MiTek®

RE: P240941-01
Roof - HT Lot 187

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

Site Information:

Customer: Clayton Properties Project Name: P240941-01
Lot/Block: 187 Model:
Address: 3219 SW Arboridge Cir Subdivision: Hawthorn Ridge
City: Lee's Summit State: MO

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

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

This package includes 64 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I66660821	A3	7/5/2024	21	I66660841	A15	7/5/2024
2	I66660822	A2	7/5/2024	22	I66660842	A16	7/5/2024
3	I66660823	A1	7/5/2024	23	I66660843	A17	7/5/2024
4	I66660824	B7	7/5/2024	24	I66660844	A11	7/5/2024
5	I66660825	B5	7/5/2024	25	I66660845	LG4	7/5/2024
6	I66660826	B4	7/5/2024	26	I66660846	LG9	7/5/2024
7	I66660827	B3	7/5/2024	27	I66660847	B1	7/5/2024
8	I66660828	B2	7/5/2024	28	I66660848	LG8	7/5/2024
9	I66660829	B8	7/5/2024	29	I66660849	LG2	7/5/2024
10	I66660830	B6	7/5/2024	30	I66660850	LG5	7/5/2024
11	I66660831	A10	7/5/2024	31	I66660851	C3	7/5/2024
12	I66660832	A9	7/5/2024	32	I66660852	C1	7/5/2024
13	I66660833	A8	7/5/2024	33	I66660853	C2	7/5/2024
14	I66660834	A7	7/5/2024	34	I66660854	LG1	7/5/2024
15	I66660835	A6	7/5/2024	35	I66660855	CG1	7/5/2024
16	I66660836	A5	7/5/2024	36	I66660856	CG6	7/5/2024
17	I66660837	A4	7/5/2024	37	I66660857	V7	7/5/2024
18	I66660838	A12	7/5/2024	38	I66660858	V3	7/5/2024
19	I66660839	A13	7/5/2024	39	I66660859	V5	7/5/2024
20	I66660840	A14	7/5/2024	40	I66660860	E2	7/5/2024

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

Truss Design Engineer's Name: Sevier, Scott

My license renewal date for the state of Missouri is December 31, 2025.

Missouri COA: 001193

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

July 05, 2024

Sevier, Scott

MiTek®

RE: P240941-01 - Roof - HT Lot 187

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

Site Information:

Project Customer: Clayton Properties Project Name: P240941-01
Lot/Block: 187 Subdivision: Hawthorn Ridge
Address: 3219 SW Arboridge Cir
City, County: Lee's Summit State: MO

No.	Seal#	Truss Name	Date
41	I66660861	E1	7/5/2024
42	I66660862	V8	7/5/2024
43	I66660863	LG7	7/5/2024
44	I66660864	D2	7/5/2024
45	I66660865	D1	7/5/2024
46	I66660866	J6	7/5/2024
47	I66660867	J1	7/5/2024
48	I66660868	CG5	7/5/2024
49	I66660869	V9	7/5/2024
50	I66660870	V4	7/5/2024
51	I66660871	V6	7/5/2024
52	I66660872	J3	7/5/2024
53	I66660873	LG6	7/5/2024
54	I66660874	J4	7/5/2024
55	I66660875	J9	7/5/2024
56	I66660876	V1	7/5/2024
57	I66660877	LG3	7/5/2024
58	I66660878	CG3	7/5/2024
59	I66660879	V10	7/5/2024
60	I66660880	J8	7/5/2024
61	I66660881	J7	7/5/2024
62	I66660882	J5	7/5/2024
63	I66660883	J2	7/5/2024
64	I66660884	V2	7/5/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A3	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
I66660821
LEE'S SUMMIT, MISSOURI
10/03/2024

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed JUL 03 11:06:36 Page: 1
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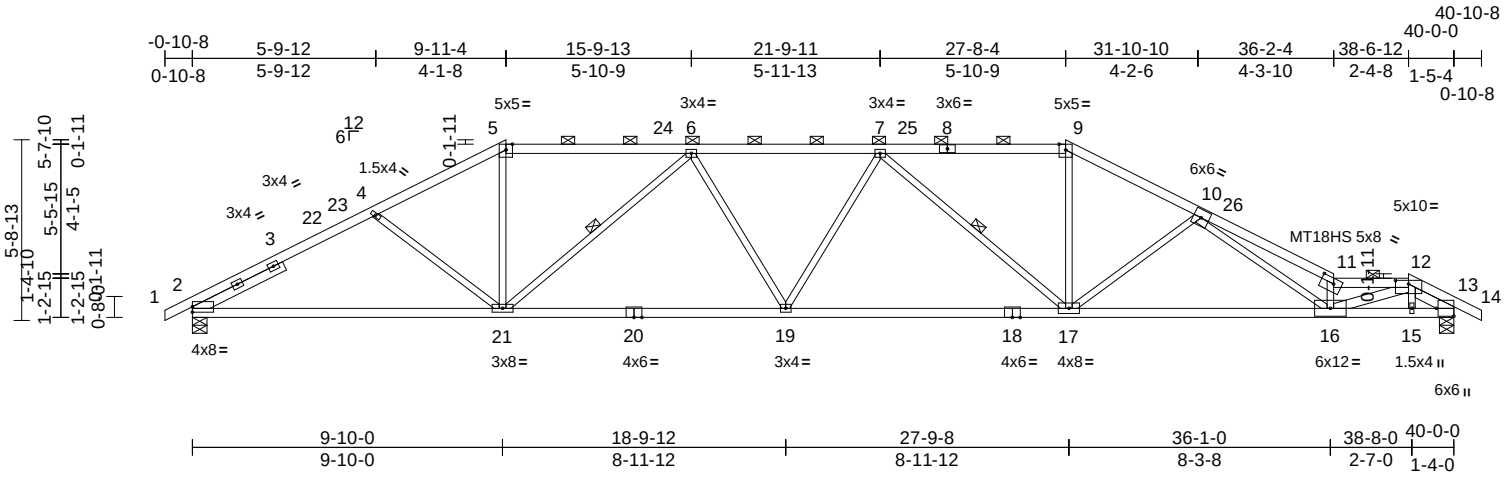

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Plate Offsets (X, Y): [2:Edge,0-2-1], [11:0-5-0,0-2-0], [12:0-5-0,0-1-7], [13:Edge,0-6-10]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.42	16-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.82	16-17	>584	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.20	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 180 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 9-11,11-12:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 18-20:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 16-12:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-2-9, Right 2x4 SP No.2 -- 1-4-12

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-1-15 oc purlins, except
2-0-0 oc purlins (2-2-0 max.): 5-9, 11-12.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-21, 7-17

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=-101 (LC 17)
Max Uplift 2=-196 (LC 12), 13=-228 (LC 13)
Max Grav 2=1861 (LC 1), 13=1861 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-4=-3188/581, 4-5=-2933/536, 5-6=-2586/511, 6-7=-3443/630, 7-9=-2950/575, 9-10=-3376/604, 10-11=-6455/1053, 11-12=-6013/945, 12-13=-3281/559, 13-14=0/6
BOT CHORD 2-21=-454/2700, 19-21=-467/3330, 17-19=-485/3461, 16-17=-565/3633, 15-16=-439/2747, 13-15=-439/2747
WEBS 5-21=-95/925, 9-17=-132/1154, 11-16=-2686/493, 12-15=-25/92, 4-21=-145/213, 10-17=-826/265, 10-16=-385/2640, 6-19=0/296, 6-21=-1083/283, 7-19=-105/112, 7-17=-821/250, 12-16=-483/3420

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 14-11-4, Interior (1) 14-11-4 to 27-8-4, Exterior(2R) 27-8-4 to 32-8-4, Interior (1) 32-8-4 to 38-8-0, Exterior (2E) 38-8-0 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 SP 1650F 1.5E crushing capacity of 565 psi.
7) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13 and 2. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A2	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I66660822
10/03/2024

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

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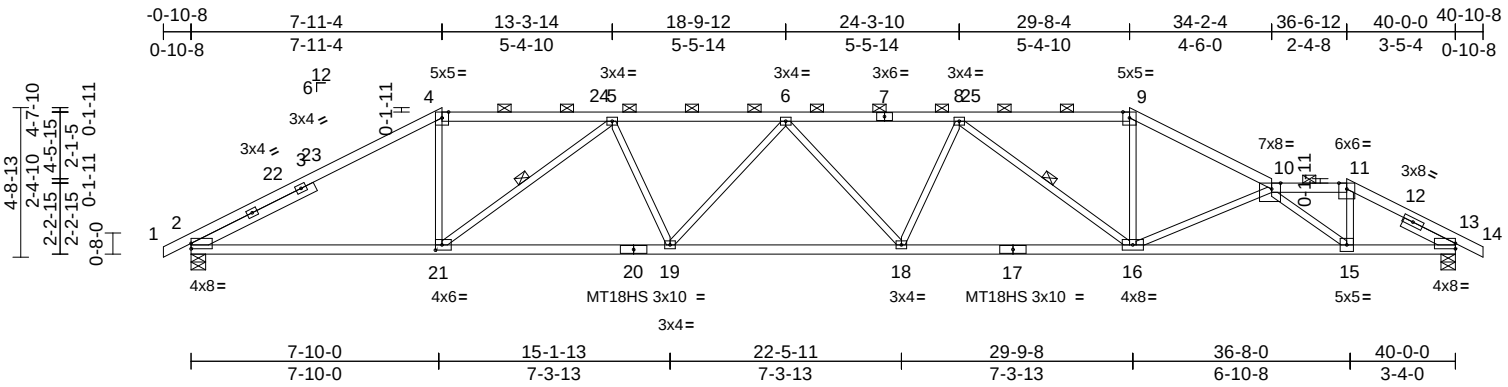

Scale = 1:72.9

Plate Offsets (X, Y): [2:Edge,0-2-1], [10:0-3-6,Edge], [13:Edge,0-2-1], [21:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.41	18-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.78	18-19	>615	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.23	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 175 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x4 SP 2400F 2.0E, 11-14:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-4-2, Right 2x4 SP No.2 -- 1-9-15

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (2-4-13 max.): 4-9, 10-11.
BOT CHORD Rigid ceiling directly applied or 8-5-3 oc bracing.
WEBS 1 Row at midpt 5-21, 8-16

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=-82 (LC 17)
Max Uplift 2=-244 (LC 9), 13=-217 (LC 8)
Max Grav 2=1861 (LC 1), 13=1861 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-3195/512, 4-5=-2698/522, 5-6=-4024/708, 6-8=-4209/730, 8-9=-3252/611, 9-10=-3718/655, 10-11=-2663/484, 11-13=-3227/538, 13-14=0/6
BOT CHORD 2-21=-412/2721, 19-21=-653/3833, 18-19=-727/4281, 16-18=-657/4111, 15-16=-717/4387, 13-15=-405/2738
WEBS 4-21=-121/1078, 9-16=-154/1327, 10-16=-1215/293, 11-15=-183/1445, 5-19=-28/517, 5-21=-1528/363, 6-19=-436/146, 6-18=-194/111, 8-18=0/317, 8-16=-1197/306, 10-15=-2221/414

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 12-11-4, Interior (1) 12-11-4 to 29-8-4, Exterior(2E) 29-8-4 to 34-2-4, Interior (1) 34-2-4 to 36-6-12, Exterior (2E) 36-6-12 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
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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A1	Roof Special Girder	1	2	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
I66660823
LEE'S SUMMIT, MISSOURI
10/03/2024

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

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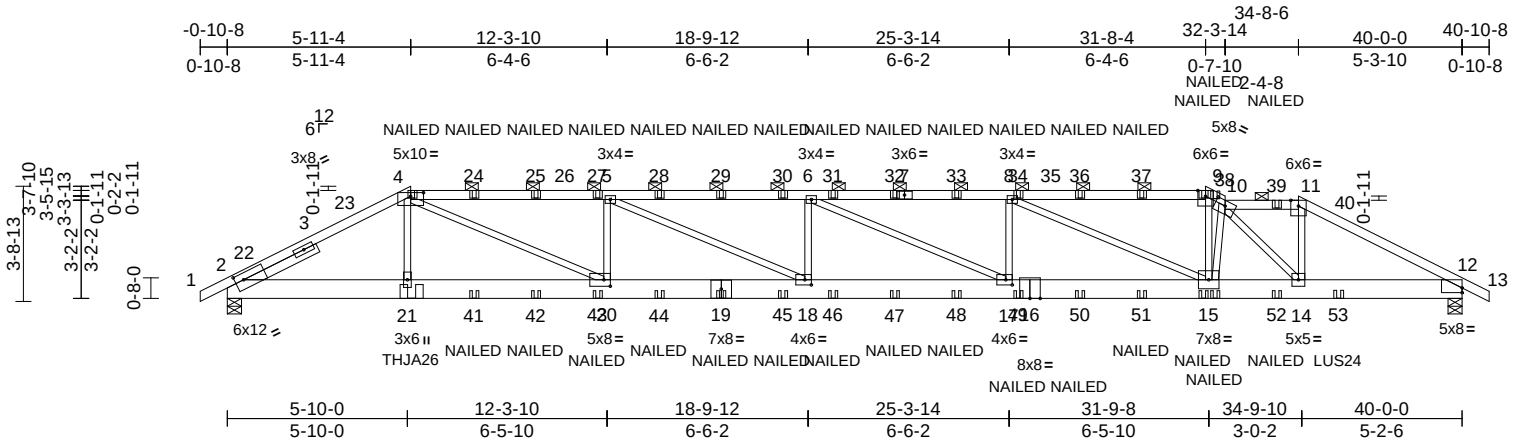

Scale = 1:74.6

Plate Offsets (X, Y): [2:0-3-5,0-2-8], [4:0-5-0,0-1-7], [10:0-4-0,0-2-0], [12:Edge,0-1-13], [17:0-2-8,0-2-0], [18:0-2-8,0-2-0], [20:0-2-8,0-2-8]

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	0.85	Vert(LL)	0.49	17-18	>974	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.83	17-18	>572	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.12	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 420 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-4,7-9:2x4 SP 1650F 1.5E, 4-7:2x4 SP 2400F 2.0E
BOT CHORD 2x8 SPF No.2 *Except* 19-16:2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-7-6

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-8-9 oc purlins, except 2-0-0 oc purlins (3-7-13 max.): 4-9, 10-11.
BOT CHORD Rigid ceiling directly applied or 9-10-6 oc bracing.

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=63 (LC 12)
Max Uplift 2=-1042 (LC 9), 12=-1057 (LC 13)
Max Grav 2=3542 (LC 1), 12=3685 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/16, 2-4=-6670/2116, 4-5=-10120/3309, 5-6=-11745/3819, 6-8=-10952/3527, 8-9=-7731/2482, 9-10=-8754/2761, 10-11=-5773/1854, 11-12=-6797/2104, 12-13=0/16
BOT CHORD 2-21=-1840/5830, 20-21=-1841/5816, 18-20=-3263/10114, 17-18=-3777/11745, 15-17=-3485/10952, 14-15=-2490/8128, 12-14=-1754/5879
WEBS 4-21=-7/518, 9-15=-851/3376, 11-14=-880/2901, 4-20=-1617/4848, 8-15=-3612/1217, 5-20=-1838/858, 5-18=-587/1832, 6-18=-533/410, 6-17=-927/323, 8-17=0/724, 10-15=-1513/489, 10-14=-3531/1167

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 0-9-0 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 10-11-4, Interior (1) 10-11-4 to 31-8-4, Exterior(2E) 31-8-4 to 32-3-14, Interior (1) 32-3-14 to 34-8-6, Exterior (2R) 34-8-6 to 39-9-4, Interior (1) 39-9-4 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) 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 SPF No.2 crushing capacity of 425 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1042 lb uplift at joint 2 and 1057 lb uplift at joint 12.
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 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.
12) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent at 36-0-0 from the left end to connect truss(es) to front face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

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, 4-9=-70, 9-10=-70, 10-11=-70, 11-13=-70, 2-12=-20
Concentrated Loads (lb)

July 5,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A1	Roof Special Girder	1	**2**	Job Reference (optional) I66660823

Vert: 4=-131 (F), 19=-39 (F), 21=-420 (F), 15=-77 (F), 9=-131 (F), 24=-131 (F), 25=-131 (F), 27=-131 (F), 28=-131 (F), 29=-131 (F), 30=-131 (F), 31=-131 (F), 32=-131 (F), 33=-131 (F), 34=-131 (F), 36=-131 (F), 37=-131 (F), 38=-128 (F), 39=-128 (F), 41=-39 (F), 42=-39 (F), 43=-39 (F), 44=-39 (F), 45=-39 (F), 46=-39 (F), 47=-39 (F), 48=-39 (F), 49=-39 (F), 50=-39 (F), 51=-39 (F), 52=-38 (F), 53=-423 (F)

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660824
P240941-01	B7	Hip	1	1	Job Reference (optional)	

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

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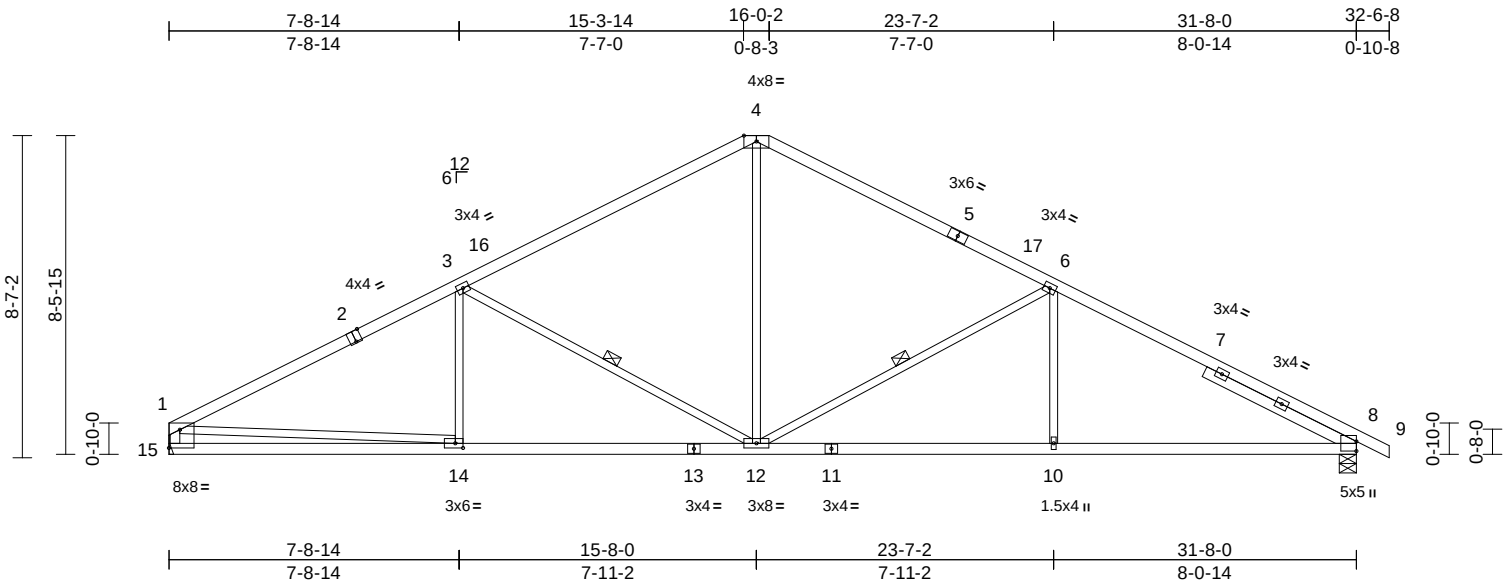

Scale = 1:61.4

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

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	0.99	Vert(LL)	-0.12	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.26	12-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.08	8	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* 4-5:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 15-1:2x4 SP No.2
SLIDER	Right 2x4 SP No.2 -- 4-5-11

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 9-11-9 oc bracing.
WEBS	1 Row at midpt 3-12, 6-12

REACTIONS (size) 8=0-5-8, 15= Mechanical
Max Horiz 15=-163 (LC 17)
Max Uplift 8=-239 (LC 13), 15=-212 (LC 12)
Max Grav 8=1481 (LC 1), 15=1418 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-2309/355, 3-4=-1671/344, 4-6=-1667/340, 6-8=-2407/362, 8-9=0/6, 1-15=-1341/255
BOT CHORD	14-15=-230/480, 12-14=-342/1971, 10-12=-224/2033, 8-10=-224/2033
WEBS	3-14=0/244, 3-12=-731/291, 6-12=-794/305, 6-10=0/336, 1-14=-159/1509, 4-12=-100/859

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) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 16-0-0, Exterior(2R) 16-0-0 to 23-0-14, Interior (1) 23-0-14 to 32-10-8 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) 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 212 lb uplift at joint 15 and 239 lb uplift at joint 8.
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

July 5,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	B5	Hip	1	1	I66660825 Job Reference (optional)

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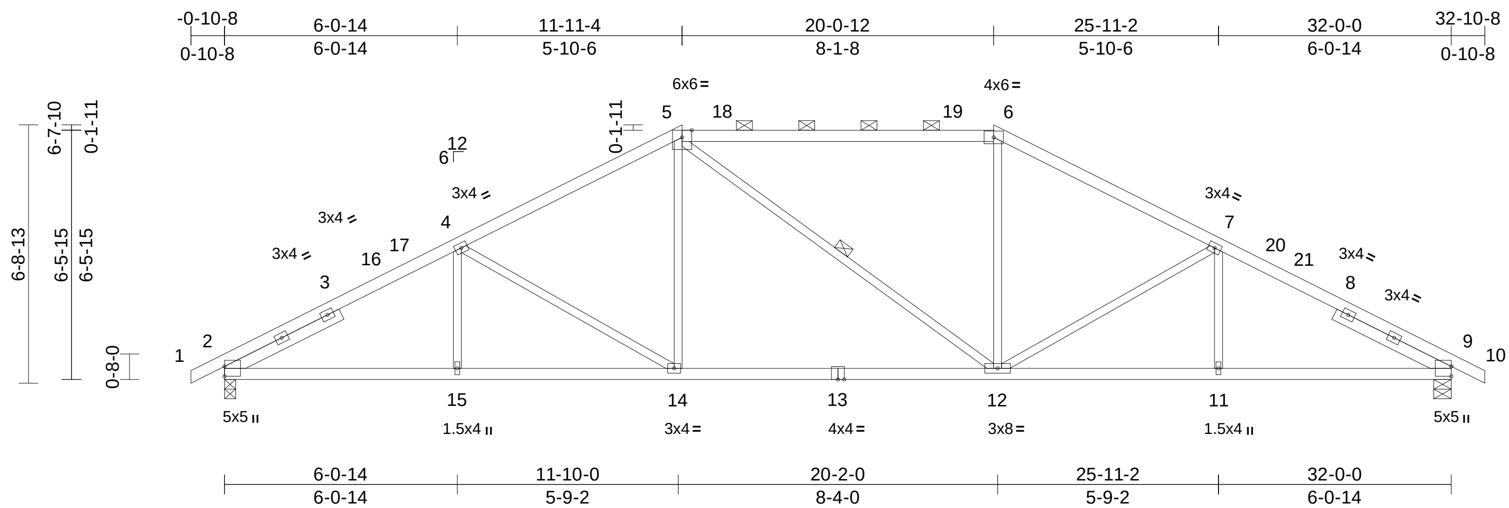


Scale = 1:60.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.15	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.34	12-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.11	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 146 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 5-6:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-4-5, Right 2x4 SP No.2 -- 3-4-5

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-15 oc purlins, except
2-0-0 oc purlins (4-4-9 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-12

REACTIONS (size) 2=0-3-8, 9=0-5-8
Max Horiz 2=-120 (LC 17)
Max Uplift 2=-207 (LC 12), 9=-207 (LC 13)
Max Grav 2=1501 (LC 1), 9=1501 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2501/426, 4-5=-2051/405, 5-6=-1763/409, 6-7=-2052/405, 7-9=-2501/426, 9-10=0/6
BOT CHORD 2-15=-301/2117, 14-15=-301/2117, 12-14=-172/1762, 11-12=-297/2116, 9-11=-297/2116
WEBS 4-15=0/217, 4-14=-424/217, 5-14=-21/430, 5-12=-191/193, 6-12=0/430, 7-12=-423/218, 7-11=0/216

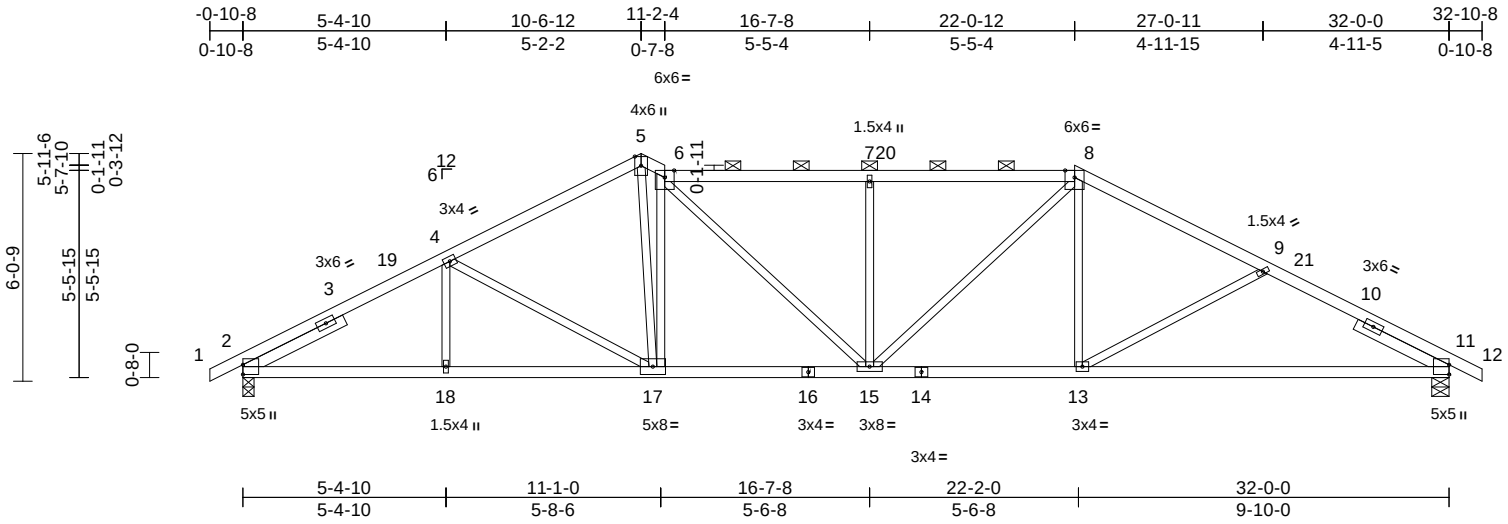
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 11-11-4, Exterior(2R) 11-11-4 to 19-0-2, Interior (1) 19-0-2 to 20-0-12, Exterior(2R) 20-0-12 to 27-1-10, Interior (1) 27-1-10 to 32-10-8 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) 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 207 lb uplift at joint 2 and 207 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	B4	Roof Special	1	1	Job Reference (optional) I66660826



Scale = 1:61.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.26	11-13	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.54	11-13	>708	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.11	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 151 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 -- 2-11-11, Right 2x4 SP No.2 -- 2-8-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-14 oc purlins, except 2-0-0 oc purlins (3-2-10 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-3-8, 11=0-5-8
Max Horiz 2=-108 (LC 13)
Max Uplift 2=-192 (LC 12), 11=-294 (LC 13)
Max Grav 2=1501 (LC 1), 11=1501 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2520/464, 4-5=-2117/444, 5-6=-2098/474, 6-7=-2253/514, 7-8=-2253/514, 8-9=-2208/440, 9-11=-2489/527, 11-12=0/6
BOT CHORD 2-18=-353/2123, 17-18=-353/2123, 15-17=-261/1992, 13-15=-224/1912, 11-13=-378/2095
WEBS 4-18=0/210, 4-17=-413/186, 5-17=-304/1549, 6-17=-1259/365, 6-15=-149/477, 7-15=-494/208, 8-15=-163/471, 8-13=0/367, 9-13=-221/200

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 10-6-12, Exterior(2E) 10-6-12 to 11-2-4, Interior (1) 11-2-4 to 22-0-12, Exterior(2R) 22-0-12 to 27-2-10, Interior (1) 27-2-10 to 32-10-8 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) 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 192 lb uplift at joint 2 and 294 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	B3	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I66660827
10/03/2024

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

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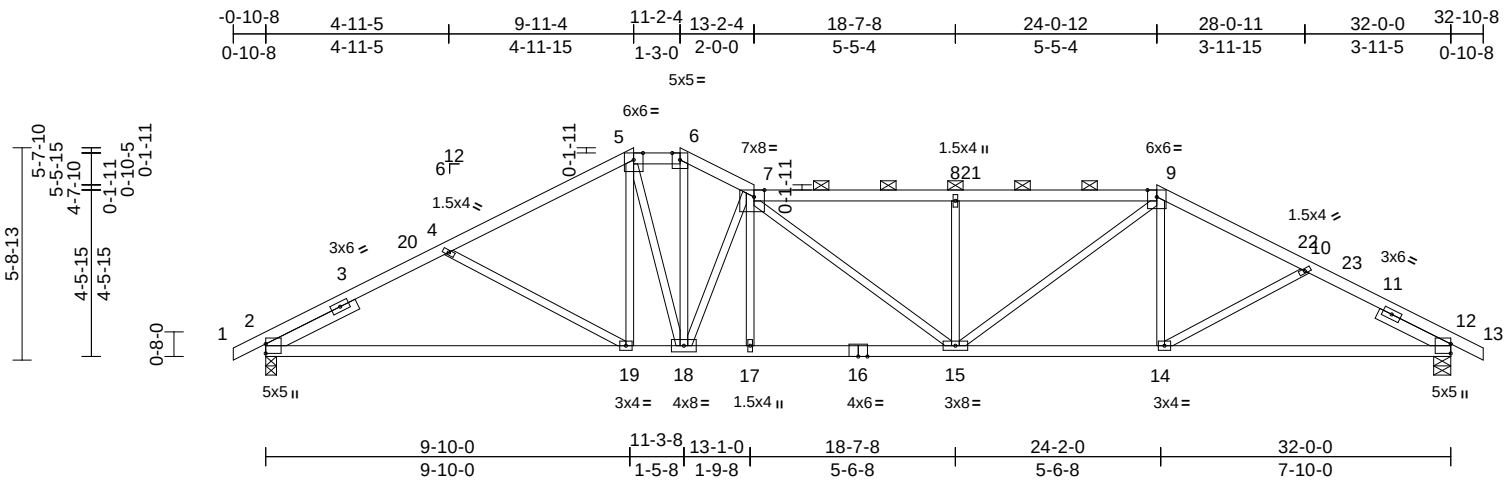

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Plate Offsets (X, Y): [7:0-3-6,Edge]

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	0.68	Vert(LL)	-0.24	2-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.50	2-19	>761	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.11	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 154 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 -- 2-8-10, Right 2x4 SP No.2 -- 2-1-15

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-15 oc purlins, except 2-0-0 oc purlins (2-11-10 max.): 5-6, 7-9.
BOT CHORD Rigid ceiling directly applied or 1-4-12 oc bracing.

REACTIONS (size) 2=0-3-8, 12=0-5-8
Max Horiz 2=-101 (LC 17)
Max Uplift 2=-185 (LC 12), 12=-292 (LC 13)
Max Grav 2=1501 (LC 1), 12=1501 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2493/525, 4-5=-2211/446, 5-6=-1997/479, 6-7=-2288/529, 7-8=-2719/583, 8-9=-2719/584, 9-10=-2320/464, 10-12=-2483/508, 12-13=0/6
BOT CHORD 2-19=-408/2098, 18-19=-248/1912, 17-18=-390/2627, 15-17=-392/2625, 14-15=-277/2047, 12-14=-370/2077
WEBS 5-19=0/509, 5-18=-216/453, 6-18=-233/943, 7-18=-1504/310, 7-17=0/214, 7-15=-105/234, 8-15=-492/208, 9-15=-185/852, 9-14=0/259, 4-19=-277/225, 10-14=-68/144

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(2E) 9-11-4 to 13-2-4, Interior (1) 13-2-4 to 24-0-12, Exterior(2R) 24-0-12 to 29-0-12, Interior (1) 29-0-12 to 32-10-8 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) 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 185 lb uplift at joint 2 and 292 lb uplift at joint 12.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

July 5,2024

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
I66660828
10/03/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	B2	Roof Special Girder	1	2	Job Reference (optional)

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

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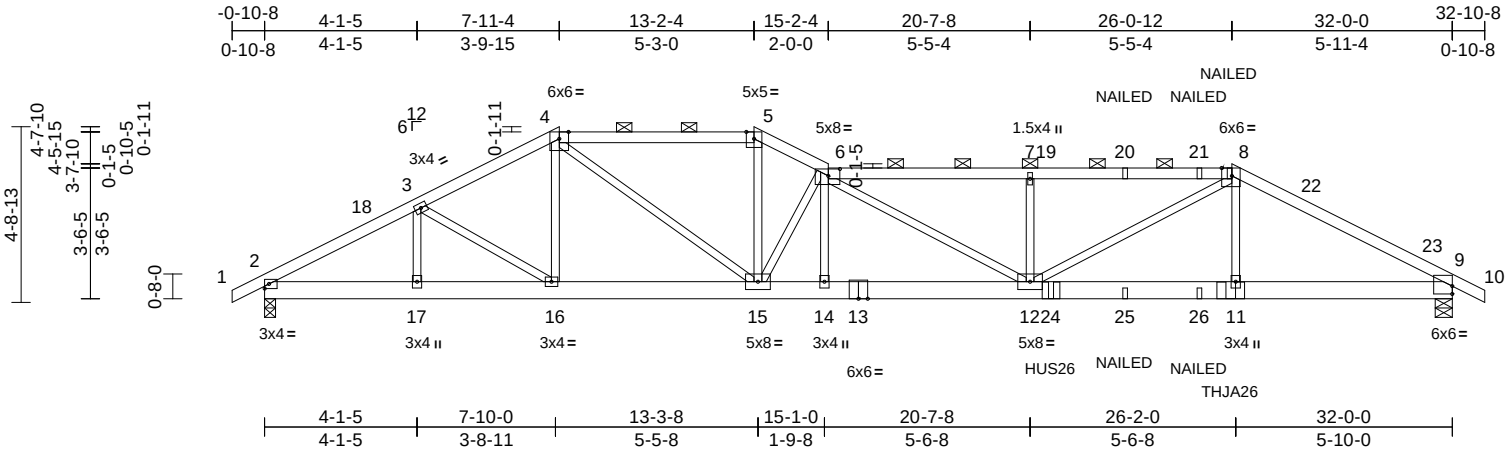

Scale = 1:62.1

Plate Offsets (X, Y): [6:0-3-12,0-2-4], [8:0-3-5,Edge], [9:Edge,0-2-9]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.23	11-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.41	11-12	>932	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.53	Horz(CT)	0.08	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 294 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-8, 9=0-5-8
Max Horiz 2=-82 (LC 17)
Max Uplift 2=-412 (LC 12), 9=-908 (LC 13)
Max Grav 2=2189 (LC 1), 9=3238 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-3841/987, 3-4=-3746/1023, 4-5=-4809/1343, 5-6=-5434/1487, 6-7=-7900/2256, 7-8=-7900/2256, 8-9=-6146/1772, 9-10=0/11
BOT CHORD 2-17=-810/3250, 16-17=-810/3250, 15-16=-787/3319, 14-15=-1692/6705, 12-14=-1695/6709, 11-12=-1451/5251, 9-11=-1454/5277
WEBS 4-16=-36/208, 4-15=-559/1970, 5-15=-519/2104, 6-15=-3615/1017, 6-14=-101/71, 6-12=-602/1467, 7-12=-663/322, 8-12=-786/3070, 8-11=-106/792, 3-16=-118/263, 3-17=-8/94

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: 2x6 - 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) -0-10-8 to 4-1-5, Interior (1) 4-1-5 to 7-11-4, Exterior(2E) 7-11-4 to 15-2-4, Interior (1) 15-2-4 to 26-0-12, Exterior(2R) 26-0-12 to 31-0-12, Interior (1) 31-0-12 to 32-10-8 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) 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 SPF No.2 crushing capacity of 425 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 412 lb uplift at joint 2 and 908 lb uplift at joint 9.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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 HUS26 (14-16d Girder, 4-16d Truss) or equivalent at 21-2-4 from the left end to connect truss(es) to front face of bottom chord.
12) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Right Hand Hip) or equivalent at 26-0-6 from the left end to connect truss(es) to front 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: 1-4=-70, 4-5=-70, 5-6=-70, 6-8=-70, 8-10=-70, 2-9=-20
Concentrated Loads (lb)
Vert: 8=-131 (F), 11=-426 (F), 20=-131 (F), 21=-131 (F), 24=-1535 (F), 25=-39 (F), 26=-39 (F)

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660829
P240941-01	B8	Common	2	1	Job Reference (optional)	

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

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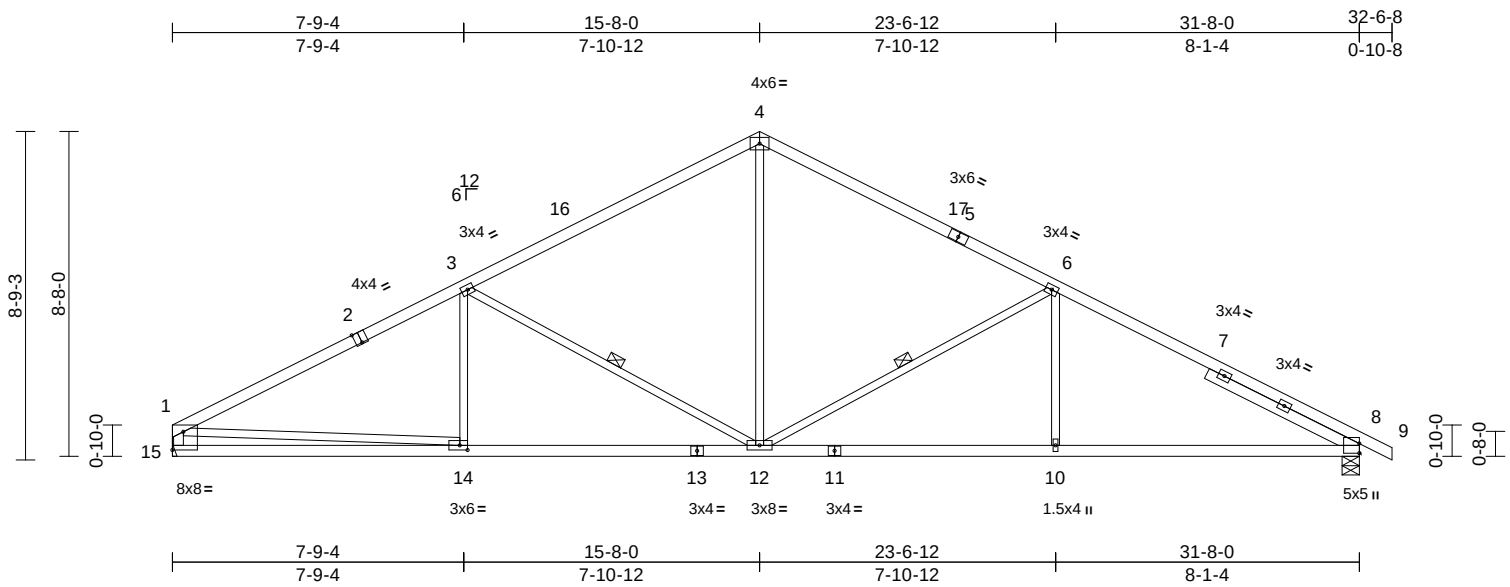

Scale = 1:61.5

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

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	0.96	Vert(LL)	-0.12	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.26	12-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.08	8	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* 4-5,1-2:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 15-1:2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 4-5-15

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-11-12 oc bracing.
WEBS 1 Row at midpt 6-12, 3-12

REACTIONS (size) 8=0-5-8, 15= Mechanical
Max Horiz 15=-163 (LC 13)
Max Uplift 8=-239 (LC 13), 15=-212 (LC 12)
Max Grav 8=1481 (LC 1), 15=1418 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-2308/379, 3-4=-1670/372, 4-6=-1666/368, 6-8=-2405/384, 8-9=0/6, 1-15=-1340/268
BOT CHORD 14-15=-232/485, 12-14=-340/1968, 10-12=-239/2031, 8-10=-239/2031
WEBS 4-12=-99/861, 6-12=-793/304, 6-10=0/336, 3-12=-729/290, 3-14=0/245, 1-14=-175/1499

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) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 16-0-0, Exterior(2R) 16-0-0 to 21-0-0, Interior (1) 21-0-0 to 32-10-8 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) Bearings are assumed to be: , Joint 8 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 212 lb uplift at joint 15 and 239 lb uplift at joint 8.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	B6	Hip	1	1	Job Reference (optional) I66660830

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:06:39 Page: 1
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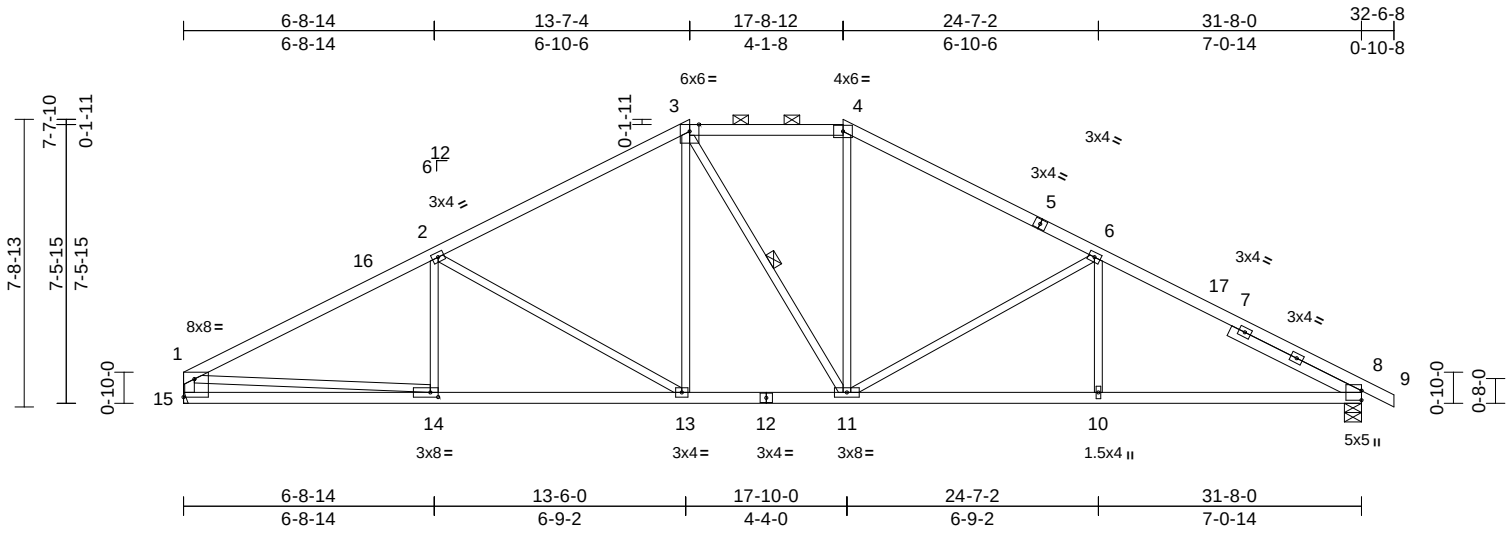

Scale = 1:61.9

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

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	0.75	Vert(LL)	-0.11	13-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.24	13-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.08	8	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* 4-5:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 15-1:2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 3-11-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-6-8 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-11

REACTIONS (size) 8=0-5-8, 15= Mechanical
Max Horiz 15=-142 (LC 13)
Max Uplift 8=-224 (LC 13), 15=-196 (LC 12)
Max Grav 8=1481 (LC 1), 15=1418 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2320/379, 2-3=-1825/374, 3-4=-1540/384, 4-6=-1835/375, 6-8=-2443/396, 8-9=0/6, 1-15=-1348/260
BOT CHORD 14-15=-188/398, 13-14=-309/1992, 11-13=-108/1526, 10-11=-263/2067, 8-10=-263/2067
WEBS 2-14=-16/188, 2-13=-561/241, 3-13=-58/390, 3-11=-170/213, 4-11=-42/393, 6-11=-624/255, 6-10=0/297, 1-14=-204/1611

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) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 13-11-4, Exterior(2E) 13-11-4 to 18-0-12, Exterior(2R) 18-0-12 to 24-11-2, Interior (1) 24-11-2 to 32-10-8 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) 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 196 lb uplift at joint 15 and 224 lb uplift at joint 8.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A10	Common	3	1	Job Reference (optional) I66660831

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:06:36 Page: 1
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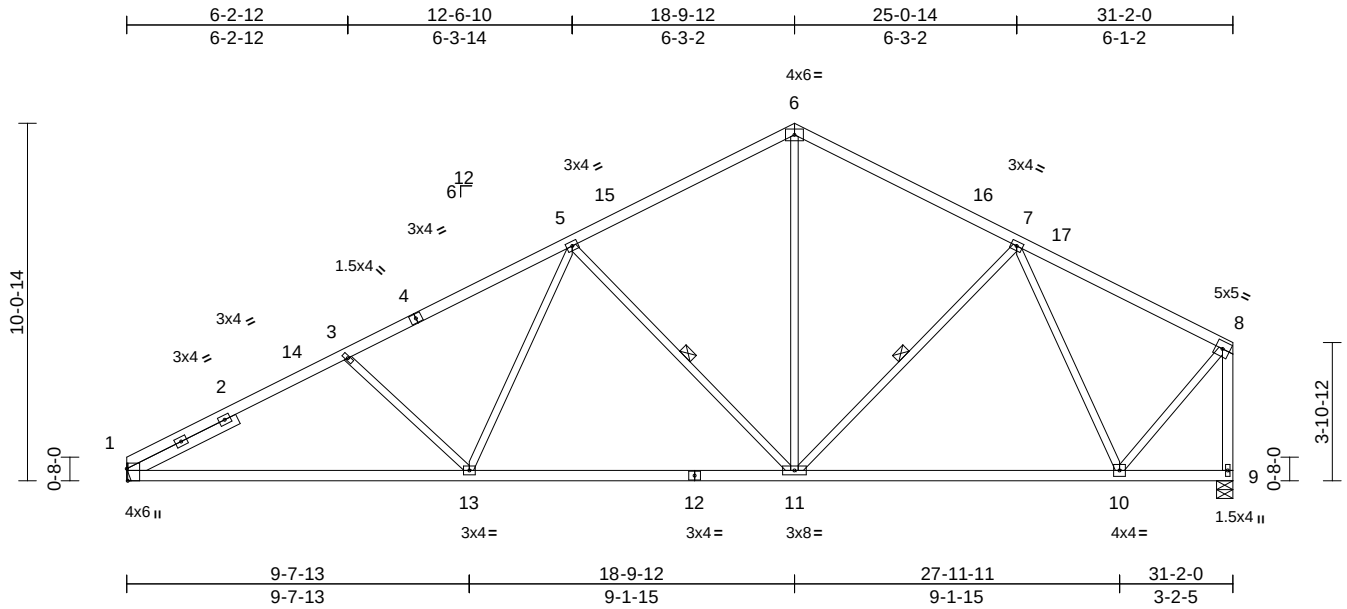

Scale = 1:64.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.22	1-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.45	1-13	>818	180		
BCLL	0.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.07	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 150 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 9-8:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-5-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 5-11, 7-11

REACTIONS (size) 1= Mechanical, 9=0-5-8
Max Horiz 1=247 (LC 9)
Max Uplift 1=-230 (LC 12), 9=-181 (LC 13)
Max Grav 1=1396 (LC 1), 9=1396 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-2383/423, 3-5=-2094/391, 5-6=-1323/357, 6-7=-1322/337, 7-8=-898/217, 8-9=-1395/234
BOT CHORD 1-13=-481/2019, 11-13=-367/1610, 10-11=-250/1042, 9-10=-69/75
WEBS 6-11=-129/697, 3-13=-329/241, 5-13=-53/483, 5-11=-779/311, 7-11=-94/211, 7-10=-771/230, 8-10=-140/1111

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 18-9-12, Exterior(2R) 18-9-12 to 23-9-12, Interior (1) 23-9-12 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) 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 230 lb uplift at joint 1.
7) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660832
P240941-01	A9	Common	1	1	Job Reference (optional)	

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

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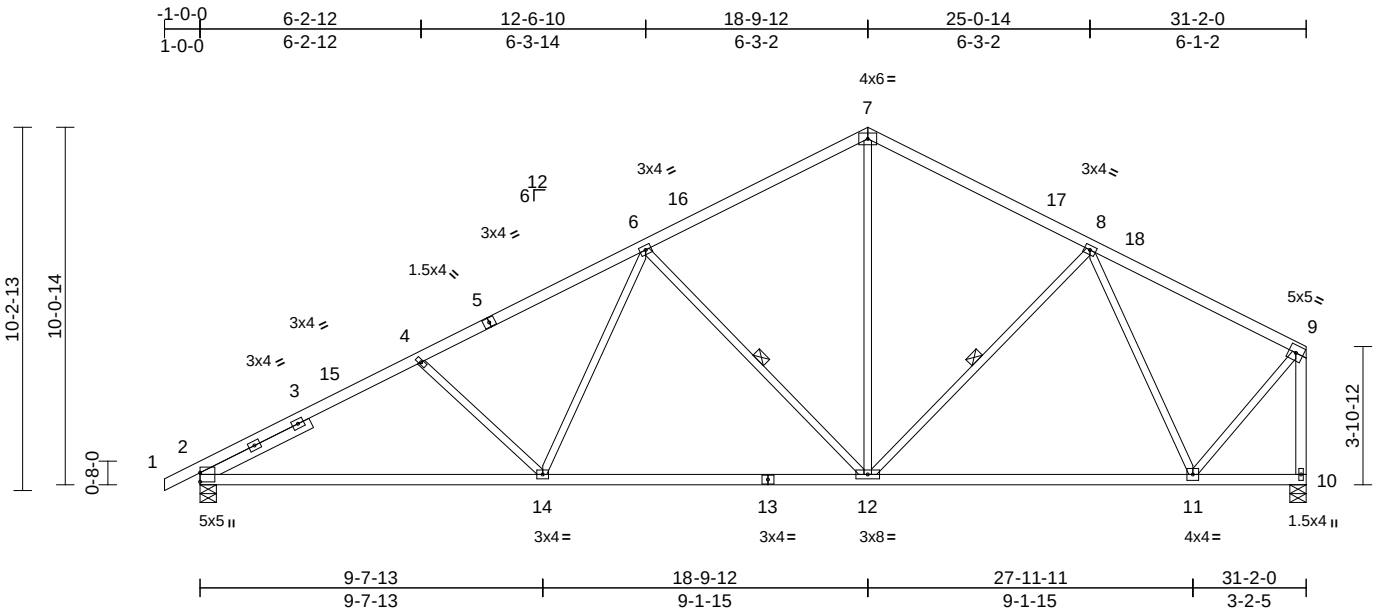

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.21	2-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.44	2-14	>839	180		
BCLL	0.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 151 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-5-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-12, 8-12

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=250 (LC 11)
Max Uplift 2=-255 (LC 12), 10=-181 (LC 13)
Max Grav 2=1467 (LC 1), 10=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/10, 2-4=-2375/419, 4-6=-2088/380, 6-7=-1321/354, 7-8=-1321/333, 8-9=-897/216, 9-10=-1393/234
BOT CHORD 2-14=-478/2011, 12-14=-366/1607, 11-12=-250/1041, 10-11=-69/75
WEBS 7-12=-127/696, 4-14=-324/238, 6-14=-51/481, 6-12=-776/311, 8-12=-94/210, 8-11=-771/230, 9-11=-139/1110

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) -1-0-0 to 4-0-0, Interior (1) 4-0-0 to 18-9-12, Exterior(2R) 18-9-12 to 23-9-12, Interior (1) 23-9-12 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) 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
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
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER
July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660833
P240941-01	A8	Common	2	1	Job Reference (optional)	

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

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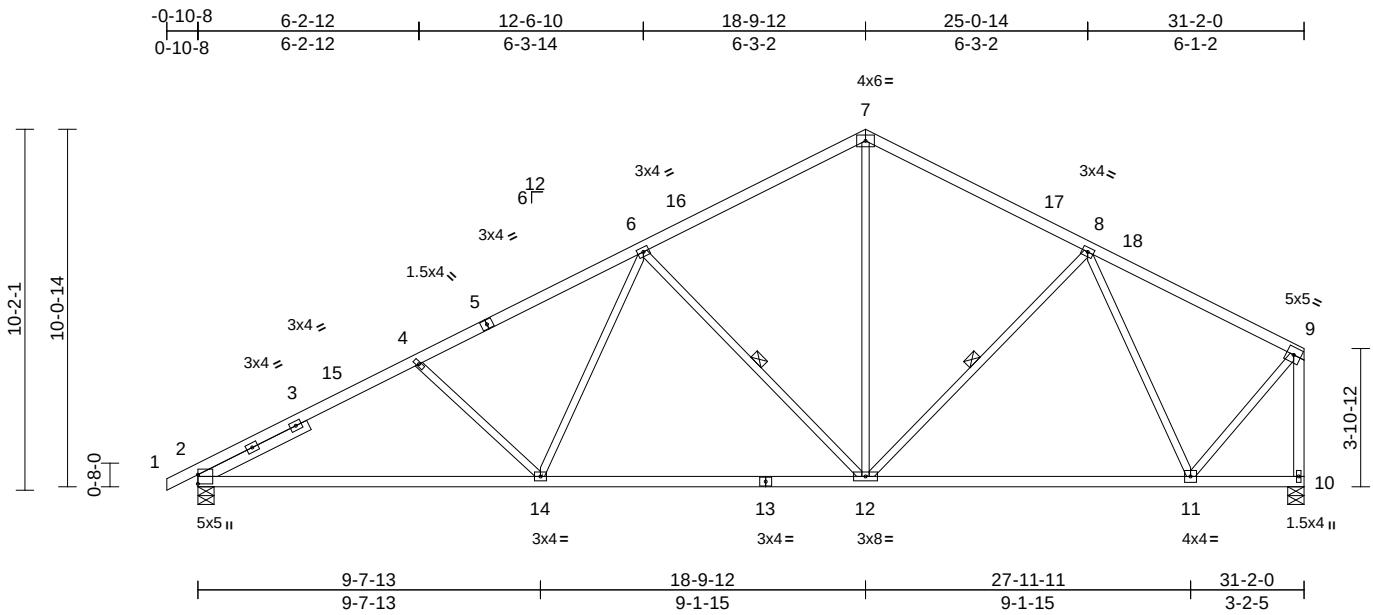

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.21	2-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.44	2-14	>838	180		
BCLL	0.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 151 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-5-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-12, 8-12

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=249 (LC 11)
Max Uplift 2=-252 (LC 12), 10=-181 (LC 13)
Max Grav 2=1458 (LC 1), 10=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2377/420, 4-6=-2089/382, 6-7=-1322/355, 7-8=-1321/334, 8-9=-897/216, 9-10=-1394/234
BOT CHORD 2-14=-479/2013, 12-14=-366/1607, 11-12=-250/1041, 10-11=-69/75
WEBS 7-12=-127/696, 4-14=-326/239, 6-14=-51/481, 6-12=-777/311, 8-12=-94/210, 8-11=-771/230, 9-11=-140/1110

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 18-9-12, Exterior(2R) 18-9-12 to 23-9-12, Interior (1) 23-9-12 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) 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660834
P240941-01	A7	Hip	1	1	Job Reference (optional)	

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

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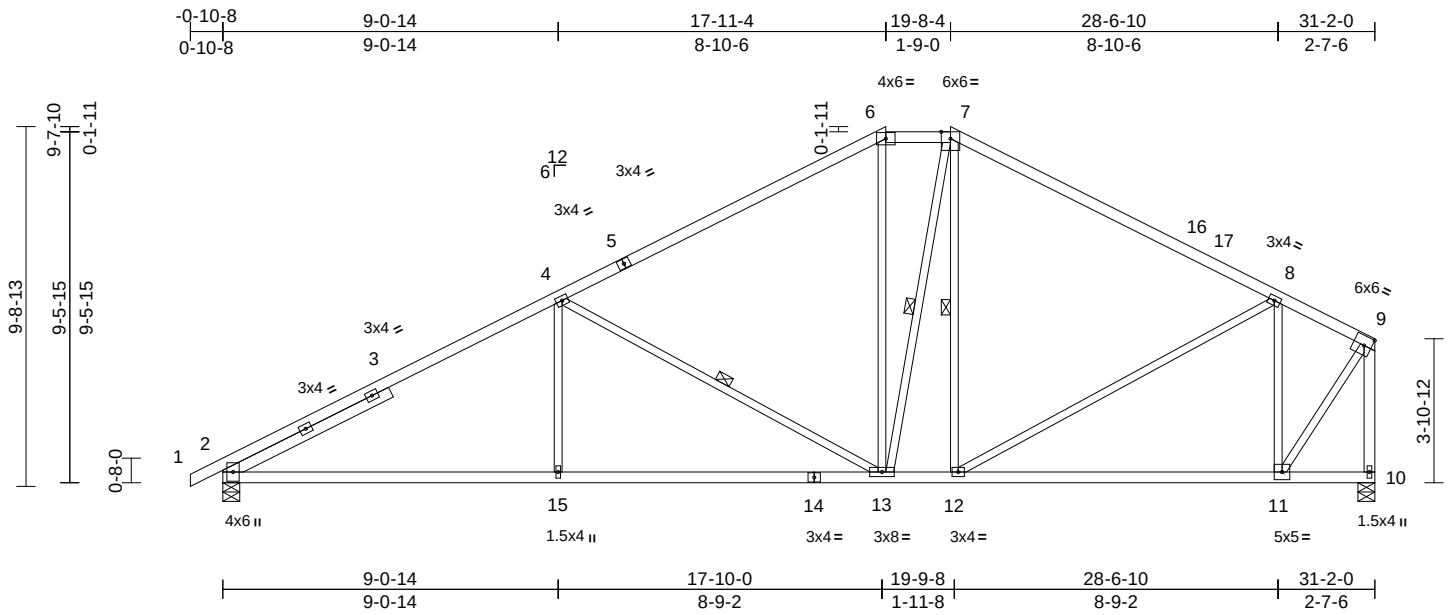

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Plate Offsets (X, Y): [2:0-3-9,0-1-5]

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	0.79	Vert(LL)	-0.16	2-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.34	2-15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 161 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 6-7:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 5-0-7

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-5-7 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 4-13, 7-12, 7-13

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=240 (LC 9)
Max Uplift 2=-248 (LC 12), 10=-174 (LC 13)
Max Grav 2=1458 (LC 1), 10=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2322/363, 4-6=-1463/332, 6-7=-1175/343, 7-8=-1397/312, 8-9=-803/193, 9-10=-1413/215
BOT CHORD 2-15=-428/1955, 13-15=-428/1955, 12-13=-210/1124, 11-12=-198/763, 10-11=-81/86
WEBS 4-15=0/392, 4-13=-906/338, 6-13=-80/360, 7-12=-94/91, 8-12=-39/449, 8-11=-989/326, 9-11=-265/1378, 7-13=-155/444

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 19-8-4, Exterior(2R) 19-8-4 to 26-9-2, Interior (1) 26-9-2 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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
10/03/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	
P240941-01	A6	Hip	1	1	Job Reference (optional)	I66660835

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

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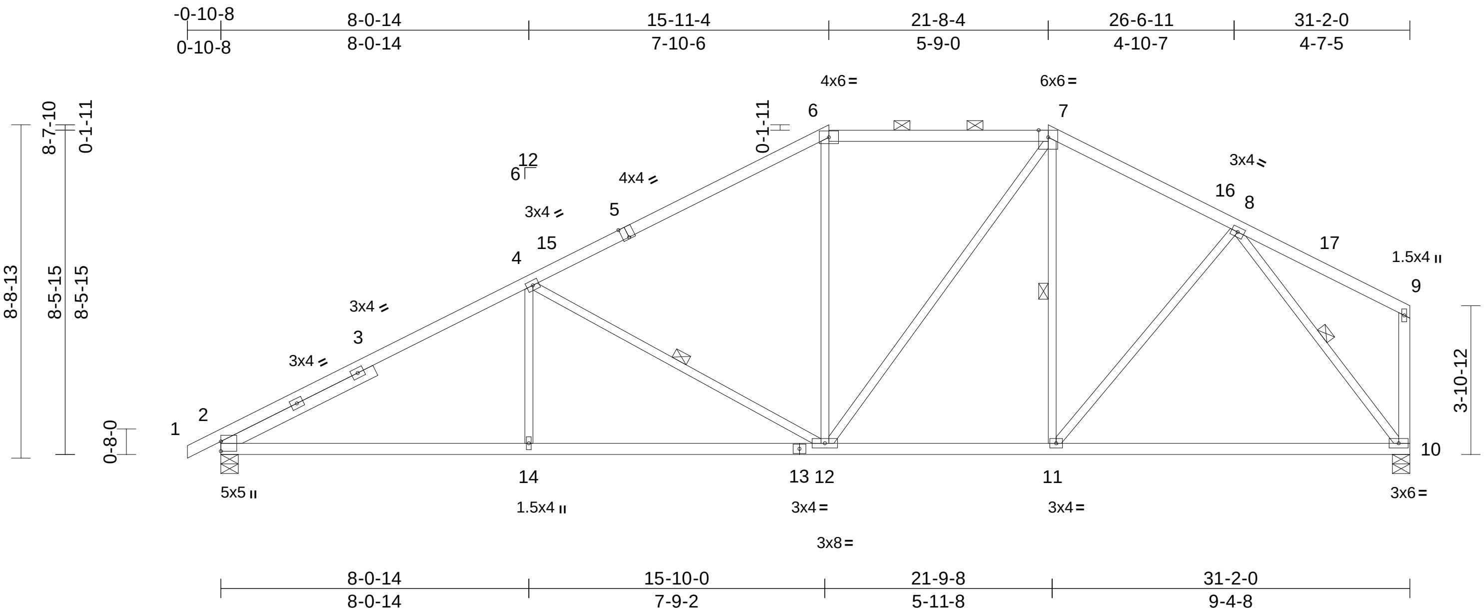

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Plate Offsets (X, Y): [5:0-2-0,Edge]

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	0.82	Vert(LL)	-0.21	10-11	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.43	10-11	>861	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.08	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 154 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 5-6:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 4-5-11

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-6 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 8-6-11 oc bracing.
WEBS 1 Row at midpt 4-12, 7-11, 8-10

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=228 (LC 9)
Max Uplift 2=-236 (LC 12), 10=-154 (LC 13)
Max Grav 2=1458 (LC 1), 10=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2362/370, 4-6=-1627/355, 6-7=-1339/360, 7-8=-1333/334, 8-9=-152/135, 9-10=-147/97
BOT CHORD 2-14=-465/1993, 12-14=-465/1993, 11-12=-225/1127, 10-11=-241/901
WEBS 4-14=0/348, 4-12=-759/296, 6-12=0/301, 7-11=-157/128, 8-10=-1451/324, 7-12=-145/457, 8-11=-31/427

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(2E) 15-11-4 to 21-8-4, Exterior(2R) 21-8-4 to 28-9-2, Interior (1) 28-9-2 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660836
P240941-01	A5	Hip	1	1	Job Reference (optional)	

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed JUL 03 11:06:36 Page: 1
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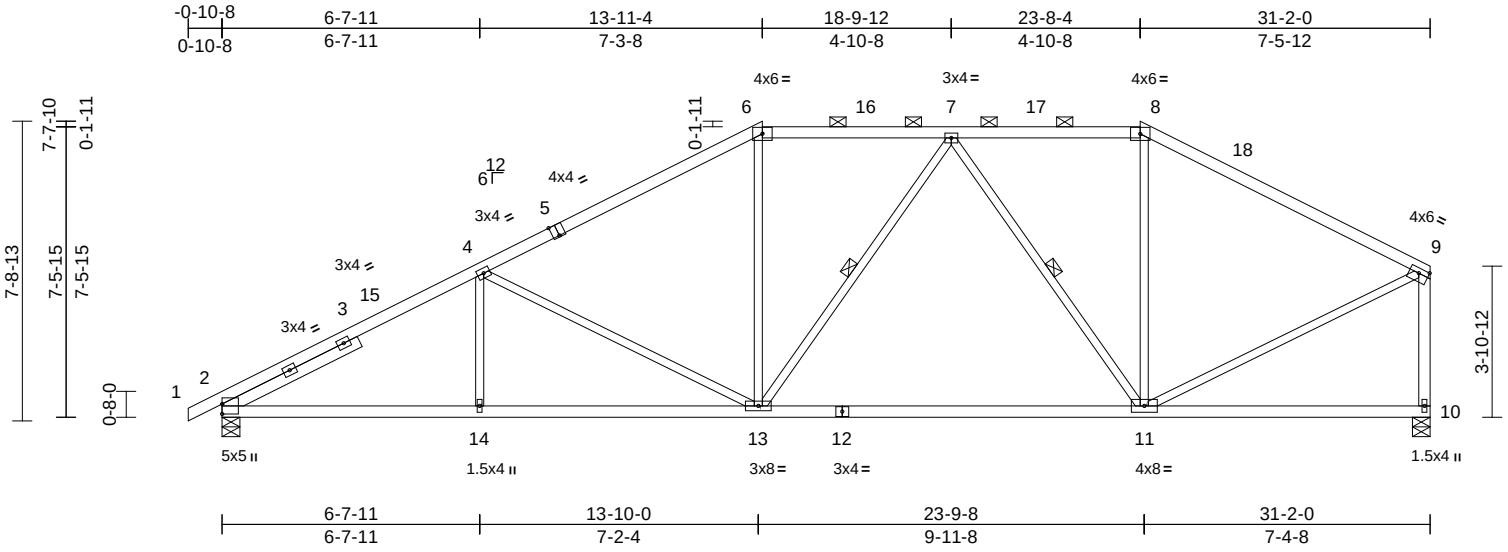


Scale = 1:59.4

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

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	0.74	Vert(LL)	-0.21	11-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.45	11-13	>836	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 150 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 6-8,1-5:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-11-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-6-11 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 8-2-11 oc bracing.
WEBS 1 Row at midpt 7-11, 7-13

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=214 (LC 9)
Max Uplift 2=-222 (LC 12), 10=-131 (LC 13)
Max Grav 2=1458 (LC 1), 10=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2417/384, 4-6=-1810/356, 6-7=-1515/358, 7-8=-1112/316, 8-9=-1351/289, 9-10=-1337/284
BOT CHORD 2-14=-498/2049, 13-14=-498/2049, 11-13=-324/1435, 10-11=-74/93
WEBS 4-14=0/260, 4-13=-605/271, 6-13=-7/391, 8-11=0/259, 9-11=-180/1185, 7-11=-653/179, 7-13=-72/200

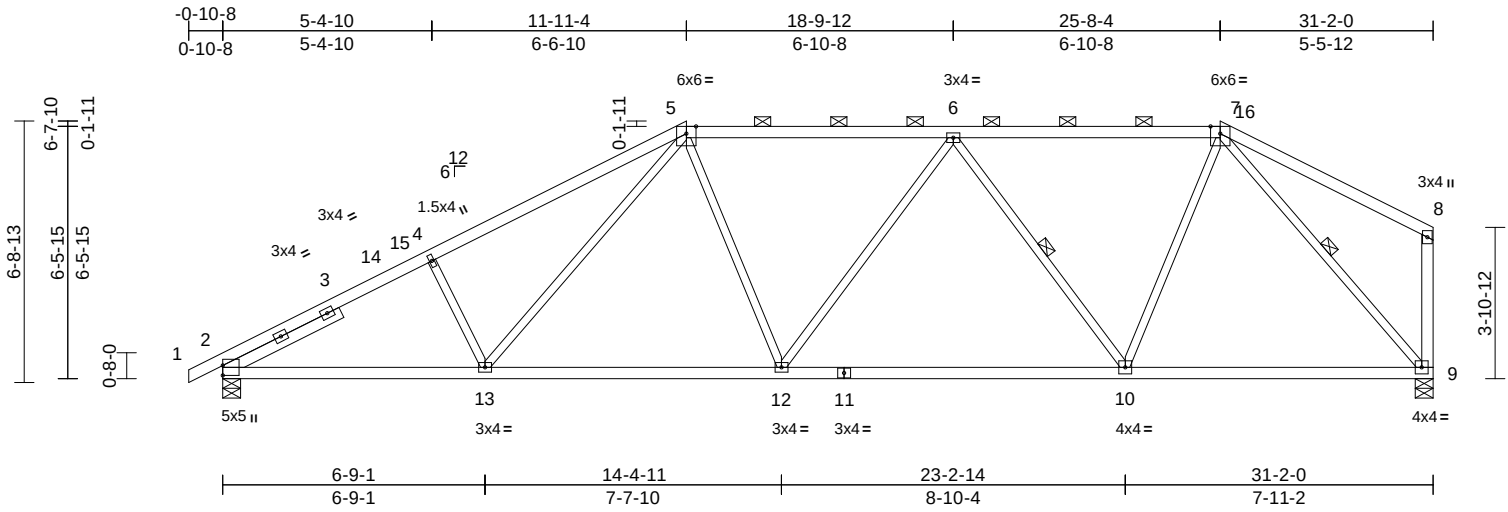
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-11-4, Exterior(2R) 13-11-4 to 21-0-2, Interior (1) 21-0-2 to 23-8-4, Exterior(2E) 23-8-4 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A4	Hip	1	1	Job Reference (optional) I66660837



Scale = 1:59.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.12	10-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.28	10-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.08	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 146 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 -- 3-4-6

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

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=200 (LC 11)
Max Uplift 2=-204 (LC 12), 9=-143 (LC 8)
Max Grav 2=1458 (LC 1), 9=1395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2447/396, 4-5=-2290/434, 5-6=-1718/357, 6-7=-1296/298, 7-8=-159/173, 8-9=-195/148
BOT CHORD 2-13=-521/2077, 12-13=-365/1654, 10-12=-371/1706, 9-10=-241/999
WEBS 4-13=-267/243, 5-13=-168/491, 5-12=-37/298, 6-12=-133/178, 6-10=-746/228, 7-10=-80/843, 7-9=-1487/282

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 18-9-12, Interior (1) 18-9-12 to 25-8-4, Exterior(2E) 25-8-4 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660838
P240941-01	A12	Half Hip	1	1	Job Reference (optional)	

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

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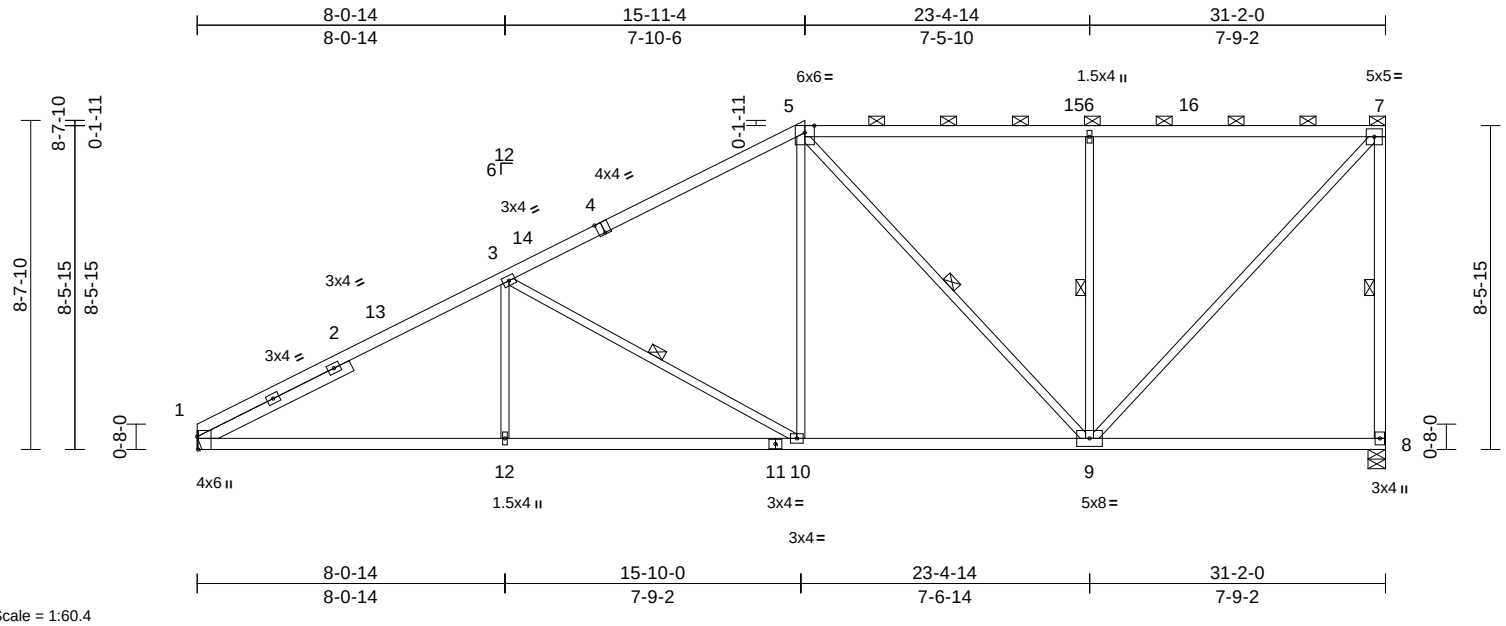

Scale = 1:60.4

Plate Offsets (X, Y): [1:0-4-1,Edge], [4:0-2-0,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	0.98	Vert(LL)	-0.11	1-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.26	1-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 155 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-5:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-8:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 4-5-11

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 7-4-12 oc bracing.
WEBS 1 Row at midpt 7-8, 3-10, 5-9, 6-9

REACTIONS (size) 1= Mechanical, 8=0-5-8
Max Horiz 1=364 (LC 9)
Max Uplift 1=-211 (LC 12), 8=-283 (LC 9)
Max Grav 1=1396 (LC 1), 8=1396 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-2365/372, 3-5=-1633/347, 5-6=-1044/321, 6-7=-1041/319, 7-8=-1328/314
BOT CHORD 1-12=-624/1997, 10-12=-624/1997, 9-10=-433/1341, 8-9=-150/173
WEBS 3-12=0/339, 3-10=-747/302, 5-10=-58/533, 5-9=-447/167, 6-9=-625/287, 7-9=-307/1506

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 31-0-4 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 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 211 lb uplift at joint 1.
8) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A13	Half Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I66660839
10/03/2024

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:06:37 Page: 1
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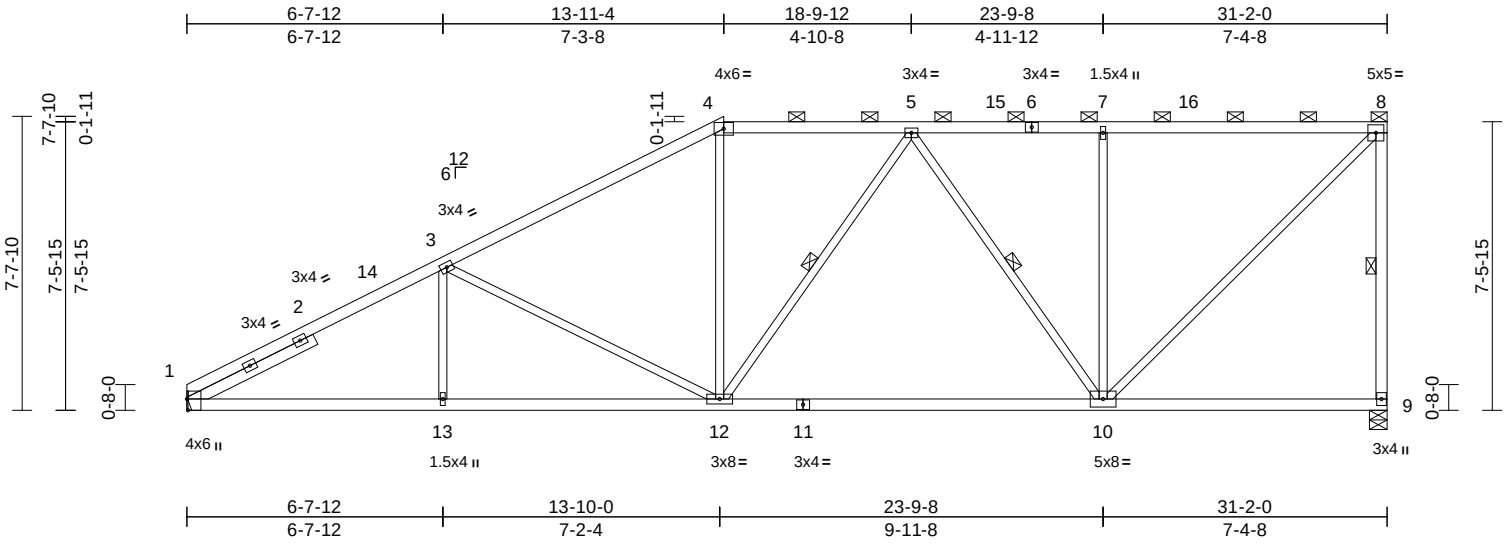

Scale = 1:59.8

Plate Offsets (X, Y): [1:0-3-8,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	0.92	Vert(LL)	-0.21	10-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.46	10-12	>814	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.07	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 153 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* 8-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-8-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-15 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 4-8.
BOT CHORD Rigid ceiling directly applied or 7-4-3 oc bracing.
WEBS 1 Row at midpt 8-9, 5-12, 5-10

REACTIONS (size) 1= Mechanical, 9=0-5-8
Max Horiz 1=320 (LC 9)
Max Uplift 1=-197 (LC 12), 9=-289 (LC 9)
Max Grav 1=1396 (LC 1), 9=1396 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-2426/387, 3-4=-1813/350, 4-5=-1518/352, 5-7=-1136/301, 7-8=-1136/301, 8-9=-1338/314
BOT CHORD 1-13=-627/2059, 12-13=-627/2059, 10-12=-401/1433, 9-10=-132/152
WEBS 4-12=-7/390, 3-13=0/262, 3-12=-604/276, 5-12=-74/216, 5-10=-523/168, 7-10=-497/232, 8-10=-309/1577

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 31-0-4 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 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 197 lb uplift at joint 1.
8) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER
July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A14	Half Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I66660840
10/03/2024

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

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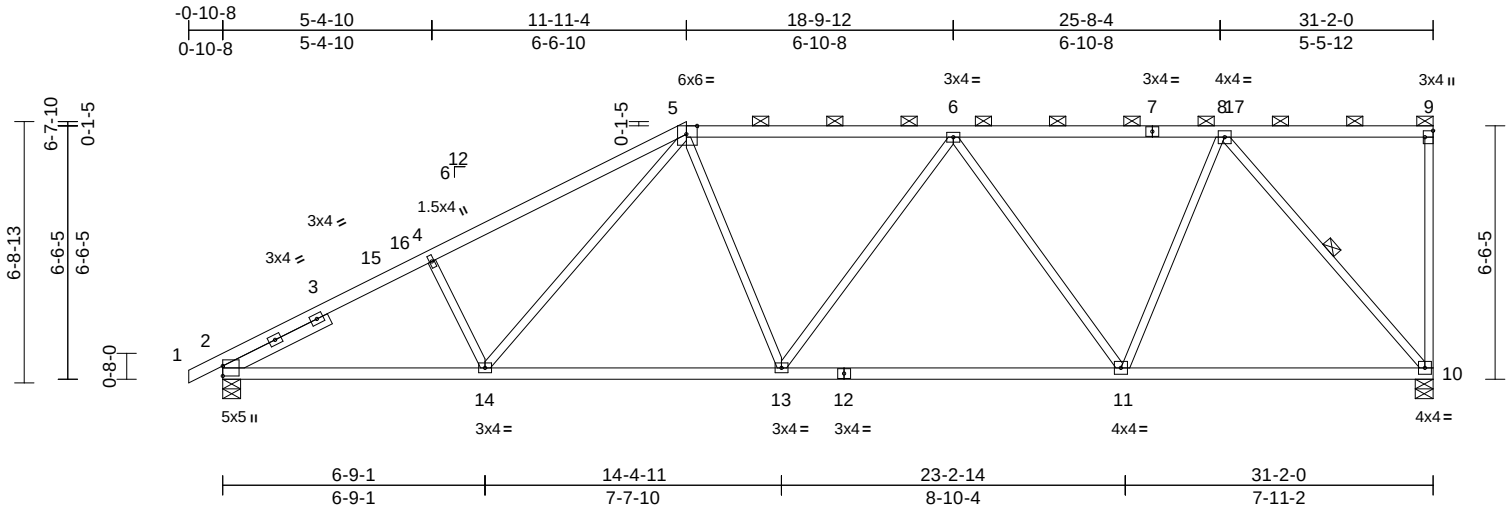

Scale = 1:59.3

Plate Offsets (X, Y): [5:0-3-5,Edge], [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	0.73	Vert(LL)	-0.11	11-13	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.27	11-13	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.08	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 144 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
SLIDER Left 2x4 SP No.2 -- 3-0-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-12 oc purlins, except end verticals, and 2-0-0 oc purlins (3-5-4 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 7-5-4 oc bracing.
WEBS 1 Row at midpt 8-10

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=278 (LC 9)
Max Uplift 2=-202 (LC 12), 10=-294 (LC 9)
Max Grav 2=1460 (LC 1), 10=1397 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2463/391, 4-5=-2291/429, 5-6=-1715/351, 6-8=-1319/293, 8-9=-133/138, 9-10=-145/74
BOT CHORD 2-14=-622/2078, 13-14=-461/1655, 11-13=-425/1700, 10-11=-285/1021
WEBS 4-14=-265/244, 5-14=-169/486, 5-13=-42/292, 6-13=-128/183, 6-11=-663/207, 8-11=-56/785, 8-10=-1561/354

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 18-9-12, Interior (1) 18-9-12 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 2. This connection is for uplift only and does not consider lateral forces.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER
July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660841
P240941-01	A15	Half Hip	1	1	Job Reference (optional)	

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed JUL 03 11:06:37 Page: 1
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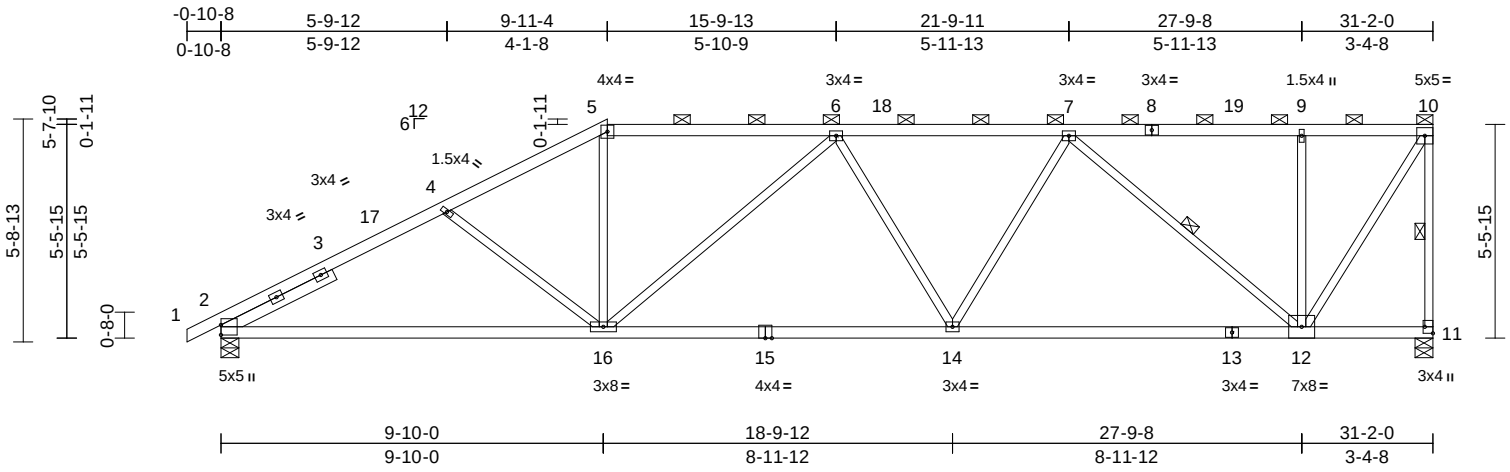

Scale = 1:59.2

Plate Offsets (X, Y): [11: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	0.52	Vert(LL)	-0.23	2-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.49	2-16	>765	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.09	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 144 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 -- 3-2-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-11 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-6 max.): 5-10.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 10-11, 7-12

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=232 (LC 9)
Max Uplift 2=-182 (LC 12), 11=-297 (LC 9)
Max Grav 2=1460 (LC 1), 11=1397 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2370/405, 4-5=-2109/364, 5-6=-1834/349, 6-7=-1996/365, 7-9=-834/214, 9-10=-834/214, 10-11=-1392/288
BOT CHORD 2-16=-575/2002, 14-16=-502/2116, 12-14=-437/1772, 11-12=-106/115
WEBS 5-16=-37/568, 4-16=-201/215, 6-16=-498/214, 6-14=-242/142, 7-14=-19/449, 7-12=-1243/295, 9-12=-362/174, 10-12=-314/1563

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) 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11 and 2. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A16	Half Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
I66660842
LEE'S SUMMIT, MISSOURI
10/03/2024

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed JU 03 11:06:37 Page: 1
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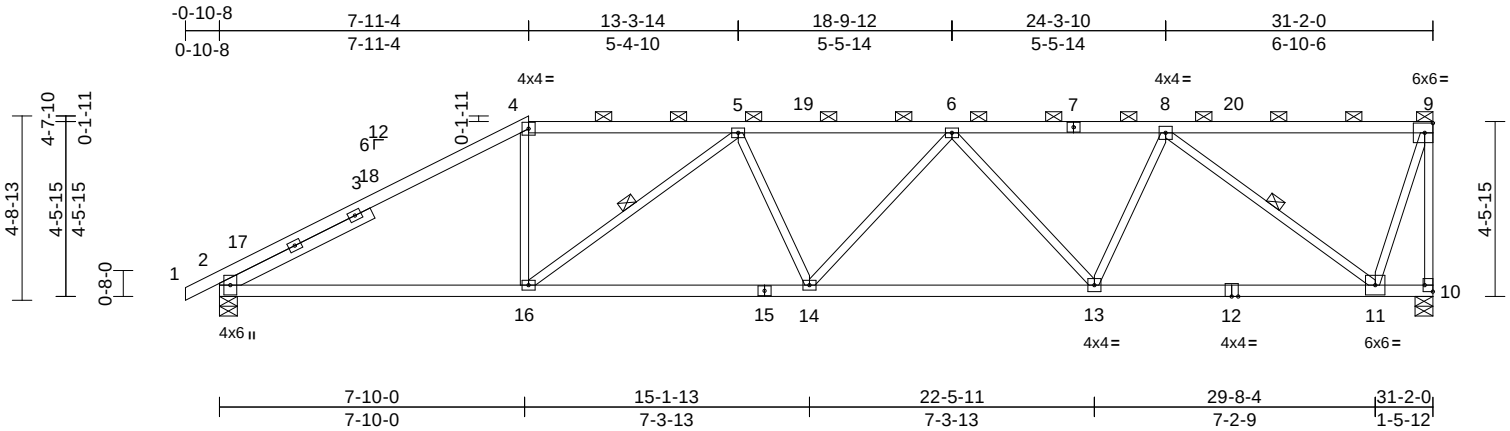

Scale = 1:59.2

Plate Offsets (X, Y): [2:0-3-9,0-1-5], [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	0.87	Vert(LL)	-0.15	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.31	13-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.11	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 139 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 -- 4-4-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-1 oc purlins, except end verticals, and 2-0-0 oc purlins (3-3-12 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 7-7-10 oc bracing.
WEBS 1 Row at midpt 5-16, 8-11

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=188 (LC 9)
Max Uplift 2=-183 (LC 9), 10=-300 (LC 9)
Max Grav 2=1460 (LC 1), 10=1397 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-2359/368, 4-5=-1971/369, 5-6=-2577/488, 6-8=-2084/415, 8-9=-412/133, 9-10=-1400/256
BOT CHORD 2-16=-437/1984, 14-16=-591/2564, 13-14=-582/2483, 11-13=-446/1818, 10-11=-78/91
WEBS 4-16=-63/682, 5-16=-868/267, 5-14=0/154, 6-14=0/188, 6-13=-607/178, 8-13=-49/666, 8-11=-1784/437, 9-11=-173/1257

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 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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 2. This connection is for uplift only and does not consider lateral forces.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A17	Half Hip Girder	1	2	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
I66660843
LEE'S SUMMIT, MISSOURI
10/03/2024

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed JUL 03 11:06:38 Page: 1
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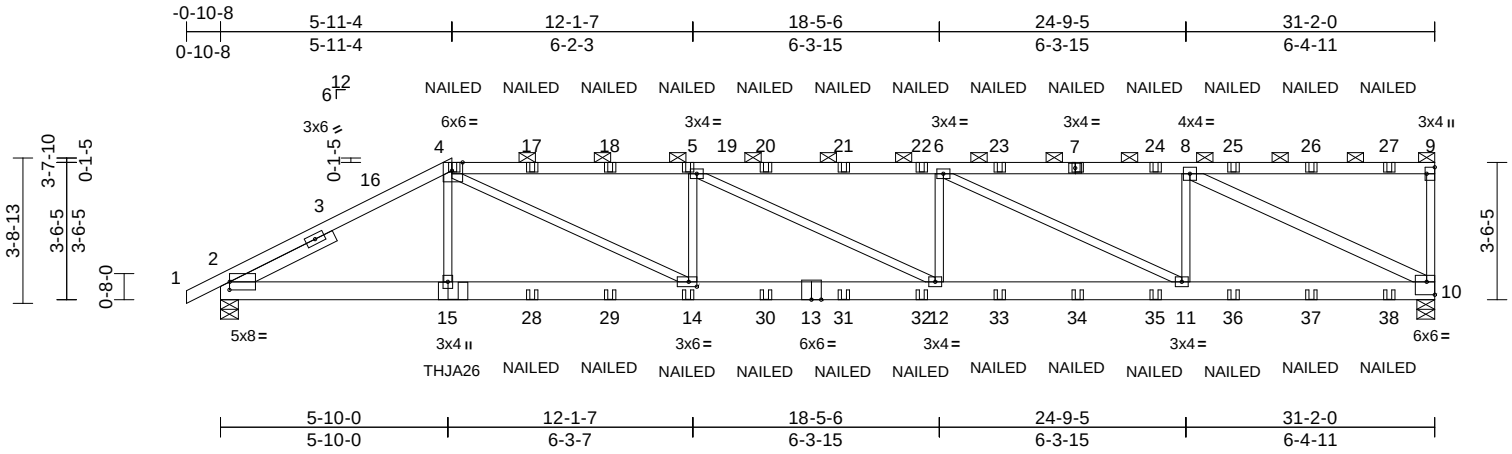

Scale = 1:59.1

Plate Offsets (X, Y): [2:0-0-1,0-2-8], [4:0-3-5,Edge], [9:Edge,0-2-8], [10:Edge,0-4-0], [14:0-2-8,0-1-8]

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	0.84	Vert(LL)	0.24	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.41	12-14	>911	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.94	Horz(CT)	0.08	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 294 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 7-9:2x4 SP No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-10:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-11-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-13 oc purlins, except end verticals, and 2-0-0 oc purlins (4-9-13 max.): 4-9.
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=143 (LC 9)
Max Uplift 2=-783 (LC 12), 10=-906 (LC 9)
Max Grav 2=2714 (LC 1), 10=2728 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-4=-4899/1532, 4-5=-6650/2194, 5-6=-6649/2189, 6-8=-4547/1517, 8-9=-86/92, 9-10=-357/213
BOT CHORD 2-15=-1448/4222, 14-15=-1447/4206, 12-14=-2248/6646, 11-12=-2242/6649, 10-11=-1538/4547
WEBS 4-15=-18/546, 4-14=-970/2817, 8-10=-5021/1658, 5-14=-1016/592, 5-12=-24/68, 6-12=0/464, 6-11=-2348/786, 8-11=-172/1307

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) 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 SPF No.2 crushing capacity of 425 psi.
8) Two H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 2. This connection is for uplift only and does not consider lateral forces.
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 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.
12) Fill all nail holes where hanger is in contact with lumber.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

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, 4-9=-70, 2-10=-20
Concentrated Loads (lb)
Vert: 4=-131 (B), 7=-131 (B), 15=-420 (B), 14=-39 (B), 5=-131 (B), 17=-131 (B), 18=-131 (B), 20=-131 (B), 21=-131 (B), 22=-131 (B), 23=-131 (B), 24=-131 (B), 25=-131 (B), 26=-131 (B), 27=-131 (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), 38=-39 (B)

July 5,2024

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
10/03/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	A11	Hip	1	1	I66660844 Job Reference (optional)

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:05:36 Page: 1

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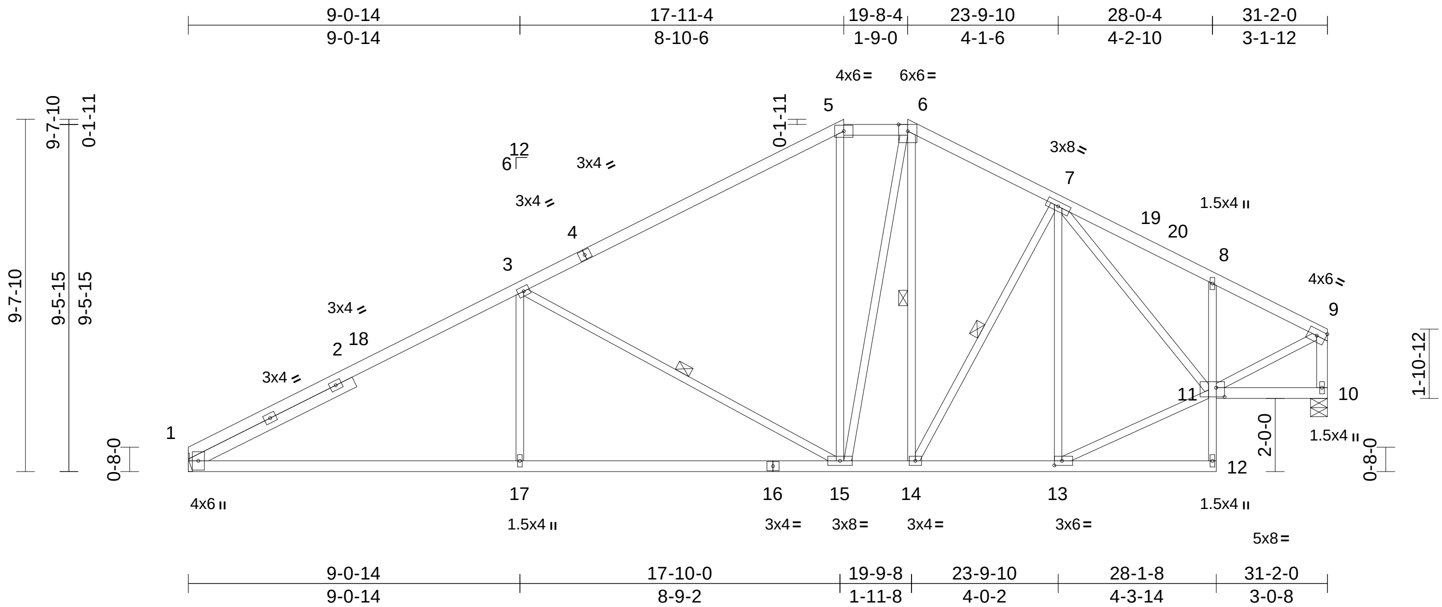

Scale = 1:63

Plate Offsets (X, Y): [1:0-3-9,0-1-5], [11:0-2-12,0-3-0], [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	0.78	Vert(LL)	-0.16	1-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.36	1-17	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 169 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E *Except* 5-6,6-9:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 12-8:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-9:2x4 SP No.2
OTHERS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 5-0-7

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-8-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 1-17
8-11-2 oc bracing: 15-17.
WEBS 1 Row at midpt 6-14, 7-14, 3-15

REACTIONS (size) 1= Mechanical, 10=0-5-8
Max Horiz 1=230 (LC 12)
Max Uplift 1=-224 (LC 12), 10=-173 (LC 13)
Max Grav 1=1396 (LC 1), 10=1396 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-2325/362, 3-5=-1465/328, 5-6=-1175/338, 6-7=-1281/341, 7-8=-1408/329, 8-9=-1393/248, 9-10=-1348/250
BOT CHORD 1-17=-425/1959, 15-17=-425/1959, 14-15=-154/1095, 13-14=-172/1086, 12-13=-4/24, 11-12=0/70, 8-11=-250/160, 10-11=-31/51
WEBS 5-15=-16/280, 6-14=-121/93, 9-11=-227/1338, 7-14=-109/158, 7-11=-108/216, 7-13=-408/140, 11-13=-186/1176, 3-17=0/391, 3-15=-909/340, 6-15=-153/532

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(2E) 17-11-4 to 19-8-4, Exterior(2R) 19-8-4 to 26-9-2, Interior (1) 26-9-2 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 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 224 lb uplift at joint 1.
8) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660845
P240941-01	LG4	Lay-In Gable	1	1	Job Reference (optional)	

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

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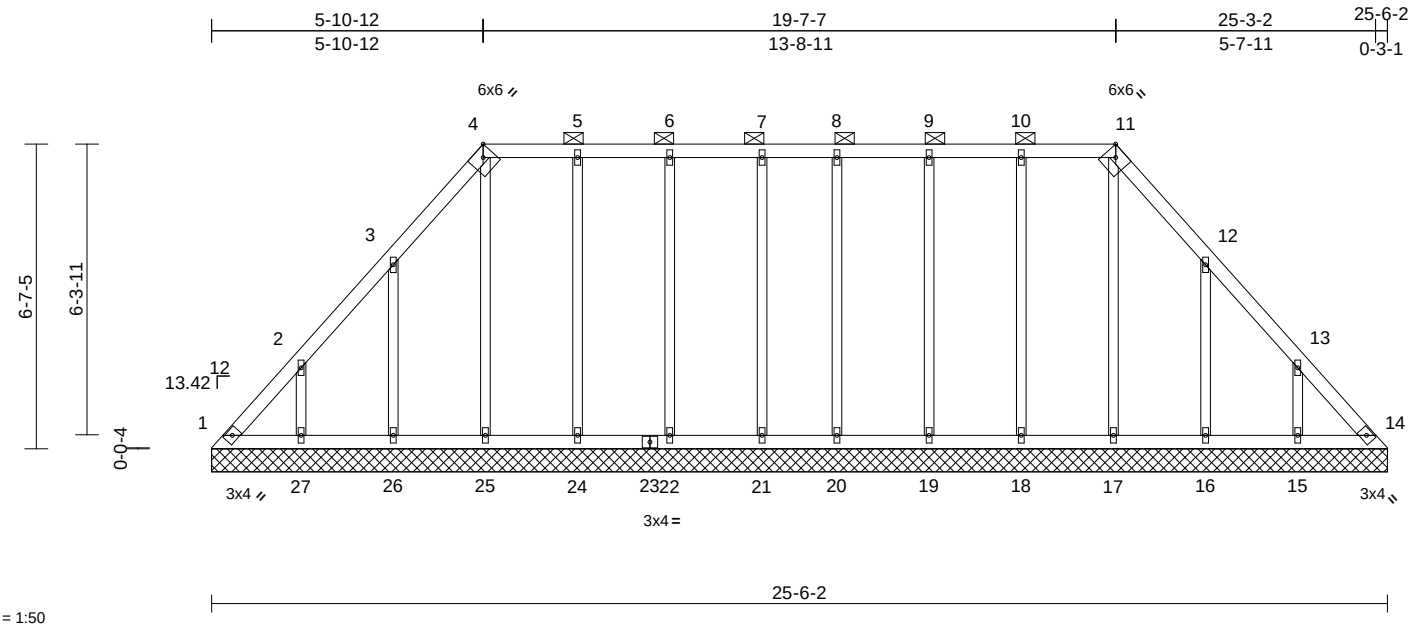

Scale = 1:50

Plate Offsets (X, Y): [4:0-2-10,Edge], [11:0-2-10,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	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	0.15	Horiz(TL)	0.01	14	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 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.): 4-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=25-6-2, 14=25-6-2, 15=25-6-2, 16=25-6-2, 17=25-6-2, 18=25-6-2, 19=25-6-2, 20=25-6-2, 21=25-6-2, 22=25-6-2, 24=25-6-2, 25=25-6-2, 26=25-6-2, 27=25-6-2
Max Horiz 1=-181 (LC 8)
Max Uplift 1=-85 (LC 10), 14=-33 (LC 11), 15=-150 (LC 13), 16=-155 (LC 13), 18=-46 (LC 9), 19=-40 (LC 8), 20=-35 (LC 9), 21=-35 (LC 9), 22=-40 (LC 8), 24=-43 (LC 8), 25=-30 (LC 9), 26=-156 (LC 12), 27=-149 (LC 12)
Max Grav 1=155 (LC 21), 14=130 (LC 22), 15=212 (LC 20), 16=220 (LC 20), 17=144 (LC 26), 18=190 (LC 25), 19=182 (LC 1), 20=160 (LC 26), 21=160 (LC 25), 22=182 (LC 1), 24=190 (LC 26), 25=164 (LC 22), 26=221 (LC 19), 27=212 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-223/174, 2-3=-148/121, 3-4=-146/159, 4-5=-121/127, 5-6=-121/127, 6-7=-121/127, 7-8=-121/127, 8-9=-121/127, 9-10=-121/127, 10-11=-121/127, 11-12=-146/133, 12-13=-96/51, 13-14=-178/107
BOT CHORD 1-27=-86/148, 26-27=-87/148, 25-26=-87/149, 24-25=-87/148, 22-24=-87/148, 21-22=-87/148, 20-21=-87/148, 19-20=-87/148, 18-19=-87/148, 17-18=-87/148, 16-17=-87/148, 15-16=-87/148, 14-15=-86/148
WEBS 2-27=-184/167, 3-26=-196/182, 4-25=-124/54, 5-24=-151/66, 6-22=-141/65, 7-21=-125/56, 8-20=-125/56, 9-19=-141/65, 10-18=-151/69, 11-17=-104/5, 12-16=-196/181, 13-15=-184/167

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) 0-3-15 to 5-3-15, Interior (1) 5-3-15 to 5-10-15, Exterior(2R) 5-10-15 to 12-11-13, Interior (1) 12-11-13 to 19-7-10, Exterior(2E) 19-7-10 to 25-2-11 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) N/A
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	LG9	Lay-In Gable	1	1	Job Reference (optional) I66660846

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:05:42 Page: 1
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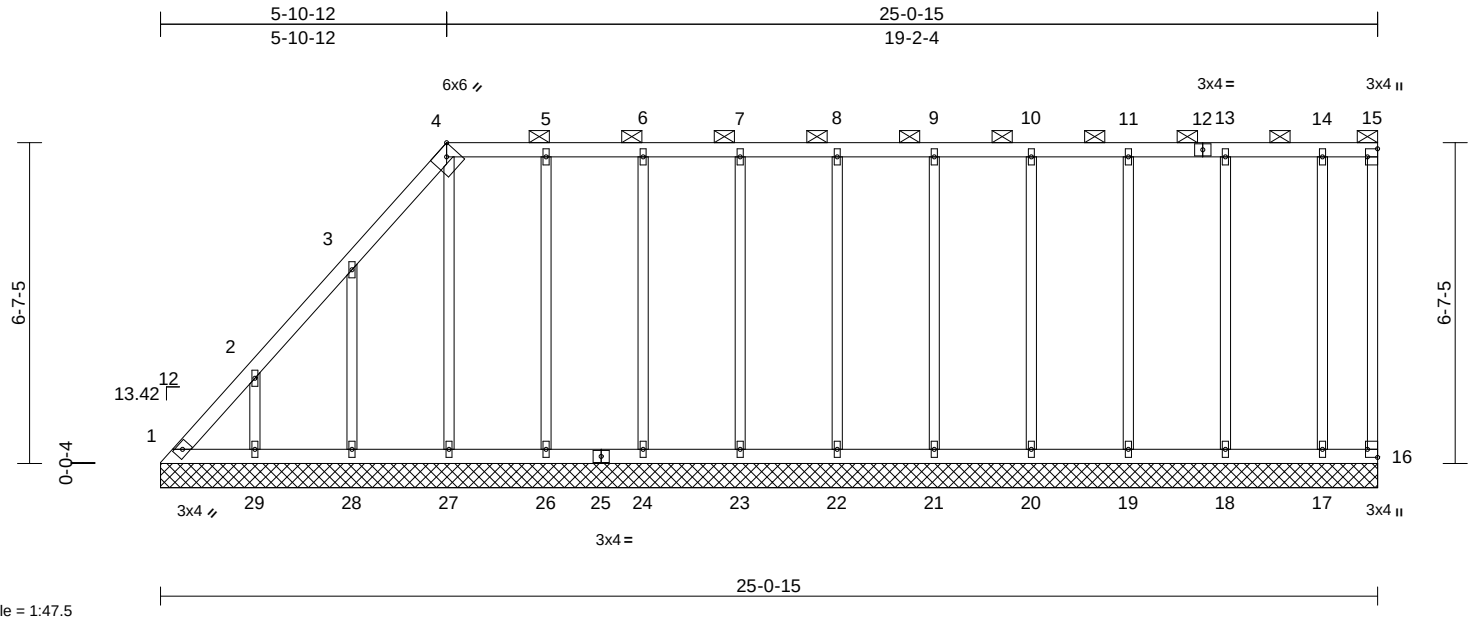

Scale = 1:47.5

Plate Offsets (X, Y): [4:0-2-10,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	0.51	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 137 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=25-0-15, 16=25-0-15, 17=25-0-15, 18=25-0-15, 19=25-0-15, 20=25-0-15, 21=25-0-15, 22=25-0-15, 23=25-0-15, 24=25-0-15, 26=25-0-15, 27=25-0-15, 28=25-0-15, 29=25-0-15
Max Horiz 1=269 (LC 9)
Max Uplift 1=-104 (LC 10), 16=-16 (LC 9), 17=-46 (LC 8), 18=-48 (LC 9), 19=-42 (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=-105 (LC 9), 28=-157 (LC 12), 29=-148 (LC 12)
Max Grav 1=216 (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=173 (LC 19), 28=221 (LC 19), 29=211 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-438/433, 2-3=-326/330, 3-4=-194/208, 4-5=-127/138, 5-6=-128/139, 6-7=-128/139, 7-8=-128/139, 8-9=-128/139, 9-10=-128/139, 10-11=-128/139, 11-13=-128/139, 13-14=-128/139, 14-15=-128/139, 15-16=-101/99
BOT CHORD 1-29=-127/139, 28-29=-128/139, 27-28=-128/139, 26-27=-128/139, 24-26=-128/139, 23-24=-128/139, 22-23=-128/139, 21-22=-128/139, 20-21=-128/139, 19-20=-128/139, 18-19=-128/139, 17-18=-128/139, 16-17=-128/139
WEBS 2-29=-185/166, 3-28=-202/182, 4-27=-238/179, 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=-139/64, 13-18=-146/67, 14-17=-149/96

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) 0-3-15 to 5-3-15, Interior (1) 5-3-15 to 5-10-15, Exterior(2R) 5-10-15 to 12-11-13, Interior (1) 12-11-13 to 24-11-15 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) N/A
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	B1	Hip Girder	1	2	Job Reference (optional) I66660847

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

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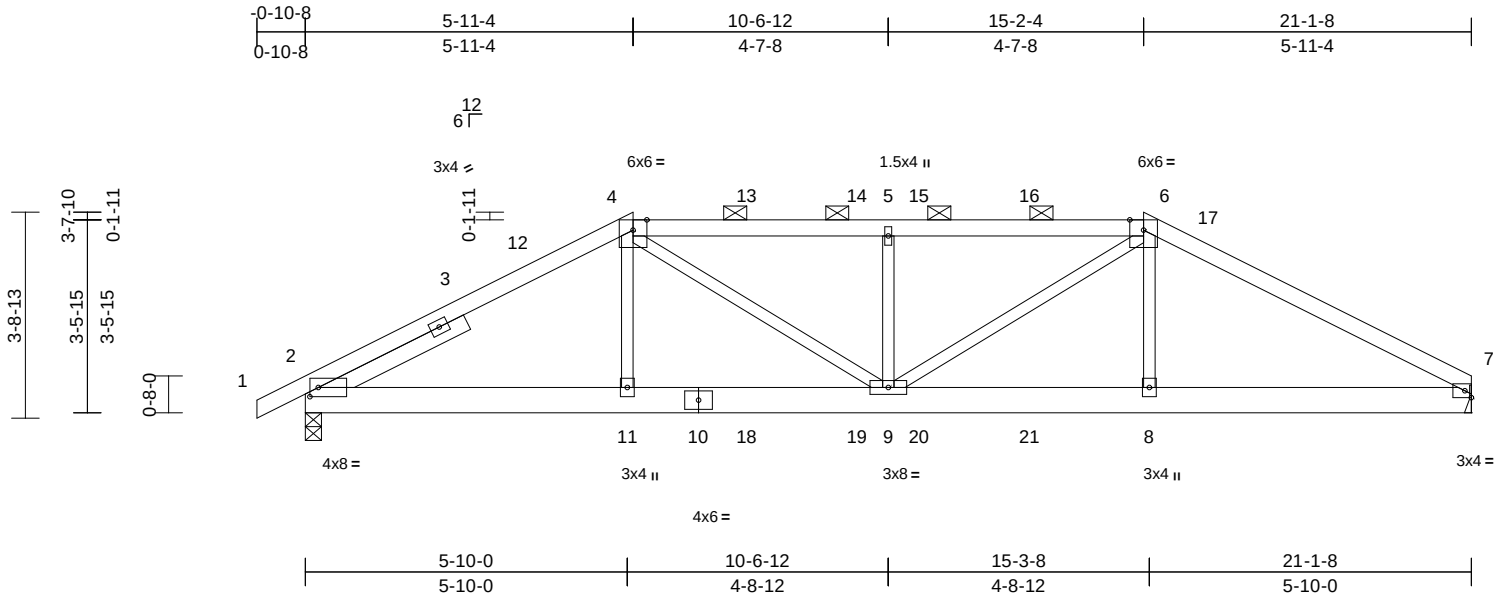

Scale = 1:41.7

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

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	0.68	Vert(LL)	0.07	9-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.12	9-11	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.18	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 186 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 -- 2-11-4

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

REACTIONS (lb/size) 2=1915/0-3-8, 7=1833/ Mechanical
Max Horiz 2=66 (LC 16)
Max Uplift 2=-566 (LC 12), 7=-537 (LC 13)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3347/1103, 3-12=-3251/1103, 4-12=-3211/1119, 4-13=-3649/1307, 13-14=-3651/1308, 5-14=-3655/1309, 5-15=-3655/1309, 15-16=-3651/1308, 6-16=-3649/1307, 6-17=-3278/1149, 7-17=-3445/1133
BOT CHORD 2-11=-898/2859, 10-11=-896/2842, 10-18=-896/2842, 18-19=-896/2842, 9-19=-896/2842, 9-20=-923/2925, 20-21=-923/2925, 8-21=-923/2925, 7-8=-925/2944
WEBS 4-11=-57/519, 6-8=-73/588, 4-9=-387/1069, 6-9=-358/974, 5-9=-874/513

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: 2x6 - 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 15-2-4, Exterior(2E) 15-2-4 to 21-0-12 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 537 lb uplift at joint 7 and 566 lb uplift at joint 2.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 155 lb down and 136 lb up at 5-11-4, 131 lb down and 136 lb up at 8-0-0, 131 lb down and 136 lb up at 10-0-0, 131 lb down and 136 lb up at 11-1-8, and 131 lb down and 136 lb up at 13-1-8, and 155 lb down and 136 lb up at 15-2-4 on top chord, and 426 lb down and 137 lb up at 5-11-4, 77 lb down at 8-0-0, 77 lb down at 10-0-0, 77 lb down at 11-1-8, and 77 lb down at 13-1-8, and 426 lb down and 137 lb up at 15-1-8 on bottom 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: 1-4=-70, 4-6=-70, 6-7=-70, 2-7=-20
Concentrated Loads (lb)
Vert: 4=-131 (F), 6=-131 (F), 11=-426 (F), 8=-426 (F), 13=-131 (F), 14=-131 (F), 15=-131 (F), 16=-131 (F), 18=-39 (F), 19=-39 (F), 20=-39 (F), 21=-39 (F)

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660848
P240941-01	LG8	Lay-In Gable	1	1	Job Reference (optional)	

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

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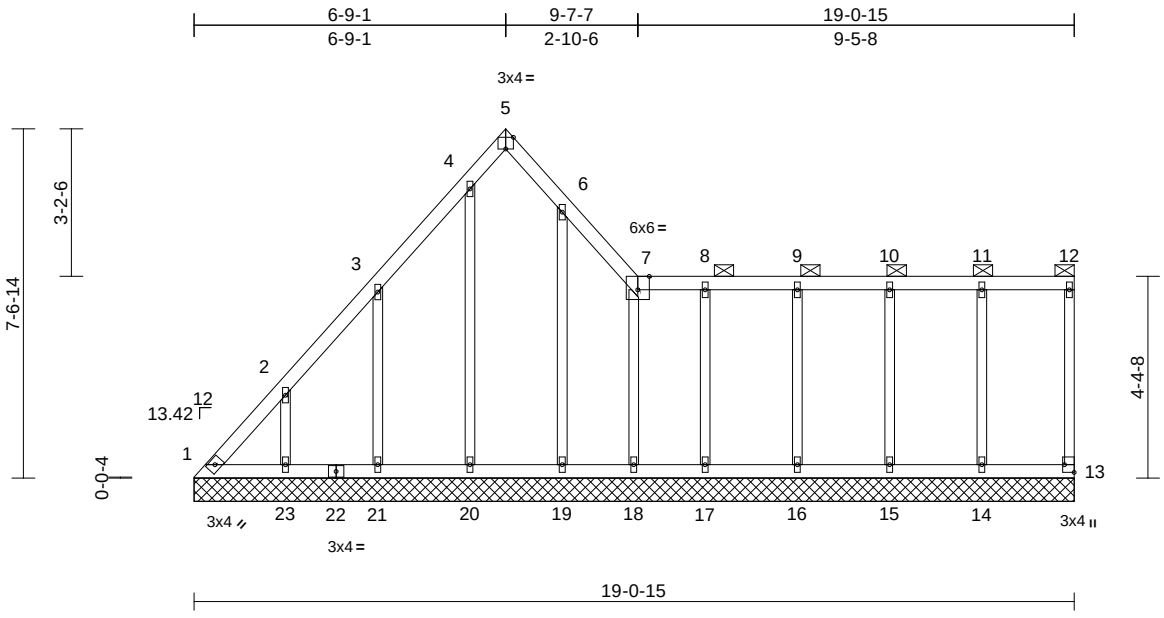

Scale = 1:50

Plate Offsets (X, Y): [5:Edge,0-3-0], [7:0-3-0,Edge], [13: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	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.00	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 96 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.): 7-12.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=19-0-15, 13=19-0-15, 14=19-0-15, 15=19-0-15, 16=19-0-15, 17=19-0-15, 18=19-0-15, 19=19-0-15, 20=19-0-15, 21=19-0-15, 23=19-0-15
Max Horiz 1=265 (LC 9)
Max Uplift 1=-149 (LC 10), 13=-20 (LC 9), 14=-47 (LC 13), 15=-41 (LC 9), 16=-42 (LC 13), 17=-40 (LC 9), 18=-105 (LC 8), 19=-25 (LC 13), 20=-133 (LC 11), 21=-188 (LC 12), 23=-143 (LC 12)
Max Grav 1=233 (LC 9), 13=71 (LC 1), 14=191 (LC 26), 15=178 (LC 1), 16=184 (LC 26), 17=163 (LC 1), 18=183 (LC 20), 19=172 (LC 1), 20=268 (LC 19), 21=200 (LC 19), 23=218 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-315/314, 2-3=-254/207, 3-4=-235/277, 4-5=-113/120, 5-6=-162/190, 6-7=-194/247, 7-8=-81/107, 8-9=-81/108, 9-10=-81/108, 10-11=-81/108, 11-12=-81/108, 12-13=-59/45
BOT CHORD 1-23=-92/123, 21-23=-92/123, 20-21=-93/123, 19-20=-93/123, 18-19=-93/123, 17-18=-87/118, 16-17=-87/118, 15-16=-87/118, 14-15=-87/118, 13-14=-87/118
WEBS 2-23=-191/160, 3-21=-253/238, 4-20=-227/174, 6-19=-159/76, 11-14=-149/83, 10-15=-139/64, 9-16=-143/67, 8-17=-127/62, 7-18=-238/255

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 Corner(3E) 0-3-15 to 5-3-15, Exterior(2N) 5-3-15 to 6-9-5, Corner(3E) 6-9-5 to 9-7-10, Exterior(2N) 9-7-10 to 18-11-15 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 149 lb uplift at joint 1, 20 lb uplift at joint 13, 143 lb uplift at joint 23, 188 lb uplift at joint 21, 133 lb uplift at joint 20, 25 lb uplift at joint 19, 47 lb uplift at joint 14, 41 lb uplift at joint 15, 42 lb uplift at joint 16, 40 lb uplift at joint 17 and 105 lb uplift at joint 18.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660849
P240941-01	LG2	Lay-In Gable	1	1	Job Reference (optional)	

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

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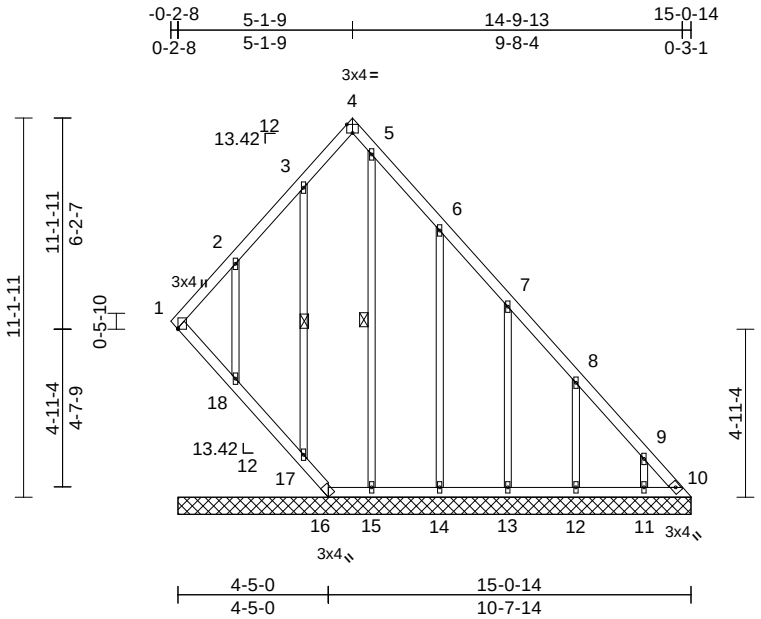

Scale = 1:67.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	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	0.35	Horiz(TL)	0.01	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 91 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 9-1-14 oc bracing.
WEBS 1 Row at midpt 3-17, 5-15

REACTIONS (size) 1=15-0-14, 10=15-0-14, 11=15-0-14, 12=15-0-14, 13=15-0-14, 14=15-0-14, 15=15-0-14, 16=15-0-14, 17=15-0-14, 18=15-0-14
Max Horiz 1=-322 (LC 13)
Max Uplift 1=-14 (LC 11), 10=-140 (LC 11), 11=-128 (LC 13), 12=-152 (LC 13), 13=-144 (LC 13), 14=-179 (LC 13), 16=-419 (LC 13), 17=-71 (LC 12), 18=-212 (LC 12)
Max Grav 1=420 (LC 13), 10=376 (LC 13), 11=183 (LC 20), 12=217 (LC 20), 13=208 (LC 20), 14=227 (LC 20), 15=133 (LC 22), 16=182 (LC 11), 17=204 (LC 19), 18=229 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-238/170, 2-3=-147/102, 3-4=-112/108, 4-5=-72/55, 5-6=-116/97, 6-7=-126/65, 7-8=-244/171, 8-9=-394/295, 9-10=-511/391
BOT CHORD 1-18=-420/540, 17-18=-416/544, 16-17=-419/563, 15-16=-268/356, 14-15=-268/356, 13-14=-268/356, 12-13=-268/356, 11-12=-267/356, 10-11=-267/355
WEBS 2-18=-242/229, 3-17=-164/107, 5-15=-99/19, 6-14=-229/204, 7-13=-197/168, 8-12=-207/178, 9-11=-169/144

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) 0-4-11 to 5-4-1, Exterior(2R) 5-4-1 to 10-4-1, Interior (1) 10-4-1 to 14-11-11 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 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 14 lb uplift at joint 1, 419 lb uplift at joint 16, 212 lb uplift at joint 18 and 71 lb uplift at joint 17.
10) N/A
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 16, 18, 17.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660850
P240941-01	LG5	Lay-In Gable	1	1	Job Reference (optional)	

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:05:42 Page: 1
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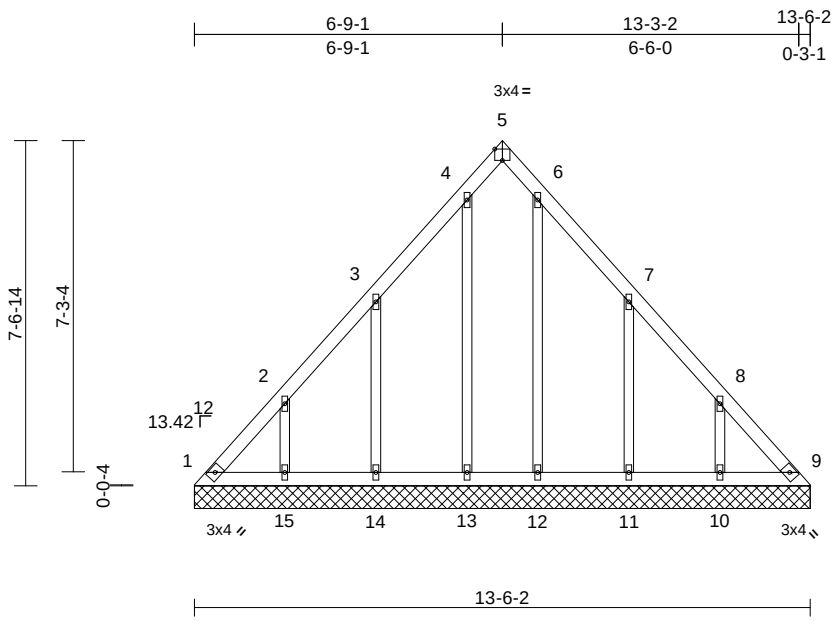

Scale = 1:50.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	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	0.12	Horiz(TL)	0.01	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 68 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=13-6-2, 9=13-6-2, 10=13-6-2, 11=13-6-2, 12=13-6-2, 13=13-6-2, 14=13-6-2, 15=13-6-2
Max Horiz 1=-208 (LC 8)
Max Uplift 1=-84 (LC 10), 9=-65 (LC 11), 10=-147 (LC 13), 11=-168 (LC 13), 12=-29 (LC 13), 13=-43 (LC 12), 14=-166 (LC 12), 15=-147 (LC 12)
Max Grav 1=233 (LC 12), 9=221 (LC 13), 10=213 (LC 20), 11=223 (LC 20), 12=148 (LC 20), 13=164 (LC 19), 14=220 (LC 19), 15=214 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-331/244, 2-3=-194/128, 3-4=-108/63, 4-5=-64/61, 5-6=-64/61, 6-7=-87/40, 7-8=-178/128, 8-9=-315/244
BOT CHORD 1-15=-182/241, 14-15=-182/241, 13-14=-182/241, 12-13=-182/241, 11-12=-182/241, 10-11=-182/241, 9-10=-182/241
WEBS 2-15=-196/172, 3-14=-226/205, 4-13=-129/63, 8-10=-196/172, 7-11=-226/205, 6-12=-113/49

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 Corner(3E) 0-3-15 to 5-3-15, Exterior(2N) 5-3-15 to 6-9-5, Corner(3R) 6-9-5 to 11-6-10, Exterior(2N) 11-6-10 to 13-2-11 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 84 lb uplift at joint 1, 65 lb uplift at joint 9, 147 lb uplift at joint 15, 166 lb uplift at joint 14, 43 lb uplift at joint 13, 147 lb uplift at joint 10, 168 lb uplift at joint 11 and 29 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 5,2024

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
10/03/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660851
P240941-01	C3	Common Girder	1	2	Job Reference (optional)	

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

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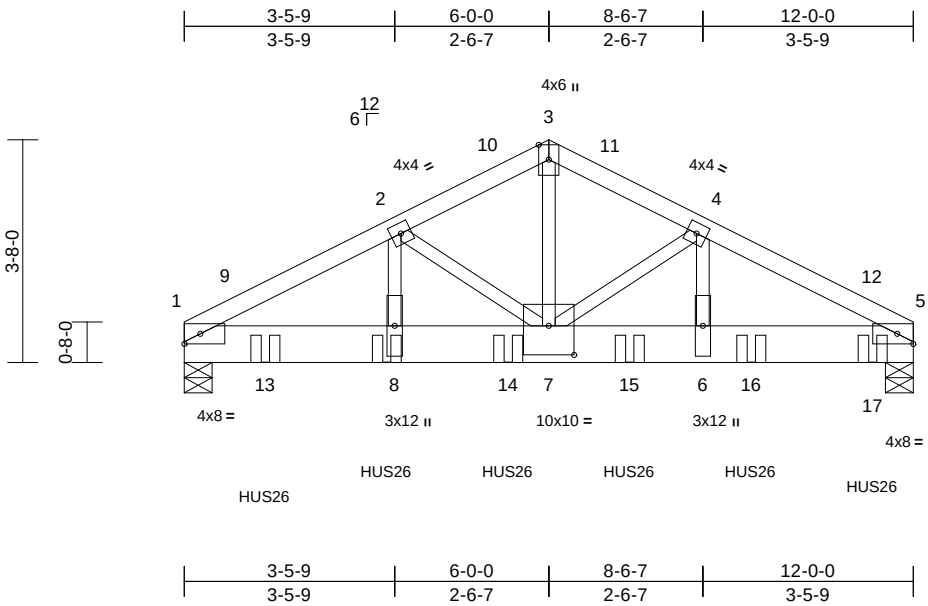

Scale = 1:37.9

Plate Offsets (X, Y): [7:0-5-0,0-5-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.05	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.09	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 116 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 5=0-5-8
Max Horiz 1=60 (LC 33)
Max Uplift 1=-751 (LC 12), 5=-795 (LC 13)
Max Grav 1=4394 (LC 1), 5=4906 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6251/1273, 2-3=-4775/1030, 3-4=-4775/1030, 4-5=-6215/1246
BOT CHORD 1-8=-1054/5323, 7-8=-1054/5323, 6-7=-1006/5292, 5-6=-1006/5292
WEBS 2-8=-269/1725, 2-7=-1365/364, 3-7=-802/4006, 4-7=-1327/335, 4-6=-235/1683

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 0-3-0 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 SPF No.2 crushing capacity of 425 psi.
7) Two H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.
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 HUS26 (14-16d Girder, 4-16d Truss) 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: 1-3=-70, 3-5=-70, 1-5=-20
Concentrated Loads (lb)
Vert: 8=-1376 (F), 13=-1376 (F), 14=-1376 (F), 15=-1376 (F), 16=-1376 (F), 17=-1382 (F)

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	C1	Hip Girder	1	1	Job Reference (optional) I66660852

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

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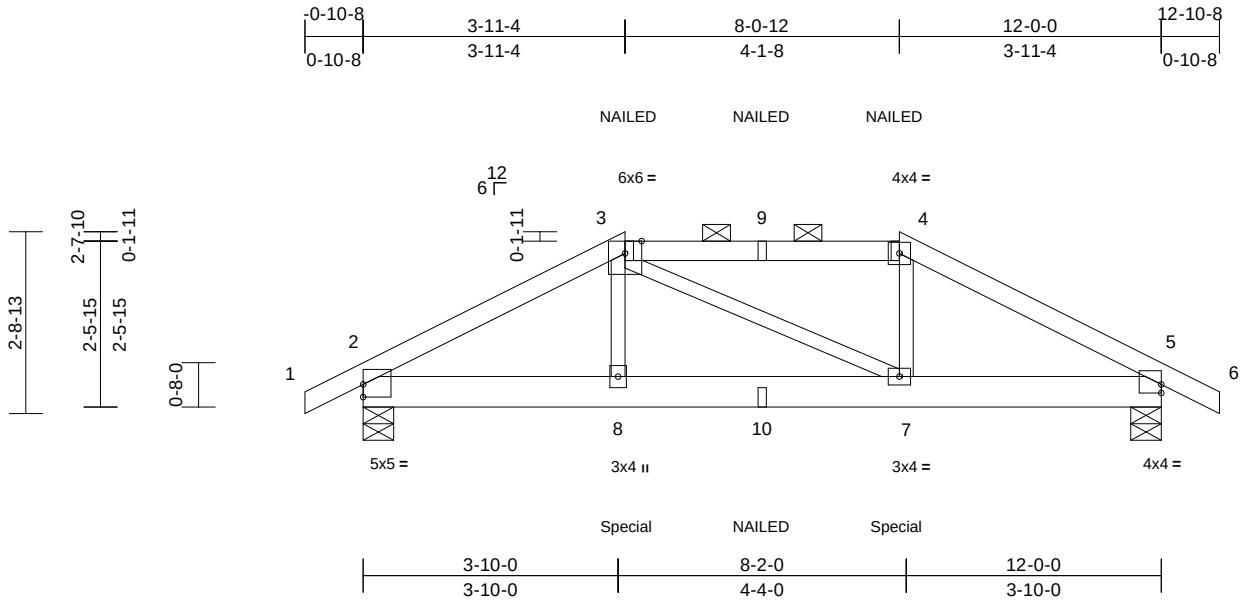

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Plate Offsets (X, Y): [2:Edge,0-2-5], [5:Edge,0-1-9]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.02	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.05	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.11	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 51 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 2=0-5-8, 5=0-5-8
Max Horiz 2=44 (LC 12)
Max Uplift 2=-255 (LC 12), 5=-255 (LC 13)
Max Grav 2=915 (LC 1), 5=915 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-1398/513, 3-4=-1131/489, 4-5=-1395/509, 5-6=0/11
BOT CHORD 2-8=-354/1148, 7-8=-353/1133, 5-7=-355/1145
WEBS 3-8=-18/328, 3-7=-55/51, 4-7=-19/328

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 255 lb uplift at joint 2 and 255 lb uplift at joint 5.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) 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) 221 lb down and 65 lb up at 3-11-4, and 221 lb down and 65 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: 1-3=-70, 3-4=-70, 4-6=-70, 2-5=-20
Concentrated Loads (lb)
Vert: 3=-59 (B), 4=-59 (B), 8=-221 (B), 7=-221 (B), 9=-59 (B), 10=-19 (B)

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	C2	Common	2	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I66660853
10/03/2024

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

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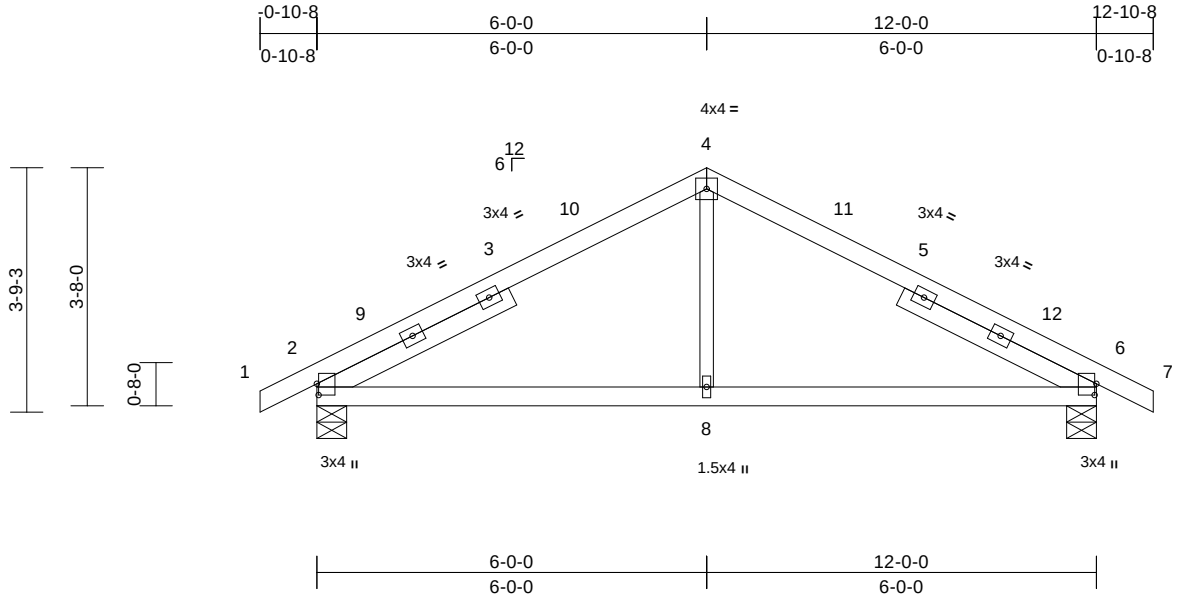

Scale = 1:35.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.55	Vert(LL)	-0.03	2-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.06	2-8	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 53 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 -- 3-3-13, Right 2x4 SP No.2 -- 3-3-13

BRACING

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

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=65 (LC 16)
Max Uplift 2=-104 (LC 12), 6=-104 (LC 13)
Max Grav 2=601 (LC 1), 6=601 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-4=-718/286, 4-6=-718/286, 6-7=0/6
BOT CHORD	2-8=-127/535, 6-8=-127/535
WEBS	4-8=0/276

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 104 lb uplift at joint 2 and 104 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	LG1	Lay-In Gable	1	1	Job Reference (optional) I66660854

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

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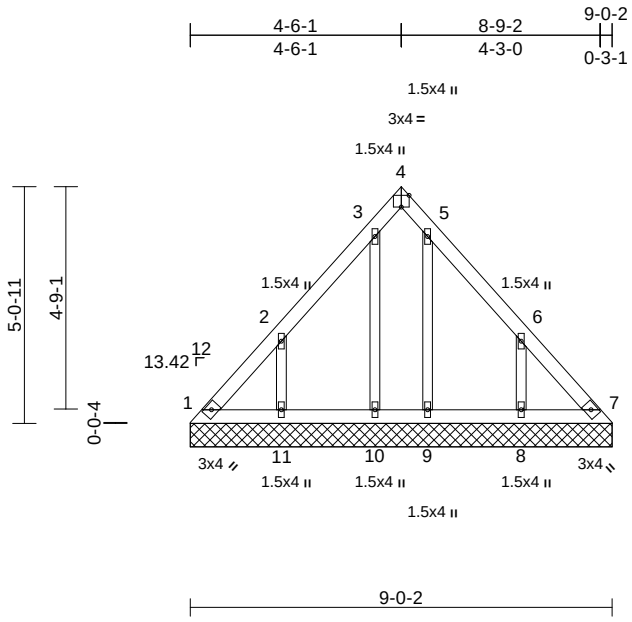

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Plate Offsets (X, Y): [4:Edge,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	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	0.05	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 41 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=9-0-2, 7=9-0-2, 8=9-0-2, 9=9-0-2, 10=9-0-2, 11=9-0-2
Max Horiz 1=-135 (LC 8)
Max Uplift 1=-42 (LC 10), 7=-27 (LC 11), 8=-164 (LC 13), 9=-42 (LC 13), 10=-52 (LC 12), 11=-163 (LC 12)
Max Grav 1=133 (LC 12), 7=123 (LC 13), 8=226 (LC 20), 9=138 (LC 20), 10=150 (LC 19), 11=224 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-195/151, 2-3=-92/63, 3-4=-49/42, 4-5=-49/42, 5-6=-76/47, 6-7=-182/151
BOT CHORD 1-11=-118/149, 10-11=-119/149, 9-10=-119/149, 8-9=-119/149, 7-8=-118/149
WEBS 2-11=-227/182, 3-10=-122/72, 5-9=-109/61, 6-8=-227/183

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) 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) N/A
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

July 5,2024

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
10/03/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660855
P240941-01	CG1	Diagonal Hip Girder	3	1	Job Reference (optional)	

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

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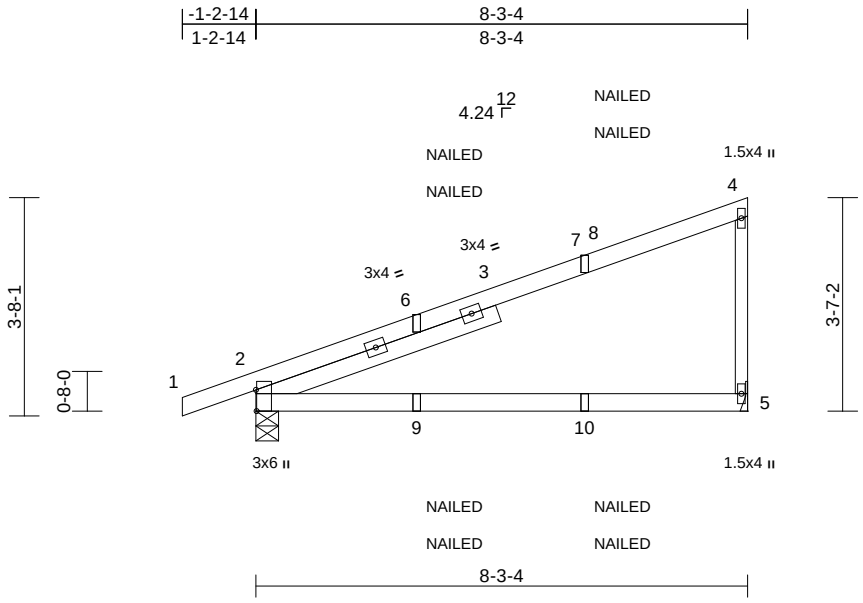

Scale = 1:38.8

Plate Offsets (X, Y): [2:0-4-5,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	0.96	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: 36 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 -- 4-3-9

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=0-4-9, 5= Mechanical
Max Horiz 2=158 (LC 9)
Max Uplift 2=-152 (LC 8), 5=-143 (LC 12)
Max Grav 2=488 (LC 1), 5=416 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/5, 2-4=-210/112, 4-5=-320/343
BOT CHORD 2-5=-67/73

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 143 lb uplift at joint 5 and 152 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=-60 (F=-34, B=-26), 9=-3 (F), 10=-19 (F=-10, B=-10)

July 5,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	CG6	Diagonal Hip Girder	2	1	Job Reference (optional) I66660856

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

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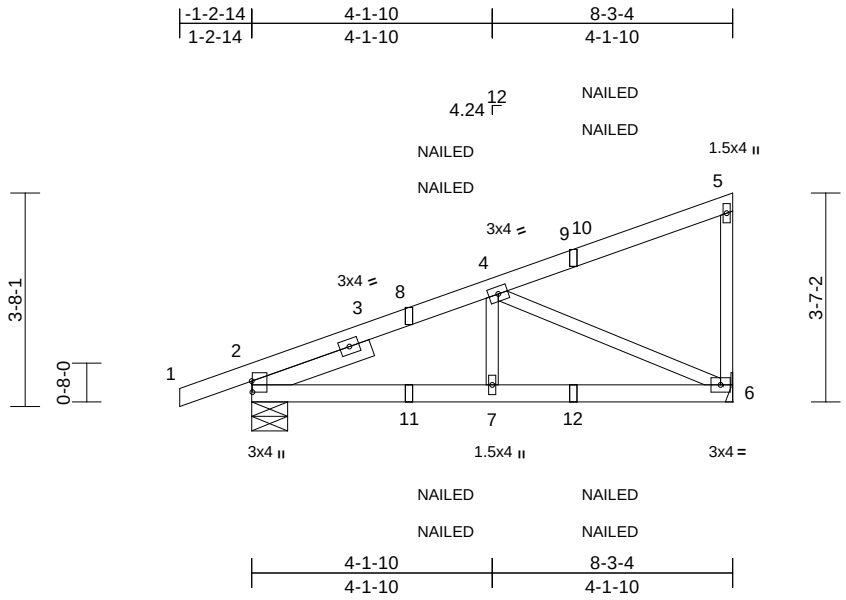

Scale = 1:39.6

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

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	0.37	Vert(LL)	-0.01	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.03	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.28	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 38 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 -- 2-1-15

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-2-5 oc bracing.

REACTIONS (size) 2=0-7-6, 6= Mechanical
Max Horiz 2=158 (LC 9)
Max Uplift 2=-152 (LC 8), 6=-141 (LC 12)
Max Grav 2=484 (LC 1), 6=410 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/5, 2-4=-633/287, 4-5=-129/91, 5-6=-134/141
BOT CHORD 2-7=-409/522, 6-7=-409/522
WEBS 4-7=0/230, 4-6=-574/405

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 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 141 lb uplift at joint 6 and 152 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: 1-5=-70, 2-6=-20
Concentrated Loads (lb)
Vert: 9=-53 (F=-26, B=-26), 12=-19 (F=-10, B=-10)

July 5,2024

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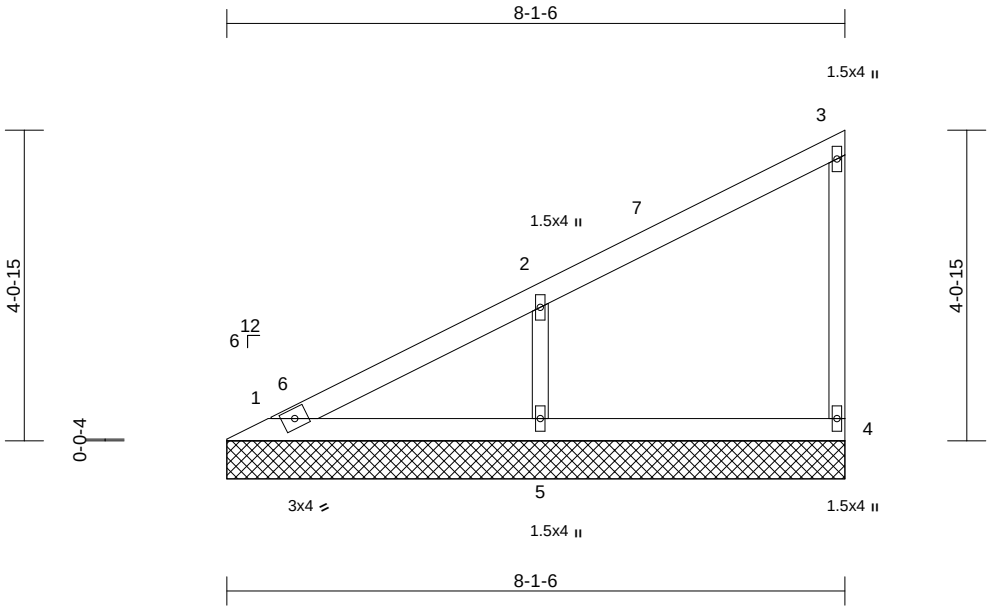
Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660857
P240941-01	V7	Valley	1	1	Job Reference (optional)	



Scale = 1:30.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	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	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 29 lb	FT = 20%

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

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

REACTIONS (size) 1=8-1-6, 4=8-1-6, 5=8-1-6
Max Horiz 1=165 (LC 9)
Max Uplift 4=-31 (LC 9), 5=-142 (LC 12)
Max Grav 1=123 (LC 20), 4=135 (LC 1), 5=418 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-295/176, 2-3=-129/99, 3-4=-109/135
BOT CHORD 1-5=-77/83, 4-5=-77/83
WEBS 2-5=-325/333

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9, Interior (1) 5-7-9 to 8-0-10 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
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 31 lb uplift at joint 4 and 142 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 5,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	V3	Valley	1	1	Job Reference (optional) I66660858

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

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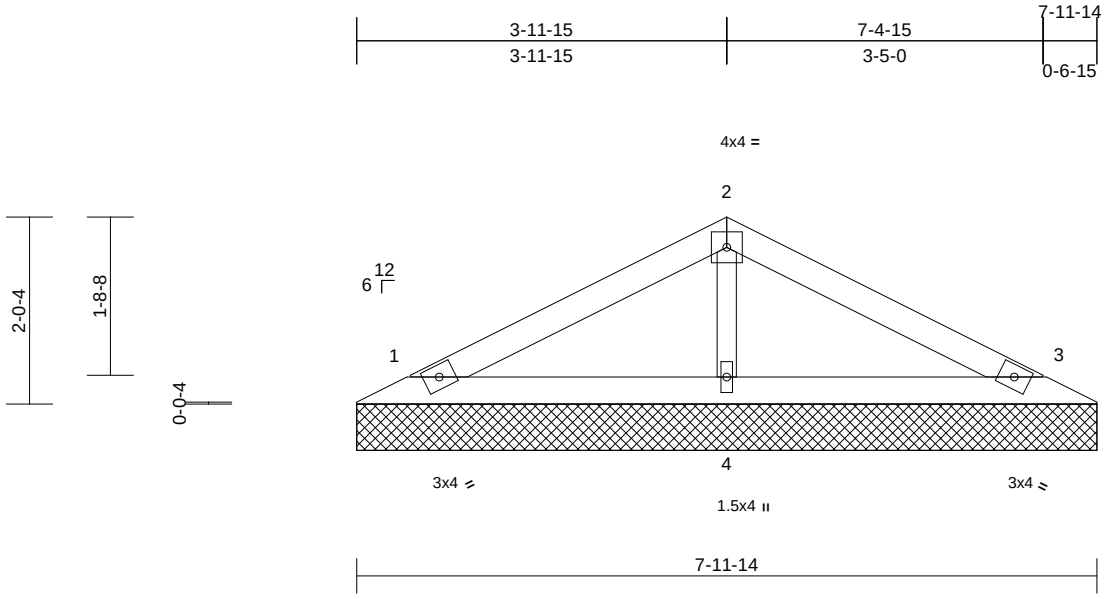

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 24 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=7-11-14, 3=7-11-14, 4=7-11-14
Max Horiz 1=-32 (LC 17)
Max Uplift 1=-42 (LC 12), 3=-48 (LC 13), 4=-10 (LC 12)
Max Grav 1=160 (LC 1), 3=160 (LC 1), 4=293 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-77/58, 2-3=-77/65
BOT CHORD 1-4=-1/35, 3-4=-1/35
WEBS 2-4=-208/166

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 42 lb uplift at joint 1, 48 lb uplift at joint 3 and 10 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

July 5,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660859
P240941-01	V5	Valley	1	1	Job Reference (optional)	

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

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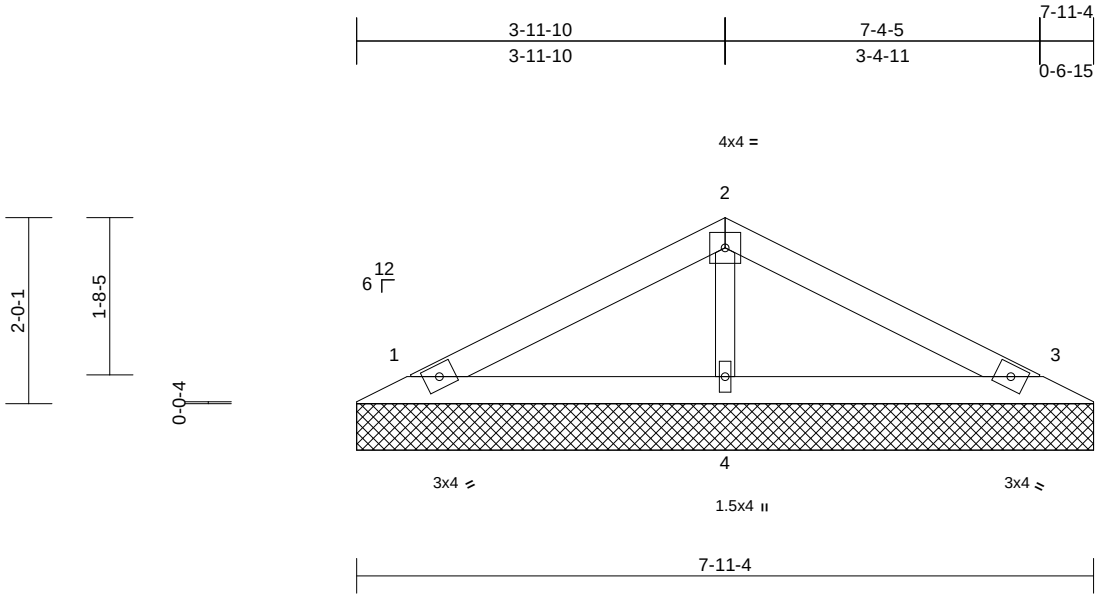

Scale = 1:24.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 24 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=7-11-4, 3=7-11-4, 4=7-11-4
Max Horiz 1=-32 (LC 13)
Max Uplift 1=-41 (LC 12), 3=-47 (LC 13), 4=-10 (LC 12)
Max Grav 1=159 (LC 1), 3=159 (LC 1), 4=291 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-76/57, 2-3=-76/65
BOT CHORD 1-4=-1/34, 3-4=-1/34
WEBS 2-4=-206/165

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 41 lb uplift at joint 1, 47 lb uplift at joint 3 and 10 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

July 5,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660860
P240941-01	E2	Common	2	1	Job Reference (optional)	

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

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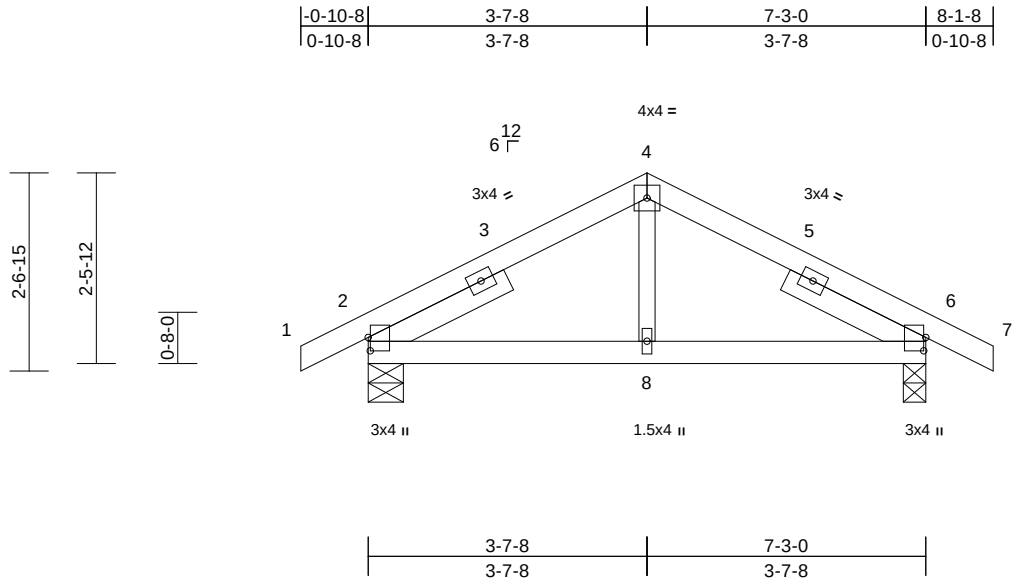

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Plate Offsets (X, Y): [2:0-2-1,0-0-5], [6:0-2-1,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.01	2-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.01	2-8	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 34 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 -- 1-11-14, Right 2x4 SP No.2 -- 1-11-14

BRACING

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

REACTIONS (size) 2=0-5-8, 6=0-3-8
Max Horiz 2=42 (LC 12)
Max Uplift 2=-71 (LC 12), 6=-71 (LC 13)
Max Grav 2=387 (LC 1), 6=387 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-4=-397/180, 4-6=-397/196, 6-7=0/6
BOT CHORD	2-8=-68/275, 6-8=-68/275
WEBS	4-8=0/178

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) 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 71 lb uplift at joint 2 and 71 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

July 5,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660861
P240941-01	E1	Hip Girder	1	1	Job Reference (optional)	

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

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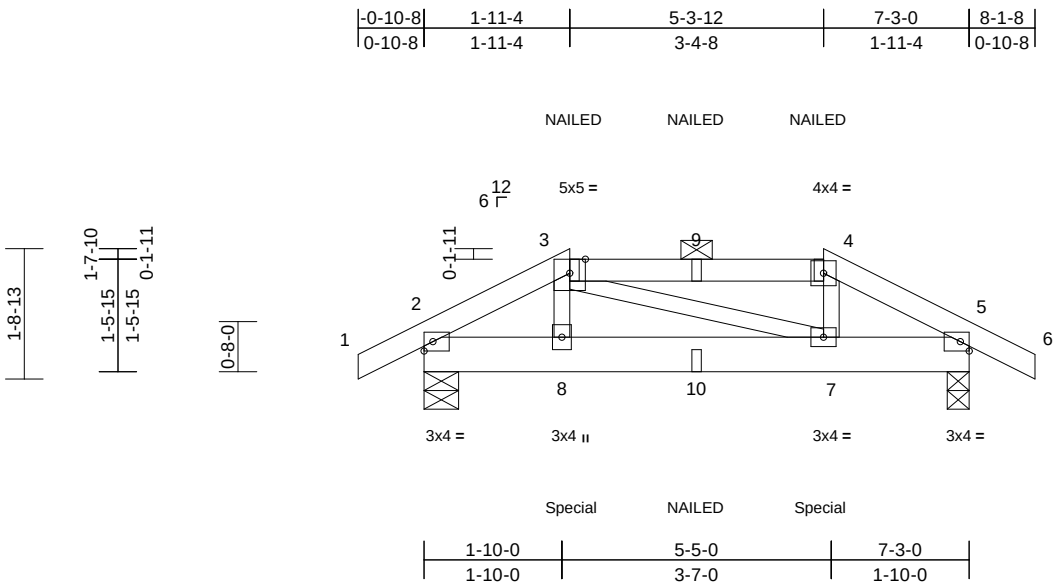

Scale = 1:30.6

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	0.29	Vert(LL)	0.01	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.01	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.04	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 32 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SPF No.2
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 (6-0-0 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 5=0-3-8
Max Horiz 2=25 (LC 16)
Max Uplift 2=-138 (LC 12), 5=-135 (LC 13)
Max Grav 2=452 (LC 1), 5=443 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-521/245, 3-4=-388/230, 4-5=-521/239, 5-6=0/11
BOT CHORD 2-8=-134/389, 7-8=-134/379, 5-7=-137/397
WEBS 3-8=-2/133, 3-7=-11/17, 4-7=0/127

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) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 5. This connection is for uplift only and does not consider lateral forces.
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) 63 lb down and 41 lb up at 1-11-4, and 63 lb down and 41 lb up at 5-3-0 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: 1-3=-70, 3-4=-70, 4-6=-70, 2-5=-20
Concentrated Loads (lb)
Vert: 8=-63 (F), 7=-63 (F)

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660862
P240941-01	V8	Valley	1	1	Job Reference (optional)	

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

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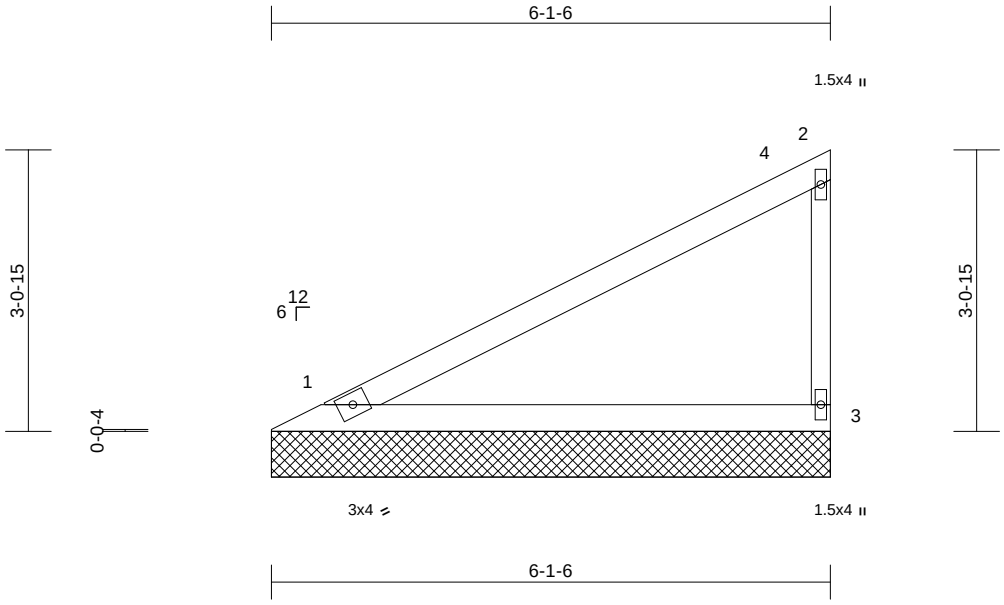

Scale = 1:25.2

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	0.69	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	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: 20 lb	FT = 20%

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

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

REACTIONS (size) 1=6-1-6, 3=6-1-6
Max Horiz 1=121 (LC 9)
Max Uplift 1=-38 (LC 12), 3=-68 (LC 12)
Max Grav 1=244 (LC 1), 3=244 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-167/114, 2-3=-190/236
BOT CHORD 1-3=-56/61

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-9 to 5-7-9, Interior (1) 5-7-9 to 6-0-10 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
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 38 lb uplift at joint 1 and 68 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

July 5,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660863
P240941-01	LG7	Lay-In Gable	1	1	Job Reference (optional)	

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

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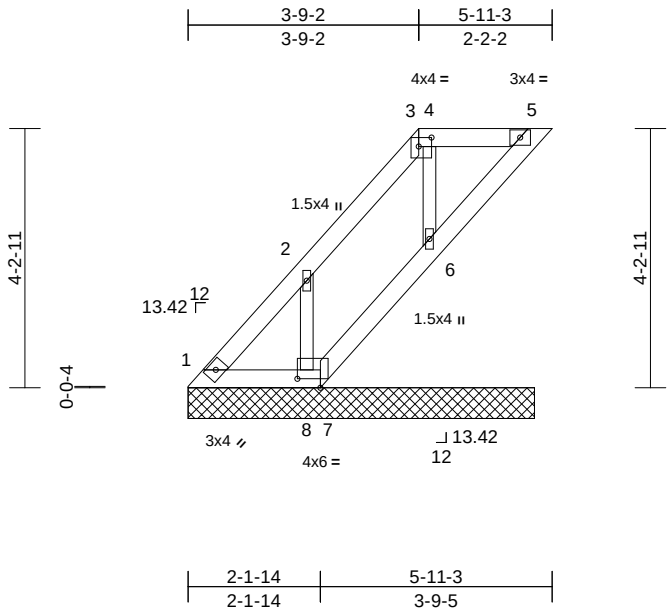

Scale = 1:37.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	5	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
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-7 oc purlins, except 2-0-0 oc purlins: 3-5.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 6-7.

REACTIONS (size) 1=5-7-12, 5=5-7-12, 6=5-7-12, 7=5-7-12, 8=5-7-12
Max Horiz 1=172 (LC 12)
Max Uplift 1=-5 (LC 10), 5=-46 (LC 12), 6=-18 (LC 9), 7=-33 (LC 10), 8=-156 (LC 12)
Max Grav 1=103 (LC 12), 5=71 (LC 1), 6=164 (LC 1), 7=40 (LC 12), 8=232 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-161/156, 2-3=-67/20, 3-4=-39/40, 4-5=-38/40
BOT CHORD 1-8=-40/39, 7-8=-40/39, 6-7=-66/76, 5-6=-69/64
WEBS 4-6=-120/56, 2-8=-240/188

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) Provide adequate drainage to prevent water ponding.
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 46 lb uplift at joint 5 and 18 lb uplift at joint 6.
9) N/A
10) Non Standard bearing condition. Review required.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER
July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660864
P240941-01	D2	Common	2	1	Job Reference (optional)	

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

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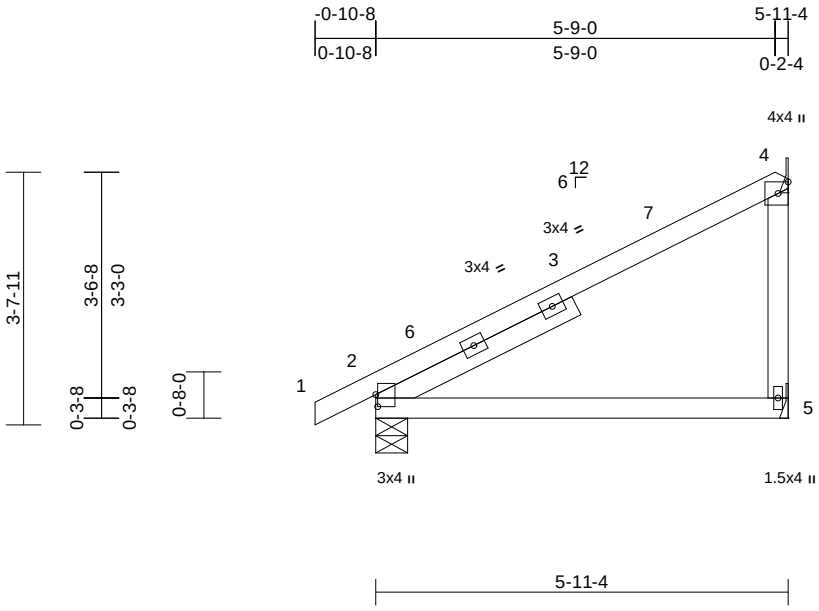

Scale = 1:33.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.07	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.13	2-5	>515	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: 29 lb	FT = 20%

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

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) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=146 (LC 9)
Max Uplift 2=-60 (LC 12), 4=-110 (LC 12)
Max Grav 2=327 (LC 1), 4=198 (LC 1), 5=116 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-192/131, 4-5=0/0
BOT CHORD 2-5=-67/73

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 5-9-8 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 110 lb uplift at joint 4 and 60 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) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	D1	Half Hip Girder	1	1	Job Reference (optional)

I66660865

10/03/2024

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

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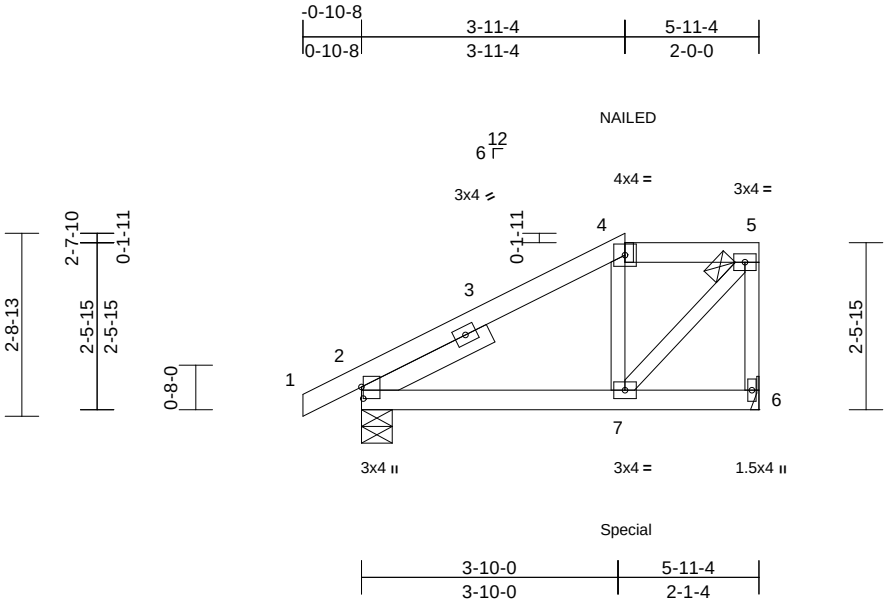

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Plate Offsets (X, Y): [2:0-2-1,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.01	2-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.02	2-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.16	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 28 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 -- 2-1-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-4 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 6= Mechanical
Max Horiz 2=99 (LC 9)
Max Uplift 2=-110 (LC 12), 6=-139 (LC 9)
Max Grav 2=423 (LC 1), 6=443 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-450/144, 4-5=-324/192, 5-6=-432/251
BOT CHORD 2-7=-194/320, 6-7=-45/49
WEBS 4-7=-68/168, 5-7=-254/480

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) Bearings are assumed to be: Joint 2 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 139 lb uplift at joint 6 and 110 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.
10) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 221 lb down and 65 lb up at 3-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) 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, 2-6=-20
Concentrated Loads (lb)
Vert: 4=-59 (F), 7=-221 (F)

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	J6	Jack-Closed Girder	1	1	Job Reference (optional) I66660866

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

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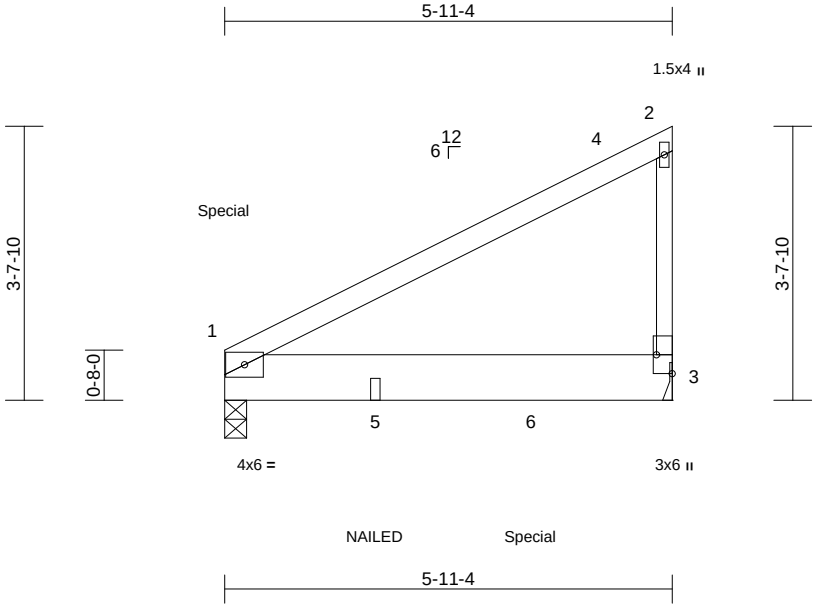

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Plate Offsets (X, Y): [3:Edge,0-2-8]

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)	-0.06	1-3	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.12	1-3	>584	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 31 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-3-6 oc bracing.

REACTIONS (size) 1=0-3-8, 3= Mechanical
Max Horiz 1=139 (LC 9)
Max Uplift 1=-227 (LC 12), 3=-460 (LC 12)
Max Grav 1=958 (LC 1), 3=1555 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-196/132, 2-3=-199/264
BOT CHORD 1-3=-64/70

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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 5-10-0 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 1 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 227 lb uplift at joint 1 and 460 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.
7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 38 lb down and 27 lb up at 0-1-12 on top chord, and 1813 lb down and 549 lb up at 4-0-13 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 1-3=-20
Concentrated Loads (lb)
Vert: 1=-38 (B), 5=-150 (B), 6=-1813 (B)

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	J1	Jack-Open	36	1	Job Reference (optional)

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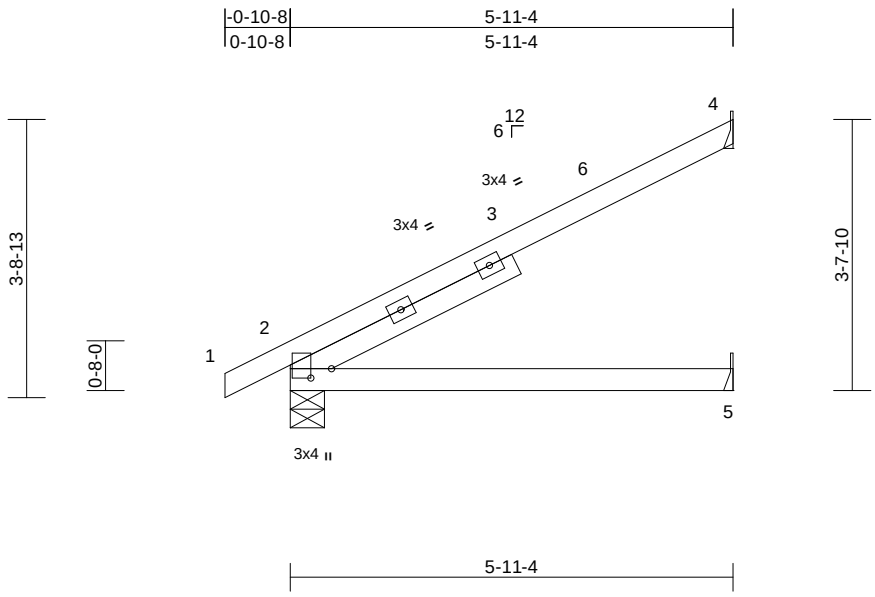

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Plate Offsets (X, Y): [2:0-1-8,0-3-5]

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	0.79	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: 25 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-4-1

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=147 (LC 12)
Max Uplift 2=-41 (LC 12), 4=-132 (LC 12)
Max Grav 2=330 (LC 1), 4=201 (LC 1), 5=117 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-141/72
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 132 lb uplift at joint 4.
6) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	CG5	Diagonal Hip Girder	3	1	Job Reference (optional) I66660868

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

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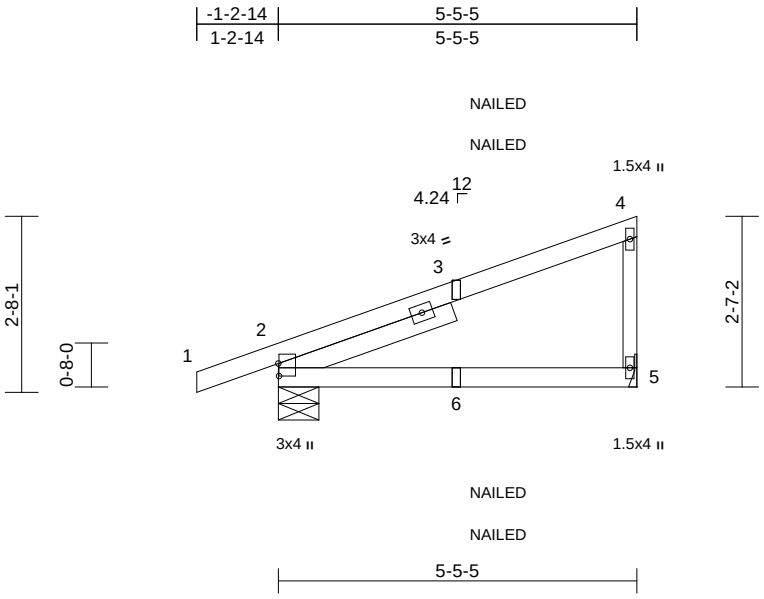

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Plate Offsets (X, Y): [2:0-2-5,0-0-2]

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	0.73	Vert(LL)	-0.05	2-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.10	2-5	>657	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: 25 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 -- 2-9-9

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) 2=0-7-6, 5= Mechanical
Max Horiz 2=110 (LC 11)
Max Uplift 2=-106 (LC 8), 5=-59 (LC 12)
Max Grav 2=337 (LC 1), 5=230 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/5, 2-4=-143/84, 4-5=-177/251
BOT CHORD 2-5=-46/50

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 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 59 lb uplift at joint 5 and 106 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	V9	Valley	1	1	Job Reference (optional) I66660869

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

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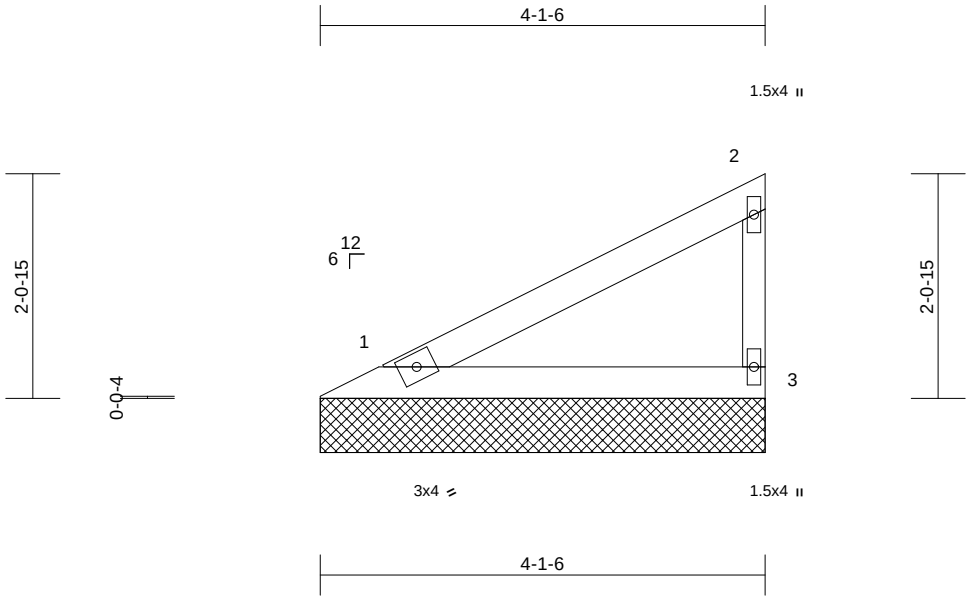

Scale = 1:21.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	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
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-1-6, 3=4-1-6
Max Horiz 1=76 (LC 9)
Max Uplift 1=-24 (LC 12), 3=-43 (LC 12)
Max Grav 1=154 (LC 1), 3=154 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-108/73, 2-3=-120/155
BOT CHORD 1-3=-35/38

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 24 lb uplift at joint 1 and 43 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	V4	Valley	1	1	Job Reference (optional) I66660870

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

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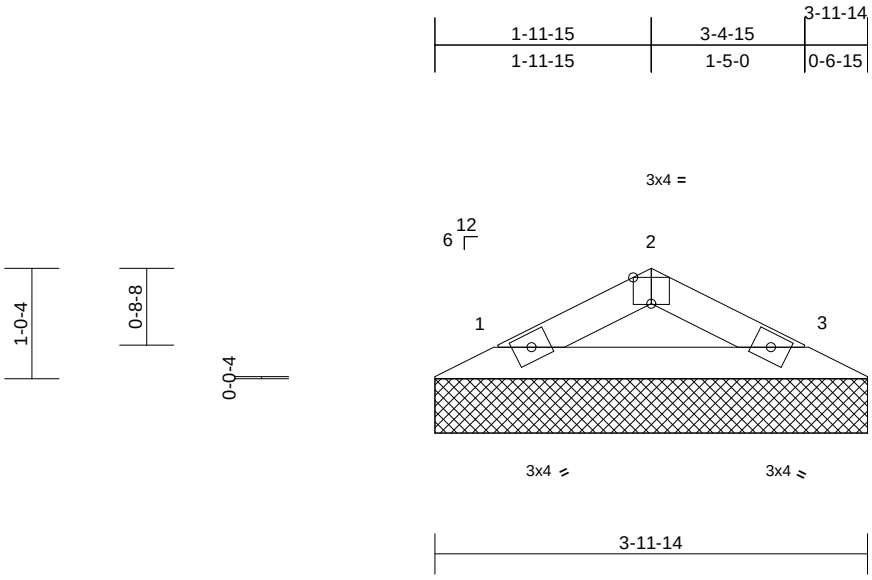

Scale = 1:21.3

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 11 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 4-0-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-11-14, 3=3-11-14
Max Horiz 1=13 (LC 16)
Max Uplift 1=-19 (LC 12), 3=-19 (LC 13)
Max Grav 1=127 (LC 1), 3=127 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-127/113, 2-3=-127/120
BOT CHORD 1-3=-78/98

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 19 lb uplift at joint 1 and 19 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	V6	Valley	1	1	Job Reference (optional)

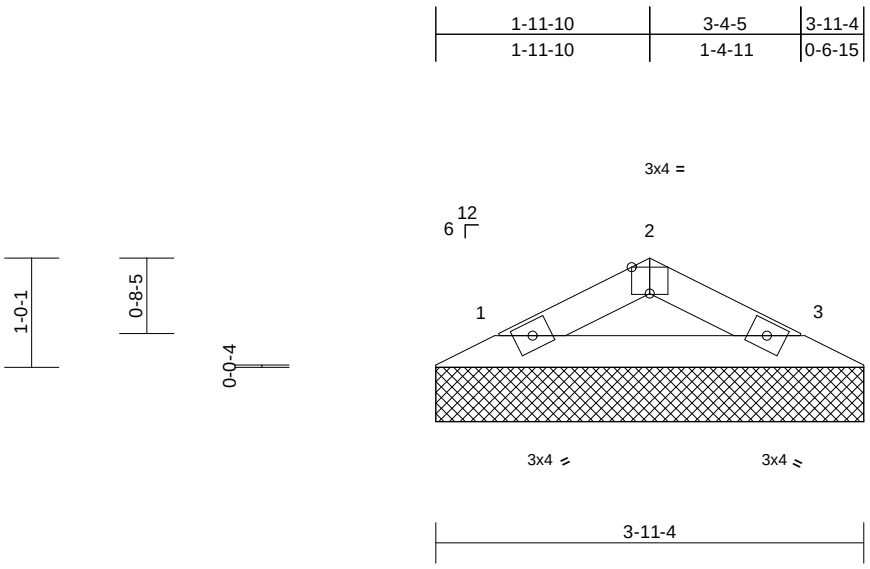

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Plate Offsets (X, Y): [2:0-2-0,Edge]

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	0.06	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	0.00	Horiz(TL)	0.00	3	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

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

REACTIONS (size) 1=3-11-4, 3=3-11-4
Max Horiz 1=-13 (LC 17)
Max Uplift 1=-19 (LC 12), 3=-19 (LC 13)
Max Grav 1=124 (LC 1), 3=124 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-125/111, 2-3=-125/118
BOT CHORD 1-3=-76/96

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 19 lb uplift at joint 1 and 19 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	J3	Jack-Open	4	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I66660872
10/03/2024

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

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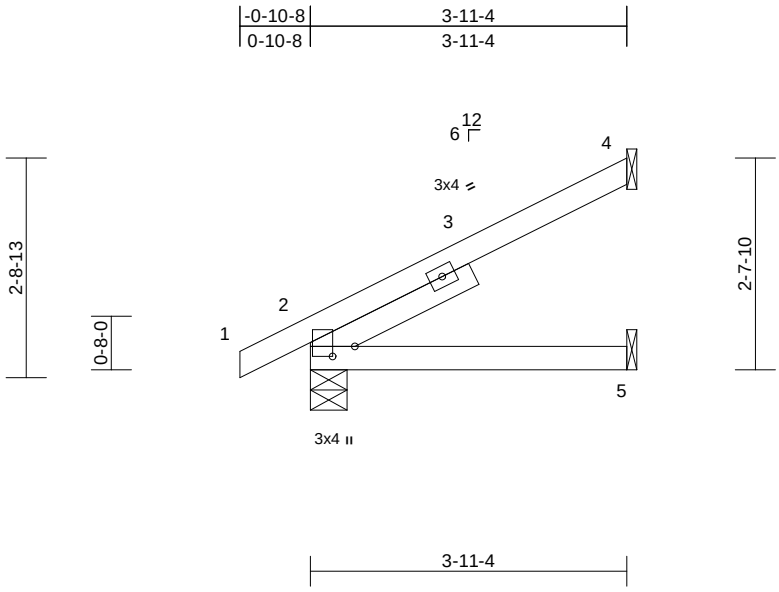

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Plate Offsets (X, Y): [2:0-1-8,0-3-5]

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	0.18	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 -- 2-2-11

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-4 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=103 (LC 12)
Max Uplift 2=-33 (LC 12), 4=-88 (LC 12)
Max Grav 2=243 (LC 1), 4=129 (LC 1), 5=78 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-97/50
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) 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 88 lb uplift at joint 4 and 33 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660873
P240941-01	LG6	Lay-In Gable	1	1	Job Reference (optional)	

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

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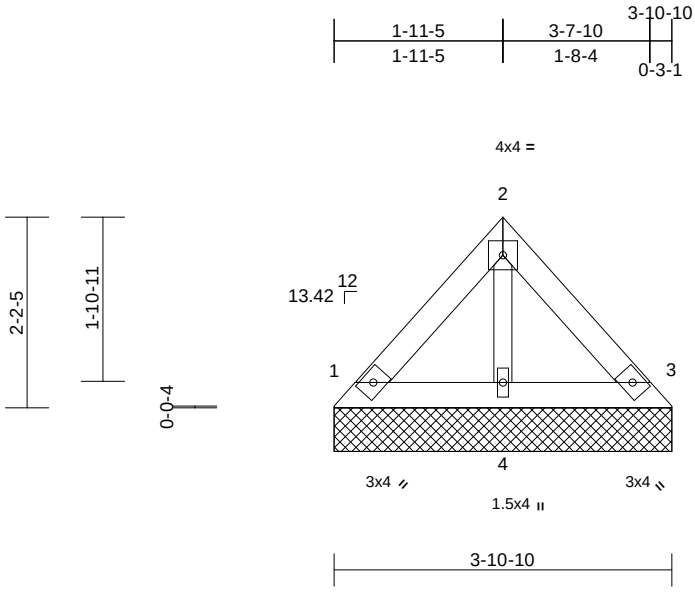

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	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 8)
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

July 5,2024

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
10/03/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660874
P240941-01	J4	Jack-Open	1	1	Job Reference (optional)	

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

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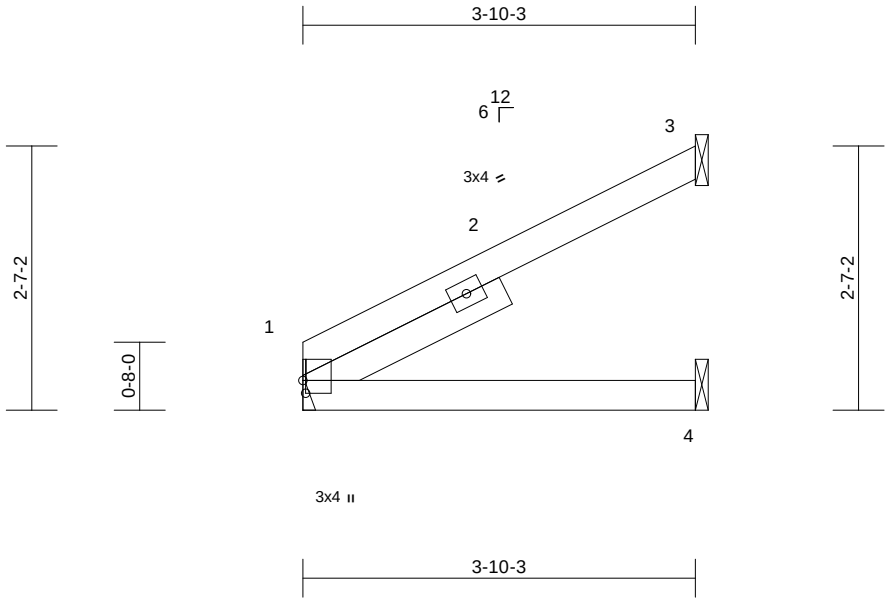

Scale = 1:22.6

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

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	0.33	Vert(LL)	-0.01	1-4	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	1-4	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-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 -- 2-2-1

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 (lb/size) 1=170/ Mechanical, 3=133/ Mechanical, 4=38/ Mechanical
Max Horiz 1=98 (LC 12)
Max Uplift 1=-8 (LC 12), 3=-89 (LC 12)
Max Grav 1=170 (LC 1), 3=133 (LC 1), 4=76 (LC 3)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) Refer to girder(s) for truss to truss connections.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 89 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	J9	Jack-Open	9	1	Job Reference (optional) I66660875

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:05:41 Page: 1
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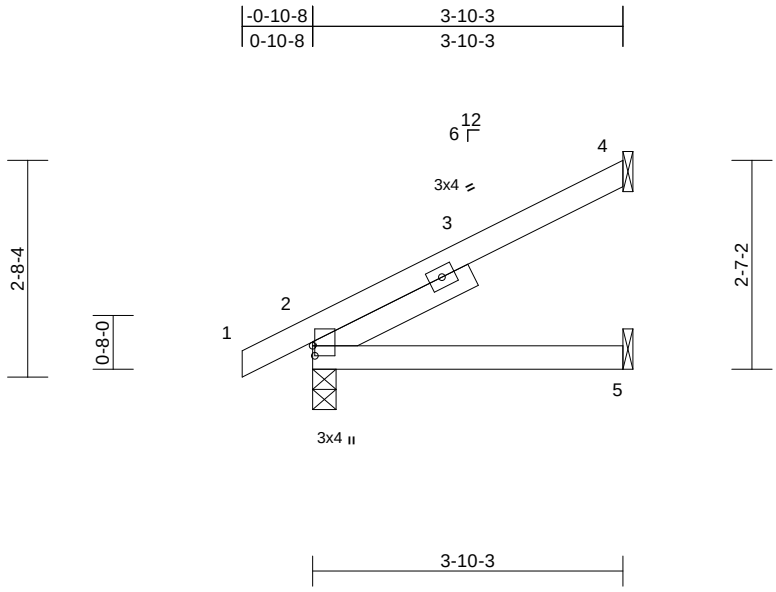

Scale = 1:28.6

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	0.31	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: 17 lb	FT = 20%

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

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=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=101 (LC 12)
Max Uplift 2=-33 (LC 12), 4=-87 (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=0/6, 2-4=-95/49
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 87 lb uplift at joint 4 and 33 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	V1	Valley	1	1	Job Reference (optional) I66660876

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

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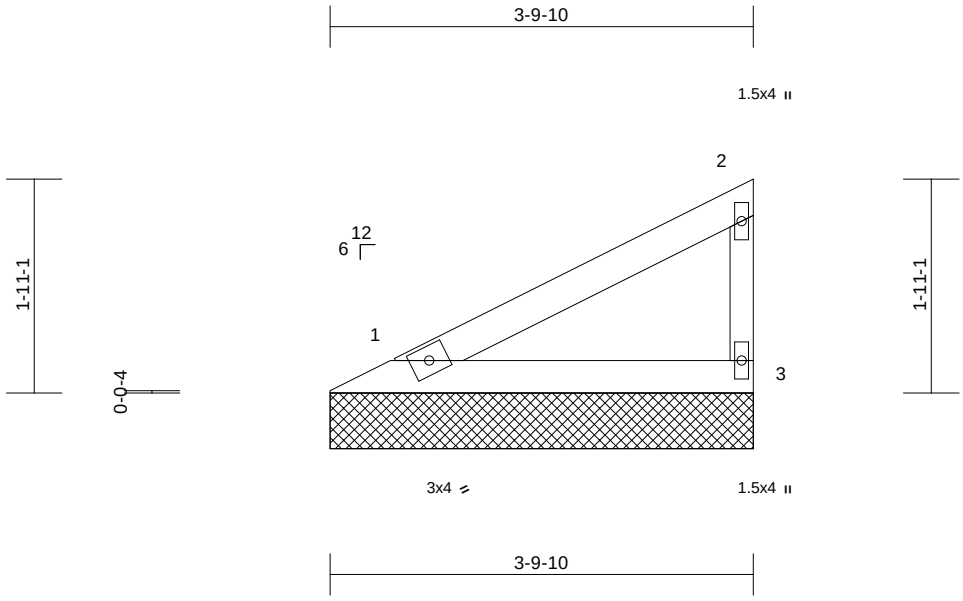

Scale = 1:20.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	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: 12 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-9-10, 3=3-9-10
Max Horiz 1=69 (LC 9)
Max Uplift 1=-22 (LC 12), 3=-39 (LC 12)
Max Grav 1=140 (LC 1), 3=140 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-98/66, 2-3=-109/141
BOT CHORD 1-3=-32/35

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 22 lb uplift at joint 1 and 39 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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	LG3	Lay-In Gable	1	1	Job Reference (optional) I66660877

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

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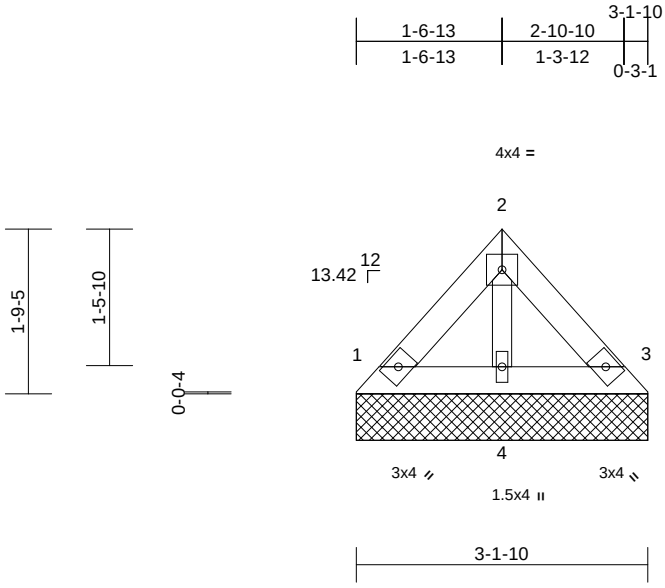

Scale = 1:24.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	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: 11 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 3-2-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-1-10, 3=3-1-10, 4=3-1-10
Max Horiz 1=41 (LC 11)
Max Uplift 1=-21 (LC 13), 3=-19 (LC 13)
Max Grav 1=74 (LC 1), 3=74 (LC 1), 4=78 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-60/30, 2-3=-54/25
BOT CHORD 1-4=-13/30, 3-4=-13/30
WEBS 2-4=-47/13

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 21 lb uplift at joint 1 and 19 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	CG3	Diagonal Hip Girder	2	1	Job Reference (optional)

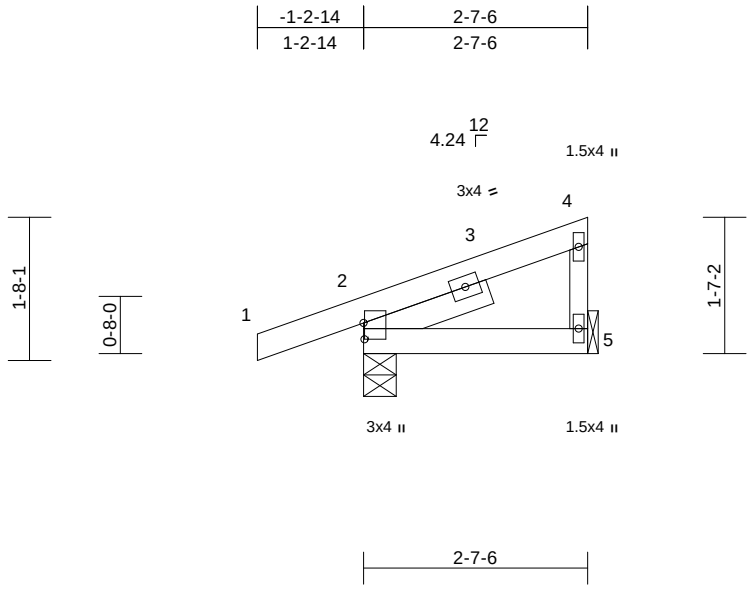

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Plate Offsets (X, Y): [2:0-2-5,0-0-2]

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	0.15	Vert(LL)	0.00	2-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	2-5	>999	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: 13 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 -- 1-6-7

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

REACTIONS (size) 2=0-4-9, 5= Mechanical
Max Horiz 2=62 (LC 9)
Max Uplift 2=-89 (LC 8), 5=-24 (LC 12)
Max Grav 2=221 (LC 1), 5=92 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/5, 2-4=-68/45, 4-5=-85/113
BOT CHORD 2-5=-26/28

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 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 2. This connection is for uplift only and does not consider lateral forces.
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.

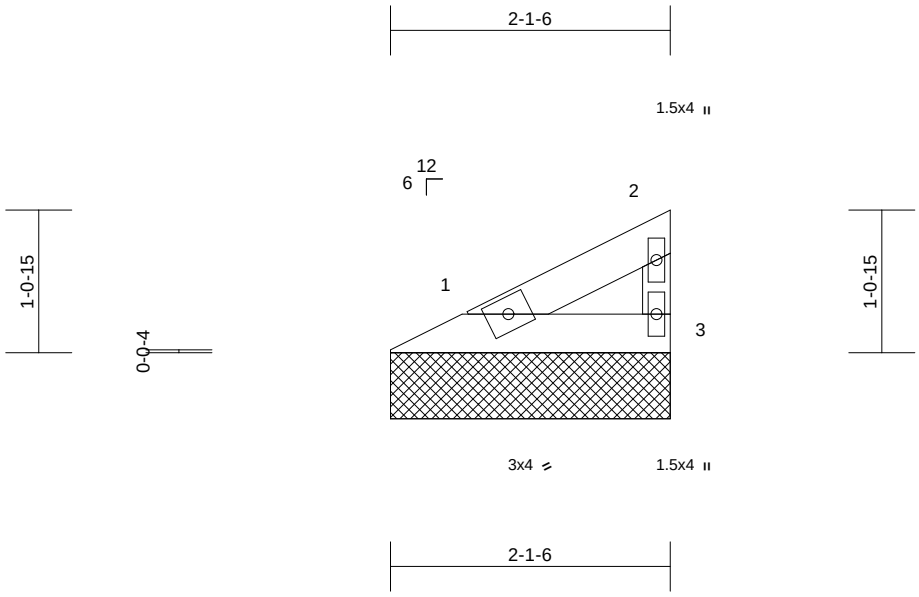
LOAD CASE(S) Standard

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	V10	Valley	1	1	Job Reference (optional) I66660879



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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	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	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: 6 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-1-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-1-6, 3=2-1-6
Max Horiz 1=32 (LC 9)
Max Uplift 1=-10 (LC 12), 3=-18 (LC 12)
Max Grav 1=64 (LC 1), 3=64 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-45/30, 2-3=-50/65
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 10 lb uplift at joint 1 and 18 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	J8	Jack-Open	3	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I66660880
10/03/2024

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

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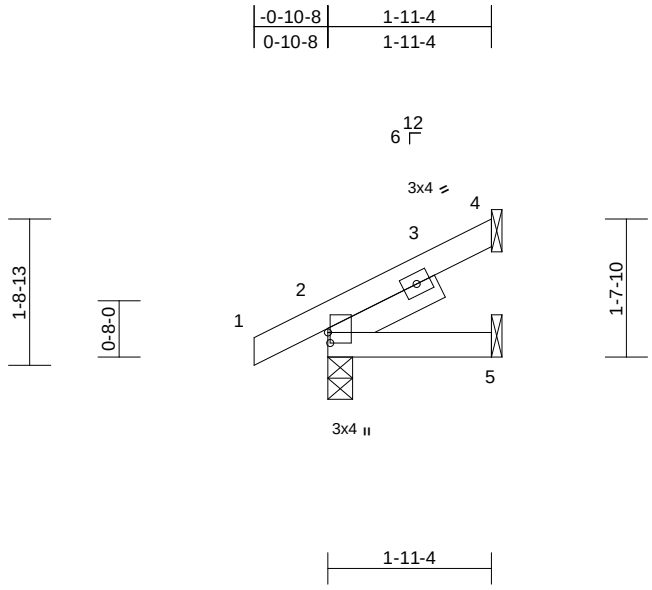

Scale = 1:27.3

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 -- 1-5-3

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-11-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=61 (LC 12)
Max Uplift 2=-26 (LC 12), 4=-45 (LC 12)
Max Grav 2=162 (LC 1), 4=53 (LC 1), 5=39 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-55/27
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 45 lb uplift at joint 4.
6) One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	J7	Jack-Open	2	1	Job Reference (optional)

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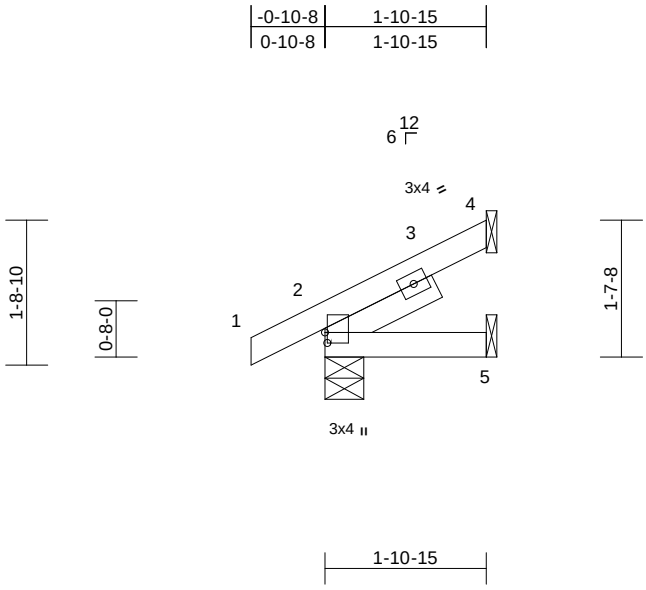

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Plate Offsets (X, Y): [2:0-1-8,0-0-5]

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 -- 1-5-3

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=60 (LC 12)
Max Uplift 2=-26 (LC 12), 4=-45 (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=0/6, 2-4=-54/26
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 26 lb uplift at joint 2 and 45 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	J5	Jack-Open	1	1	Job Reference (optional)

I66660882

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:06:41 Page: 1
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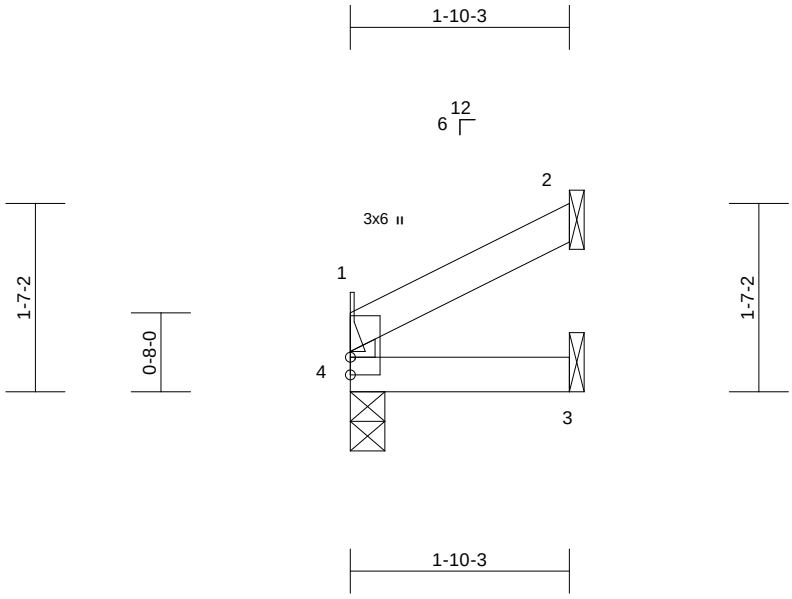


Scale = 1:19.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	3-4	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	3-4	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 6 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 1-10-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 2= Mechanical, 3= Mechanical, 4=0-3-8
Max Horiz 1=33 (LC 9)
Max Uplift 1=-21 (LC 12), 2=-34 (LC 12)
Max Grav 1=64 (LC 1), 2=58 (LC 1), 3=34 (LC 3), 4=36 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=0/0, 1-2=-39/20
BOT CHORD 3-4=0/0

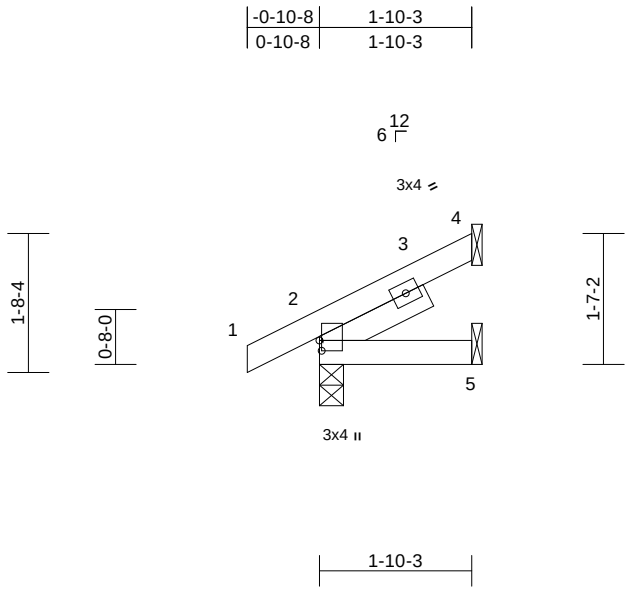
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for 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 4 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 1 and 34 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) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187	I66660883
P240941-01	J2	Jack-Open	13	1	Job Reference (optional)	



Scale = 1:28

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 -- 1-5-2

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=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=59 (LC 12)
Max Uplift 2=-26 (LC 12), 4=-43 (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=0/6, 2-4=-53/25
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 26 lb uplift at joint 2 and 43 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

July 5,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 187
P240941-01	V2	Valley	1	1	Job Reference (optional)

I66660884

10/03/2024

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

Run: 8.91 S 8.63 Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Wed Jul 03 11:06:42 Page: 1
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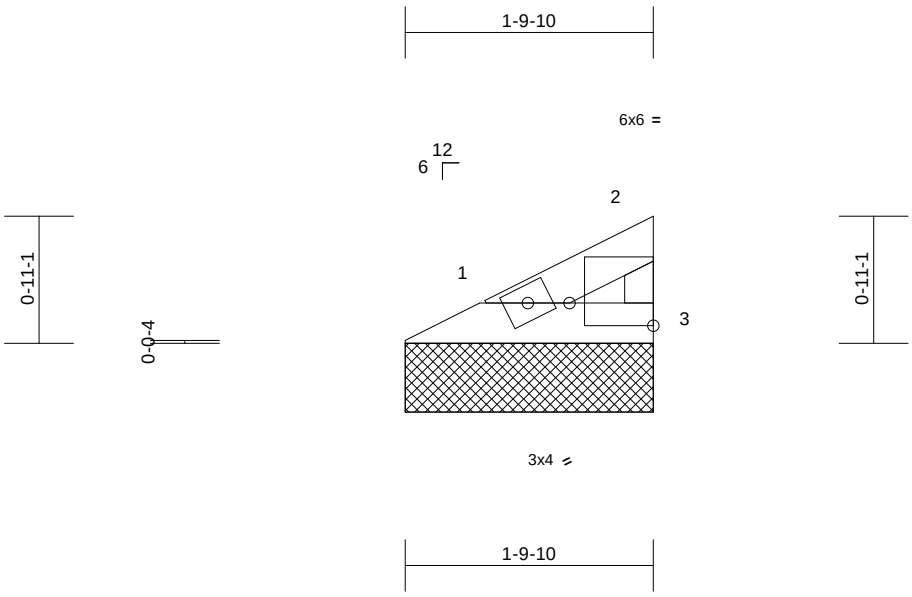


Scale = 1:16.7

Plate Offsets (X, Y): [2:Edge,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	0.02	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	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: 5 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 1-10-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=1-9-10, 3=1-9-10
Max Horiz 1=25 (LC 9)
Max Uplift 1=-8 (LC 12), 3=-14 (LC 12)
Max Grav 1=50 (LC 1), 3=50 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-35/24, 2-3=-39/50
BOT CHORD 1-3=-12/13

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 8 lb uplift at joint 1 and 14 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.

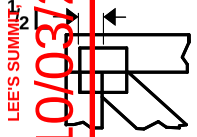
LOAD CASE(S) Standard

July 5,2024

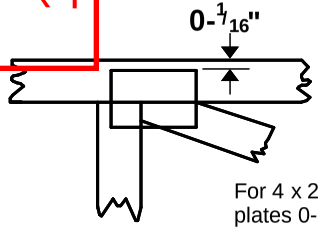
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Symbols

PLATE LOCATION AND ORIENTATION



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



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.

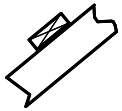
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

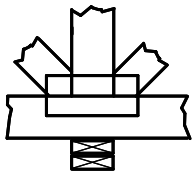
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

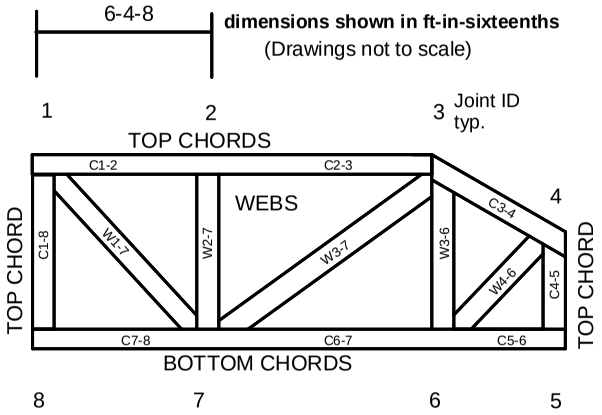


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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®

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.