MiTek®

RE: P240762

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

Site Information:

Customer: Clayton Properties Project Name: P240762
Lot/Block: 190 Model:
Address: 1050 SW Fiord Dr Subdivision: Highland Meadows
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 45 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I65739510	A1	5/22/2024	21	I65739530	C1	5/22/2024
2	I65739511	A2	5/22/2024	22	I65739531	C2	5/22/2024
3	I65739512	A3	5/22/2024	23	I65739532	CG1	5/22/2024
4	I65739513	A4	5/22/2024	24	I65739533	CG2	5/22/2024
5	I65739514	A5	5/22/2024	25	I65739534	D1	5/22/2024
6	I65739515	A6	5/22/2024	26	I65739535	D2	5/22/2024
7	I65739516	A7	5/22/2024	27	I65739536	D3	5/22/2024
8	I65739517	A8	5/22/2024	28	I65739537	GR1	5/22/2024
9	I65739518	A9	5/22/2024	29	I65739538	J1	5/22/2024
10	I65739519	A10	5/22/2024	30	I65739539	J2	5/22/2024
11	I65739520	A11	5/22/2024	31	I65739540	J3	5/22/2024
12	I65739521	A12	5/22/2024	32	I65739541	J4	5/22/2024
13	I65739522	A13	5/22/2024	33	I65739542	J5	5/22/2024
14	I65739523	A14	5/22/2024	34	I65739543	J6	5/22/2024
15	I65739524	A15	5/22/2024	35	I65739544	J7	5/22/2024
16	I65739525	A16	5/22/2024	36	I65739545	LG1	5/22/2024
17	I65739526	A17	5/22/2024	37	I65739546	LG2	5/22/2024
18	I65739527	B1	5/22/2024	38	I65739547	LG3	5/22/2024
19	I65739528	B2	5/22/2024	39	I65739548	LG4	5/22/2024
20	I65739529	B3	5/22/2024	40	I65739549	LG5	5/22/2024

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: Nathan Fox

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

Missouri COA: 001193

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

May 22, 2024

Nathan Fox

MiTek®

RE: P240762 -

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

Site Information:

Project Customer: Clayton Properties Project Name: P240762
Lot/Block: 190 Subdivision: Highland Meadows
Address: 1050 SW Fiord Dr
City, County: Lee's Summit State: MO

No.	Seal#	Truss Name	Date
41	I65739550	V1	5/22/2024
42	I65739551	V2	5/22/2024
43	I65739552	V3	5/22/2024
44	I65739553	V4	5/22/2024
45	I65739554	V5	5/22/2024

Job	Truss	Truss Type	Qty	Ply	
P240762	A1	Hip Girder	1	**2**	I65739510 Job Reference (optional)

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:00 Page: 1

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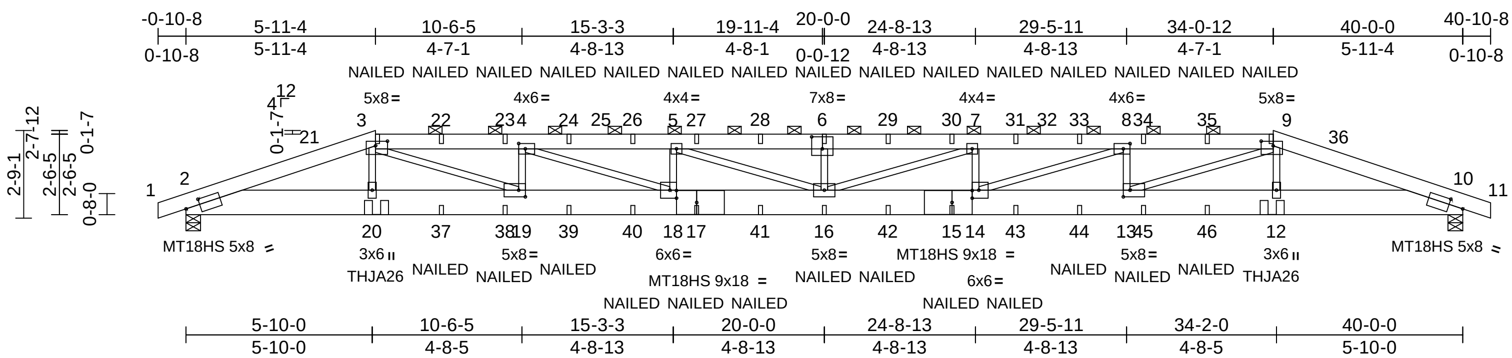

Scale = 1:72.2

Plate Offsets (X, Y): [2:0-5-6,0-2-1], [3:0-4-8,0-1-12], [4:0-2-8,0-2-0], [6:0-4-0,0-4-8], [8:0-2-8,0-2-0], [9:0-4-8,0-1-12], [10:0-5-6,0-2-1], [13:0-2-8,0-2-8], [14:0-2-8,0-3-0], [15:0-7-10,0-4-8], [17:0-7-10,0-4-8], [18:0-2-8,0-3-0], [19:0-2-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.63	16	>750	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-1.14	16	>417	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.10	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 575 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x10 SP 2400F 2.0E
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (4-11-11 max.): 3-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=-42 (LC 17)
Max Uplift 2=-990 (LC 8), 10=-990 (LC 9)
Max Grav 2=3512 (LC 1), 10=3512 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-9808/2792, 3-4=-13711/3921, 4-5=-16651/4701, 5-7=-17404/4881, 7-8=-16649/4690, 8-9=-13709/3913, 9-10=-9807/2787, 10-11=0/17
BOT CHORD 2-20=-2552/9212, 19-20=-2546/9171, 18-19=-3800/13707, 16-18=-4583/16651, 14-16=-4572/16649, 13-14=-3792/13705, 12-13=-2542/9170, 10-12=-2547/9211
WEBS 3-20=-102/772, 3-19=-1373/4989, 9-13=-1373/4988, 4-19=-1963/708, 4-18=-881/3214, 5-18=-976/426, 5-16=-230/857, 6-16=-599/327, 7-16=-220/838, 7-14=-978/427, 8-14=-881/3214, 8-13=-1961/706

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 5-11-4, Exterior(2R) 5-11-4 to 13-0-2, Interior (1) 13-0-2 to 34-0-12, Exterior(2E) 34-0-12 to 40-10-8 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
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 990 lb uplift at joint 2 and 990 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Left Hand Hip) or equivalent at 5-11-10 from the left end to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Right Hand Hip) or equivalent at 34-0-6 from the left end to connect truss(es) to front face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.
15) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-9=-70, 9-11=-70, 2-10=-20
Concentrated Loads (lb)

May 22,2024

Continued on page 2

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

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Vert: 3=-131 (F), 17=-39 (F), 20=-420 (F), 12=-420 (F), 9=-131 (F), 15=-39 (F), 16=-39 (F), 6=-131 (F), 22=-131 (F), 23=-131 (F), 24=-131 (F), 26=-131 (F), 27=-131 (F), 28=-131 (F), 29=-131 (F), 30=-131 (F), 31=-131 (F), 33=-131 (F), 34=-131 (F), 35=-131 (F), 37=-39 (F), 38=-39 (F), 39=-39 (F), 40=-39 (F), 41=-39 (F), 42=-39 (F), 43=-39 (F), 44=-39 (F), 45=-39 (F), 46=-39 (F)

Job	Truss	Truss Type	Qty	Ply		
P240762	A2	Hip	1	1	Job Reference (optional)	I65739511

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:01 Page: 1
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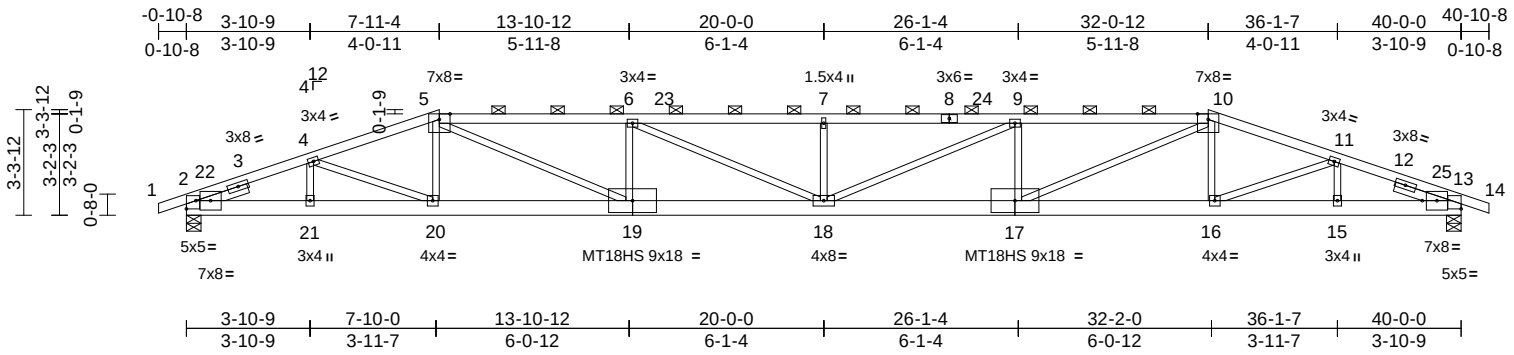

Scale = 1:72.3

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

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)	-0.54	18	>884	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.97	18	>491	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.15	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 186 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E
BOT CHORD 2x6 SPF No.2 *Except* 19-17:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-8-2, Right 2x4 SP No.2 -- 1-10-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-11 oc purlins, except
2-0-0 oc purlins (2-10-10 max.): 5-10.
BOT CHORD Rigid ceiling directly applied or 7-11-15 oc bracing.

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=-54 (LC 13)
Max Uplift 2=-428 (LC 8), 13=-428 (LC 9)
Max Grav 2=1857 (LC 1), 13=1857 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-4=-3811/922, 4-5=-4122/1017, 5-6=-5737/1416, 6-7=-6271/1475, 7-9=-6271/1475, 9-10=-5738/1416, 10-11=-4122/1017, 11-13=-3832/925, 13-14=0/1
BOT CHORD 2-21=-805/3470, 20-21=-805/3470, 18-20=-1261/5707, 16-18=-1266/5707, 15-16=-803/3483, 13-15=-803/3483
WEBS 5-20=-32/163, 10-16=-31/164, 5-19=-477/2108, 10-17=-477/2109, 4-20=-115/639, 11-16=-113/626, 6-19=-798/285, 6-18=-162/706, 7-18=-417/187, 9-18=-162/706, 9-17=-798/285, 4-21=-155/94, 11-15=-139/91

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) -0-10-8 to 3-10-9, Interior (1) 3-10-9 to 7-11-4, Exterior(2R) 7-11-4 to 15-0-2, Interior (1) 15-0-2 to 32-0-12, Exterior(2R) 32-0-12 to 39-1-10, Interior (1) 39-1-10 to 40-10-8 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
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 428 lb uplift at joint 2 and 428 lb uplift at joint 13.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240762	A3	Hip	1	1	I65739512

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:01 Page: 1
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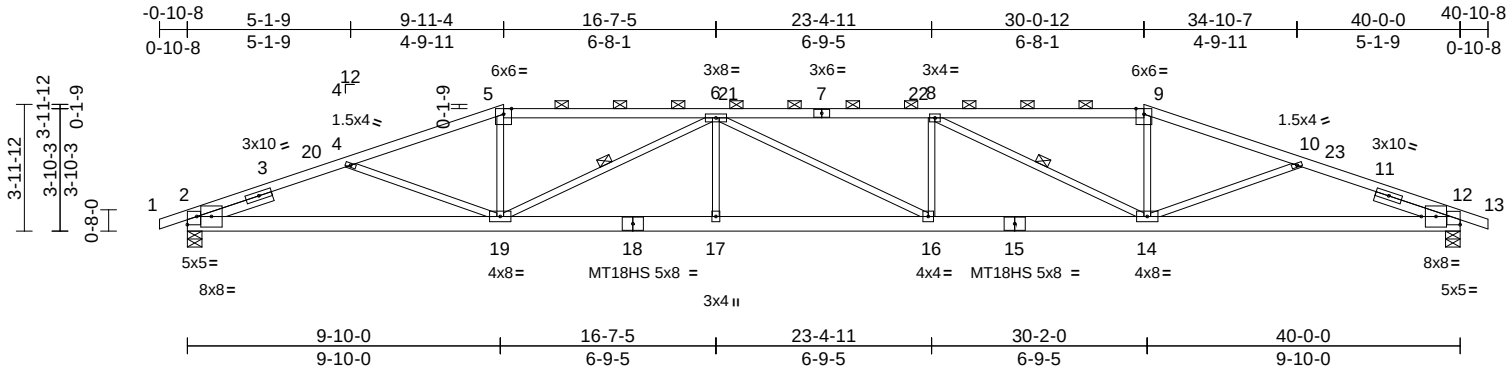

Scale = 1:72.4

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

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	0.86	Vert(LL)	-0.46	16-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.84	16-17	>566	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.18	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 179 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-5-9, Right 2x4 SP No.2 -- 2-5-9

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

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=-67 (LC 13)
Max Uplift 2=-421 (LC 8), 12=-421 (LC 9)
Max Grav 2=1857 (LC 1), 12=1857 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-4=-4057/1075, 4-5=-3946/972, 5-6=-3707/949, 6-8=-4974/1273, 8-9=-3709/950, 9-10=-3947/973, 10-12=-4058/1076, 12-13=0/1
BOT CHORD 2-19=-942/3699, 17-19=-1108/4982, 16-17=-1108/4982, 14-16=-1107/4974, 12-14=-940/3700
WEBS 5-19=-101/799, 6-19=-1558/386, 6-17=0/253, 6-16=-136/119, 8-16=0/249, 8-14=-1548/382, 9-14=-101/798, 4-19=0/323, 10-14=0/324

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 9-11-4, Exterior(2R) 9-11-4 to 17-0-2, Interior (1) 17-0-2 to 30-0-12, Exterior(2R) 30-0-12 to 37-1-10, Interior (1) 37-1-10 to 40-10-8 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
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 421 lb uplift at joint 2 and 421 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A4	Hip	1	1	Job Reference (optional)	I65739513

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:02 Page: 1
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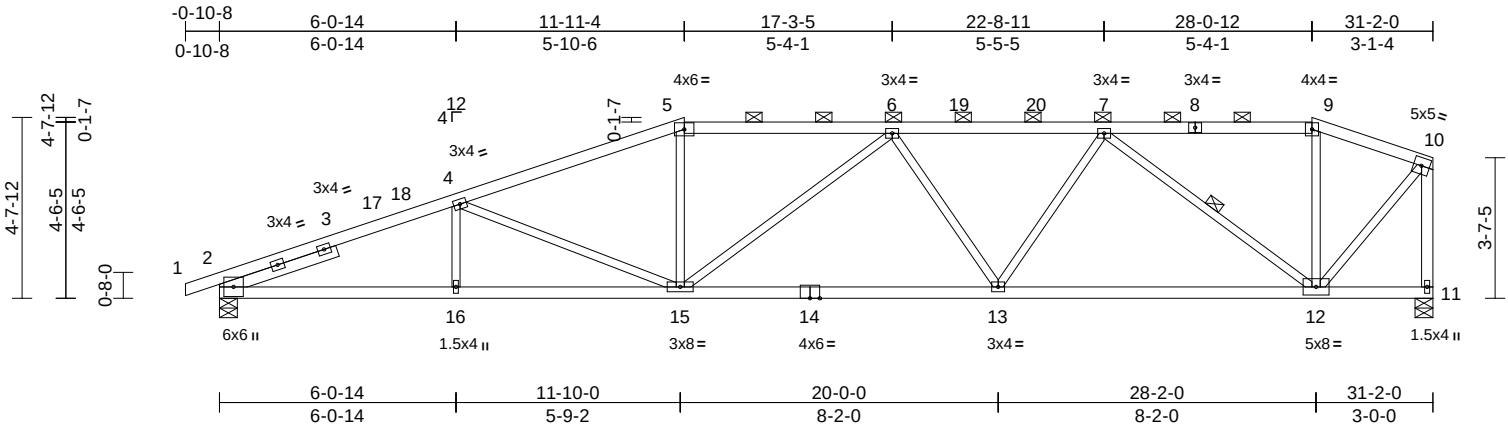

Scale = 1:59.2

Plate Offsets (X, Y): [2:0-3-13,0-1-5]

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	0.98	Vert(LL)	-0.19	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.40	13-15	>937	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.12	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 140 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 11-10:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 3-2-0

BRACING

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

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=145 (LC 9)
Max Uplift 2=-338 (LC 8), 11=-280 (LC 9)
Max Grav 2=1458 (LC 1), 11=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-5/0, 2-4=-3153/772, 4-5=-2625/684, 5-6=-2433/676, 6-7=-2345/634, 7-9=-882/301, 9-10=-950/293, 10-11=-1391/390
BOT CHORD	2-16=-902/2866, 15-16=-902/2866, 13-15=-735/2547, 12-13=-619/2034, 11-12=-65/69
WEBS	4-16=0/214, 4-15=-463/217, 5-15=-36/421, 9-12=-27/115, 10-12=-358/1350, 6-13=-381/197, 6-15=-343/109, 7-13=-72/582, 7-12=-1474/419

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 11-11-4, Exterior(2R) 11-11-4 to 19-0-2, Interior (1) 19-0-2 to 28-0-12, Exterior(2E) 28-0-12 to 31-0-4 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 338 lb uplift at joint 2 and 280 lb uplift at joint 11.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A5	Hip	1	1	Job Reference (optional)	I65739514

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:02 Page: 1
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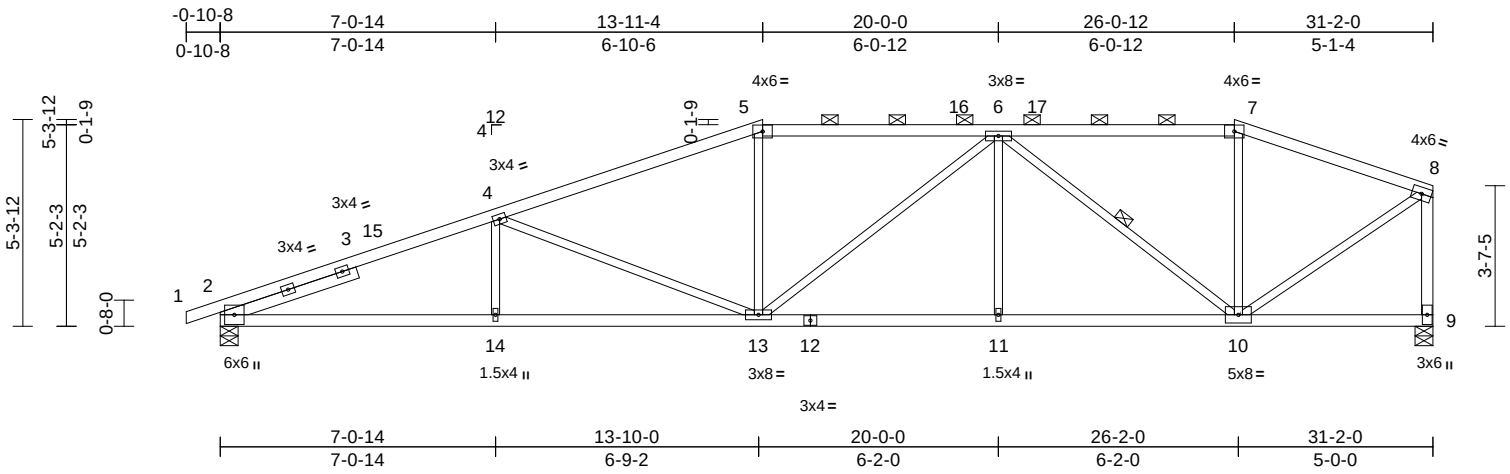

Scale = 1:59.2

Plate Offsets (X, Y): [2:0-3-13,0-1-5]

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	0.75	Vert(LL)	-0.18	13-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.35	13-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.11	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 142 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 9-8:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-8-5

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

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=136 (LC 9)
Max Uplift 2=-333 (LC 8), 9=-267 (LC 9)
Max Grav 2=1458 (LC 1), 9=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-3134/785, 4-5=-2402/653, 5-6=-2210/662, 6-7=-1192/420, 7-8=-1301/404, 8-9=-1352/440
BOT CHORD 2-14=-899/2864, 13-14=-899/2864, 11-13=-641/2086, 10-11=-641/2086, 9-10=-61/71
WEBS 4-14=0/282, 4-13=-708/259, 5-13=-2/359, 6-13=-110/184, 6-11=0/243, 6-10=-1185/312, 7-10=-26/159, 8-10=-405/1415

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-11-4, Exterior(2R) 13-11-4 to 21-0-2, Interior (1) 21-0-2 to 26-0-12, Exterior(2E) 26-0-12 to 31-0-4 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 333 lb uplift at joint 2 and 267 lb uplift at joint 9.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	
P240762	A6	Hip	1	1	I65739515 Job Reference (optional)

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:02 Page: 1

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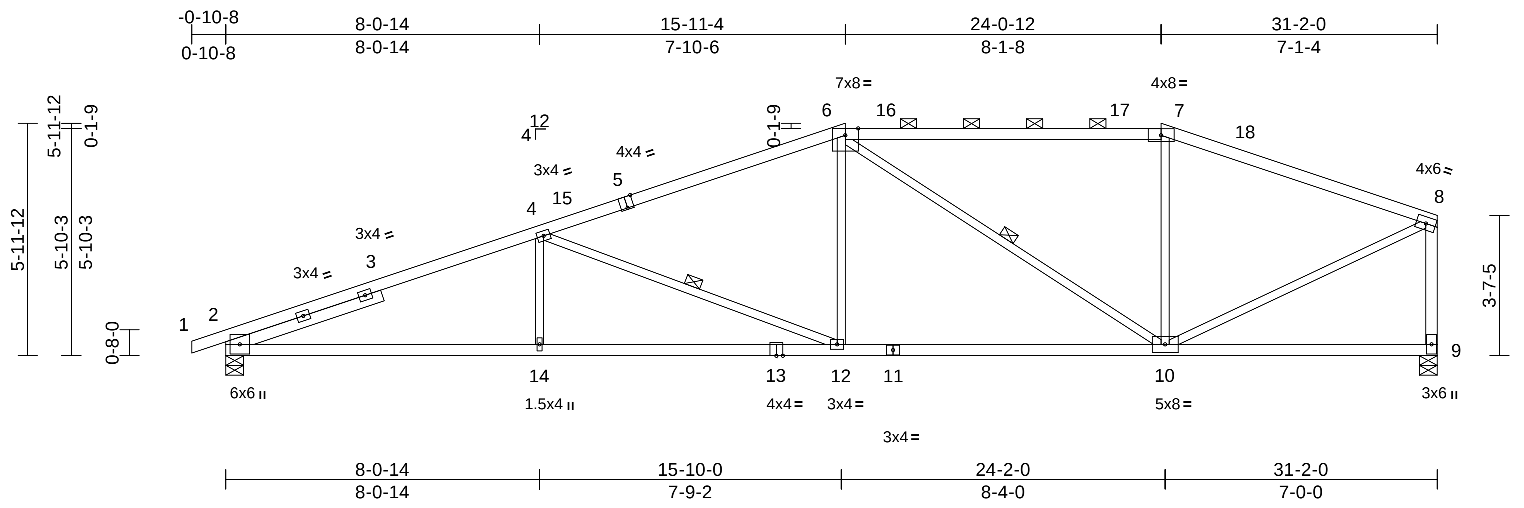

Scale = 1:59.3

Plate Offsets (X, Y): [2:0-3-13,0-1-5], [5:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.17	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.34	12-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.10	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 139 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E *Except* 7-8:2x4 SP No.2

BOT CHORD 2x4 SP No.2

WEBS 2x3 SPF No.2 *Except* 9-8:2x4 SP No.2

SLIDER Left 2x4 SP No.2 -- 4-2-10

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 6-7.

BOT CHORD Rigid ceiling directly applied or 6-2-1 oc bracing.

WEBS 1 Row at midpt 4-12, 6-10

REACTIONS (size) 2=0-5-8, 9=0-5-8

Max Horiz 2=127 (LC 9)

Max Uplift 2=-326 (LC 8), 9=-252 (LC 9)

Max Grav 2=1458 (LC 1), 9=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-5/0, 2-4=-3095/787, 4-6=-2183/628, 6-7=-1390/515, 7-8=-1530/484, 8-9=-1335/452

BOT CHORD 2-14=-894/2827, 12-14=-894/2827, 10-12=-627/1984, 9-10=-73/87

WEBS 4-14=0/323, 4-12=-905/309, 6-12=-18/536, 6-10=-804/218, 7-10=-183/171, 8-10=-413/1488

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 15-11-4, Exterior(2R) 15-11-4 to 23-0-2, Interior (1) 23-0-2 to 24-0-12, Exterior(2E) 24-0-12 to 31-0-4 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) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 326 lb uplift at joint 2 and 252 lb uplift at joint 9.

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

8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A7	Hip	1	1	Job Reference (optional)	I65739516

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:02 Page: 1
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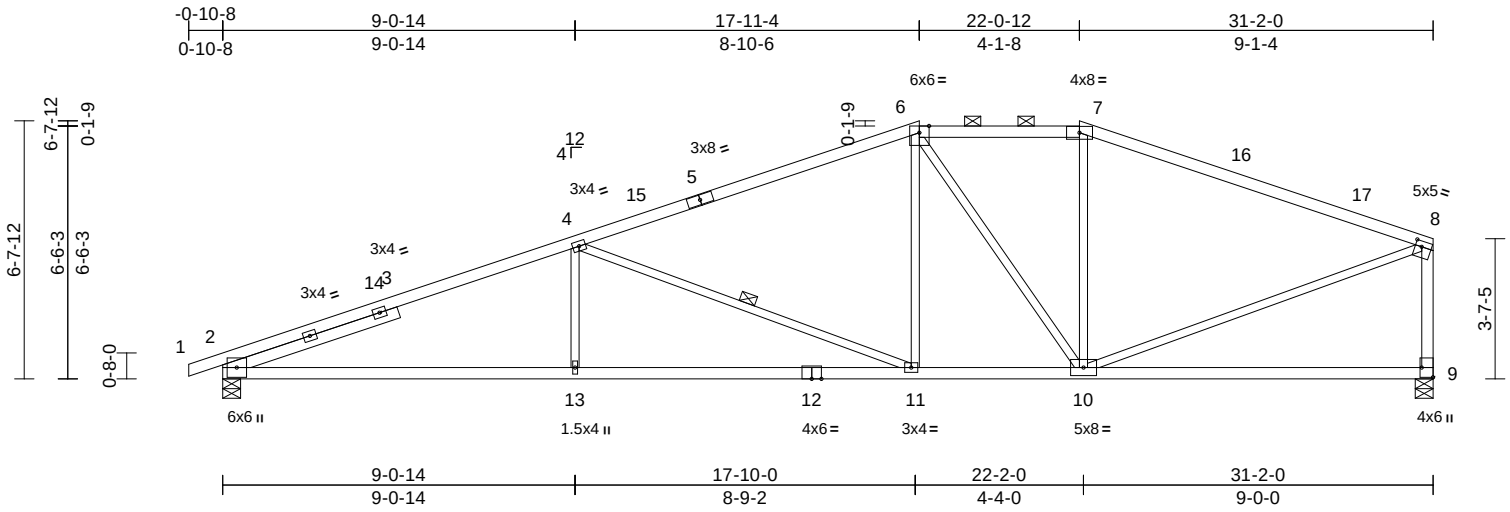

Scale = 1:59.3

Plate Offsets (X, Y): [2:0-3-13,0-1-5], [8:0-2-0,0-1-12], [9:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.19	9-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.40	9-10	>926	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.09	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 141 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 6-7:2x4 SP No.2, 1-5:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 12-9:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 9-8:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 4-9-0

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

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=127 (LC 12)
Max Uplift 2=-318 (LC 8), 9=-235 (LC 9)
Max Grav 2=1458 (LC 1), 9=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-3056/738, 4-6=-1922/563, 6-7=-1457/530, 7-8=-1631/493, 8-9=-1308/452
BOT CHORD 2-13=-841/2789, 11-13=-841/2789, 10-11=-527/1718, 9-10=-84/116
WEBS 4-13=0/392, 4-11=-1153/349, 6-11=-60/532, 6-10=-591/157, 7-10=-140/194, 8-10=-378/1454

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 17-11-4, Exterior(2E) 17-11-4 to 22-0-12, Exterior(2R) 22-0-12 to 29-1-10, Interior (1) 29-1-10 to 31-0-4 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 2 SP 1650F 1.5E crushing capacity of 565 psi, Joint 9 SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 318 lb uplift at joint 2 and 235 lb uplift at joint 9.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A8	Common	3	1	Job Reference (optional)	I65739517

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:02 Page: 1
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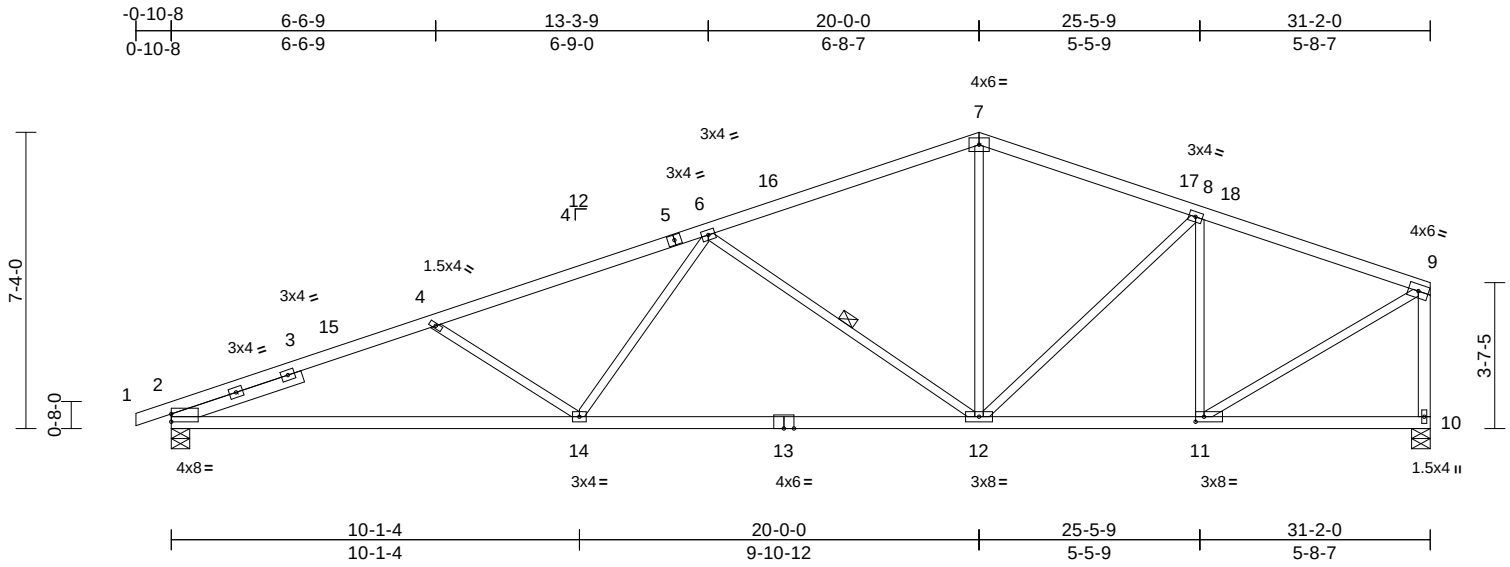

Scale = 1:57

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.23	2-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.50	2-14	>752	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.09	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 141 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E *Except* 13-10:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-4-14

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-3-2 oc bracing.
WEBS 1 Row at midpt 6-12

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=142 (LC 12)
Max Uplift 2=-306 (LC 8), 10=-215 (LC 9)
Max Grav 2=1458 (LC 1), 10=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-3103/743, 4-6=-2739/619, 6-7=-1604/466, 7-8=-1585/462, 8-9=-1388/390, 9-10=-1338/400
BOT CHORD 2-14=-804/2831, 12-14=-636/2264, 11-12=-371/1266, 10-11=-61/75
WEBS 7-12=-101/586, 9-11=-363/1442, 4-14=-375/251, 6-14=-9/552, 6-12=-1027/331, 8-12=-60/358, 8-11=-654/255

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 31-0-4 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearings are assumed to be: Joint 2 SP 1650F 1.5E crushing capacity of 565 psi, Joint 10 SP No.2 crushing capacity of 565 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 306 lb uplift at joint 2 and 215 lb uplift at joint 10.
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

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A9	Common	2	1	Job Reference (optional)	I65739518

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:02 Page: 1
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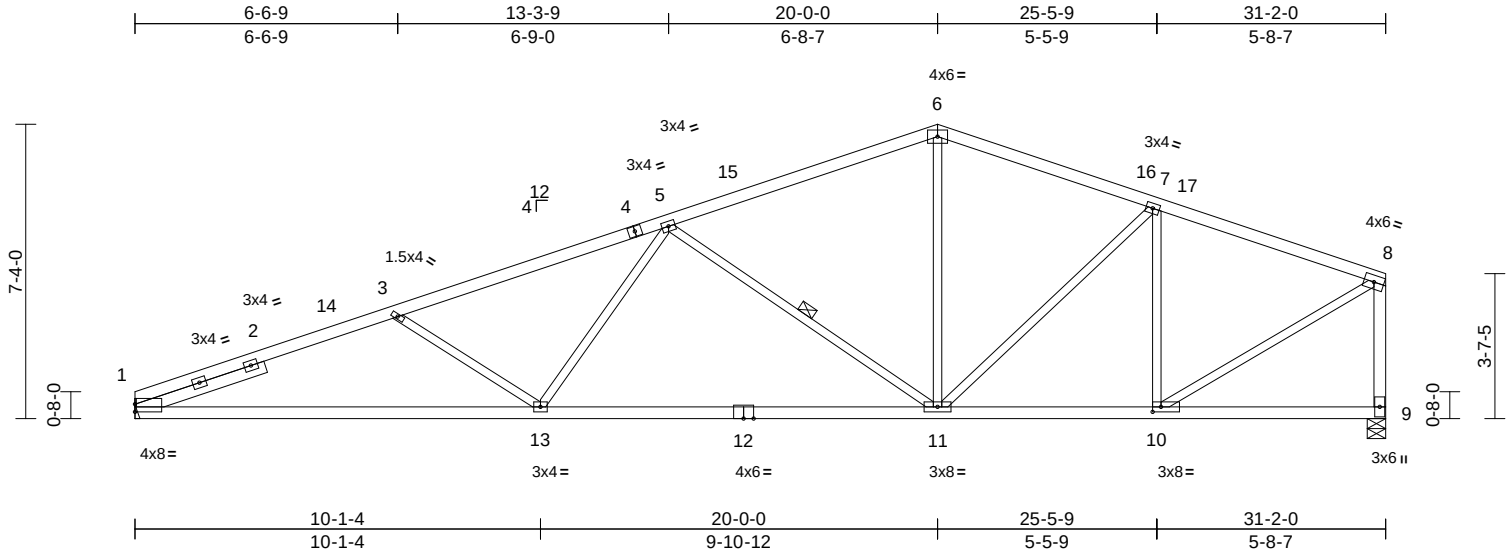

Scale = 1:57.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.23	1-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.51	1-13	>735	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.09	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 140 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E *Except* 12-9:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 9-8:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-4-14

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

REACTIONS (size) 1= Mechanical, 9=0-5-8
Max Horiz 1=144 (LC 16)
Max Uplift 1=-265 (LC 8), 9=-215 (LC 9)
Max Grav 1=1396 (LC 1), 9=1396 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-3113/774, 3-5=-2746/638, 5-6=-1605/471, 6-7=-1587/467, 7-8=-1389/393, 8-9=-1339/400
BOT CHORD 1-13=-808/2840, 11-13=-637/2267, 10-11=-372/1267, 9-10=-61/75
WEBS 6-11=-104/587, 8-10=-363/1443, 3-13=-379/265, 5-13=-18/554, 5-11=-1030/332, 7-11=-60/359, 7-10=-654/255

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) 0-0-0 to 5-0-0, Interior (1) 5-0-0 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 31-0-4 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearings are assumed to be: , Joint 9 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 265 lb uplift at joint 1 and 215 lb uplift at joint 9.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply		
P240762	A10	Half Hip	1	1	Job Reference (optional)	I65739519

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:03 Page: 1
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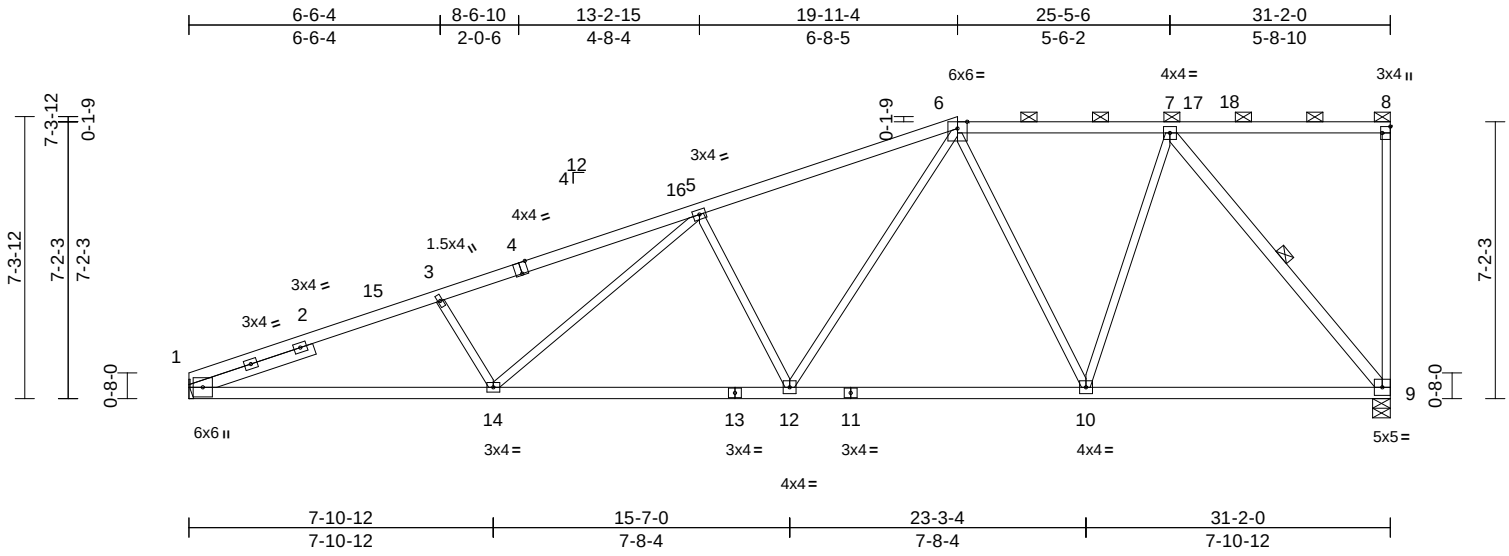

Scale = 1:59.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.18	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.36	12-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.10	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 148 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 9-7:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-4-14

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

REACTIONS (size) 1= Mechanical, 9=0-5-8
Max Horiz 1=327 (LC 9)
Max Uplift 1=-289 (LC 8), 9=-321 (LC 8)
Max Grav 1=1398 (LC 1), 9=1398 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-3143/755, 3-5=-2939/737, 5-6=-2140/600, 6-7=-1190/418, 7-8=-144/151, 8-9=-160/88
BOT CHORD 1-14=-974/2867, 12-14=-819/2283, 10-12=-550/1446, 9-10=-394/963
WEBS 6-12=-241/963, 6-10=-598/268, 7-10=-132/744, 7-9=-1513/475, 3-14=-280/217, 5-14=-134/596, 5-12=-741/320

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) 0-0-0 to 5-0-0, Interior (1) 5-0-0 to 19-11-4, Exterior(2R) 19-11-4 to 27-0-2, Interior (1) 27-0-2 to 31-0-12 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: , Joint 9 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 321 lb uplift at joint 9 and 289 lb uplift at joint 1.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A11	Half Hip	1	1	Job Reference (optional)	I65739520

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:03 Page: 1
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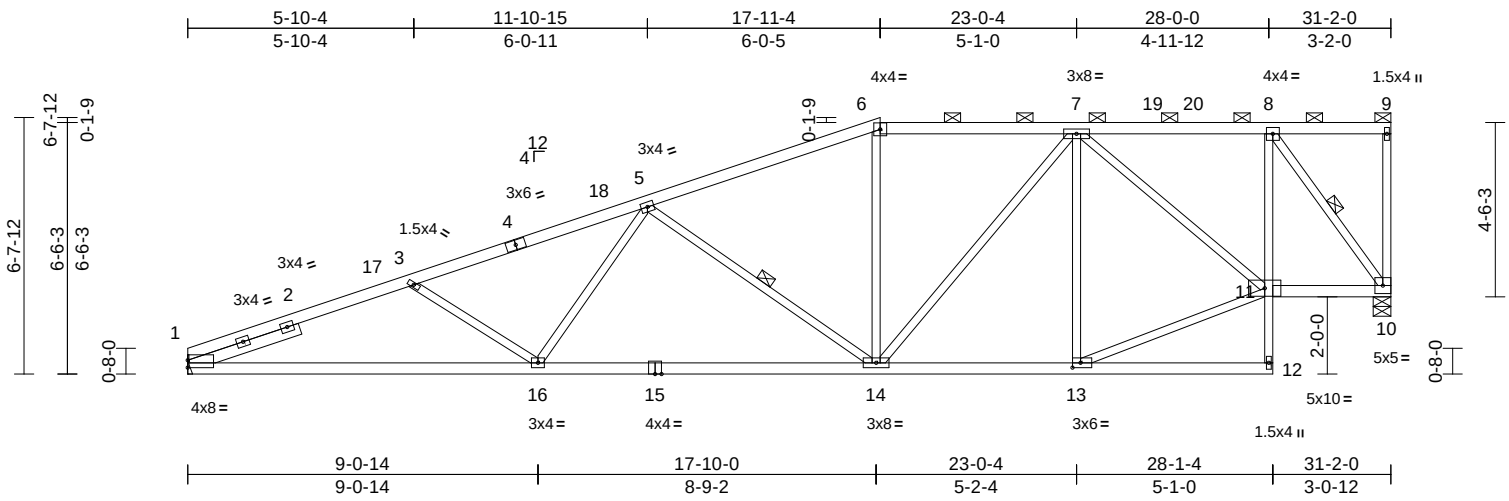

Scale = 1:59.7

Plate Offsets (X, Y): [1:Edge,0-2-5], [13:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.17	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.39	14-16	>967	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 149 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 1-15:2x4 SP 1650F 1.5E, 12-8:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-0-7

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

REACTIONS (size) 1= Mechanical, 10=0-5-8
Max Horiz 1=273 (LC 12)
Max Uplift 1=-278 (LC 8), 10=-332 (LC 8)
Max Grav 1=1398 (LC 1), 10=1398 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-3139/721, 3-5=-2822/604, 5-6=-1887/464, 6-7=-1723/477, 7-8=-934/265, 8-9=0/0
BOT CHORD 1-16=-876/2852, 14-16=-723/2419, 13-14=-371/1370, 12-13=-3/24, 11-12=0/91, 8-11=-208/983, 10-11=-264/932
WEBS 6-14=0/293, 7-14=-170/547, 7-11=-571/166, 9-10=-75/47, 8-10=-1589/449, 7-13=-449/208, 11-13=-397/1451, 3-16=-260/237, 5-16=-15/463, 5-14=-860/309

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) 0-0-0 to 5-0-0, Interior (1) 5-0-0 to 17-11-4, Exterior(2R) 17-11-4 to 25-0-2, Interior (1) 25-0-2 to 31-0-12 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: , Joint 10 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 278 lb uplift at joint 1 and 332 lb uplift at joint 10.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A12	Half Hip	1	1	Job Reference (optional)	I65739521

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:03 Page: 1
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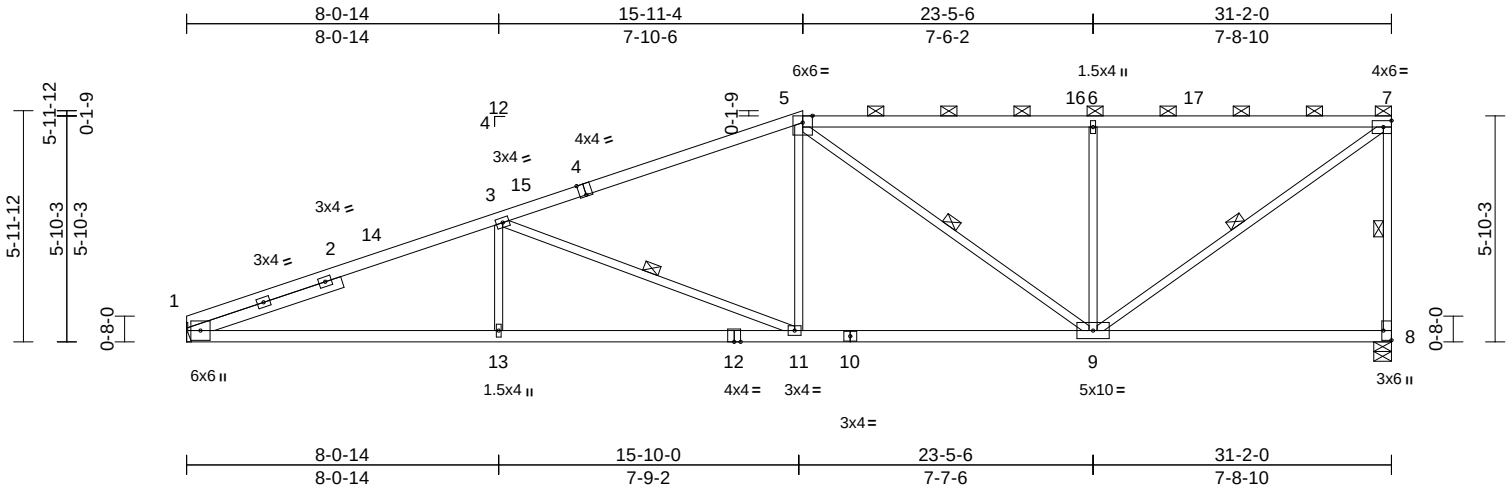

Scale = 1:59.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.18	11-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.36	11-13	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.10	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 137 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-2-10

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

REACTIONS (size) 1= Mechanical, 8=0-5-8
Max Horiz 1=264 (LC 9)
Max Uplift 1=-295 (LC 8), 8=-315 (LC 8)
Max Grav 1=1398 (LC 1), 8=1398 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-3113/747, 3-5=-2182/588, 5-6=-1543/497, 6-7=-1541/495, 7-8=-1330/429
BOT CHORD 1-13=-945/2845, 11-13=-945/2845, 9-11=-656/1980, 8-9=-102/120
WEBS 3-13=0/332, 3-11=-920/311, 5-11=-31/516, 5-9=-549/201, 6-9=-634/291, 7-9=-508/1885

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) 0-0-0 to 5-0-0, Interior (1) 5-0-0 to 15-11-4, Exterior(2R) 15-11-4 to 23-0-2, Interior (1) 23-0-2 to 31-0-12 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: , Joint 8 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 315 lb uplift at joint 8 and 295 lb uplift at joint 1.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A13	Half Hip	1	1	Job Reference (optional)	I65739522

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:03 Page: 1
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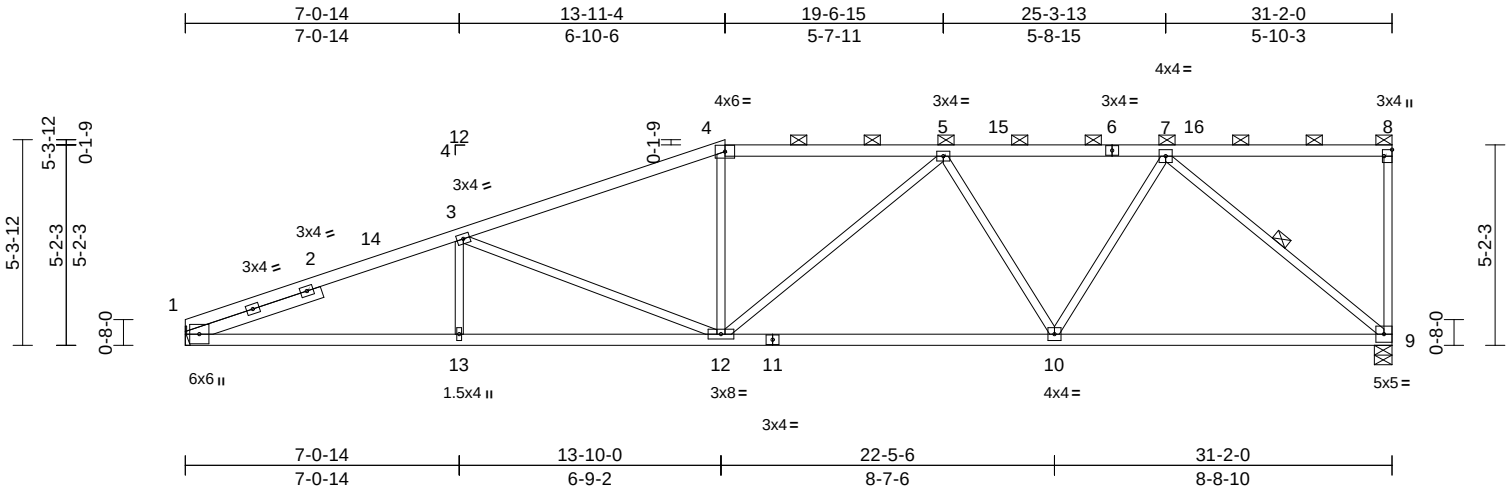

Scale = 1:59.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.18	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.35	9-10	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.11	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 135 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-8-5

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

REACTIONS (size) 1= Mechanical, 9=0-5-8
Max Horiz 1=232 (LC 11)
Max Uplift 1=-297 (LC 8), 9=-313 (LC 8)
Max Grav 1=1398 (LC 1), 9=1398 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-3146/773, 3-4=-2415/638, 4-5=-2222/635, 5-7=-1791/507, 7-8=-113/111, 8-9=-170/98
BOT CHORD 1-13=-938/2876, 12-13=-938/2876, 10-12=-630/2098, 9-10=-452/1372
WEBS 4-12=-6/367, 5-10=-607/258, 5-12=-95/160, 7-10=-130/827, 7-9=-1782/501, 3-12=-701/266, 3-13=0/273

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) 0-0-0 to 5-0-0, Interior (1) 5-0-0 to 13-11-4, Exterior(2R) 13-11-4 to 21-0-2, Interior (1) 21-0-2 to 31-0-12 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: , Joint 9 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 297 lb uplift at joint 1 and 313 lb uplift at joint 9.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply		
P240762	A14	Half Hip	1	1	Job Reference (optional)	I65739523

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:03 Page: 1
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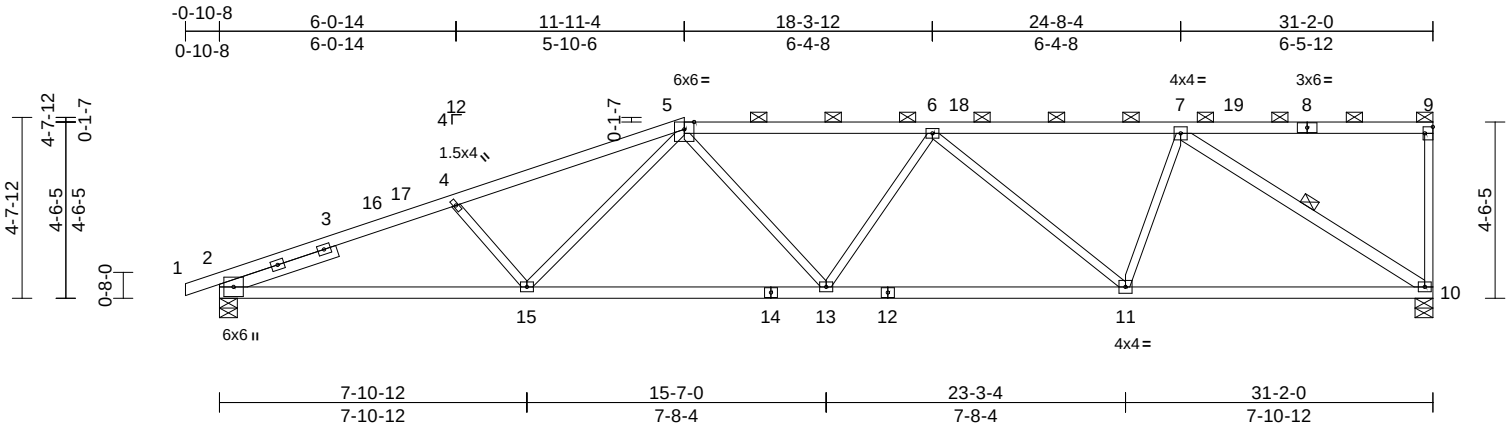

Scale = 1:59.2

Plate Offsets (X, Y): [2:0-3-13,0-1-5], [9:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.20	13-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.39	13-15	>949	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.12	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 138 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-10:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-2-0

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

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=199 (LC 9)
Max Uplift 2=-340 (LC 8), 10=-310 (LC 8)
Max Grav 2=1460 (LC 1), 10=1397 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-3147/782, 4-5=-2917/737, 5-6=-2532/677, 6-7=-1954/520, 7-9=-102/97, 9-10=-189/113
BOT CHORD 2-15=-947/2861, 13-15=-745/2409, 11-13=-712/2524, 10-11=-510/1735
WEBS 4-15=-225/220, 5-15=-95/451, 5-13=-3/342, 6-13=-131/146, 6-11=-750/266, 7-11=-78/689, 7-10=-2058/533

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 11-11-4, Exterior(2R) 11-11-4 to 19-0-2, Interior (1) 19-0-2 to 31-0-12 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) Provide adequate drainage to prevent water ponding.
4) All plates are 3x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 310 lb uplift at joint 10 and 340 lb uplift at joint 2.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A15	Half Hip	1	1	Job Reference (optional)	I65739524

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:03 Page: 1
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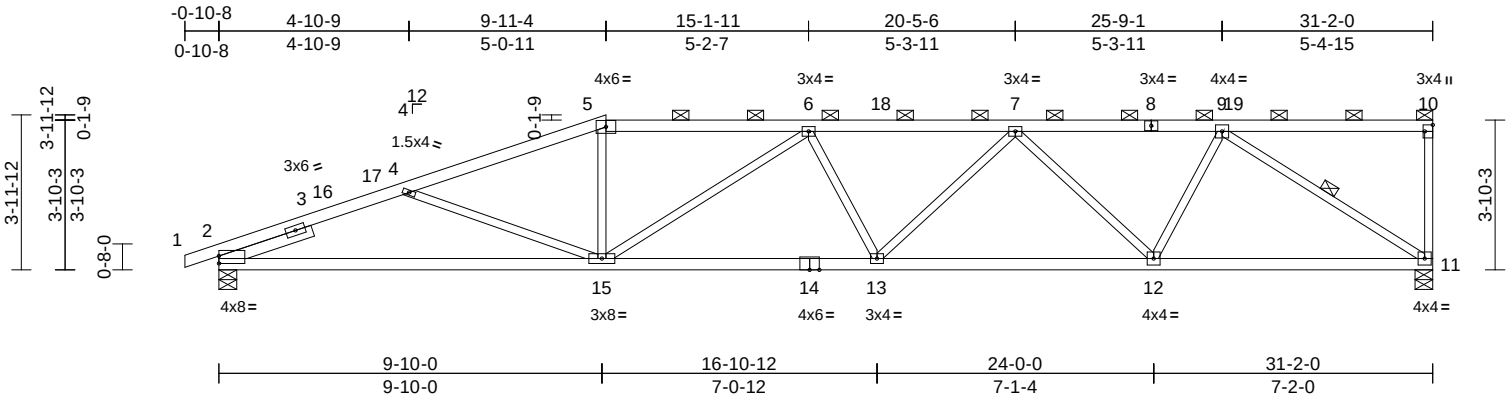

Scale = 1:59.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.25	2-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.55	2-15	>682	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.13	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 132 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E *Except* 14-11:2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-6-2

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

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=167 (LC 11)
Max Uplift 2=-342 (LC 8), 11=-309 (LC 8)
Max Grav 2=1460 (LC 1), 11=1397 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-3090/830, 4-5=-2849/707, 5-6=-2663/697, 6-7=-3021/780, 7-9=-2154/535, 9-10=-88/82, 10-11=-159/95
BOT CHORD 2-15=-949/2803, 13-15=-817/3084, 12-13=-722/2768, 11-12=-500/1774
WEBS 5-15=-46/512, 4-15=-137/239, 6-13=-141/135, 6-15=-657/185, 7-13=-67/358, 7-12=-869/279, 9-12=-117/858, 9-11=-2111/536

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 9-11-4, Exterior(2R) 9-11-4 to 17-0-2, Interior (1) 17-0-2 to 31-0-12 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 2 SP 1650F 1.5E crushing capacity of 565 psi, Joint 11 SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 309 lb uplift at joint 11 and 342 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	A16	Half Hip	1	1	Job Reference (optional)	I65739525

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:03 Page: 1
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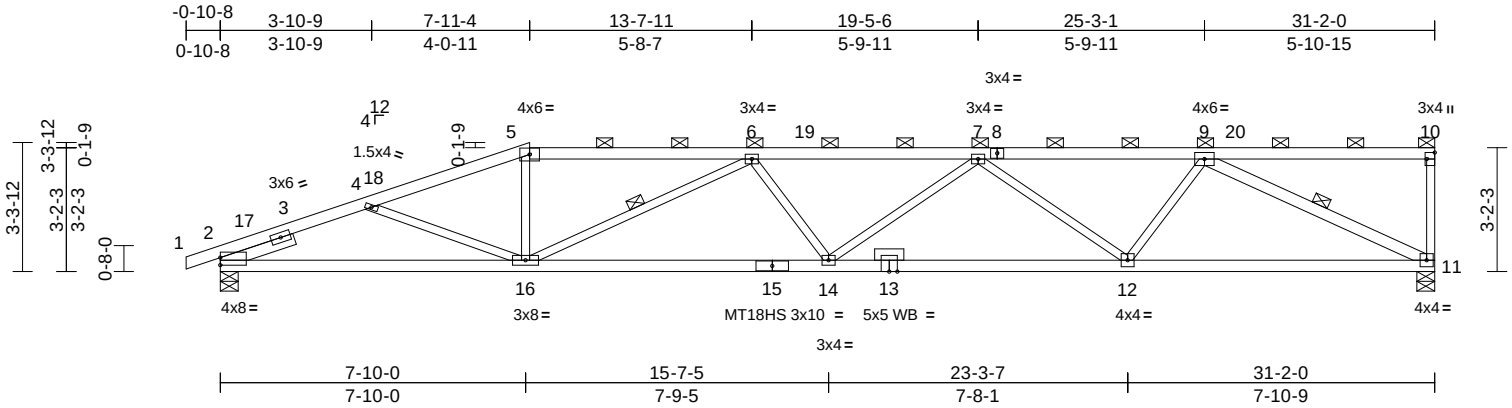

Scale = 1:59.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.30	14-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.56	14-16	>661	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.15	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 134 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 9-11:2x4 SP No.2
OTHERS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-11-13

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

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=135 (LC 9)
Max Uplift 2=-343 (LC 8), 11=-307 (LC 8)
Max Grav 2=1460 (LC 1), 11=1397 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-3031/808, 4-5=-3023/753, 5-6=-2841/739, 6-7=-3747/917, 7-9=-2828/651, 9-10=-83/67, 10-11=-176/107
BOT CHORD 2-16=-873/2730, 14-16=-933/3747, 12-14=-865/3550, 11-12=-615/2345
WEBS 5-16=-57/563, 6-14=0/153, 6-16=-1127/291, 7-14=-33/280, 7-12=-903/300, 9-12=-96/857, 9-11=-2582/633, 4-16=0/352

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 7-11-4, Exterior(2R) 7-11-4 to 15-0-2, Interior (1) 15-0-2 to 31-0-12 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) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP 1650F 1.5E crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 307 lb uplift at joint 11 and 343 lb uplift at joint 2.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply		
P240762	A17	Half Hip Girder	1	2	Job Reference (optional)	I65739526

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

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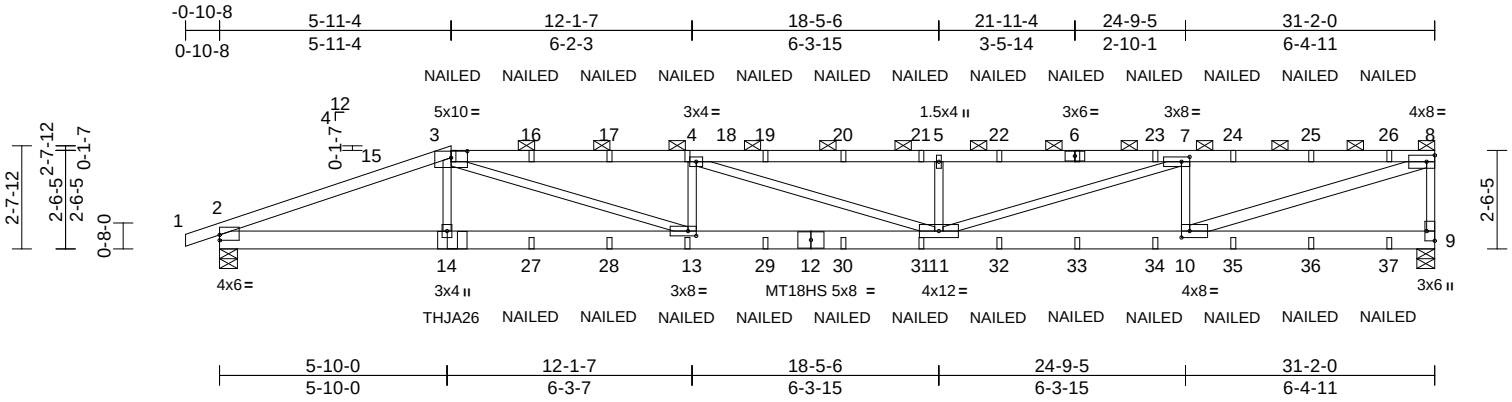


Scale = 1:59.1

Plate Offsets (X, Y): [2:Edge,0-1-10], [3:0-5-0,0-2-0], [7:0-2-8,0-1-8], [9:Edge,0-2-8], [10:0-2-8,0-2-0], [13:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.39	11-13	>946	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.71	11-13	>524	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.06	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 307 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 3-6:2x4 SP 2400F 2.0E, 6-8:2x4 SP 1650F 1.5E
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 8-10:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-4-5 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-15 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=102 (LC 11)
Max Uplift 2=-772 (LC 8), 9=-751 (LC 8)
Max Grav 2=2714 (LC 1), 9=2728 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-3=-6730/1916, 3-4=-9594/2760, 4-5=-9582/2700, 5-7=-9582/2700, 7-8=-6569/1847, 8-9=-2577/815
BOT CHORD 2-14=-1836/6209, 13-14=-1834/6180, 11-13=-2724/9591, 10-11=-1857/6569, 9-10=-83/123
WEBS 3-14=-36/652, 3-13=-1014/3714, 8-10=-1875/6814, 4-13=-1014/503, 4-11=-9/62, 5-11=-820/435, 7-11=-901/3182, 7-10=-1955/787

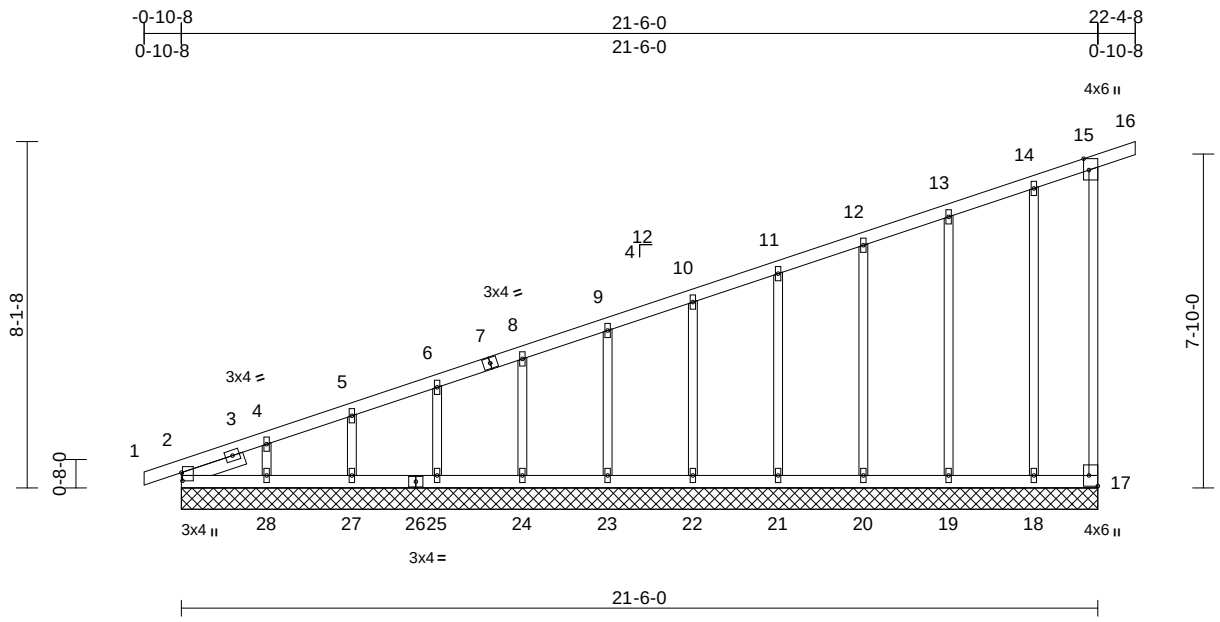
NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 5-11-4, Exterior(2R) 5-11-4 to 13-0-2, Interior (1) 13-0-2 to 31-0-12 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
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 751 lb uplift at joint 9 and 772 lb uplift at joint 2.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Right Hand Hip) or equivalent at 5-11-10 from the left end to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-8=-70, 2-9=-20
Concentrated Loads (lb)
Vert: 3=-131 (B), 6=-131 (B), 14=-420 (B), 13=-39 (B), 4=-131 (B), 16=-131 (B), 17=-131 (B), 19=-131 (B), 20=-131 (B), 21=-131 (B), 22=-131 (B), 23=-131 (B), 24=-131 (B), 25=-131 (B), 26=-131 (B), 27=-39 (B), 28=-39 (B), 29=-39 (B), 30=-39 (B), 31=-39 (B), 32=-39 (B), 33=-39 (B), 34=-39 (B), 35=-39 (B), 36=-39 (B), 37=-39 (B)

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	B1	Monopitch Supported Gable	1	1	Job Reference (optional)	I65739527



Scale = 1:54.1

Plate Offsets (X, Y): [2:0-2-5,0-0-5], [15:0-3-3,Edge], [17:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.00	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 107 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
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 6-0-0 oc bracing.

REACTIONS (size) 2=21-6-0, 17=21-6-0, 18=21-6-0, 19=21-6-0, 20=21-6-0, 21=21-6-0, 22=21-6-0, 23=21-6-0, 24=21-6-0, 25=21-6-0, 27=21-6-0, 28=21-6-0
Max Horiz 2=370 (LC 9)
Max Uplift 17=-79 (LC 9), 18=-41 (LC 8), 19=-44 (LC 12), 20=-52 (LC 8), 21=-48 (LC 12), 22=-49 (LC 8), 23=-49 (LC 12), 24=-49 (LC 8), 25=-50 (LC 12), 27=-45 (LC 8), 28=-101 (LC 12)
Max Grav 2=194 (LC 20), 17=139 (LC 1), 18=141 (LC 1), 19=185 (LC 1), 20=179 (LC 1), 21=180 (LC 1), 22=180 (LC 1), 23=180 (LC 1), 24=180 (LC 1), 25=180 (LC 1), 27=181 (LC 1), 28=180 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-540/299, 4-5=-458/265, 5-6=-424/255, 6-8=-387/243, 8-9=-351/231, 9-10=-315/219, 10-11=-279/207, 11-12=-242/196, 12-13=-206/184, 13-14=-171/174, 14-15=-121/129, 15-16=-22/0, 15-17=-129/184
BOT CHORD 2-28=-148/194, 27-28=-148/194, 25-27=-148/194, 24-25=-148/194, 23-24=-148/194, 22-23=-148/194, 21-22=-148/194, 20-21=-148/194, 19-20=-148/194, 18-19=-148/194, 17-18=-148/194
WEBS 4-28=-138/192, 5-27=-142/88, 6-25=-139/93, 8-24=-140/91, 9-23=-140/91, 10-22=-140/91, 11-21=-140/91, 12-20=-140/91, 13-19=-144/105, 14-18=-171/140

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) -0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 22-4-8 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
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 17, 101 lb uplift at joint 28, 45 lb uplift at joint 27, 50 lb uplift at joint 25, 49 lb uplift at joint 24, 49 lb uplift at joint 23, 49 lb uplift at joint 22, 48 lb uplift at joint 21, 52 lb uplift at joint 20, 44 lb uplift at joint 19 and 41 lb uplift at joint 18.
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

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	B2	Monopitch	1	1	Job Reference (optional)	I65739528

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

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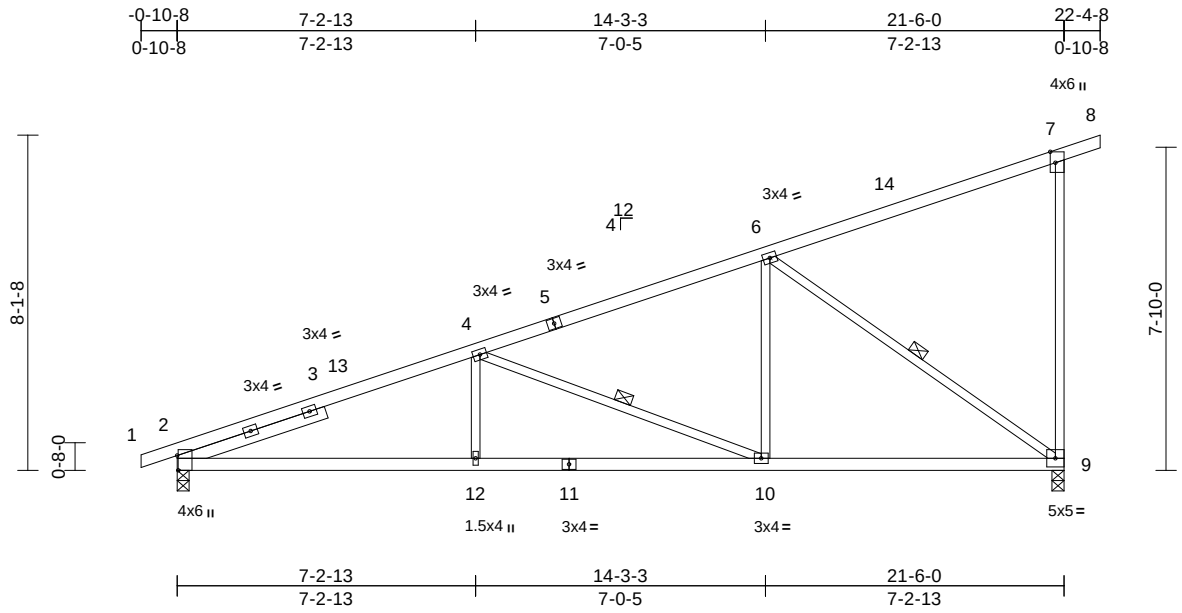

Scale = 1:55.9

Plate Offsets (X, Y): [2:0-4-5,Edge], [7:0-3-3,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	0.79	Vert(LL)	-0.09	9-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.18	2-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 99 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 -- 3-9-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-7-1 oc bracing.
WEBS 1 Row at midpt 4-10, 6-9

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=370 (LC 9)
Max Uplift 2=-219 (LC 8), 9=-269 (LC 12)
Max Grav 2=1024 (LC 1), 9=1032 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-1938/407, 4-6=-1100/264, 6-7=-194/138, 7-8=-22/0, 7-9=-275/221
BOT CHORD 2-12=-584/1746, 10-12=-584/1746, 9-10=-372/977
WEBS 4-12=0/289, 4-10=-826/258, 6-10=-23/516, 6-9=-1192/330

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 22-4-8 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 269 lb uplift at joint 9 and 219 lb uplift at joint 2.
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

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	B3	Monopitch	10	1	Job Reference (optional)	I65739529

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

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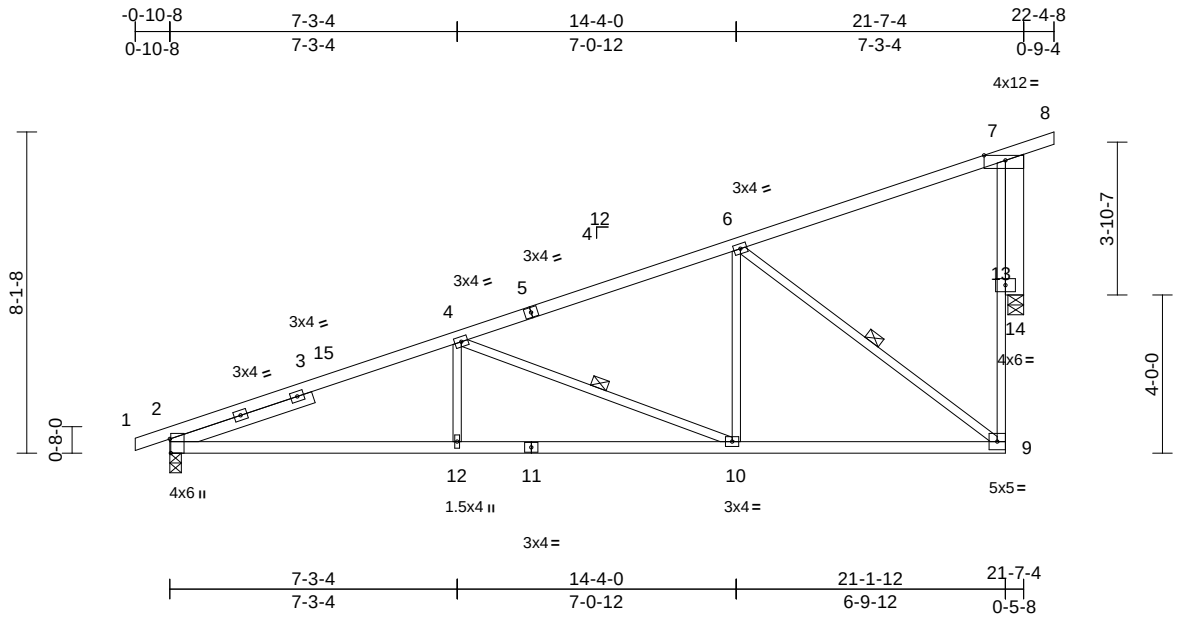

Scale = 1:58.3

Plate Offsets (X, Y): [2:0-4-5,Edge], [7:0-6-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.09	10-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.19	2-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.36	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 104 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
OTHERS	2x6 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 3-9-9

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-1-3 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-11-9 oc bracing.
WEBS	1 Row at midpt 4-10, 6-9

REACTIONS (size) 2=0-3-8, 14=0-4-12
Max Horiz 2=306 (LC 9)
Max Uplift 2=-197 (LC 8), 14=-291 (LC 12)
Max Grav 2=1024 (LC 1), 14=1024 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-5/0, 2-4=-1942/292, 4-6=-1085/142, 6-7=-161/14, 7-8=-30/0, 9-13=-153/760, 7-13=-153/760
BOT CHORD	2-12=-535/1749, 10-12=-535/1749, 9-10=-317/961
WEBS	4-12=0/296, 4-10=-847/277, 6-10=-21/500, 6-9=-1136/305, 7-14=-1030/316

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 22-4-8 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 14 SPF No.2 crushing capacity of 425 psi.
4) 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 197 lb uplift at joint 2 and 291 lb uplift at joint 14.
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

May 22,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240762	C1	Monopitch Supported Gable	1	1	I65739530

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:05 Page: 1
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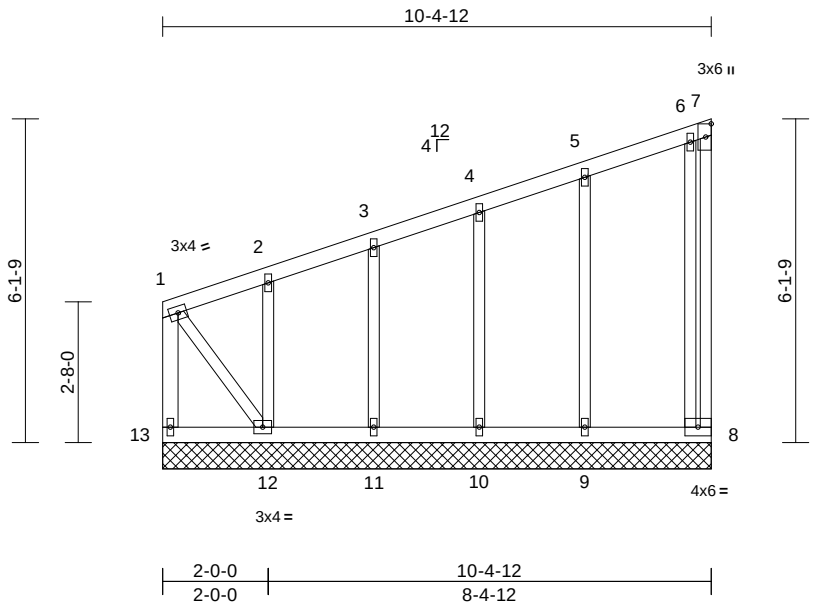

Scale = 1:43.7

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	0.53	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 59 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 13-1:2x4 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, Except:
8-3-10 oc bracing: 12-13.

REACTIONS (size) 8=10-4-12, 9=10-4-12, 10=10-4-12, 11=10-4-12, 12=10-4-12, 13=10-4-12
Max Horiz 13=260 (LC 9)
Max Uplift 8=-41 (LC 9), 9=-62 (LC 8), 10=-45 (LC 12), 11=-51 (LC 8), 12=-251 (LC 9)
Max Grav 8=96 (LC 1), 9=200 (LC 1), 10=176 (LC 1), 11=180 (LC 1), 12=188 (LC 1), 13=275 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-355/203, 2-3=-298/188, 3-4=-238/170, 4-5=-182/157, 5-6=-113/127, 6-7=-88/118, 7-8=-76/93, 1-13=-597/338
BOT CHORD 12-13=-507/367, 11-12=-120/159, 10-11=-120/159, 9-10=-120/159, 8-9=-120/159
WEBS 2-12=-145/172, 3-11=-140/166, 4-10=-138/169, 5-9=-153/194, 6-8=-148/166, 1-12=-395/688

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) 8-1-12 to 13-1-12, Exterior(2N) 13-1-12 to 18-3-8 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
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) 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 41 lb uplift at joint 8, 251 lb uplift at joint 12, 51 lb uplift at joint 11, 45 lb uplift at joint 10 and 62 lb uplift at joint 9.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240762	C2	Jack-Closed	10	1	I65739531

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:05 Page: 1
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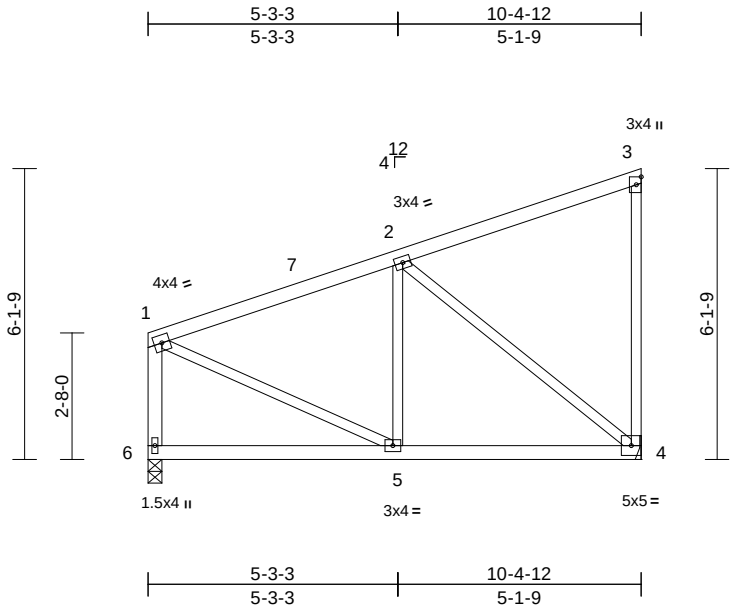

Scale = 1:48.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	0.02	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.04	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 52 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 6-1:2x4 SP 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 8-7-5 oc bracing.

REACTIONS (size) 4= Mechanical, 6=0-3-8
Max Horiz 6=260 (LC 9)
Max Uplift 4=-120 (LC 12), 6=-83 (LC 8)
Max Grav 4=457 (LC 1), 6=457 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-408/196, 2-3=-143/115, 3-4=-138/157, 1-6=-411/270
BOT CHORD 5-6=-463/332, 4-5=-397/405
WEBS 1-5=-138/343, 2-4=-435/403, 2-5=-32/141

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) 8-1-12 to 13-3-3, Interior (1) 13-3-3 to 18-3-8 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 6 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 120 lb uplift at joint 4 and 83 lb uplift at joint 6.
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

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER
May 22,2024

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08/21/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240762	CG1	Diagonal Hip Girder	3	1	I65739532

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

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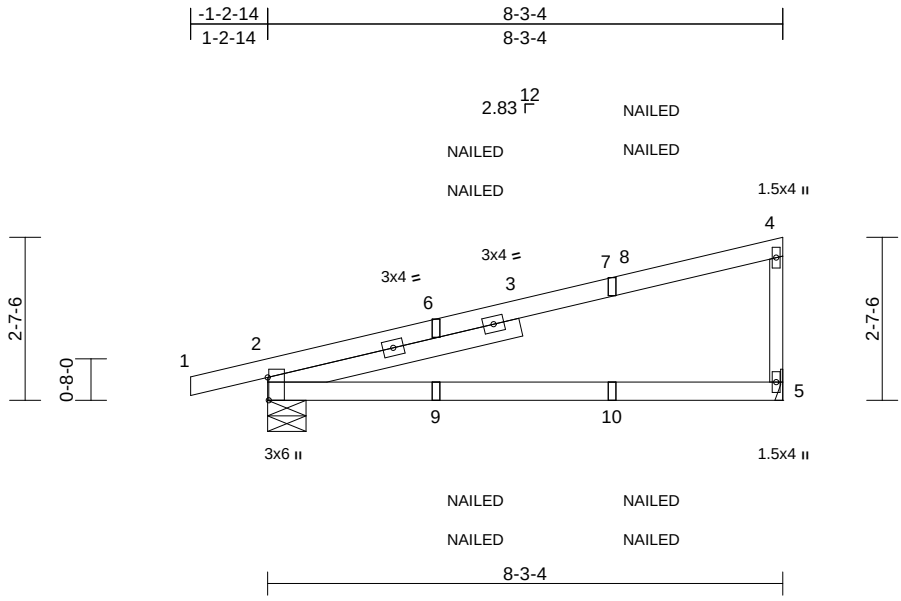

Scale = 1:37

Plate Offsets (X, Y): [2:0-4-6,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	0.94	Vert(LL)	-0.22	2-5	>454	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.43	2-5	>227	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 35 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 2400F 2.0E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-1-15

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

REACTIONS (size) 2=0-7-6, 5= Mechanical
Max Horiz 2=103 (LC 9)
Max Uplift 2=-149 (LC 8), 5=-115 (LC 12)
Max Grav 2=484 (LC 1), 5=410 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6/0, 2-4=-125/82, 4-5=-315/306
BOT CHORD 2-5=-47/51

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 (3) -1-2-14 to 5-10-0, Exterior(2R) 5-10-0 to 8-2-0 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 115 lb uplift at joint 5 and 149 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 2-5=-20
Concentrated Loads (lb)
Vert: 7=-53 (F=-26, B=-26), 10=-19 (F=-10, B=-10)

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

May 22,2024

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RELEASE FOR CONSTRUCTION
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LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240762	CG2	Diagonal Hip Girder	2	1	I65739533

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

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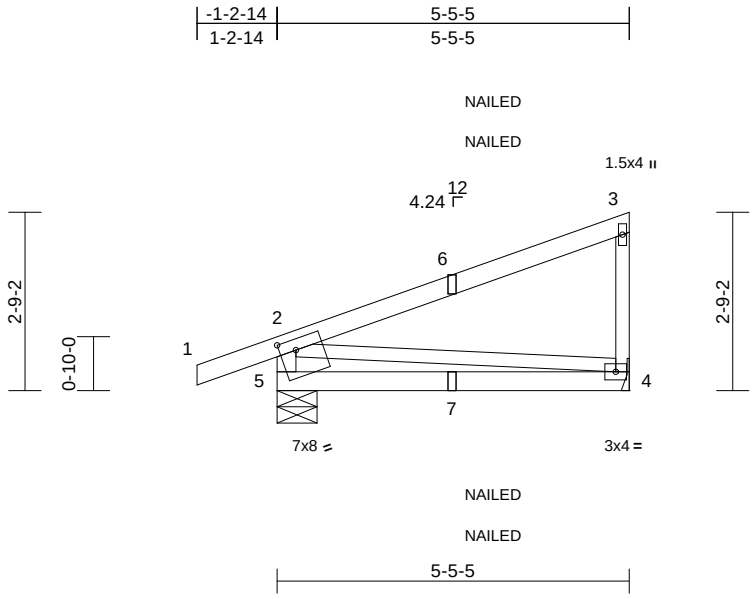

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Plate Offsets (X, Y): [5:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.04	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.09	4-5	>714	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.06	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

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

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

REACTIONS (size) 4= Mechanical, 5=0-7-6
Max Horiz 5=124 (LC 9)
Max Uplift 4=-76 (LC 12), 5=-130 (LC 8)
Max Grav 4=221 (LC 1), 5=343 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-291/370, 1-2=0/32, 2-3=-175/85, 3-4=-169/226
BOT CHORD 4-5=-286/134
WEBS 2-4=-95/253

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 (3) 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 5 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 5 and 76 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

May 22,2024

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Job	Truss	Truss Type	Qty	Ply		
P240762	D1	Hip Girder	1	1	Job Reference (optional)	I65739534

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

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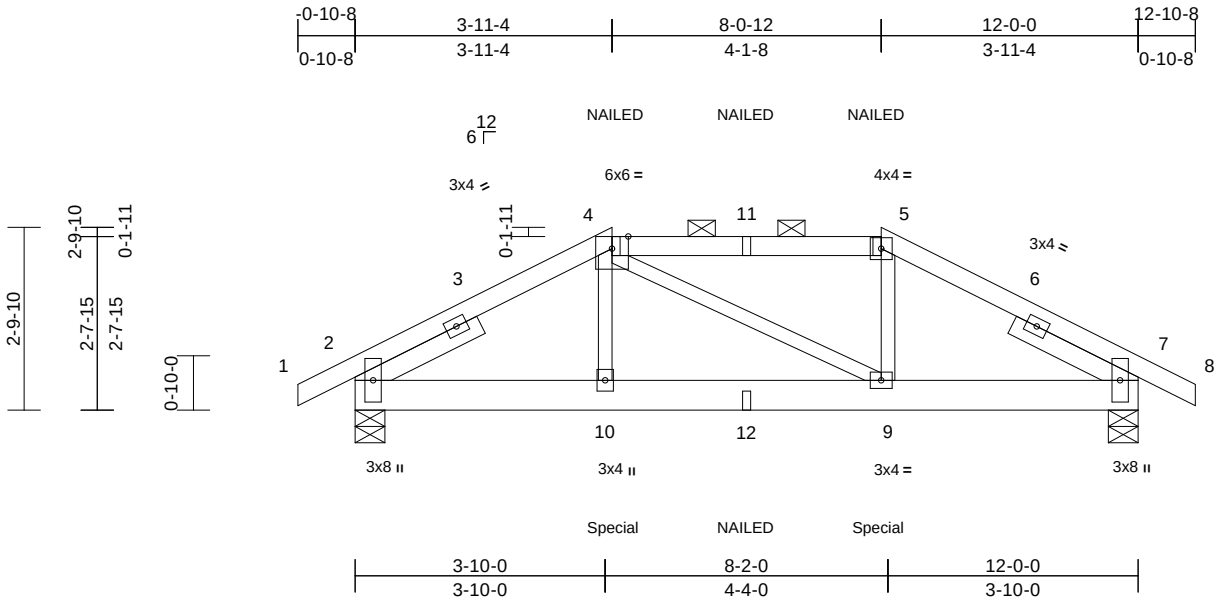

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Plate Offsets (X, Y): [2:0-4-9,0-1-13], [7:0-4-9,0-1-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	0.03	9-10	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.05	9-10	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 57 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-1-4, Right 2x4 SP No.2 -- 2-1-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-14 oc purlins, except 2-0-0 oc purlins (4-8-9 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=-44 (LC 34)
Max Uplift 2=-249 (LC 12), 7=-249 (LC 13)
Max Grav 2=897 (LC 1), 7=897 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-1330/509, 4-5=-1079/485, 5-7=-1328/506, 7-8=0/0
BOT CHORD 2-10=-353/1092, 9-10=-352/1080, 7-9=-350/1090
WEBS 4-10=-24/293, 4-9=-65/62, 5-9=-26/293

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) 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 249 lb uplift at joint 2 and 249 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 210 lb down and 82 lb up at 3-11-4, and 210 lb down and 82 lb up at 8-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-5=-70, 5-8=-70, 2-7=-20
Concentrated Loads (lb)
Vert: 4=-51 (B), 5=-51 (B), 10=-210 (B), 9=-210 (B), 11=-51 (B), 12=-18 (B)

May 22,2024

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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply		
P240762	D2	Common	2	1	Job Reference (optional)	I65739535

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

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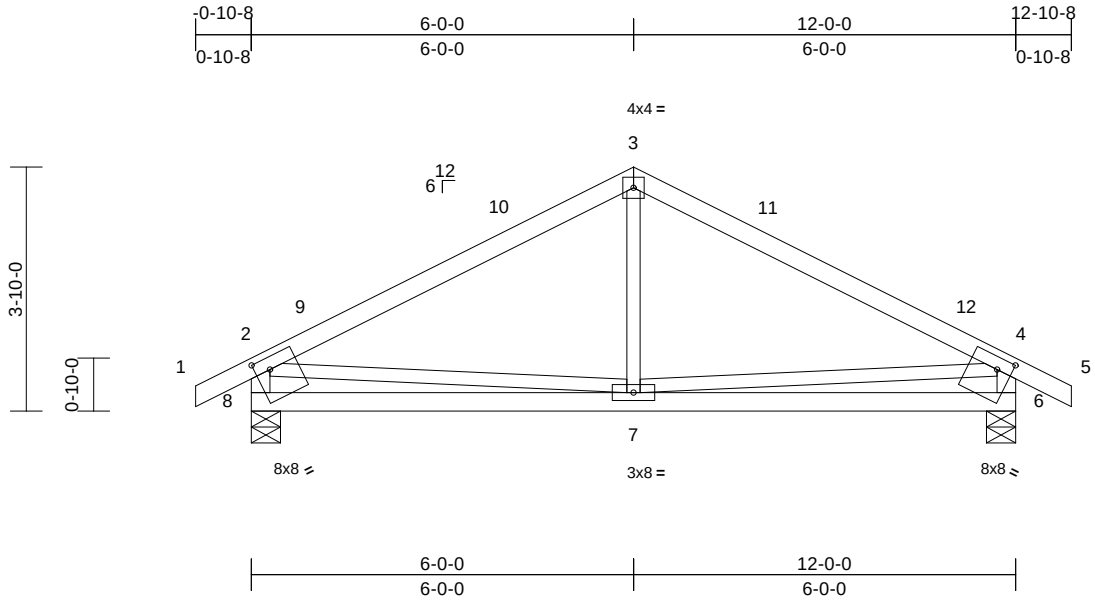

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Plate Offsets (X, Y): [6:0-2-12,0-2-4], [8:0-2-12,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.03	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.05	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 54 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 8-2,6-4:2x4 SP 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) 6=0-5-8, 8=0-5-8
Max Horiz 8=72 (LC 11)
Max Uplift 6=-105 (LC 13), 8=-105 (LC 12)
Max Grav 6=598 (LC 1), 8=598 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-632/261, 3-4=-632/262, 4-5=0/32, 2-8=-546/310, 4-6=-546/310
BOT CHORD 7-8=-304/356, 6-7=-254/356
WEBS 3-7=0/232, 2-7=-8/227, 4-7=-8/227

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-0-0, Exterior(2R) 6-0-0 to 11-0-0, Interior (1) 11-0-0 to 12-10-8 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
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 105 lb uplift at joint 8 and 105 lb uplift at joint 6.
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

May 22,2024

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	
P240762	D3	Common Girder	1	2	I65739536 Job Reference (optional)

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:05 Page: 1
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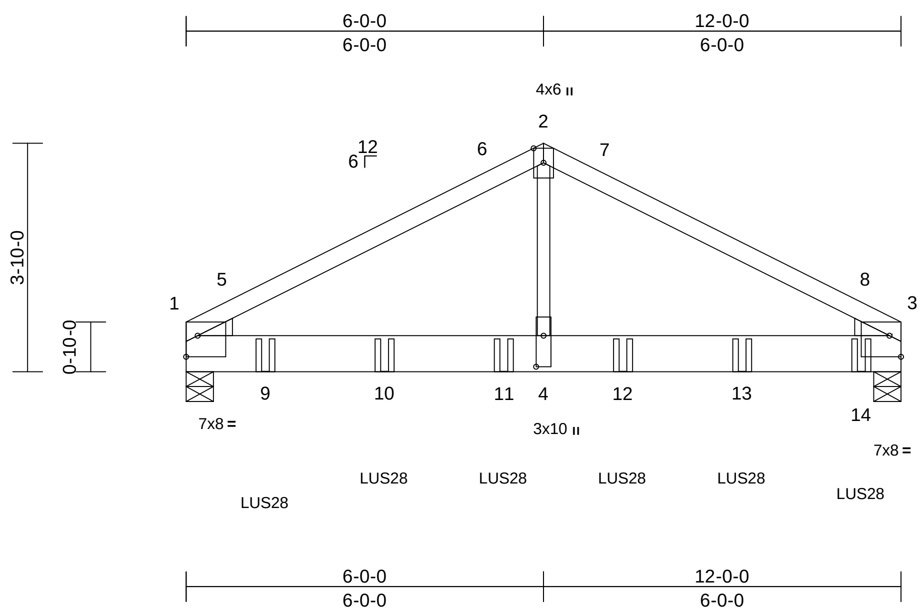

Scale = 1:38.7

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

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	0.89	Vert(LL)	-0.06	1-4	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.10	1-4	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.83	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 123 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 3=0-5-8
Max Horiz 1=64 (LC 12)
Max Uplift 1=-886 (LC 12), 3=-1026 (LC 13)
Max Grav 1=4411 (LC 1), 3=4896 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5327/1272, 2-3=-5327/1272
BOT CHORD 1-4=-989/4538, 3-4=-989/4538
WEBS 2-4=-963/4859

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-5-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 5-2-12, Interior (1) 5-2-12 to 6-0-0, Exterior(2R) 6-0-0 to 11-0-0, Interior (1) 11-0-0 to 11-9-4 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
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 886 lb uplift at joint 1 and 1026 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Use Simpson Strong-Tie LUS28 (6-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-4-0 from the left end to 11-4-0 to connect truss(es) to front face of bottom chord.
10) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 1-3=-20
Concentrated Loads (lb)
Vert: 9=-1376 (F), 10=-1376 (F), 11=-1378 (F), 12=-1378 (F), 13=-1378 (F), 14=-1383 (F)

May 22,2024

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Job	Truss	Truss Type	Qty	Ply	
P240762	GR1	Flat Girder	1	3	I65739537 Job Reference (optional)

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:06 Page: 1

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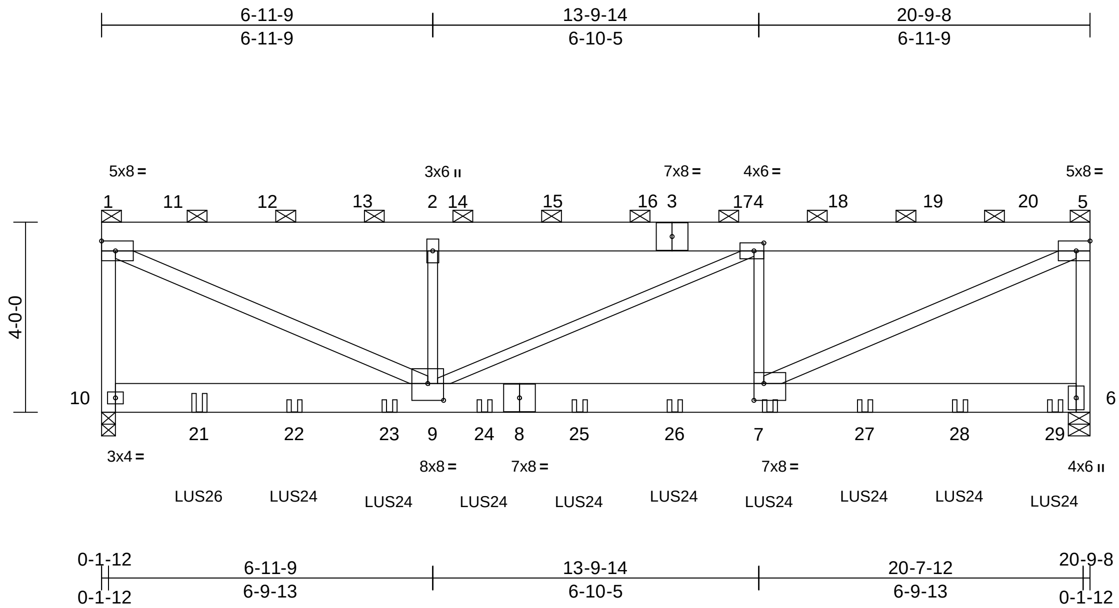

Scale = 1:48.5

Plate Offsets (X, Y): [4:0-2-8,0-2-0], [7:0-2-8,0-4-4], [9:0-4-0,0-4-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.14	7-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.24	7-9	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 416 lb	FT = 20%

LUMBER
TOP CHORD 2x8 SPF No.2
BOT CHORD 2x8 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-1,5-6:2x4 SP No.2, 9-1,7-5:2x4 SP 1650F 1.5E

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

REACTIONS (size) 6=0-5-8, 10=0-3-8
Max Horiz 10=139 (LC 9)
Max Uplift 6=-2220 (LC 9), 10=-2114 (LC 8)
Max Grav 6=8064 (LC 1), 10=7692 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-7083/2154, 1-2=-11462/3402, 2-4=-11462/3402, 4-5=-11524/3422, 5-6=-7195/2182
BOT CHORD 9-10=-235/238, 7-9=-3478/11524, 6-7=-111/211
WEBS 1-9=-3739/12569, 2-9=-3945/1285, 4-9=-69/68, 4-7=-3960/1310, 5-7=-3761/12638

NOTES

1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-8-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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 and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: Joint 10 SP No.2 crushing capacity of 565 psi, Joint 6 SPF No.2 crushing capacity of 425 psi.
7) Bearing at joint(s) 6, 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2220 lb uplift at joint 6 and 2114 lb uplift at joint 10.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 2-0-11 from the left end to connect truss(es) to back face of bottom chord.
12) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 4-0-11 from the left end to 20-0-11 to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 954 lb down and 259 lb up at 1-6-0, 954 lb down and 259 lb up at 3-6-0, 954 lb down and 259 lb up at 5-6-0, 954 lb down and 259 lb up at 7-6-0, 954 lb down and 259 lb up at 9-6-0, 954 lb down and 259 lb up at 11-6-0, 954 lb down and 259 lb up at 13-6-0, 954 lb down and 259 lb up at 15-6-0, and 954 lb down and 259 lb up at 17-6-0, and 954 lb down and 259 lb up at 19-6-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 6-10=-20
Concentrated Loads (lb)
Vert: 7=-437 (B), 11=-954, 12=-954, 13=-954, 14=-954, 15=-954, 16=-954, 17=-954, 18=-954, 19=-954, 20=-954, 21=-437 (B), 22=-437 (B), 23=-437 (B), 24=-437 (B), 25=-437 (B), 26=-437 (B), 27=-437 (B), 28=-437 (B), 29=-441 (B)

May 22,2024

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	
P240762	J1	Jack-Open	3	1	I65739538 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,   Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:06 Page: 1

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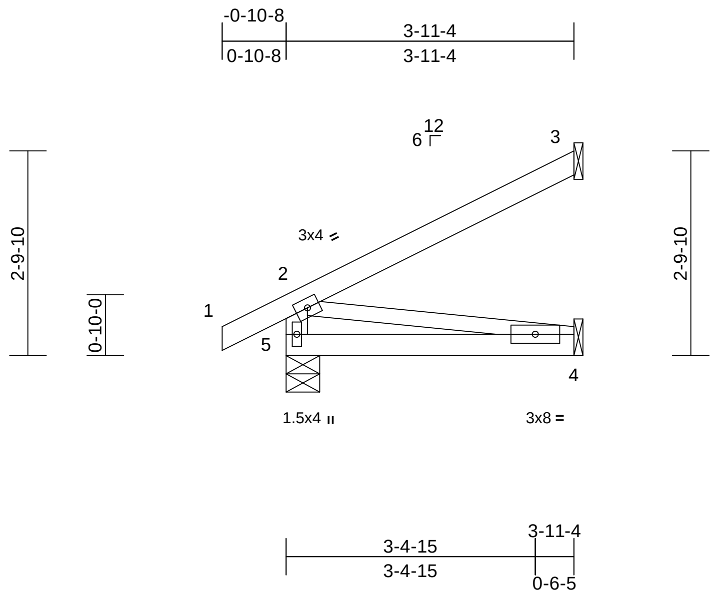

Scale = 1:31.5

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	0.26	Vert(LL)	-0.01	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 18 lb	FT = 20%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=91 (LC 12)
Max Uplift 3=-74 (LC 12), 5=-32 (LC 12)
Max Grav 3=121 (LC 1), 4=76 (LC 3), 5=250 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-212/146, 1-2=0/32, 2-3=-85/46
BOT CHORD 4-5=-191/60
WEBS 2-4=-61/193

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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5 and 74 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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Job	Truss	Truss Type	Qty	Ply		
P240762	J2	Jack-Open	4	1	Job Reference (optional)	I65739539

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:06 Page: 1
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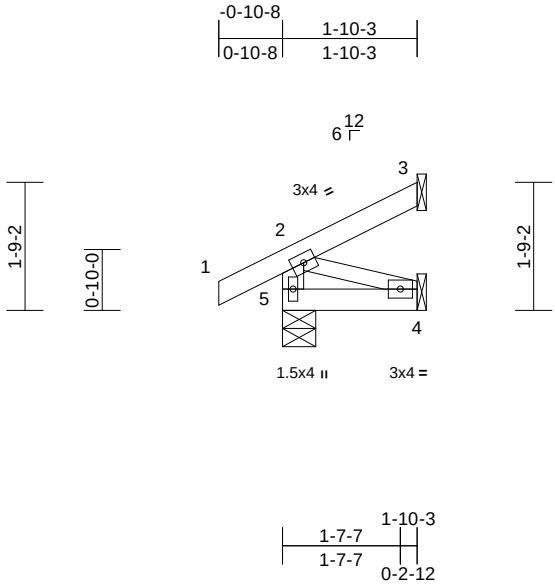

Scale = 1:31.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 9 lb	FT = 20%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=47 (LC 12)
Max Uplift 3=-25 (LC 12), 4=-8 (LC 12), 5=-26 (LC 12)
Max Grav 3=38 (LC 1), 4=34 (LC 3), 5=169 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-152/110, 1-2=0/32, 2-3=-36/22
BOT CHORD 4-5=-113/29
WEBS 2-4=-31/120

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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 5, 8 lb uplift at joint 4 and 25 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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Job	Truss	Truss Type	Qty	Ply		
P240762	J3	Jack-Open	28	1	Job Reference (optional)	I65739540

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/21/2024

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:52:06 Page: 1
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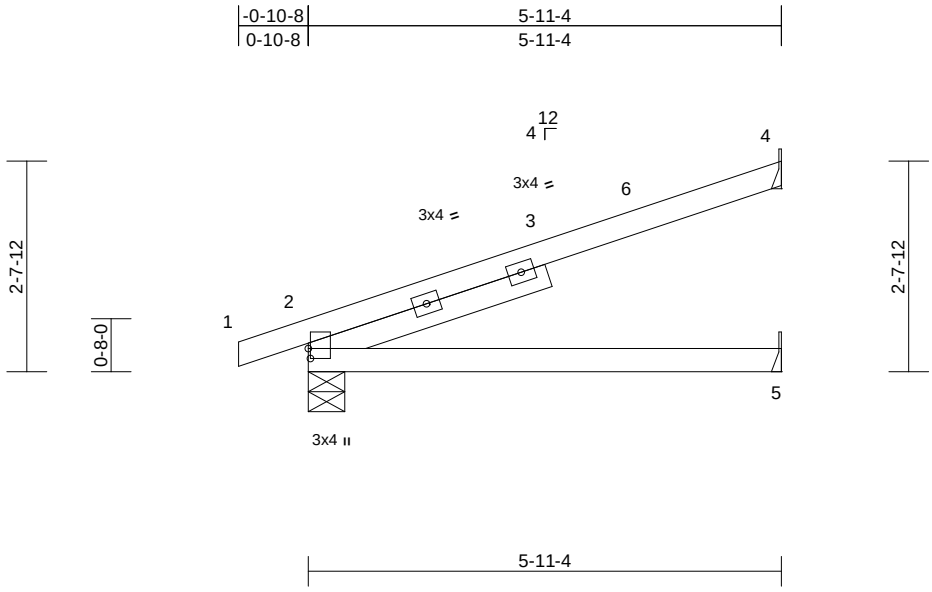

Scale = 1:28.9

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

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	0.78	Vert(LL)	-0.07	2-5	>987	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.14	2-5	>493	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 24 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-1-13

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=99 (LC 12)
Max Uplift 2=-81 (LC 8), 4=-111 (LC 12)
Max Grav 2=330 (LC 1), 4=201 (LC 1), 5=118 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-105/50
BOT CHORD 2-5=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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 5-10-8 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 111 lb uplift at joint 4 and 81 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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Job	Truss	Truss Type	Qty	Ply		
P240762	J4	Jack-Open	4	1	Job Reference (optional)	I65739541

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:52:06 Page: 1
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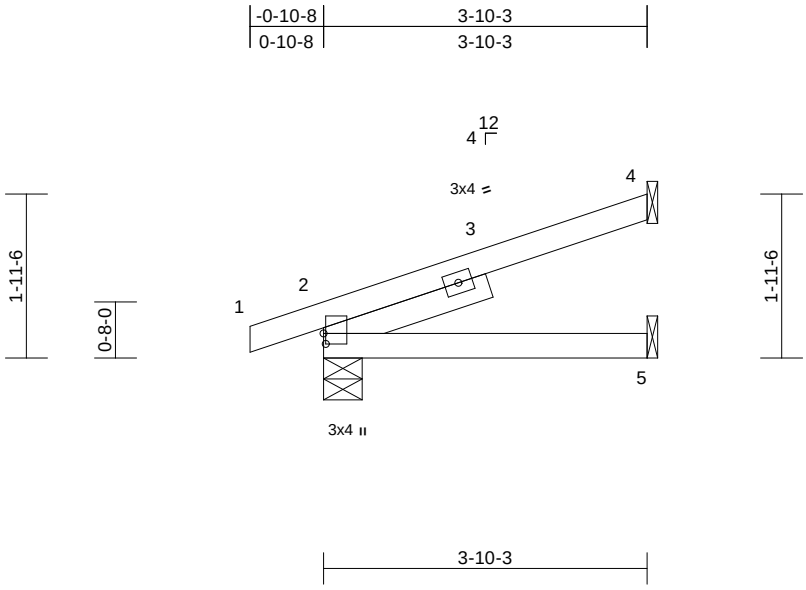

Scale = 1:27.4

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

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	0.32	Vert(LL)	-0.01	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	2-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 16 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-0-10

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

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=68 (LC 12)
Max Uplift 2=-67 (LC 8), 4=-73 (LC 12)
Max Grav 2=239 (LC 1), 4=125 (LC 1), 5=76 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-76/31
BOT CHORD 2-5=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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 73 lb uplift at joint 4 and 67 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	
P240762	J5	Jack-Open	4	1	Job Reference (optional) I65739542

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:06 Page: 1

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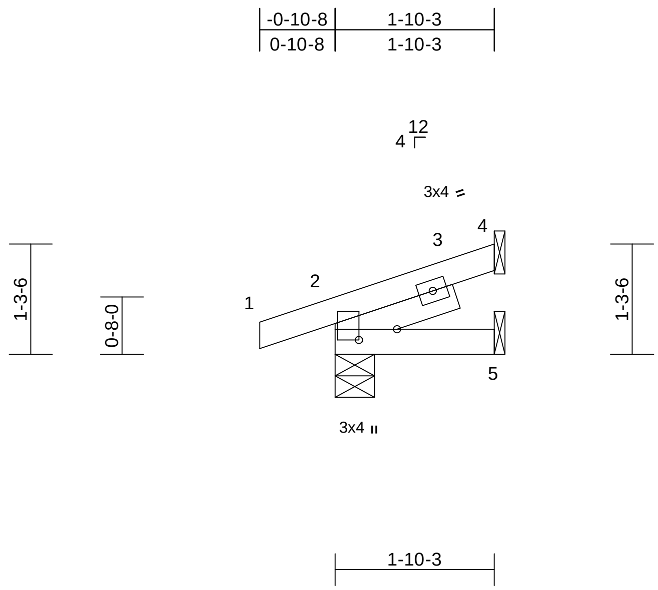

Scale = 1:26.8

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

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	0.06	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	2-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 9 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-5-8

BRACING

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

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=40 (LC 12)
Max Uplift 2=-57 (LC 8), 4=-35 (LC 12)
Max Grav 2=158 (LC 1), 4=50 (LC 1), 5=37 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-43/16
BOT CHORD 2-5=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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 2 and 35 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240762	J6	Jack-Open	2	1	I65739543

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:07 Page: 1
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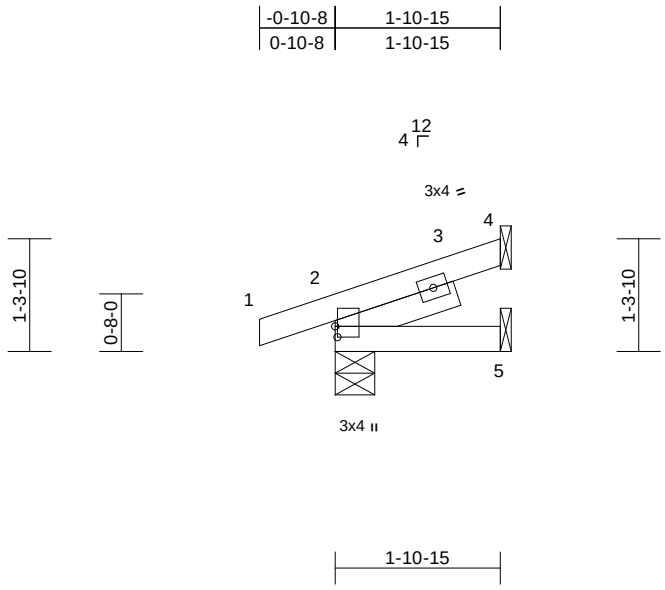

Scale = 1:26.7

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

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	0.06	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	2-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-5-8

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

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=41 (LC 12)
Max Uplift 2=-57 (LC 8), 4=-36 (LC 12)
Max Grav 2=161 (LC 1), 4=52 (LC 1), 5=38 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-44/17
BOT CHORD 2-5=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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 2 and 36 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

MiTek®
16023 Swingley Ridge Rd.
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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/21/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240762	J7	Jack-Open	2	1	I65739544

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:07 Page: 1
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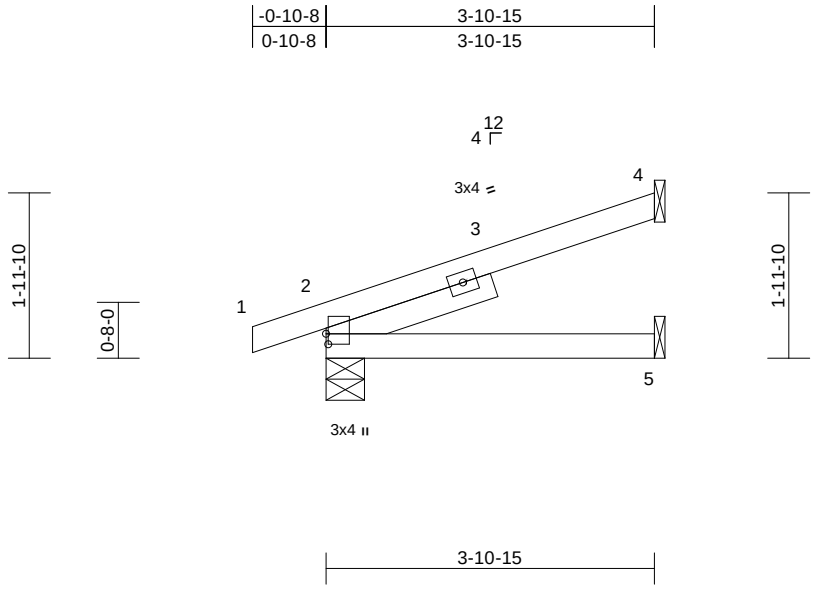

Scale = 1:27.4

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

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	0.34	Vert(LL)	-0.01	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	2-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-1-0

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

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=69 (LC 12)
Max Uplift 2=-67 (LC 8), 4=-74 (LC 12)
Max Grav 2=241 (LC 1), 4=128 (LC 1), 5=77 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-4=-75/32
BOT CHORD 2-5=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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 4 and 67 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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Job	Truss	Truss Type	Qty	Ply		
P240762	LG1	Lay-In Gable	1	1	Job Reference (optional)	I65739545

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:07 Page: 1
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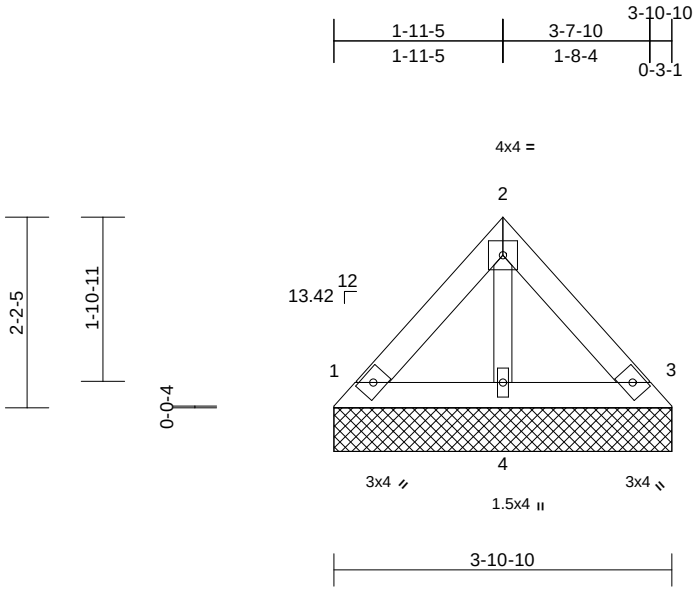

Scale = 1:26.5

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 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 3-11-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-10-10, 3=3-10-10, 4=3-10-10
Max Horiz 1=53 (LC 9)
Max Uplift 1=-28 (LC 13), 3=-24 (LC 13)
Max Grav 1=97 (LC 1), 3=97 (LC 1), 4=101 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-77/39, 2-3=-70/33
BOT CHORD 1-4=-17/39, 3-4=-17/39
WEBS 2-4=-60/17

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) 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1 and 24 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	LG2	Lay-In Gable	1	1	Job Reference (optional)	I65739546

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:07 Page: 1
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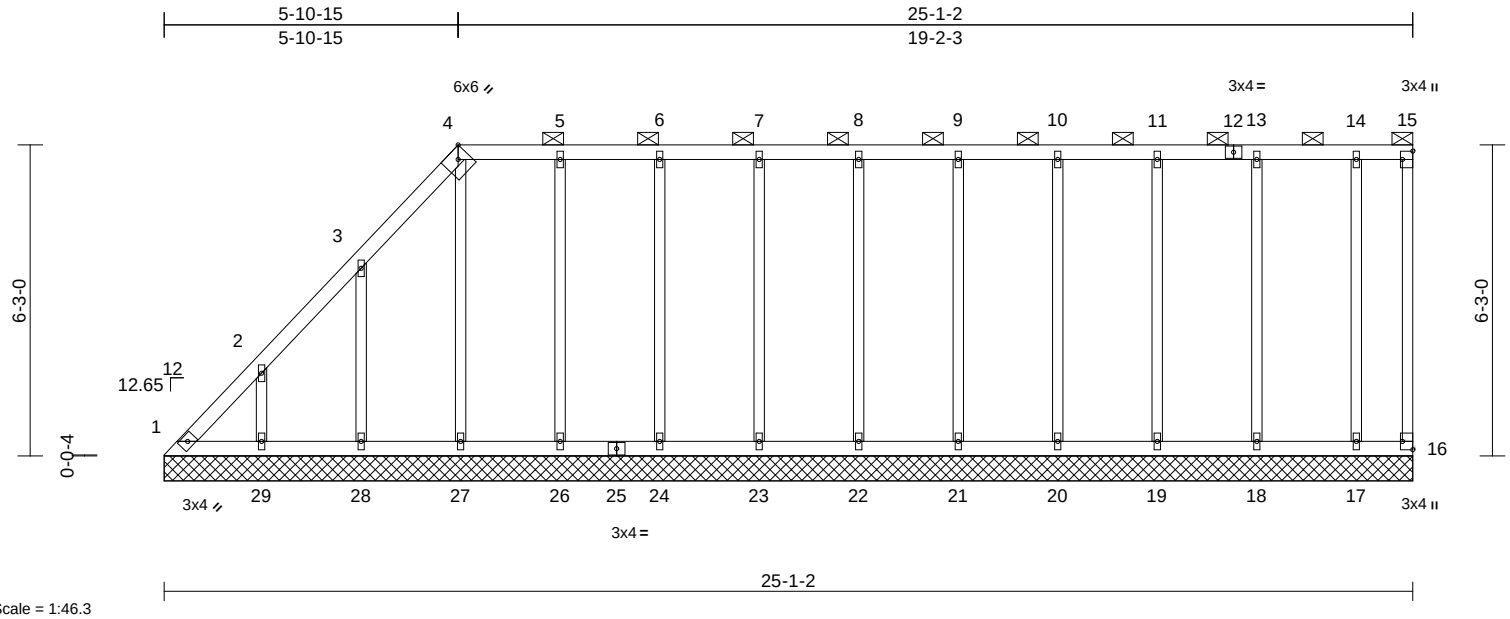

Scale = 1:46.3

Plate Offsets (X, Y): [4:0-2-9,Edge], [15:Edge,0-2-8], [16:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 133 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, and 2-0-0 oc purlins (6-0-0 max.): 4-15.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=25-1-2, 16=25-1-2, 17=25-1-2, 18=25-1-2, 19=25-1-2, 20=25-1-2, 21=25-1-2, 22=25-1-2, 23=25-1-2, 24=25-1-2, 26=25-1-2, 27=25-1-2, 28=25-1-2, 29=25-1-2
Max Horiz 1=254 (LC 9)
Max Uplift 1=-86 (LC 10), 16=-14 (LC 9), 17=-44 (LC 8), 18=-47 (LC 9), 19=-41 (LC 8), 20=-40 (LC 9), 21=-39 (LC 8), 22=-39 (LC 9), 23=-40 (LC 9), 24=-40 (LC 8), 26=-47 (LC 9), 27=-95 (LC 9), 28=-144 (LC 12), 29=-137 (LC 12)
Max Grav 1=193 (LC 9), 16=29 (LC 1), 17=147 (LC 1), 18=188 (LC 1), 19=179 (LC 1), 20=180 (LC 1), 21=180 (LC 1), 22=180 (LC 1), 23=180 (LC 1), 24=178 (LC 1), 26=190 (LC 1), 27=167 (LC 19), 28=216 (LC 19), 29=206 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-402/398, 2-3=-299/303, 3-4=-179/192, 4-5=-121/131, 5-6=-121/132, 6-7=-121/132, 7-8=-121/132, 8-9=-121/132, 9-10=-121/132, 10-11=-121/132, 11-13=-121/132, 13-14=-121/132, 14-15=-121/132, 15-16=-93/90
BOT CHORD 1-29=-121/132, 28-29=-121/132, 27-28=-121/132, 26-27=-121/132, 24-26=-121/132, 23-24=-121/132, 22-23=-121/132, 21-22=-121/132, 20-21=-121/132, 19-20=-121/132, 18-19=-121/132, 17-18=-121/132, 16-17=-121/132
WEBS 2-29=-176/155, 3-28=-192/170, 4-27=-223/165, 5-26=-150/71, 6-24=-138/64, 7-23=-140/64, 8-22=-140/63, 9-21=-140/63, 10-20=-140/63, 11-19=-139/63, 13-18=-146/66, 14-17=-144/91

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) 0-4-1 to 5-4-1, Interior (1) 5-4-1 to 5-11-2, Exterior(2R) 5-11-2 to 13-0-0, Interior (1) 13-0-0 to 25-0-2 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) 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) Provide adequate drainage to prevent water ponding.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 0-0-0 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 86 lb uplift at joint 1, 14 lb uplift at joint 16, 137 lb uplift at joint 29, 144 lb uplift at joint 28, 95 lb uplift at joint 27, 47 lb uplift at joint 26, 40 lb uplift at joint 24, 40 lb uplift at joint 23, 39 lb uplift at joint 22, 39 lb uplift at joint 21, 40 lb uplift at joint 20, 41 lb uplift at joint 19, 47 lb uplift at joint 18 and 44 lb uplift at joint 17.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240762	LG3	Lay-In Gable	1	1	I65739547

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:07 Page: 1
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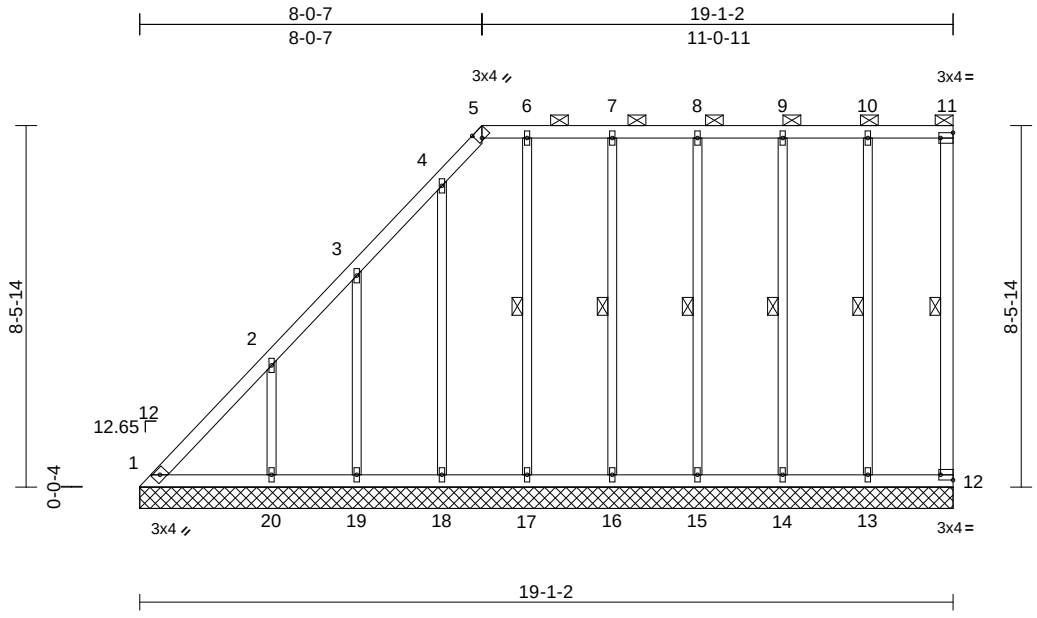

Scale = 1:54.1

Plate Offsets (X, Y): [5:0-1-7,Edge], [11:Edge,0-1-8], [12:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.32	Horiz(TL)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 117 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, and 2-0-0 oc purlins (6-0-0 max.): 5-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 11-12, 6-17, 7-16, 8-15, 9-14, 10-13

REACTIONS (size) 1=19-1-2, 12=19-1-2, 13=19-1-2, 14=19-1-2, 15=19-1-2, 16=19-1-2, 17=19-1-2, 18=19-1-2, 19=19-1-2, 20=19-1-2
Max Horiz 1=349 (LC 9)
Max Uplift 1=-101 (LC 10), 12=-21 (LC 9), 13=-50 (LC 8), 14=-47 (LC 9), 15=-41 (LC 8), 16=-54 (LC 8), 17=-90 (LC 9), 18=-103 (LC 9), 19=-133 (LC 12), 20=-192 (LC 12)
Max Grav 1=258 (LC 9), 12=71 (LC 1), 13=186 (LC 26), 14=181 (LC 1), 15=180 (LC 1), 16=182 (LC 26), 17=180 (LC 1), 18=221 (LC 19), 19=175 (LC 19), 20=296 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-546/545, 2-3=-388/388, 3-4=-292/309, 4-5=-182/181, 5-6=-160/174, 6-7=-160/174, 7-8=-160/174, 8-9=-160/174, 9-10=-160/174, 10-11=-160/174, 11-12=-121/105
BOT CHORD 1-20=-160/175, 19-20=-160/175, 18-19=-160/175, 17-18=-160/175, 16-17=-160/175, 15-16=-160/175, 14-15=-160/175, 13-14=-160/175, 12-13=-160/175
WEBS 2-20=-255/213, 3-19=-189/159, 4-18=-259/199, 6-17=-199/133, 7-16=-142/79, 8-15=-140/65, 9-14=-141/71, 10-13=-180/113

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-1 to 5-1-6, Interior (1) 5-1-6 to 8-0-10, Exterior(2R) 8-0-10 to 15-1-6, Interior (1) 15-1-6 to 18-11-10 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 0-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 101 lb uplift at joint 1, 21 lb uplift at joint 12, 192 lb uplift at joint 20, 133 lb uplift at joint 19, 103 lb uplift at joint 18, 90 lb uplift at joint 17, 54 lb uplift at joint 16, 41 lb uplift at joint 15, 47 lb uplift at joint 14 and 50 lb uplift at joint 13.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	LG4	Lay-In Gable	1	1	Job Reference (optional)	I65739548

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:07 Page: 1
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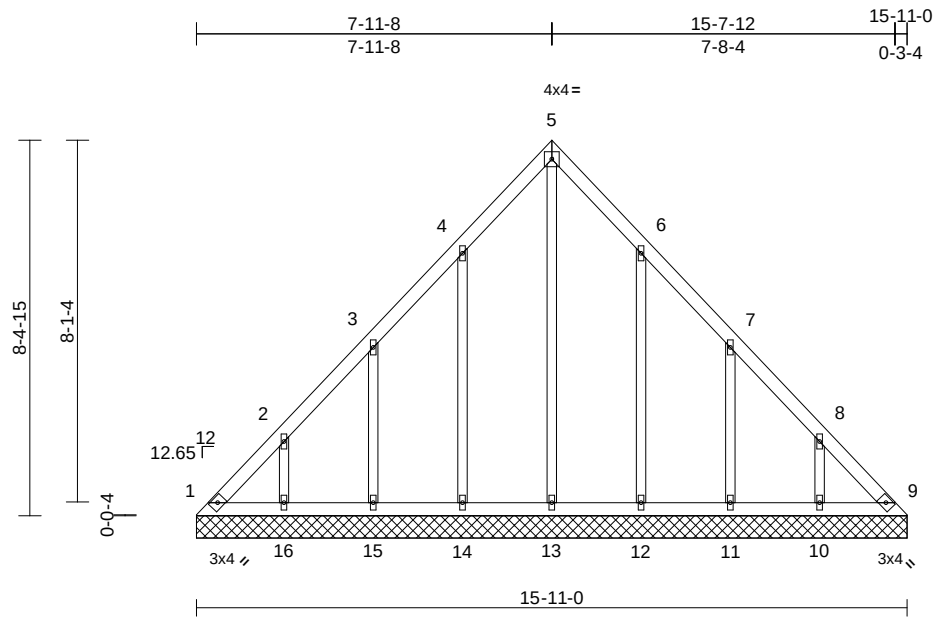

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.24	Horiz(TL)	0.01	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 81 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) 1=15-11-0, 9=15-11-0, 10=15-11-0, 11=15-11-0, 12=15-11-0, 13=15-11-0, 14=15-11-0, 15=15-11-0, 16=15-11-0
Max Horiz 1=-228 (LC 8)
Max Uplift 1=-92 (LC 10), 9=-58 (LC 11), 10=-137 (LC 13), 11=-140 (LC 13), 12=-134 (LC 13), 14=-137 (LC 12), 15=-139 (LC 12), 16=-137 (LC 12)
Max Grav 1=211 (LC 12), 9=188 (LC 13), 10=209 (LC 20), 11=206 (LC 20), 12=214 (LC 20), 13=177 (LC 13), 14=216 (LC 19), 15=205 (LC 19), 16=209 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-309/190, 2-3=-183/140, 3-4=-143/100, 4-5=-162/158, 5-6=-162/150, 6-7=-107/58, 7-8=-155/93, 8-9=-278/190
BOT CHORD 1-16=-146/219, 15-16=-146/219, 14-15=-147/219, 13-14=-147/219, 12-13=-147/219, 11-12=-147/219, 10-11=-146/219, 9-10=-146/219
WEBS 5-13=-153/104, 4-14=-187/160, 3-15=-195/164, 2-16=-185/154, 6-12=-187/158, 7-11=-195/165, 8-10=-185/154

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-1 to 5-4-1, Interior (1) 5-4-1 to 7-11-12, Exterior(2R) 7-11-12 to 12-11-12, Interior (1) 12-11-12 to 15-7-7 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) 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 92 lb uplift at joint 1, 58 lb uplift at joint 9, 137 lb uplift at joint 14, 139 lb uplift at joint 15, 137 lb uplift at joint 16, 134 lb uplift at joint 12, 140 lb uplift at joint 11 and 137 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240762	LG5	Lay-In Gable	1	1	Job Reference (optional) I65739549

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/21/2024

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:08 Page: 1
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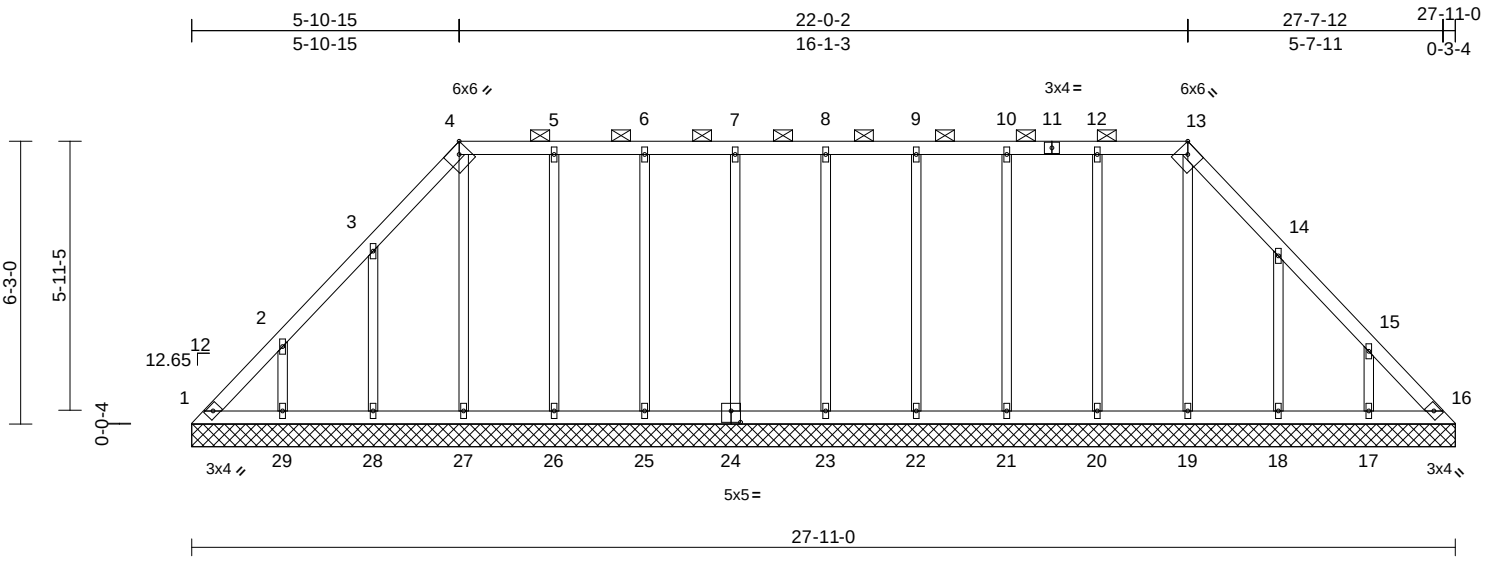

Scale = 1:50.9

Plate Offsets (X, Y): [4:0-2-9,Edge], [13:0-2-9,Edge], [24:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.01	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 140 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, except 2-0-0 oc purlins (6-0-0 max.): 4-13.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=27-11-0, 16=27-11-0, 17=27-11-0, 18=27-11-0, 19=27-11-0, 20=27-11-0, 21=27-11-0, 22=27-11-0, 23=27-11-0, 24=27-11-0, 25=27-11-0, 26=27-11-0, 27=27-11-0, 28=27-11-0, 29=27-11-0
Max Horiz 1=-168 (LC 8)
Max Uplift 1=-70 (LC 10), 16=-23 (LC 11), 17=-135 (LC 13), 18=-146 (LC 13), 20=-45 (LC 9), 21=-40 (LC 8), 22=-40 (LC 9), 23=-39 (LC 9), 24=-39 (LC 8), 25=-40 (LC 8), 26=-44 (LC 8), 27=-30 (LC 9), 28=-140 (LC 12), 29=-140 (LC 12)
Max Grav 1=142 (LC 21), 16=115 (LC 22), 17=204 (LC 20), 18=218 (LC 20), 19=147 (LC 26), 20=189 (LC 25), 21=179 (LC 1), 22=180 (LC 26), 23=181 (LC 25), 24=180 (LC 26), 25=176 (LC 1), 26=194 (LC 26), 27=163 (LC 22), 28=212 (LC 19), 29=211 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-203/160, 2-3=-138/113, 3-4=-135/151, 4-5=-113/124, 5-6=-113/124, 6-7=-113/124, 7-8=-115/124, 8-9=-115/124, 9-10=-115/124, 10-12=-115/124, 12-13=-115/124, 13-14=-136/126, 14-15=-86/44, 15-16=-158/96
BOT CHORD 1-29=-80/137, 28-29=-80/137, 27-28=-80/137, 26-27=-80/136, 25-26=-80/136, 23-25=-80/136, 22-23=-78/135, 21-22=-78/135, 20-21=-78/135, 19-20=-78/135, 18-19=-78/135, 17-18=-78/135, 16-17=-78/135
WEBS 13-19=-106/5, 12-20=-149/69, 10-21=-139/64, 9-22=-140/63, 8-23=-140/63, 7-24=-140/63, 6-25=-138/63, 5-26=-154/68, 4-27=-123/54, 3-28=-180/166, 2-29=-177/158, 14-18=-188/171, 15-17=-171/153

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) 0-4-1 to 5-4-1, Interior (1) 5-4-1 to 5-11-2, Exterior(2R) 5-11-2 to 13-0-0, Interior (1) 13-0-0 to 22-0-5, Exterior(2E) 22-0-5 to 27-7-7 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 70 lb uplift at joint 1, 23 lb uplift at joint 16, 45 lb uplift at joint 20, 40 lb uplift at joint 21, 40 lb uplift at joint 22, 39 lb uplift at joint 23, 39 lb uplift at joint 24, 40 lb uplift at joint 25, 44 lb uplift at joint 26, 30 lb uplift at joint 27, 140 lb uplift at joint 28, 140 lb uplift at joint 29, 146 lb uplift at joint 18 and 135 lb uplift at joint 17.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	V1	Valley	1	1	Job Reference (optional)	I65739550

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

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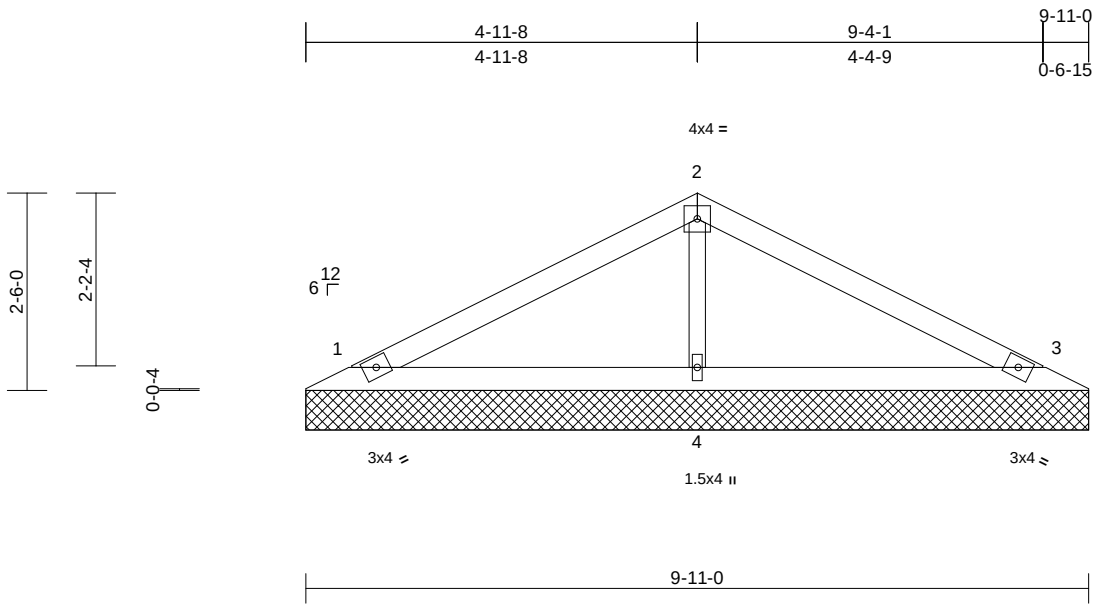

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 31 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) 1=9-11-0, 3=9-11-0, 4=9-11-0
Max Horiz 1=-41 (LC 13)
Max Uplift 1=-44 (LC 12), 3=-51 (LC 13), 4=-33 (LC 12)
Max Grav 1=185 (LC 25), 3=185 (LC 26), 4=417 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-113/71, 2-3=-113/79
BOT CHORD 1-4=-3/48, 3-4=-3/48
WEBS 2-4=-285/204

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) 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 1, 51 lb uplift at joint 3 and 33 lb uplift at joint 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	V2	Valley	1	1	Job Reference (optional)	I65739551

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

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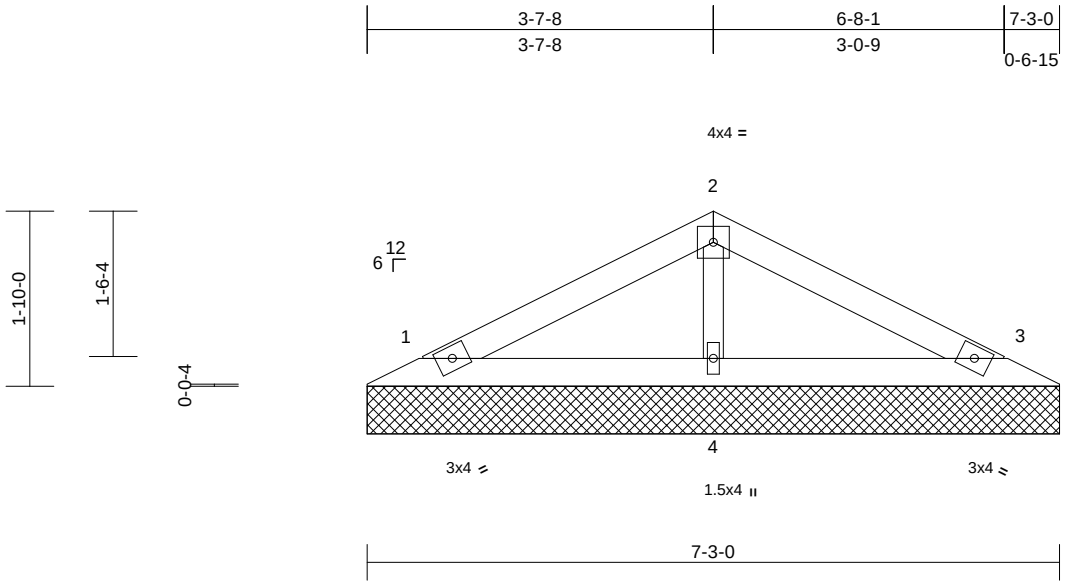

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 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) 1=7-3-0, 3=7-3-0, 4=7-3-0
Max Horiz 1=-29 (LC 17)
Max Uplift 1=-37 (LC 12), 3=-42 (LC 13), 4=-9 (LC 12)
Max Grav 1=143 (LC 1), 3=143 (LC 1), 4=261 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-69/53, 2-3=-69/60
BOT CHORD 1-4=-1/31, 3-4=-1/31
WEBS 2-4=-185/154

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 1, 42 lb uplift at joint 3 and 9 lb uplift at joint 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	V3	Valley	1	1	Job Reference (optional)	I65739552

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:52:08 Page: 1
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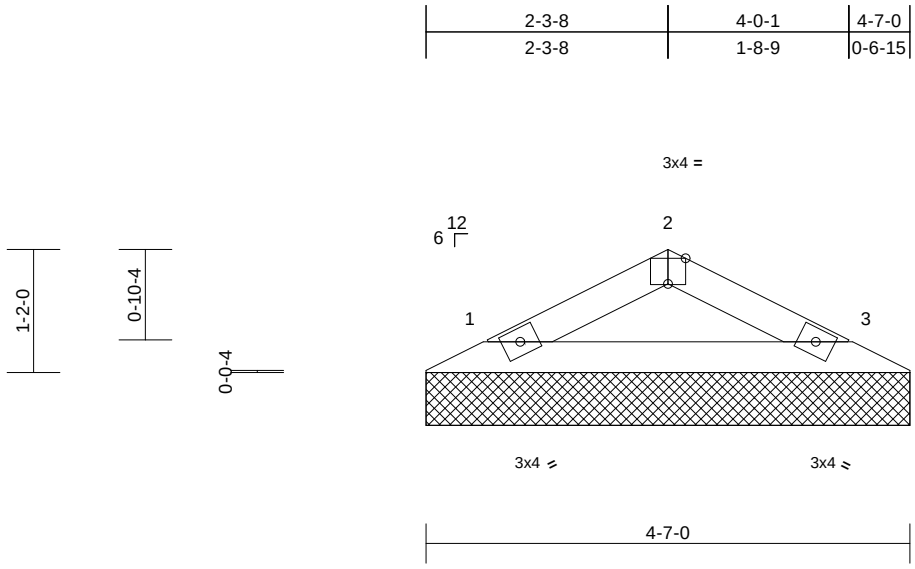

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Plate Offsets (X, Y): [2:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

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

REACTIONS (size) 1=4-7-0, 3=4-7-0
Max Horiz 1=16 (LC 16)
Max Uplift 1=-23 (LC 12), 3=-23 (LC 13)
Max Grav 1=153 (LC 1), 3=153 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-154/137, 2-3=-154/146
BOT CHORD 1-3=-94/118

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) 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1 and 23 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	V4	Valley	1	1	Job Reference (optional)	I65739553

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue May 21 14:58:08 Page: 1
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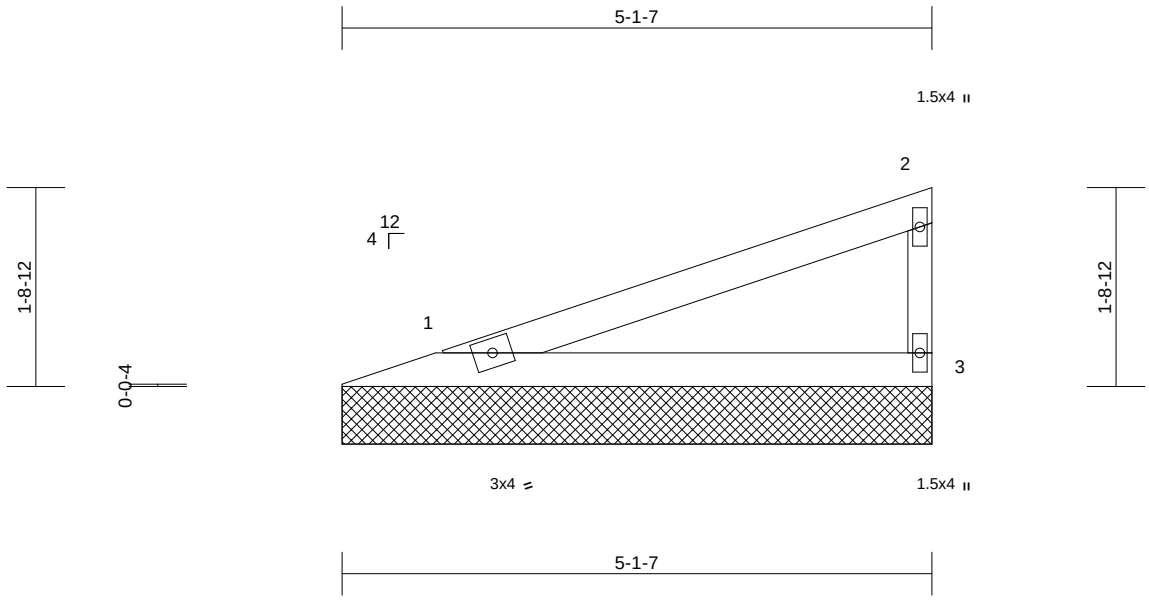

Scale = 1:20

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
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 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 5-2-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-1-7, 3=5-1-7
Max Horiz 1=66 (LC 9)
Max Uplift 1=-36 (LC 8), 3=-46 (LC 12)
Max Grav 1=186 (LC 1), 3=186 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-93/57, 2-3=-145/189
BOT CHORD 1-3=-29/31

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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 1 and 46 lb uplift at joint 3.
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

May 22,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240762	V5	Valley	1	1	Job Reference (optional)	I65739554

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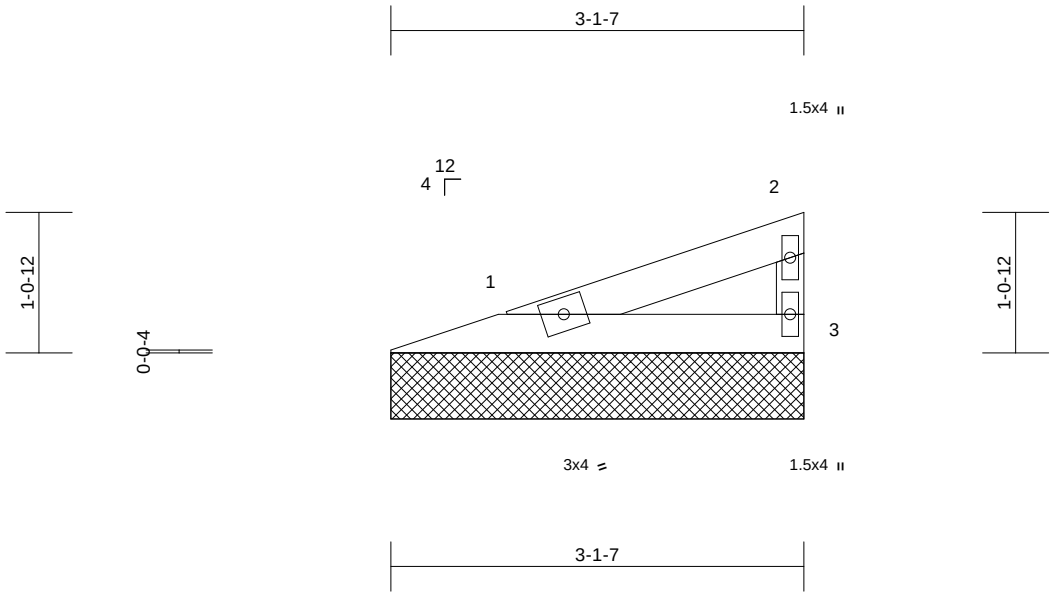

Scale = 1:17.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 9 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 3-2-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-1-7, 3=3-1-7
Max Horiz 1=35 (LC 9)
Max Uplift 1=-18 (LC 8), 3=-24 (LC 12)
Max Grav 1=96 (LC 1), 3=96 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-49/30, 2-3=-75/98
BOT CHORD 1-3=-15/16

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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1 and 24 lb uplift at joint 3.
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

May 22,2024

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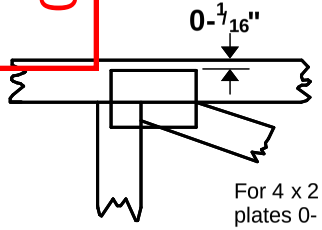
Symbols

PLATE LOCATION AND ORIENTATION

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



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

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

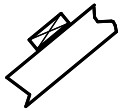
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

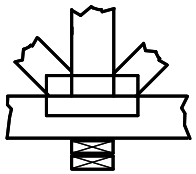
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

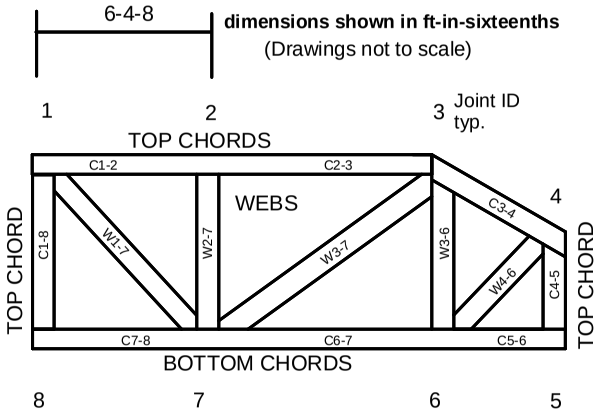


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

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/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.