MiTek®

RE: P240990

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

Site Information:

Customer: Clayton Properties Project Name: P240990
Lot/Block: 162 Model: Tupelo - Transitional 3Car
Address: 1616 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 37 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I68441522	A01	9/26/2024	21	I68441542	D02	9/26/2024
2	I68441523	A02	9/26/2024	22	I68441543	D03	9/26/2024
3	I68441524	A03	9/26/2024	23	I68441544	D04	9/26/2024
4	I68441525	B01	9/26/2024	24	I68441545	GR01	9/26/2024
5	I68441526	B02	9/26/2024	25	I68441546	J01	9/26/2024
6	I68441527	B03	9/26/2024	26	I68441547	J02	9/26/2024
7	I68441528	B04	9/26/2024	27	I68441548	J03	9/26/2024
8	I68441529	B05	9/26/2024	28	I68441549	LG01	9/26/2024
9	I68441530	B06	9/26/2024	29	I68441550	LG02	9/26/2024
10	I68441531	B07	9/26/2024	30	I68441551	LG03	9/26/2024
11	I68441532	B08	9/26/2024	31	I68441552	LG04	9/26/2024
12	I68441533	B09	9/26/2024	32	I68441553	V01	9/26/2024
13	I68441534	B10	9/26/2024	33	I68441554	V1	9/26/2024
14	I68441535	B11	9/26/2024	34	I68441555	V02	9/26/2024
15	I68441536	B12	9/26/2024	35	I68441556	V2	9/26/2024
16	I68441537	B13	9/26/2024	36	I68441557	V3	9/26/2024
17	I68441538	C01	9/26/2024	37	I68441558	V4	9/26/2024
18	I68441539	C02	9/26/2024				
19	I68441540	CJ01	9/26/2024				
20	I68441541	D01	9/26/2024				

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

Truss Design Engineer's Name: Sevier, Scott

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

Missouri COA: 001193

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

September 26, 2024

Sevier, Scott

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

Job	Truss	Truss Type	Qty	Ply		
P240990	A01	Hip Girder	1	1	Job Reference (optional)	I68441522

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:06 Page: 1
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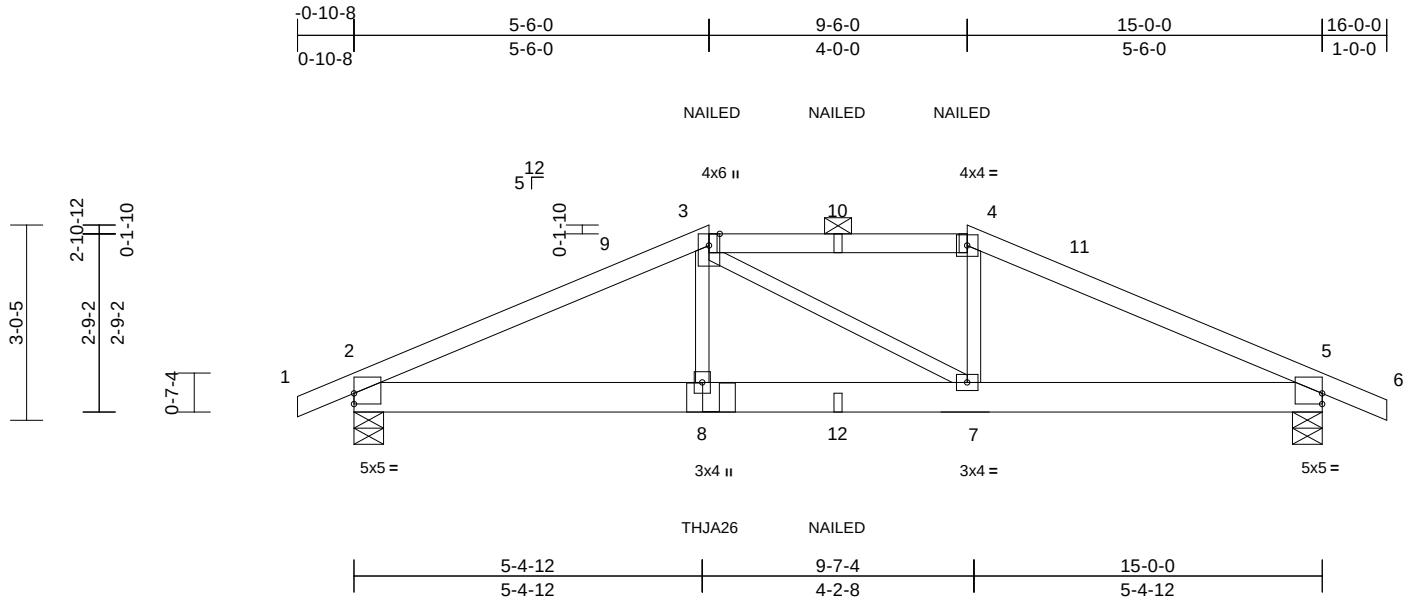

Scale = 1:35.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.06	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.11	7-8	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.17	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 61 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 3-2-15 oc purlins, except 2-0-0 oc purlins (3-4-13 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 9-4-1 oc bracing.

REACTIONS (size) 2=0-5-8, 5=0-5-8
Max Horiz 2=-51 (LC 13)
Max Uplift 2=-339 (LC 12), 5=-343 (LC 13)
Max Grav 2=1243 (LC 1), 5=1254 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/10, 2-3=-2309/768, 3-4=-1996/742, 4-5=-2304/767, 5-6=0/14
BOT CHORD 2-8=-613/2020, 7-8=-610/2000, 5-7=-606/2016
WEBS 3-8=-50/474, 3-7=-105/97, 4-7=-55/495

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 5-6-0, Exterior(2E) 5-6-0 to 16-0-0 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) 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 SPF No.2 crushing capacity of 425 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 339 lb uplift at joint 2 and 343 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Use Simpson Strong-Tie THJA26 (THJA26 on 1 ply, Right Hand Hip) or equivalent at 5-6-6 from the left end to connect truss(es) to back face of bottom chord.
11)
12) Fill all nail holes where hanger is in contact with lumber.
13) N/A
14) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 4-6=-70, 2-5=-20
Concentrated Loads (lb)
Vert: 3=-104 (B), 4=-104 (B), 8=-340 (B), 7=-340 (B), 10=-104 (B), 12=-32 (B)

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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	A02	Common	1	1	Job Reference (optional)	I68441523

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

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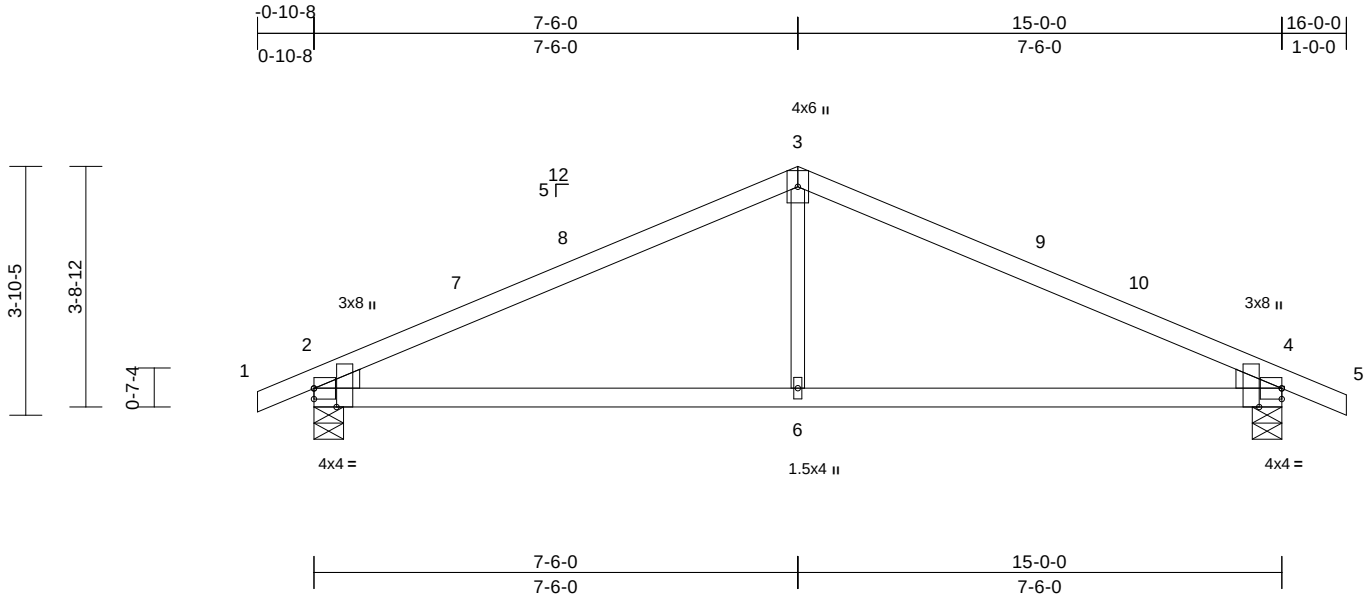

Scale = 1:35.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.07	4-6	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.16	4-6	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 54 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 1650F 1.5E *Except* 3-5:2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
WEDGE	Left: 2x4 SP No.2 Right: 2x4 SP No.2

BRACING

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

REACTIONS (size) 2=0-5-8, 4=0-5-8
Max Horiz 2=-68 (LC 13)
Max Uplift 2=-130 (LC 12), 4=-133 (LC 13)
Max Grav 2=731 (LC 1), 4=741 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/4, 2-3=-981/312, 3-4=-982/311, 4-5=0/8
BOT CHORD	2-6=-168/793, 4-6=-168/793
WEBS	3-6=0/353

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 7-6-0, Exterior(2R) 7-6-0 to 12-6-0, Interior (1) 12-6-0 to 16-0-0 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 2 and 133 lb uplift at joint 4.
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

September 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply		
P240990	A03	Common	3	1	Job Reference (optional)	I68441524

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

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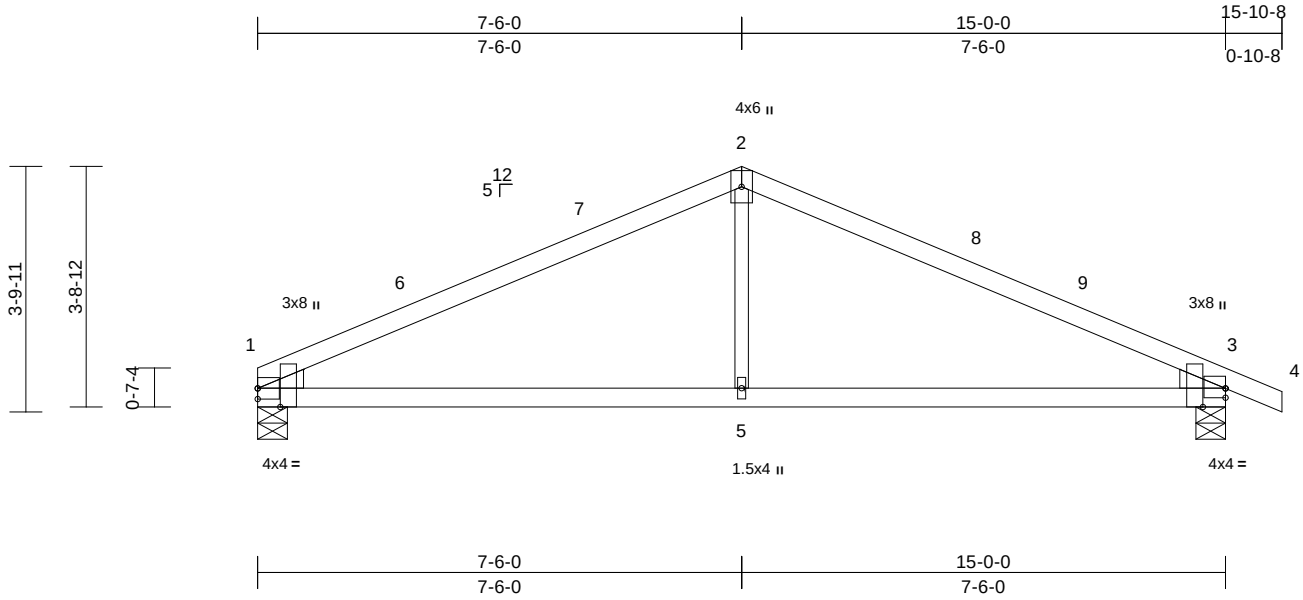

Scale = 1:35.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.07	3-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.16	3-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 53 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 2-4:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

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

REACTIONS (size) 1=0-5-8, 3=0-5-8
Max Horiz 1=-67 (LC 13)
Max Uplift 1=-101 (LC 12), 3=-130 (LC 13)
Max Grav 1=651 (LC 1), 3=735 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-988/322, 2-3=-991/315, 3-4=0/4
BOT CHORD 1-5=-176/803, 3-5=-176/803
WEBS 2-5=0/355

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) 0-2-12 to 5-2-12, Interior (1) 5-2-12 to 7-6-0, Exterior(2R) 7-6-0 to 12-6-0, Interior (1) 12-6-0 to 15-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 3 and 101 lb uplift at joint 1.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	B01	Hip Girder	1	**2**	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I68441525
10/14/2024

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

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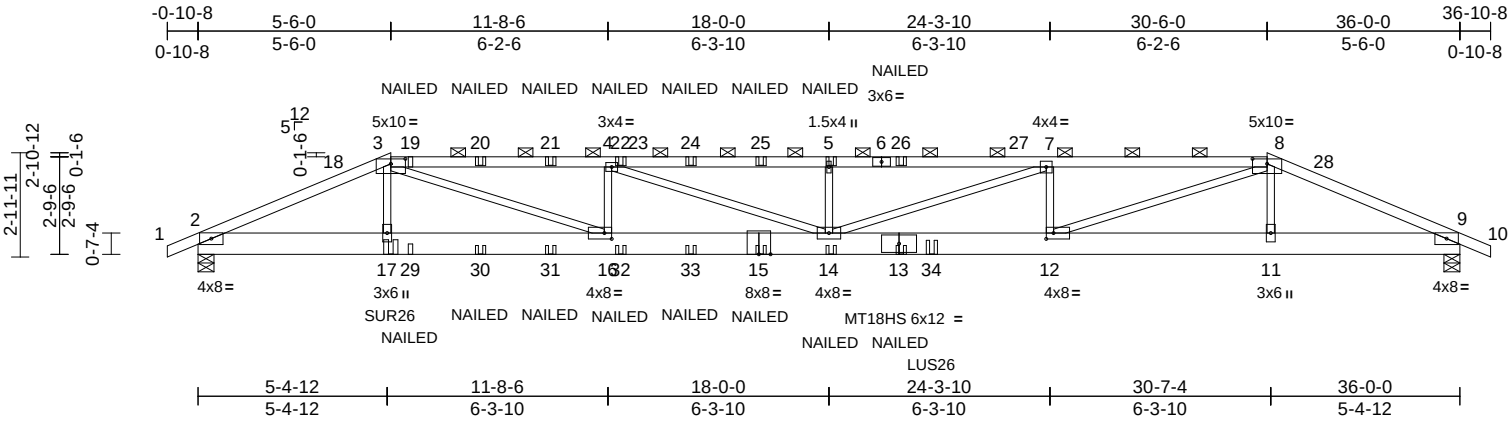

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Plate Offsets (X, Y): [3:0-5-0,0-1-11], [8:0-5-0,0-1-11], [12:0-2-8,0-2-0], [16:0-2-8,0-2-0]

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	0.86	Vert(LL)	-0.51	12-14	>841	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.91	12-14	>471	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.07	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 395 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 3-6:2x4 SP 2400F 2.0E, 6-8:2x4 SP 1650F 1.5E
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-11 oc purlins, except 2-0-0 oc purlins (3-6-5 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=49 (LC 12)
Max Uplift 2=-788 (LC 8), 9=-605 (LC 9)
Max Grav 2=2963 (LC 1), 9=2571 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-3=-6587/1781, 3-4=-10113/2806, 4-5=-11622/3117, 5-7=-11622/3117, 7-8=-9689/2502, 8-9=-5640/1351, 9-10=0/15
BOT CHORD 2-17=-1576/5933, 16-17=-1574/5907, 14-16=-2732/10109, 12-14=-2424/9687, 11-12=-1175/5056, 9-11=-1173/5066
WEBS 3-17=-53/606, 8-11=0/296, 3-16=-1245/4567, 8-12=-1339/5027, 4-16=-1494/615, 4-14=-337/1658, 5-14=-712/405, 7-14=-661/2113, 7-12=-1305/477

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 5-6-0, Exterior(2R) 5-6-0 to 12-6-14, Interior (1) 12-6-14 to 30-6-0, Exterior(2E) 30-6-0 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
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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 2400F 2.0E crushing capacity of 805 psi.
10) Two H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
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.
13) Use Simpson Strong-Tie SUR26 (6-16d Girder, 6-10dx1 1/2 Truss) or equivalent at 5-6-0 from the left end to connect truss(es) to back face of bottom chord, skewed 45.0 deg.to the right, sloping 0.0 deg. down.
14) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 20-11-4 from the left end to connect truss(es) to back face of bottom chord.
15) Fill all nail holes where hanger is in contact with lumber.
16) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-8=-70, 8-10=-70, 2-9=-20
Concentrated Loads (lb)
Vert: 15=-32 (B), 17=-308 (B), 13=-32 (B), 14=-32 (B), 5=-104 (B), 19=-104 (B), 20=-104 (B), 21=-104 (B), 22=-104 (B), 24=-104 (B), 25=-104 (B), 26=-104 (B), 29=-32 (B), 30=-32 (B), 31=-32 (B), 32=-32 (B), 33=-32 (B), 34=-783 (B)

September 26,2024

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

Job	Truss	Truss Type	Qty	Ply		
P240990	B02	Hip	1	1	Job Reference (optional)	I68441526

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

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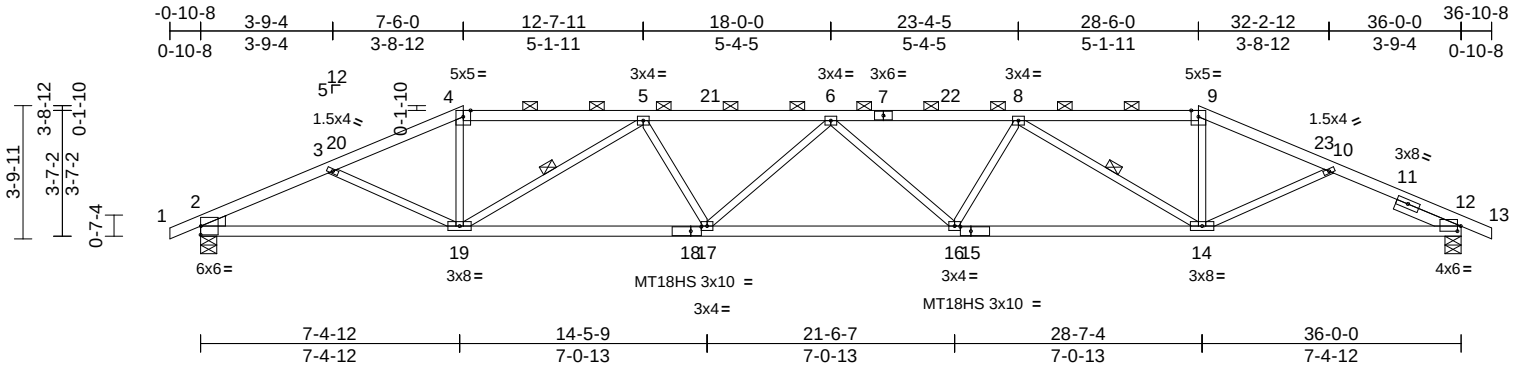

Scale = 1:65.8

Plate Offsets (X, Y): [12:0-1-2,0-1-12], [15:0-3-10,0-1-8], [18:0-3-10,0-1-8]

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	0.96	Vert(LL)	-0.38	16-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.71	16-17	>597	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.19	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 151 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 1650F 1.5E *Except* 4-7,7-9:2x4 SP No.2
BOT CHORD	2x4 SP 1650F 1.5E
WEBS	2x3 SPF No.2
WEDGE	Left: 2x4 SP No.2
SLIDER	Right 2x4 SP No.2 -- 1-11-10

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-7-4 oc purlins, except 2-0-0 oc purlins (2-5-7 max.): 4-9.
BOT CHORD	Rigid ceiling directly applied or 8-0-3 oc bracing.
WEBS	1 Row at midpt 5-19, 8-14

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=65 (LC 16)
Max Uplift 2=-296 (LC 8), 12=-296 (LC 9)
Max Grav 2=1677 (LC 1), 12=1677 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/4, 2-3=-3076/554, 3-4=-3049/559, 4-5=-2762/533, 5-6=-4115/817, 6-8=-4115/817, 8-9=-2763/533, 9-10=-3021/556, 10-12=-2987/541, 12-13=0/4
BOT CHORD	2-19=-456/2667, 17-19=-722/3936, 16-17=-808/4315, 14-16=-716/3934, 12-14=-431/2589
WEBS	4-19=-99/840, 9-14=-90/788, 3-19=0/307, 10-14=-5/377, 5-17=-1/410, 5-19=-1458/346, 6-17=-326/125, 6-16=-325/125, 8-16=-2/414, 8-14=-1456/345

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 7-6-0, Exterior(2R) 7-6-0 to 14-6-14, Interior (1) 14-6-14 to 28-6-0, Exterior(2R) 28-6-0 to 35-9-4, Interior (1) 35-9-4 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.
7) All bearings are assumed to be SP 1650F 1.5E crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 296 lb uplift at joint 2 and 296 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	B03	Hip	1	1	Job Reference (optional)	I68441527

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

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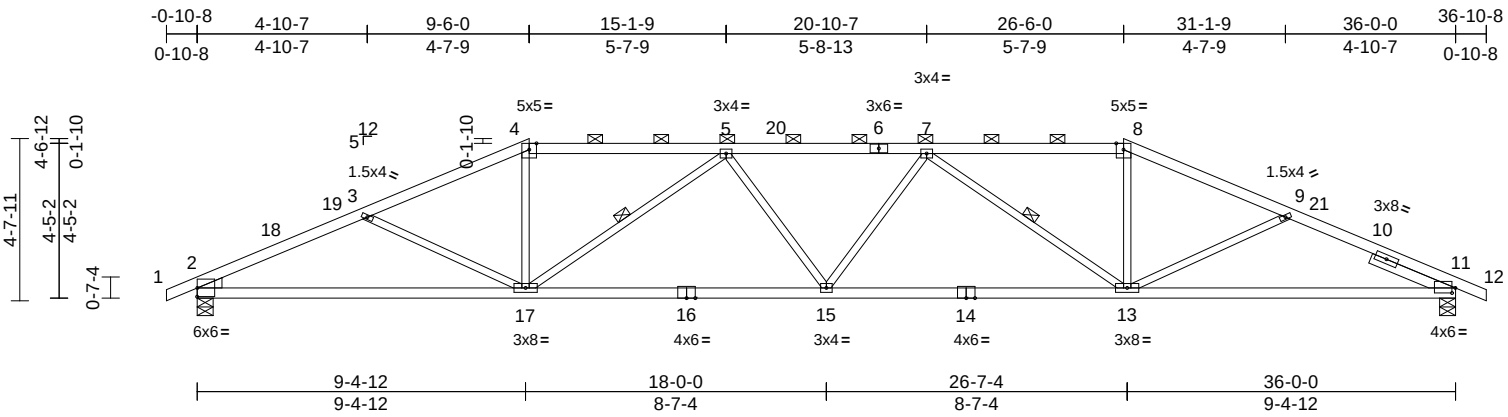

Scale = 1:65.9

Plate Offsets (X, Y): [11:0-1-2,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.28	13-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.54	13-15	>785	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.17	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 151 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 4-6,6-8:2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E *Except* 16-14:2x4 SP No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 2-6-12

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-13 oc purlins, except 2-0-0 oc purlins (2-9-6 max.): 4-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 5-17, 7-13

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=80 (LC 16)
Max Uplift 2=-270 (LC 8), 11=-270 (LC 9)
Max Grav 2=1677 (LC 1), 11=1677 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-3125/540, 3-4=-2935/500, 4-5=-2645/482, 5-7=-3424/642, 7-8=-2646/483, 8-9=-2908/498, 9-11=-3078/533, 11-12=0/4
BOT CHORD 2-17=-435/2749, 15-17=-558/3370, 13-15=-554/3367, 11-13=-419/2683
WEBS 4-17=-63/762, 8-13=-56/716, 5-15=0/194, 5-17=-1001/256, 7-15=0/198, 7-13=-996/255, 3-17=-113/212, 9-13=-44/213

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 9-6-0, Exterior(2R) 9-6-0 to 16-6-14, Interior (1) 16-6-14 to 26-6-0, Exterior(2R) 26-6-0 to 33-6-14, Interior (1) 33-6-14 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.
6) All bearings are assumed to be SP 1650F 1.5E crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 270 lb uplift at joint 2 and 270 lb uplift at joint 11.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	B04	Hip	1	1	Job Reference (optional) I68441528

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

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

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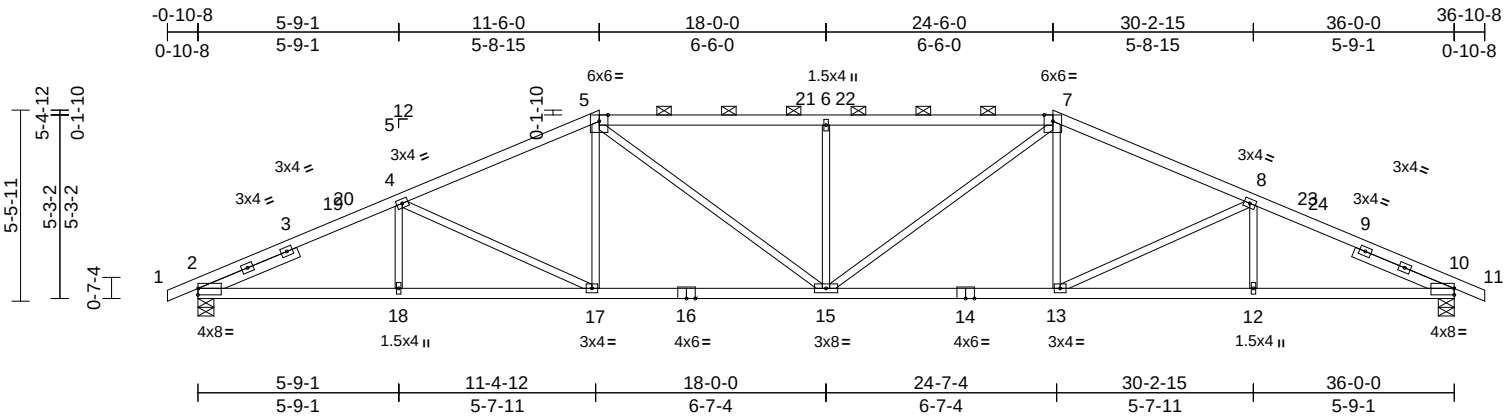

Scale = 1:66

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.24	15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.44	15-17	>970	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.15	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 160 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 5-7:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-0-11, Right 2x4 SP No.2 -- 3-0-11

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

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=96 (LC 12)
Max Uplift 2=-244 (LC 8), 10=-244 (LC 9)
Max Grav 2=1677 (LC 1), 10=1677 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-4=-3150/505, 4-5=-2735/476, 5-6=-2921/544, 6-7=-2921/544, 7-8=-2735/476, 8-10=-3150/505, 10-11=0/4
BOT CHORD 2-18=-396/2756, 17-18=-396/2756, 15-17=-301/2480, 13-15=-287/2480, 12-13=-392/2756, 10-12=-392/2756
WEBS 4-18=0/205, 4-17=-327/193, 5-17=-12/336, 5-15=-138/709, 6-15=-557/243, 7-15=-138/709, 7-13=-12/336, 8-13=-327/194, 8-12=0/205

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 11-6-0, Exterior(2R) 11-6-0 to 18-6-14, Interior (1) 18-6-14 to 24-6-0, Exterior(2R) 24-6-0 to 31-6-14, Interior (1) 31-6-14 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 244 lb uplift at joint 2 and 244 lb uplift at joint 10.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	B05	Hip	1	1	Job Reference (optional)	I68441529

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

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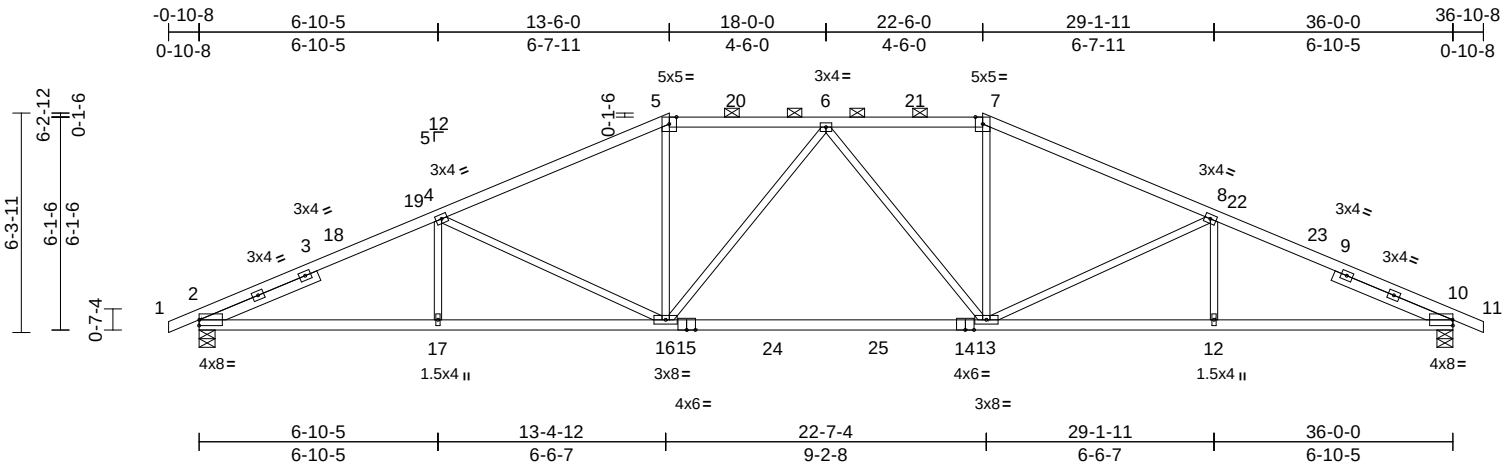

Scale = 1:66.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.38	13-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.67	13-16	>639	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.15	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 161 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 5-7:2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-7-14, Right 2x4 SP No.2 -- 3-7-14

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

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=-112 (LC 13)
Max Uplift 2=-237 (LC 12), 10=-237 (LC 13)
Max Grav 2=1730 (LC 2), 10=1730 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-4=-3267/515, 4-5=-2707/466, 5-6=-2431/469, 6-7=-2431/469, 7-8=-2707/466, 8-10=-3267/515, 10-11=0/4
BOT CHORD 2-17=-398/2882, 16-17=-398/2882, 13-16=-294/2544, 12-13=-394/2882, 10-12=-394/2882
WEBS 4-17=0/238, 4-16=-539/245, 5-16=-39/685, 7-13=-39/685, 8-13=-539/245, 8-12=0/238, 6-16=-395/110, 6-13=-395/110

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-6-0, Exterior(2R) 13-6-0 to 20-6-14, Interior (1) 20-6-14 to 22-6-0, Exterior(2R) 22-6-0 to 29-6-14, Interior (1) 29-6-14 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 1650F 1.5E crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 237 lb uplift at joint 2 and 237 lb uplift at joint 10.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	B06	Hip	1	1	Job Reference (optional)	I68441530

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

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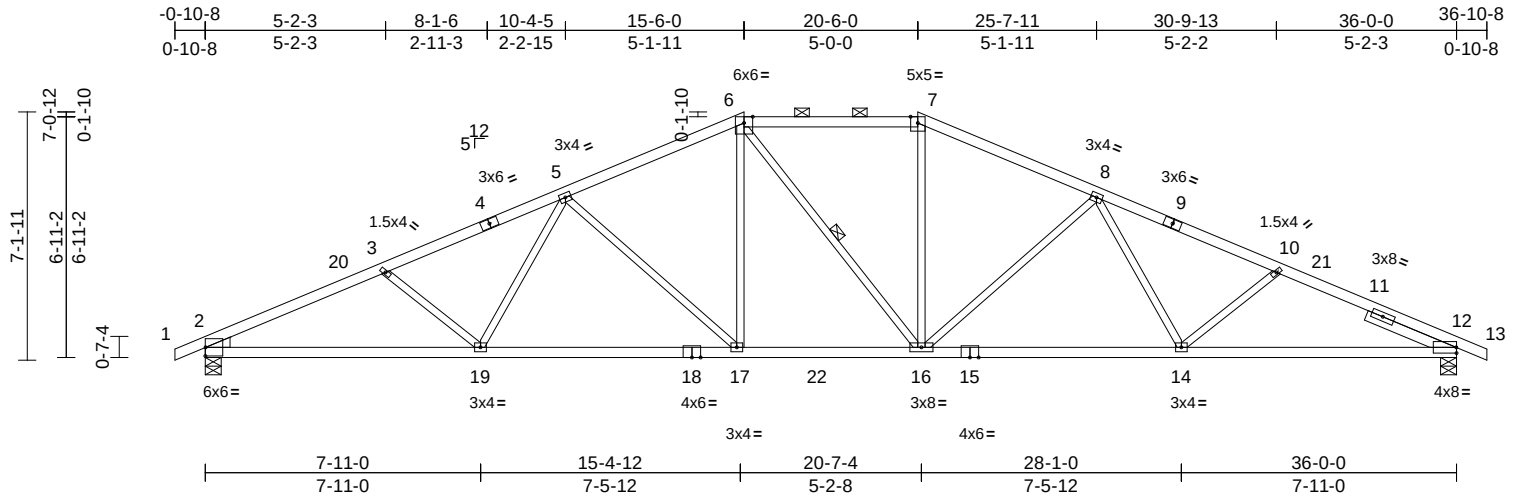

Scale = 1:66.3

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	0.90	Vert(LL)	-0.23	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.43	14-16	>990	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.15	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 161 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4,9-13:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 18-15:2x4 SP No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 2-8-15

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-4 oc purlins, except 2-0-0 oc purlins (3-4-12 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-16

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=127 (LC 16)
Max Uplift 2=-256 (LC 12), 12=-256 (LC 13)
Max Grav 2=1725 (LC 2), 12=1722 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-3247/510, 3-5=-3102/485, 5-6=-2443/458, 6-7=-2194/453, 7-8=-2441/458, 8-10=-3042/478, 10-12=-3186/502, 12-13=0/4
BOT CHORD 2-19=-474/2872, 17-19=-333/2627, 16-17=-205/2199, 14-16=-330/2628, 12-14=-391/2798
WEBS 6-17=-86/629, 6-16=-212/214, 7-16=-42/622, 3-19=-178/179, 5-19=-18/408, 5-17=-595/234, 8-16=-602/236, 8-14=-9/349, 10-14=-127/170

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 15-6-0, Exterior(2E) 15-6-0 to 20-6-0, Exterior(2R) 20-6-0 to 27-6-14, Interior (1) 27-6-14 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 1650F 1.5E crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 256 lb uplift at joint 2 and 256 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	B07	Hip	1	1	Job Reference (optional)	I68441531

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

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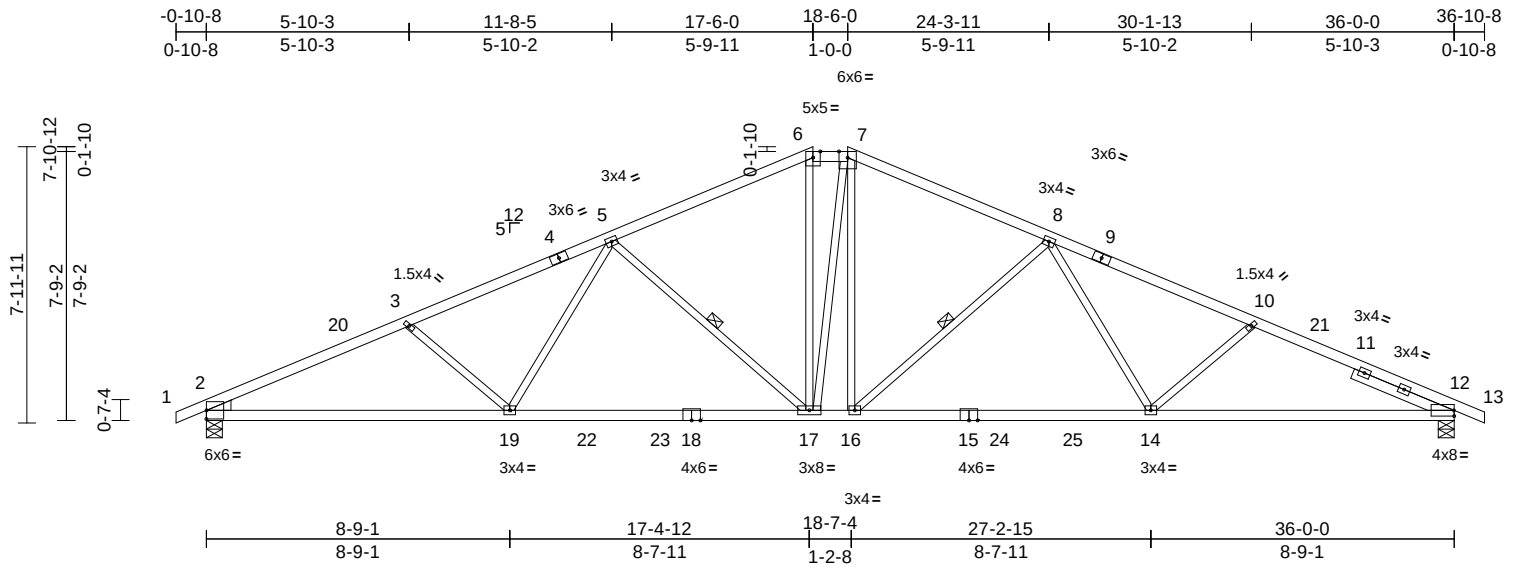

Scale = 1:66.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.32	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.55	14-16	>769	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.15	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 166 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-4 oc purlins, except
2-0-0 oc purlins (3-11-1 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 9-10-12 oc bracing.
WEBS 1 Row at midpt 5-17, 8-16

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=143 (LC 16)
Max Uplift 2=-274 (LC 12), 12=-274 (LC 13)
Max Grav 2=1739 (LC 2), 12=1739 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-3285/498, 3-5=-3099/447, 5-6=-2261/409, 6-7=-2024/407, 7-8=-2266/409, 8-10=-3047/441, 10-12=-3239/494, 12-13=0/4
BOT CHORD 2-19=-520/2914, 17-19=-349/2543, 16-17=-135/2031, 14-16=-277/2551, 12-14=-367/2852
WEBS 6-17=-117/723, 7-17=-297/203, 7-16=-116/630, 3-19=-262/207, 5-19=-32/540, 5-17=-715/269, 8-16=-714/268, 8-14=-22/489, 10-14=-218/199

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 17-6-0, Exterior(2E) 17-6-0 to 18-6-0, Exterior(2R) 18-6-0 to 25-6-14, Interior (1) 25-6-14 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 1650F 1.5E crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 274 lb uplift at joint 2 and 274 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	B08	Common	1	1	Job Reference (optional) I68441532

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:09 Page: 1

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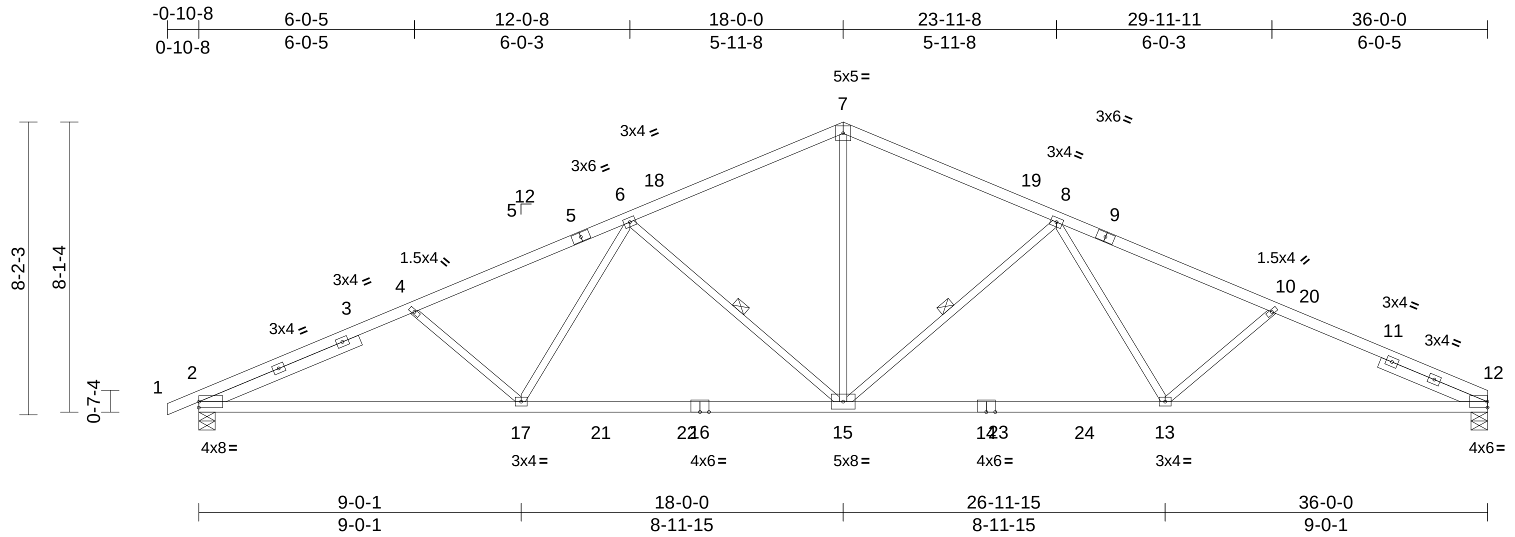

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.31	13-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.54	13-15	>795	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.15	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 160 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 9-12:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-9-13, Right 2x4 SP No.2 -- 3-2-6

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-10-3 oc bracing.
WEBS 1 Row at midpt 6-15, 8-15

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=149 (LC 12)
Max Uplift 2=-278 (LC 12), 12=-249 (LC 13)
Max Grav 2=1744 (LC 2), 12=1679 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-4=-3257/503, 4-6=-3071/460, 6-7=-2211/427, 7-8=-2212/431, 8-10=-3049/474, 10-12=-3257/516
BOT CHORD 2-17=-522/2885, 15-17=-356/2530, 13-15=-286/2534, 12-13=-391/2872
WEBS 7-15=-157/1345, 4-17=-254/205, 6-17=-26/528, 6-15=-770/287, 8-15=-774/288, 8-13=-28/517, 10-13=-250/210

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 to 35-9-4 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
3) All plates are 3x4 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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 1650F 1.5E crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 278 lb uplift at joint 2 and 249 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	B09	Roof Special	1	1	Job Reference (optional)	I68441533

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

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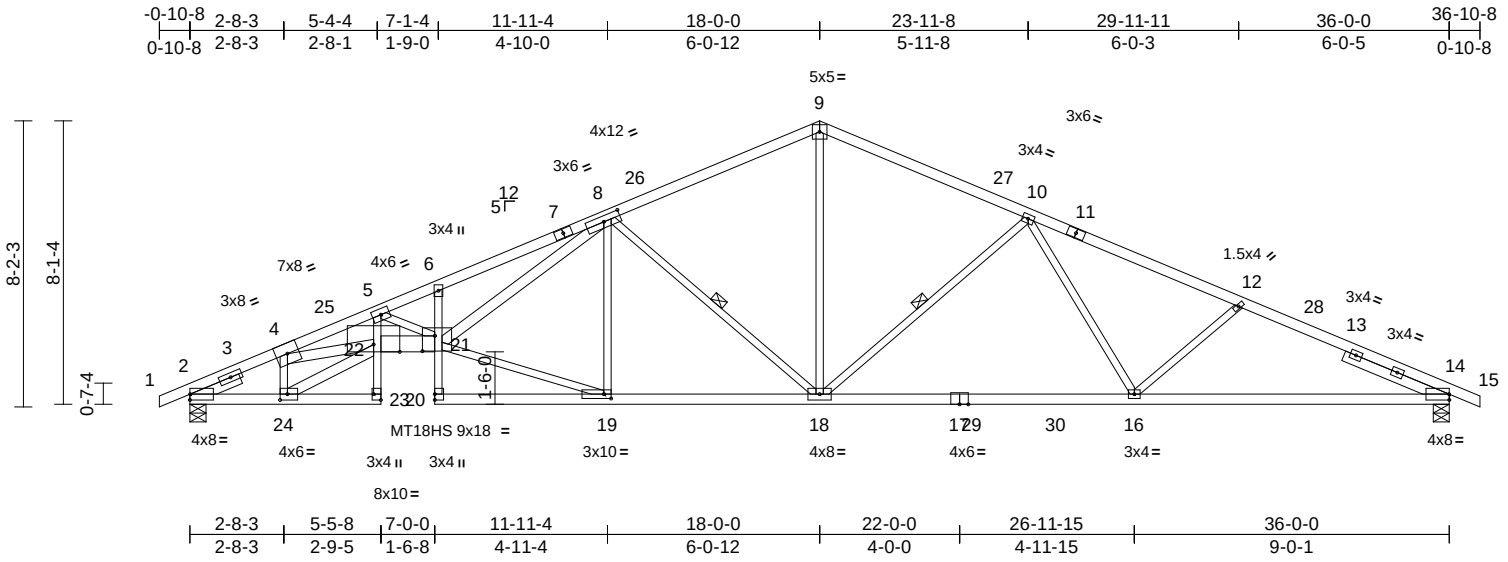

Scale = 1:65.9

Plate Offsets (X, Y): [8:0-5-14,0-2-0], [19:0-2-8,0-1-8], [21:0-4-4,0-5-4], [23:Edge,0-2-8], [24:0-2-8,0-2-0]

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	0.81	Vert(LL)	-0.45	16-18	>942	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.79	16-18	>538	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.35	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 181 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 1-7,11-15:2x4 SP 1650F 1.5E
BOT CHORD	2x3 SPF No.2 *Except* 2-23:2x4 SP No.2, 22-21:2x6 SP 2400F 2.0E, 20-17,17-14:2x4 SP 1650F 1.5E
WEBS	2x3 SPF No.2 *Except* 21-8,22-24,22-4:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 1-6-0, Right 2x4 SP No.2 -- 3-2-6

BRACING

TOP CHORD	Structural wood sheathing directly applied or 1-11-12 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 8-18, 10-18

REACTIONS (size) 2=0-5-8, 14=0-5-8
Max Horiz 2=148 (LC 16)
Max Uplift 2=-277 (LC 12), 14=-277 (LC 13)
Max Grav 2=1720 (LC 2), 14=1731 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/4, 2-4=-2927/429, 4-5=-6985/1141, 5-6=-5765/923, 6-8=-5744/989, 8-9=-2170/427, 9-10=-2171/428, 10-12=-3016/456, 12-14=-3223/502, 14-15=0/4
BOT CHORD	2-24=-477/2505, 23-24=-33/201, 22-23=0/92, 5-22=-149/944, 21-22=-1104/6444, 20-21=0/93, 6-21=-189/119, 19-20=-24/197, 18-19=-346/2517, 16-18=-283/2500, 14-16=-372/2839
WEBS	5-21=-1259/258, 8-18=-794/269, 9-18=-151/1307, 10-18=-777/285, 10-16=-23/524, 12-16=-242/206, 8-19=-644/172, 19-21=-339/2441, 8-21=-661/3480, 4-24=-1278/297, 22-24=-506/2623, 4-22=-631/3928

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 14 SP 1650F 1.5E crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 277 lb uplift at joint 2 and 277 lb uplift at joint 14.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	B10	Common	3	1	Job Reference (optional)	I68441534

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

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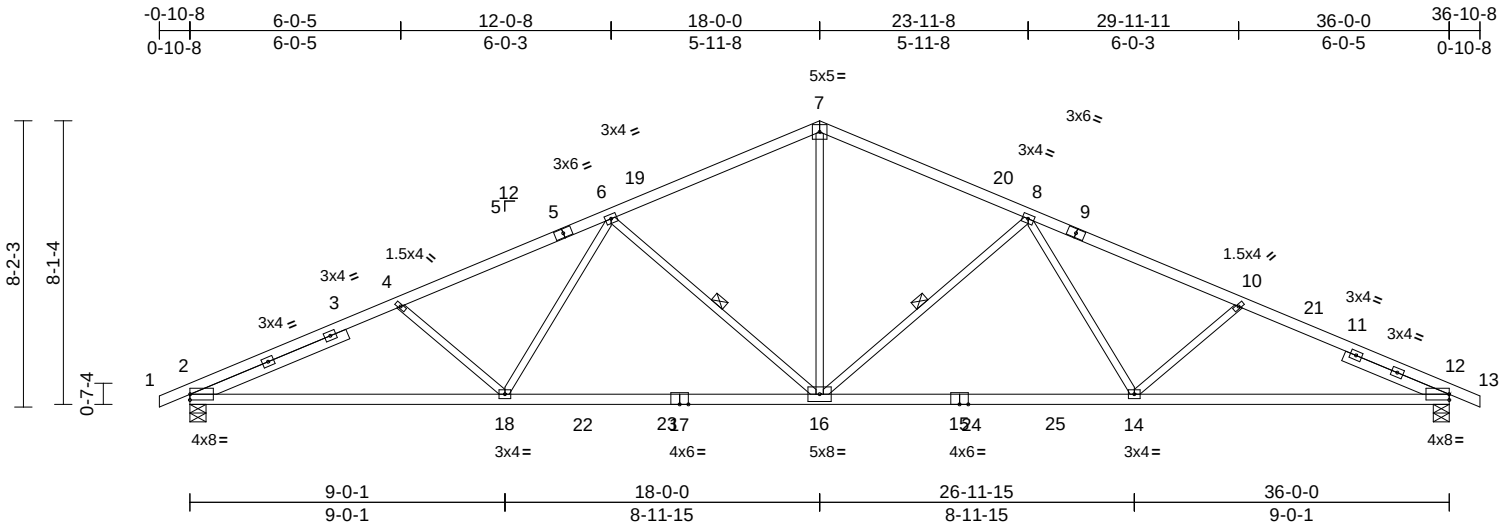

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.31	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.54	14-16	>795	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.15	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 161 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5,9-13:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-9-13, Right 2x4 SP No.2 -- 3-2-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-10-6 oc bracing.
WEBS 1 Row at midpt 6-16, 8-16

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=148 (LC 12)
Max Uplift 2=-277 (LC 12), 12=-277 (LC 13)
Max Grav 2=1743 (LC 2), 12=1743 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-4=-3255/502, 4-6=-3069/460, 6-7=-2209/426, 7-8=-2210/426, 8-10=-3040/457, 10-12=-3247/503, 12-13=0/4
BOT CHORD 2-18=-521/2883, 16-18=-354/2528, 14-16=-283/2529, 12-14=-373/2861
WEBS 7-16=-154/1343, 4-18=-255/206, 6-18=-26/528, 6-16=-769/287, 8-16=-771/287, 8-14=-26/511, 10-14=-243/206

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 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) All plates are 3x4 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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 1650F 1.5E crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 277 lb uplift at joint 2 and 277 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

September 26,2024

Job	Truss	Truss Type	Qty	Ply		
P240990	B11	Common	3	1	Job Reference (optional)	I68441535

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

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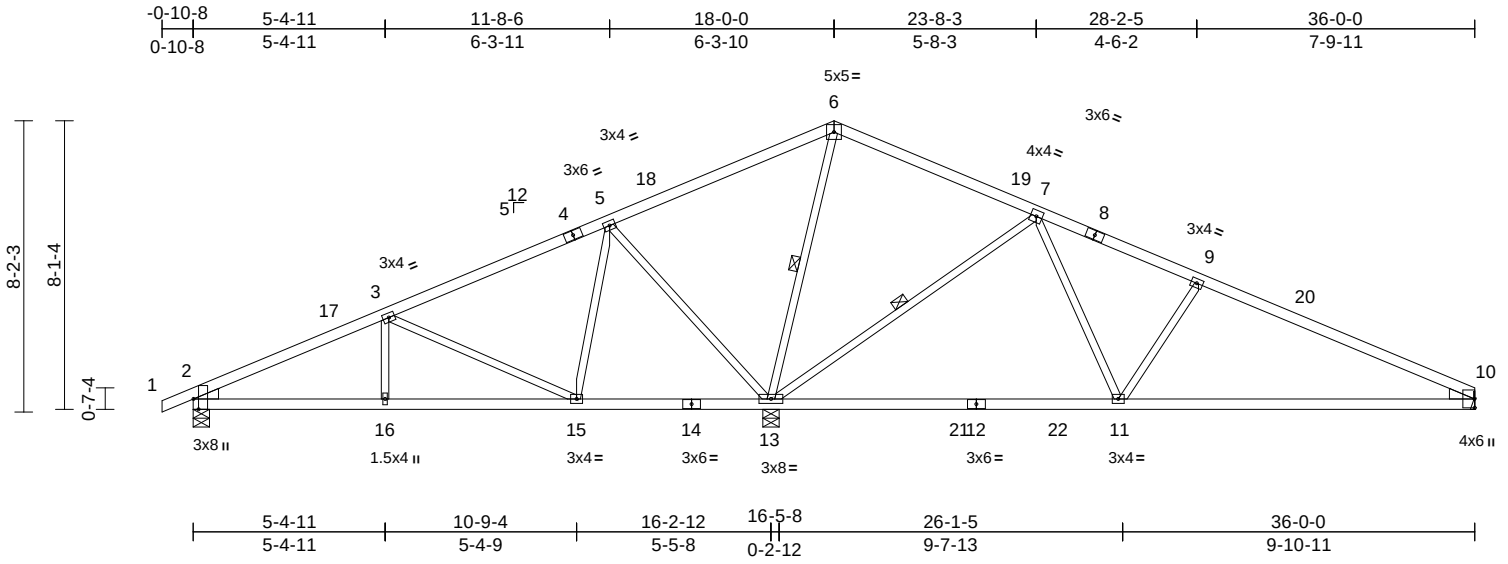

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Plate Offsets (X, Y): [2:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.22	10-11	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.48	10-11	>494	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 153 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 8-10:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 14-12:2x4 SP No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 6-13, 7-13

REACTIONS (size) 2=0-5-8, 10= Mechanical, 13=0-5-8
Max Horiz 2=149 (LC 12)
Max Uplift 2=-121 (LC 12), 10=-153 (LC 13), 13=-283 (LC 12)
Max Grav 2=578 (LC 25), 10=696 (LC 28), 13=2290 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-766/134, 3-5=-160/339, 5-6=-49/874, 6-7=0/658, 7-9=-744/238, 9-10=-995/257
BOT CHORD 2-16=-204/625, 15-16=-204/625, 13-15=-339/225, 11-13=-49/335, 10-11=-145/838
WEBS 6-13=-935/162, 7-13=-946/277, 5-13=-786/291, 3-16=0/242, 9-11=-452/252, 7-11=-93/811, 5-15=-32/432, 3-15=-656/200

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 to 35-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) 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.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 2, 283 lb uplift at joint 13 and 153 lb uplift at joint 10.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 26,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

Job	Truss	Truss Type	Qty	Ply		
P240990	B12	Common	4	1	Job Reference (optional)	I68441536

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

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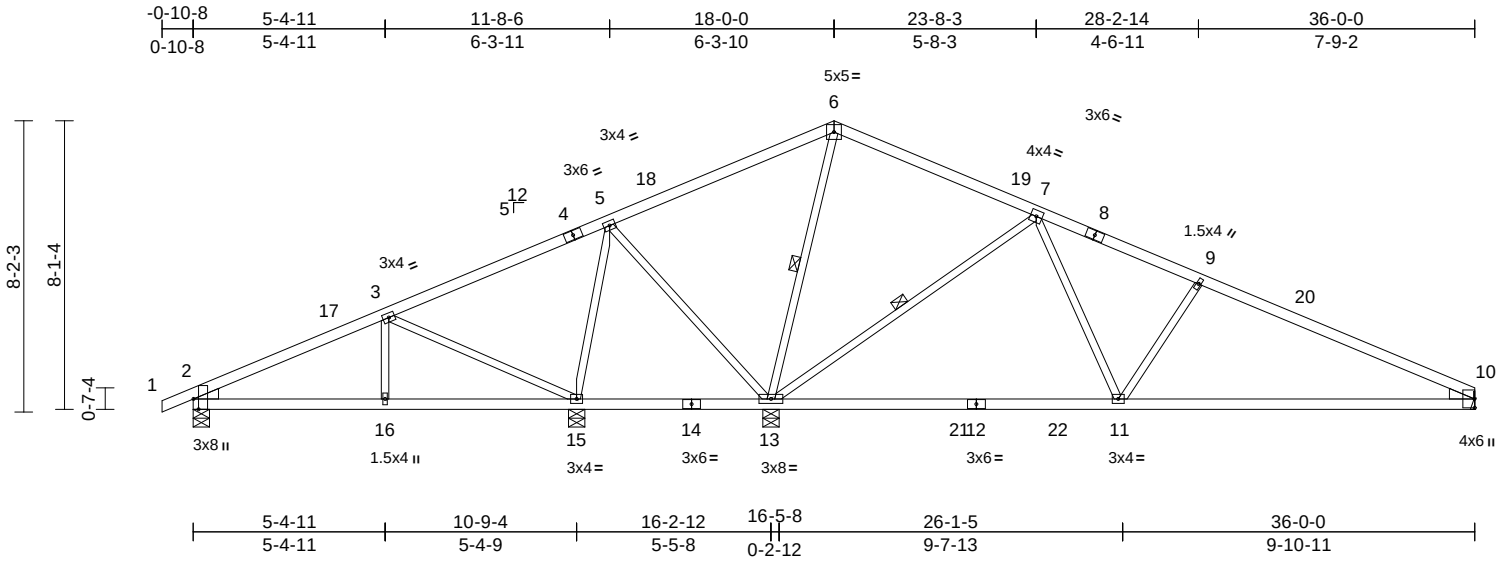

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Plate Offsets (X, Y): [2:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.22	10-11	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.48	10-11	>492	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 153 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 8-10:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 14-12:2x4 SP No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-13, 7-13

REACTIONS (size) 2=0-5-8, 10= Mechanical, 13=0-5-8, 15=0-5-8
Max Horiz 2=149 (LC 12)
Max Uplift 2=-77 (LC 12), 10=-146 (LC 13), 13=-278 (LC 13), 15=-204 (LC 12)
Max Grav 2=425 (LC 25), 10=712 (LC 28), 13=1829 (LC 2), 15=705 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-422/68, 3-5=-73/529, 5-6=-4/717, 6-7=0/528, 7-9=-784/222, 9-10=-1009/242
BOT CHORD 2-16=-115/317, 15-16=-115/317, 13-15=-406/205, 11-13=0/347, 10-11=-131/864
WEBS 6-13=-821/145, 3-16=0/242, 3-15=-678/209, 5-15=-347/171, 5-13=-323/151, 7-13=-945/277, 7-11=-93/805, 9-11=-447/253

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 to 35-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearings are assumed to be: Joint 2 SP 1650F 1.5E crushing capacity of 565 psi, Joint 15 SP 1650F 1.5E crushing capacity of 565 psi, Joint 13 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 2, 278 lb uplift at joint 13, 146 lb uplift at joint 10 and 204 lb uplift at joint 15.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 26,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

Job	Truss	Truss Type	Qty	Ply	
P240990	B13	Common	1	1	I68441537 Job Reference (optional)

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

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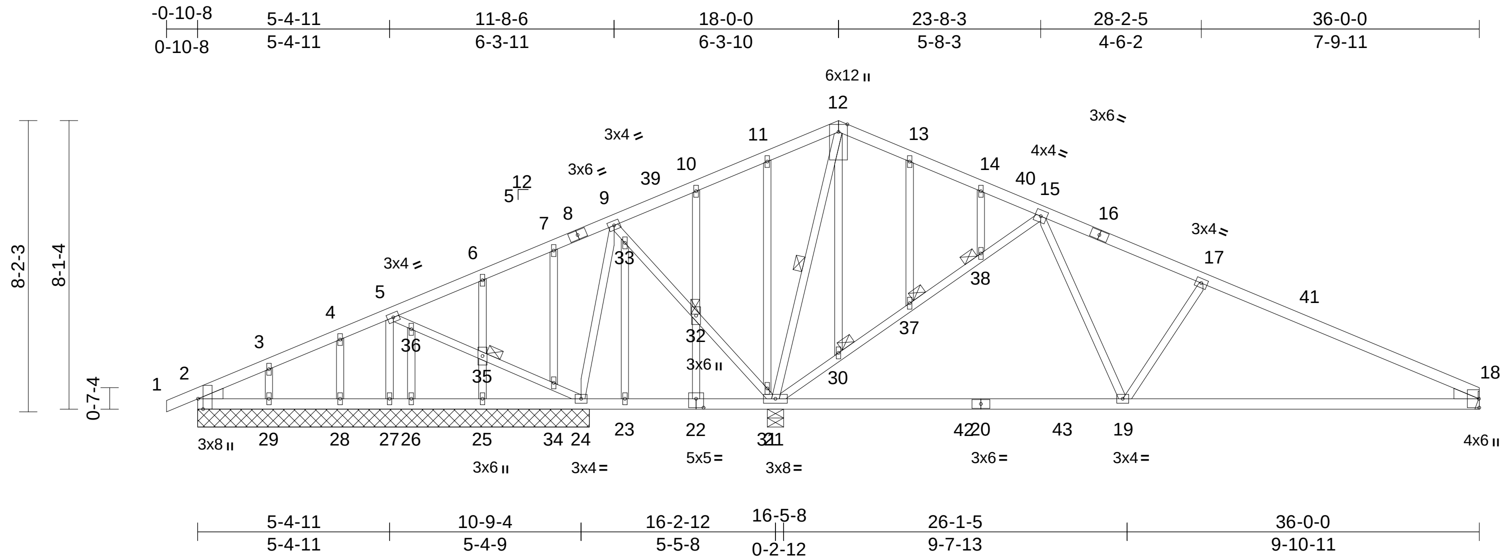

Scale = 1:64.7

Plate Offsets (X, Y): [2:0-3-8,Edge], [22:0-2-8,0-3-0]

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	0.70	Vert(LL)	-0.23	18-19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.49	18-19	>484	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.01	18	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 186 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 16-18:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 22-20:2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 19-21,18-19.
WEBS 1 Row at midpt 12-21
JOINTS 1 Brace at Jt(s): 30, 32, 35, 37, 38

REACTIONS (size) 2=11-0-0, 18= Mechanical, 21=0-5-8, 24=11-0-0, 25=11-0-0, 26=11-0-0, 27=11-0-0, 28=11-0-0, 29=11-0-0
Max Horiz 2=149 (LC 12)
Max Uplift 2=-20 (LC 13), 18=-147 (LC 13), 21=-253 (LC 13), 24=-94 (LC 12), 25=-73 (LC 12), 27=-98 (LC 28), 28=-34 (LC 12), 29=-77 (LC 12)
Max Grav 2=135 (LC 25), 18=729 (LC 28), 21=1834 (LC 2), 24=271 (LC 25), 25=243 (LC 27), 26=73 (LC 2), 27=51 (LC 13), 28=143 (LC 27), 29=217 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/4, 2-3=-126/176, 3-4=-69/169, 4-5=-39/174, 5-6=-71/369, 6-7=-17/350, 7-9=0/371, 9-10=-12/572, 10-11=0/594, 11-12=0/593, 12-13=0/456, 13-14=0/425, 14-15=0/365, 15-17=-822/224, 17-18=-1045/244

BOT CHORD 2-29=-132/136, 28-29=-132/136, 27-28=-132/136, 26-27=-132/136, 25-26=-132/136, 24-25=-132/136, 23-24=-350/228, 21-23=-350/228, 19-21=0/383, 18-19=-133/897

WEBS 12-21=-693/118, 21-30=-912/257, 30-37=-942/279, 37-38=-914/261, 15-38=-945/269, 9-33=-268/99, 32-33=-300/104, 31-32=-279/96, 21-31=-408/188, 5-27=-42/119, 17-19=-445/256, 15-19=-96/800, 9-24=-107/210, 5-36=-227/97, 35-36=-220/93, 34-35=-216/94, 24-34=-241/100, 12-30=-44/65, 11-31=-189/113, 10-32=-73/24, 22-32=-104/35, 23-33=-5/52, 7-34=-54/24, 6-35=-196/108, 25-35=-209/114, 26-36=-16/9, 4-28=-101/55, 3-29=-163/102, 13-37=-58/35, 14-38=-13/53

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 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 to 35-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 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, with BCDL = 10.0psf.
8) Bearings are assumed to be: Joint 29 SP 1650F 1.5E crushing capacity of 565 psi, Joint 21 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 20 lb uplift at joint 2, 253 lb uplift at joint 21, 98 lb uplift at joint 27, 147 lb uplift at joint 18, 94 lb uplift at joint 24, 73 lb uplift at joint 25, 34 lb uplift at joint 28 and 77 lb uplift at joint 29.

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

September 26,2024

Continued on page 2

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

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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

MiTek®
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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply		
P240990	C01	Common	3	1	Job Reference (optional)	I68441538

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

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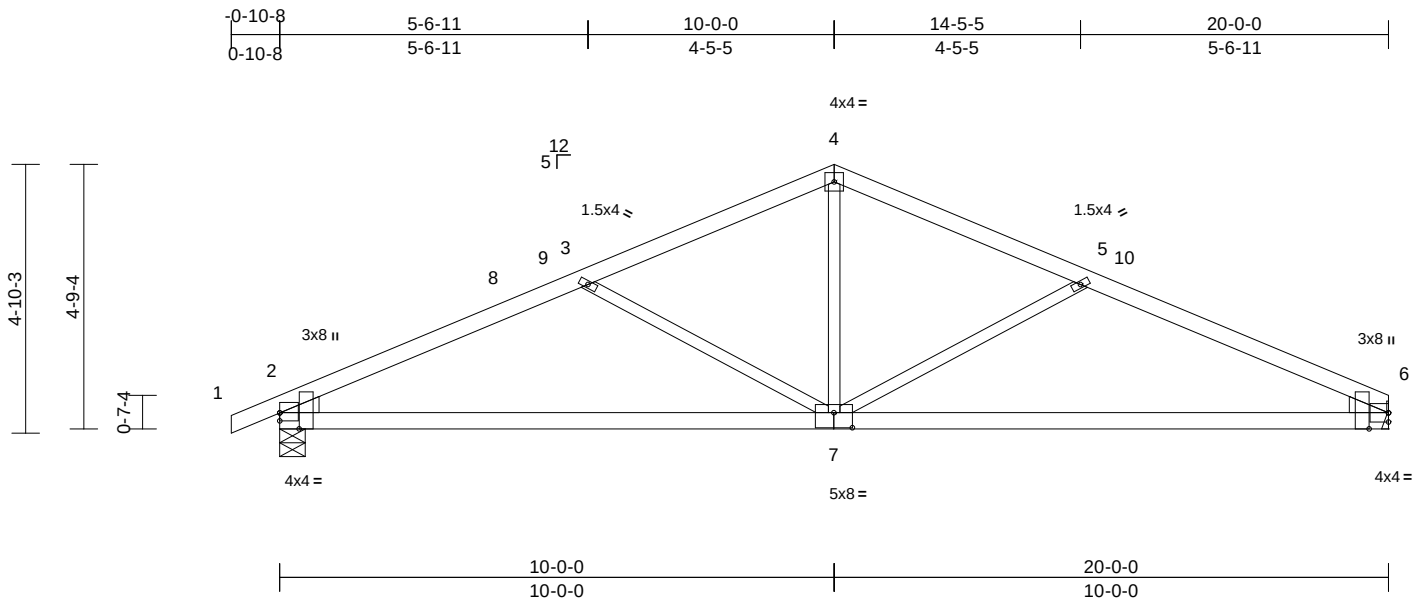

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Plate Offsets (X, Y): [2:Edge,0-1-12], [2:0-3-7,Edge], [6:0-3-7,Edge], [7:0-4-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.21	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.45	6-7	>529	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 77 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

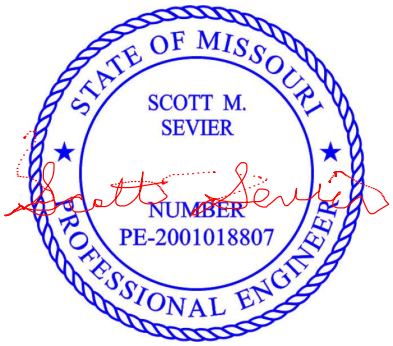
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 6= Mechanical
Max Horiz 2=87 (LC 16)
Max Uplift 2=-166 (LC 12), 6=-138 (LC 13)
Max Grav 2=966 (LC 1), 6=885 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-1544/422, 3-4=-1193/304, 4-5=-1194/311, 5-6=-1573/429
BOT CHORD 2-6=-324/1375
WEBS 3-7=-379/236, 4-7=-95/594, 5-7=-417/253

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 10-0-0, Exterior(2R) 10-0-0 to 15-0-0, Interior (1) 15-0-0 to 19-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearings are assumed to be: Joint 2 SP 1650F 1.5E crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 166 lb uplift at joint 2 and 138 lb uplift at joint 6.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	C02	Common Supported Gable	1	1	Job Reference (optional)	I68441539

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

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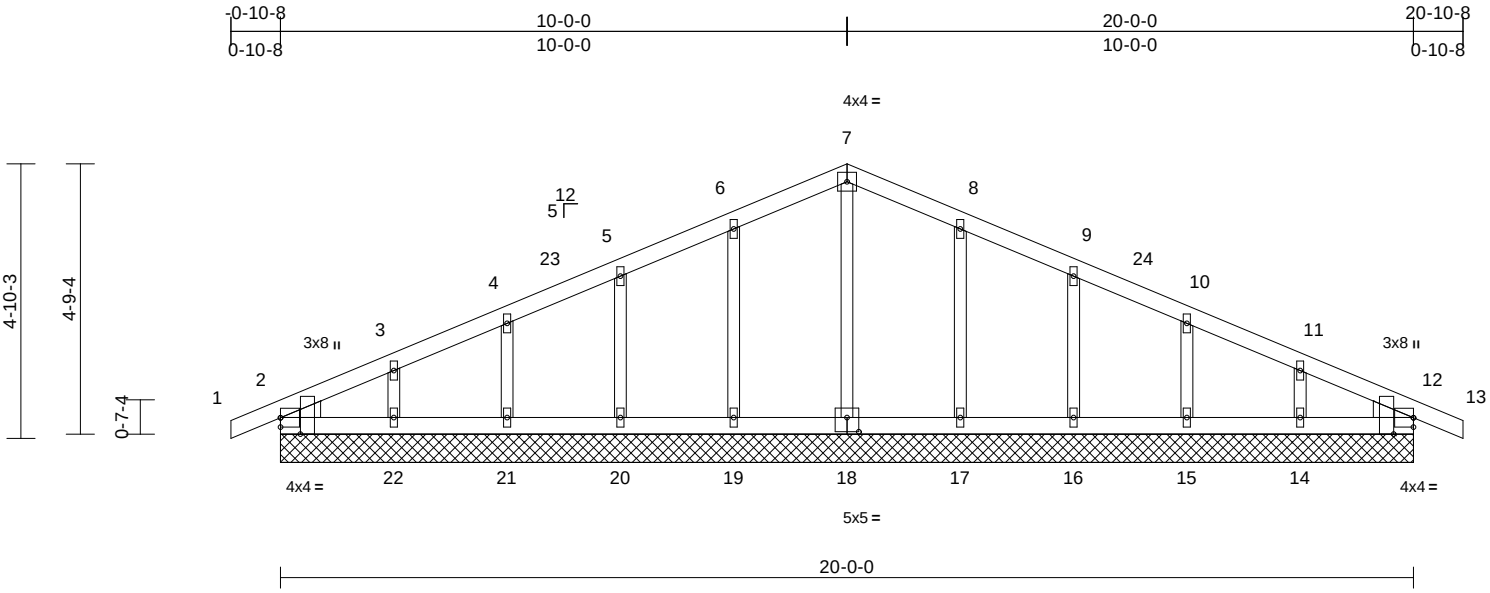

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Plate Offsets (X, Y): [2:0-3-7,Edge], [12:0-3-7,Edge], [18:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 84 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP 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=20-0-0, 12=20-0-0, 14=20-0-0, 15=20-0-0, 16=20-0-0, 17=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0
Max Horiz 2=85 (LC 16)
Max Uplift 2=-24 (LC 8), 12=-27 (LC 9), 14=-65 (LC 13), 15=-53 (LC 13), 16=-55 (LC 13), 17=-56 (LC 13), 19=-57 (LC 12), 20=-55 (LC 12), 21=-54 (LC 12), 22=-70 (LC 12)
Max Grav 2=157 (LC 1), 12=157 (LC 1), 14=181 (LC 26), 15=180 (LC 26), 16=179 (LC 1), 17=190 (LC 26), 18=156 (LC 1), 19=190 (LC 25), 20=179 (LC 1), 21=180 (LC 25), 22=181 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-101/50, 3-4=-66/60, 4-5=-45/82, 5-6=-47/105, 6-7=-63/139, 7-8=-63/136, 8-9=-47/99, 9-10=-42/61, 10-11=-42/23, 11-12=-72/24, 12-13=0/4
BOT CHORD 2-22=-20/74, 21-22=-20/74, 20-21=-20/74, 19-20=-20/74, 17-19=-20/74, 16-17=-20/74, 15-16=-20/74, 14-15=-20/74, 12-14=-20/74
WEBS 7-18=-116/0, 6-19=-150/96, 5-20=-138/93, 4-21=-141/79, 3-22=-138/94, 8-17=-150/96, 9-16=-138/93, 10-15=-141/79, 11-14=-138/89

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 10-0-0, Exterior(2R) 10-0-0 to 15-0-0, Interior (1) 15-0-0 to 20-10-8 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) 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 24 lb uplift at joint 2, 27 lb uplift at joint 12, 57 lb uplift at joint 19, 55 lb uplift at joint 20, 54 lb uplift at joint 21, 70 lb uplift at joint 22, 56 lb uplift at joint 17, 55 lb uplift at joint 16, 53 lb uplift at joint 15 and 65 lb uplift at joint 14.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 12.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	CJ01	Diagonal Hip Girder	5	1	Job Reference (optional)	I68441540

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

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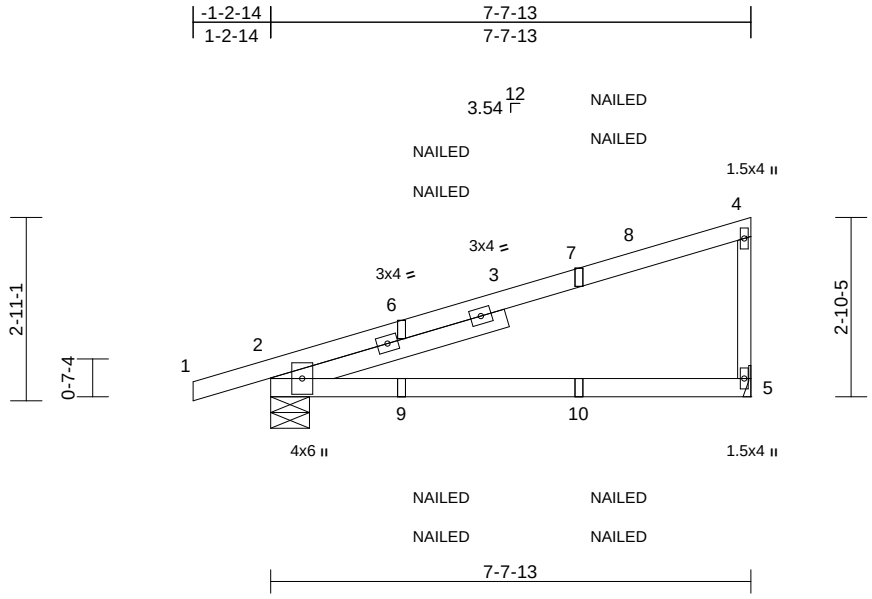

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Plate Offsets (X, Y): [2:0-3-2,0-4-0]

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	0.70	Vert(LL)	-0.21	2-5	>441	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.41	2-5	>221	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 33 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-10-10

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

REACTIONS (size) 2=0-7-6, 5= Mechanical
Max Horiz 2=120 (LC 9)
Max Uplift 2=-139 (LC 8), 5=-104 (LC 12)
Max Grav 2=435 (LC 1), 5=336 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-4=-161/96, 4-5=-257/308
BOT CHORD 2-5=-52/57

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 7-6-9 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
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 104 lb uplift at joint 5 and 139 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) "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: 1-4=-70, 2-5=-20
Concentrated Loads (lb)
Vert: 10=-6 (F=-3, B=-3)

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	D01	Hip Girder	1	1	I68441541 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,
Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:11 Page: 1
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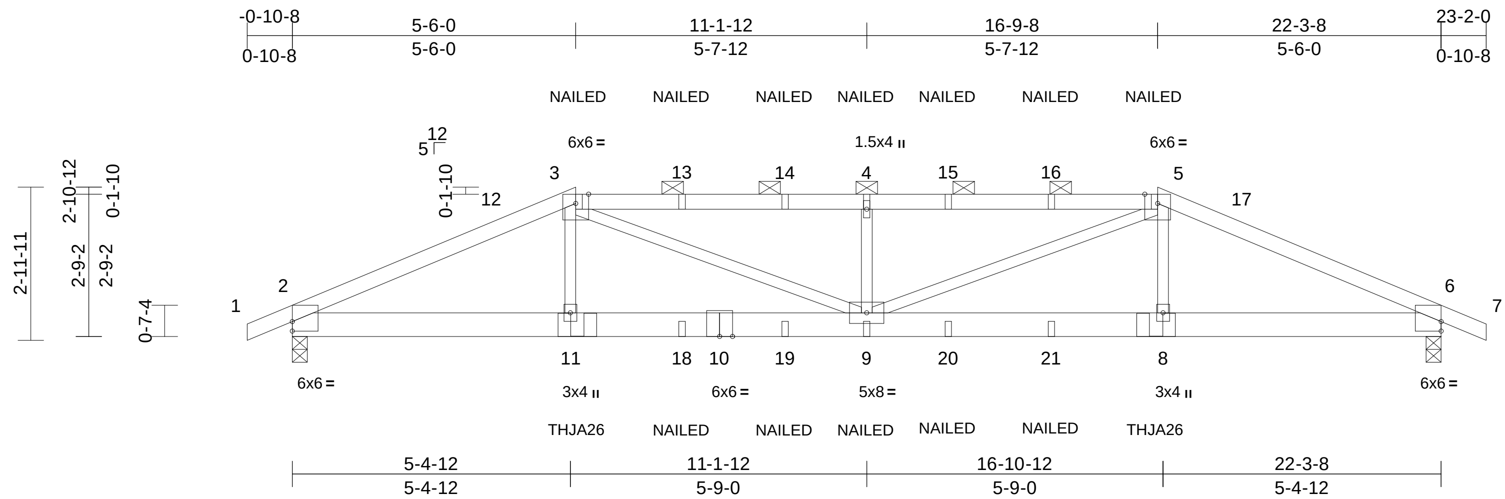

Scale = 1:44.7

Plate Offsets (X, Y): [2:Edge,0-2-3], [6:Edge,0-2-3]

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	0.89	Vert(LL)	0.20	9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.36	9	>731	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.50	Horz(CT)	0.08	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 92 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 3-5:2x4 SP 2400F 2.0E
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (3-2-6 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 7-5-15 oc bracing.

REACTIONS (size) 2=0-3-8, 6=0-3-8
Max Horiz 2=49 (LC 16)
Max Uplift 2=-507 (LC 8), 6=-507 (LC 9)
Max Grav 2=1846 (LC 1), 6=1846 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/10, 2-3=-3822/1136, 3-4=-4649/1455, 4-5=-4649/1455, 5-6=-3822/1136, 6-7=0/10
BOT CHORD 2-11=-959/3404, 9-11=-957/3382, 8-9=-956/3382, 6-8=-957/3404
WEBS 3-11=-36/541, 3-9=-448/1469, 4-9=-916/506, 5-9=-448/1469, 5-8=-36/541

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 5-6-0, Exterior(2R) 5-6-0 to 12-6-14, Interior (1) 12-6-14 to 16-9-8, Exterior(2E) 16-9-8 to 23-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 SPF No.2 crushing capacity of 425 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 507 lb uplift at joint 2 and 507 lb uplift at joint 6.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Use Simpson Strong-Tie THJA26 (THJA26 on 1 ply, Left Hand Hip) or equivalent at 5-6-6 from the left end to connect truss(es) to front face of bottom chord.
11) Use Simpson Strong-Tie THJA26 (THJA26 on 1 ply, Right Hand Hip) or equivalent at 16-9-2 from the left end to connect truss(es) to front face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.
13) N/A
14) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-5=-70, 5-7=-70, 2-6=-20
Concentrated Loads (lb)
Vert: 3=-104 (F), 5=-104 (F), 11=-340 (F), 9=-32 (F), 4=-104 (F), 8=-340 (F), 13=-104 (F), 14=-104 (F), 15=-104 (F), 16=-104 (F), 18=-32 (F), 19=-32 (F), 20=-32 (F), 21=-32 (F)

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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	D02	Hip	1	1	Job Reference (optional)	I68441542

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:11 2024 Page: 1
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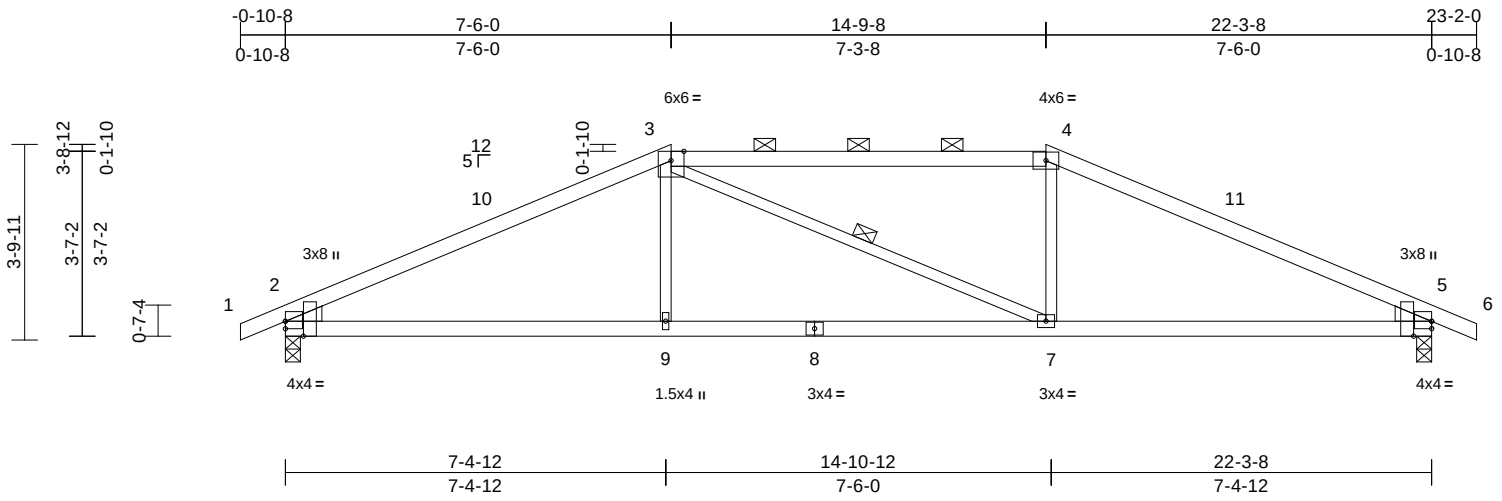

Scale = 1:44.8

Plate Offsets (X, Y): [2:Edge,0-1-12], [2:0-3-7,Edge], [5:Edge,0-1-12], [5:0-3-7,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	0.78	Vert(LL)	-0.10	2-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.22	2-9	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.05	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 85 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 5=0-3-8
Max Horiz 2=65 (LC 16)
Max Uplift 2=-158 (LC 8), 5=-158 (LC 9)
Max Grav 2=1061 (LC 1), 5=1061 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-1785/350, 3-4=-1525/377, 4-5=-1785/350, 5-6=0/4
BOT CHORD 2-9=-238/1530, 7-9=-241/1525, 5-7=-227/1530
WEBS 3-9=0/320, 3-7=-185/186, 4-7=0/320

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 7-6-0, Exterior(2E) 7-6-0 to 14-9-8, Exterior(2R) 14-9-8 to 22-1-12, Interior (1) 22-1-12 to 23-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 158 lb uplift at joint 2 and 158 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	D03	Hip	1	1	Job Reference (optional) I68441543

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

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

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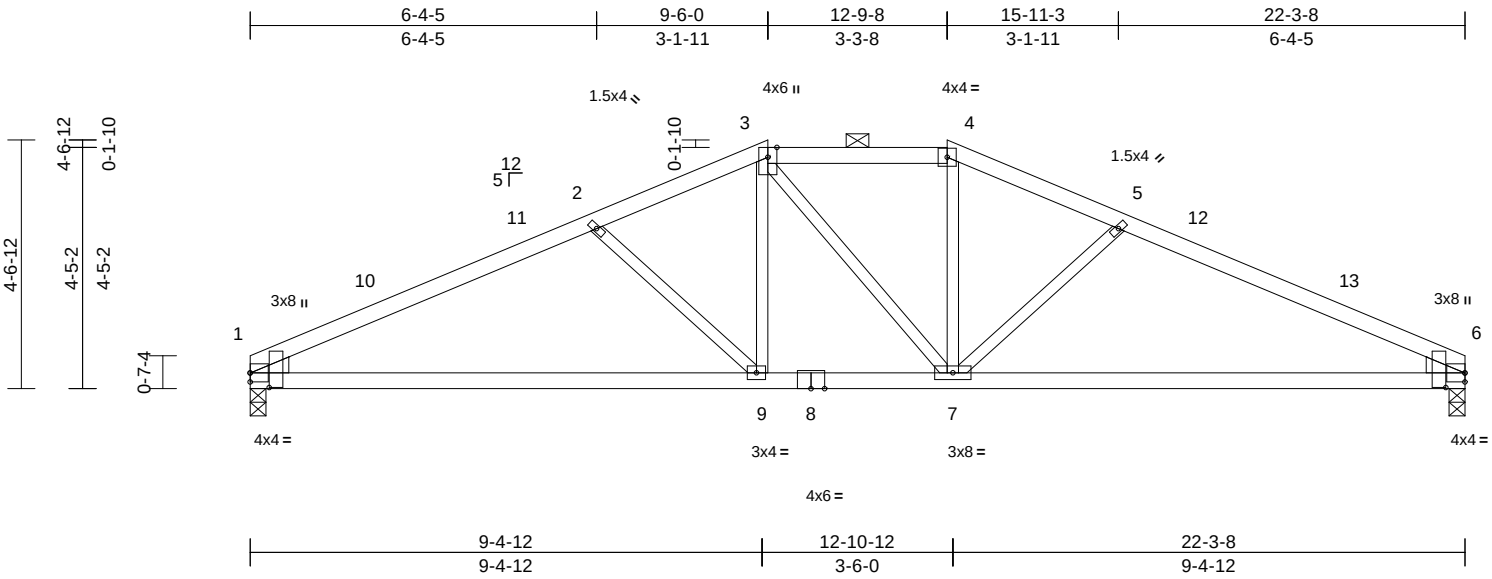

Scale = 1:42.3

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

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	0.82	Vert(LL)	-0.24	1-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.51	1-9	>522	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.05	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 88 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

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

REACTIONS (size) 1=0-3-8, 6=0-3-8
Max Horiz 1=-79 (LC 17)
Max Uplift 1=-140 (LC 12), 6=-140 (LC 13)
Max Grav 1=990 (LC 1), 6=990 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1767/389, 2-3=-1477/325, 3-4=-1304/312, 4-5=-1478/325, 5-6=-1767/389
BOT CHORD 1-9=-292/1543, 7-9=-147/1303, 6-7=-285/1543
WEBS 3-9=-72/370, 3-7=-129/132, 4-7=-56/353, 2-9=-332/218, 5-7=-331/219

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 9-6-0, Exterior(2E) 9-6-0 to 12-9-8, Exterior(2R) 12-9-8 to 19-10-6, Interior (1) 19-10-6 to 22-1-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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 140 lb uplift at joint 1 and 140 lb uplift at joint 6.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	D04	Hip Girder	1	**2**	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

I68441544

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:11 Page: 1
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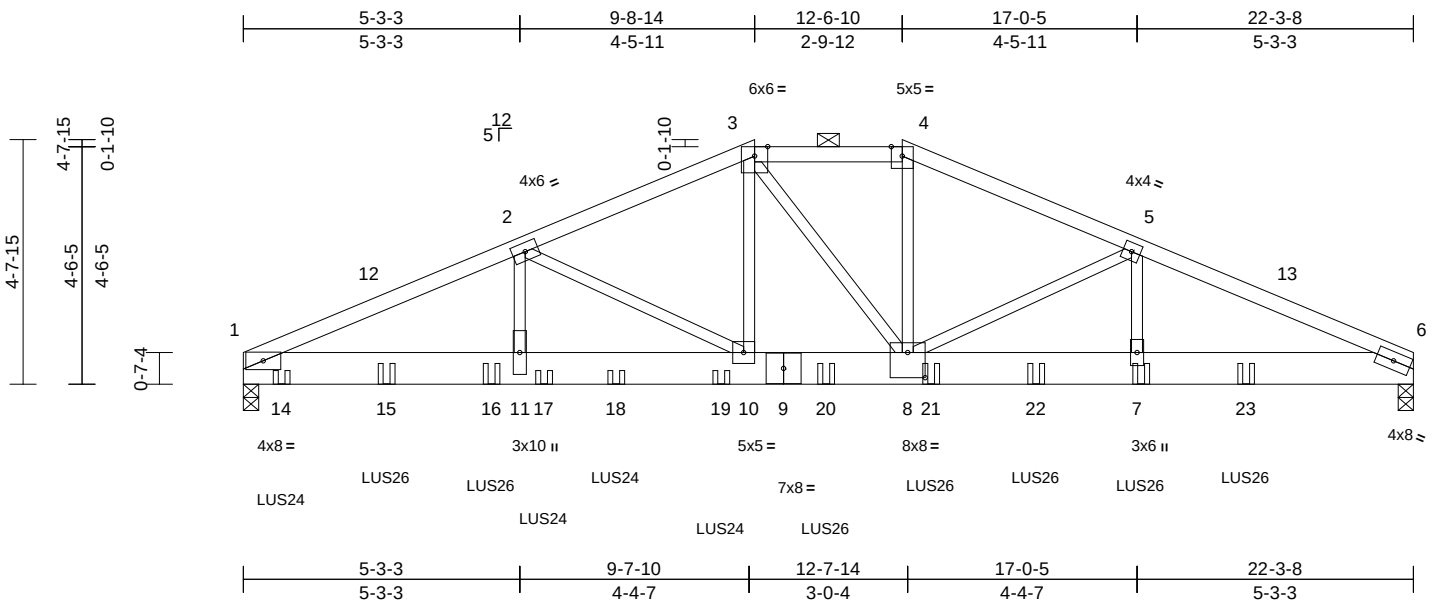

Scale = 1:43.9

Plate Offsets (X, Y): [8:0-4-0,0-5-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.16	10-11	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.28	10-11	>940	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.46	Horz(CT)	0.06	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 233 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E *Except* 9-6:2x8 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 1=0-3-8, 6=0-3-8
Max Horiz 1=78 (LC 16)
Max Uplift 1=-1117 (LC 12), 6=-903 (LC 13)
Max Grav 1=5726 (LC 1), 6=4225 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-10127/2156, 2-3=-7404/1675, 3-4=-6641/1557, 4-5=-7287/1664, 5-6=-8935/2014
BOT CHORD 1-11=-1916/9162, 10-11=-1916/9162, 8-10=-1403/6744, 7-8=-1781/8063, 6-7=-1781/8063
WEBS 3-10=-556/2654, 3-8=-316/78, 4-8=-535/2448, 2-10=-2695/594, 5-8=-1570/459, 2-11=-383/2363, 5-7=-263/1401

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-5-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-3-3, Interior (1) 5-3-3 to 9-8-14, Exterior(2E) 9-8-14 to 12-6-10, Exterior(2R) 12-6-10 to 19-7-8, Interior (1) 19-7-8 to 22-1-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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 1 SP 2400F 2.0E crushing capacity of 805 psi, Joint 6 SPF No.2 crushing capacity of 425 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1117 lb uplift at joint 1 and 903 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 LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent at 0-8-12 from the left end to connect truss(es) to back face of bottom chord.
13) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-8-12 from the left end to 4-8-12 to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 5-8-12 from the left end to 9-1-4 to connect truss(es) to back face of bottom chord.
15) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 11-1-4 from the left end to 19-1-4 to connect truss(es) to back face of bottom chord.
16) 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)

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

September 26,2024

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)
P240990	D04	Hip Girder	1	**2**	I68441544

Vert: 7=-667 (B), 14=-869 (B), 15=-865 (B), 16=-865 (B), 17=-685 (B), 18=-672 (B), 19=-672 (B), 20=-672 (B), 21=-672 (B), 22=-667 (B), 23=-667 (B)

Job	Truss	Truss Type	Qty	Ply		
P240990	GR01	Jack-Closed Girder	1	1	Job Reference (optional)	I68441545

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

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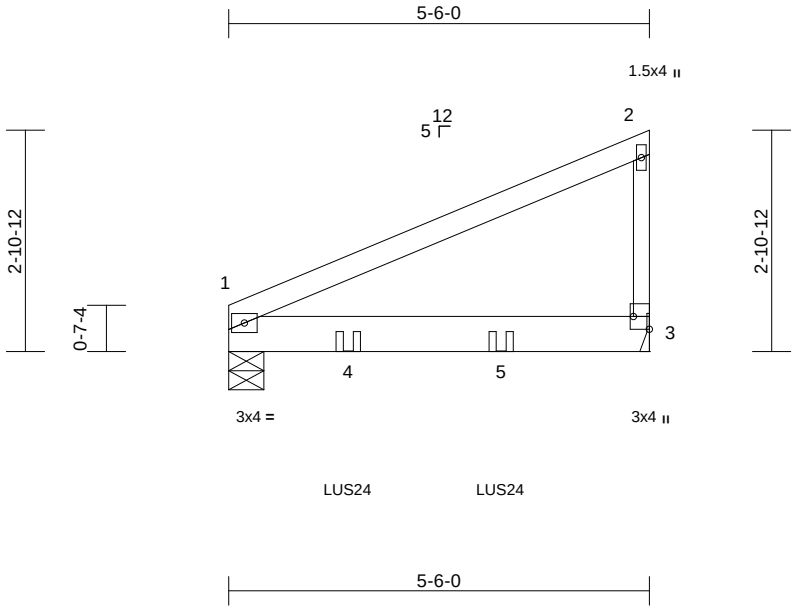

Scale = 1:30.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.07	1-3	>903	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.13	1-3	>486	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 24 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 3= Mechanical
Max Horiz 1=115 (LC 11)
Max Uplift 1=-161 (LC 12), 3=-166 (LC 12)
Max Grav 1=925 (LC 1), 3=803 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-152/103, 2-3=-181/224
BOT CHORD 1-3=-51/55

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 1 SP 2400F 2.0E crushing capacity of 805 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 161 lb uplift at joint 1 and 166 lb uplift at joint 3.
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) Use Simpson Strong-Tie LUS24 (4-10dx1 1/2 Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-6-12 from the left end to 3-6-12 to connect truss(es) to back face of bottom chord.
9) Fill all nail holes where hanger is in contact with lumber.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 1-3=-20
Concentrated Loads (lb)
Vert: 4=-631 (B), 5=-631 (B)

September 26,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

Job	Truss	Truss Type	Qty	Ply		
P240990	J01	Jack-Open	10	1	Job Reference (optional)	I68441546

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

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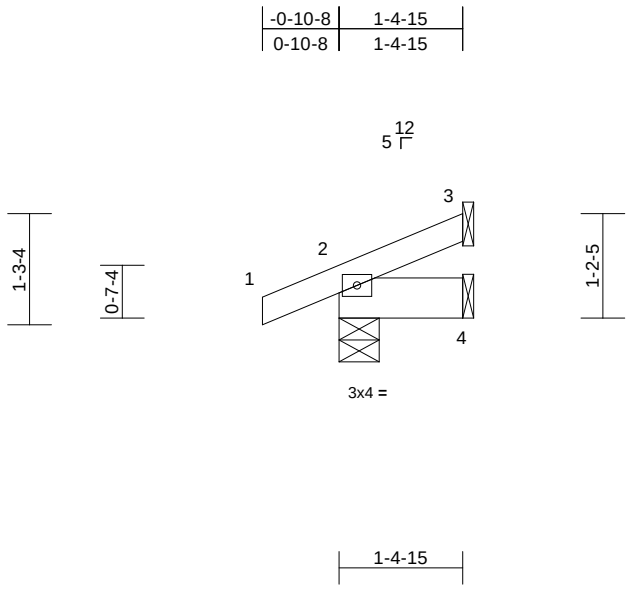

Scale = 1:26.3

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	0.06	Vert(LL)	0.00	2	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	2-4	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 6 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-4-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=40 (LC 12)
Max Uplift 2=-40 (LC 8), 3=-23 (LC 12)
Max Grav 2=147 (LC 1), 3=25 (LC 1), 4=27 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/10, 2-3=-35/21
BOT CHORD 2-4=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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 SPF No.2 crushing capacity of 425 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 40 lb uplift at joint 2 and 23 lb uplift at joint 3.
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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	J02	Jack-Open	10	1	Job Reference (optional)	I68441547

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

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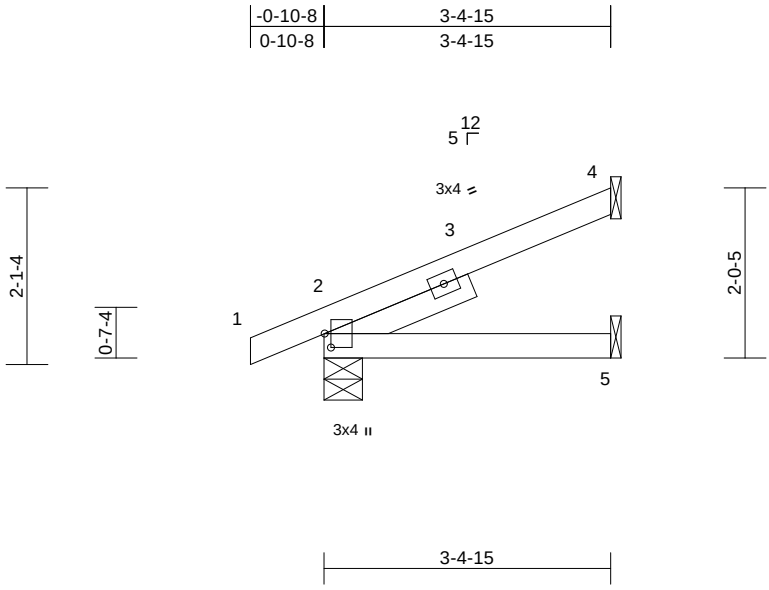

Scale = 1:27.4

Plate Offsets (X, Y): [2:0-2-0,0-0-14]

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	0.17	Vert(LL)	-0.01	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	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: 15 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-10-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-15 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=76 (LC 12)
Max Uplift 2=-44 (LC 12), 4=-64 (LC 12)
Max Grav 2=231 (LC 1), 4=96 (LC 1), 5=62 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-4=-72/34
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 64 lb uplift at joint 4 and 44 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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	J03	Jack-Open	18	1	Job Reference (optional)	I68441548

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:12 2024 Page: 1
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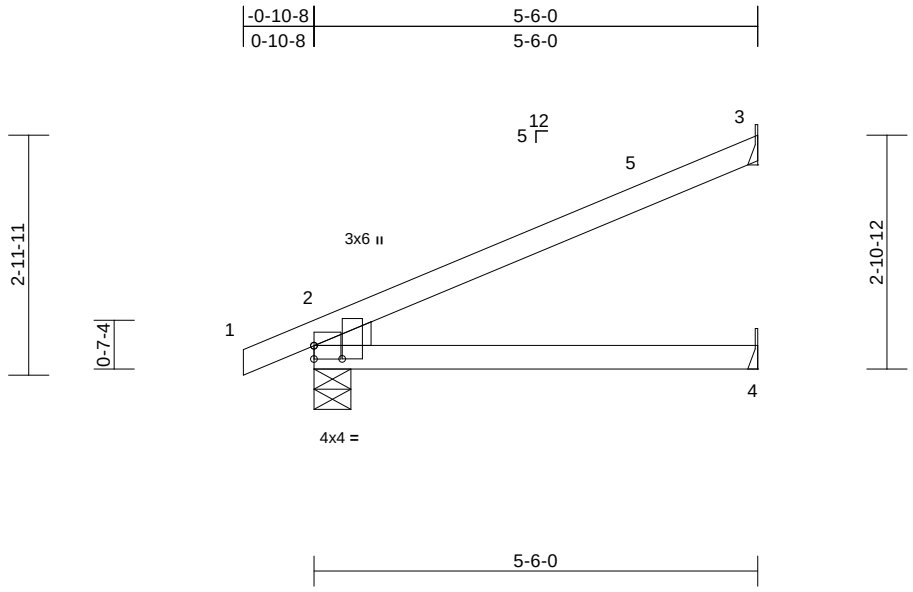

Scale = 1:28.5

Plate Offsets (X, Y): [2:0-1-15,0-4-3]

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	0.57	Vert(LL)	-0.04	2-4	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.09	2-4	>708	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEDGE Left: 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=114 (LC 12)
Max Uplift 2=-55 (LC 12), 3=-107 (LC 12)
Max Grav 2=320 (LC 1), 3=174 (LC 1), 4=104 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/4, 2-3=-115/62
BOT CHORD 2-4=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 5-5-4 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 107 lb uplift at joint 3 and 55 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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	LG01	Lay-In Gable	1	1	Job Reference (optional)	I68441549

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

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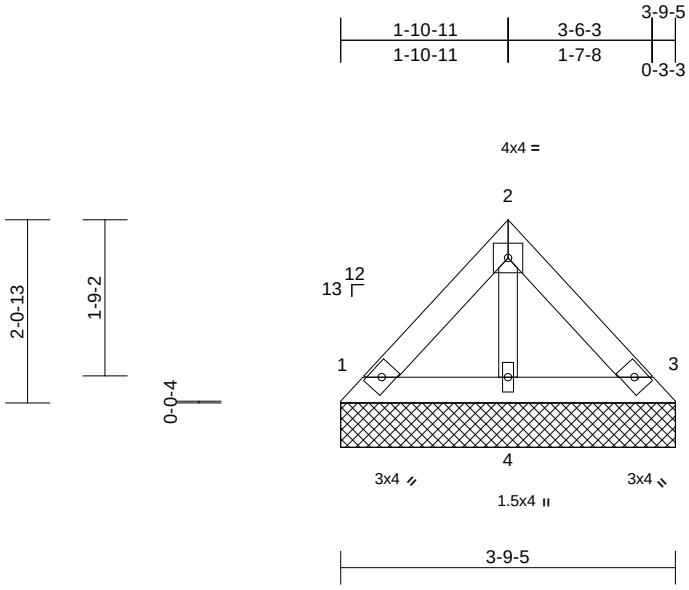

Scale = 1:26

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-9-5, 3=3-9-5, 4=3-9-5
Max Horiz 1=-49 (LC 10)
Max Uplift 1=-26 (LC 13), 3=-23 (LC 13)
Max Grav 1=92 (LC 1), 3=92 (LC 1), 4=99 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-73/37, 2-3=-67/31
BOT CHORD 1-4=-15/36, 3-4=-15/36
WEBS 2-4=-60/17

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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 26 lb uplift at joint 1 and 23 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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	LG02	Lay-In Gable	1	1	Job Reference (optional)

I68441550

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

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

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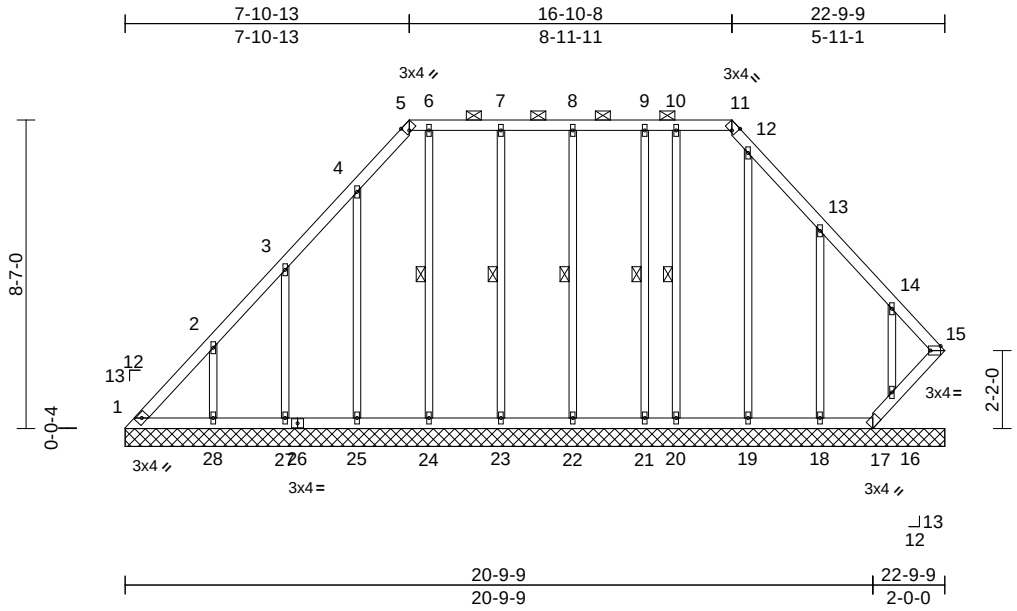

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Plate Offsets (X, Y): [5:0-1-7,Edge], [11:0-1-7,Edge], [15:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.01	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 134 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-24, 7-23, 8-22, 9-21, 10-20

REACTIONS (size) 1=22-9-9, 15=22-9-9, 16=22-9-9, 17=22-9-9, 18=22-9-9, 19=22-9-9, 20=22-9-9, 21=22-9-9, 22=22-9-9, 23=22-9-9, 24=22-9-9, 25=22-9-9, 27=22-9-9, 28=22-9-9
Max Horiz 1=229 (LC 9)
Max Uplift 1=-85 (LC 10), 15=-152 (LC 11), 16=-118 (LC 13), 17=-187 (LC 13), 18=-169 (LC 13), 19=-12 (LC 8), 20=-18 (LC 9), 21=-31 (LC 8), 22=-40 (LC 9), 23=-51 (LC 8), 24=-22 (LC 9), 25=-116 (LC 12), 27=-144 (LC 12), 28=-165 (LC 12)
Max Grav 1=230 (LC 12), 15=336 (LC 13), 16=173 (LC 20), 17=113 (LC 11), 18=220 (LC 20), 19=162 (LC 26), 20=117 (LC 26), 21=129 (LC 25), 22=185 (LC 25), 23=187 (LC 26), 24=159 (LC 22), 25=204 (LC 19), 27=201 (LC 19), 28=245 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-338/210, 2-3=-185/134, 3-4=-128/93, 4-5=-137/123, 5-6=-114/110, 6-7=-114/110, 7-8=-114/110, 8-9=-114/110, 9-10=-114/110, 10-11=-114/110, 11-12=-125/103, 12-13=-112/92, 13-14=-133/84, 14-15=-219/130
BOT CHORD 1-28=-96/168, 27-28=-97/168, 25-27=-97/168, 24-25=-97/168, 23-24=-97/168, 22-23=-97/168, 21-22=-97/168, 20-21=-97/168, 19-20=-97/168, 18-19=-97/168, 17-18=-97/168, 16-17=-149/263, 15-16=-156/256
WEBS 2-28=-208/183, 3-27=-190/170, 4-25=-163/139, 6-24=-119/46, 7-23=-148/74, 8-22=-143/65, 9-21=-101/48, 10-20=-90/35, 12-19=-119/38, 13-18=-207/189, 14-16=-163/143

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-0 to 5-4-0, Interior (1) 5-4-0 to 7-11-1, Exterior(2R) 7-11-1 to 14-11-14, Interior (1) 14-11-14 to 16-10-12, Exterior(2E) 16-10-12 to 22-7-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 0-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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 85 lb uplift at joint 1, 152 lb uplift at joint 15, 187 lb uplift at joint 17, 165 lb uplift at joint 28, 144 lb uplift at joint 27, 116 lb uplift at joint 25, 22 lb uplift at joint 24, 51 lb uplift at joint 23, 40 lb uplift at joint 22, 31 lb uplift at joint 21, 18 lb uplift at joint 20, 12 lb uplift at joint 19, 169 lb uplift at joint 18 and 118 lb uplift at joint 16.
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 15, 16.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

September 26,2024

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)
P240990	LG02	Lay-In Gable	1	1	I68441550

14) 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		
P240990	LG03	Lay-In Gable	1	1	Job Reference (optional)	I68441551

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

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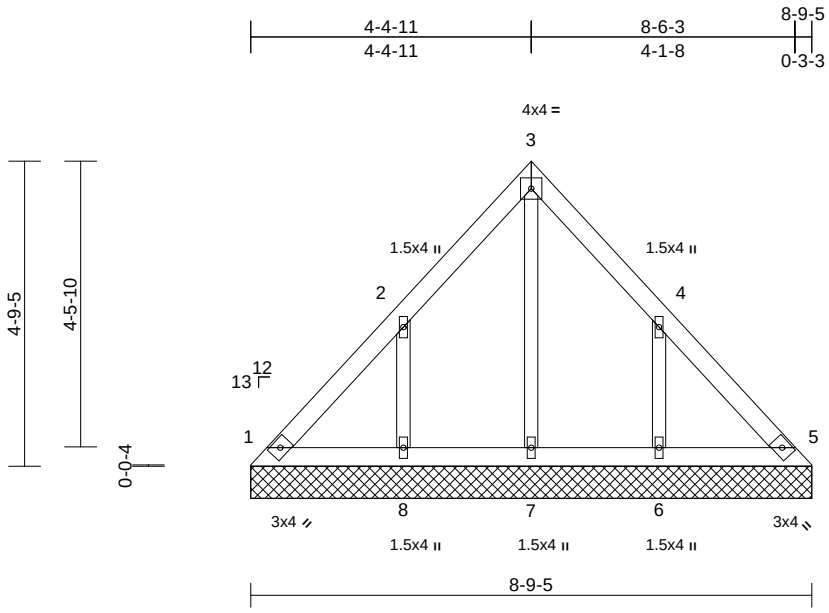

Scale = 1:36

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 38 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=8-9-5, 5=8-9-5, 6=8-9-5, 7=8-9-5, 8=8-9-5
Max Horiz 1=-126 (LC 8)
Max Uplift 1=-22 (LC 8), 5=-4 (LC 9), 6=-179 (LC 13), 8=-179 (LC 12)
Max Grav 1=120 (LC 20), 5=110 (LC 22), 6=259 (LC 20), 7=115 (LC 22), 8=259 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-136/100, 2-3=-105/87, 3-4=-105/83, 4-5=-120/87
BOT CHORD 1-8=-80/116, 7-8=-80/117, 6-7=-80/117, 5-6=-80/116
WEBS 2-8=-261/207, 3-7=-78/38, 4-6=-261/207

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 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 0-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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 22 lb uplift at joint 1, 4 lb uplift at joint 5, 179 lb uplift at joint 8 and 179 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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	LG04	Lay-In Gable	1	1	Job Reference (optional)	I68441552

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:12 2024 Page: 1
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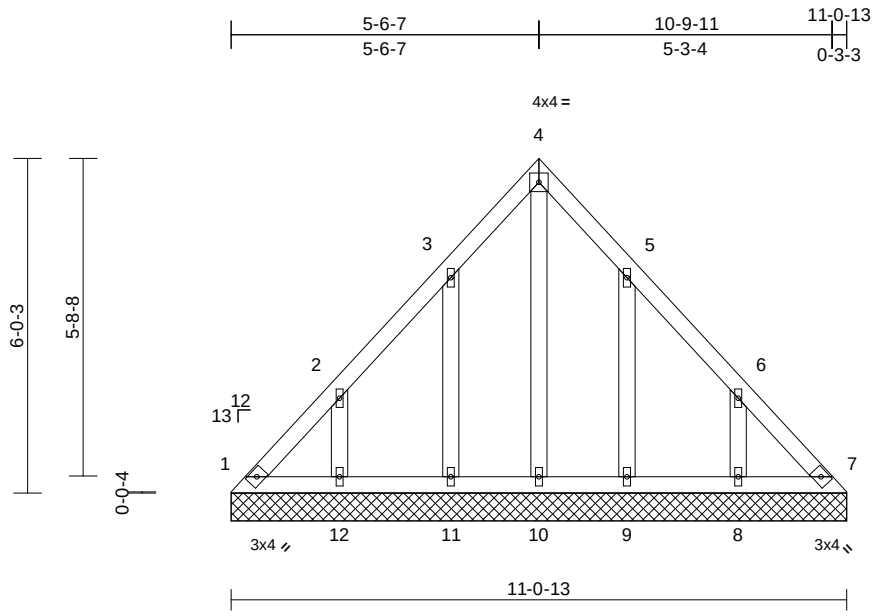

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	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 2x4 SPF No.3

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=11-0-13, 7=11-0-13, 8=11-0-13, 9=11-0-13, 10=11-0-13, 11=11-0-13, 12=11-0-13
Max Horiz 1=-162 (LC 8)
Max Uplift 1=-55 (LC 10), 7=-30 (LC 11), 8=-149 (LC 13), 9=-126 (LC 13), 11=-127 (LC 12), 12=-148 (LC 12)
Max Grav 1=137 (LC 12), 7=122 (LC 22), 8=216 (LC 20), 9=194 (LC 20), 10=129 (LC 13), 11=196 (LC 19), 12=215 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-204/135, 2-3=-123/83, 3-4=-124/116, 4-5=-124/114, 5-6=-97/50, 6-7=-181/132
BOT CHORD 1-12=-106/150, 11-12=-106/150, 10-11=-106/150, 9-10=-106/150, 8-9=-106/150, 7-8=-106/150
WEBS 2-12=-206/167, 3-11=-182/151, 4-10=-114/79, 5-9=-182/149, 6-8=-206/168

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 0-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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 1, 30 lb uplift at joint 7, 148 lb uplift at joint 12, 127 lb uplift at joint 11, 126 lb uplift at joint 9 and 149 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

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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	V01	Valley	1	1	Job Reference (optional)	I68441553

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:12 2024 Page: 1
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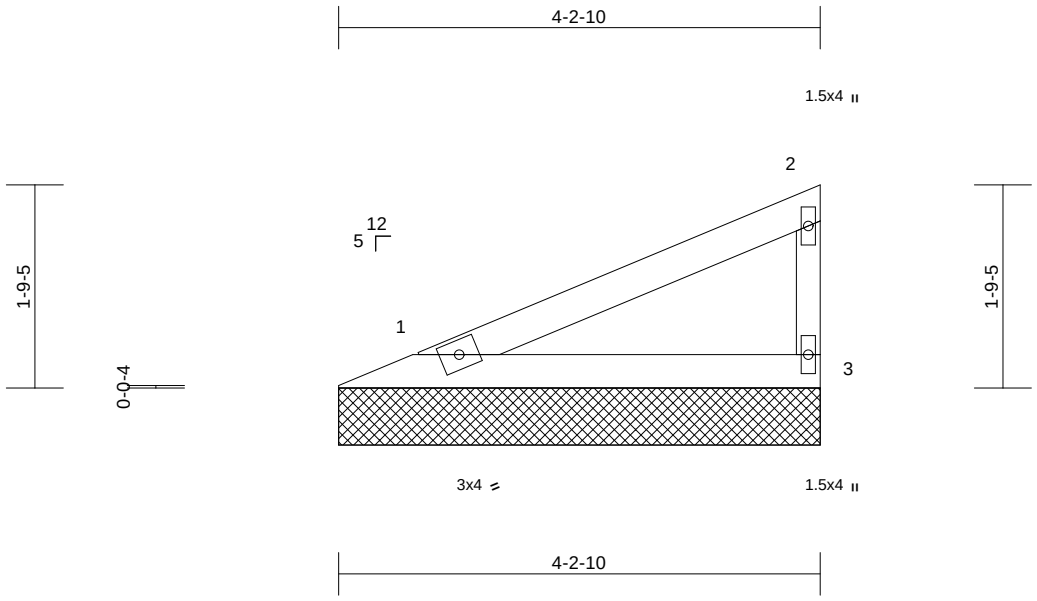

Scale = 1:20.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 20%

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

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

REACTIONS (size) 1=4-2-10, 3=4-2-10
Max Horiz 1=67 (LC 9)
Max Uplift 1=-27 (LC 12), 3=-40 (LC 12)
Max Grav 1=153 (LC 1), 3=153 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/59, 2-3=-119/141
BOT CHORD 1-3=-29/32

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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 27 lb uplift at joint 1 and 40 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	V1	Valley	1	1	Job Reference (optional) I68441554

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

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

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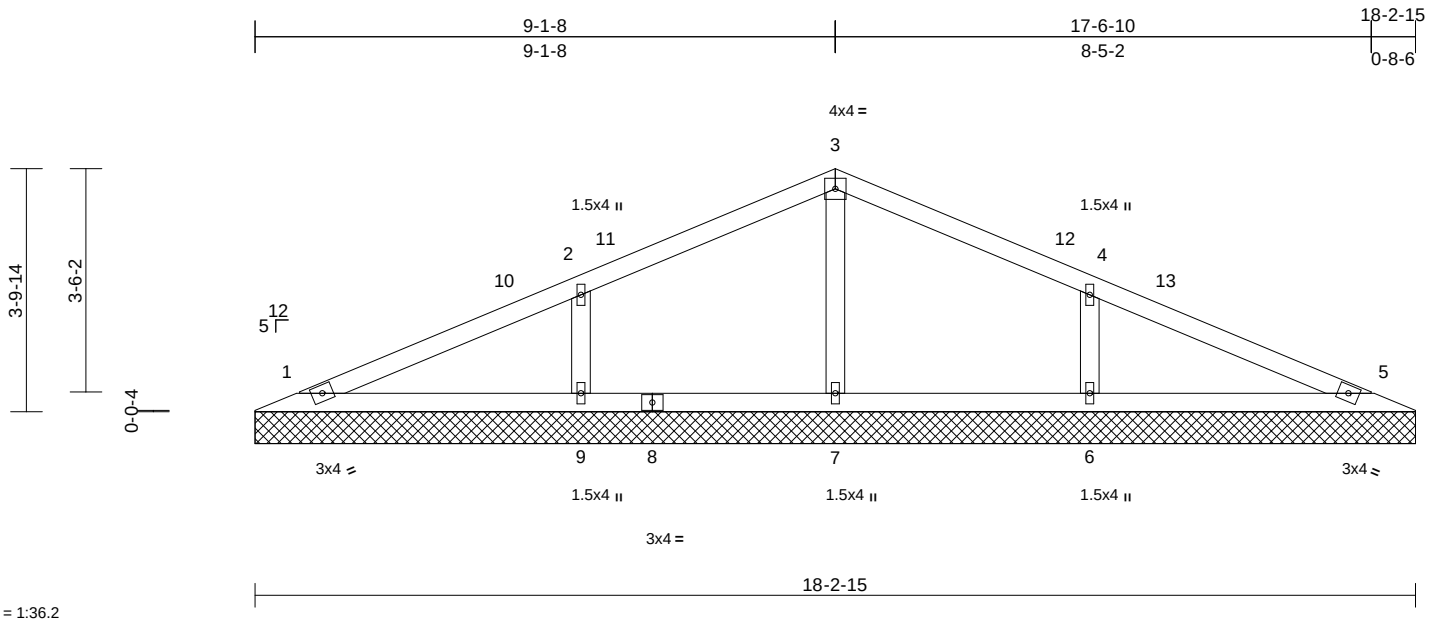

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 62 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SPF No.3

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=18-2-15, 5=18-2-15, 6=18-2-15, 7=18-2-15, 9=18-2-15
Max Horiz 1=-66 (LC 13)
Max Uplift 1=-15 (LC 13), 5=-25 (LC 13), 6=-143 (LC 13), 9=-143 (LC 12)
Max Grav 1=165 (LC 1), 5=165 (LC 1), 6=458 (LC 26), 7=278 (LC 1), 9=458 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-81/71, 2-3=-85/113, 3-4=-85/109, 4-5=-59/57
BOT CHORD 1-9=-10/51, 7-9=-10/51, 6-7=-10/51, 5-6=-10/51
WEBS 3-7=-213/48, 2-9=-352/227, 4-6=-352/227

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 9-2-1, Exterior(2R) 9-2-1 to 14-2-1, Interior (1) 14-2-1 to 17-7-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 15 lb uplift at joint 1, 25 lb uplift at joint 5, 143 lb uplift at joint 9 and 143 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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	V02	Valley	1	1	Job Reference (optional)	I68441555

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

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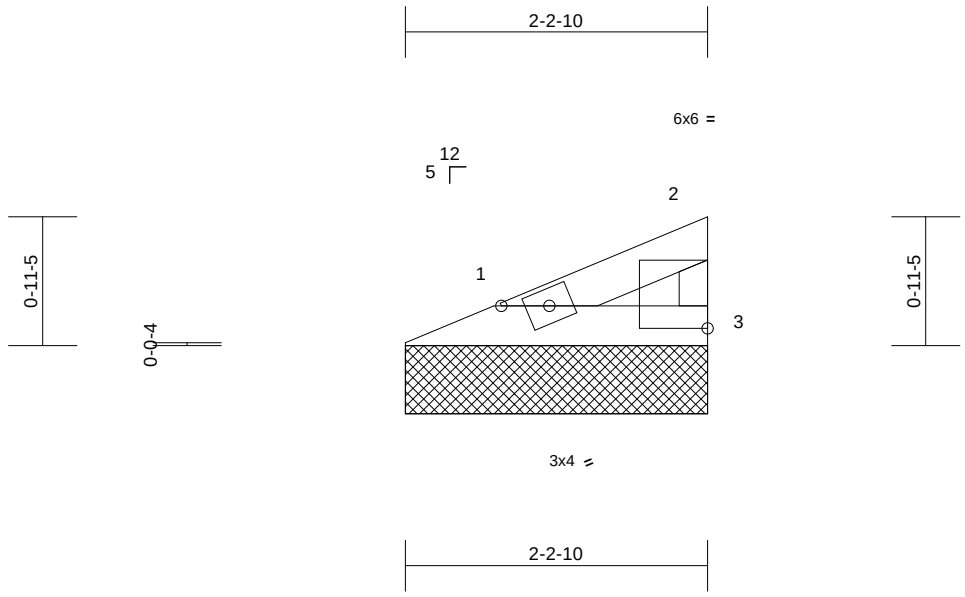

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Plate Offsets (X, Y): [2:Edge,0-2-0]

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 6 lb	FT = 20%

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

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

REACTIONS (size) 1=2-2-10, 3=2-2-10
Max Horiz 1=28 (LC 9)
Max Uplift 1=-11 (LC 12), 3=-17 (LC 12)
Max Grav 1=63 (LC 1), 3=63 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-37/25, 2-3=-49/58
BOT CHORD 1-3=-12/13

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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 11 lb uplift at joint 1 and 17 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply	
P240990	V2	Valley	1	1	Job Reference (optional) I68441556

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/14/2024

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

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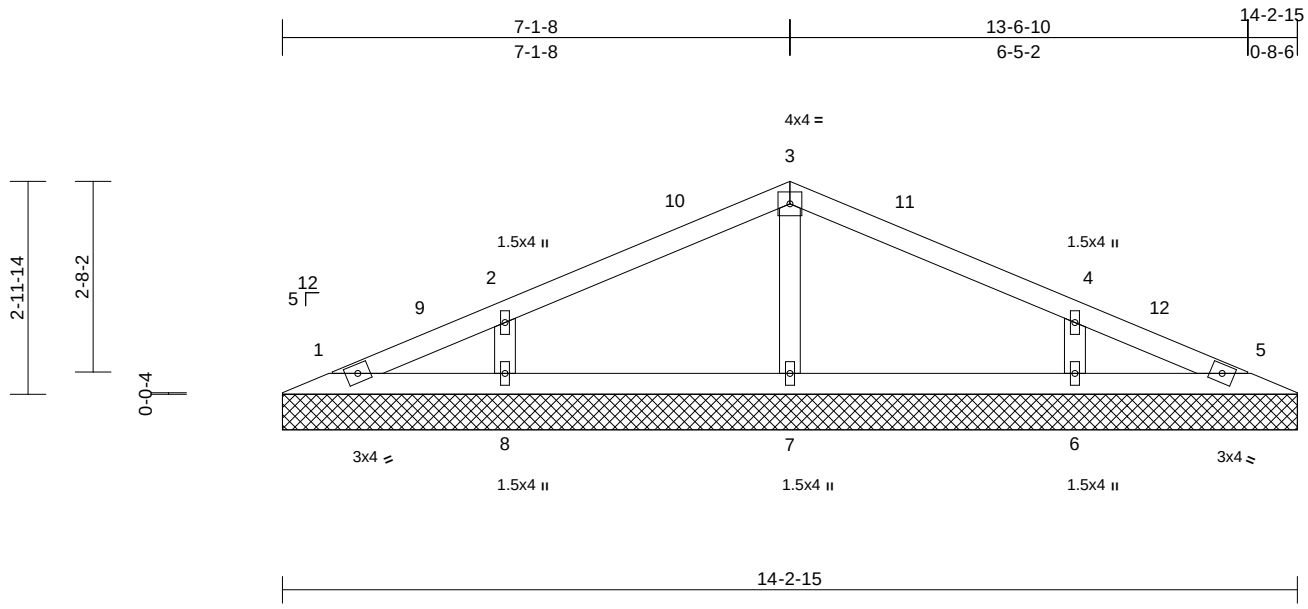

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 46 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SPF No.3

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=14-2-15, 5=14-2-15, 6=14-2-15, 7=14-2-15, 8=14-2-15
Max Horiz 1=-51 (LC 13)
Max Uplift 1=-10 (LC 13), 5=-2 (LC 13), 6=-113 (LC 13), 7=-5 (LC 12), 8=-113 (LC 12)
Max Grav 1=73 (LC 1), 5=73 (LC 1), 6=350 (LC 26), 7=327 (LC 1), 8=350 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-61/41, 2-3=-83/97, 3-4=-83/90, 4-5=-45/32
BOT CHORD 1-8=-4/39, 7-8=-4/39, 6-7=-4/39, 5-6=-4/39
WEBS 3-7=-243/106, 2-8=-279/226, 4-6=-279/226

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) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 7-2-1, Exterior(2R) 7-2-1 to 12-2-1, Interior (1) 12-2-1 to 13-7-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 10 lb uplift at joint 1, 2 lb uplift at joint 5, 5 lb uplift at joint 7, 113 lb uplift at joint 8 and 113 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
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	V3	Valley	1	1	Job Reference (optional)	I68441557

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

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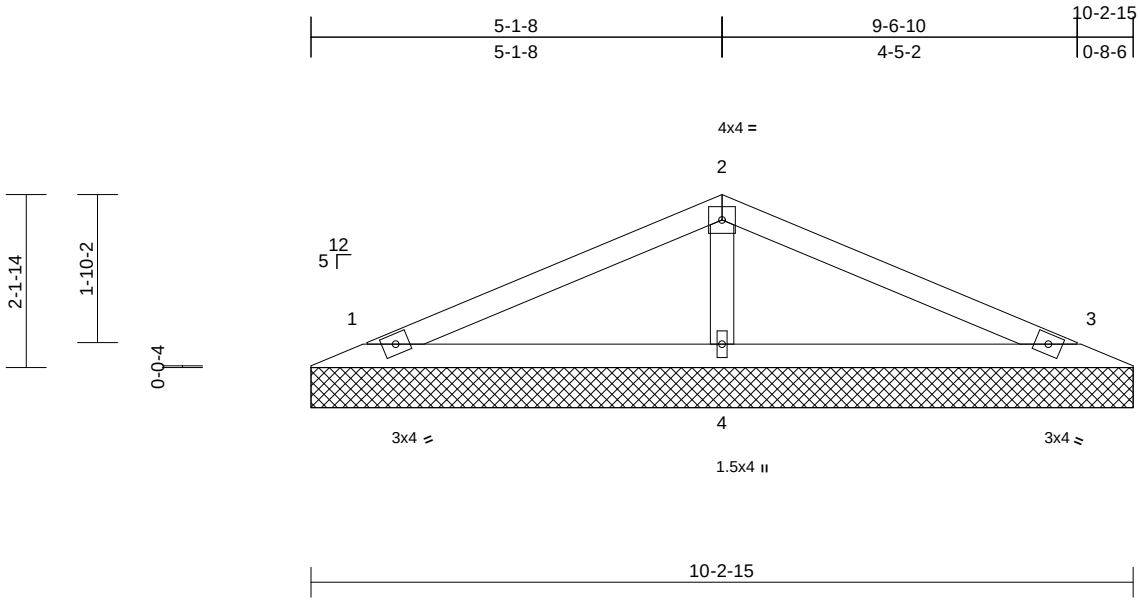

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 31 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SPF No.3

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=10-2-15, 3=10-2-15, 4=10-2-15
Max Horiz 1=-35 (LC 13)
Max Uplift 1=-43 (LC 12), 3=-49 (LC 13), 4=-39 (LC 12)
Max Grav 1=181 (LC 25), 3=181 (LC 26), 4=442 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/55, 2-3=-88/60
BOT CHORD 1-4=-1/35, 3-4=-1/35
WEBS 2-4=-308/223

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 43 lb uplift at joint 1, 49 lb uplift at joint 3 and 39 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

September 26,2024

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

Job	Truss	Truss Type	Qty	Ply		
P240990	V4	Valley	1	1	Job Reference (optional)	I68441558

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Sep 24 11:49:12 2024 Page: 1
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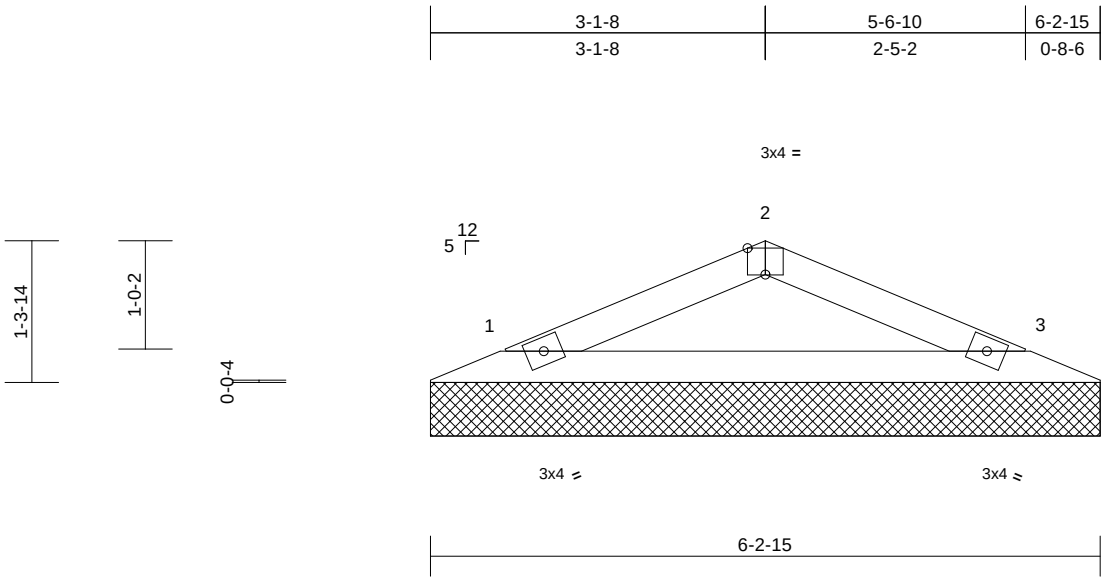

Scale = 1:21.5

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	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	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: 17 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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=6-2-15, 3=6-2-15
Max Horiz 1=-19 (LC 17)
Max Uplift 1=-34 (LC 12), 3=-34 (LC 13)
Max Grav 1=218 (LC 1), 3=218 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-244/215, 2-3=-244/224
BOT CHORD 1-3=-165/201

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 34 lb uplift at joint 1 and 34 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

September 26,2024

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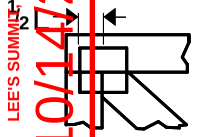
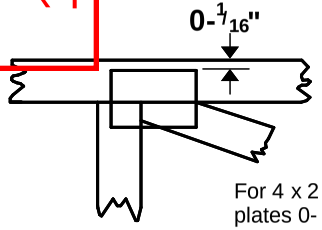
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

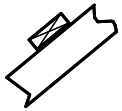
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

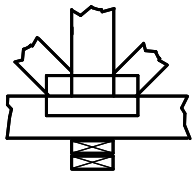
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

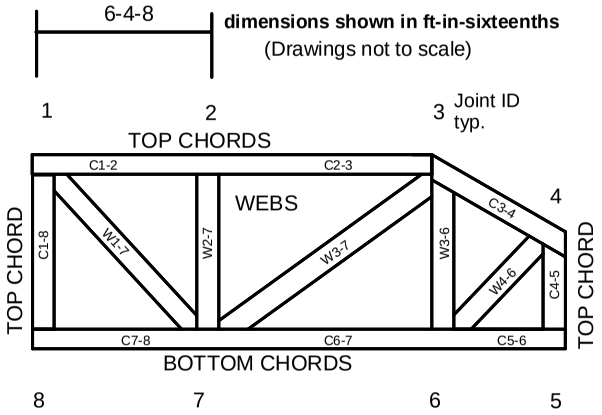


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

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.