MiTek®

RE: P240299

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

Site Information:

Customer: Clover & Hive Project Name: P240299
Lot/Block: 167 Model:
Address: 1704 SW Buckthorn Street Subdivision: Hawthorne Ridge
City: Lee's Summit State: MO

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

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

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

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I64723041	A01	4/8/2024	21	I64723061	PB3	4/8/2024
2	I64723042	A02	4/8/2024	22	I64723062	V01	4/8/2024
3	I64723043	A03	4/8/2024	23	I64723063	V02	4/8/2024
4	I64723044	A04	4/8/2024	24	I64723064	V03	4/8/2024
5	I64723045	B01	4/8/2024	25	I64723065	V04	4/8/2024
6	I64723046	C01	4/8/2024	26	I64723066	V05	4/8/2024
7	I64723047	C02	4/8/2024				
8	I64723048	C03	4/8/2024				
9	I64723049	C04	4/8/2024				
10	I64723050	C05	4/8/2024				
11	I64723051	C06	4/8/2024				
12	I64723052	C07	4/8/2024				
13	I64723053	C08	4/8/2024				
14	I64723054	C09	4/8/2024				
15	I64723055	CJ01	4/8/2024				
16	I64723056	J01	4/8/2024				
17	I64723057	J02	4/8/2024				
18	I64723058	LG01	4/8/2024				
19	I64723059	PB1	4/8/2024				
20	I64723060	PB2	4/8/2024				

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

Truss Design Engineer's Name: Johnson, Andrew

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

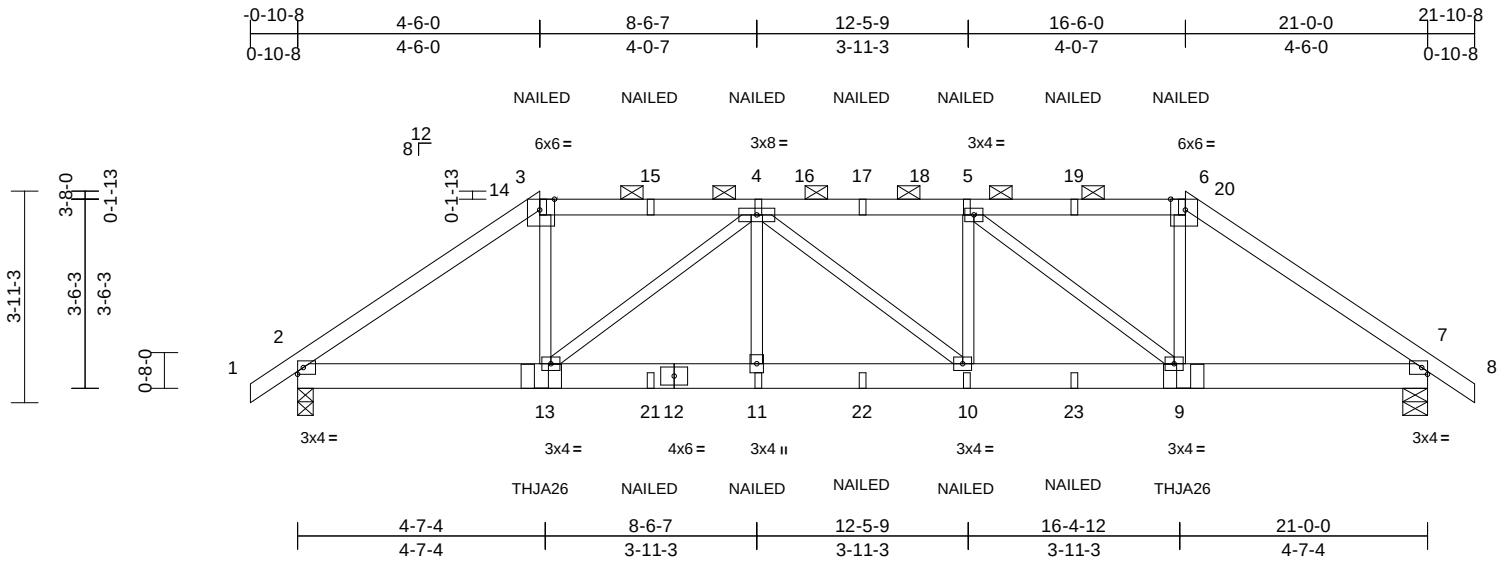
Missouri COA: 001193

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

April 08, 2024

Johnson, Andrew

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	A01	Hip Girder	1	2	I64723041



Scale = 1:42.8

Plate Offsets (X, Y): [3:0-3-5,Edge], [6:0-3-5,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	0.37	Vert(LL)	0.05	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.08	10-11	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.17	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 191 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-8, 7=0-5-8
Max Horiz 2=98 (LC 11)
Max Uplift 2=-534 (LC 12), 7=-539 (LC 13)
Max Grav 2=1590 (LC 1), 7=1601 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-2338/854, 3-4=-1843/747, 4-5=-2573/1031, 5-6=-1819/731, 6-7=-2322/854, 7-8=0/22
BOT CHORD 2-13=-702/1808, 11-13=-1006/2586, 10-11=-1006/2586, 9-10=-983/2573, 7-9=-624/1784
WEBS 3-13=-294/974, 4-13=-998/448, 4-11=0/250, 4-10=-37/29, 5-10=0/254, 5-9=-1010/448, 6-9=-298/983

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-6-0, Exterior(2R) 4-6-0 to 11-6-14, Interior (1) 11-6-14 to 16-6-0, Exterior(2E) 16-6-0 to 21-10-8 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 534 lb uplift at joint 2 and 539 lb uplift at joint 7.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Left Hand Hip) or equivalent at 4-6-6 from the left end to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Right Hand Hip) or equivalent at 16-5-10 from the left end to connect truss(es) to front face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.
15) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-6=-70, 6-8=-70, 2-7=-20
Concentrated Loads (lb)
Vert: 3=-79 (F), 6=-79 (F), 13=-254 (F), 4=-79 (F), 11=-24 (F), 10=-24 (F), 5=-79 (F), 9=-254 (F), 15=-79 (F), 17=-79 (F), 19=-79 (F), 21=-24 (F), 22=-24 (F), 23=-24 (F)

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	A02	Hip	1	1	I64723042

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

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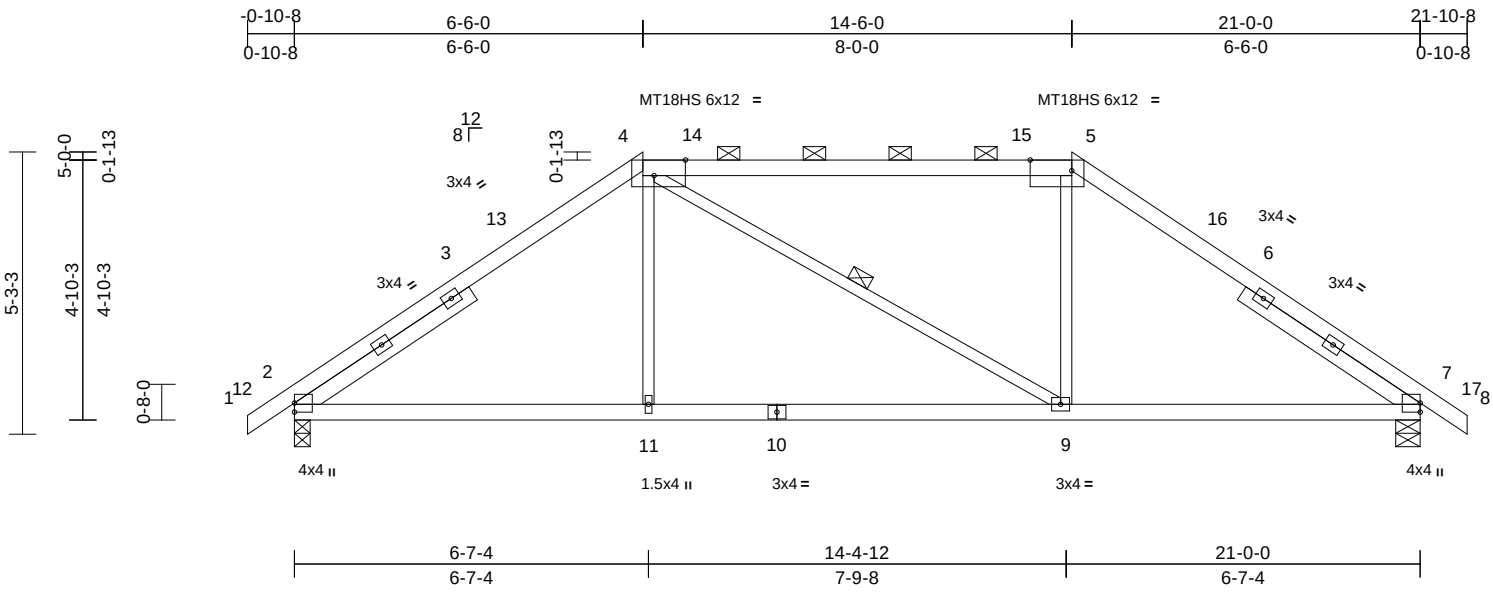

Scale = 1:43

Plate Offsets (X, Y): [4:0-7-0,Edge], [5:0-9-5,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.07	9-11	>999	240	MT18HS	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.15	9-11	>999	180	MT20	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 96 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 4-5:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 3-11-1, Right 2x4 SP No.2 -- 3-11-1

BRACING

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

REACTIONS (size) 2=0-3-8, 7=0-5-8
Max Horiz 2=-136 (LC 10)
Max Uplift 2=-125 (LC 12), 7=-125 (LC 13)
Max Grav 2=1006 (LC 1), 7=1006 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/16, 2-4=-1287/212, 4-5=-975/245, 5-7=-1287/211, 7-8=0/16
BOT CHORD	2-11=-133/971, 9-11=-131/975, 7-9=-57/971
WEBS	4-11=0/307, 4-9=-117/118, 5-9=0/307

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-6-0, Exterior(2R) 6-6-0 to 13-6-14, Interior (1) 13-6-14 to 14-6-0, Exterior(2R) 14-6-0 to 21-6-14, Interior (1) 21-6-14 to 21-10-8 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 125 lb uplift at joint 2 and 125 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

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	A03	Hip	1	1	I64723043

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

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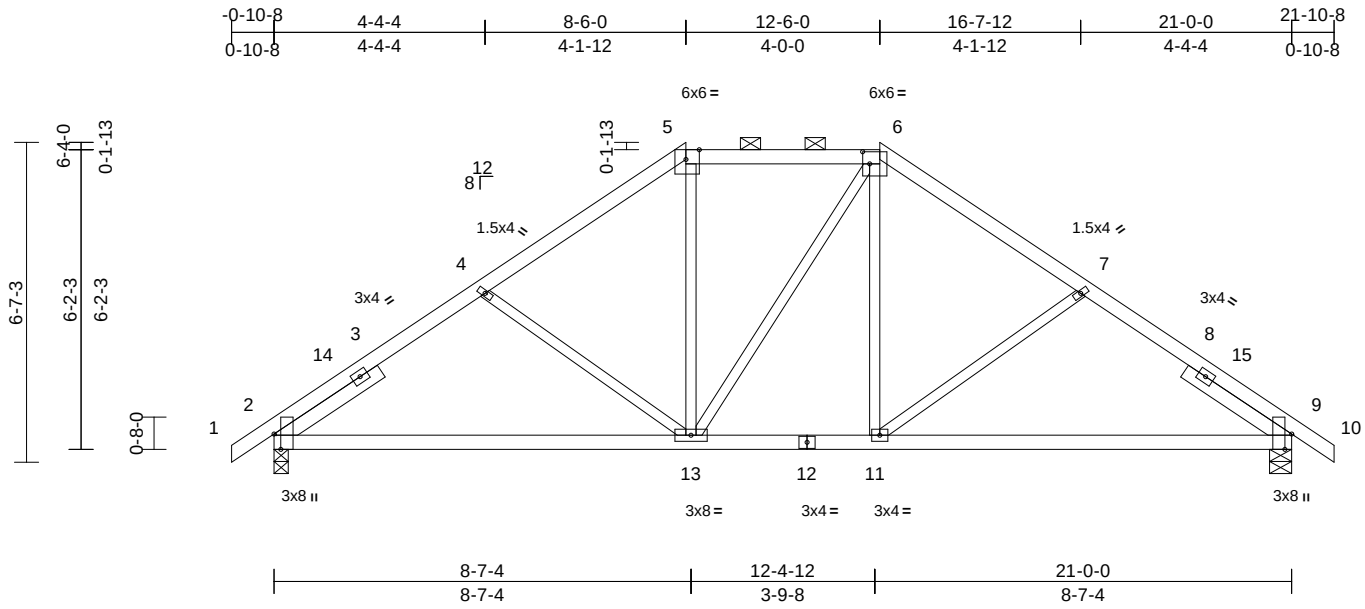

Scale = 1:47.5

Plate Offsets (X, Y): [2:0-3-13,Edge], [5:0-3-5,Edge], [6:0-1-12,0-3-0], [9:0-3-13,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	0.27	Vert(LL)	-0.15	9-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.31	9-11	>802	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 102 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 -- 2-6-14, Right 2x4 SP No.2 -- 2-6-14

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

REACTIONS (size) 2=0-3-8, 9=0-5-8
Max Horiz 2=173 (LC 11)
Max Uplift 2=-143 (LC 12), 9=-143 (LC 13)
Max Grav 2=1006 (LC 1), 9=1006 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-1295/252, 4-5=-1064/218, 5-6=-826/225, 6-7=-1064/214, 7-9=-1294/229, 9-10=0/16
BOT CHORD 2-13=-185/991, 11-13=-4/826, 9-11=-112/991
WEBS 4-13=-254/200, 5-13=-24/287, 6-13=-108/110, 6-11=-42/287, 7-11=-255/200

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-2-11, Interior (1) 4-2-11 to 8-6-0, Exterior(2E) 8-6-0 to 12-6-0, Exterior(2R) 12-6-0 to 19-6-14, Interior (1) 19-6-14 to 21-10-8 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 2 and 143 lb uplift at joint 9.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 8,2024

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

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	A04	Hip Girder	1	3	I64723044

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

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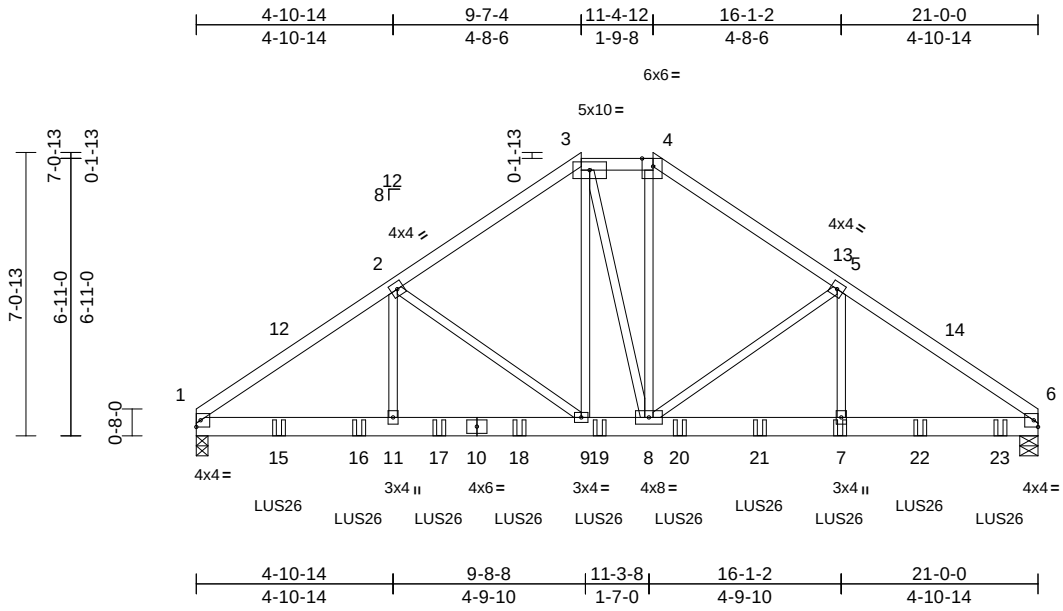
06/07/2024



Scale = 1:57.5

Plate Offsets (X, Y): [4:0-3-5,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	0.68	Vert(LL)	-0.07	9-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.12	9-11	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.27	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 314 lb	FT = 20%

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

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

REACTIONS (size) 1=0-3-8, 6=0-5-8
Max Horiz 1=-184 (LC 10)
Max Uplift 1=-1057 (LC 12), 6=-1199 (LC 13)
Max Grav 1=4702 (LC 1), 6=5169 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6888/1581, 2-3=-4817/1181, 3-4=-4038/1045, 4-5=-4874/1206, 5-6=-6846/1589
BOT CHORD 1-11=-1296/5482, 9-11=-1296/5482, 8-9=-850/3982, 7-8=-1204/5416, 6-7=-1204/5416
WEBS 2-11=-462/2343, 2-9=-2038/565, 3-9=-549/2178, 3-8=-140/333, 4-8=-599/2376, 5-8=-1778/554, 5-7=-469/2154

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: 2x6 - 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) 0-1-12 to 4-10-14, Interior (1) 4-10-14 to 9-7-4, Exterior(2E) 9-7-4 to 11-4-12, Exterior(2R) 11-4-12 to 18-5-10, Interior (1) 18-5-10 to 20-9-4 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1057 lb uplift at joint 1 and 1199 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 LUS26 (4-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 20-0-12 to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 4-6=-70, 1-6=-20
Concentrated Loads (lb)
Vert: 7=-800 (B), 15=-805 (B), 16=-805 (B), 17=-800 (B), 18=-800 (B), 19=-800 (B), 20=-800 (B), 21=-800 (B), 22=-800 (B), 23=-803 (B)

April 8,2024

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Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	B01	Common Supported Gable	1	1	I64723045

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

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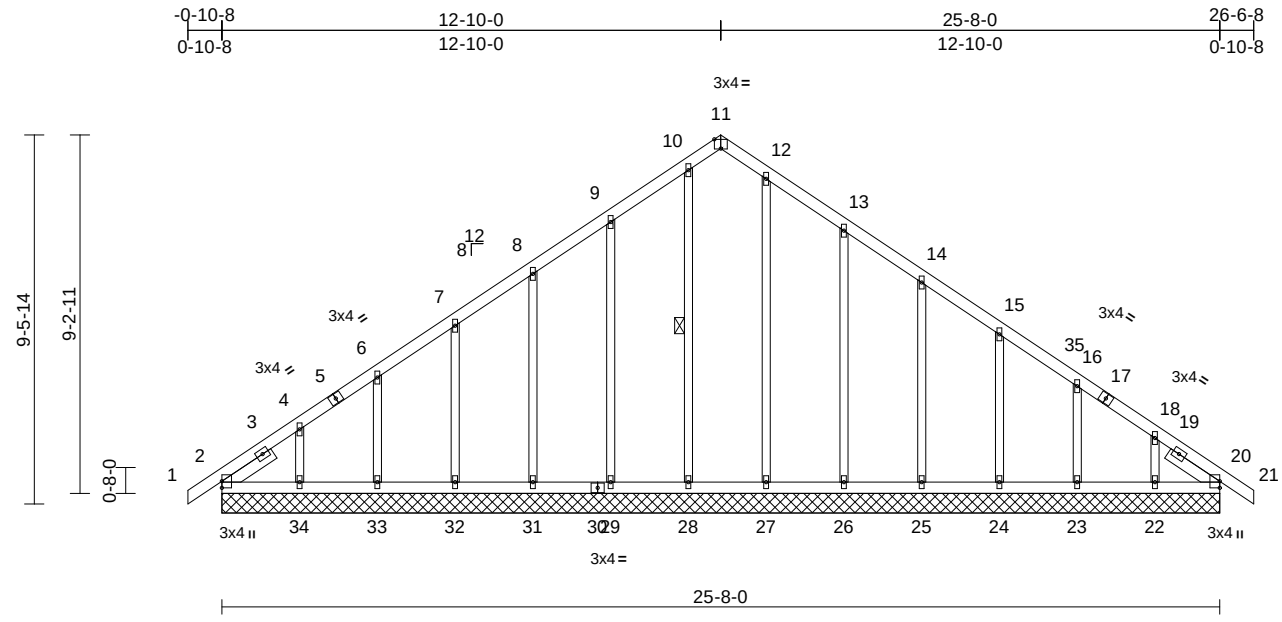

Scale = 1:59.3

Plate Offsets (X, Y): [11:0-2-0,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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	20	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 138 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 1-6-4, Right 2x4 SP No.2 -- 1-6-5

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 10-28

REACTIONS (size) 2=25-8-0, 20=25-8-0, 22=25-8-0, 23=25-8-0, 24=25-8-0, 25=25-8-0, 26=25-8-0, 27=25-8-0, 28=25-8-0, 29=25-8-0, 31=25-8-0, 32=25-8-0, 33=25-8-0, 34=25-8-0
Max Horiz 2=255 (LC 11)
Max Uplift 2=-55 (LC 8), 20=-16 (LC 9), 22=-125 (LC 13), 23=-76 (LC 13), 24=-79 (LC 13), 25=-75 (LC 13), 26=-101 (LC 13), 29=-98 (LC 12), 31=-75 (LC 12), 32=-80 (LC 12), 33=-70 (LC 12), 34=-137 (LC 12)
Max Grav 2=215 (LC 21), 20=189 (LC 22), 22=183 (LC 20), 23=192 (LC 20), 24=188 (LC 20), 25=188 (LC 20), 26=197 (LC 20), 27=163 (LC 1), 28=175 (LC 22), 29=192 (LC 19), 31=189 (LC 19), 32=190 (LC 19), 33=186 (LC 19), 34=213 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/16, 2-4=-316/190, 4-6=-211/148, 6-7=-148/125, 7-8=-131/99, 8-9=-116/109, 9-10=-108/160, 10-11=-92/129, 11-12=-101/144, 12-13=-100/143, 13-14=-71/65, 14-15=-86/39, 15-16=-117/64, 16-18=-182/90, 18-20=-280/134, 20-21=0/16
BOT CHORD	2-34=-113/248, 33-34=-113/248, 32-33=-113/248, 31-32=-113/248, 29-31=-113/248, 28-29=-113/248, 27-28=-113/248, 26-27=-113/248, 25-26=-113/248, 24-25=-113/248, 23-24=-113/248, 22-23=-113/248, 20-22=-113/248
WEBS	4-34=-167/156, 6-33=-148/98, 7-32=-149/104, 8-31=-149/99, 9-29=-152/122, 10-28=-135/22, 12-27=-123/0, 13-26=-157/125, 14-25=-148/99, 15-24=-148/103, 16-23=-152/105, 18-22=-144/144

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 12-10-0, Corner(3R) 12-10-0 to 18-0-0, Exterior(2N) 18-0-0 to 26-6-8 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) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 55 lb uplift at joint 2, 137 lb uplift at joint 34, 70 lb uplift at joint 33, 80 lb uplift at joint 32, 75 lb uplift at joint 31, 98 lb uplift at joint 29, 101 lb uplift at joint 26, 75 lb uplift at joint 25, 79 lb uplift at joint 24, 76 lb uplift at joint 23, 125 lb uplift at joint 22 and 16 lb uplift at joint 20.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	C01	Piggyback Base Structural Gable	1	1	I64723046

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Apr 05 10:55:12 Page: 1
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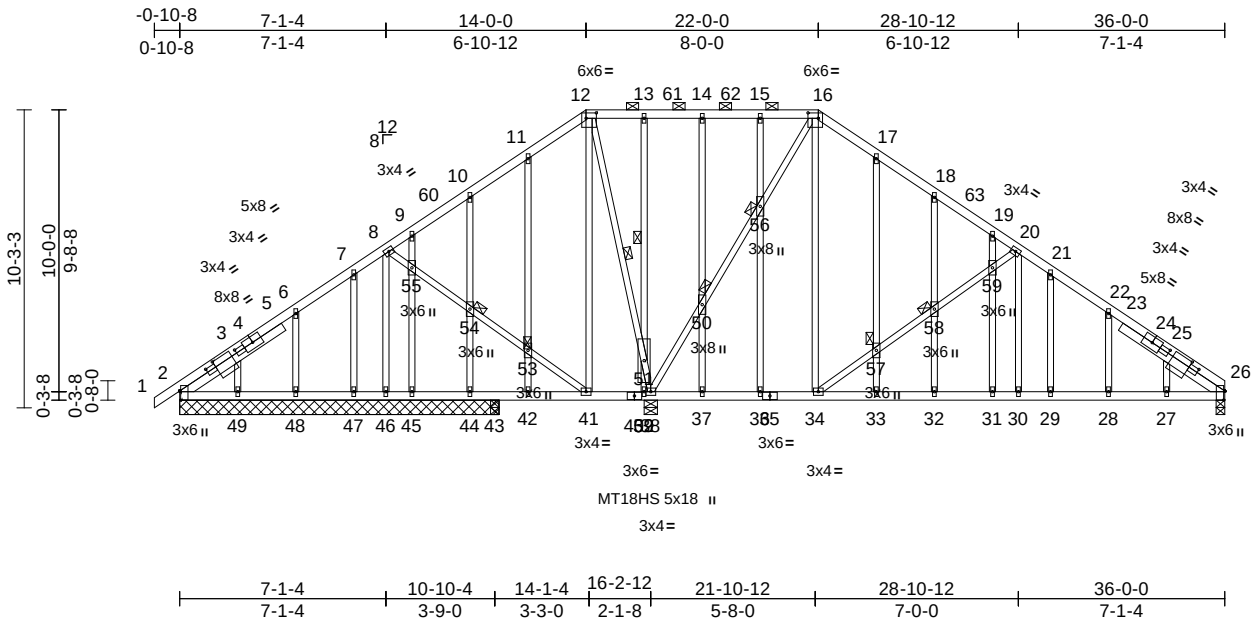

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Plate Offsets (X, Y): [2:0-3-13,Edge], [2:1-1-14,0-1-8], [2:2-4-4,0-1-8], [3:1-5-14,0-2-8], [12:0-4-4,0-2-4], [16:0-4-4,0-2-4], [25:1-5-12,0-2-8], [26:0-3-13,Edge], [26:1-1-12,0-1-8], [26:2-4-1,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	0.09	27-28	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.13	32-33	>999	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.02	26	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 252 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-2-10, Right 2x4 SP No.2 -- 4-2-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-5-11 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 12-16.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 12-38, 13-51
JOINTS 1 Brace at Jt(s): 50, 53, 54, 56, 57, 58

REACTIONS (size) 2=11-0-0, 26=0-3-8, 38=0-5-8, 39=0-5-8, 43=0-3-8, 44=11-0-0, 45=11-0-0, 46=11-0-0, 47=11-0-0, 48=11-0-0, 49=11-0-0
Max Horiz 2=275 (LC 9)
Max Uplift 2=-82 (LC 8), 26=-165 (LC 13), 38=-191 (LC 8), 39=-435 (LC 25), 43=-77 (LC 12), 44=-64 (LC 12), 45=-41 (LC 12), 46=-5 (LC 9), 47=-50 (LC 12), 48=-96 (LC 12), 49=-89 (LC 12)
Max Grav 2=140 (LC 20), 26=819 (LC 1), 38=1615 (LC 1), 39=211 (LC 9), 43=225 (LC 19), 44=121 (LC 19), 45=146 (LC 19), 46=84 (LC 25), 47=159 (LC 19), 48=209 (LC 19), 49=194 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/16, 2-3=-237/259, 3-6=-176/240, 6-7=-124/210, 7-8=-91/177, 8-9=-81/159, 9-10=-57/166, 10-11=-43/162, 11-12=-65/194, 12-13=-35/184, 13-14=-35/184, 14-15=-35/184, 15-16=-35/184, 16-17=-350/261, 17-18=-384/209, 18-19=-417/149, 19-20=-473/130, 20-21=-864/284, 21-22=-934/255, 22-25=-964/189, 25-26=-1077/162
BOT CHORD 2-49=-145/176, 48-49=-148/179, 47-48=-148/179, 46-47=-148/179, 45-46=-148/179, 44-45=-148/179, 43-44=-148/179, 42-43=-148/179, 41-42=-148/179, 39-41=-163/250, 38-39=-163/250, 37-38=0/310, 36-37=0/310, 34-36=0/310, 33-34=-62/777, 32-33=-62/777, 31-32=-62/777, 30-31=-62/777, 29-30=-62/777, 28-29=-62/777, 27-28=-62/777, 26-27=-62/775
WEBS 8-46=-83/11, 8-55=-40/89, 54-55=-43/89, 53-54=-38/88, 41-53=-43/90, 12-41=-42/92, 12-51=-241/13, 51-52=-438/101, 38-52=-278/15, 38-50=-871/156, 50-56=-837/149, 16-56=-796/145, 16-34=-189/578, 34-57=-656/290, 57-58=-646/284, 58-59=-622/274, 20-59=-668/295, 20-30=-127/316, 14-50=-114/57, 37-50=-89/63, 13-51=-220/94, 39-52=-188/91, 11-53=-119/89, 42-53=-109/83, 10-54=-185/121, 44-54=-197/126, 9-55=-103/59, 45-55=-96/57, 7-47=-123/71, 6-48=-169/121, 3-49=-151/113, 15-56=-69/48, 36-56=-33/51, 17-57=-57/67, 33-57=-39/58, 18-58=-103/85, 32-58=-62/68, 19-59=0/67, 31-59=-35/47, 21-29=-17/39, 22-28=-93/92, 25-27=0/91

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-0-0, Interior (1) 4-0-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-0-0 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) 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 MT20 plates unless otherwise indicated.
6) All plates are 1.5x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.

April 8,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	C01	Piggyback Base Structural Gable	1	1	I64723046

8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 2, 5 lb uplift at joint 46, 191 lb uplift at joint 38, 165 lb uplift at joint 26, 435 lb uplift at joint 39, 64 lb uplift at joint 44, 41 lb uplift at joint 45, 50 lb uplift at joint 47, 96 lb uplift at joint 48, 89 lb uplift at joint 49 and 77 lb uplift at joint 43.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) 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

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

Job	Truss	Truss Type	Qty	Ply		
P240299	C02	Piggyback Base	2	1	Job Reference (optional)	I64723047

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

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06/07/2024

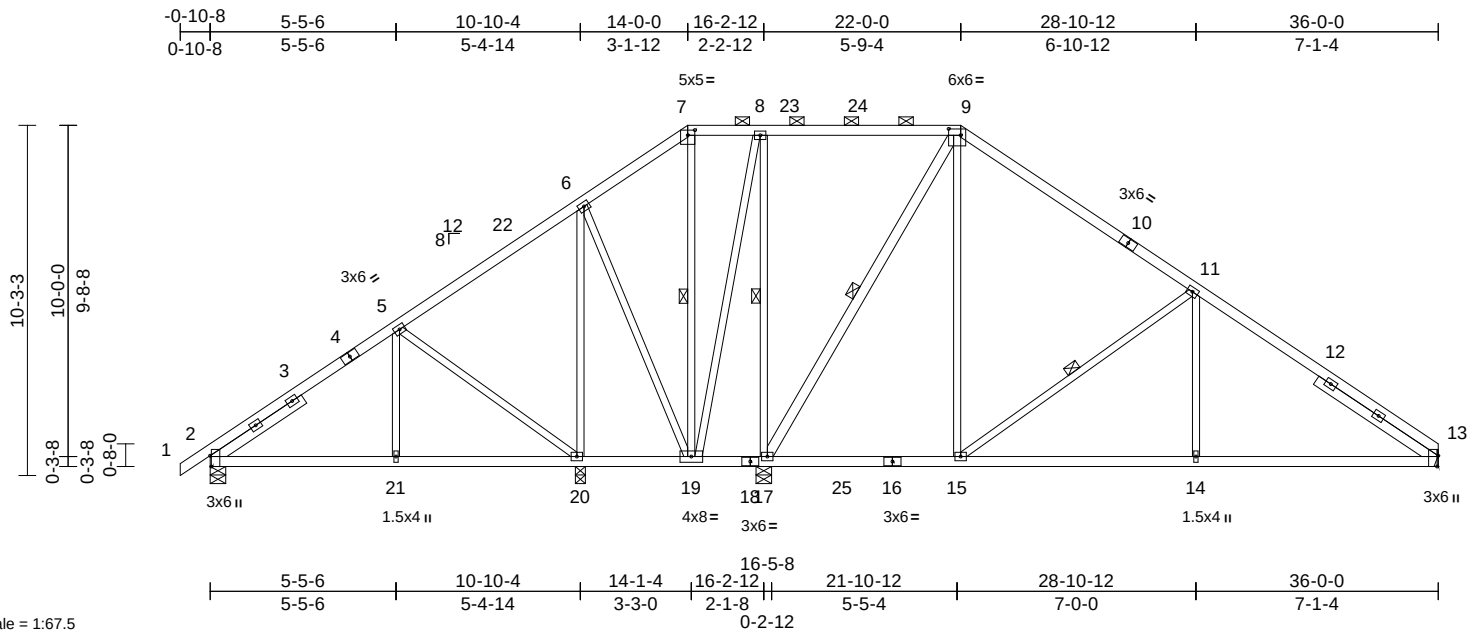

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Plate Offsets (X, Y): [2:0-3-13,Edge], [7:0-2-8,0-1-13], [9:0-4-4,0-2-4], [13:0-3-13,Edge]

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	13-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.14	13-14	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.02	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 207 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 17-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-2-11, Right 2x4 SP No.2 -- 4-2-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-1-9 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 19-20,17-19.
WEBS 1 Row at midpt 7-19, 9-17, 11-15, 8-17

REACTIONS (size) 2=0-5-8, 13= Mechanical, 17=0-5-8, 20=0-3-8
Max Horiz 2=275 (LC 9)
Max Uplift 2=-89 (LC 12), 13=-176 (LC 13), 17=-63 (LC 13), 20=-198 (LC 12)
Max Grav 2=486 (LC 25), 13=909 (LC 20), 17=1371 (LC 2), 20=881 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-5=-450/125, 5-6=-45/322, 6-7=-59/260, 7-8=-44/209, 8-9=-32/231, 9-11=-505/239, 11-13=-1120/246
BOT CHORD 2-21=-161/411, 20-21=-161/411, 19-20=-232/195, 17-19=-245/218, 15-17=-14/354, 14-15=-78/825, 13-14=-78/825
WEBS 7-19=-153/0, 9-17=-929/125, 9-15=-90/691, 11-15=-748/288, 11-14=0/309, 8-17=-451/148, 8-19=-9/149, 6-20=-389/128, 6-19=-23/92, 5-20=-573/214, 5-21=0/237

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-0-0 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 20 SP No.2 crushing capacity of 565 psi, Joint 17 SP No.2 crushing capacity of 565 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 89 lb uplift at joint 2, 63 lb uplift at joint 17, 176 lb uplift at joint 13 and 198 lb uplift at joint 20.
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

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240299	C03	Piggyback Base	8	1	I64723048 Job Reference (optional)

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

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/07/2024

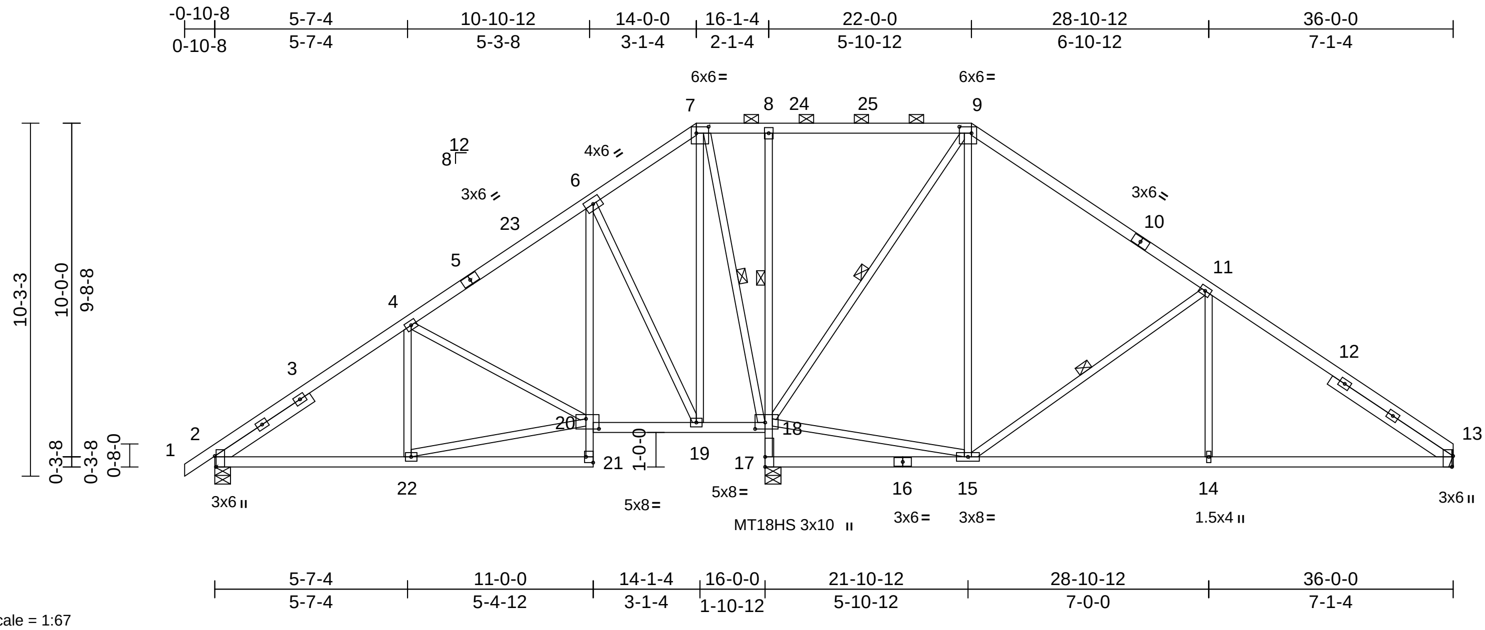

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Plate Offsets (X, Y): [2:0-3-13,Edge], [7:0-4-4,0-2-4], [9:0-4-4,0-2-4], [13:0-3-13,Edge], [18:0-3-8,0-2-4], [20:0-4-8,0-3-8], [21:Edge,0-2-8]

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	0.69	Vert(LL)	-0.06	13-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.14	13-14	>999	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.03	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 205 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 21-6,8-17:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-3-13, Right 2x4 SP No.2 -- 4-2-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-1-12 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 3-6-8 oc bracing. Except:
1 Row at midpt 8-18
WEBS 1 Row at midpt 7-18, 9-18, 11-15

REACTIONS (size) 2=0-5-8, 13= Mechanical, 17=0-5-8
Max Horiz 2=275 (LC 9)
Max Uplift 2=-133 (LC 12), 13=-192 (LC 13), 17=-166 (LC 12)
Max Grav 2=669 (LC 25), 13=820 (LC 26), 17=1866 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-748/155, 4-6=-363/177, 6-7=-86/227, 7-8=0/283, 8-9=0/283, 9-11=-499/267, 11-13=-1055/275
BOT CHORD 2-22=-194/626, 21-22=0/28, 20-21=0/88, 6-20=-88/410, 19-20=-119/284, 18-19=-158/223, 17-18=-1816/261, 8-18=-405/189, 15-17=-12/25, 14-15=-101/781, 13-14=-101/781
WEBS 4-22=-2/183, 20-22=-199/613, 4-20=-391/179, 6-19=-630/266, 7-19=-189/585, 7-18=-729/144, 15-18=0/294, 9-18=-839/130, 9-15=-105/483, 11-15=-650/287, 11-14=0/306

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-0-0 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 MT20 plates unless otherwise indicated.
5) All plates are 3x4 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) 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.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 133 lb uplift at joint 2, 166 lb uplift at joint 17 and 192 lb uplift at joint 13.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 8,2024

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
06/07/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	C04	Piggyback Base	4	1	I64723049

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

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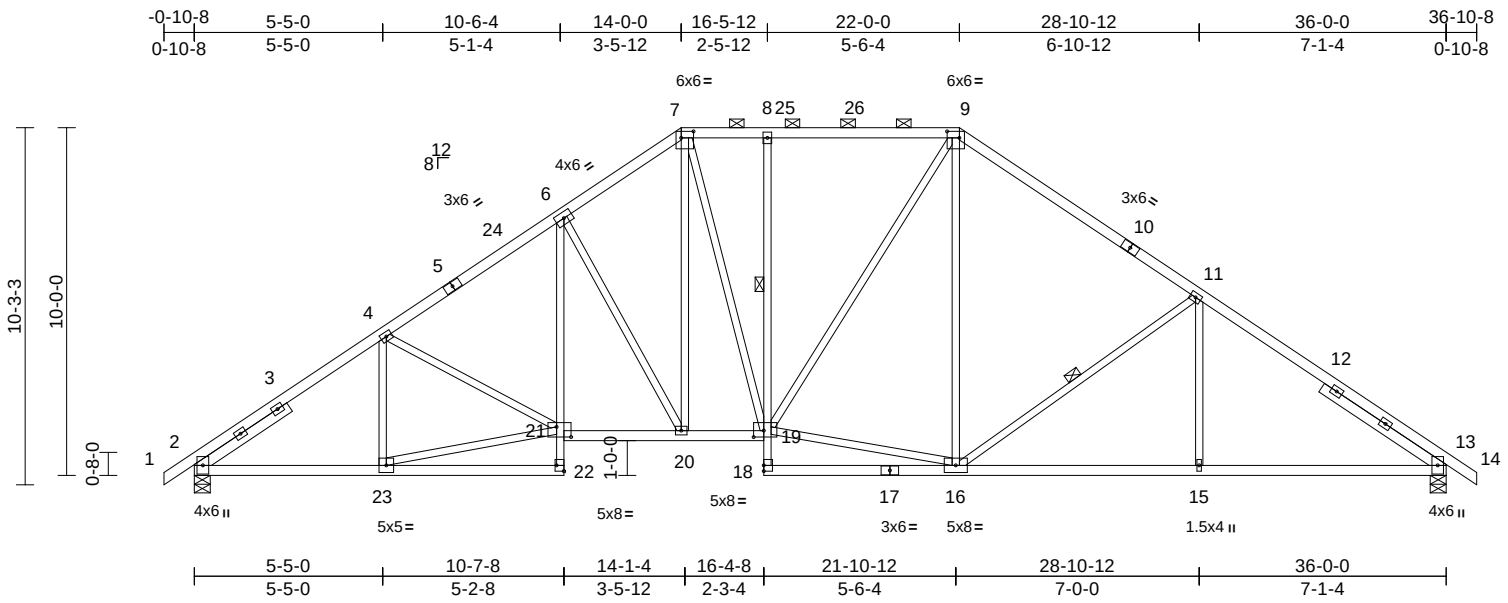

Scale = 1:66.3

Plate Offsets (X, Y): [2:0-3-5,0-0-15], [7:0-4-4,0-2-4], [9:0-4-4,0-2-4], [13:0-3-5,0-0-15], [19:0-3-8,0-2-4], [21:0-5-0,0-3-8], [22: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	0.69	Vert(LL)	-0.13	20-21	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.24	20-21	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.14	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 206 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 9-10:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP No.2 *Except* 22-6,8-18:2x3 SPF No.2
WEBS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 3-2-8, Right 2x4 SP No.2 -- 4-2-10

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-11-15 max.): 7-9.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
1 Row at midpt	8-19
WEBS	1 Row at midpt 11-16

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=277 (LC 11)
Max Uplift 2=-225 (LC 12), 13=-225 (LC 13)
Max Grav 2=1681 (LC 1), 13=1681 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/16, 2-4=-2437/353, 4-6=-2443/419, 6-7=-2002/433, 7-8=-1669/405, 8-9=-1670/406, 9-11=-1880/393, 11-13=-2406/361, 13-14=0/16
BOT CHORD	2-23=-316/1901, 22-23=-7/82, 21-22=0/92, 6-21=-97/544, 20-21=-201/1959, 19-20=-118/1600, 18-19=0/90, 8-19=-333/173, 16-18=0/80, 15-16=-186/1877, 13-15=-186/1877
WEBS	4-23=-317/139, 21-23=-317/1866, 4-21=-74/158, 6-20=-759/276, 7-20=-188/688, 7-19=-207/402, 16-19=-43/1390, 9-19=-192/527, 9-16=-106/307, 11-16=-593/284, 11-15=0/298

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-10-8 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 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 225 lb uplift at joint 2 and 225 lb uplift at joint 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) 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

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240299	C05	Piggyback Base	1	1	I64723050 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Apr 05 10:56:13 Page: 1
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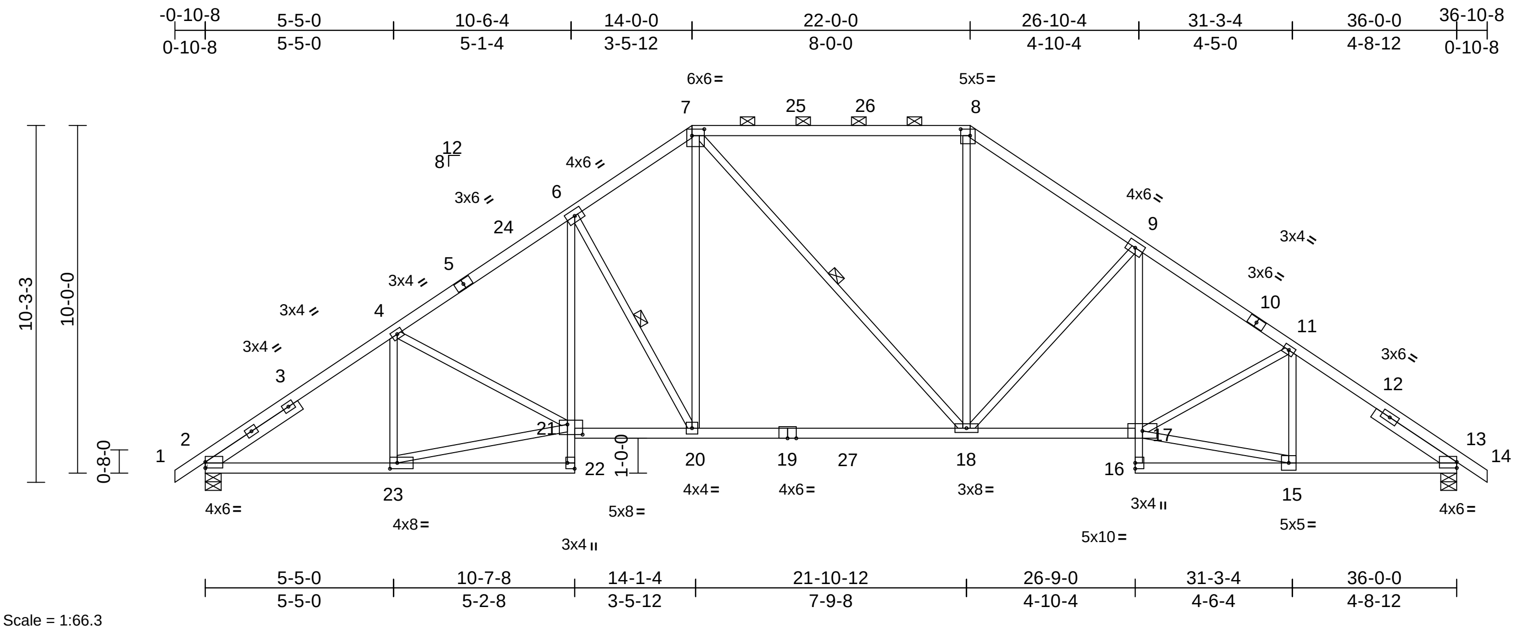

Scale = 1:66.3

Plate Offsets (X, Y): [2:Edge,0-2-1], [7:0-4-4,0-2-4], [8:0-3-4,0-2-4], [13:Edge,0-2-1], [21:0-5-4,0-3-8], [22:Edge,0-2-8], [23:0-2-8,0-2-0]

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	0.71	Vert(LL)	-0.23	18-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.40	18-20	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.16	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 195 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 7-8:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2 *Except* 22-6,9-16:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-2-8, Right 2x4 SP No.2 -- 2-9-8

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-12 oc purlins, except 2-0-0 oc purlins (4-7-10 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 20-21.
WEBS 1 Row at midpt 6-20, 7-18

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=277 (LC 11)
Max Uplift 2=-225 (LC 12), 13=-225 (LC 13)
Max Grav 2=1751 (LC 2), 13=1745 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-2569/354, 4-6=-2554/420, 6-7=-2123/425, 7-8=-1725/391, 8-9=-2137/409, 9-11=-2606/415, 11-13=-2560/349, 13-14=0/16
BOT CHORD 2-23=-316/2141, 22-23=-1/115, 21-22=0/93, 6-21=-110/638, 20-21=-201/2135, 18-20=-122/1742, 17-18=-161/2138, 16-17=0/84, 9-17=-51/484, 15-16=-9/105, 13-15=-200/1996
WEBS 4-23=-317/140, 21-23=-323/2078, 4-21=-74/150, 6-20=-820/279, 7-20=-154/938, 7-18=-186/187, 8-18=-52/795, 9-18=-738/256, 11-17=-80/221, 11-15=-327/105, 15-17=-196/1936

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 26-10-4, Interior (1) 26-10-4 to 36-10-8 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 225 lb uplift at joint 2 and 225 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

April 8,2024

Job	Truss	Truss Type	Qty	Ply	
P240299	C06	Piggyback Base	6	1	Job Reference (optional) I64723051

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

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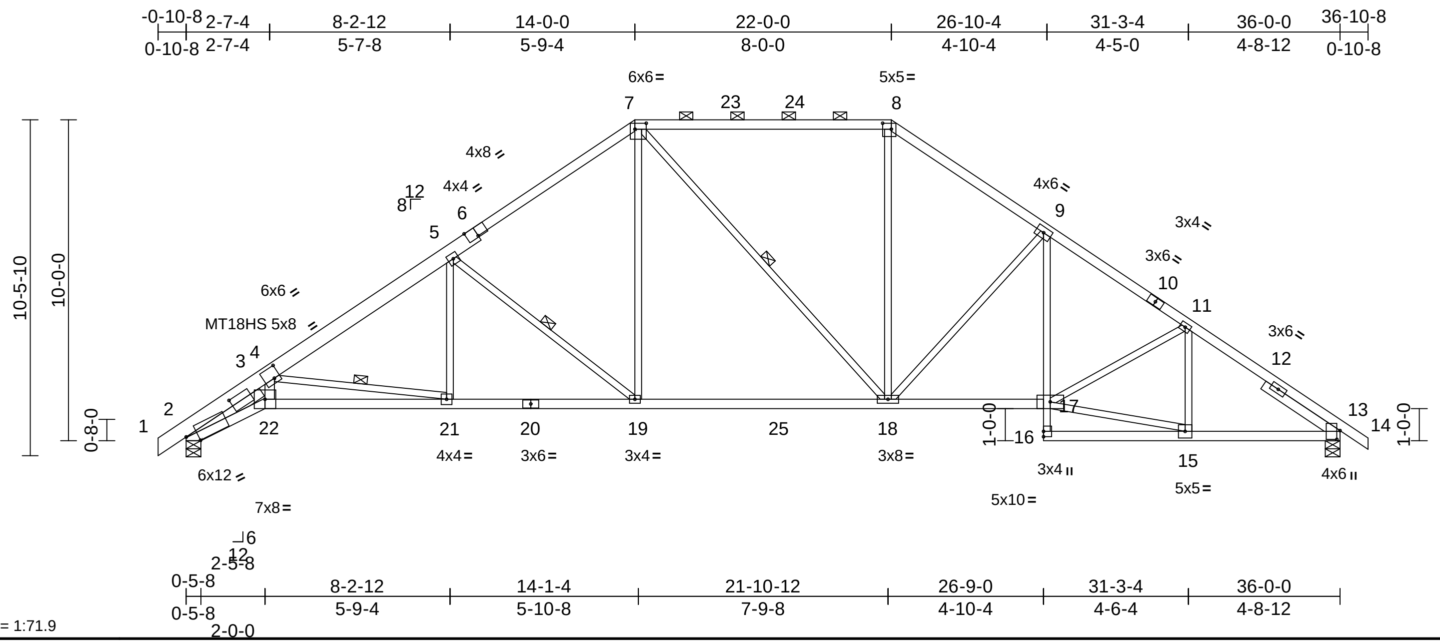

Scale = 1:71.9

Plate Offsets (X, Y): [2:0-4-4,0-3-7], [2:1-8-15,0-2-8], [4:0-2-4,0-4-4], [6:0-4-0,Edge], [7:0-4-4,0-2-4], [8:0-3-4,0-2-4], [13:0-3-5,0-1-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.27	18-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.47	18-19	>918	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.28	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 190 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 7-8:2x4 SP 2400F 2.0E, 1-6:2x6 SPF No.2

BOT CHORD 2x4 SP 1650F 1.5E *Except* 9-16:2x3 SPF No.2, 16-13,20-17:2x4 SP No.2

WEBS 2x3 SPF No.2 *Except* 22-4:2x4 SP No.2

SLIDER Left 2x4 SP No.2 -- 2-9-0, Right 2x4 SP No.2 -- 2-9-8

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-10-0 oc purlins, except 2-0-0 oc purlins (4-7-1 max.): 7-8.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 8-0-12 oc bracing: 2-22 8-9-10 oc bracing: 21-22.

WEBS 1 Row at midpt 4-21, 5-19, 7-18

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=-279 (LC 10)
Max Uplift 2=-225 (LC 12), 13=-223 (LC 13)
Max Grav 2=1753 (LC 2), 13=1739 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/13, 2-4=-5317/782, 4-5=-2788/414, 5-7=-2149/406, 7-8=-1715/390, 8-9=-2126/408, 9-11=-2593/413, 11-13=-2550/347, 13-14=0/16

BOT CHORD 2-22=-798/4582, 21-22=-673/3791, 19-21=-314/2441, 18-19=-124/1727, 17-18=-159/2127, 16-17=0/84, 9-17=-51/482, 15-16=-9/106, 13-15=-198/1987

WEBS 4-22=-293/2132, 4-21=-1372/364, 5-21=0/450, 5-19=-929/319, 7-19=-114/876, 7-18=-174/200, 8-18=-55/790, 9-18=-736/256, 11-17=-80/218, 11-15=-325/104, 15-17=-194/1927

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 26-10-4, Interior (1) 26-10-4 to 36-10-8 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearings are assumed to be: Joint 2 SP 1650F 1.5E crushing capacity of 565 psi, Joint 13 SP No.2 crushing capacity of 565 psi.
8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 13 and 225 lb uplift at joint 2.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 8,2024

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
06/07/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	C07	Piggyback Base	2	1	I64723052

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

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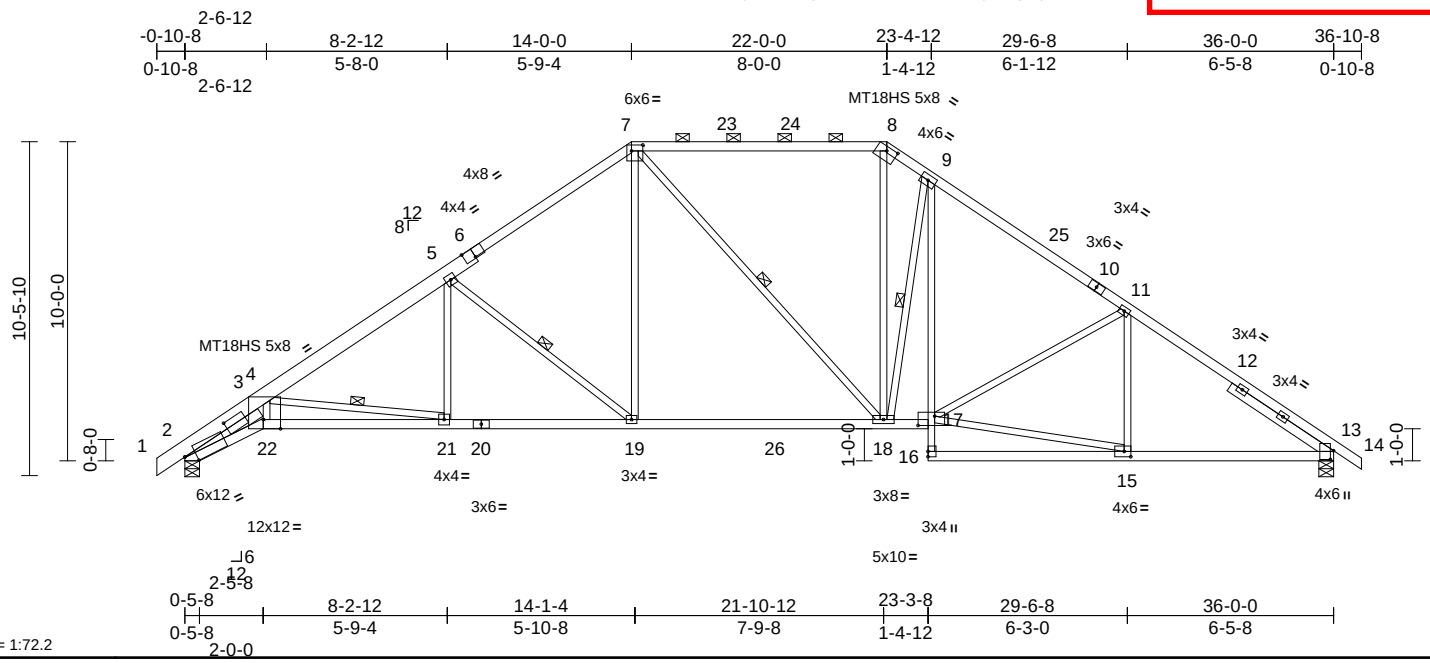

Scale = 1:72.2

Plate Offsets (X, Y): [2:0-4-4,0-3-7], [2:1-7-3,0-2-8], [6:0-4-0,Edge], [7:0-4-4,0-2-4], [8:0-4-0,0-1-9], [13:0-3-5,0-1-3], [15:0-2-8,0-2-0], [17:0-6-4,0-3-8], [22:0-6-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.25	18-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.44	18-19	>974	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.28	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 198 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 7-8:2x4 SP 2400F 2.0E, 1-6:2x6 SPF No.2
BOT CHORD	2x4 SP 1650F 1.5E *Except* 9-16:2x3 SPF No.2, 16-13,20-17:2x4 SP No.2
WEBS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 2-9-0, Right 2x4 SP No.2 -- 3-10-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-11-4 oc purlins, except 2-0-0 oc purlins (4-9-8 max.): 7-8.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 4-21, 5-19, 7-18, 9-18

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=-279 (LC 10)
Max Uplift 2=-225 (LC 12), 13=-223 (LC 13)
Max Grav 2=1753 (LC 2), 13=1739 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-4=-5233/775, 4-5=-2791/414, 5-7=-2148/406, 7-8=-1724/391, 8-9=-2057/455, 9-11=-2300/407, 11-13=-2508/355, 13-14=0/16
BOT CHORD	2-22=-791/4495, 21-22=-685/3849, 19-21=-314/2444, 18-19=-124/1725, 17-18=-81/1823, 16-17=0/109, 9-17=-111/520, 15-16=0/175, 13-15=-187/1975
WEBS	4-22=-288/2076, 4-21=-1426/376, 5-21=0/451, 5-19=-934/320, 7-19=-114/870, 7-18=-159/214, 8-18=-145/904, 9-18=-748/301, 15-17=-193/1832, 11-17=-295/227, 11-15=-198/119

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-10-8 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearings are assumed to be: Joint 2 SP 1650F 1.5E crushing capacity of 565 psi, Joint 13 SP No.2 crushing capacity of 565 psi.
8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 13 and 225 lb uplift at joint 2.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240299	C08	Piggyback Base Supported Gable	1	1	Job Reference (optional)	I64723053

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

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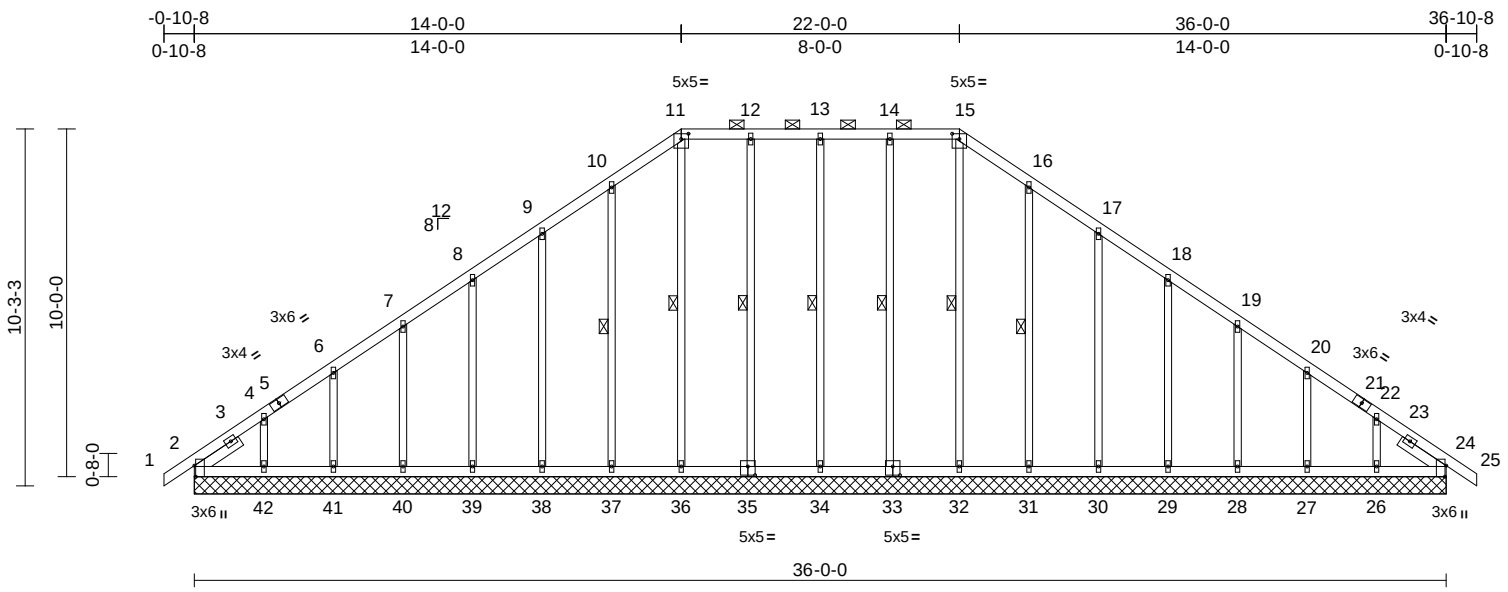

Scale = 1:66.3

Plate Offsets (X, Y): [2:0-3-13,Edge], [11:0-2-8,0-1-13], [15:0-2-8,0-1-13], [24:0-3-13,Edge], [33:0-2-8,0-3-0], [35:0-2-8,0-3-0]

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	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 209 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-4, Right 2x4 SP No.2 -- 1-6-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 11-15.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 15-32, 14-33, 13-34, 12-35, 11-36, 10-37, 16-31

REACTIONS (size) 2=36-0-0, 24=36-0-0, 26=36-0-0, 27=36-0-0, 28=36-0-0, 29=36-0-0, 30=36-0-0, 31=36-0-0, 32=36-0-0, 33=36-0-0, 34=36-0-0, 35=36-0-0, 36=36-0-0, 37=36-0-0, 38=36-0-0, 39=36-0-0, 40=36-0-0, 41=36-0-0, 42=36-0-0
Max Horiz 2=-277 (LC 10)
Max Uplift 2=-100 (LC 8), 24=-20 (LC 9), 26=-118 (LC 13), 27=-73 (LC 13), 28=-79 (LC 13), 29=-77 (LC 13), 30=-82 (LC 13), 31=-76 (LC 13), 33=-43 (LC 9), 34=-41 (LC 8), 35=-42 (LC 9), 36=-15 (LC 9), 37=-78 (LC 12), 38=-81 (LC 12), 39=-77 (LC 12), 40=-80 (LC 12), 41=-71 (LC 12), 42=-132 (LC 12)
Max Grav 2=225 (LC 20), 24=171 (LC 1), 26=204 (LC 20), 27=187 (LC 20), 28=189 (LC 20), 29=189 (LC 20), 30=189 (LC 20), 31=196 (LC 20), 32=167 (LC 22), 33=187 (LC 25), 34=182 (LC 25), 35=187 (LC 26), 36=186 (LC 22), 37=199 (LC 19), 38=188 (LC 19), 39=189 (LC 19), 40=190 (LC 19), 41=185 (LC 19), 42=220 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-286/237, 4-6=-198/190, 6-7=-172/168, 7-8=-155/162, 8-9=-141/190, 9-10=-138/232, 10-11=-177/273, 11-12=-153/250, 12-13=-154/251, 13-14=-154/251, 14-15=-153/250, 15-16=-177/273, 16-17=-138/209, 17-18=-99/141, 18-19=-69/75, 19-20=-84/54, 20-22=-113/77, 22-24=-202/113, 24-25=0/16
BOT CHORD 2-42=-95/196, 41-42=-95/196, 40-41=-95/196, 39-40=-95/196, 38-39=-95/196, 37-38=-95/196, 36-37=-95/196, 34-36=-95/196, 32-34=-95/196, 31-32=-95/196, 30-31=-95/196, 29-30=-95/196, 28-29=-95/196, 27-28=-95/196, 26-27=-95/196, 24-26=-95/196
WEBS 15-32=-128/7, 14-33=-148/67, 13-34=-139/67, 12-35=-148/65, 11-36=-147/45, 10-37=-158/103, 9-38=-148/104, 8-39=-149/101, 7-40=-149/103, 6-41=-147/96, 4-42=-173/151, 16-31=-156/100, 17-30=-149/106, 18-29=-149/101, 19-28=-149/103, 20-27=-149/98, 22-26=-158/138

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 14-0-0, Corner(3R) 14-0-0 to 19-0-0, Exterior(2N) 19-0-0 to 22-0-0, Corner(3R) 22-0-0 to 27-0-0, Exterior(2N) 27-0-0 to 36-10-8 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

April 8,2024

Continued on page 2

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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply		
P240299	C08	Piggyback Base Supported Gable	1	1	Job Reference (optional)	I64723053

9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint 2, 43 lb uplift at joint 33, 41 lb uplift at joint 34, 42 lb uplift at joint 35, 15 lb uplift at joint 36, 78 lb uplift at joint 37, 81 lb uplift at joint 38, 77 lb uplift at joint 39, 80 lb uplift at joint 40, 71 lb uplift at joint 41, 132 lb uplift at joint 42, 76 lb uplift at joint 31, 82 lb uplift at joint 30, 77 lb uplift at joint 29, 79 lb uplift at joint 28, 73 lb uplift at joint 27, 118 lb uplift at joint 26 and 20 lb uplift at joint 24.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) 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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	C09	Piggyback Base	5	1	I64723054

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

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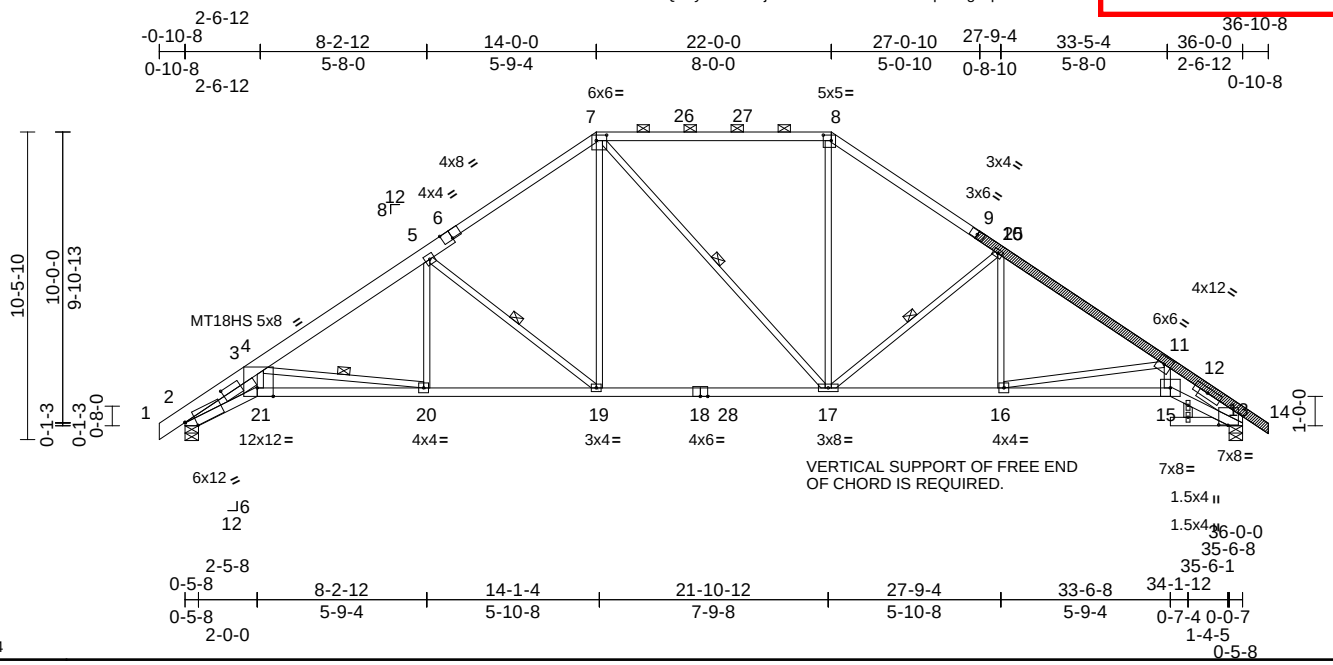

Plate Offsets (X, Y): [2:0-4-4,0-3-7], [2:1-7-3,0-2-8], [6:0-4-0,Edge], [7:0-4-4,0-2-4], [8:0-3-4,0-2-4], [13:0-3-12,0-0-2], [21:0-6-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.31	17-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.53	17-19	>802	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.41	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 204 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 7-8:2x4 SP 2400F 2.0E, 1-6:2x6 SPF No.2, 9-14:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP 1650F 1.5E *Except* 23-22:2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 23-24:2x4 SP No.2
LBR SCAB	9-14 SP 1650F 1.5E one side
SLIDER	Left 2x4 SP No.2 -- 2-9-0, Right 2x4 SP No.2 -- 1-10-2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-10-13 oc purlins, except 2-0-0 oc purlins (4-6-12 max.): 7-8.
BOT CHORD	Rigid ceiling directly applied or 8-1-5 oc bracing.
WEBS	1 Row at midpt 4-20, 5-19, 7-17, 10-17

REACTIONS (size) 2=0-5-8, 13=0-5-8
Max Horiz 2=279 (LC 11)
Max Uplift 2=-225 (LC 12), 13=-225 (LC 13)
Max Grav 2=1747 (LC 2), 13=1741 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-4=-5216/773, 4-5=-2777/413, 5-7=-2138/404, 7-8=-1696/389, 8-10=-2133/403, 10-11=-2730/402, 11-13=-4660/563, 13-14=0/6
BOT CHORD	2-21=-788/4480, 20-21=-683/3836, 19-20=-312/2432, 17-19=-128/1717, 16-17=-190/2261, 15-16=-361/3215, 13-15=-414/3756
WEBS	4-21=-286/2071, 4-20=-1425/375, 5-20=0/447, 5-19=-929/320, 7-19=-114/879, 7-17=-184/188, 8-17=-51/782, 10-17=-863/280, 10-16=0/405, 11-16=-1032/235, 11-15=-119/1713

NOTES

1) Attached 12-0-0 scab 9 to 14, front face(s) 2x4 SP 1650F 1.5E with 1 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 0-1-12 from end at joint 9, nail 1 row(s) at 7" o.c. for 2-0-0; starting at 6-9-4 from end at joint 9, nail 1 row(s) at 3" o.c. for 3-5-7.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-10-8 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
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP 1650F 1.5E crushing capacity of 565 psi.
9) Bearing at joint(s) 13, 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 225 lb uplift at joint 13 and 225 lb uplift at joint 2.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240299	CJ01	Diagonal Hip Girder	2	1	Job Reference (optional)	I64723055

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

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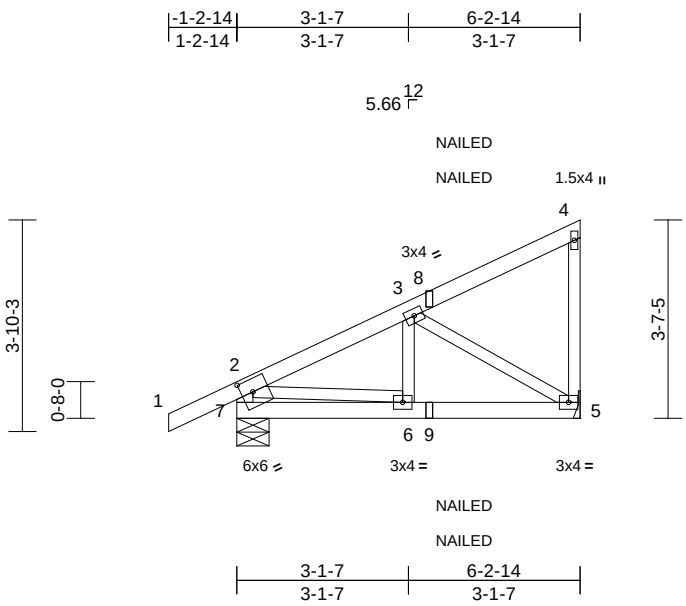

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Plate Offsets (X, Y): [7:0-2-8,0-2-12]

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	0.22	Vert(LL)	0.00	6	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	5-6	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 31 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-2:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-11-10 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-7-0
Max Horiz 7=159 (LC 9)
Max Uplift 5=-94 (LC 9), 7=-94 (LC 12)
Max Grav 5=258 (LC 1), 7=378 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-352/278, 1-2=0/41, 2-3=-353/123, 3-4=-214/102, 4-5=-90/117
BOT CHORD 6-7=-353/181, 5-6=-257/300
WEBS 3-6=0/121, 3-5=-290/247, 2-6=-63/329

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-2-14 to 5-10-0, Exterior(2R) 5-10-0 to 6-1-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Bearings are assumed to be: Joint 7 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 7 and 94 lb uplift at joint 5.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

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

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240299	J01	Jack-Open	4	1	Job Reference (optional)	I64723056

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

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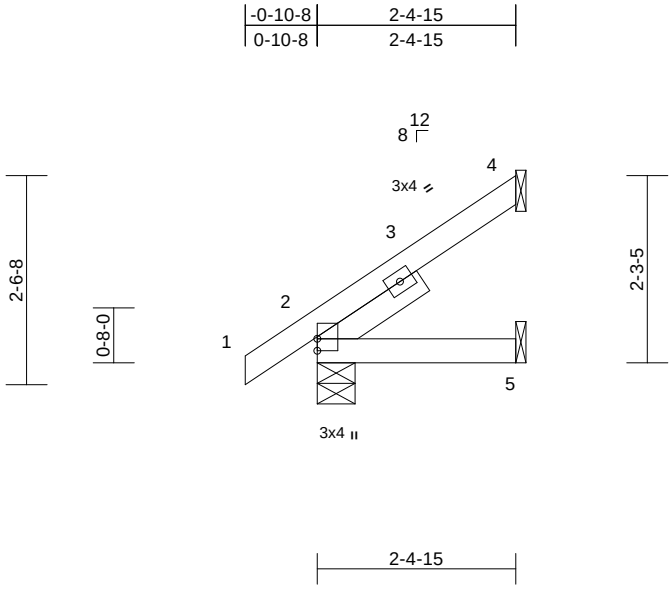

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	2-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 12 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-5-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=92 (LC 12)
Max Uplift 2=-16 (LC 12), 4=-67 (LC 12)
Max Grav 2=178 (LC 1), 4=80 (LC 19), 5=47 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-78/47
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) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 4 and 16 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.

LOAD CASE(S) Standard

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	J02	Jack-Open	7	1	I64723057

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

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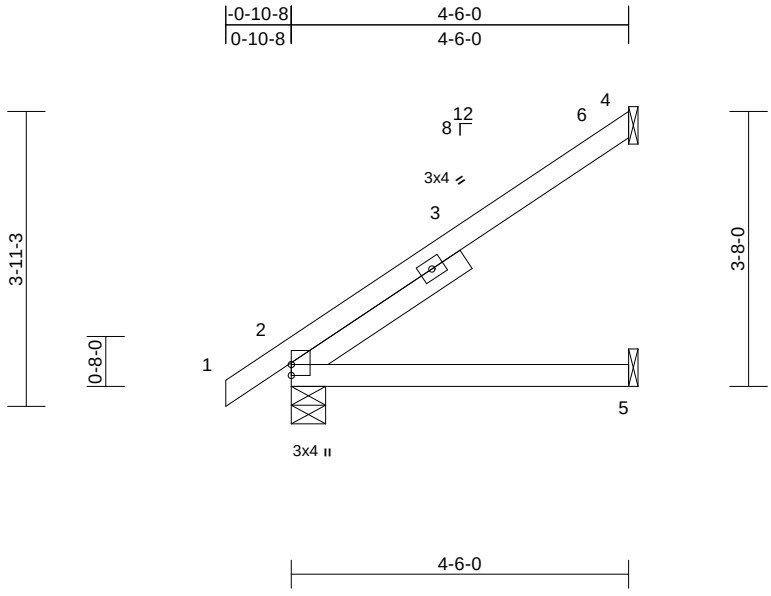

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.02	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	2-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 21 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-8-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-0 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=153 (LC 12)
Max Uplift 2=-15 (LC 12), 4=-121 (LC 12)
Max Grav 2=267 (LC 1), 4=163 (LC 19), 5=89 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-131/80
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-5-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 4 and 15 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.

LOAD CASE(S) Standard

April 8,2024

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
06/07/2024

Job	Truss	Truss Type	Qty	Ply	
P240299	LG01	Lay-In Gable	1	1	I64723058 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Apr 05 10:56:14 Page: 1
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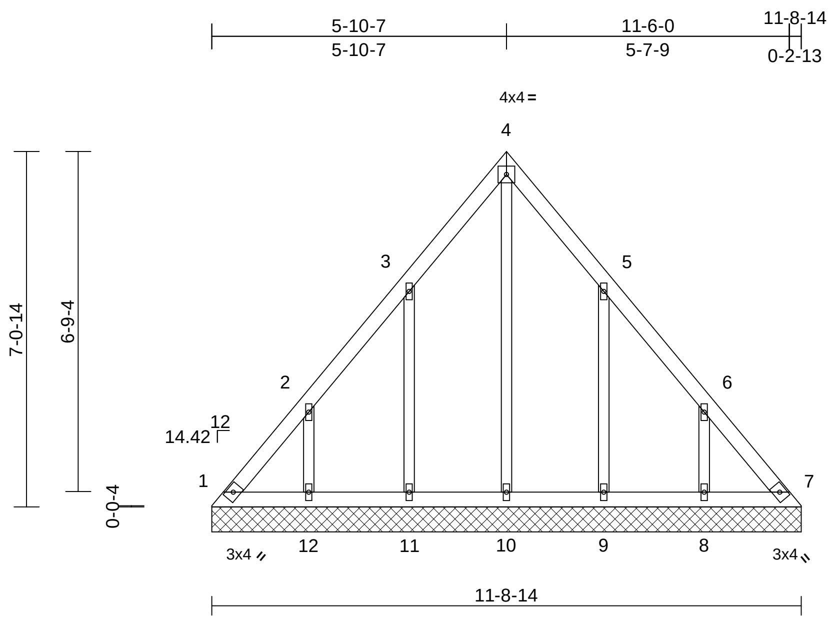

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	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
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=11-8-14, 7=11-8-14, 8=11-8-14, 9=11-8-14, 10=11-8-14, 11=11-8-14, 12=11-8-14
Max Horiz 1=197 (LC 9)
Max Uplift 1=-82 (LC 10), 7=-57 (LC 11), 8=-168 (LC 13), 9=-165 (LC 13), 11=-167 (LC 12), 12=-168 (LC 12)
Max Grav 1=190 (LC 12), 7=174 (LC 13), 8=220 (LC 20), 9=225 (LC 20), 10=142 (LC 22), 11=226 (LC 19), 12=219 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-264/171, 2-3=-150/105, 3-4=-135/124, 4-5=-135/119, 5-6=-125/71, 6-7=-243/171
BOT CHORD 1-12=-129/187, 11-12=-130/188, 10-11=-130/188, 9-10=-130/188, 8-9=-130/188, 7-8=-129/187
WEBS 2-12=-218/185, 3-11=-221/192, 4-10=-114/77, 5-9=-221/191, 6-8=-218/185

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-12 to 5-3-12, Interior (1) 5-3-12 to 5-10-10, Exterior(2R) 5-10-10 to 10-10-10, Interior (1) 10-10-10 to 11-5-9 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 82 lb uplift at joint 1, 57 lb uplift at joint 7, 168 lb uplift at joint 12, 167 lb uplift at joint 11, 165 lb uplift at joint 9 and 168 lb uplift at joint 8.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 8,2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	PB1	Piggyback	1	1	I64723059

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

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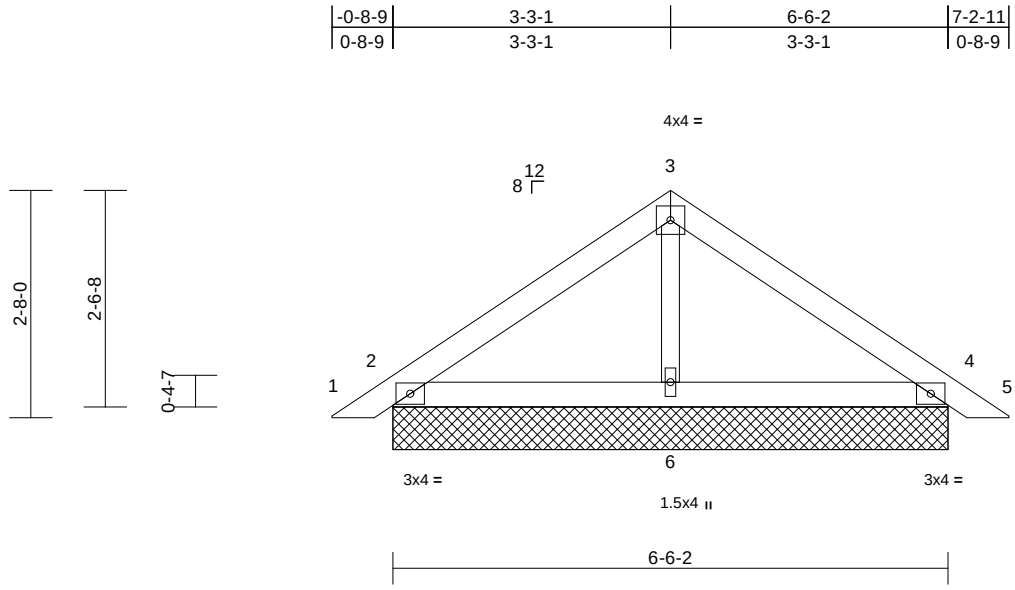

Scale = 1:27

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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

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

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

REACTIONS (size) 2=6-6-2, 4=6-6-2, 6=6-6-2
Max Horiz 2=-69 (LC 10)
Max Uplift 2=-55 (LC 12), 4=-64 (LC 13)
Max Grav 2=200 (LC 1), 4=200 (LC 1), 6=251 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-106/75, 3-4=-100/76, 4-5=0/16
BOT CHORD 2-6=-13/53, 4-6=-13/53
WEBS 3-6=-170/93

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 55 lb uplift at joint 2 and 64 lb uplift at joint 4.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	PB2	Piggyback	28	1	I64723060

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

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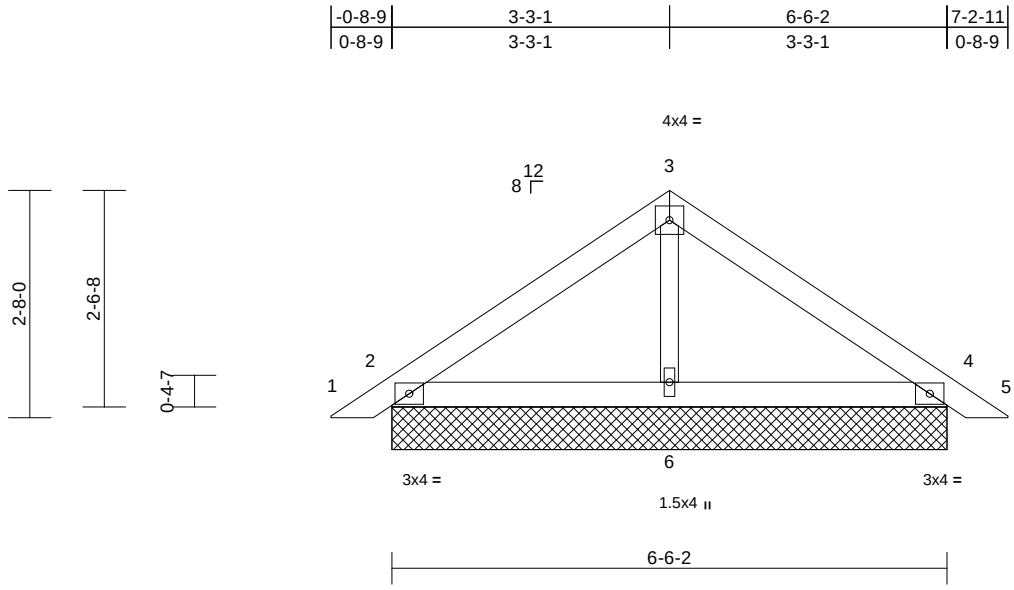

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

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

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

REACTIONS (size) 2=6-6-2, 4=6-6-2, 6=6-6-2
Max Horiz 2=-69 (LC 10)
Max Uplift 2=-55 (LC 12), 4=-64 (LC 13)
Max Grav 2=200 (LC 1), 4=200 (LC 1), 6=251 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-106/75, 3-4=-100/76, 4-5=0/16
BOT CHORD 2-6=-13/53, 4-6=-13/53
WEBS 3-6=-170/93

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 55 lb uplift at joint 2 and 64 lb uplift at joint 4.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	PB3	Piggyback	1	1	I64723061

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

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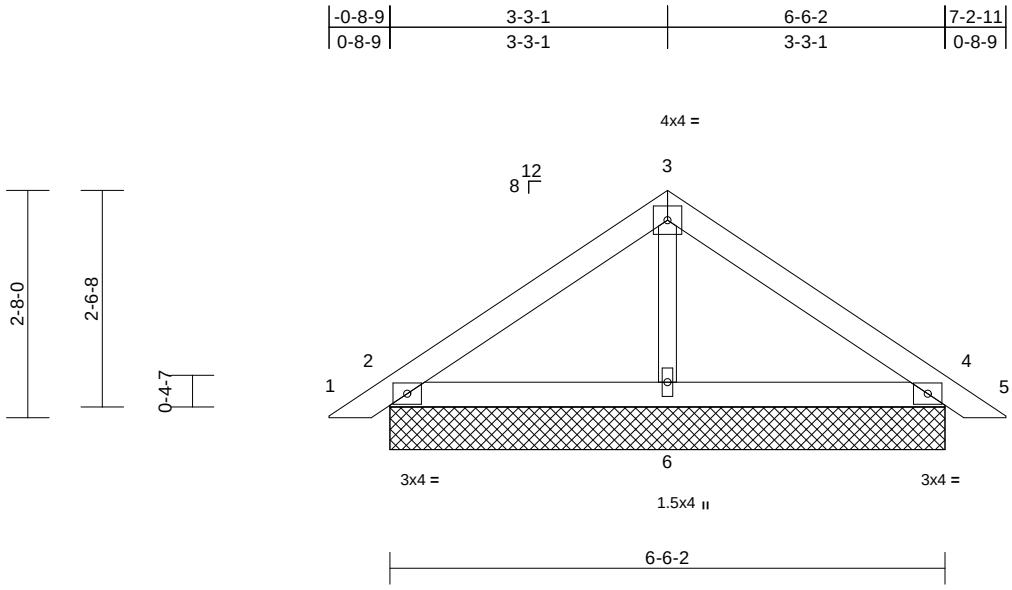

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

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

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

REACTIONS (size) 2=6-6-2, 4=6-6-2, 6=6-6-2
Max Horiz 2=-69 (LC 10)
Max Uplift 2=-55 (LC 12), 4=-64 (LC 13)
Max Grav 2=200 (LC 1), 4=200 (LC 1), 6=251 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-106/75, 3-4=-100/76, 4-5=0/16
BOT CHORD 2-6=-13/53, 4-6=-13/53
WEBS 3-6=-170/93

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 55 lb uplift at joint 2 and 64 lb uplift at joint 4.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 8,2024

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
06/07/2024

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	V01	Valley	1	1	I64723062

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

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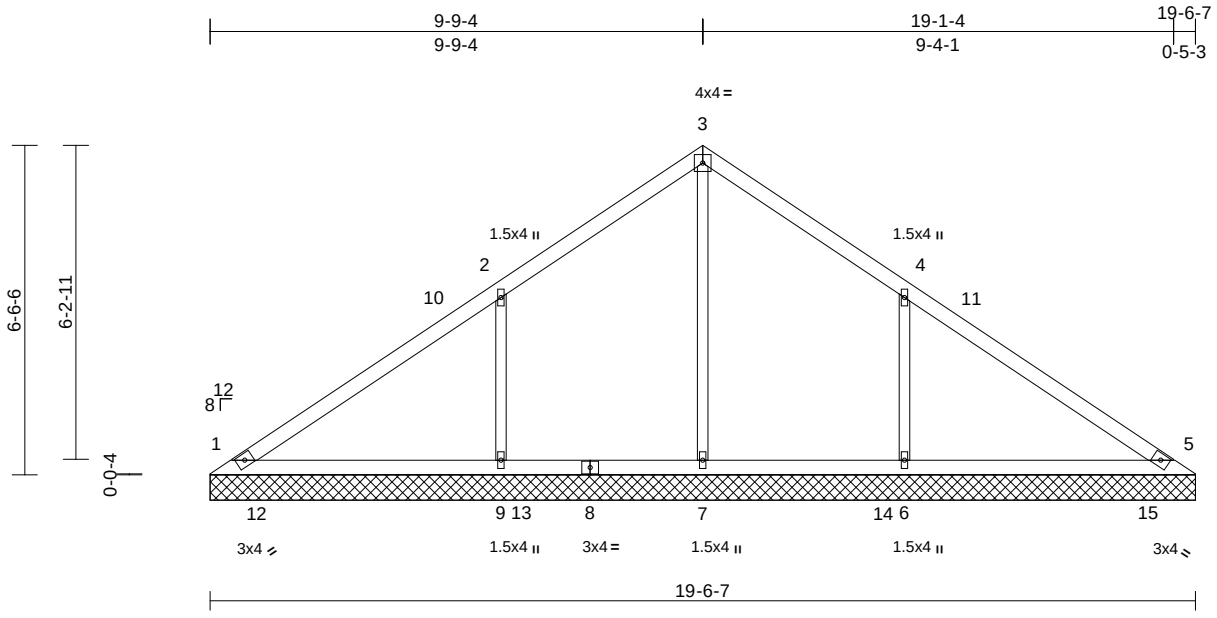

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 73 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=19-6-7, 5=19-6-7, 6=19-6-7, 7=19-6-7, 9=19-6-7
Max Horiz 1=-174 (LC 8)
Max Uplift 1=-21 (LC 13), 6=-229 (LC 13), 9=-229 (LC 12)
Max Grav 1=234 (LC 20), 5=216 (LC 1), 6=653 (LC 20), 7=331 (LC 22), 9=654 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-169/146, 2-3=-154/156, 3-4=-141/135, 4-5=-130/102
BOT CHORD 1-9=-56/124, 7-9=-56/124, 6-7=-56/124, 5-6=-56/124
WEBS 3-7=-160/0, 2-9=-422/281, 4-6=-422/281

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 9-9-10, Exterior(2R) 9-9-10 to 14-9-10, Interior (1) 14-9-10 to 19-1-7 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) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
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 21 lb uplift at joint 1, 229 lb uplift at joint 9 and 229 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.

LOAD CASE(S) Standard

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240299	V02	Valley	1	1	Job Reference (optional)	I64723063

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

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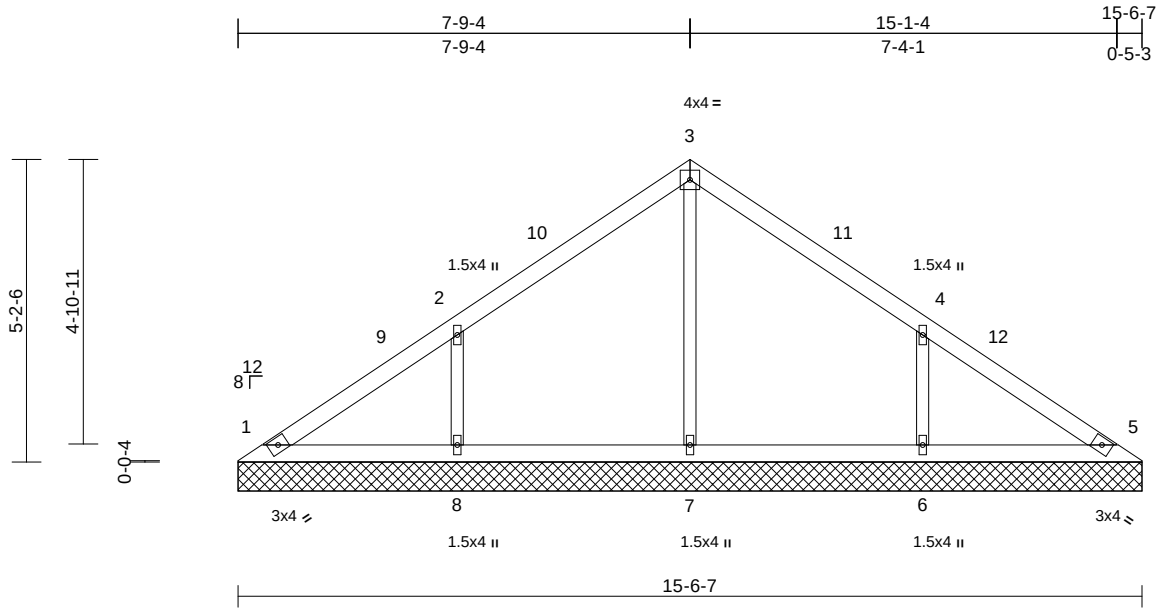

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	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=15-6-7, 5=15-6-7, 6=15-6-7, 7=15-6-7, 8=15-6-7
Max Horiz 1=-136 (LC 8)
Max Uplift 1=-17 (LC 13), 6=-175 (LC 13), 8=-175 (LC 12)
Max Grav 1=146 (LC 20), 5=139 (LC 1), 6=408 (LC 20), 7=270 (LC 1), 8=408 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-142/100, 2-3=-149/124, 3-4=-140/112, 4-5=-107/56
BOT CHORD 1-8=-38/88, 7-8=-38/88, 6-7=-38/88, 5-6=-38/88
WEBS 3-7=-193/5, 2-8=-321/218, 4-6=-321/218

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 7-9-10, Exterior(2R) 7-9-10 to 12-9-10, Interior (1) 12-9-10 to 15-1-7 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) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 17 lb uplift at joint 1, 175 lb uplift at joint 8 and 175 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.

LOAD CASE(S) Standard

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 8,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240299	V03	Valley	1	1	Job Reference (optional)	I64723064

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

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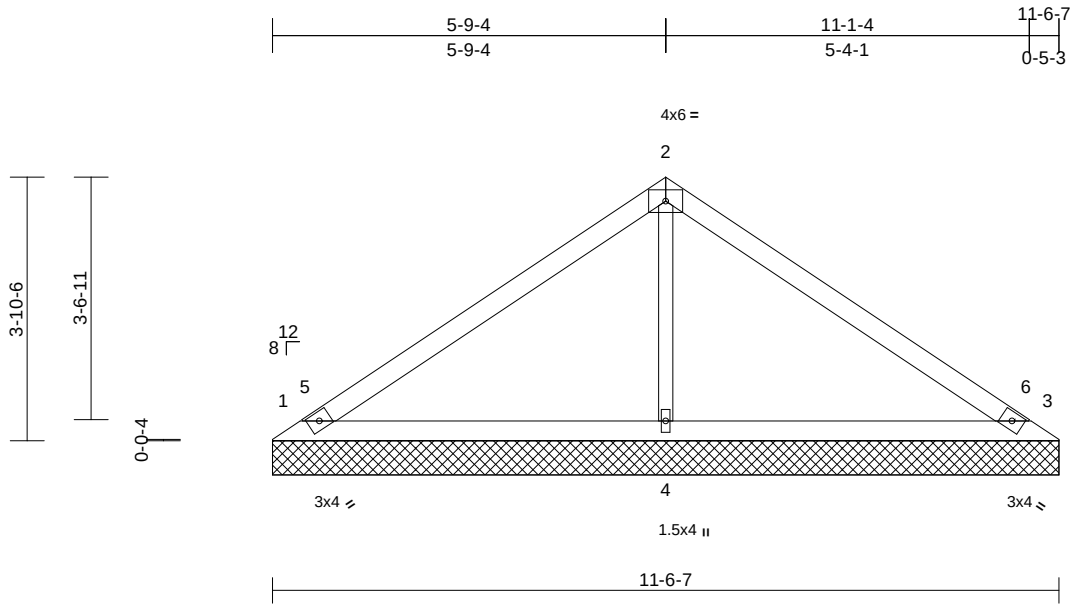

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 39 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=11-6-7, 3=11-6-7, 4=11-6-7
Max Horiz 1=-99 (LC 10)
Max Uplift 1=-54 (LC 12), 3=-66 (LC 13), 4=-29 (LC 12)
Max Grav 1=246 (LC 1), 3=246 (LC 1), 4=465 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-186/93, 2-3=-183/88
BOT CHORD 1-4=-20/87, 3-4=-20/87
WEBS 2-4=-303/124

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 5-9-10, Exterior(2R) 5-9-10 to 10-9-10, Interior (1) 10-9-10 to 11-1-7 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) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 54 lb uplift at joint 1, 66 lb uplift at joint 3 and 29 lb uplift at joint 4.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 8,2024

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

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	V04	Valley	1	1	I64723065

06/07/2024

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Apr 05 10:56:15 Page: 1
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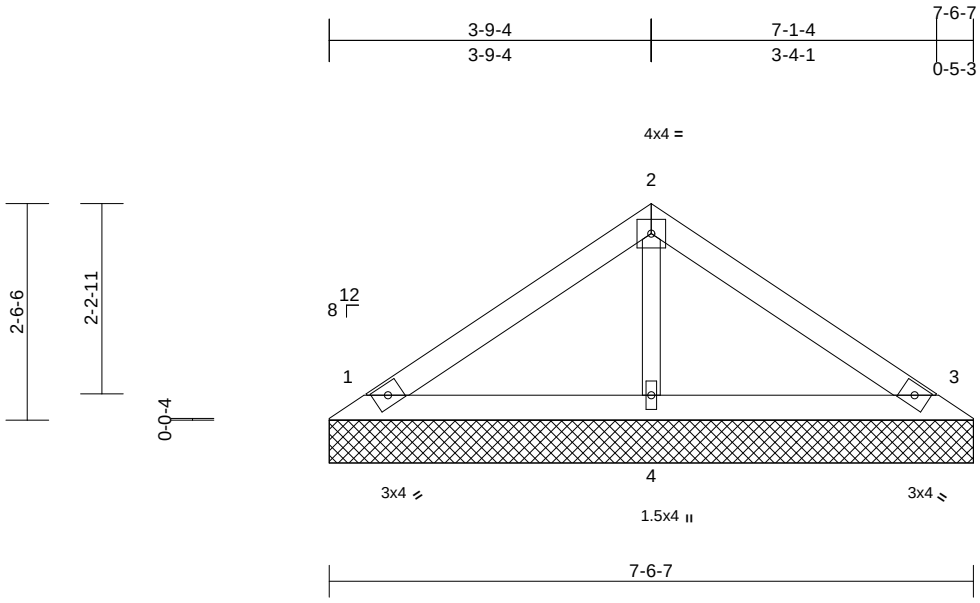

Scale = 1:27

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	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

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

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

REACTIONS (size) 1=7-6-7, 3=7-6-7, 4=7-6-7
Max Horiz 1=62 (LC 11)
Max Uplift 1=-42 (LC 12), 3=-50 (LC 13)
Max Grav 1=168 (LC 1), 3=168 (LC 1), 4=261 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-105/64, 2-3=-100/64
BOT CHORD 1-4=-13/50, 3-4=-13/50
WEBS 2-4=-178/96

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 1 and 50 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 8,2024

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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P240299	V05	Valley	1	1	I64723066

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Apr 05 10:56:15 Page: 1
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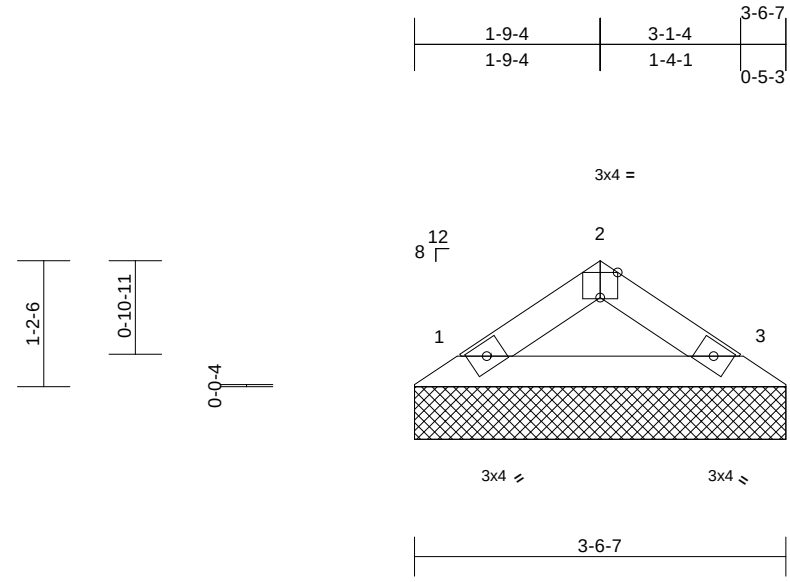

Scale = 1:21.9

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-6-7, 3=3-6-7
Max Horiz 1=25 (LC 11)
Max Uplift 1=-17 (LC 12), 3=-17 (LC 13)
Max Grav 1=119 (LC 1), 3=119 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-104/71, 2-3=-104/71
BOT CHORD 1-3=-26/69

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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
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 17 lb uplift at joint 1 and 17 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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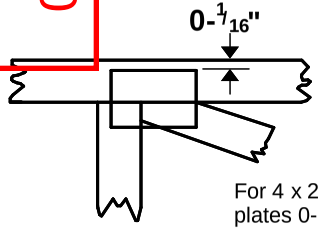
Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

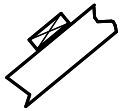
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

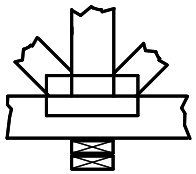
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

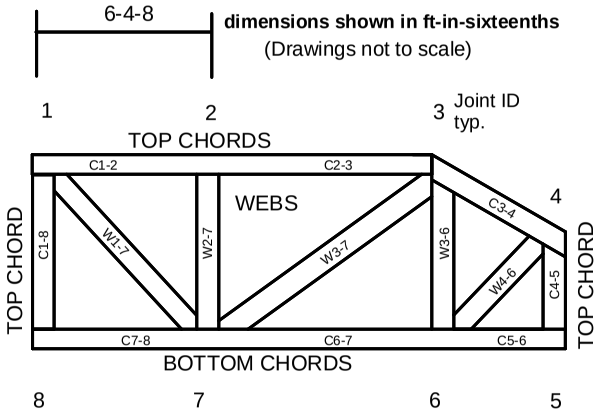


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

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.