	>308	180	197/144
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.02	10	n/a	n/a	
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 123 lb FT = 20%											

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 17-2,10-9:2x4 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 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 18, 21, 22
REACTIONS (size)	
	10=0-5-8, 12=0-3-8, 14=7-6-8, 15=7-6-8, 16=7-6-8, 17=7-6-8
Max Horiz	17=278 (LC 13)
Max Uplift	10=101 (LC 17), 12=149 (LC 7), 14=48 (LC 16), 17=117 (LC 16)
Max Grav	10=859 (LC 24), 12=19 (LC 24), 14=470 (LC 23), 15=176 (LC 24), 16=80 (LC 7), 17=634 (LC 1)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/79, 2-3=-331/249, 3-4=-534/158, 4-5=-590/190, 5-6=-540/216, 6-7=-547/197, 7-8=-731/170, 8-9=-415/126, 2-17=-399/251, 9-10=-367/136
BOT CHORD	16-17=-120/476, 15-16=-120/476, 14-15=-120/476, 12-14=-120/476, 11-12=-120/476, 10-11=-68/661
WEBS	17-21=-386/36, 20-21=-376/38, 3-20=-476/39, 8-10=-621/96, 3-19=-101/230, 18-19=-63/205, 11-18=-86/227, 6-11=-143/426, 11-22=-357/274, 8-22=-322/259, 5-18=-58/31, 4-19=-334/90, 14-19=-415/119, 15-20=-138/2, 16-21=-3/18, 7-22=-49/20

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 Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 10-4-8, Exterior(2R) 10-4-8 to 15-5-8, Interior (1) 15-5-8 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 17, 101 lb uplift at joint 10, 48 lb uplift at joint 14 and 149 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



June 18,2025

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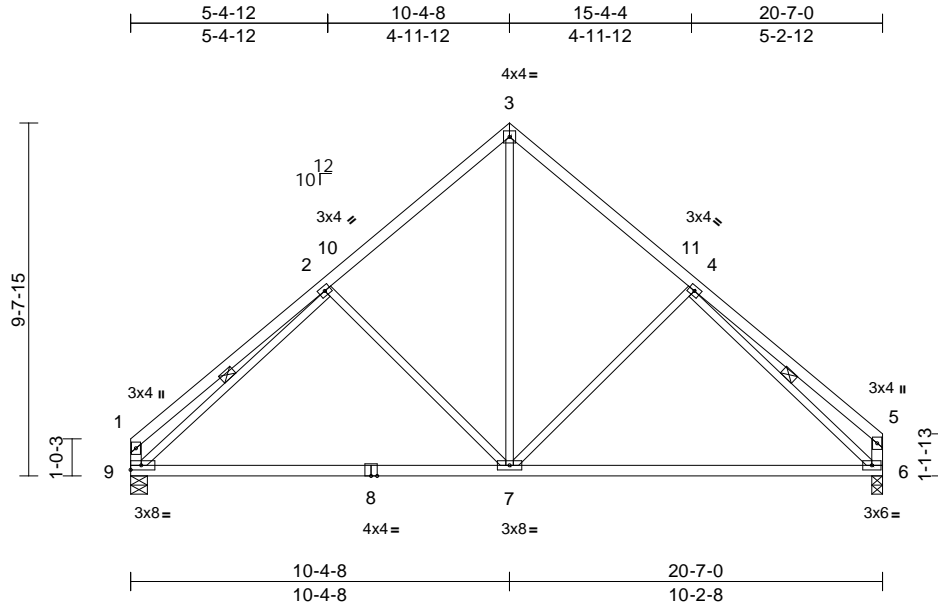
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
Basswood Farmhouse	D3	Common	7	1	I74271796

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.22	7-9	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.44	7-9	>556	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 103 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

WEBS 1 Row at midpt 2-9, 4-6
REACTIONS (size) 6=0-3-8, 9=0-5-8
Max Horiz 9=273 (LC 13)
Max Uplift 6=111 (LC 17), 9=113 (LC 16)
Max Grav 6=968 (LC 23), 9=969 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-414/134, 2-3=-896/236, 3-4=-893/235, 4-5=-353/123, 1-9=-369/142, 5-6=-326/131
BOT CHORD 7-9=-174/775, 6-7=-104/757
WEBS 2-9=-793/122, 4-6=-845/130, 2-7=-340/277, 3-7=-153/560, 4-7=-318/272

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) 0-1-12 to 5-3-8, Interior (1) 5-3-8 to 10-4-8, Exterior(2R) 10-4-8 to 15-5-8, Interior (1) 15-5-8 to 20-5-4 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
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

- Unbalanced snow loads have been considered for this design.
 - 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 113 lb uplift at joint 9 and 111 lb uplift at joint 6.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



June 18, 2025

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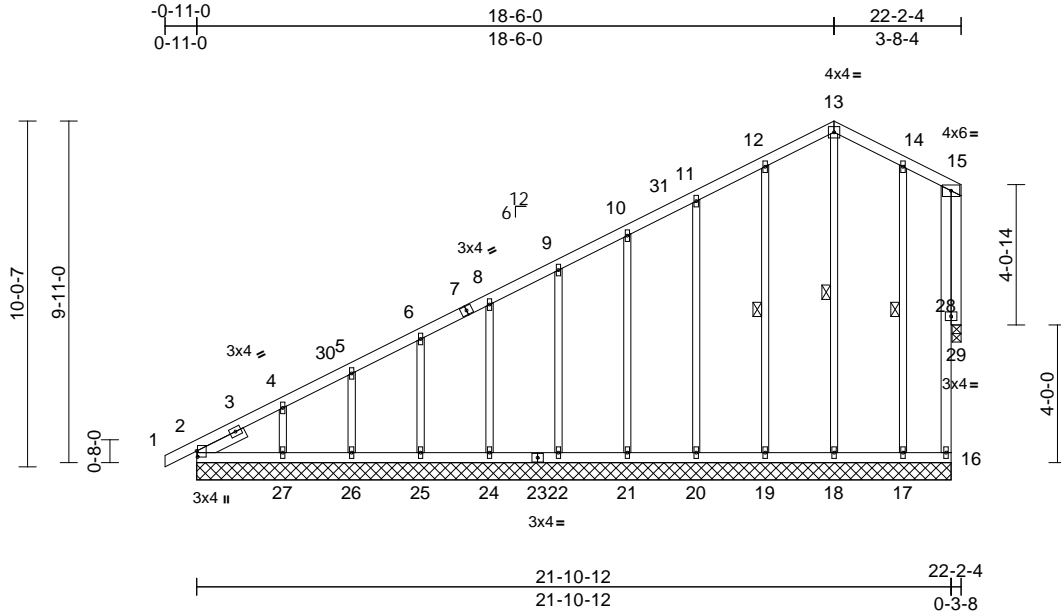
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	E1	Roof Special Supported Gable	1	1	Job Reference (optional)
					I74271797

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Scale = 1:66.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	0.00	2-27	>999	240	MT20	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	0.27	Horz(CT)	-0.01	29	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								
BCDL	10.0											
Weight: 137 lb FT = 20%												

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP 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, 24=21-10-12, 25=21-10-12, 26=21-10-12, 27=21-10-12, 29=0-3-2
	Max Horiz	2=383 (LC 16)
	Max Uplift	16=-9 (LC 17), 17=-48 (LC 17), 19=-64 (LC 16), 20=-62 (LC 16), 21=-61 (LC 16), 22=-61 (LC 16), 24=-60 (LC 16), 25=-65 (LC 16), 26=-42 (LC 16), 27=-147 (LC 16), 29=-16 (LC 16)
	Max Grav	2=218 (LC 28), 16=43 (LC 24), 17=233 (LC 24), 18=181 (LC 24), 19=261 (LC 23), 20=232 (LC 23), 21=182 (LC 23), 22=180 (LC 36), 24=180 (LC 23), 25=182 (LC 36), 26=171 (LC 1), 27=215 (LC 36), 29=23 (LC 24)

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

TOP CHORD	1-2=0/12, 2-4=-413/153, 4-5=-318/115, 5-6=-278/100, 6-8=-227/80, 8-9=-179/62, 9-10=-130/43, 10-11=-81/43, 11-12=-48/53, 12-13=-52/105, 13-14=-54/93, 14-15=-26/36, 16-28=-32/19, 15-28=-32/19
BOT CHORD	2-27=-2/2, 26-27=-2/2, 25-26=-2/2, 24-25=-2/2, 22-24=-2/2, 21-22=-2/2, 20-21=-2/2, 19-20=-2/2, 18-19=-2/2, 17-18=-2/2, 16-17=-2/2
WEBS	13-18=-139/20, 12-19=-221/96, 11-20=-192/98, 10-21=-142/96, 9-22=-140/97, 8-24=-140/96, 6-25=-141/100, 5-26=-135/93, 4-27=-162/241, 14-17=-201/124, 15-29=-23/23

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 21-9-0 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); 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 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 24, 65 lb uplift at joint 25, 42 lb uplift at joint 26, 147 lb uplift at joint 27, 48 lb uplift at joint 17 and 16 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.



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Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	E1	Roof Special Supported Gable	1	1	I74271797
					Job Reference (optional)

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

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LOAD CASE(S) Standard

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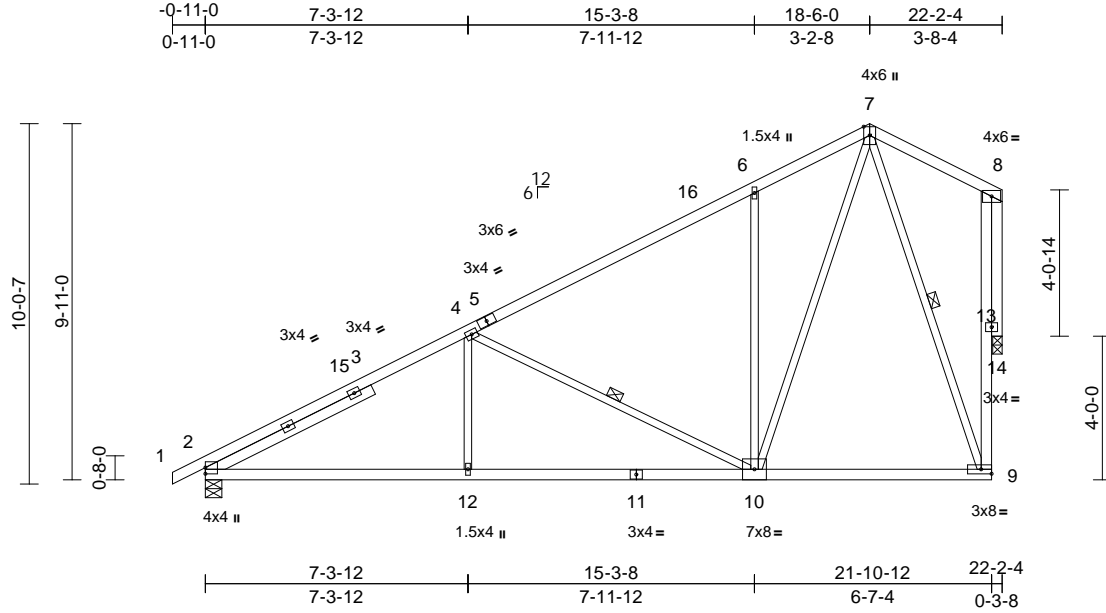
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	E2	Roof Special	8	1	Job Reference (optional)
					I74271798

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

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Scale = 1:64.2

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	0.77	Vert(LL)	-0.08	10-12	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.18	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.14	14	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 129 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 9-8:2x4 SP No.2
OTHERS	2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 5-2-1

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-0-1 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 8-9-2 oc bracing.
WEBS	1 Row at midpt 7-9, 4-10

REACTIONS

(size)	2=0-5-8, 14=0-3-2
Max Horiz	2=383 (LC 16)
Max Uplift	2=-160 (LC 16), 14=-229 (LC 16)
Max Grav	2=1090 (LC 23), 14=974 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/12, 2-4=-1641/193, 4-6=-896/124, 6-7=-887/266, 7-8=-107/57, 9-13=-198/903, 8-13=-198/903
BOT CHORD	2-12=-446/1368, 10-12=-446/1368, 9-10=-87/328
WEBS	7-10=-334/1135, 7-9=-888/238, 6-10=-589/286, 4-10=-765/286, 4-12=0/327, 8-14=-977/263

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 18-6-0, Exterior(2E) 18-6-0 to 21-9-0 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.
- 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.
- Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 160 lb uplift at joint 2 and 229 lb uplift at joint 14.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



June 18,2025

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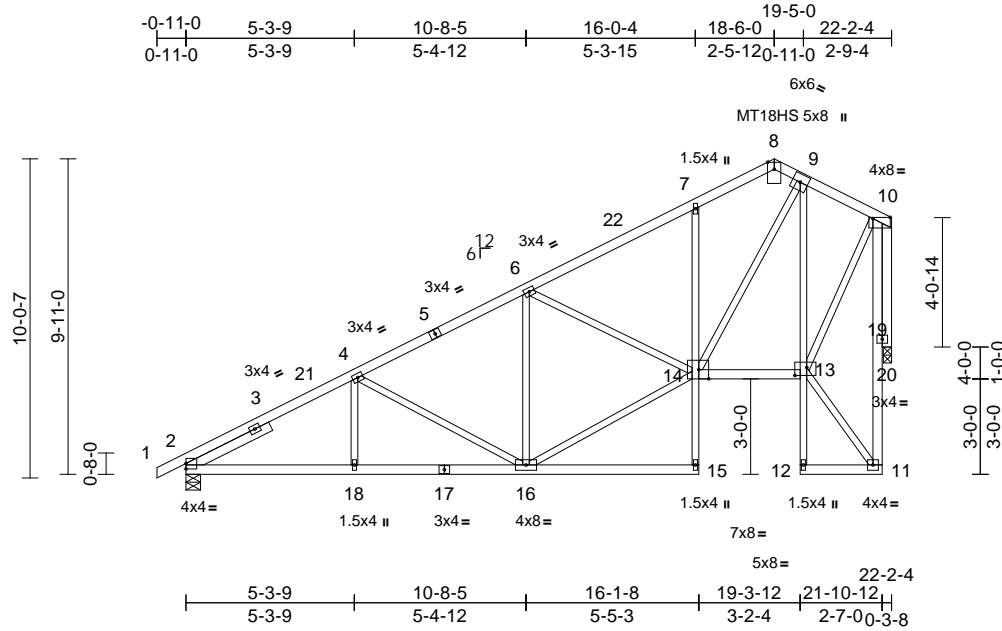
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	E3	Roof Special	2	1	Job Reference (optional)
					I74271799

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Scale = 1:72.5

Plate Offsets (X, Y): [2:Edge,0-2-1], [10:0-6-8,0-0-8], [13:0-4-8,0-3-0], [14:0-3-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.09	7-14	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.16	15-16	>999	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.16	20	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 141 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 15-7,9-12:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-10:2x4 SP No.2
OTHERS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-11-2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 20=0-3-2
Max Horiz 2=306 (LC 13)
Max Uplift 2=-167 (LC 16), 20=-222 (LC 16)
Max Grav 2=1090 (LC 23), 20=974 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-4=-1695/227, 4-6=-1264/199, 6-7=-1104/266, 7-8=-996/333, 8-9=-710/266, 9-10=-473/171, 11-19=-114/122, 10-19=-114/122
BOT CHORD 2-18=-514/1414, 16-18=-514/1414, 15-16=-2/13, 14-15=0/90, 7-14=-226/133, 13-14=-216/366, 12-13=-23/46, 9-13=-514/176, 11-12=-7/2
WEBS 11-13=-160/214, 10-13=-284/721, 9-14=-328/1089, 6-14=-237/156, 4-18=0/213, 4-16=-410/176, 6-16=-281/217, 14-16=-441/1209, 10-20=-977/272

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 18-6-0, Exterior(2E) 18-6-0 to 21-9-0 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
- 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 MT20 plates unless otherwise indicated.
- The Fabrication Tolerance at joint 8 = 16%
- 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) 20 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 167 lb uplift at joint 2 and 222 lb uplift at joint 20.
- 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



June 18,2025

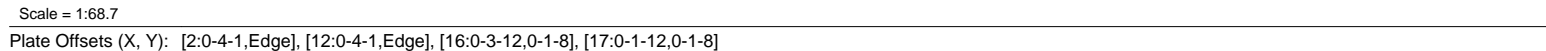
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LUMBER		2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
TOP CHORD	2x4 SP No.2	Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
BOT CHORD	2x4 SP No.2	Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
WEBS	2x3 SPF No.2	exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0,
SLIDER	Left 2x4 SP No.2 -- 4-0-10, Right 2x4 SP No.2 -- 4-0-10	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
BRACING		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
TOP CHORD	Structural wood sheathing directly applied.	4) Unbalanced snow loads have been considered for this design.
BOT CHORD	Rigid ceiling directly applied or 8-8-5 oc bracing.	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.
WEBS	1 Row at midpt 4-17, 10-16	6) All plates are MT20 plates unless otherwise indicated.
REACTIONS	(size) 2=0-5-8, 12=0-5-8	7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
	Max Horiz 2=183 (LC 20)	8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
	Max Uplift 2=-276 (LC 16), 12=-276 (LC 17)	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.
	Max Grav 2=1729 (LC 1), 12=1729 (LC 1)	10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and
FORCES		
	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/12, 2-4=-2935/447, 4-6=-2308/435, 6-7=-2285/551, 7-8=-2285/551, 8-10=-2308/435, 10-12=-2935/447, 12-13=0/12	
BOT CHORD	2-19=-454/2497, 17-19=-454/2497, 16-17=-110/1596, 14-16=-286/2497, 12-14=-286/2497	
WEBS	4-19=0/296, 4-17=-641/256, 6-17=-625/264, 8-16=-625/264, 10-16=-641/257, 10-14=0/296, 7-17=-320/1161, 7-16=-319/1161	

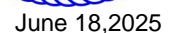
NOTES

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

R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard





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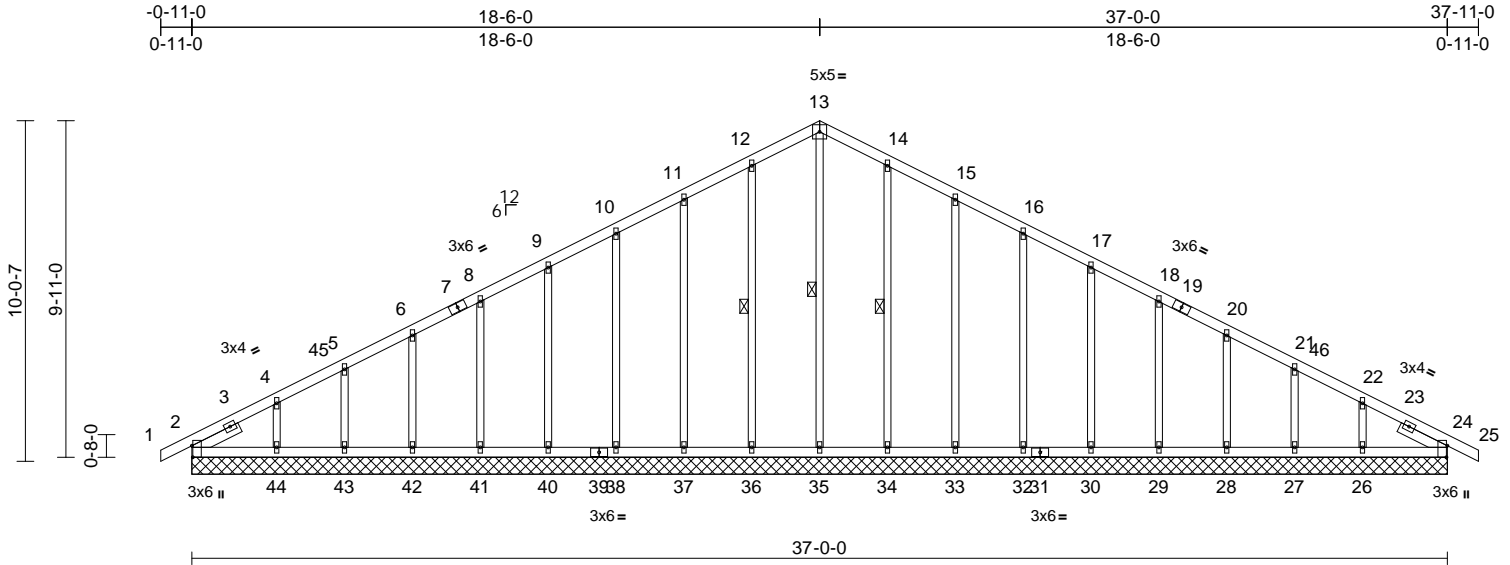
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
Basswood Farmhouse	E5	Common Supported Gable	1	1	I74271801

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Scale = 1:67.9

Plate Offsets (X, Y): [2:0-4-1,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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 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, 32=37-0-0, 33=37-0-0, 34=37-0-0, 35=37-0-0, 36=37-0-0, 37=37-0-0, 38=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 17)
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), 32=-60 (LC 17), 33=-67 (LC 17), 34=-50 (LC 17), 36=-55 (LC 16), 37=-65 (LC 16), 38=-60 (LC 16), 40=-61 (LC 16), 41=-60 (LC 16), 42=-64 (LC 16), 43=-48 (LC 16), 44=-118 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-4=-243/84, 4-5=-162/90, 5-6=-128/105, 6-8=-102/131, 8-9=-82/159, 9-10=-73/187, 10-11=-91/237, 11-12=-111/294, 12-13=-128/341, 13-14=-128/341, 14-15=-111/294, 15-16=-91/237, 16-17=-73/184, 17-18=-58/130, 18-20=-58/76, 20-21=-73/31, 21-22=-98/22, 22-24=-165/50, 24-25=0/12
BOT CHORD 2-44=-48/193, 43-44=-48/193, 42-43=-48/193, 41-42=-48/193, 40-41=-48/193, 38-40=-48/193, 37-38=-48/193, 36-37=-48/193, 35-36=-48/193, 34-35=-48/193, 33-34=-48/193, 32-33=-48/193, 30-32=-48/193, 29-30=-48/193, 28-29=-48/193, 27-28=-48/193, 26-27=-48/193, 24-26=-48/193
WEBS 13-35=-213/42, 12-36=-234/82, 11-37=-225/104, 10-38=-181/95, 9-40=-140/97, 8-41=-140/96, 6-42=-141/98, 5-43=-136/100, 4-44=-159/205, 14-34=-234/82, 15-33=-225/104, 16-32=-181/95, 17-30=-140/97, 18-29=-140/96, 20-28=-141/98, 21-27=-136/101, 22-26=-159/202

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.



June 18, 2025

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	I74271801
Basswood Farmhouse	E5	Common Supported Gable	1	1	Job Reference (optional)

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- 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 2-0-0 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 37, 60 lb uplift at joint 38, 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 33, 60 lb uplift at joint 32, 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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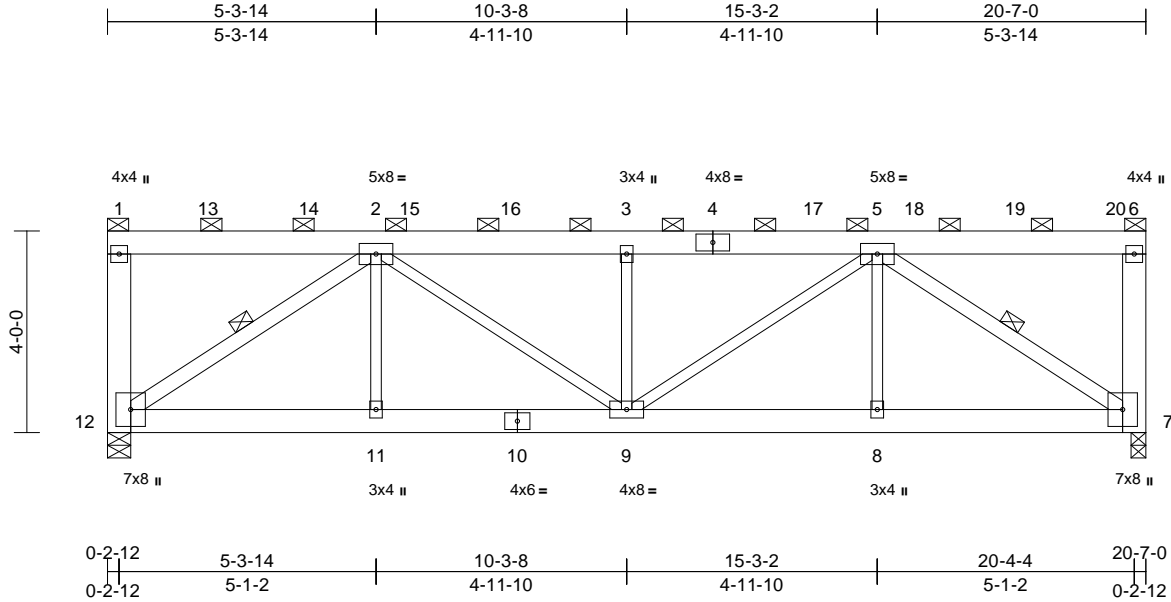
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
Basswood Farmhouse	R1	Flat Girder	1	2	I74271802

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

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.11	9	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.20	9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.65	Horz(CT)	0.06	7	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 288 lb	FT = 20%

LUMBER		
TOP CHORD	2x6 SP No.2	
BOT CHORD	2x6 SP No.2	
WEBS	2x3 SPF No.2 *Except* 12-1,6-7:2x6 SP No.2, 5-7,12-2:2x4 SP No.2	
BRACING		
TOP CHORD	2-0-0 oc purlins (4-5-15 max.): 1-6, except end verticals.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	
WEBS	1 Row at midpt 5-7, 2-12	
REACTIONS (size)		
	7=0-3-8, 12=0-5-8	
	Max Horiz 12=-108 (LC 14)	
	Max Uplift 7=-1263 (LC 13), 12=-1120 (LC 12)	
	Max Grav 7=5781 (LC 1), 12=5096 (LC 1)	
FORCES (lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-12=-854/274, 1-2=-186/123, 2-3=-7927/2003, 3-5=-7927/2003, 5-6=-183/45, 6-7=-1496/392	
BOT CHORD	11-12=-1580/6122, 9-11=-1580/6122, 8-9=-1550/6185, 7-8=-1550/6185	
WEBS	5-7=-7310/1833, 2-11=0/170, 2-12=-7239/1815, 2-9=-558/2216, 3-9=-2419/679, 5-9=-556/2139, 5-8=0/168	

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
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.
- 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) 12, 7 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 1120 lb uplift at joint 12 and 1263 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 25 lb up at 0-2-12, 954 lb down and 198 lb up at 2-0-0, 954 lb down and 198 lb up at 4-0-0, 954 lb down and 198 lb up at 6-0-0, 954 lb down and 198 lb up at 8-0-0, 954 lb down and 198 lb up at 10-0-0, 954 lb down and 198 lb up at 12-0-0, 954 lb down and 198 lb up at 14-0-0, 954 lb down and 198 lb up at 16-0-0, and 954 lb down and 191 lb up at 18-0-0, and 961 lb down and 201 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=-904, 3=-904, 13=-904, 14=-904, 15=-904, 16=-904, 17=-904, 18=-904, 19=-904, 20=-927



June 18,2025

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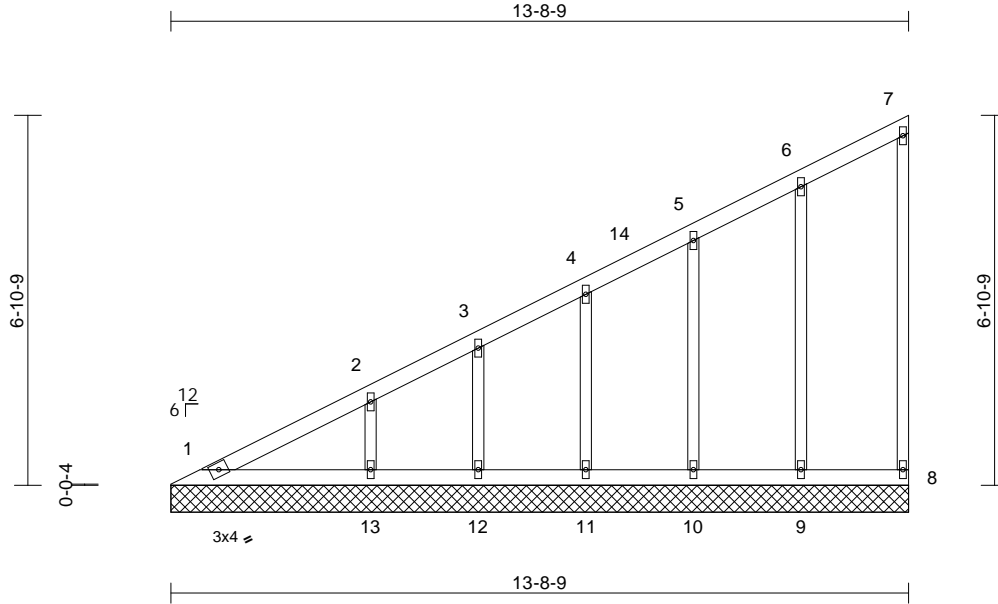
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	V1	Valley	1	1	Job Reference (optional)
					I74271803

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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	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	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



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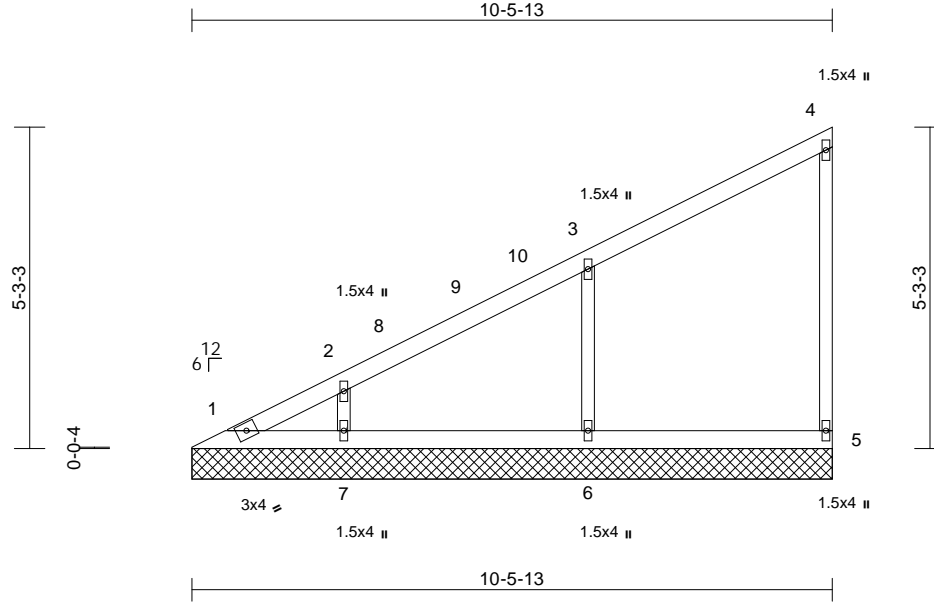
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	V2	Valley	1	1	Job Reference (optional)
					I74271804

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Scale = 1:37.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	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



June 18, 2025

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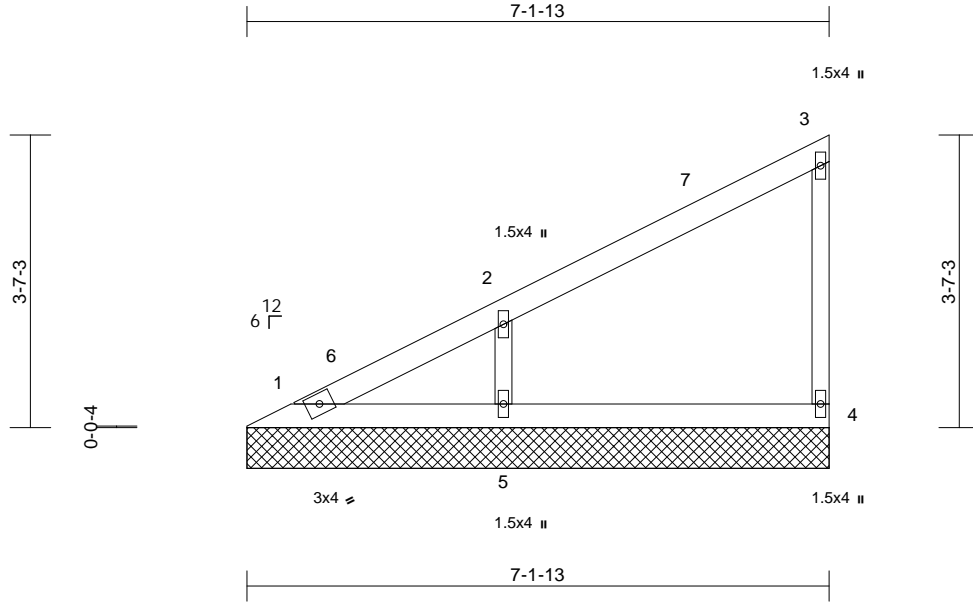
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	V3	Valley	1	1	Job Reference (optional)
					I74271805

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Scale = 1:28.3

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	0.35	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	(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 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 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



June 18,2025

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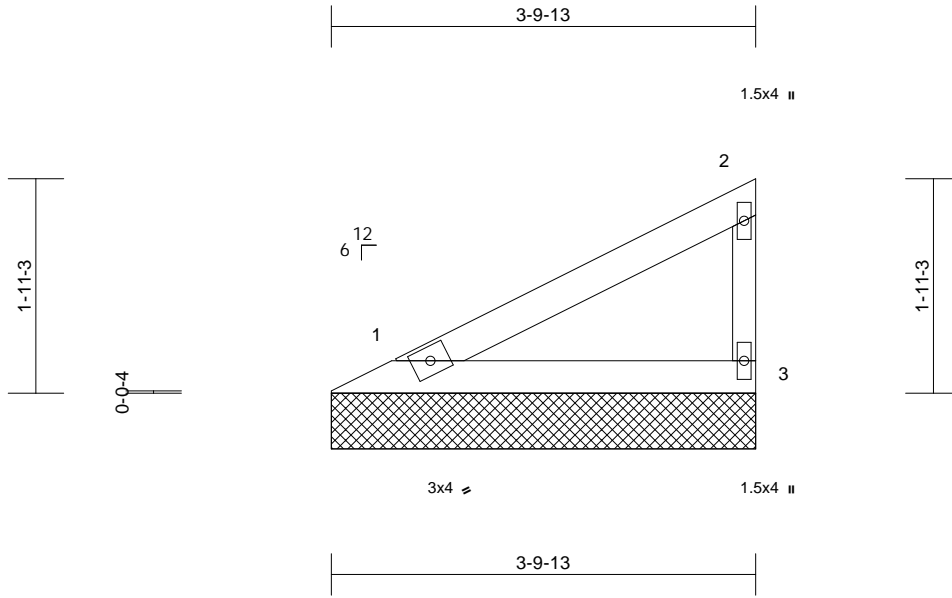
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	V4	Valley	1	1	Job Reference (optional)
					I74271806

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Scale = 1:20.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	n/a	-	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 12 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 3-10-5 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

(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) 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 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



June 18,2025

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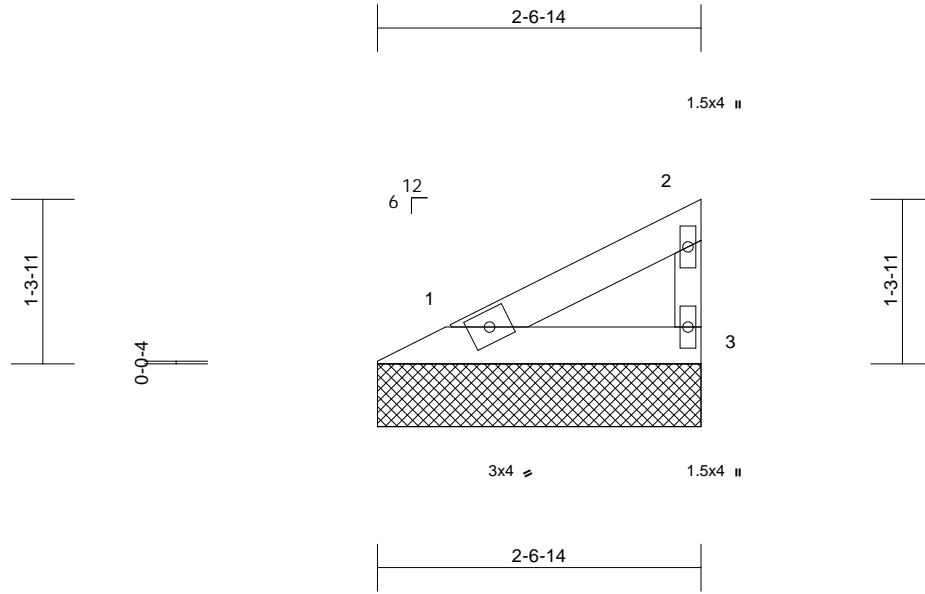
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	V5	Valley	1	1	Job Reference (optional)
					I74271807

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

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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
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999	244/190
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



June 18,2025

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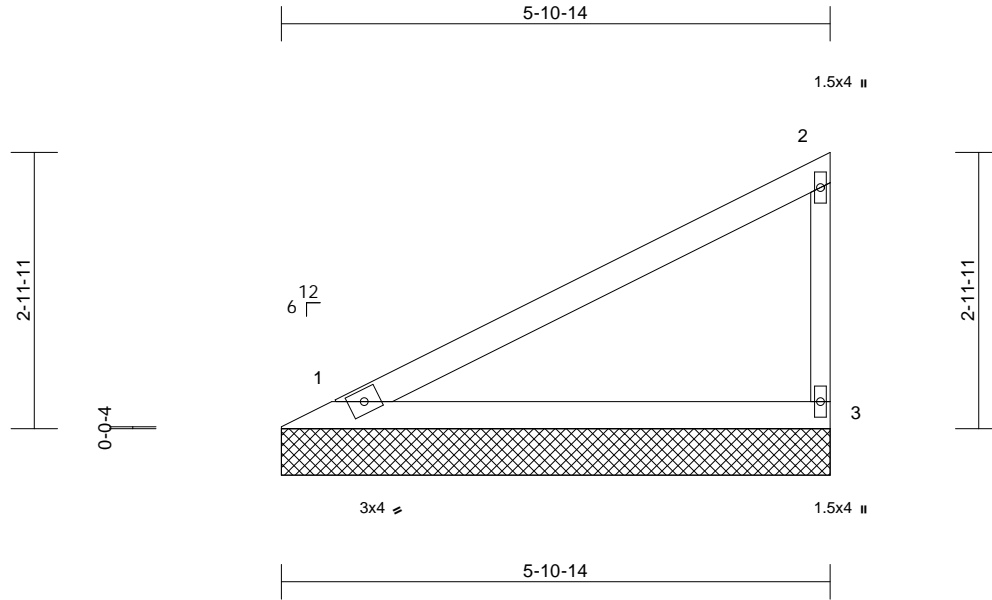
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	V6	Valley	1	1	Job Reference (optional)
					I74271808

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

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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



June 18, 2025

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, 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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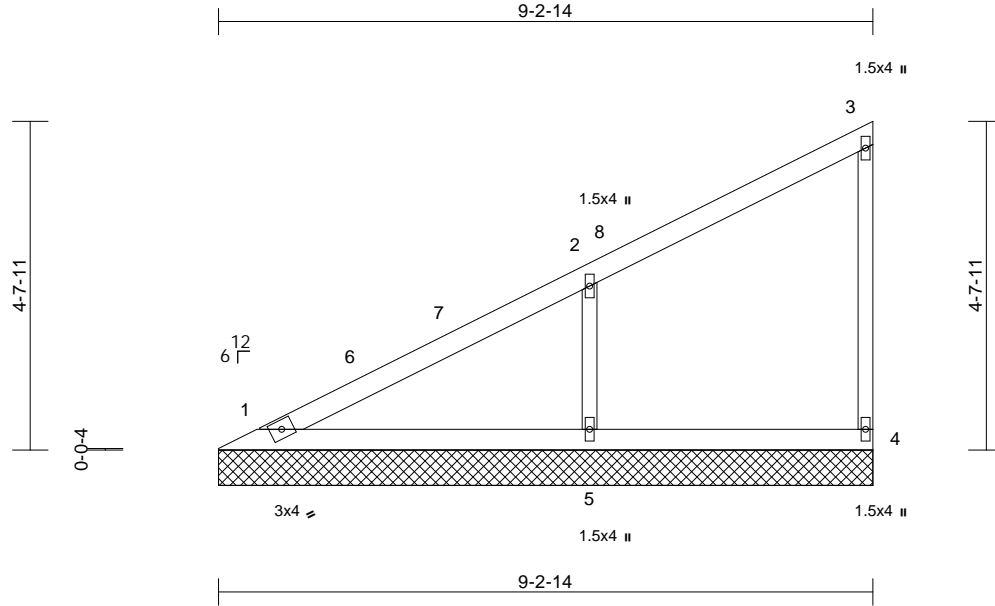
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	V7	Valley	1	1	Job Reference (optional)
					I74271809

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

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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
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999	244/190
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



June 18, 2025

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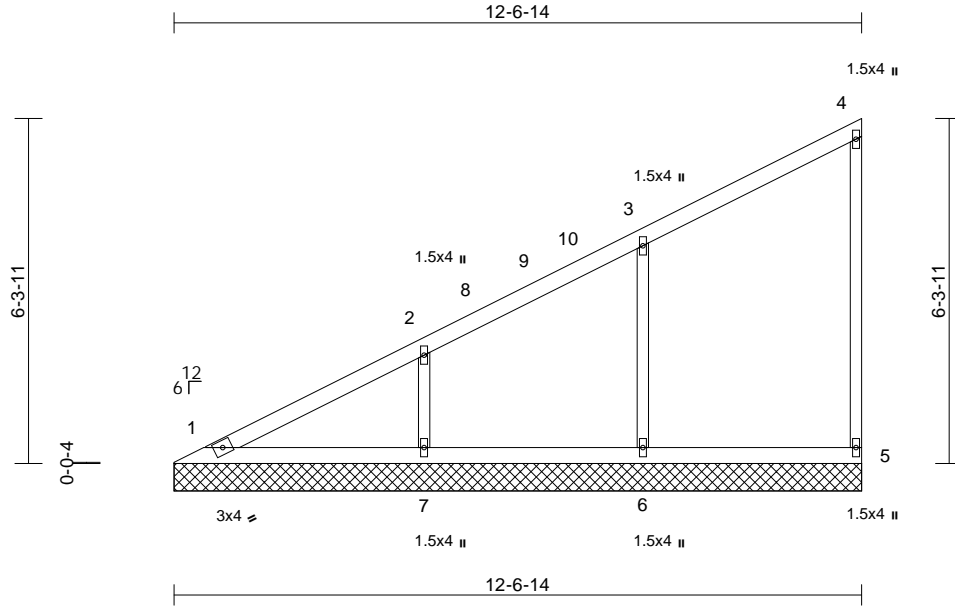
Job	Truss	Truss Type	Qty	Ply	
Basswood Farmhouse	V8	Valley	1	1	Job Reference (optional)
					I74271810

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

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Scale = 1:42.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.13	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	5	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



June 18, 2025

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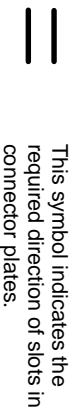
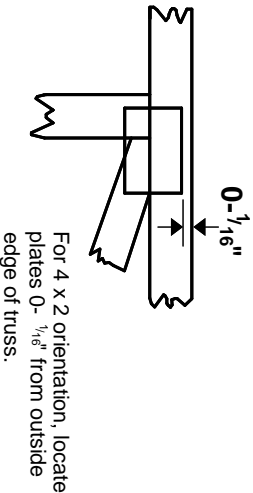
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of the design parameters and properly incorporate this design into the overall 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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Symbols

PLATE LOCATION AND ORIENTATION



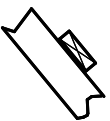
* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

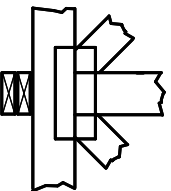
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

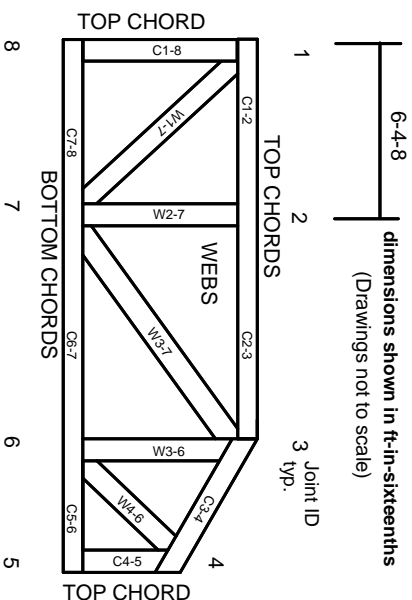
BEARING



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

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:
ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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