MiTek®

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

RE: P241241-01 - Roof - MH Lot 201

Site Information:

Project Customer: Clayton Properties Project Name: Westport - Modern Prairie
Lot/Block: 201 Subdivision: Highland Meadows
Model: Westport - Modern Prairie
Address: 1059 SW Fiord Dr
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
Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
Wind Speed: 115 mph
Floor Load: N/A psf
Roof Load: 45.0 psf
Mean Roof Height (feet): 35
Exposure Category: C

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I70321878	A1	12/20/24	35	I70321912	LAY04	12/20/24
2	I70321879	A2	12/20/24	36	I70321913	LAY05	12/20/24
3	I70321880	A3	12/20/24	37	I70321914	LAY06	12/20/24
4	I70321881	A4	12/20/24	38	I70321915	V1	12/20/24
5	I70321882	A5	12/20/24	39	I70321916	V2	12/20/24
6	I70321883	A6	12/20/24	40	I70321917	V3	12/20/24
7	I70321884	A7	12/20/24	41	I70321918	V4	12/20/24
8	I70321885	A8	12/20/24				
9	I70321886	A9	12/20/24				
10	I70321887	A10	12/20/24				
11	I70321888	A11	12/20/24				
12	I70321889	A12	12/20/24				
13	I70321890	A13	12/20/24				
14	I70321891	A14	12/20/24				
15	I70321892	A15	12/20/24				
16	I70321893	A16	12/20/24				
17	I70321894	A17	12/20/24				
18	I70321895	A18	12/20/24				
19	I70321896	A19	12/20/24				
20	I70321897	A20	12/20/24				
21	I70321898	A21	12/20/24				
22	I70321899	B1	12/20/24				
23	I70321900	B2	12/20/24				
24	I70321901	B3	12/20/24				
25	I70321902	CG1	12/20/24				
26	I70321903	J1	12/20/24				
27	I70321904	J2	12/20/24				
28	I70321905	J3	12/20/24				
29	I70321906	J4	12/20/24				
30	I70321907	J8	12/20/24				
31	I70321908	J9	12/20/24				
32	I70321909	LAY01	12/20/24				
33	I70321910	LAY02	12/20/24				
34	I70321911	LAY03	12/20/24				

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

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

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

December 20,2024

Sevier, Scott

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I70321878
01/07/2025

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	A1	Hip Girder	1	3	Job Reference (optional)

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

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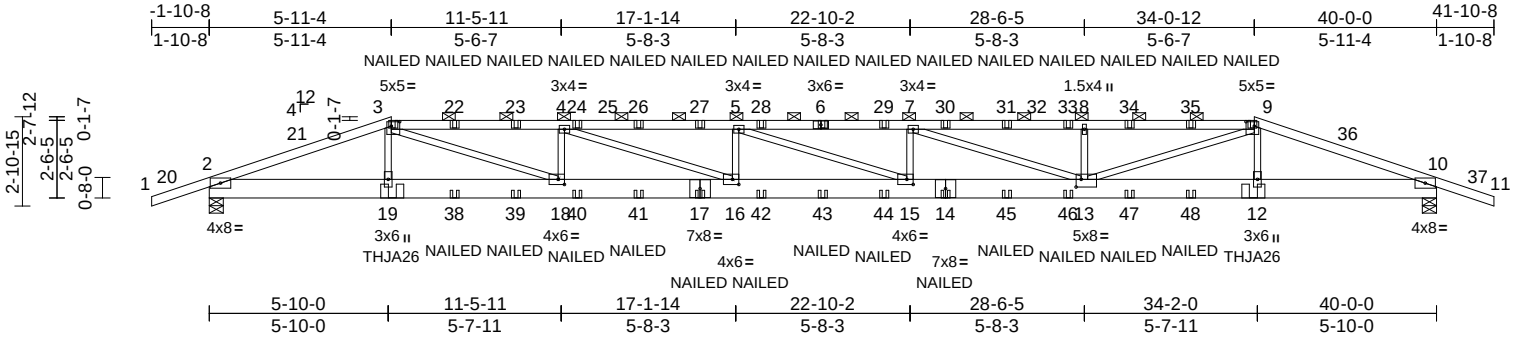

Scale = 1:75.1

Plate Offsets (X, Y): [3:0-3-4,0-1-12], [9:0-3-4,0-1-12], [13:0-2-0,0-3-0], [15:0-2-8,0-2-0], [16:0-2-8,0-2-0], [18:0-2-8,0-2-0]

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	0.43	Vert(LL)	-0.55	15-16	>858	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-1.01	15-16	>470	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.63	Horz(CT)	0.11	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 577 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 3-6,6-9:2x4 SP 2400F 2.0E
BOT CHORD 2x8 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.): 3-9.
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=48 (LC 12)
Max Uplift 2=-982 (LC 8), 10=-981 (LC 9)
Max Grav 2=3382 (LC 1), 10=3382 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-8496/2362, 3-4=-12964/3632, 4-5=-15492/4279, 5-7=-15508/4284, 7-8=-12882/3604, 8-9=-12886/3606, 9-10=-8509/2366, 10-11=0/28
BOT CHORD 2-19=-2116/7888, 18-19=-2115/7862, 16-18=-3505/12959, 15-16=-4163/15492, 13-15=-4157/15508, 12-13=-2126/7872, 10-12=-2128/7900
WEBS 3-19=-32/598, 9-12=-43/620, 3-18=-1507/5520, 9-13=-1476/5427, 4-18=-1821/696, 4-16=-731/2732, 5-16=-734/390, 5-15=-25/59, 7-15=0/455, 7-13=-2832/761, 8-13=-873/455

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 5-11-4, Exterior(2R) 5-11-4 to 13-0-2, Interior (1) 13-0-2 to 34-0-12, Exterior(2R) 34-0-12 to 41-1-10, Interior (1) 41-1-10 to 41-10-8 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 982 lb uplift at joint 2 and 981 lb uplift at joint 10.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use Simpson Strong-Tie 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) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Left Hand Hip) or equivalent at 34-0-6 from the left end to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) "NAILED" indicates 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: 1-3=-70, 3-9=-70, 9-11=-70, 2-10=-20
Concentrated Loads (lb)
Vert: 3=-115 (B), 6=-115 (B), 17=-39 (B), 19=-343 (B), 12=-343 (B), 9=-115 (B), 14=-39 (B), 22=-115 (B), 23=-115 (B), 24=-115 (B), 26=-115 (B), 27=-115 (B), 28=-115 (B), 29=-115 (B), 30=-115 (B), 31=-115 (B), 33=-115 (B), 34=-115 (B), 35=-115 (B), 38=-39 (B), 39=-39 (B), 40=-39 (B), 41=-39 (B), 42=-39 (B), 43=-39 (B), 44=-39 (B), 45=-39 (B), 46=-39 (B), 47=-39 (B), 48=-39 (B)

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321879
P241241-01	A2	Hip	1	1	Job Reference (optional)	

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

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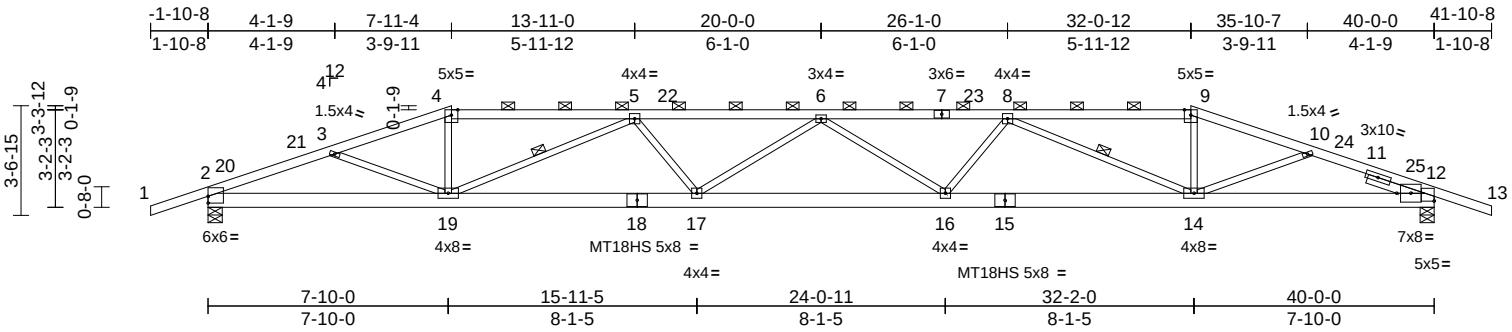

Scale = 1:75.2

Plate Offsets (X, Y): [2:Edge,0-2-10], [12:0-1-9,0-3-8], [12:Edge,0-3-2]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.54	16-17	>875	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.99	16-17	>480	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.14	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 197 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2
SLIDER Right 2x4 SP No.2 -- 1-11-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (2-4-4 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 9-1-6 oc bracing.
WEBS 1 Row at midpt 5-19, 8-14

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=60 (LC 12)
Max Uplift 2=-476 (LC 8), 12=-476 (LC 9)
Max Grav 2=1927 (LC 1), 12=1927 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-3972/987, 3-4=-4061/932, 4-5=-3804/904, 5-6=-5907/1365, 6-8=-5911/1365, 8-9=-3795/906, 9-10=-4027/930, 10-12=-3900/968, 12-13=0/24
BOT CHORD 2-19=-838/3592, 17-19=-1228/5643, 16-17=-1316/6213, 14-16=-1220/5641, 12-14=-826/3527
WEBS 4-19=-130/911, 9-14=-116/858, 5-17=-6/488, 5-19=-2100/528, 6-17=-433/183, 6-16=-428/183, 8-16=-8/498, 8-14=-2109/526, 3-19=-13/462, 10-14=-28/502

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 7-11-4, Exterior(2R) 7-11-4 to 15-0-2, Interior (1) 15-0-2 to 32-0-12, Exterior(2R) 32-0-12 to 39-1-10, Interior (1) 39-1-10 to 41-10-8 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 2400F 2.0E crushing capacity of 805 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 476 lb uplift at joint 2 and 476 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

December 20,2024

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	A3	Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
01/07/2025

I70321880

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

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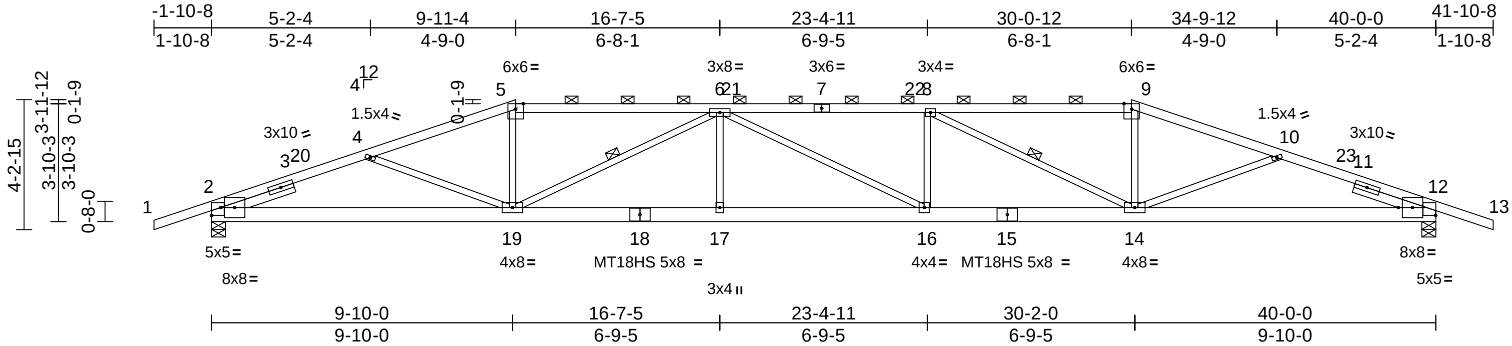

Scale = 1:75.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.46	16-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.84	16-17	>568	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.18	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 182 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-5-15, Right 2x4 SP No.2 -- 2-5-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-11-5 oc purlins, except
2-0-0 oc purlins (2-8-0 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-19, 8-14

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=73 (LC 16)
Max Uplift 2=-469 (LC 8), 12=-469 (LC 9)
Max Grav 2=1927 (LC 1), 12=1927 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-4=-4004/1046, 4-5=-3908/934, 5-6=-3674/920, 6-8=-4942/1240, 8-9=-3675/917, 9-10=-3910/930, 10-12=-4005/1038, 12-13=0/24
BOT CHORD 2-19=-889/3642, 17-19=-1063/4950, 16-17=-1063/4950, 14-16=-1051/4942, 12-14=-892/3642
WEBS 5-19=-95/786, 6-19=-1554/383, 6-17=0/253, 6-16=-132/115, 8-16=0/250, 8-14=-1544/379, 9-14=-93/784, 4-19=0/326, 10-14=0/327

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 9-11-4, Exterior(2R) 9-11-4 to 17-0-2, Interior (1) 17-0-2 to 30-0-12, Exterior(2R) 30-0-12 to 37-1-10, Interior (1) 37-1-10 to 41-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 469 lb uplift at joint 2 and 469 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

December 20,2024

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

01/07/2025

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321881
P241241-01	A4	Hip	1	1	Job Reference (optional)	

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

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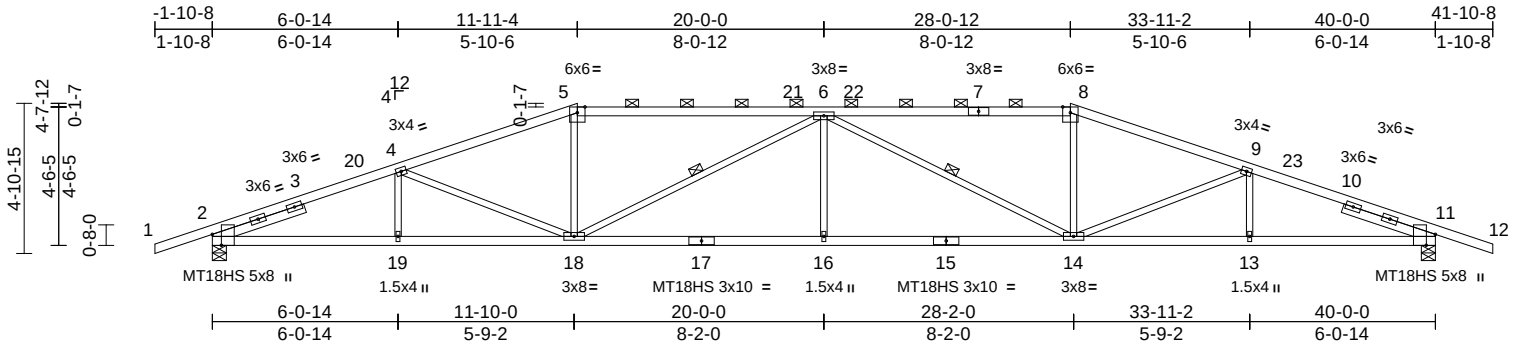

Scale = 1:75.4

Plate Offsets (X, Y): [2:0-4-5,Edge], [11:0-4-5,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	0.91	Vert(LL)	-0.41	16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.77	14-16	>625	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.25	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 174 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-2-0, Right 2x4 SP No.2 -- 3-2-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-4 oc purlins, except
2-0-0 oc purlins (2-2-0 max.): 5-8.
BOT CHORD Rigid ceiling directly applied or 7-5-0 oc bracing.
WEBS 1 Row at midpt 6-18, 6-14

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=86 (LC 16)
Max Uplift 2=-453 (LC 8), 11=-453 (LC 9)
Max Grav 2=1931 (LC 1), 11=1931 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-4149/1030, 4-5=-3776/958, 5-6=-3542/948, 6-8=-3547/949, 8-9=-3782/960, 9-11=-4147/1029, 11-12=0/18
BOT CHORD 2-19=-878/3796, 18-19=-878/3796, 16-18=-933/4351, 14-16=-933/4351, 13-14=-884/3793, 11-13=-884/3793
WEBS 4-19=0/206, 4-18=-293/199, 5-18=-83/683, 6-18=-1110/270, 6-16=0/337, 6-14=-1102/268, 8-14=-81/675, 9-14=-283/199, 9-13=0/207

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 11-11-4, Exterior(2R) 11-11-4 to 19-0-2, Interior (1) 19-0-2 to 28-0-12, Exterior(2R) 28-0-12 to 35-1-10, Interior (1) 35-1-10 to 41-10-8 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 453 lb uplift at joint 2 and 453 lb uplift at joint 11.
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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321882
P241241-01	A5	Hip	1	1	Job Reference (optional)	

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

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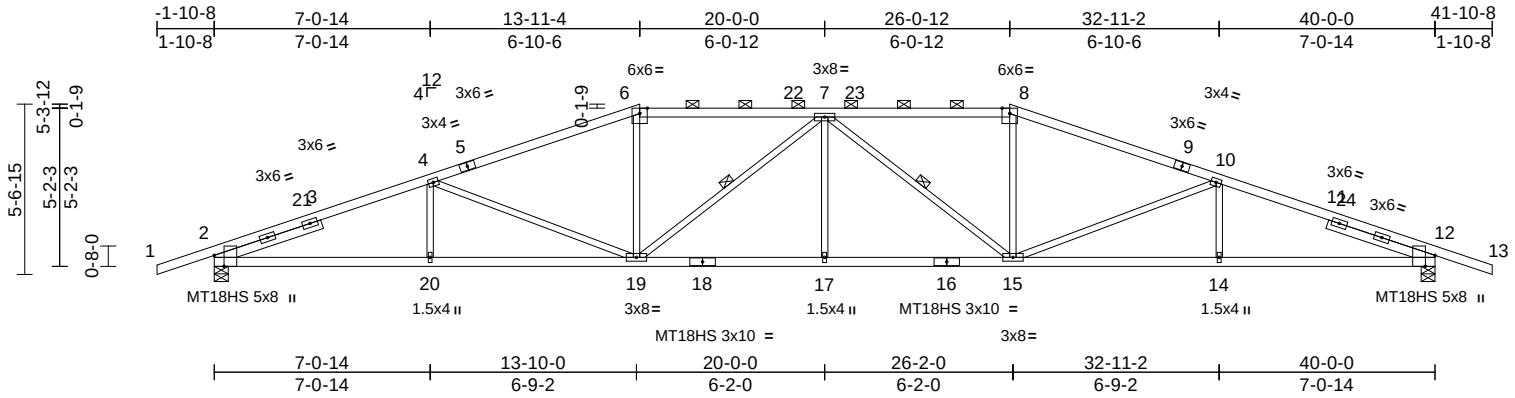

Scale = 1:75.5

Plate Offsets (X, Y): [2:0-4-5,Edge], [12:0-4-5,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	0.86	Vert(LL)	-0.36	17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.66	17-19	>724	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.23	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 177 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E *Except* 6-8:2x4 SP No.2
BOT CHORD	2x4 SP 1650F 1.5E *Except* 18-16:2x4 SP No.2
WEBS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 3-8-5, Right 2x4 SP No.2 -- 3-8-5

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-11-1 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied or 6-7-10 oc bracing.
WEBS	1 Row at midpt 7-19, 7-15

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=-98 (LC 13)
Max Uplift 2=-443 (LC 8), 12=-443 (LC 9)
Max Grav 2=1931 (LC 1), 12=1931 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/18, 2-4=-4196/1039, 4-6=-3558/937, 6-7=-3320/932, 7-8=-3320/932, 8-10=-3558/937, 10-12=-4196/1039, 12-13=0/18
BOT CHORD	2-20=-881/3828, 19-20=-881/3828, 17-19=-794/3708, 15-17=-794/3708, 14-15=-889/3828, 12-14=-889/3828
WEBS	4-20=0/276, 4-19=-577/244, 6-19=-83/656, 7-19=-701/180, 7-17=0/233, 7-15=-701/179, 8-15=-83/656, 10-15=-577/245, 10-14=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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 13-11-4, Exterior(2R) 13-11-4 to 21-0-2, Interior (1) 21-0-2 to 26-0-12, Exterior(2R) 26-0-12 to 32-11-2, Interior (1) 32-11-2 to 41-10-8 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 443 lb uplift at joint 2 and 443 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321883
P241241-01	A6	Hip	1	1	Job Reference (optional)	

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

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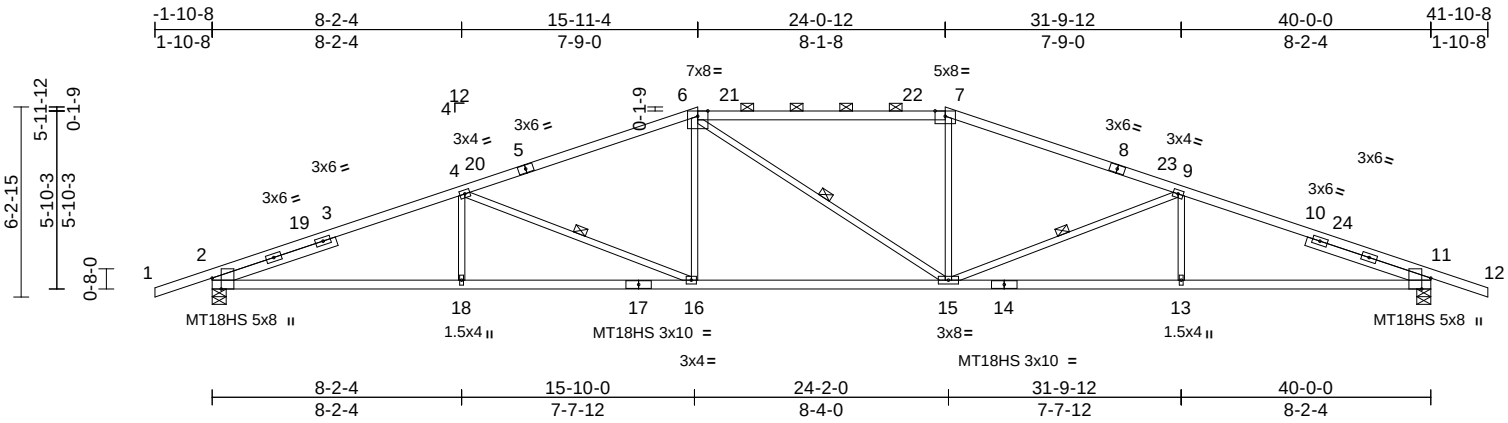

Scale = 1:75.6

Plate Offsets (X, Y): [2:0-4-5,Edge], [11:0-4-5,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	1.00	Vert(LL)	-0.32	16-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.64	15-16	>752	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.22	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 175 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E *Except* 1-5,8-12:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP 1650F 1.5E
WEBS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 4-3-6, Right 2x4 SP No.2 -- 4-3-6

BRACING

TOP CHORD	Structural wood sheathing directly applied, except 2-0-0 oc purlins (2-2-0 max.): 6-7.
BOT CHORD	Rigid ceiling directly applied or 7-7-3 oc bracing.
WEBS	1 Row at midpt 4-16, 6-15, 9-15

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=111 (LC 12)
Max Uplift 2=-431 (LC 8), 11=-431 (LC 9)
Max Grav 2=1931 (LC 1), 11=1931 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/18, 2-4=-4154/1043, 4-6=-3362/917, 6-7=-3113/923, 7-9=-3363/917, 9-11=-4153/1043, 11-12=0/18
BOT CHORD	2-18=-878/3809, 16-18=-878/3809, 15-16=-651/3112, 13-15=-885/3809, 11-13=-885/3809
WEBS	4-18=0/317, 4-16=-787/288, 6-16=-13/507, 6-15=-294/296, 7-15=-2/507, 9-15=-786/289, 9-13=0/316

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 15-11-4, Exterior(2R) 15-11-4 to 23-0-2, Interior (1) 23-0-2 to 24-0-12, Exterior(2R) 24-0-12 to 31-1-10, Interior (1) 31-1-10 to 41-10-8 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 431 lb uplift at joint 2 and 431 lb uplift at joint 11.
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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321884
P241241-01	A7	Hip	1	1	Job Reference (optional)	

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

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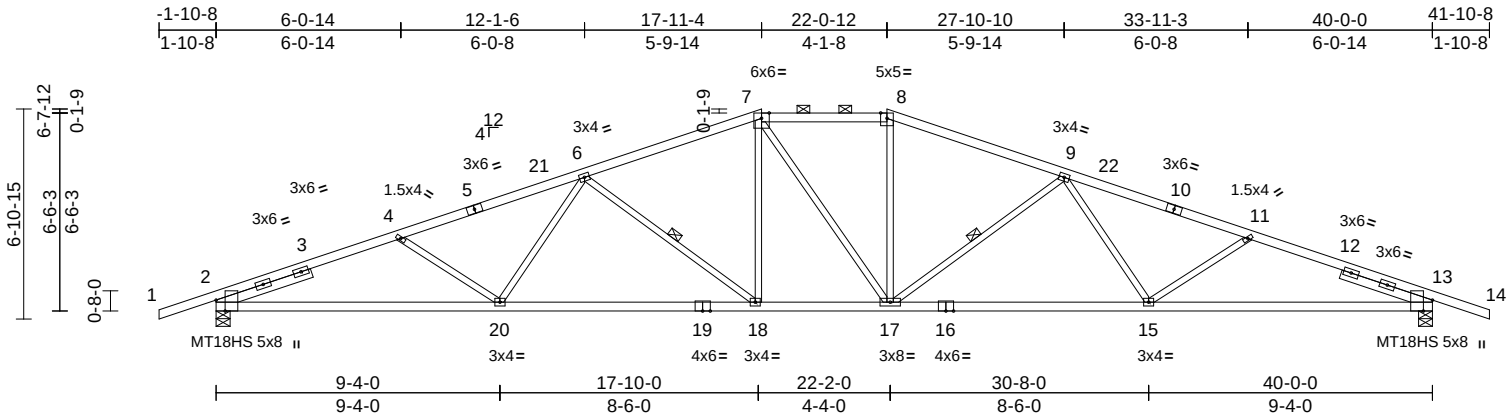

Scale = 1:75.8

Plate Offsets (X, Y): [2:0-4-5,Edge], [13:0-4-5,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	0.71	Vert(LL)	-0.33	18-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.67	18-20	>718	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.22	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 179 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E *Except* 7-8:2x4 SP No.2, 1-5,10-14:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 19-16:2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-3-7, Right 2x4 SP No.2 -- 3-1-14

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-9-12 oc purlins, except 2-0-0 oc purlins (3-2-14 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-18, 9-17

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=123 (LC 12)
Max Uplift 2=-418 (LC 8), 13=-418 (LC 9)
Max Grav 2=1931 (LC 1), 13=1931 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-4130/1010, 4-6=-3884/943, 6-7=-3064/849, 7-8=-2838/854, 8-9=-3066/863, 9-11=-3882/963, 11-13=-4126/1029, 13-14=0/18
BOT CHORD 2-20=-857/3778, 18-20=-757/3473, 17-18=-539/2837, 15-17=-785/3474, 13-15=-882/3775
WEBS 7-18=-102/618, 7-17=-250/254, 8-17=-100/604, 4-20=-208/210, 6-20=0/420, 6-18=-815/282, 9-17=-814/280, 9-15=0/418, 11-15=-206/210

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 17-11-4, Exterior(2E) 17-11-4 to 22-0-12, Exterior(2R) 22-0-12 to 29-1-10, Interior (1) 29-1-10 to 41-10-8 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 418 lb uplift at joint 2 and 418 lb uplift at joint 13.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

December 20,2024

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321885
P241241-01	A8	Common	3	1	Job Reference (optional)	

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

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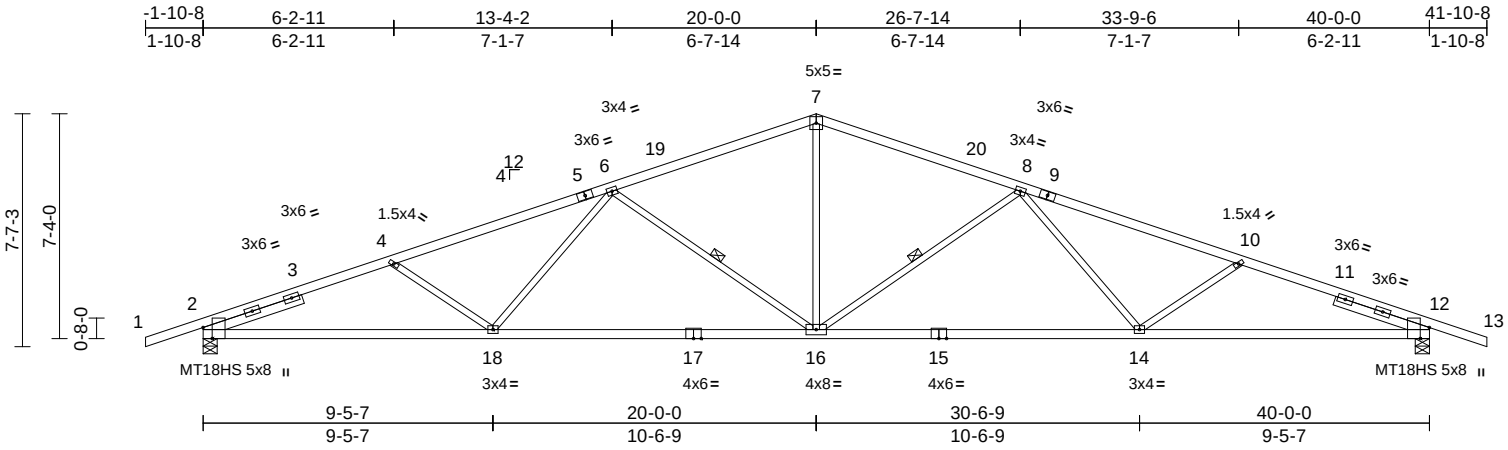

Scale = 1:75.2

Plate Offsets (X, Y): [2:0-4-5,Edge], [12:0-4-5,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	0.97	Vert(LL)	-0.34	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.74	14-16	>645	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.22	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 173 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5,9-13:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-4-14, Right 2x4 SP No.2 -- 3-2-13

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 8-0-10 oc bracing.
WEBS 1 Row at midpt 6-16, 8-16

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=137 (LC 16)
Max Uplift 2=-403 (LC 8), 12=-403 (LC 9)
Max Grav 2=1931 (LC 1), 12=1931 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-4158/913, 4-6=-3865/829, 6-7=-2811/702, 7-8=-2812/701, 8-10=-3863/829, 10-12=-4154/913, 12-13=0/18
BOT CHORD 2-18=-761/3809, 16-18=-624/3349, 14-16=-638/3350, 12-14=-775/3806
WEBS 7-16=-231/1323, 4-18=-287/236, 6-18=-9/509, 6-16=-974/337, 8-16=-974/337, 8-14=-9/507, 10-14=-285/236

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 41-10-8 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) All plates are MT20 plates unless otherwise indicated.
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 1650F 1.5E crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 403 lb uplift at joint 2 and 403 lb uplift at joint 12.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

December 20,2024

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321886
P241241-01	A9	Common	1	1	Job Reference (optional)	

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

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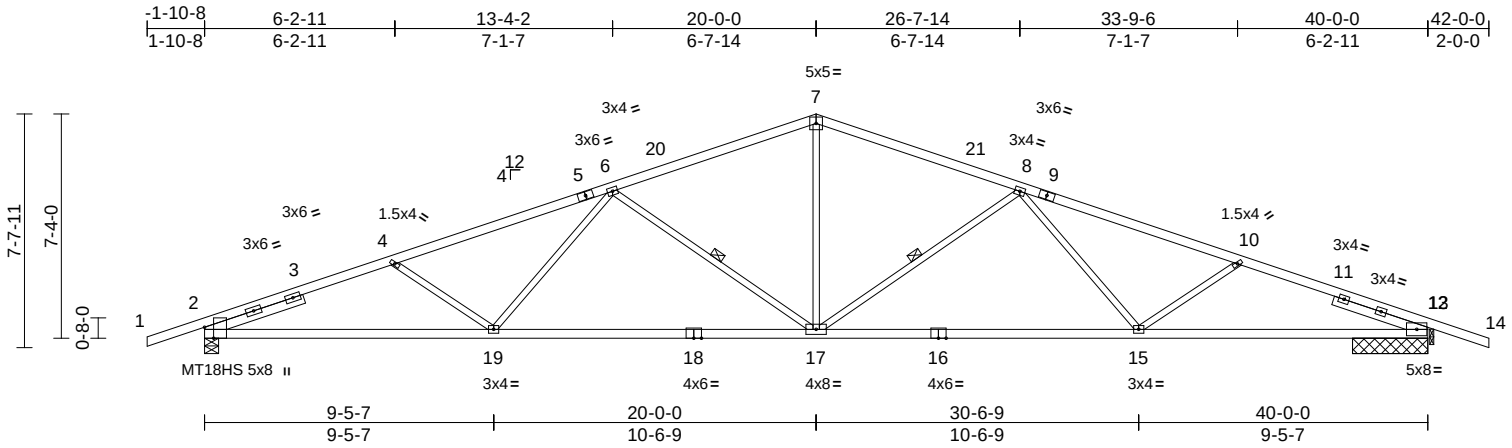

Scale = 1:75.3

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

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	0.99	Vert(LL)	-0.34	15-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.75	15-17	>642	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.22	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 173 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5,9-14:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-4-14, Right 2x4 SP No.2 -- 3-2-13

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 8-1-3 oc bracing.
WEBS 1 Row at midpt 6-17, 8-17

REACTIONS (size) 2=0-5-8, 12=2-5-8, 13=0-1-9
Max Horiz 2=-141 (LC 17)
Max Uplift 2=-403 (LC 8), 12=-371 (LC 13), 13=-1311 (LC 3)
Max Grav 2=1927 (LC 1), 12=3132 (LC 1), 13=61 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-4147/915, 4-6=-3854/831, 6-7=-2799/700, 7-8=-2799/703, 8-10=-3820/830, 10-12=-4093/921, 12-13=-1262/203, 13-14=0/41
BOT CHORD 2-19=-756/3799, 17-19=-613/3338, 15-17=-635/3327, 12-15=-764/3738
WEBS 7-17=-231/1316, 4-19=-288/236, 6-19=-9/510, 6-17=-974/337, 8-17=-963/336, 8-15=-7/479, 10-15=-258/234

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 42-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
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 13 SP 2400F 2.0E crushing capacity of 805 psi, Joint 2 SP 1650F 1.5E crushing capacity of 565 psi, Joint 12 SP 1650F 1.5E crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 403 lb uplift at joint 2, 371 lb uplift at joint 12 and 1311 lb uplift at joint 13.
8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 13.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.

LOAD CASE(S) Standard

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321887
P241241-01	A10	Common Structural Gable	1	1	Job Reference (optional)	

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

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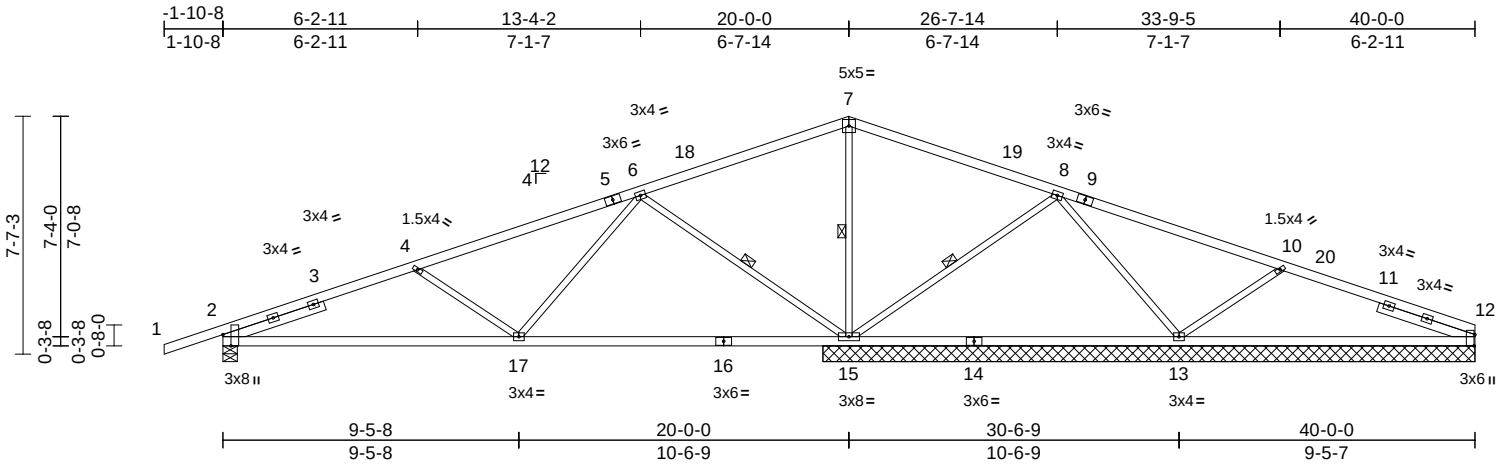

Scale = 1:73.6

Plate Offsets (X, Y): [2:0-4-5,Edge], [12:0-4-5,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	0.85	Vert(LL)	-0.16	2-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.33	2-17	>720	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.02	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 170 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 -- 3-4-14, Right 2x4 SP No.2 -- 3-2-13

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 13-15.
WEBS 1 Row at midpt 7-15, 8-15, 6-15

REACTIONS (size) 2=0-5-8, 12=20-10-0, 13=20-10-0, 15=20-10-0
Max Horiz 2=142 (LC 12)
Max Uplift 2=-220 (LC 8), 12=-88 (LC 13), 13=-191 (LC 13), 15=-376 (LC 8)
Max Grav 2=806 (LC 25), 12=369 (LC 26), 13=787 (LC 26), 15=1993 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1180/286, 4-6=-740/171, 6-7=-118/739, 7-8=-102/740, 8-10=-33/307, 10-12=-405/209
BOT CHORD 2-17=-299/1028, 15-17=-54/237, 13-15=-326/117, 12-13=-114/332
WEBS 7-15=-832/221, 8-15=-572/254, 8-13=-304/303, 10-13=-588/313, 6-17=-37/646, 4-17=-490/271, 6-15=-1056/353

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 40-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x4 MT20 unless otherwise indicated.
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 220 lb uplift at joint 2, 376 lb uplift at joint 15, 88 lb uplift at joint 12 and 191 lb uplift at joint 13.
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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321888
P241241-01	A11	Common	1	1	Job Reference (optional)	

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

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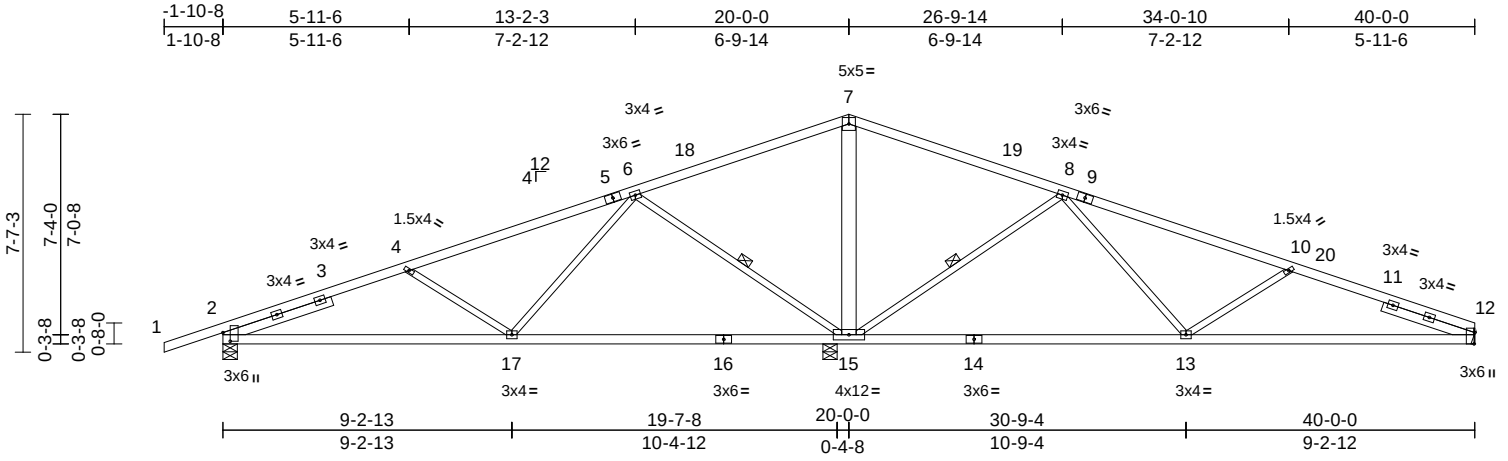

Scale = 1:73.6

Plate Offsets (X, Y): [2:0-3-5,0-2-13], [12:0-4-5,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	0.94	Vert(LL)	-0.17	15-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.35	15-17	>680	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.02	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 177 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 15-7:2x6 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-7-14, Right 2x4 SP No.2 -- 3-1-1

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-15, 8-15

REACTIONS (size) 2=0-5-8, 12= Mechanical, 15=0-5-8
Max Horiz 2=142 (LC 16)
Max Uplift 2=-217 (LC 8), 12=-152 (LC 13), 15=-373 (LC 8)
Max Grav 2=775 (LC 25), 12=636 (LC 26), 15=2525 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1121/273, 4-6=-678/136, 6-7=-123/1109, 7-8=-130/1109, 8-10=-694/204, 10-12=-1136/345
BOT CHORD 2-17=-321/977, 15-17=-355/217, 13-15=-346/177, 12-13=-258/1012
WEBS 7-15=-1075/277, 4-17=-514/270, 6-17=-28/659, 6-15=-1071/360, 8-15=-1081/362, 8-13=-58/665, 10-13=-540/308

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 40-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x4 MT20 unless otherwise indicated.
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, Joint 15 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 217 lb uplift at joint 2, 152 lb uplift at joint 12 and 373 lb uplift at joint 15.
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

December 20,2024

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321889
P241241-01	A12	Hip	1	1	Job Reference (optional)	

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

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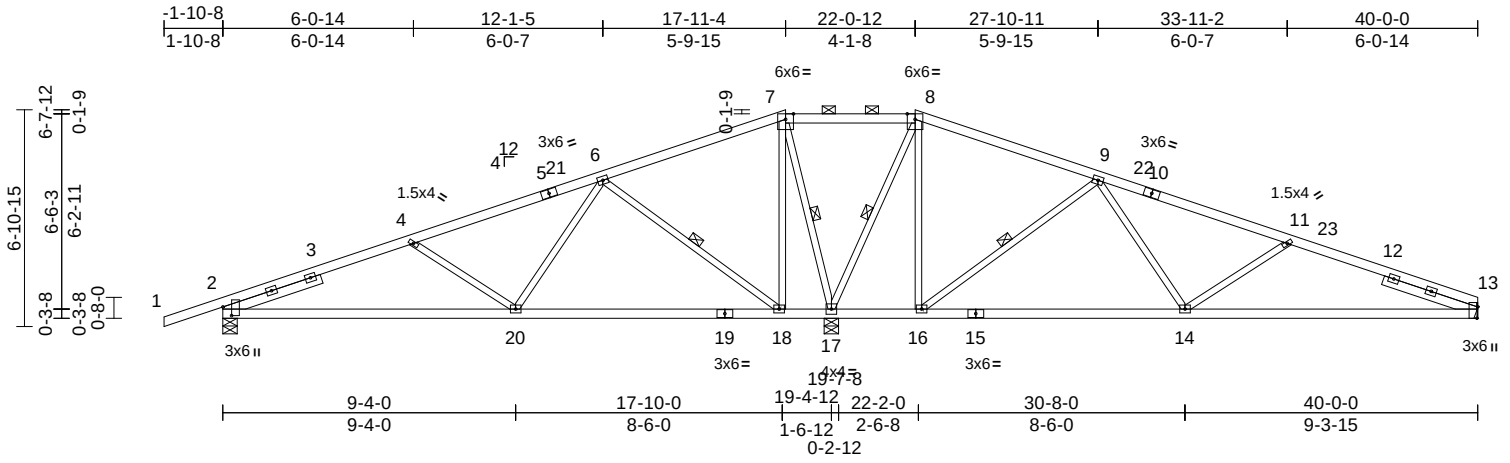

Scale = 1:73.4

Plate Offsets (X, Y): [2:0-3-5,0-3-5], [13:0-4-5,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	0.66	Vert(LL)	-0.18	13-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.36	13-14	>683	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.03	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 181 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 -- 3-3-7, Right 2x4 SP No.2 -- 3-1-13

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-2-5 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-18, 9-16, 7-17, 8-17

REACTIONS (size) 2=0-5-8, 13= Mechanical, 17=0-5-8
Max Horiz 2=128 (LC 16)
Max Uplift 2=-221 (LC 8), 13=-164 (LC 13), 17=-383 (LC 8)
Max Grav 2=776 (LC 25), 13=702 (LC 26), 17=2428 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1090/275, 4-6=-674/154, 6-7=-69/802, 7-8=-73/1004, 8-9=-53/580, 9-11=-874/242, 11-13=-1278/367
BOT CHORD 2-20=-306/942, 18-20=-243/296, 17-18=-723/304, 16-17=-512/252, 14-16=-107/482, 13-14=-275/1140
WEBS 7-18=-79/667, 8-16=-101/682, 4-20=-463/240, 6-20=-23/563, 6-18=-951/321, 9-16=-952/321, 9-14=-49/561, 11-14=-471/277, 7-17=-1243/286, 8-17=-1259/318

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 17-11-4, Exterior(2E) 17-11-4 to 22-0-12, Exterior(2R) 22-0-12 to 29-1-10, Interior (1) 29-1-10 to 40-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 17 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 221 lb uplift at joint 2, 164 lb uplift at joint 13 and 383 lb uplift at joint 17.
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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321890
P241241-01	A13	Hip	1	1	Job Reference (optional)	

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

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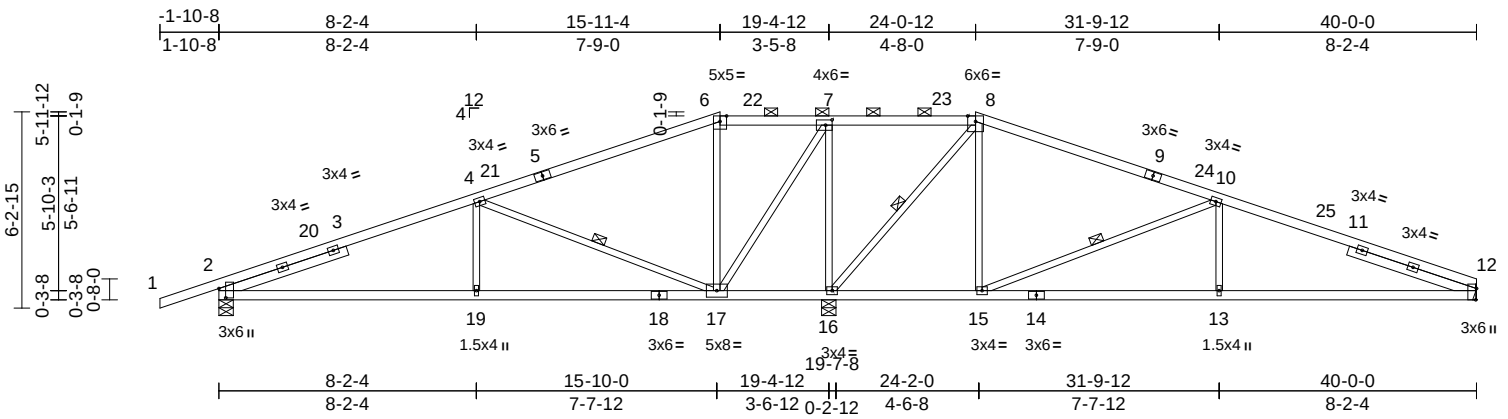
01/07/2025



Scale = 1:73.3

Plate Offsets (X, Y): [2:0-3-9,0-2-9], [7:0-2-8,0-2-0], [12:0-4-5,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	0.88	Vert(LL)	-0.11	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.24	12-13	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.05	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 179 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 -- 4-3-6, Right 2x4 SP No.2 -- 4-3-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-17, 8-16, 10-15

REACTIONS (size) 2=0-5-8, 12= Mechanical, 16=0-5-8
Max Horiz 2=116 (LC 16)
Max Uplift 2=-261 (LC 8), 12=-194 (LC 9), 16=-332 (LC 8)
Max Grav 2=841 (LC 25), 12=762 (LC 26), 16=2225 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1197/347, 4-6=-97/268, 6-7=-10/232, 7-8=0/751, 8-10=-280/209, 10-12=-1360/387
BOT CHORD 2-19=-315/1028, 17-19=-315/1028, 16-17=-749/223, 15-16=-91/165, 13-15=-279/1207, 12-13=-279/1207
WEBS 4-19=0/351, 4-17=-1124/331, 6-17=-421/161, 8-16=-1233/292, 8-15=-47/542, 10-15=-1127/337, 10-13=0/350, 7-16=-1198/359, 7-17=-250/1126

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 15-11-4, Exterior(2R) 15-11-4 to 23-0-2, Interior (1) 23-0-2 to 24-0-12, Exterior(2R) 24-0-12 to 31-1-10, Interior (1) 31-1-10 to 40-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 16 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 261 lb uplift at joint 2, 332 lb uplift at joint 16 and 194 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.

LOAD CASE(S) Standard

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321891
P241241-01	A14	Hip	1	1	Job Reference (optional)	

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

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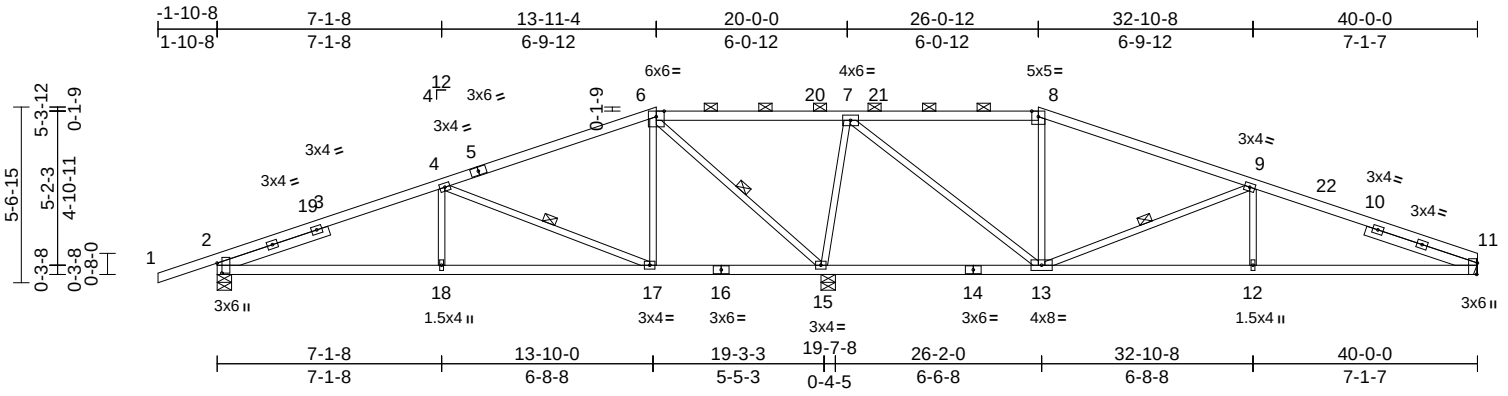

Scale = 1:73.1

Plate Offsets (X, Y): [2:0-3-13,0-1-13], [11:0-4-5,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	0.79	Vert(LL)	-0.07	11-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.16	11-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.04	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 174 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 -- 3-8-11, Right 2x4 SP No.2 -- 3-8-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-2 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-17, 6-15, 9-13

REACTIONS (size) 2=0-5-8, 11= Mechanical, 15=0-5-8
Max Horiz 2=103 (LC 16)
Max Uplift 2=-247 (LC 8), 11=-183 (LC 9), 15=-379 (LC 8)
Max Grav 2=814 (LC 25), 11=759 (LC 26), 15=2256 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1188/316, 4-6=-269/148, 6-7=-58/904, 7-8=-427/244, 8-9=-520/221, 9-11=-1419/373
BOT CHORD 2-18=-280/1026, 17-18=-280/1026, 15-17=-110/169, 13-15=-702/217, 12-13=-277/1266, 11-12=-277/1266
WEBS 4-18=0/302, 4-17=-932/291, 6-17=-41/461, 6-15=-1269/297, 7-15=-1272/418, 7-13=-279/1272, 8-13=-308/142, 9-13=-931/302, 9-12=0/292

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 13-11-4, Exterior(2R) 13-11-4 to 21-0-2, Interior (1) 21-0-2 to 26-0-12, Exterior(2R) 26-0-12 to 32-10-8, Interior (1) 32-10-8 to 40-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 15 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 11, 247 lb uplift at joint 2 and 379 lb uplift at joint 15.
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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321892
P241241-01	A15	Hip	1	1	Job Reference (optional)	

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

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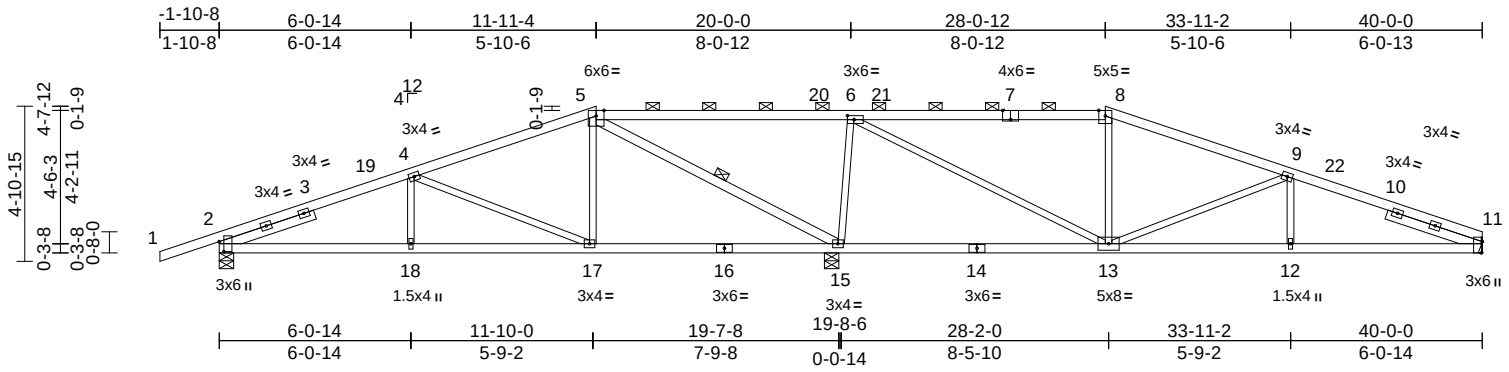

Scale = 1:73

Plate Offsets (X, Y): [2:0-3-13,0-1-13], [6:0-2-8,0-1-8], [7:0-3-0,Edge], [11:0-4-5,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	0.87	Vert(LL)	-0.09	13-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.20	13-15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.04	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 176 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 5-7:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 15-5:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-2-0, Right 2x4 SP No.2 -- 3-2-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-12 oc purlins, except 2-0-0 oc purlins (5-1-1 max.): 5-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 13-15.
WEBS 1 Row at midpt 5-15

REACTIONS (size) 2=0-5-8, 11= Mechanical, 15=0-5-8
Max Horiz 2=90 (LC 12)
Max Uplift 2=-245 (LC 8), 11=-172 (LC 9), 15=-410 (LC 8)
Max Grav 2=844 (LC 25), 11=746 (LC 26), 15=2214 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1311/338, 4-5=-608/190, 5-6=-88/863, 6-8=-649/250, 8-9=-739/231, 9-11=-1436/379
BOT CHORD 2-18=-259/1143, 17-18=-259/1143, 15-17=-70/509, 13-15=-759/255, 12-13=-291/1283, 11-12=-291/1283
WEBS 4-18=0/235, 4-17=-689/253, 5-17=-17/439, 5-15=-1459/347, 6-15=-1330/466, 6-13=-335/1466, 8-13=-262/151, 9-13=-708/265, 9-12=0/229

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 11-11-4, Exterior(2R) 11-11-4 to 19-0-2, Interior (1) 19-0-2 to 28-0-12, Exterior(2R) 28-0-12 to 35-1-10, Interior (1) 35-1-10 to 40-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 15 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 172 lb uplift at joint 11, 245 lb uplift at joint 2 and 410 lb uplift at joint 15.
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

December 20,2024

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321893
P241241-01	A16	Half Hip	1	1	Job Reference (optional)	

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

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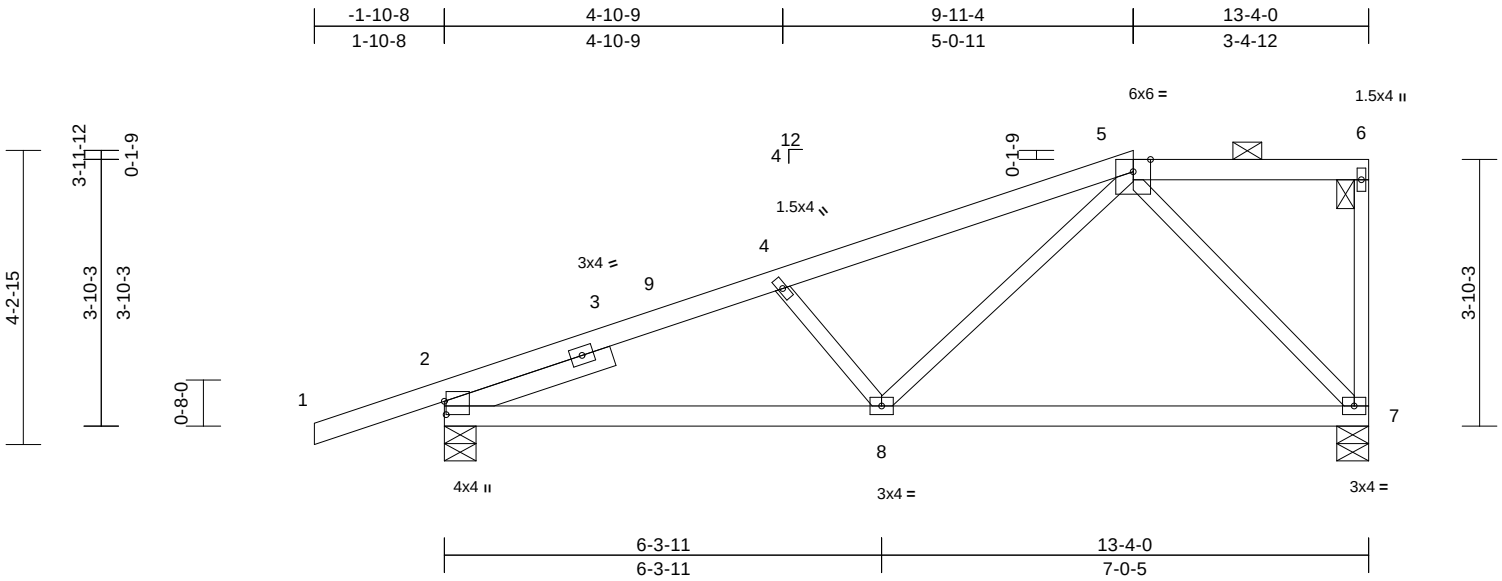

Scale = 1:33.2

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

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	0.41	Vert(LL)	-0.07	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.14	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 60 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 -- 2-6-7

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

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=174 (LC 9)
Max Uplift 2=-213 (LC 8), 7=-133 (LC 8)
Max Grav 2=736 (LC 1), 7=586 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1082/390, 4-5=-862/312, 5-6=-84/83, 6-7=-109/96
BOT CHORD 2-8=-613/937, 7-8=-314/402
WEBS 5-8=-176/516, 5-7=-582/393, 4-8=-276/284

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 9-11-4, Exterior(2E) 9-11-4 to 13-2-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) 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 133 lb uplift at joint 7 and 213 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

December 20,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321894
P241241-01	A17	Half Hip	1	1	Job Reference (optional)	

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

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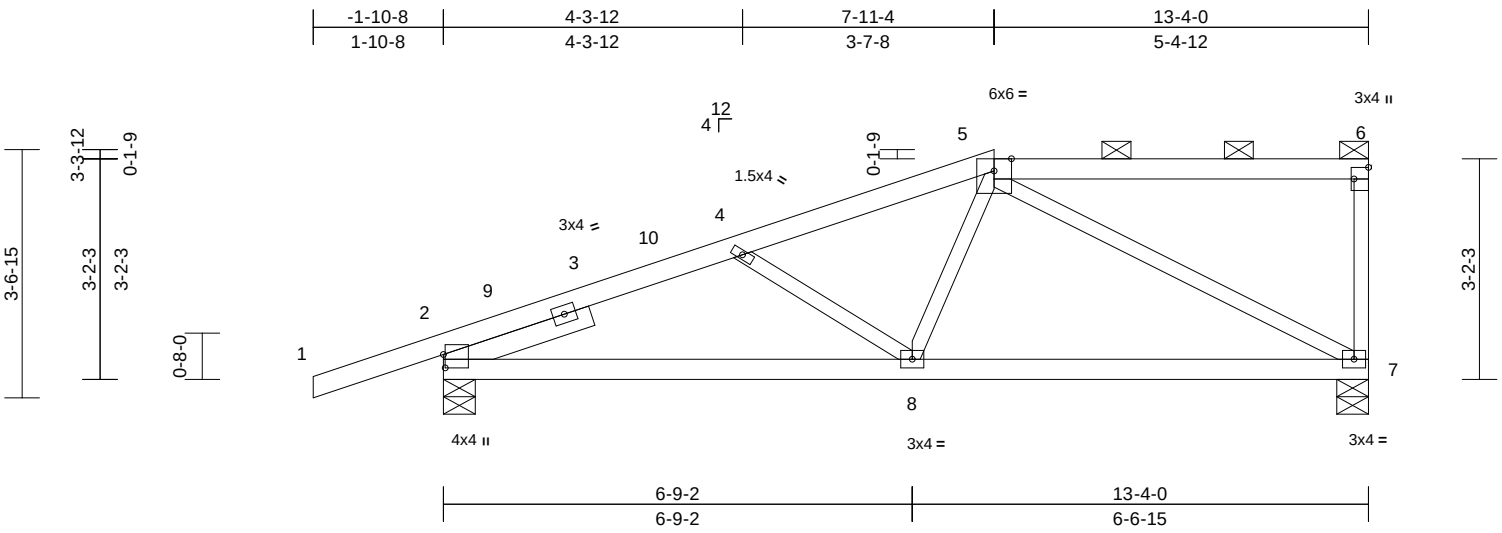

Scale = 1:33.2

Plate Offsets (X, Y): [2:0-2-5,0-0-5], [6: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	0.50	Vert(LL)	-0.05	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.10	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 58 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 -- 2-2-11

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-8-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 7-4-3 oc bracing.

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=143 (LC 9)
Max Uplift 2=-216 (LC 8), 7=-130 (LC 8)
Max Grav 2=736 (LC 1), 7=586 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1054/472, 4-5=-819/344, 5-6=-79/81, 6-7=-181/156
BOT CHORD 2-8=-633/907, 7-8=-431/658
WEBS 5-8=-31/338, 5-7=-722/431, 4-8=-181/229

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 7-11-4, Exterior(2E) 7-11-4 to 13-2-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) 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 130 lb uplift at joint 7 and 216 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

December 20,2024

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314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
01/07/2025

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321895
P241241-01	A18	Half Hip Girder	1	2	Job Reference (optional)	

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

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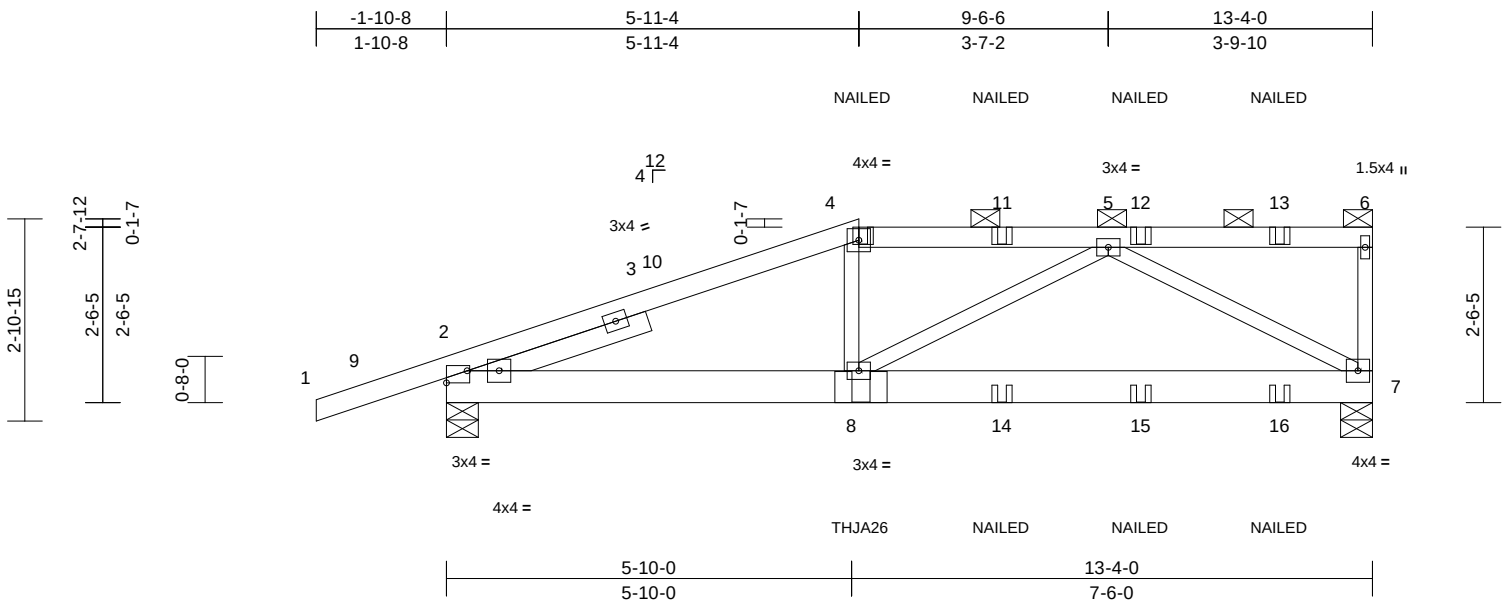

Scale = 1:33.2

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

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	0.35	Vert(LL)	-0.03	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.08	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.20	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 122 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-8-8

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.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=110 (LC 32)
Max Uplift 2=-367 (LC 8), 7=-325 (LC 8)
Max Grav 2=1125 (LC 1), 7=1152 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-4=-2029/634, 4-5=-1804/642, 5-6=-65/54, 6-7=-199/130
BOT CHORD 2-8=-699/1814, 7-8=-676/1439
WEBS 4-8=0/405, 5-8=-29/530, 5-7=-1614/738

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.
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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 5-11-4, Exterior(2E) 5-11-4 to 13-2-12 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 325 lb uplift at joint 7 and 367 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) 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) 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, 4-6=-70, 2-7=-20
Concentrated Loads (lb)
Vert: 4=-115 (F), 8=-343 (F), 11=-115 (F), 12=-136 (F), 13=-136 (F), 14=-39 (F), 15=-39 (F), 16=-39 (F)

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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321896
P241241-01	A19	Half Hip	1	1	Job Reference (optional)	

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

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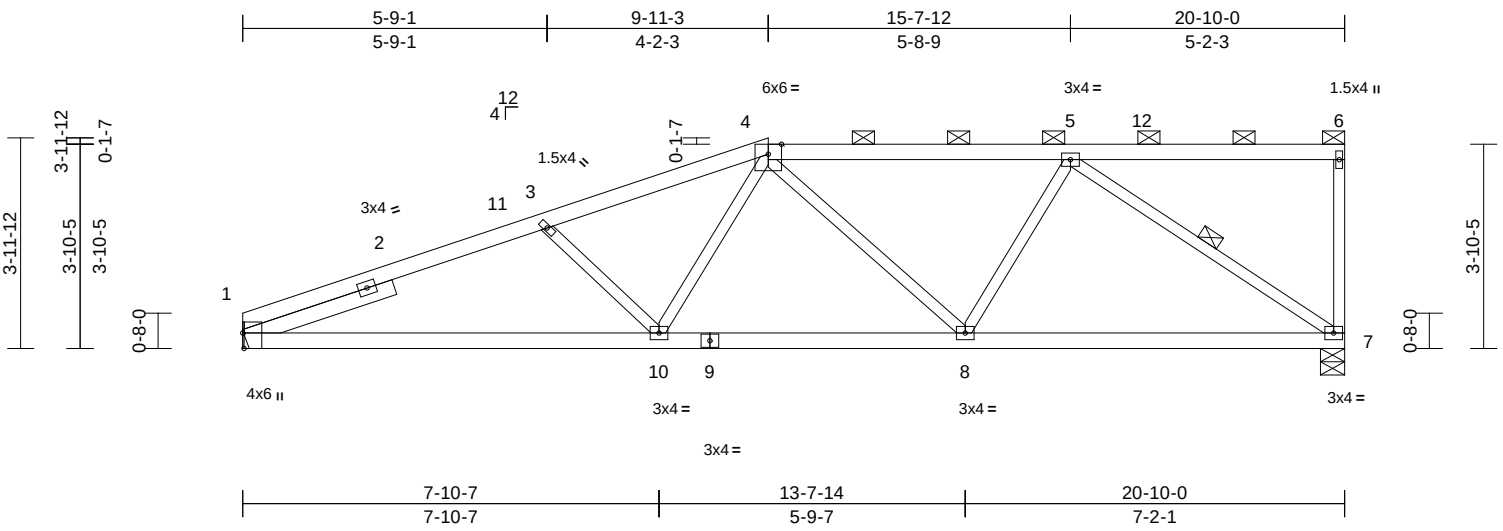

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Plate Offsets (X, Y): [1:0-3-8,Edge]

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	0.49	Vert(LL)	-0.11	1-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.25	1-10	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 88 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 -- 2-11-15

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

REACTIONS (size) 1= Mechanical, 7=0-5-8
Max Horiz 1=169 (LC 11)
Max Uplift 1=-197 (LC 8), 7=-210 (LC 8)
Max Grav 1=933 (LC 1), 7=933 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-1891/593, 3-4=-1653/520, 4-5=-1208/414, 5-6=-87/79, 6-7=-142/98
BOT CHORD 1-10=-726/1705, 8-10=-516/1354, 7-8=-415/1051
WEBS 4-10=-92/360, 4-8=-207/135, 5-8=-10/371, 5-7=-1264/442, 3-10=-244/232

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) 0-0-1 to 5-0-1, Interior (1) 5-0-1 to 9-11-4, Exterior(2R) 9-11-4 to 17-0-2, Interior (1) 17-0-2 to 20-8-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: , Joint 7 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 and 210 lb uplift at joint 7.
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

December 20,2024

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	A20	Half Hip	1	1	Job Reference (optional) I70321897

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

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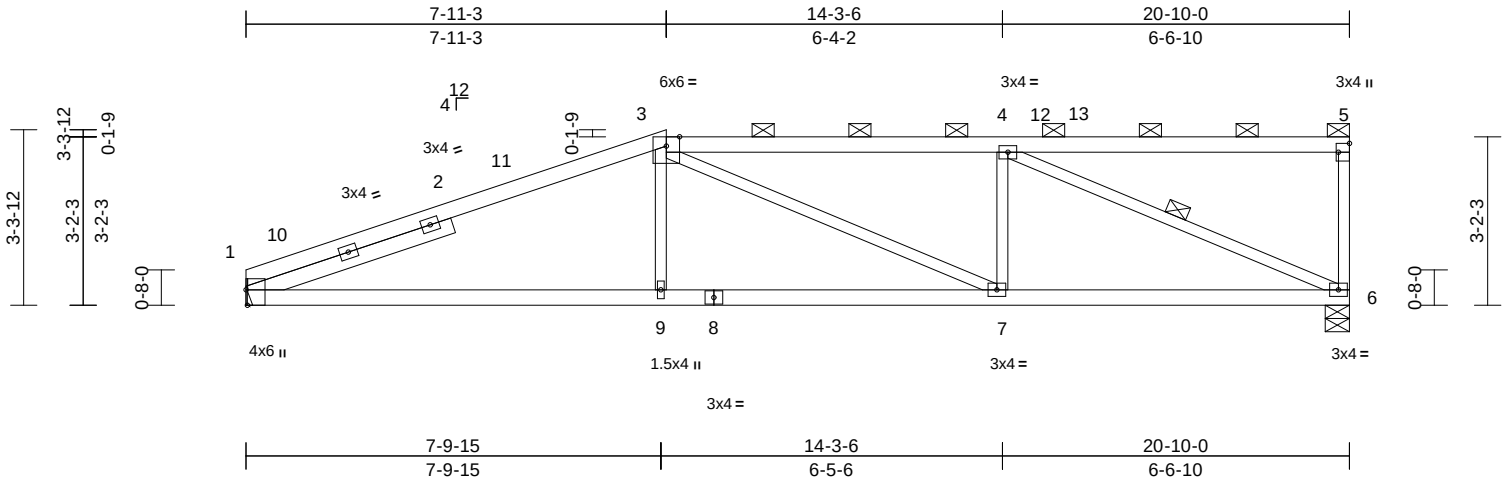

Scale = 1:43.5

Plate Offsets (X, Y): [1:0-3-8,Edge], [5: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)	-0.11	1-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.24	1-9	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.05	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 86 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 -- 4-1-2

BRACING

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

REACTIONS (size) 1= Mechanical, 6=0-5-8
Max Horiz 1=137 (LC 9)
Max Uplift 1=-199 (LC 8), 6=-208 (LC 8)
Max Grav 1=933 (LC 1), 6=933 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-1818/543, 3-4=-1553/526, 4-5=-82/70, 5-6=-191/133
BOT CHORD	1-9=-556/1629, 7-9=-558/1623, 6-7=-489/1551
WEBS	4-6=-1660/497, 3-9=0/305, 3-7=-83/148, 4-7=0/295

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) 0-0-1 to 5-0-1, Interior (1) 5-0-1 to 7-11-4, Exterior(2R) 7-11-4 to 15-0-2, Interior (1) 15-0-2 to 20-8-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: , Joint 6 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 199 lb uplift at joint 1 and 208 lb uplift at joint 6.
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

December 20,2024

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
01/07/2025

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	A21	Half Hip Girder	1	2	Job Reference (optional) I70321898

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

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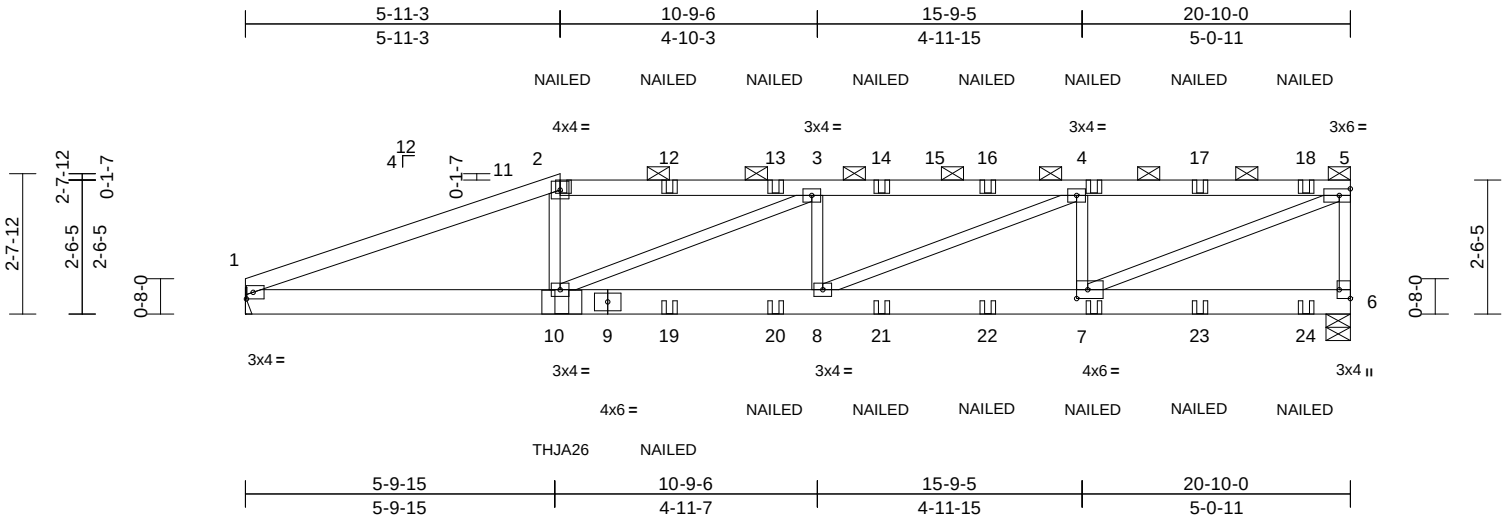

Scale = 1:43.4

Plate Offsets (X, Y): [1:0-1-8,0-1-8], [6:Edge,0-2-8], [7:0-2-8,0-2-0]

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	0.62	Vert(LL)	-0.11	8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.20	8-10	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.59	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 174 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 5-7-10 oc purlins, except end verticals, and 2-0-0 oc purlins (5-8-15 max.): 2-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 6=0-5-8
Max Horiz 1=102 (LC 11)
Max Uplift 1=-441 (LC 8), 6=-508 (LC 8)
Max Grav 1=1615 (LC 1), 6=1831 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3950/1240, 2-3=-3595/1204, 3-4=-4415/1402, 4-5=-3251/1002, 5-6=-1705/588
BOT CHORD 1-10=-1179/3631, 8-10=-1340/4415, 7-8=-990/3251, 6-7=-63/75
WEBS 2-10=-115/883, 5-7=-1012/3462, 3-8=-317/293, 3-10=-1021/257, 4-8=-436/1268, 4-7=-1202/552

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.
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) 0-0-13 to 5-0-13, Interior (1) 5-0-13 to 5-11-4, Exterior(2R) 5-11-4 to 13-0-2, Interior (1) 13-0-2 to 20-8-12 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) Bearings are assumed to be: , Joint 6 SPF No.2 crushing capacity of 425 psi.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 441 lb uplift at joint 1 and 508 lb uplift at joint 6.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Right Hand Hip) or equivalent at 5-11-10 from the left end to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) "NAILED" indicates 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: 1-2=-70, 2-5=-70, 1-6=-20
Concentrated Loads (lb)
Vert: 2=-115 (B), 10=-343 (B), 7=-39 (B), 4=-115 (B), 12=-115 (B), 13=-115 (B), 14=-115 (B), 16=-115 (B), 17=-136 (B), 18=-145 (B), 19=-39 (B), 20=-39 (B), 21=-39 (B), 22=-39 (B), 23=-39 (B), 24=-41 (B)

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	B1	Hip Girder	1	2	Job Reference (optional) I70321899

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

Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Thu Dec 19 09:46:52 Page: 1
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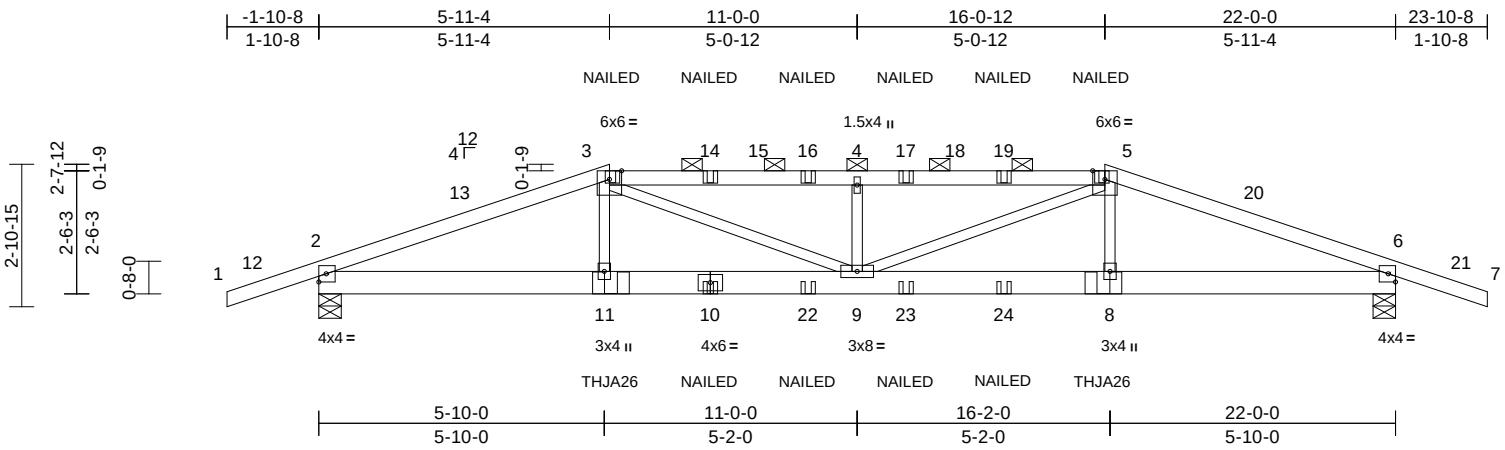

Scale = 1:47.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.13	9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.23	9	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.23	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 185 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 5-10-8 oc purlins, except 2-0-0 oc purlins (5-0-8 max.): 3-5.
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=48 (LC 16)
Max Uplift 2=-575 (LC 8), 6=-575 (LC 9)
Max Grav 2=1881 (LC 1), 6=1881 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-4154/1262, 3-4=-4911/1539, 4-5=-4911/1539, 5-6=-4154/1262, 6-7=0/24
BOT CHORD 2-11=-1083/3804, 9-11=-1082/3780, 8-9=-1085/3780, 6-8=-1087/3804
WEBS 3-11=-34/560, 3-9=-396/1317, 4-9=-830/440, 5-9=-396/1317, 5-8=-34/560

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 5-11-4, Exterior(2R) 5-11-4 to 13-0-2, Interior (1) 13-0-2 to 16-0-12, Exterior(2R) 16-0-12 to 23-1-10, Interior (1) 23-1-10 to 23-10-8 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 575 lb uplift at joint 2 and 575 lb uplift at joint 6.
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 THJA26 (THJA26 on 2 ply, Right Hand Hip) or equivalent at 16-0-6 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 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: 1-3=-70, 3-5=-70, 5-7=-70, 2-6=-20
Concentrated Loads (lb)
Vert: 3=-115 (F), 5=-115 (F), 10=-39 (F), 11=-343 (F), 8=-343 (F), 14=-115 (F), 16=-115 (F), 17=-115 (F), 19=-115 (F), 22=-39 (F), 23=-39 (F), 24=-39 (F)

December 20,2024

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
I70321900
01/07/2025

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	B2	Hip	1	1	Job Reference (optional)

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

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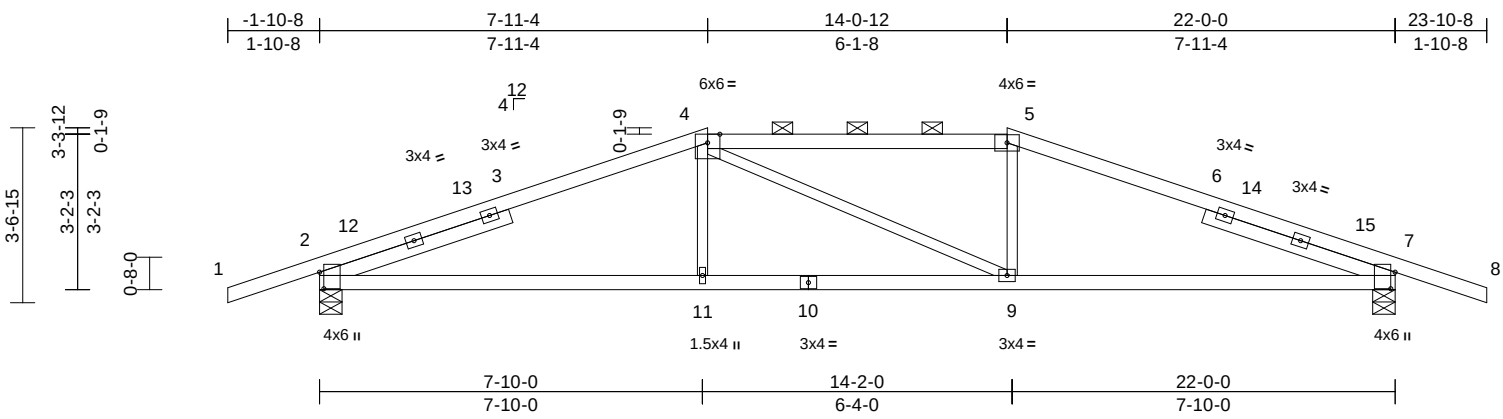

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Plate Offsets (X, Y): [2:0-4-1,0-1-1], [7:0-4-1,0-1-1]

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	0.96	Vert(LL)	-0.11	2-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.25	2-11	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 95 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 -- 4-1-2, Right 2x4 SP No.2 -- 4-1-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 8-5-13 oc bracing.

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=60 (LC 12)
Max Uplift 2=-283 (LC 8), 7=-283 (LC 9)
Max Grav 2=1121 (LC 1), 7=1121 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-1956/584, 4-5=-1729/638, 5-7=-1956/617, 7-8=0/18
BOT CHORD 2-11=-437/1734, 9-11=-440/1729, 7-9=-470/1734
WEBS 4-11=0/289, 4-9=-204/204, 5-9=0/289

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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 7-11-4, Exterior(2E) 7-11-4 to 14-0-12, Exterior(2R) 14-0-12 to 21-1-10, Interior (1) 21-1-10 to 23-10-8 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 283 lb uplift at joint 2 and 283 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

December 20,2024

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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
01/07/2025

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	B3	Hip Girder	1	2	Job Reference (optional) I70321901

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

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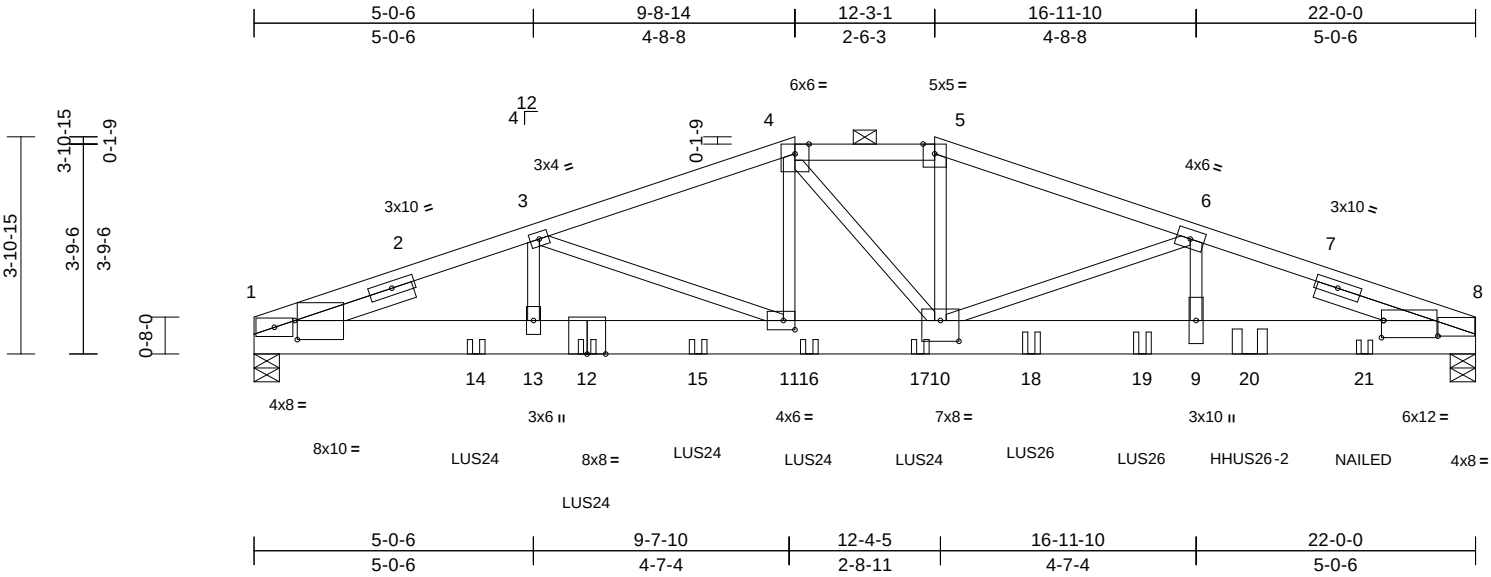

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Plate Offsets (X, Y): [1:0-0-9,0-4-2], [8:0-0-7,0-3-11], [8:0-11-12,0-3-6], [10:0-4-0,0-4-8], [11:0-2-8,0-2-0]

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	0.84	Vert(LL)	-0.15	9-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.27	9-10	>972	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.41	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 254 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 4-5:2x4 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-2-8, Right 2x4 SP No.2 -- 2-2-8

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-9 oc purlins, except 2-0-0 oc purlins (4-0-12 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-7, 8=0-5-7
Max Horiz 1=64 (LC 16)
Max Uplift 1=-1361 (LC 8), 8=-1210 (LC 9)
Max Grav 1=7171 (LC 1), 8=4959 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-9715/2610, 3-4=-8593/2338, 4-5=-8432/2317, 5-6=-8942/2411, 6-8=-11405/3035
BOT CHORD 1-13=-2381/9005, 11-13=-2381/9005, 10-11=-2070/8109, 9-10=-2781/10585, 8-9=-2781/10585
WEBS 4-11=-486/1894, 4-10=-165/678, 5-10=-593/2367, 3-11=-956/321, 3-13=-191/996, 6-10=-2299/667, 6-9=-453/2025

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 0-6-0 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 5-0-6, Interior (1) 5-0-6 to 9-8-14, Exterior(2E) 9-8-14 to 12-3-1, Exterior(2R) 12-3-1 to 19-3-15, Interior (1) 19-3-15 to 21-9-4 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) 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 SP 2400F 2.0E crushing capacity of 805 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1361 lb uplift at joint 1 and 1210 lb uplift at joint 8.
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 LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 4-0-0 from the left end to 12-0-0 to connect truss(es) to front face of bottom chord.
12) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 14-0-0 from the left end to 16-0-0 to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 17-11-3 from the left end to connect truss(es) to front face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 3116 lb down and 381 lb up at 0-2-12 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, 4-5=-70, 5-8=-70, 1-8=-20
Concentrated Loads (lb)
Vert: 1=-3116, 12=-682 (F), 14=-616 (F), 15=-742 (F), 16=-739 (F), 17=-726 (F), 18=-913 (F), 19=-913 (F), 20=-1595 (F), 21=-150 (F)

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321902
P241241-01	CG1	Diagonal Hip Girder	6	1	Job Reference (optional)	

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

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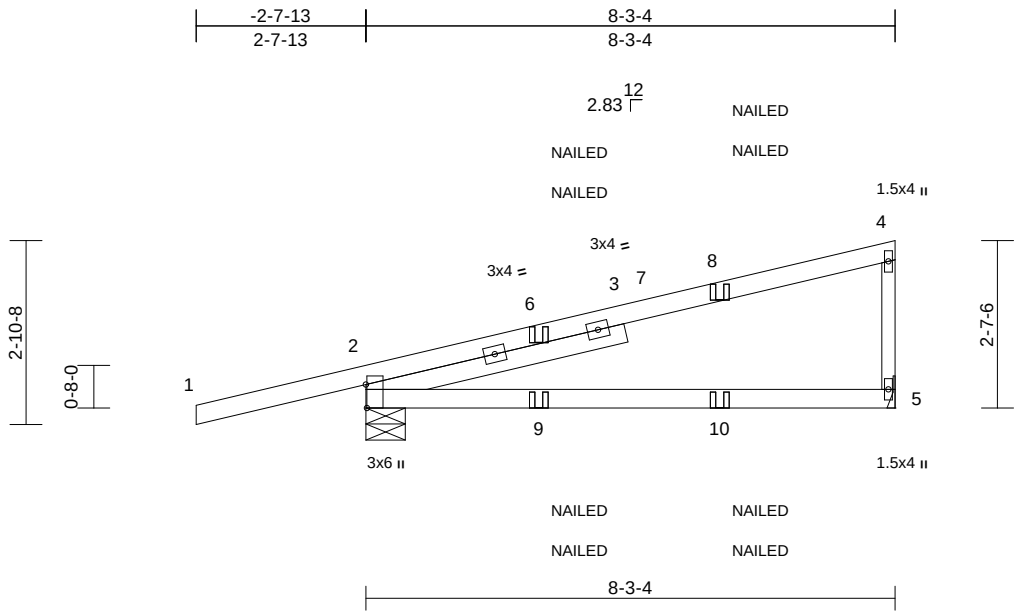

Scale = 1:36

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.22	2-5	>454	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.43	2-5	>227	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 37 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 2400F 2.0E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-1-15

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

REACTIONS (size) 2=0-7-6, 5= Mechanical
Max Horiz 2=110 (LC 9)
Max Uplift 2=-248 (LC 8), 5=-105 (LC 12)
Max Grav 2=551 (LC 1), 5=333 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-176/78, 4-5=-238/303
BOT CHORD 2-5=-47/51

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -2-7-13 to 4-5-1, Exterior(2R) 4-5-1 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 105 lb uplift at joint 5 and 248 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 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
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: 6=58 (F=29, B=29), 8=-2 (F=-1, B=-1), 10=-19 (F=-10, B=-10)

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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321903
P241241-01	J1	Jack-Open	29	1	Job Reference (optional)	

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

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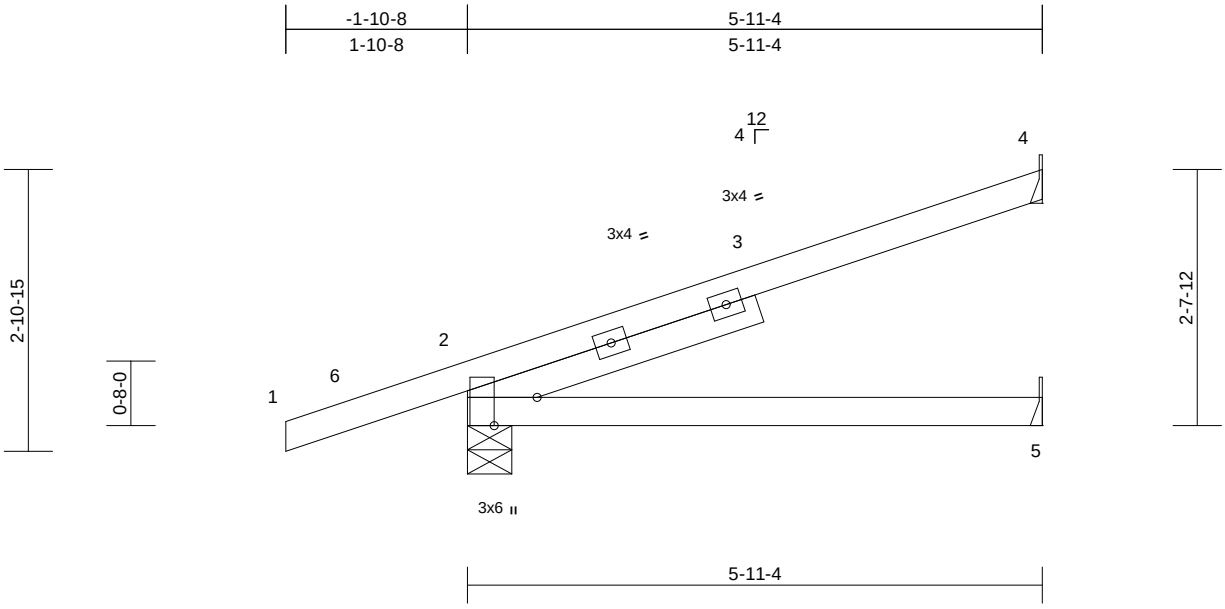

Scale = 1:23.8

Plate Offsets (X, Y): [2:0-3-8,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	0.69	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: 26 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=116 (LC 8)
Max Uplift 2=-138 (LC 8), 4=-105 (LC 12)
Max Grav 2=417 (LC 1), 4=185 (LC 1), 5=118 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-102/47
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) -1-10-8 to 3-1-8, Interior (1) 3-1-8 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 105 lb uplift at joint 4 and 138 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

December 20,2024

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321904
P241241-01	J2	Jack-Open	11	1	Job Reference (optional)	

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

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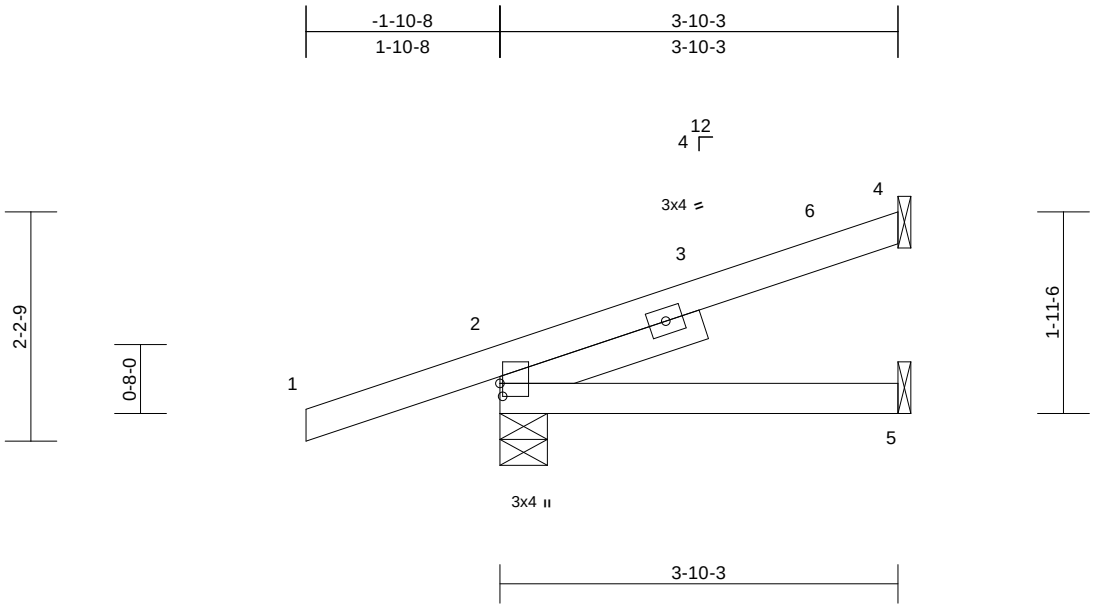

Scale = 1:22.3

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	0.28	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)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 18 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=86 (LC 8)
Max Uplift 2=-130 (LC 8), 4=-63 (LC 12)
Max Grav 2=334 (LC 1), 4=100 (LC 1), 5=76 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-77/32
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-10-8 to 3-1-8, Interior (1) 3-1-8 to 3-9-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 63 lb uplift at joint 4 and 130 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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321905
P241241-01	J3	Jack-Open	11	1	Job Reference (optional)	

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

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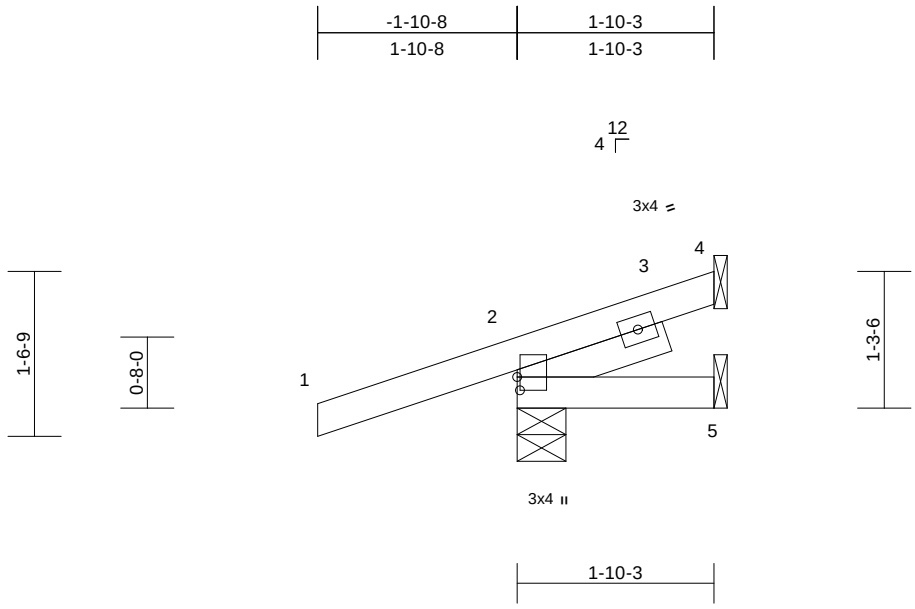

Scale = 1:21.6

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	0.28	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: 11 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=58 (LC 8)
Max Uplift 2=-138 (LC 8), 4=-16 (LC 12)
Max Grav 2=281 (LC 1), 4=5 (LC 8), 5=37 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-69/17
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 138 lb uplift at joint 2 and 16 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

December 20,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321906
P241241-01	J4	Jack-Open	4	1	Job Reference (optional)	

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

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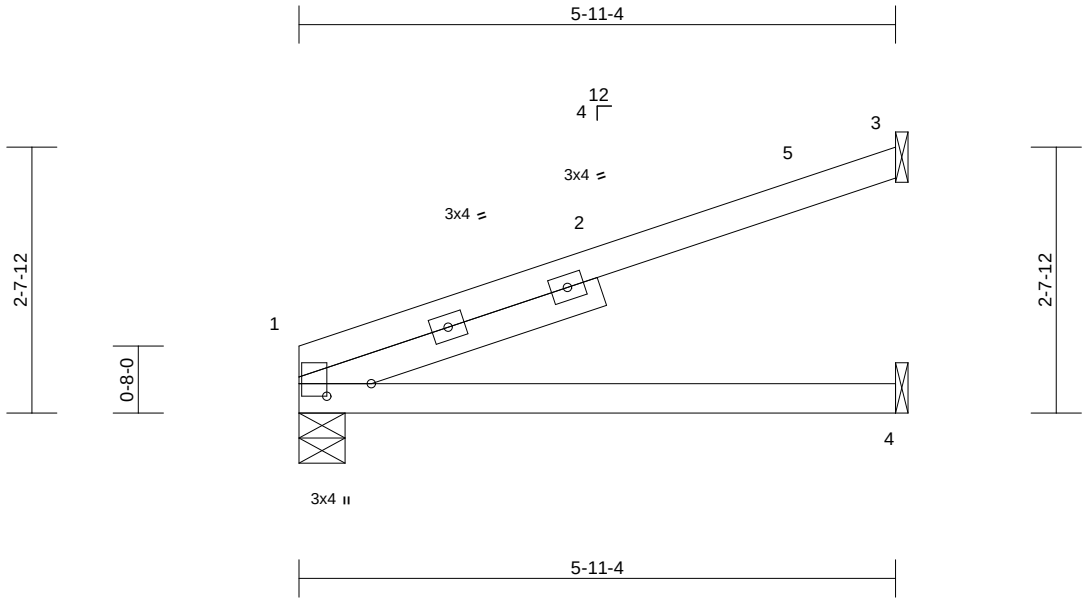

Scale = 1:22.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.07	1-4	>987	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.14	1-4	>493	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 23 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 1=101 (LC 8)
Max Uplift 1=-38 (LC 8), 3=-113 (LC 8)
Max Grav 1=264 (LC 1), 3=206 (LC 1), 4=117 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-107/52
BOT CHORD 1-4=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) 0-0-0 to 5-0-0, Interior (1) 5-0-0 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 1 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 38 lb uplift at joint 1 and 113 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

December 20,2024

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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	J8	Jack-Open	1	1	Job Reference (optional) I70321907

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

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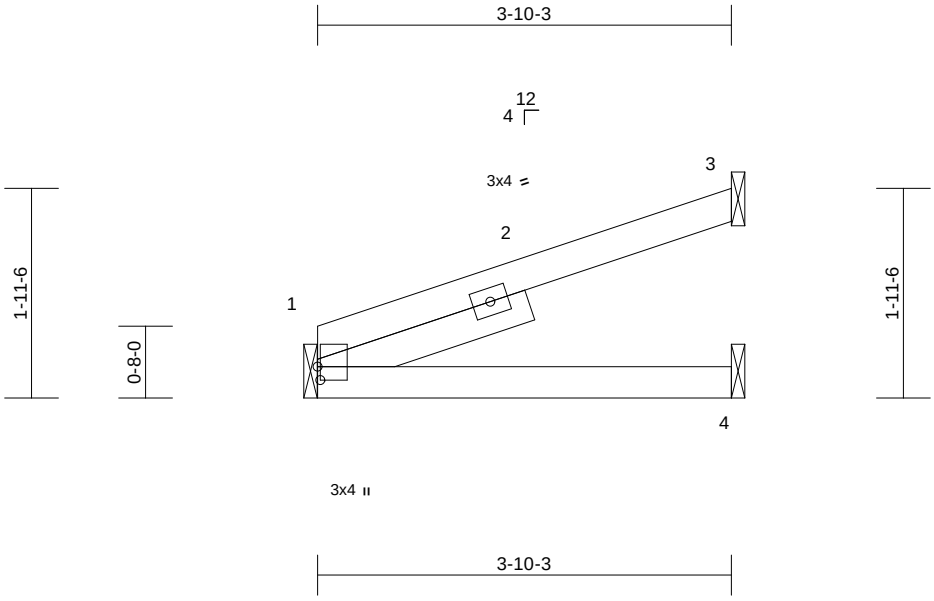

Scale = 1:21.4

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	0.36	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: 15 lb	FT = 20%

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

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

REACTIONS (size) 1= Mechanical, 3= Mechanical, 4= Mechanical
Max Horiz 1=71 (LC 8)
Max Uplift 1=-22 (LC 8), 3=-75 (LC 8)
Max Grav 1=170 (LC 1), 3=132 (LC 1), 4=76 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-78/33
BOT CHORD 1-4=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) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 1 and 75 lb uplift at joint 3.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	J9	Jack-Open	1	1	Job Reference (optional)

I70321908

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

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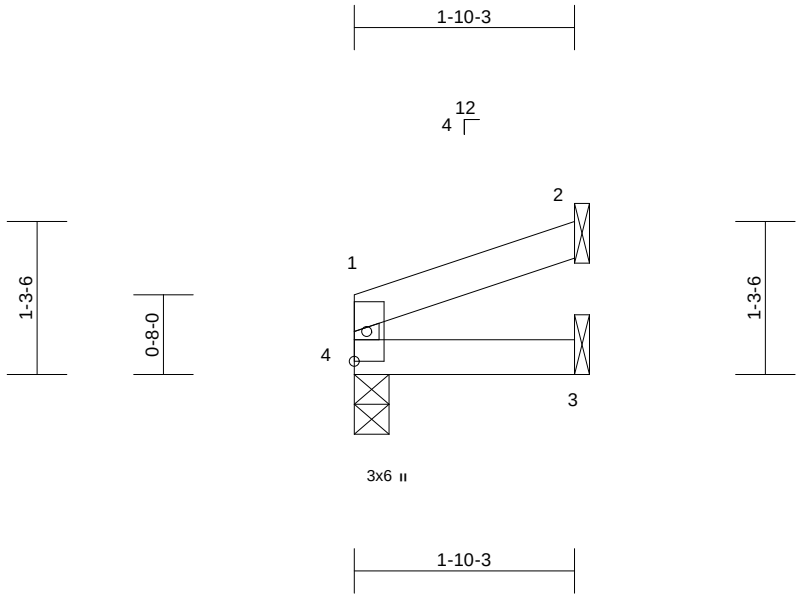

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	3-4	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	3-4	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	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) 2= Mechanical, 3= Mechanical, 4=0-3-8
Max Horiz 4=26 (LC 9)
Max Uplift 2=-31 (LC 12), 4=-8 (LC 8)
Max Grav 2=58 (LC 1), 3=34 (LC 3), 4=78 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-63/65, 1-2=-32/14
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 4 and 31 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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321909
P241241-01	LAY01	Lay-In Gable	1	1	Job Reference (optional)	

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

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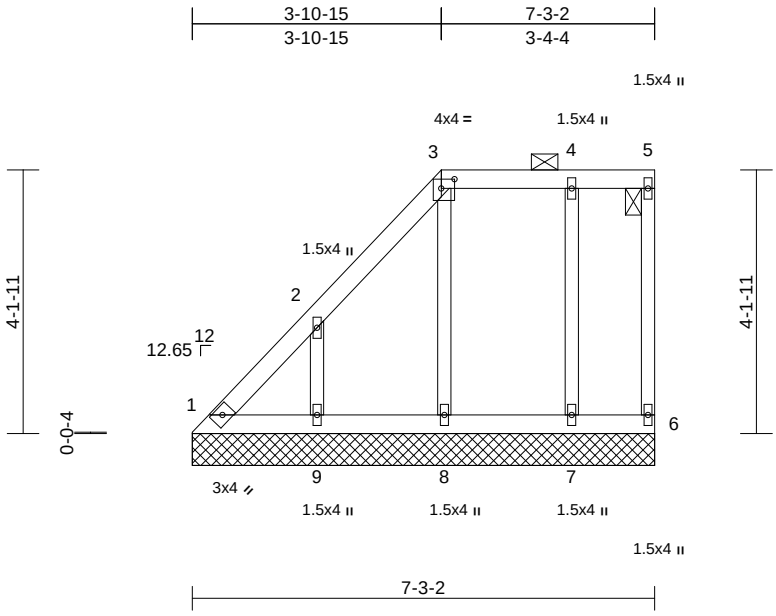

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Plate Offsets (X, Y): [3:0-2-8,0-1-12]

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	0.29	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	0.07	Horiz(TL)	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
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: 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=7-3-2, 6=7-3-2, 7=7-3-2, 8=7-3-2, 9=7-3-2
Max Horiz 1=164 (LC 9)
Max Uplift 1=-41 (LC 10), 6=-7 (LC 8), 7=-45 (LC 9), 8=-70 (LC 9), 9=-155 (LC 12)
Max Grav 1=120 (LC 9), 6=30 (LC 1), 7=181 (LC 1), 8=153 (LC 1), 9=226 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-284/289, 2-3=-143/145, 3-4=-79/85, 4-5=-79/86, 5-6=-22/11
BOT CHORD 1-9=-78/86, 8-9=-79/86, 7-8=-79/86, 6-7=-79/86
WEBS 2-9=-233/179, 3-8=-196/146, 4-7=-145/67

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) Provide adequate drainage to prevent water ponding.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 0-0-0 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, 7 lb uplift at joint 6, 155 lb uplift at joint 9, 70 lb uplift at joint 8 and 45 lb uplift at joint 7.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	LAY02	Lay-In Gable	1	1	Job Reference (optional) I70321910

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

Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Thu Dec 19 09:46:53 Page: 1
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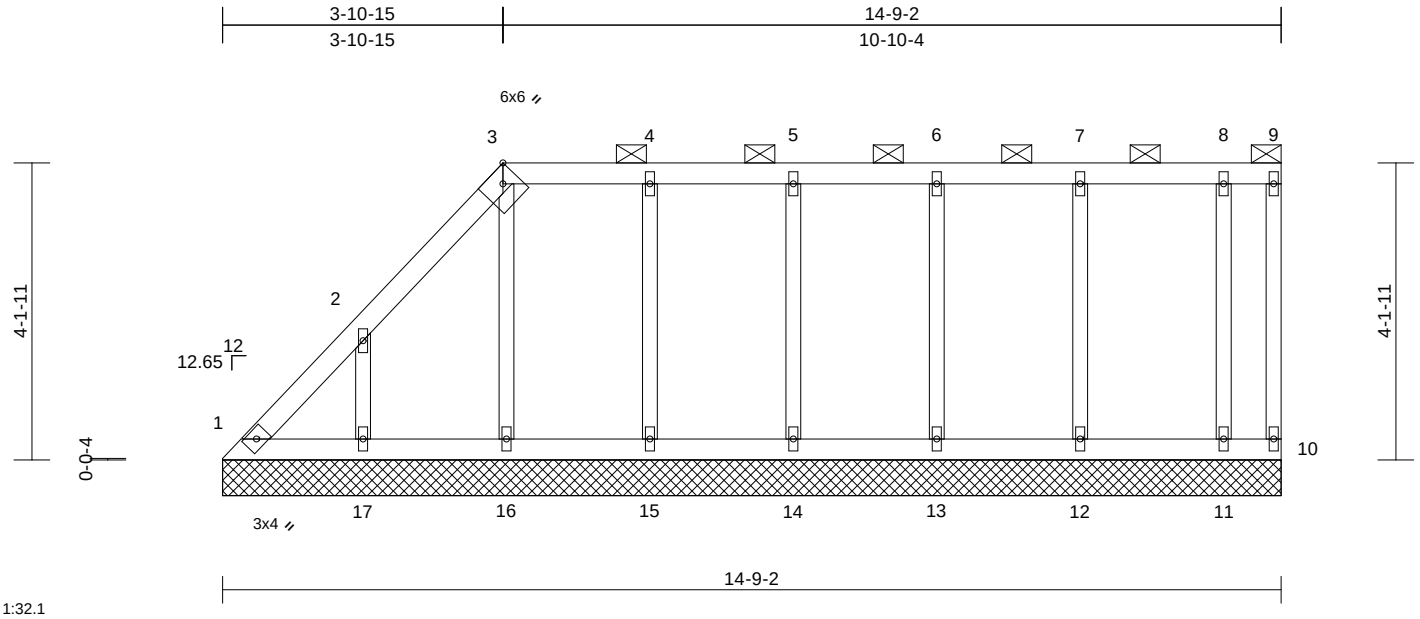

Scale = 1:32.1

Plate Offsets (X, Y): [3:0-2-9,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	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 67 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.): 3-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=14-9-2, 10=14-9-2, 11=14-9-2, 12=14-9-2, 13=14-9-2, 14=14-9-2, 15=14-9-2, 16=14-9-2, 17=14-9-2
Max Horiz 1=164 (LC 9)
Max Uplift 1=-41 (LC 8), 10=-11 (LC 11), 11=-37 (LC 8), 12=-45 (LC 9), 13=-40 (LC 8), 14=-38 (LC 8), 15=-45 (LC 9), 16=-76 (LC 9), 17=-148 (LC 12)
Max Grav 1=120 (LC 20), 10=8 (LC 1), 11=137 (LC 1), 12=189 (LC 1), 13=179 (LC 1), 14=178 (LC 1), 15=191 (LC 1), 16=164 (LC 1), 17=219 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-263/265, 2-3=-141/148, 3-4=-79/85, 4-5=-79/86, 5-6=-79/86, 6-7=-79/86, 7-8=-79/86, 8-9=-79/86, 9-10=-48/49
BOT CHORD 1-17=-78/86, 16-17=-79/86, 15-16=-79/86, 14-15=-79/86, 13-14=-79/86, 12-13=-79/86, 11-12=-79/86, 10-11=-79/86
WEBS 2-17=-199/166, 3-16=-199/145, 4-15=-150/69, 5-14=-138/62, 6-13=-139/63, 7-12=-148/68, 8-11=-114/68

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-1 to 3-11-2, Exterior(2R) 3-11-2 to 11-0-0, Interior (1) 11-0-0 to 14-8-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Provide adequate drainage to prevent water ponding.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 0-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 1, 11 lb uplift at joint 10, 148 lb uplift at joint 17, 76 lb uplift at joint 16, 45 lb uplift at joint 15, 38 lb uplift at joint 14, 40 lb uplift at joint 13, 45 lb uplift at joint 12 and 37 lb uplift at joint 11.
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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	LAY03	Lay-In Gable	1	1	Job Reference (optional) I70321911

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

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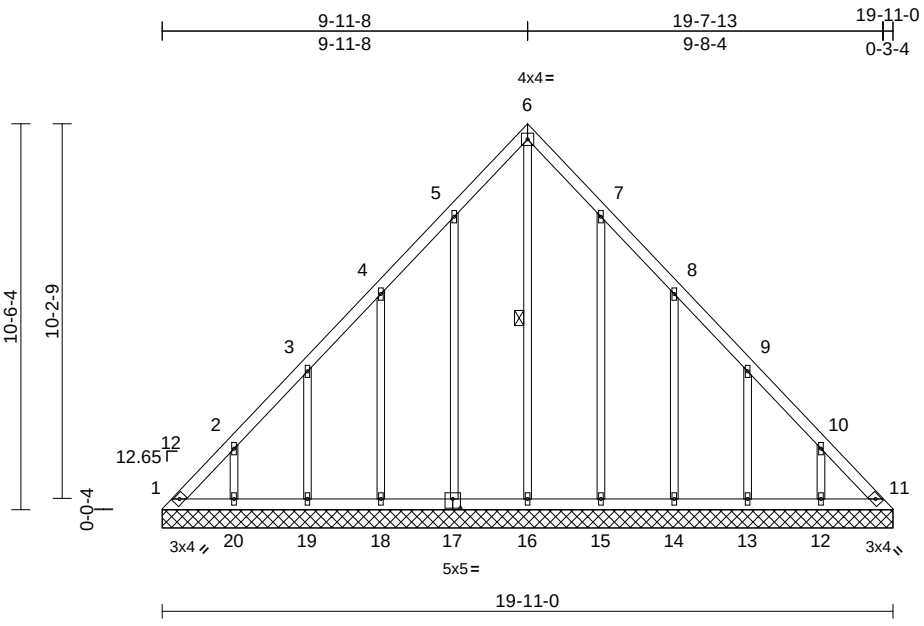

Scale = 1:62.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.28	Horiz(TL)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 110 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.
WEBS 1 Row at midpt 6-16

REACTIONS (size) 1=19-11-0, 11=19-11-0, 12=19-11-0, 13=19-11-0, 14=19-11-0, 15=19-11-0, 16=19-11-0, 17=19-11-0, 18=19-11-0, 19=19-11-0, 20=19-11-0
Max Horiz 1=288 (LC 9)
Max Uplift 1=-131 (LC 10), 11=-88 (LC 11), 12=-138 (LC 13), 13=-135 (LC 13), 14=-143 (LC 13), 15=-128 (LC 13), 17=-131 (LC 12), 18=-142 (LC 12), 19=-135 (LC 12), 20=-138 (LC 12)
Max Grav 1=284 (LC 12), 11=255 (LC 13), 12=209 (LC 20), 13=206 (LC 20), 14=207 (LC 20), 15=212 (LC 20), 16=231 (LC 13), 17=216 (LC 19), 18=205 (LC 19), 19=206 (LC 19), 20=209 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-409/251, 2-3=-282/194, 3-4=-176/144, 4-5=-149/134, 5-6=-194/198, 6-7=-194/185, 7-8=-105/94, 8-9=-134/84, 9-10=-242/148, 10-11=-369/250
BOT CHORD 1-20=-187/282, 19-20=-188/282, 18-19=-188/282, 16-18=-188/282, 15-16=-187/282, 14-15=-187/282, 13-14=-187/282, 12-13=-187/282, 11-12=-187/281
WEBS 6-16=-207/148, 5-17=-177/156, 4-18=-191/165, 3-19=-184/160, 2-20=-181/155, 7-15=-176/152, 8-14=-191/166, 9-13=-185/160, 10-12=-181/155

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-1 to 5-4-1, Interior (1) 5-4-1 to 9-11-12, Exterior(2R) 9-11-12 to 14-11-12, Interior (1) 14-11-12 to 19-7-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 131 lb uplift at joint 1, 88 lb uplift at joint 11, 131 lb uplift at joint 17, 142 lb uplift at joint 18, 135 lb uplift at joint 19, 138 lb uplift at joint 20, 128 lb uplift at joint 15, 143 lb uplift at joint 14, 135 lb uplift at joint 13 and 138 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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321912
P241241-01	LAY04	Lay-In Gable	1	1	Job Reference (optional)	

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

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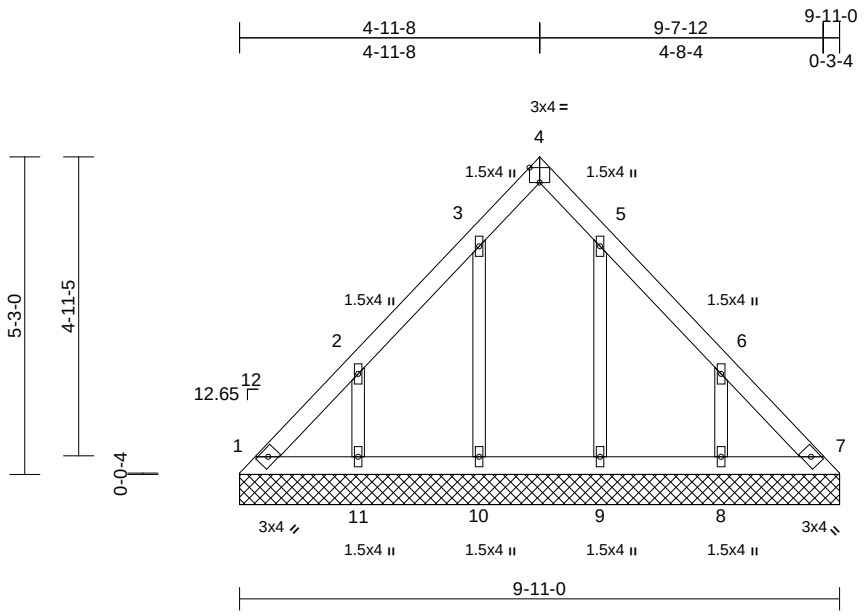

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Plate Offsets (X, Y): [4:Edge,0-3-0]

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	0.04	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: 43 lb	FT = 20%

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

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

REACTIONS (size) 1=9-11-0, 7=9-11-0, 8=9-11-0, 9=9-11-0, 10=9-11-0, 11=9-11-0
Max Horiz 1=-139 (LC 8)
Max Uplift 1=-33 (LC 10), 7=-26 (LC 11), 8=-152 (LC 13), 9=-74 (LC 13), 10=-80 (LC 12), 11=-150 (LC 12)
Max Grav 1=146 (LC 12), 7=141 (LC 13), 8=217 (LC 20), 9=170 (LC 20), 10=177 (LC 19), 11=215 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-218/169, 2-3=-110/55, 3-4=-65/34, 4-5=-65/34, 5-6=-104/44, 6-7=-211/169
BOT CHORD 1-11=-132/171, 10-11=-132/171, 9-10=-132/171, 8-9=-132/171, 7-8=-132/171
WEBS 2-11=-213/169, 3-10=-138/105, 5-9=-132/99, 6-8=-213/171

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 1, 26 lb uplift at joint 7, 150 lb uplift at joint 11, 80 lb uplift at joint 10, 74 lb uplift at joint 9 and 152 lb uplift at joint 8.
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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321913
P241241-01	LAY05	Lay-In Gable	1	1	Job Reference (optional)	

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

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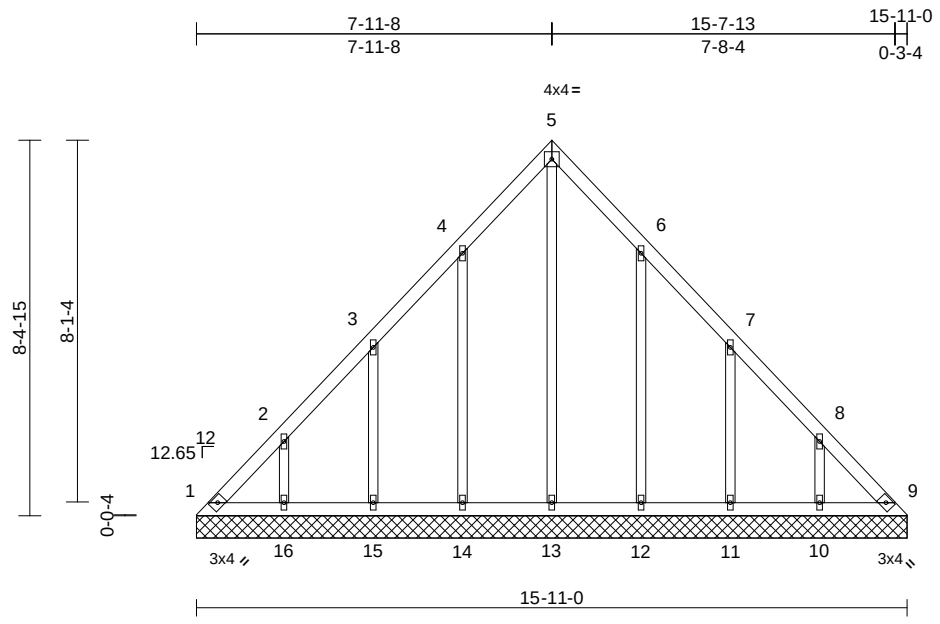

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.24	Horiz(TL)	0.01	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 81 lb	FT = 20%

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

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

REACTIONS (size) 1=15-11-0, 9=15-11-0, 10=15-11-0, 11=15-11-0, 12=15-11-0, 13=15-11-0, 14=15-11-0, 15=15-11-0, 16=15-11-0
Max Horiz 1=-228 (LC 10)
Max Uplift 1=-92 (LC 10), 9=-58 (LC 11), 10=-137 (LC 13), 11=-140 (LC 13), 12=-134 (LC 13), 14=-137 (LC 12), 15=-139 (LC 12), 16=-137 (LC 12)
Max Grav 1=211 (LC 12), 9=188 (LC 13), 10=209 (LC 20), 11=206 (LC 20), 12=214 (LC 20), 13=177 (LC 13), 14=216 (LC 19), 15=205 (LC 19), 16=209 (LC 19)

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

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-1 to 5-4-1, Interior (1) 5-4-1 to 7-11-12, Exterior(2R) 7-11-12 to 12-11-12, Interior (1) 12-11-12 to 15-7-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 1, 58 lb uplift at joint 9, 137 lb uplift at joint 14, 139 lb uplift at joint 15, 137 lb uplift at joint 16, 134 lb uplift at joint 12, 140 lb uplift at joint 11 and 137 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	LAY06	Lay-In Gable	1	1	Job Reference (optional)

I70321914

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

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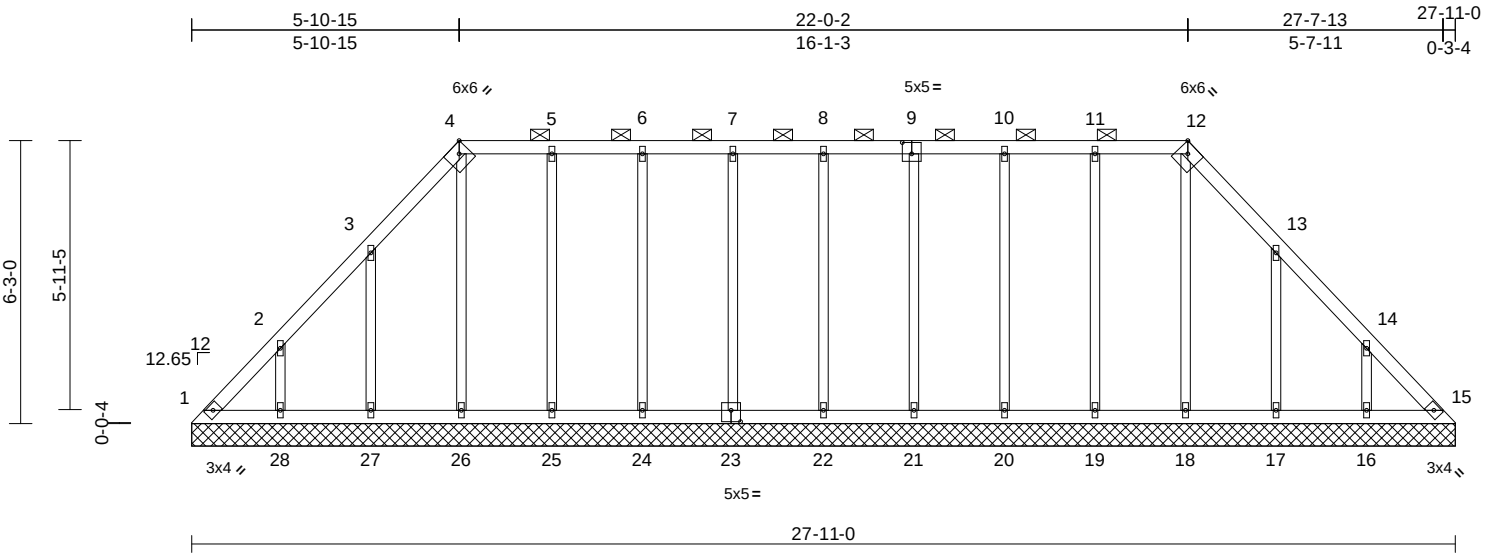

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Plate Offsets (X, Y): [4:0-2-9,Edge], [9:0-2-8,0-3-0], [12:0-2-9,Edge], [23:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.01	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 140 lb	FT = 20%

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

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

REACTIONS (size) 1=27-11-0, 15=27-11-0, 16=27-11-0, 17=27-11-0, 18=27-11-0, 19=27-11-0, 20=27-11-0, 21=27-11-0, 22=27-11-0, 23=27-11-0, 24=27-11-0, 25=27-11-0, 26=27-11-0, 27=27-11-0, 28=27-11-0
Max Horiz 1=168 (LC 9)
Max Uplift 1=-72 (LC 10), 15=-22 (LC 11), 16=-138 (LC 13), 17=-143 (LC 13), 19=-45 (LC 9), 20=-41 (LC 8), 21=-40 (LC 9), 22=-38 (LC 8), 23=-40 (LC 9), 24=-40 (LC 8), 25=-43 (LC 8), 26=-30 (LC 9), 27=-144 (LC 12), 28=-137 (LC 12)
Max Grav 1=141 (LC 21), 15=116 (LC 22), 16=208 (LC 20), 17=214 (LC 20), 18=147 (LC 26), 19=191 (LC 25), 20=181 (LC 1), 21=180 (LC 25), 22=178 (LC 26), 23=181 (LC 26), 24=178 (LC 1), 25=192 (LC 26), 26=162 (LC 22), 27=215 (LC 19), 28=207 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-204/160, 2-3=-139/114, 3-4=-136/151, 4-5=-114/124, 5-6=-114/124, 6-7=-114/124, 7-8=-115/124, 8-10=-115/124, 10-11=-114/124, 11-12=-114/124, 12-13=-135/126, 13-14=-86/43, 14-15=-158/96
BOT CHORD 1-28=-79/136, 27-28=-79/136, 26-27=-79/136, 25-26=-79/136, 24-25=-79/136, 22-24=-79/136, 21-22=-78/136, 20-21=-79/136, 19-20=-79/136, 18-19=-79/136, 17-18=-79/136, 16-17=-79/136, 15-16=-79/136
WEBS 2-28=-174/155, 3-27=-184/169, 4-26=-122/53, 5-25=-151/67, 6-24=-138/63, 7-23=-141/64, 8-22=-137/62, 9-21=-140/63, 10-20=-141/65, 11-19=-151/69, 12-18=-107/5, 13-17=-184/168, 14-16=-174/156

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-1 to 5-4-1, Interior (1) 5-4-1 to 5-11-2, Exterior(2R) 5-11-2 to 13-0-0, Interior (1) 13-0-0 to 22-0-6, Exterior(2E) 22-0-6 to 27-7-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 0-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 1, 22 lb uplift at joint 15, 137 lb uplift at joint 28, 144 lb uplift at joint 27, 30 lb uplift at joint 26, 43 lb uplift at joint 25, 40 lb uplift at joint 24, 40 lb uplift at joint 23, 38 lb uplift at joint 22, 40 lb uplift at joint 21, 41 lb uplift at joint 20, 45 lb uplift at joint 19, 143 lb uplift at joint 17 and 138 lb uplift at joint 16.
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

December 20,2024

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
01/07/2025

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201
P241241-01	V1	Valley	1	1	I70321915 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,
Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Thu Dec 19 09:46:5 Page: 1
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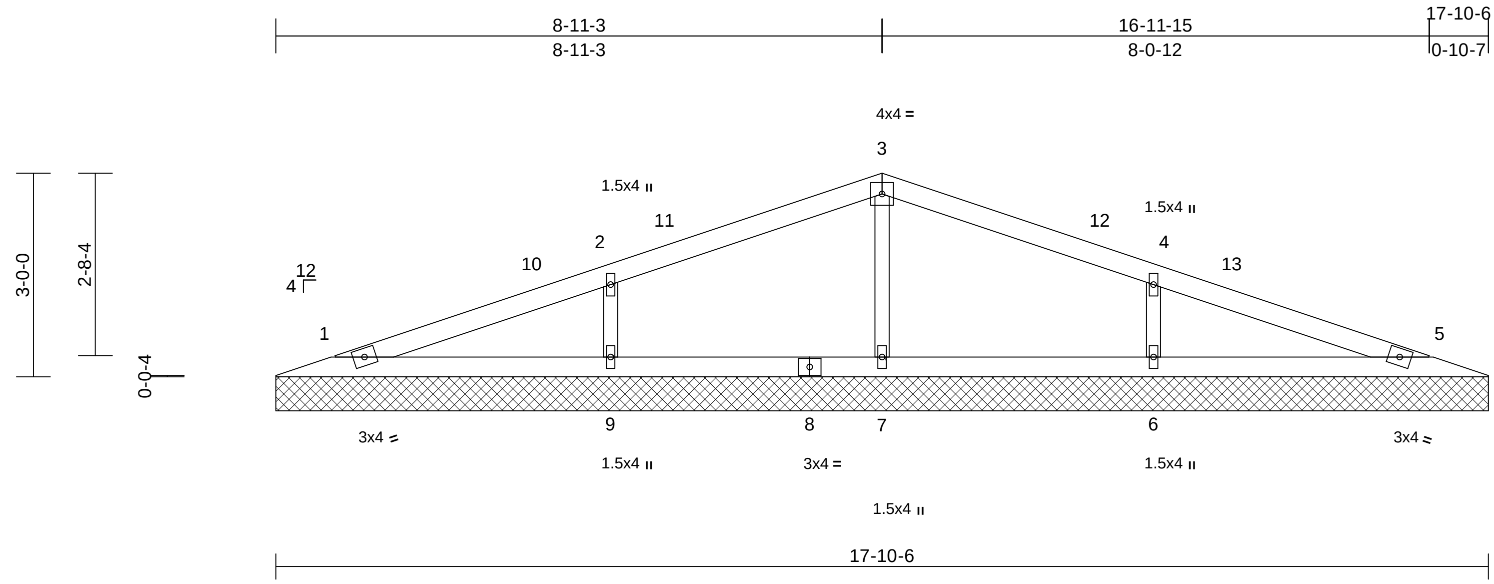

Scale = 1:33.9

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	0.28	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	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 56 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=17-10-6, 5=17-10-6, 6=17-10-6, 7=17-10-6, 9=17-10-6
Max Horiz 1=-51 (LC 13)
Max Uplift 1=-21 (LC 8), 5=-27 (LC 9), 6=-123 (LC 13), 7=-7 (LC 8), 9=-123 (LC 12)
Max Grav 1=147 (LC 1), 5=147 (LC 1), 6=434 (LC 26), 7=297 (LC 1), 9=434 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-62/55, 2-3=-69/98, 3-4=-69/102, 4-5=-46/43
BOT CHORD 1-9=-6/36, 7-9=-6/36, 6-7=-6/36, 5-6=-6/36
WEBS 3-7=-227/78, 2-9=-335/236, 4-6=-335/236

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-5 to 5-11-5, Interior (1) 5-11-5 to 8-11-15, Exterior(2R) 8-11-15 to 13-11-15, Interior (1) 13-11-15 to 17-0-10 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
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 21 lb uplift at joint 1, 27 lb uplift at joint 5, 7 lb uplift at joint 7, 123 lb uplift at joint 9 and 123 lb uplift at joint 6.
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

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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321916
P241241-01	V2	Valley	1	1	Job Reference (optional)	

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

Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Thu Dec 19 09:46:54 Page: 1
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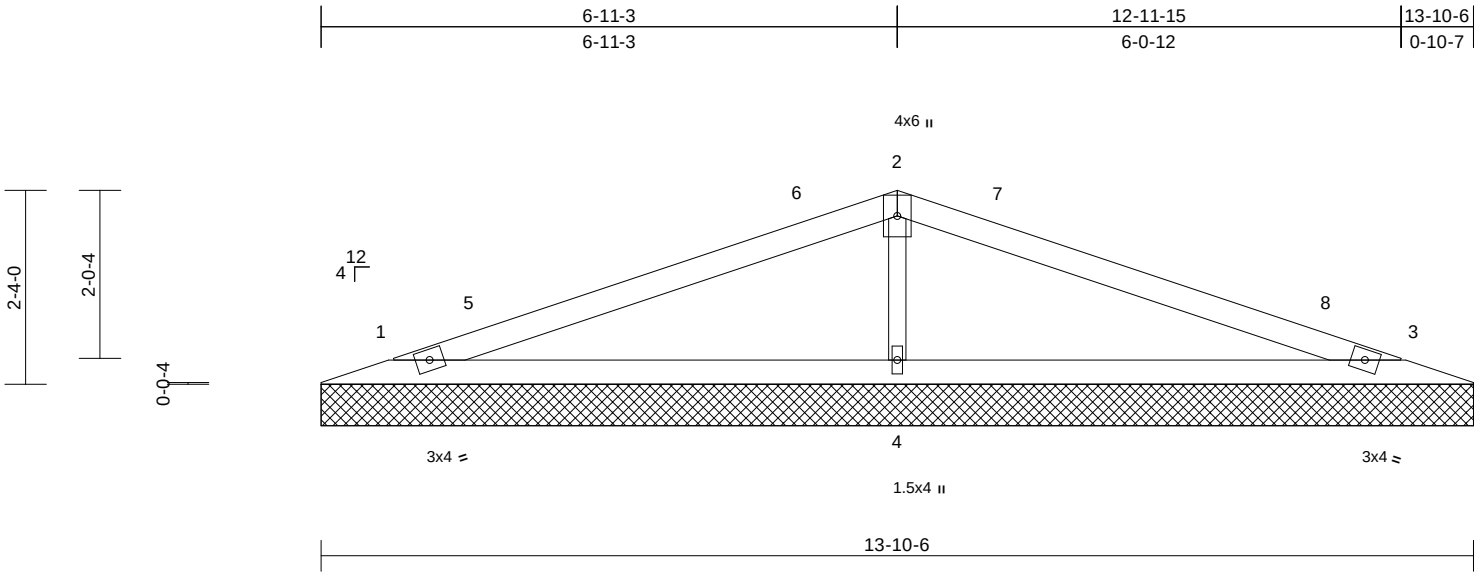

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	3	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=13-10-6, 3=13-10-6, 4=13-10-6
Max Horiz 1=38 (LC 16)
Max Uplift 1=-60 (LC 8), 3=-64 (LC 13), 4=-72 (LC 8)
Max Grav 1=244 (LC 25), 3=244 (LC 26), 4=617 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-98/70, 2-3=-98/71
BOT CHORD 1-4=-2/38, 3-4=-2/38
WEBS 2-4=-435/318

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-5 to 5-11-5, Interior (1) 5-11-5 to 6-11-15, Exterior(2R) 6-11-15 to 11-11-15, Interior (1) 11-11-15 to 13-0-10 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
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 60 lb uplift at joint 1, 64 lb uplift at joint 3 and 72 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

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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321917
P241241-01	V3	Valley	1	1	Job Reference (optional)	

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

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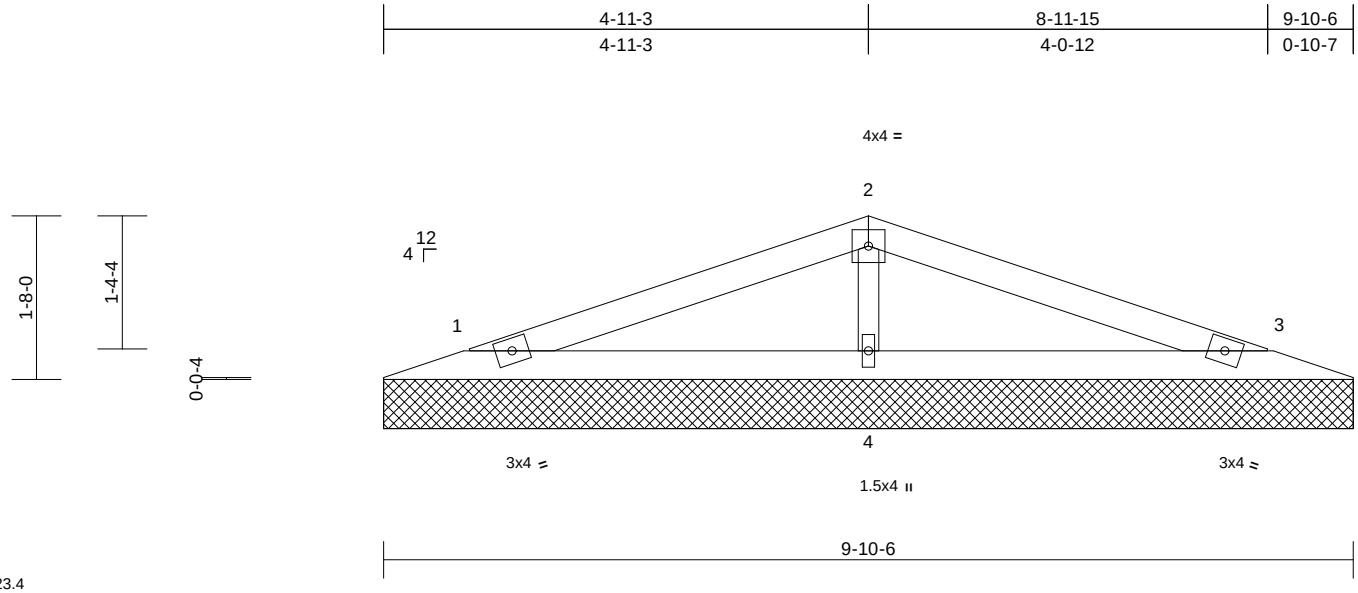

Scale = 1:23.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 28 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=9-10-6, 3=9-10-6, 4=9-10-6
Max Horiz 1=-26 (LC 17)
Max Uplift 1=-40 (LC 8), 3=-43 (LC 13), 4=-48 (LC 8)
Max Grav 1=164 (LC 25), 3=164 (LC 26), 4=413 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-66/54, 2-3=-66/55
BOT CHORD 1-4=-1/25, 3-4=-1/25
WEBS 2-4=-291/276

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) 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 40 lb uplift at joint 1, 43 lb uplift at joint 3 and 48 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

December 20,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - MH Lot 201	I70321918
P241241-01	V4	Valley	1	1	Job Reference (optional)	

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

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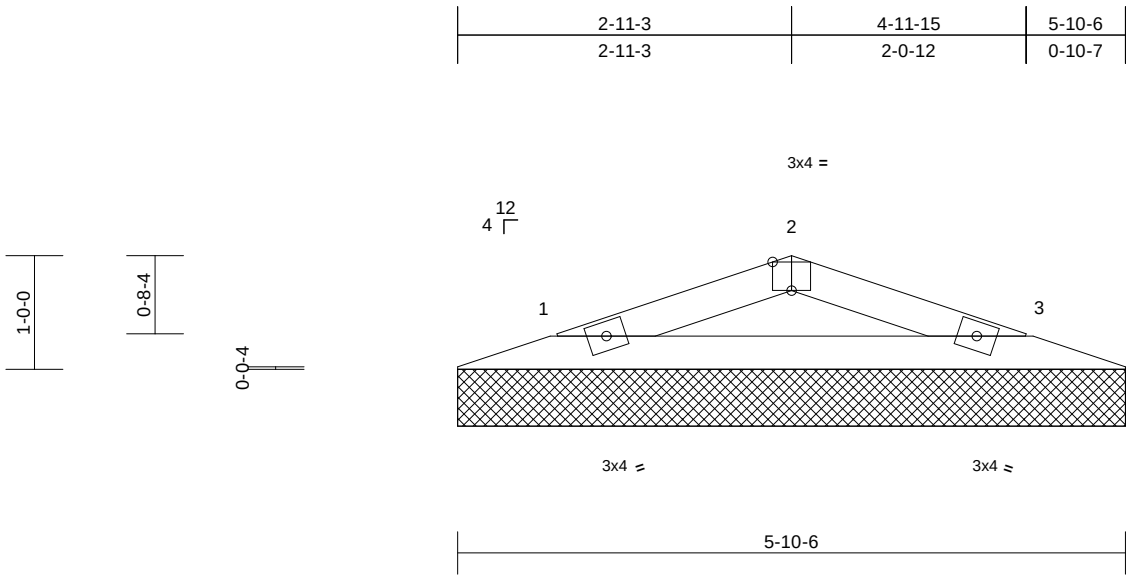


Scale = 1:20.2

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	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-10-6, 3=5-10-6
Max Horiz 1=-13 (LC 17)
Max Uplift 1=-32 (LC 8), 3=-32 (LC 9)
Max Grav 1=185 (LC 1), 3=185 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-242/285, 2-3=-242/290
BOT CHORD 1-3=-238/211

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 32 lb uplift at joint 1 and 32 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.

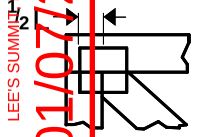
LOAD CASE(S) Standard

December 20,2024

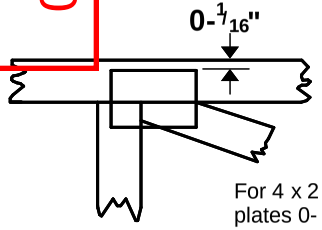
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

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.

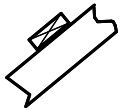
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

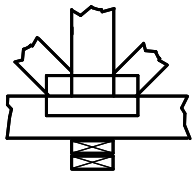
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

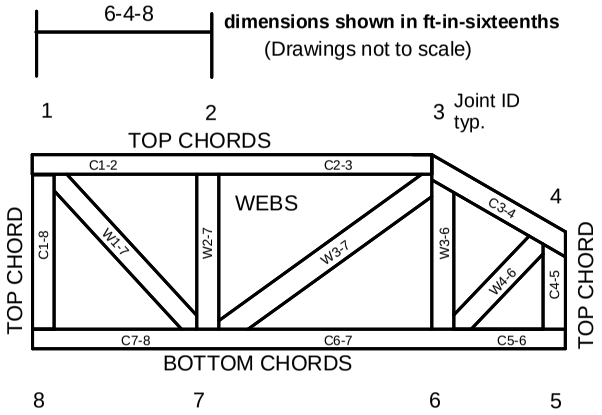


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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®

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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