



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

03/03/2021

MiTek USA, Inc.

16023 Swingley Ridge Rd
Chesterfield, MO 63017
314-434-1200

Re: H3-91
SUMMIT HOMES

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

Pages or sheets covered by this seal: I44738396 thru I44738425

My license renewal date for the state of Missouri is December 31, 2021.

Missouri COA: Engineering 001193



February 10, 2021

Sevier, Scott ,Engineer

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

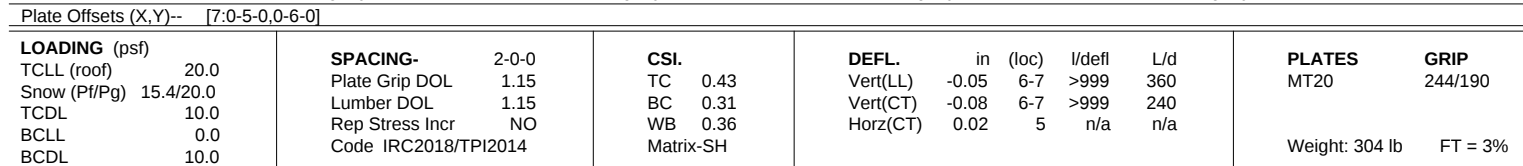
**RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW** 144738397

DEVELOPMENT SERVICES

LEE'S SUMMIT MISSOURI

20-8-0
5-2-0

03/03/2021



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.

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

TOP CHORD	1-2=-4959/573, 2-3=-3697/438, 3-4=-3697/438, 4-5=-5215/566
BOT CHORD	1-8=-494/4190, 7-8=-494/4190, 6-7=-428/4412, 5-6=-428/4412
WEBS	3-7=-319/2912, 4-7=-1383/215, 4-6=-121/1434, 2-7=-1125/223, 2-8=-178/1176

NOTES-

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDF=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 2 degree rotation about its center.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=400, 5=334.
- 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.
- Use USP JUS24 (With 4-10d nails into Girder & 2-10d nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-8-0 from the left end to 18-8-0 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard



February 10, 2021

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Components**.

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601.



Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	G1	Common Girder	1	2	

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File See C:\BOM\100155 Page 2

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LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-51, 3-5=-51, 1-5=-20

Concentrated Loads (lb)

Vert: 11=-299(B) 12=-294(B) 13=-290(B) 14=-290(B) 15=-521(B) 16=-417(B) 17=-417(B) 18=-417(B) 19=-417(B) 20=-547(B)

 **WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	G2	Roof Special Girder	1	2	

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LEE'S SUMMIT, MISSOURI
03/03/2021

Mid America Truss, Jefferson City, MO - 65101, 8.430 s Nov 30 2020 MiTek Industries, Inc. File No. 2010118807 Page 1
 ID: Z_Eg7_y5DGhi_ENvQbP05Vz4M0m-mqlskBWk0rwKKly2ZIJkoA?NjSBvAQMt1INZfVzmqm8
 10-0-0 3-4-0 13-4-0 3-4-0
 6x6 = Scale = 1:27.9

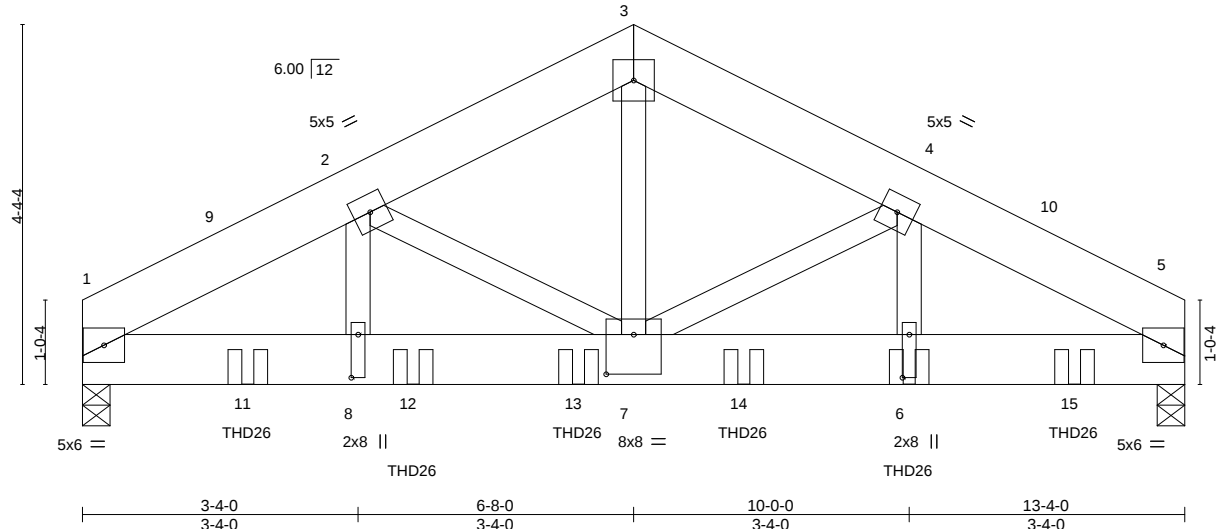


Plate Offsets (X,Y)-- [6:0-6-4,0-1-0], [7:0-4-0,0-5-12], [8:0-6-4,0-1-0]									
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	-0.03	6-7	>999
Snow (Pl/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.06	6-7	>999
TCDL	10.0	Rep Stress Incr	NO	WB	0.56	Horz(CT)	0.02	5	n/a
BCLL	0.0	Code IRC2018/TPI2014		Matrix-P					
BCDL	10.0								
								PLATES	GRIP
								MT20	244/190
								Weight: 216 lb	FT = 3%

LUMBER-		BRACING-	
TOP CHORD	2x8 SP 2400F 2.0E	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	2x8 SP 2400F 2.0E	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.2		

REACTIONS. (size) 1=0-4-0, 5=0-4-0
 Max Horz 1=-42(LC 7)
 Max Uplift 1=-42(LC 11), 5=-46(LC 12)
 Max Grav 1=4984(LC 2), 5=5466(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-7582/66, 2-3=-5745/75, 3-4=-5743/75, 4-5=-7685/69
 BOT CHORD 1-8=-60/6242, 7-8=-60/6242, 6-7=-24/6327, 5-6=-24/6327
 WEBS 3-7=-29/4595, 4-7=-1378/65, 4-6=0/2428, 2-7=-1279/62, 2-8=0/2313

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
 Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-6-0 oc.
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 4-6 2x4 - 1 row at 0-5-0 oc.
 - 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.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - Use USP THD26 (With 18-16d nails into Girder & 12-10d x 1-1/2 nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-0 from the left end to 12-0-0 to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-3=-51, 3-5=-51, 1-5=-20



Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	G2	Roof Special Girder	1	2	

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File: C:\Users\m11n\Documents\144738398

ID:Z_Eg7_y5DGhi_ENvQbP05Vz4M0m-mqlskBWK0rwKKly2ZIJkoA?NjSBvAQMt1INZfWzmqm8

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144738398

LOAD CASE(S) Standard
Concentrated Loads (lb)
Vert: 6=-1386(B) 11=-1386(B) 12=-1386(B) 13=-1386(B) 14=-1386(B) 15=-1386(B)



Job

H3-91

Truss

H1

Truss Type

Hip Girder

Qty

1

Ply

2

SUMMIT HOMES

Job Reference (optional)

Mid America Truss,

Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File See 8.430 s Nov 30 2020 MiTek Industries, Inc. File See

0-10-8

4-11-4

8-3-12

13-3-0

14-1-8

0-10-8

0-10-8

4-11-4

3-4-8

4-11-4

0-10-8

5x8 =

4x5 =

4x4 =

4x4 =

4x6 ||

2x4 ||

5x5 =

4x6 ||

4-11-4

8-3-12

13-3-0

4-11-4

4-11-4

3-4-8

4-11-4

2-11-15

0-11-4

5.00 12

4x4 =

11

2

4

5

6

12

7

8

2-11-15

0-11-4

10

13

9

2x4 ||

JUS24

5x5 =

HJC26

HJC26

4x6 ||

4-11-4

8-3-12

13-3-0

4-11-4

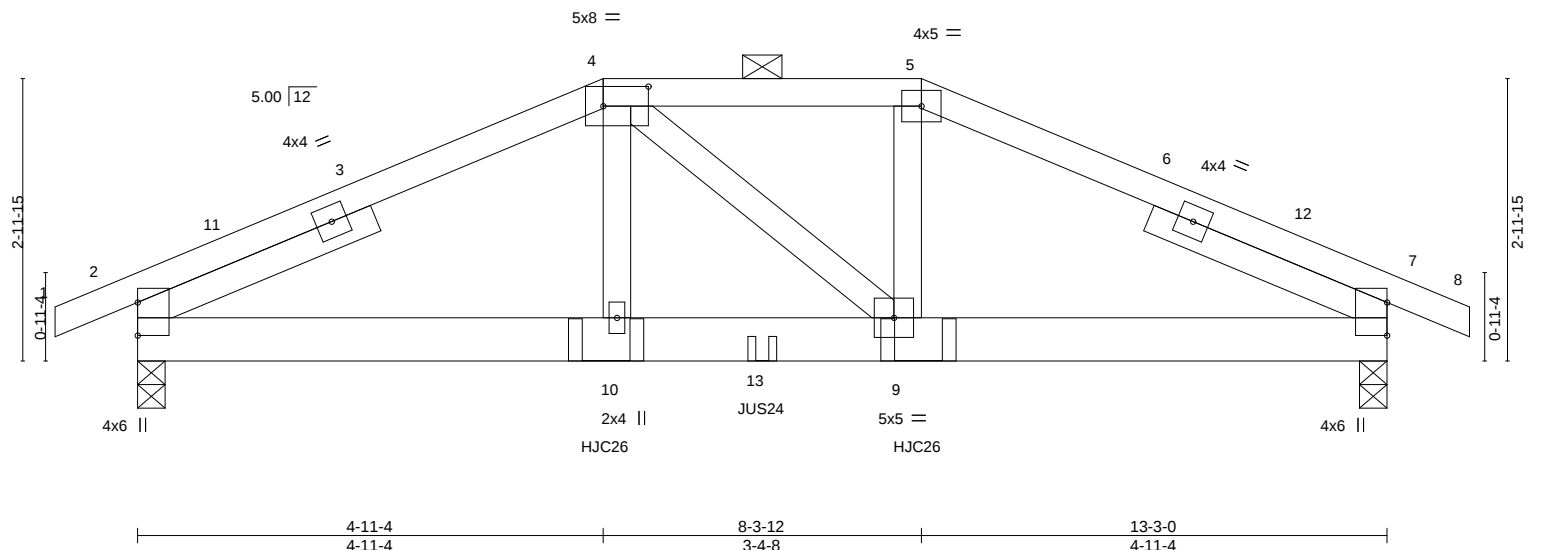
4-11-4

3-4-8

4-11-4

Plate Offsets (X,Y)--

[4:0-5-12,0-2-8]



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.03	9-10	>999	360	MT20	244/190
Snow (Pl/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.06	9-10	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0	Code IRC2018/TPI2014		Matrix-P								
BCDL	10.0										Weight: 150 lb	FT = 3%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except
BOT CHORD	2x6 SP No.1	BOT CHORD	2-0-0 oc purlins (6-0-0 max.): 4-5.
WEBS	2x4 SP No.2		Rigid ceiling directly applied or 10-0-0 oc bracing.
SLIDER	Left 2x4 SP No.2 -t 2-8-14, Right 2x4 SP No.2 -t 2-8-14		

REACTIONS. (size) 2=0-3-8, 7=0-3-8
Max Horz 2=25(LC 13)
Max Uplift 2=-97(LC 7), 7=-97(LC 8)
Max Grav 2=1244(LC 34), 7=1244(LC 34)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-2013/185, 4-5=-1738/181, 5-7=-2013/185
BOT CHORD 2-10=-132/1701, 9-10=-133/1738, 7-9=-129/1702
WEBS 4-10=-36/658, 5-9=-43/684

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - 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.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0 Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - Provide adequate drainage to prevent water ponding.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 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.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
 - Use USP HJC26 (With 16-16d nails into Girder & 10d nails into Truss) or equivalent spaced at 3-3-12 oc max. starting at 4-11-10 from the left end to 8-3-6 to connect truss(es) to back face of bottom chord.
 - Use USP JUS24 (With 4-10d nails into Girder & 2-10d nails into Truss) or equivalent at 6-7-8 from the left end to connect truss(es) to back face of bottom chord.



February 10, 2021

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	H1	Hip Girder	1	2	

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File See SUMMIT MISSOURI Page 1

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144738399

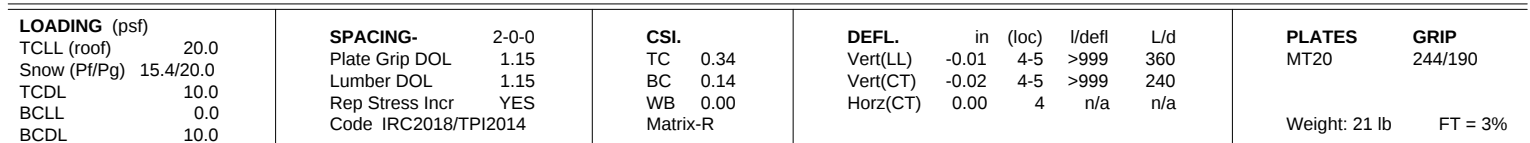
NOTES-
15) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-51, 4-5=-61, 5-8=-51, 2-7=-20
Concentrated Loads (lb)
Vert: 10=-472(B) 9=-472(B) 13=-200(B)



8.430 s Nov 30 2020 MiTek Industries, Inc. File Sec 9 15 07 03 2021 Page 1

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~~Scale = 1:17.8~~

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

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDD=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCDL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) Plates checked for a plus or minus 2 degree rotation about its center.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 4.
- 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.



February 10, 2021



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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	J2	Jack-Open	4	1	

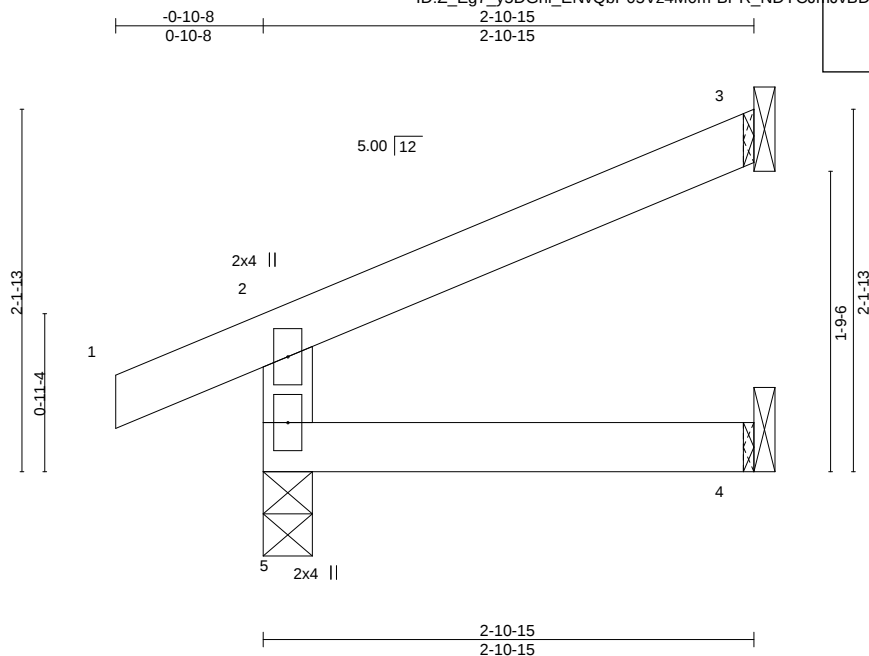
Mid America Truss, Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File No. 144738401

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LEE'S SUMMIT, MISSOURI
03/03/2021**

Scale = 1:13.7



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.11	Vert(LL) 0.00	4-5	>999	360	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.05	Vert(CT) -0.00	4-5	>999	240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT) -0.00	3	n/a	n/a		
BCLL 0.0	Rep Stress Incr YES	Matrix-R						
BCDL 10.0	Code IRC2018/TPI2014							
							Weight: 11 lb	FT = 3%

LUMBER-

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

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 5=0-3-8, 3=Mechanical, 4=Mechanical
Max Horz 5=43(LC 8)
Max Uplift 5=-10(LC 7), 3=-28(LC 11)
Max Grav 5=216(LC 16), 3=84(LC 16), 4=29(LC 16)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) Plates checked for a plus or minus 2 degree rotation about its center.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



February 10, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

8.430 s Nov 30 2020 MiTek Industries, Inc. Tue Sep 9 18:07:05 2021 Page 1

03/03/2021

Structural drawing of a roof truss system. The drawing shows a series of triangular truss units supported by a horizontal base. Key dimensions and member labels include:

- Overall height: 11'-4"
- Base dimensions: 0'-11"-4", 2'-8"-13", 8'-0"-0", 25'-0"-0", 34'-0"-0", 40'-0"-0", 6'-0"-0".
- Member labels: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.
- Member specifications: 4x5, 3x8, 6x6, 6x10, 8x10, 10x12.
- Angles: 5.00°.

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 1-7-12 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2 *Except* 15-17: 2x4 SP No.1	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.2 *Except* 2-17: 2x4 SP No.1	WEBS	1 Row at midpt 7-14, 9-14

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

TOP CHORD 2-18=-1670/121, 2-3=-4992/277, 3-4=-4883/315, 4-6=-3722/165, 6-7=-2673/128,
7-8=-1696/104, 8-9=-1697/116, 9-10=-1429/50

BOT CHORD 17-18=-163/288, 16-17=-243/3721, 15-16=-130/2813, 14-15=-41/2129, 13-14=0/1460,
12-13=-27/727

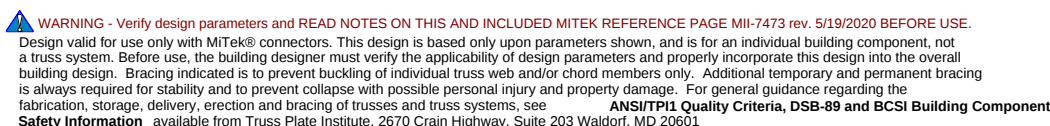
WEBS 2-17=-213/4276, 4-17=-141/942, 4-16=-560/141, 6-16=-36/816, 6-15=-702/143,
7-15=-13/789, 7-14=-992/148, 8-14=-12/905, 9-13=-586/59, 10-13=0/884,
10-12=-1693/38

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDF=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Plates checked for a plus or minus 2 degree rotation about its center.
- 7) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 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.



February 10, 2021



Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	S1A	Roof Special	2	1	

RELEASE FOR

CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

144738403

8.430 s Nov 30 2020 MiTek Industries, Inc. File See 0082RFGTtAua4VPEqtAzmqm2

ID:Z_Eg7_y5DGhi_ENVQbP05Vz4M0m-b_67?Ea4bhhU2gPBw0Q82RFGTtAua4VPEqtAzmqm2

Job Reference (optional)

Scale = 1:83.2

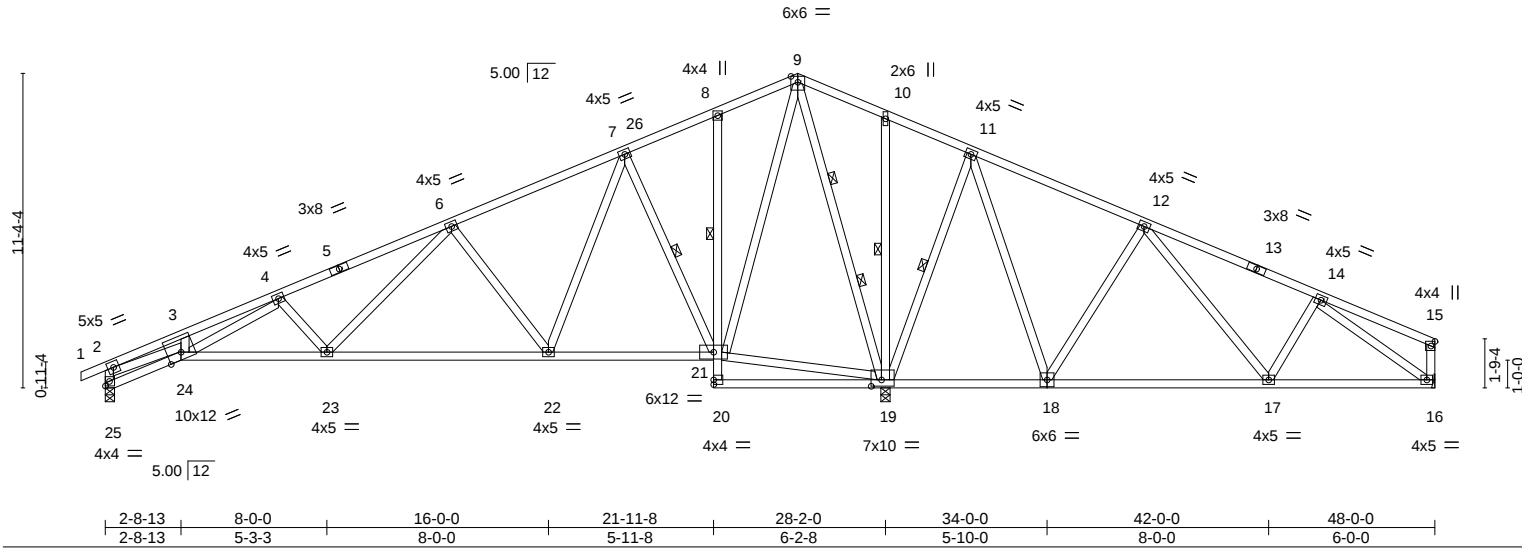


Plate Offsets (X,Y)-- [19:0-4-8,0-2-12]											
LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	
TCLL (roof)	20.0	2-0-0		TC	0.61	in (loc)	l/defl	L/d		MT20	GRIP
Snow (Pf/Pg)	15.4/20.0	Plate Grip DOL	1.15	BC	0.51	Vert(LL)	-0.10 23-24	>999	360		244/190
TCDL	10.0	Lumber DOL	1.15	WB	0.82	Vert(CT)	-0.24 22-23	>999	240		
BCLL	0.0	Rep Stress Incr	YES	Matrix-SH		Horz(CT)	0.09 19	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014								Weight: 336 lb	FT = 3%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 3-9-4 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
WEBS	2x4 SP No.2	WEBS	1 Row at midpt 8-21 1 Row at midpt 7-21, 10-19, 11-19 2 Rows at 1/3 pts 9-19

REACTIONS. (size) 25=0-4-0, 19=0-4-0, 16=Mechanical
Max Horz 25=104(LC 11)
Max Uplift 25=-29(LC 11), 19=-40(LC 11), 16=-134(LC 29)
Max Grav 25=802(LC 29), 19=2903(LC 2), 16=440(LC 30)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-25=-805/88, 2-3=-2147/167, 3-4=-2099/208, 4-6=-1290/86, 6-7=-359/62, 7-8=0/480, 8-9=0/490, 9-10=0/1296, 10-11=0/1291, 11-12=-49/860, 12-14=-403/404
BOT CHORD 23-24=-141/1411, 22-23=-43/654, 18-19=-911/141, 17-18=-602/135, 16-17=-252/397
WEBS 2-24=-117/1797, 4-24=-116/622, 4-23=-452/132, 6-23=-22/694, 6-22=-671/144, 7-22=-25/744, 7-21=-834/120, 19-21=-687/114, 9-21=-87/969, 9-19=-1794/71, 10-19=-264/52, 11-19=-807/114, 11-18=-18/711, 12-18=-628/119, 12-17=0/505, 14-17=-282/83, 14-16=-469/336

- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - 6) Plates checked for a plus or minus 2 degree rotation about its center.
 - 7) Refer to girder(s) for truss to truss connections.
 - 8) Bearing at joint(s) 25 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 19 except (jt=lb) 16=134.
 - 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.



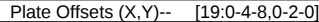
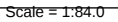
February 10,2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



8.430 s Nov 30 2020 MiTek Industries, Inc. File: E:\110703\1123 Page: 1
ID:Z_Eg7_y5DGhi_EnvQbP05Vz4M0m-3AgVCabjM?bLgq_UOjxNbeoRHHXCJWFvneaQPczmqm1



Weight: 337 lb FT = 3%

BRACING- TOP CHORD	Structural wood sheathing directly applied or 3-10-7 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 1 Row at midpt 8-21
WEBS	1 Row at midpt 7-21, 10-19, 11-19 2 Rows at 1/3 pts 9-19

(size) 25=0-4-0, 19=0-4-0, 16=Mechanical
 Max Horz 25=113(LC 11)
 Max Uplift 25=-41(LC 11), 19=-37(LC 11), 16=-125(LC 29)
 Max Grav 25=871(LC 29), 19=2886(LC 2), 16=443(LC 30)

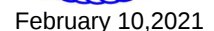
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD
2-25=842/95, 2-3=2059/153, 3-4=2003/192, 4-6=1282/85, 6-7=368/64, 7-8=0/467,
8-9=0/477, 9-10=0/1279, 10-11=0/1273, 11-12=46/843, 12-14=407/391

BOT CHORD
23-24=138/193, 22-23=44/658, 18-19=895/138, 17-18=588/132, 16-17=242/400

WEBS
2-24=114/1796, 4-24=102/537, 4-23=438/130, 6-23=19/678, 6-22=664/143,
7-22=24/738, 7-21=830/120, 19-21=675/112, 9-21=87/967, 9-19=1780/68,
10-19=267/52, 11-19=806/114, 11-18=18/709, 12-18=626/119, 12-17=0/501,
14-17=279/83, 14-16=474/323

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) TLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Plates checked for a plus or minus 2 degree rotation about its center.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Bearing at joint(s) 25 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 19 except (jt=lb) 16=125.
- 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.



Job

H3-91

Truss

S1C

Truss Type

Roof Special

Qty

1

Ply

1

SUMMIT HOMES

Job Reference (optional)

RELEASE FOR CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

144738405

8.430 s Nov 30 2020 MiTek Industries, Inc. File See 10055 Page 1

ID:Z_Eg7_y5DGhi_EnvQbP05Vz4M0m-?ZoFdGdzuc33v88mb8zrg3tjM48DnQhC6B3XUVzmqm?

Mid America Truss,

Jefferson City, MO - 65101,

1-10-8

2-8-13

6-3-0

12-6-0

18-9-0

25-0-0

31-3-0

37-6-0

43-9-0

1-10-8

2-8-13

3-6-3

6-3-0

6-3-0

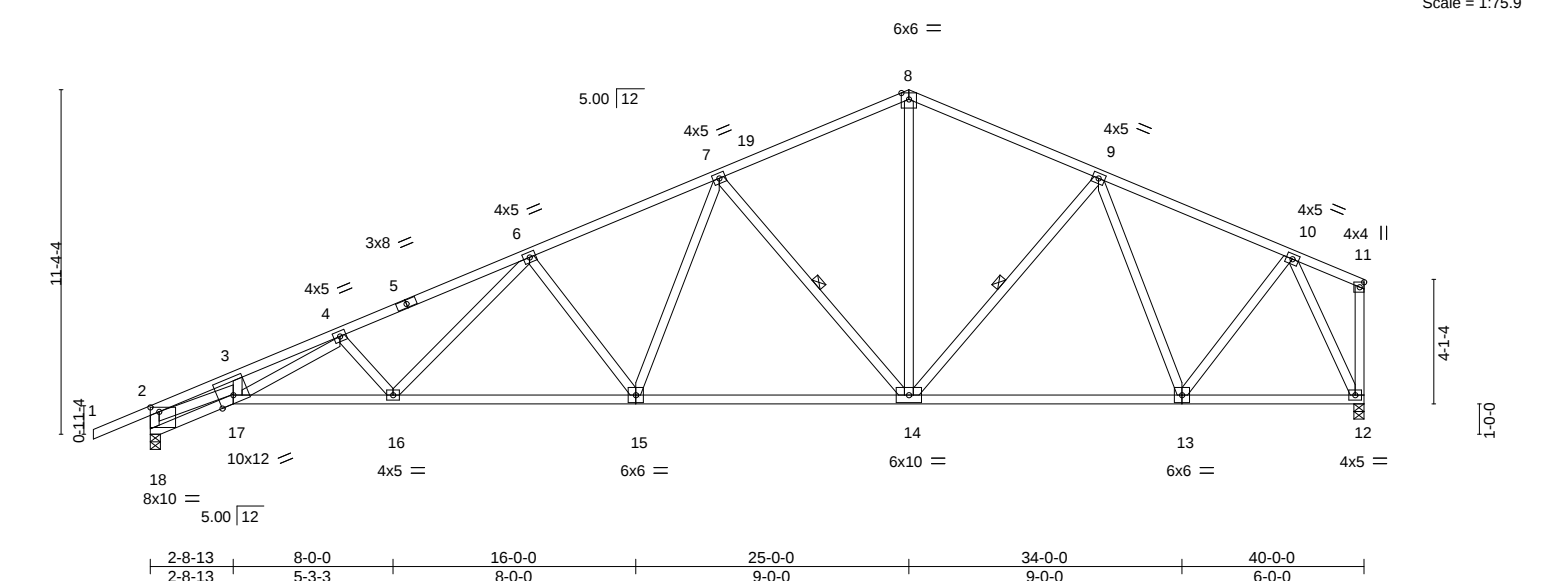
6-3-0

6-3-0

6-3-0

2-6-0

Scale = 1:75.9



LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.24	15-16	>999	360	MT20	244/190	
Snow (Pl/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.54	15-16	>880	240			
TCDL	10.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.26	12	n/a	n/a			
BCLL	0.0	Code IRC2018/TPI2014		Matrix-SH									
BCDL	10.0										Weight: 247 lb	FT = 3%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 1-8-12 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2 *Except* 15-17: 2x4 SP No.1	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 17-18.
WEBS	2x4 SP No.2 *Except* 2-17: 2x4 SP No.1	WEBS	1 Row at midpt 7-14, 9-14

REACTIONS.	
(size)	18=0-4-0, 12=0-4-0
Max Horz	18=165(LC 8)
Max Uplift	18=-63(LC 11), 12=-1(LC 12)
Max Grav	18=1713(LC 2), 12=1585(LC 2)

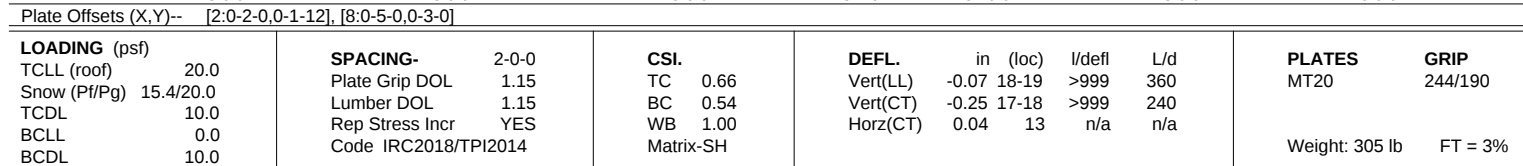
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	2-18=-1700/128, 2-3=-4882/259, 3-4=-4766/295, 4-6=-3695/161, 6-7=-2664/126, 7-8=-1692/103, 8-9=-1693/115, 9-10=-1427/50
BOT CHORD	16-17=-237/3686, 15-16=-127/2800, 14-15=-40/2122, 13-14=0/1457, 12-13=-27/726
WEBS	2-17=-207/4255, 4-17=-127/855, 4-16=-544/138, 6-16=-34/799, 6-15=-695/142, 7-15=-12/783, 7-14=-987/147, 8-14=-11/902, 9-13=-584/59, 10-13=0/883, 10-12=-1690/38

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 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.



February 10, 2021

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
144738406
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
Industries, Incorporated
11111 Highway 71, Missouri
BfWbVxIiz9sU4CHQxauXQVqOLKro50xmzgm_
43-9-0 48-0-0
6-3-0 4-3-0
03/10/2018
Scale: 1"=2'-0"



REACTIONS. (size) 13=Mechanical, 20=0-4-0, 16=0-4-0
 Max Horz 20=104(LC 11)
 Max Uplift 13=-39(LC 12), 20=-45(LC 11), 16=-2(LC 11)
 Max Grav 13=650(LC 30), 20=1036(LC 29), 16=2285(LC 2)

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

TOP CHORD	2-3=-431/77, 3-5=-1488/103, 5-6=-876/102, 8-9=-269/174, 9-11=-740/99, 2-20=-383/81
BOT CHORD	19-20=-134/1418, 18-19=-64/1037, 17-18=0/537, 16-17=-1002/106, 14-15=-13/439, 13-14=-52/663
WEBS	5-19=-13/444, 5-18=-574/129, 6-18=-7/709, 6-17=-937/142, 7-17=-387/0, 8-17=-28/1569, 8-15=-11/609, 9-15=-516/119, 9-14=0/333, 11-13=-805/63, 3-20=-1229/12, 8-16=-2355/31

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Plates checked for a plus or minus 2 degree rotation about its center.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 20, 16.
- 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.



February 10, 2021

8.430 s Nov 30 2020 MiTek Industries, Inc. Tue Dec 9 15:07:12 2021 Page 1

03/03/2021

The diagram illustrates a complex roof truss system. The main horizontal dimension at the top is 6x8 =. The vertical height on the left is 0-11-4. The roof slope is indicated as 11-4-4. The truss consists of several triangular units connected by horizontal and diagonal members. Key dimensions include:

- Horizontal Dimensions (from left to right):** 4x5 =, 6x10 =, 4x4 =, 6x12 =, 4x4 =, 6x10 =, 2x6 //, 6x6 =, 4x5 =, 4x5 =.
- Vertical Dimensions (from bottom to top):** 0-11-4, 11-4-4, 1-9-4, 1-0-0.
- Roof Slope:** 11-4-4.
- Member Labels:** Various labels are placed along the members, such as 4x4 ||, 4x5 =, 3x8 =, 4x4 ||, 4x5 =, 10x10 =, 4x5 =, 3x8 =, 4x5 =, 4x4 ||.
- Joint Numbers:** Joints are numbered from 1 to 25, indicating specific points where members meet.

	8-0-0	14-0-8	21-11-8	25-0-0	28-2-0	34-0-0	42-0-0	48-0-0
Plate Offsets (X,Y)--	8-0-0	6-0-8	7-11-0	3-0-8	3-2-0	5-10-0	8-0-0	6-0-0

[illegible]

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

TOP CHORD	Structural wood sheathing directly applied or 4-7-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 5-4-12 oc bracing. Except:
	1 Row at midpt 8-21
WEBS	1 Row at midpt 7-21, 9-19, 10-18

(size) 25=0-4-0, 15=Mechanical, 18=0-4-0
 Max Horz 25=104(LC 11)
 Max Uplift 25=-45(LC 11), 15=-46(LC 12)
 Max Grav 25=1010(LC 29), 15=629(LC 30), 18=2350(LC 2)

TOP CHORD 2-3=-427/72, 3-5=-1421/103, 5-6=-1147/114, 6-7=-1168/153, 7-8=-286/96,
8-9=-273/137, 10-11=-225/252, 11-13=-707/111, 12-25=-379/79

BOT CHORD 24-25=-138/1367, 21-22=0/514, 18-19=-1085/112, 17-18=-320/93, 16-17=-81/402,
15-16=-62/637

WEBS 22-24=-35/1120, 5-22=-396/98, 7-22=-83/954, 7-21=-798/137, 9-21=-80/1030,
9-19=-1218/33, 10-19=-48/1587, 10-17=-12/611, 11-17=-524/117, 11-16=0/354,
3-25=-1175/22, 13-15=-773/75, 10-18=-2380/54

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Plates checked for a plus or minus 2 degree rotation about its center.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 15.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



February 10, 2021



WARNING: Verify design parameters and READ NOTES ON THIS AND INCLUDED WITH REFERENCE PAGE MIF-743 (Rev. 3/19/2020) BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601.



16023 Swingley Ridge Rd
Chesterfield, MO 63017

8.430 s Nov 30 2020 MiTek Industries, Inc. File Set: 15W07114202 Page: 1
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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

Safety Information available from Truss Plate Institute, 2602 Crain Highway, Suite 203 Waldorf, MD 20601

Job

H3-91

Truss

T1GE

Truss Type

GABLE

Qty

1

Ply

1

SUMMIT HOMES

Mid America Truss,

Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc.

Job Reference (optional)

0-10-8

6-3-0

12-6-0

18-9-0

25-0-0

31-3-0

37-6-0

43-9-0

48-0-0

0-10-8

6-3-0

6-3-0

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6-3-0

6-3-0

6-3-0

6-3-0

4-3-0

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144738409

LEE'S SUMMIT MISSOURI

03/03/2021

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES

Scale = 1:104.4

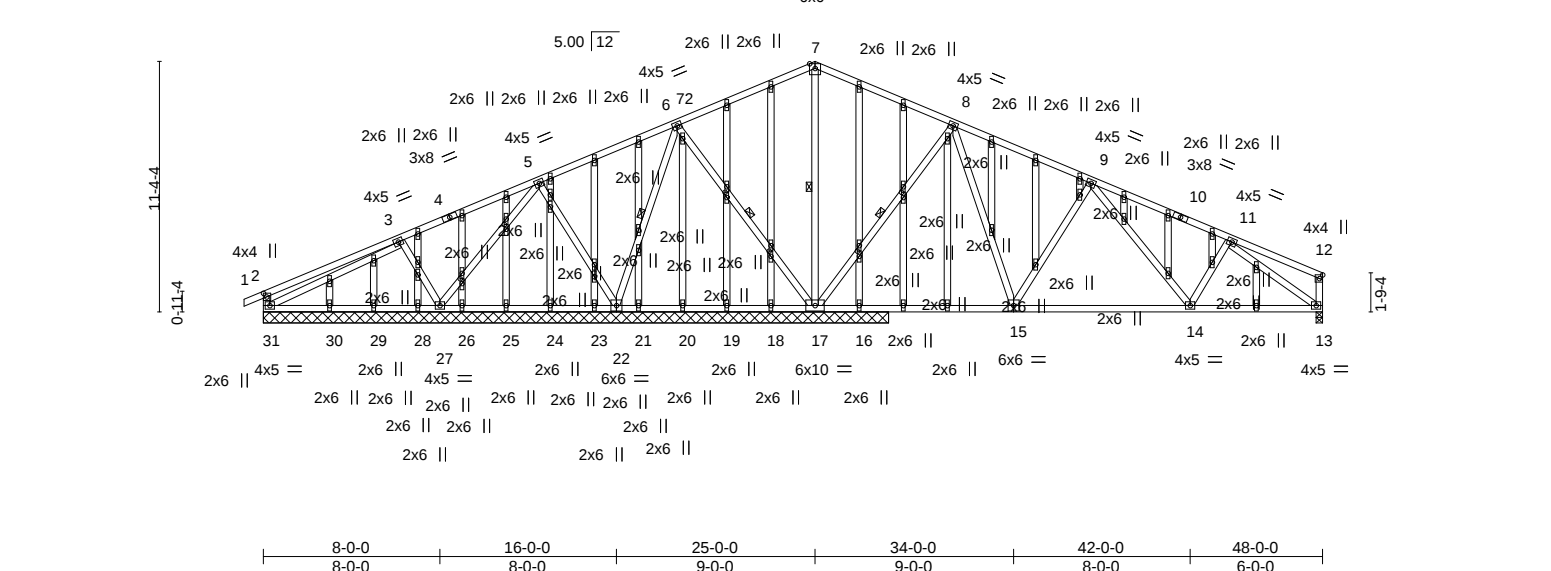


Plate Offsets (X,Y)--		[2:0-2-0,0-1-12], [32:0-2-14,0-1-0], [34:0-2-14,0-1-0], [43:0-2-9,0-1-0], [45:0-2-9,0-1-0], [52:0-2-14,0-1-0], [55:0-2-14,0-1-0]	
LOADING (psf)		SPACING-	
TCLL (roof)	20.0	2-0-0	
Snow (Pl/Pg)	15.4/20.0	Plate Grip DOL	1.15
TCDL	10.0	Lumber DOL	1.15
BCLL	0.0	Rep Stress Incr	YES
BCDL	10.0	Code IRC2018/TPI2014	
		CSI.	
		TC	0.67
		BC	0.37
		WB	0.43
		Matrix-SH	
		DEFL.	
		in (loc)	l/defl
		Vert(LL)	-0.03 14-15 >999 360
		Vert(CT)	-0.12 14-15 >999 240
		Horz(CT)	0.01 13 n/a n/a
		PLATES	
		MT20	244/190
		GRIP	
		Weight: 451 lb	FT = 3%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 5-11-1 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	2x4 SP No.2	WEBS	1 Row at midpt 6-22, 6-17, 7-17, 8-17
OTHERS	2x4 SP No.2		

REACTIONS. All bearings 28-4-0 except (jt=length) 13=0-3-8.
(lb) - Max Horz 31=104(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 31, 13 except 22=-157(LC 11), 27=-133(LC 11), 17=-174(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 18, 19, 20, 21, 23, 24, 25, 26, 28, 29, 30, 16 except 22=410(LC 29), 27=440(LC 29), 17=1593(LC 2), 31=306(LC 29), 13=723(LC 30)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 5-6=0/274, 6-7=0/469, 7-8=0/469, 8-9=-422/98, 9-11=-855/83, 2-31=-301/91
BOT CHORD 14-15=0/571, 13-14=-39/753
WEBS 3-27=-362/137, 5-22=-306/110, 6-17=-342/81, 7-17=-649/4, 8-17=-851/145, 8-15=-12/599, 9-15=-483/123, 9-14=0/252, 11-13=-917/47

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 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.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable studs spaced at 2-0-0 oc.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 31, 13 except (jt=lb) 22=157, 27=133, 17=174.
 - 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.



February 10, 2021

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	T2	ROOF SPECIAL	6	1	

RELEASE FOR

CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

8.430 s Nov 30 2020 MiTek Industries, Inc.

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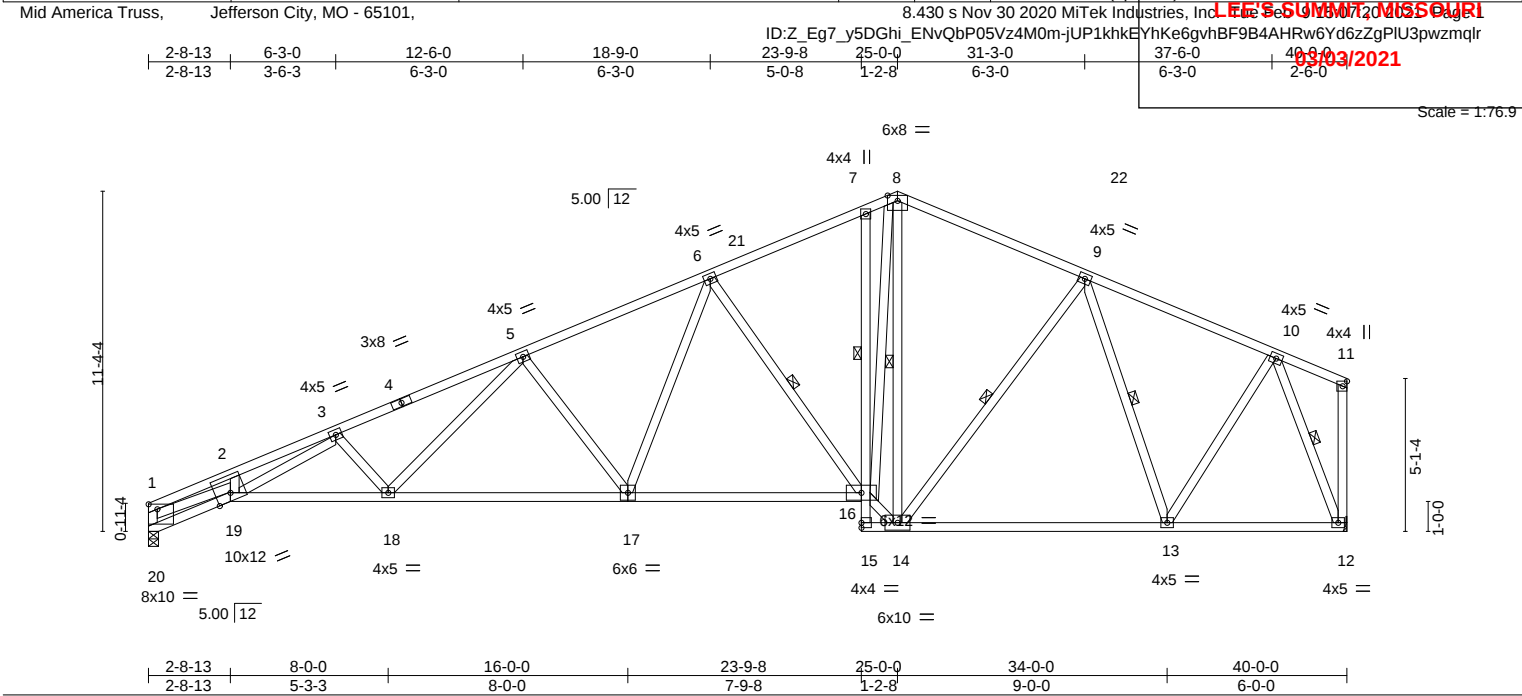


Plate Offsets (X,Y)-- [20:Edge,0-2-0]									
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL (roof)	20.0	2-0-0		TC 0.88		in (loc) l/defl L/d		MT20 244/190	
Snow (Pl/Pg)	15.4/20.0	Plate Grip DOL 1.15		BC 0.79		Vert(LL) -0.26 17 >999 360			
TCDL	10.0	Lumber DOL 1.15		WB 0.72		Vert(CT) -0.59 16-17 >806 240			
BCLL	0.0	Rep Stress Incr YES		Matrix-SH		Horz(CT) 0.33 12 n/a n/a			
BCDL	10.0	Code IRC2018/TPI2014						Weight: 284 lb FT = 3%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 1-8-14 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2 *Except* 17-19: 2x4 SP No.1	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 15-16. 1 Row at midpt 7-16
WEBS	2x4 SP No.2 *Except* 1-19: 2x4 SP No.1	WEBS	1 Row at midpt 6-16, 8-14, 9-14, 9-13, 10-12

REACTIONS.	
(size)	20=0-4-0, 12=Mechanical
Max Horz	20=164(LC 8)
Max Uplift	20=-42(LC 11), 12=-1(LC 12)
Max Grav	20=1588(LC 2), 12=1588(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	1-20=-1590/100, 1-2=-5032/258, 2-3=-4943/299, 3-5=-3729/159, 5-6=-2678/126, 6-7=-1784/112, 7-8=-1660/143, 8-9=-1557/122, 9-10=-1241/61
BOT CHORD	18-19=-220/3730, 17-18=-112/2821, 16-17=-22/2126, 13-14=0/1289, 12-13=-29/604
WEBS	1-19=-206/4368, 3-19=-132/994, 3-18=-563/137, 5-18=-32/816, 5-17=-709/145, 6-17=-14/805, 6-16=-955/130, 14-16=0/1751, 8-16=-108/1921, 8-14=-1014/36, 9-14=-50/260, 9-13=-663/56, 10-13=0/915, 10-12=-1641/38

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Refer to girder(s) for truss to truss connections.
 - Bearing at joint(s) 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 20, 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.



February 10,2021

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	T2GE	COMMON SUPPORTED GAB	1	1	

RELEASE FOR

CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

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40-0-0

15-0-0

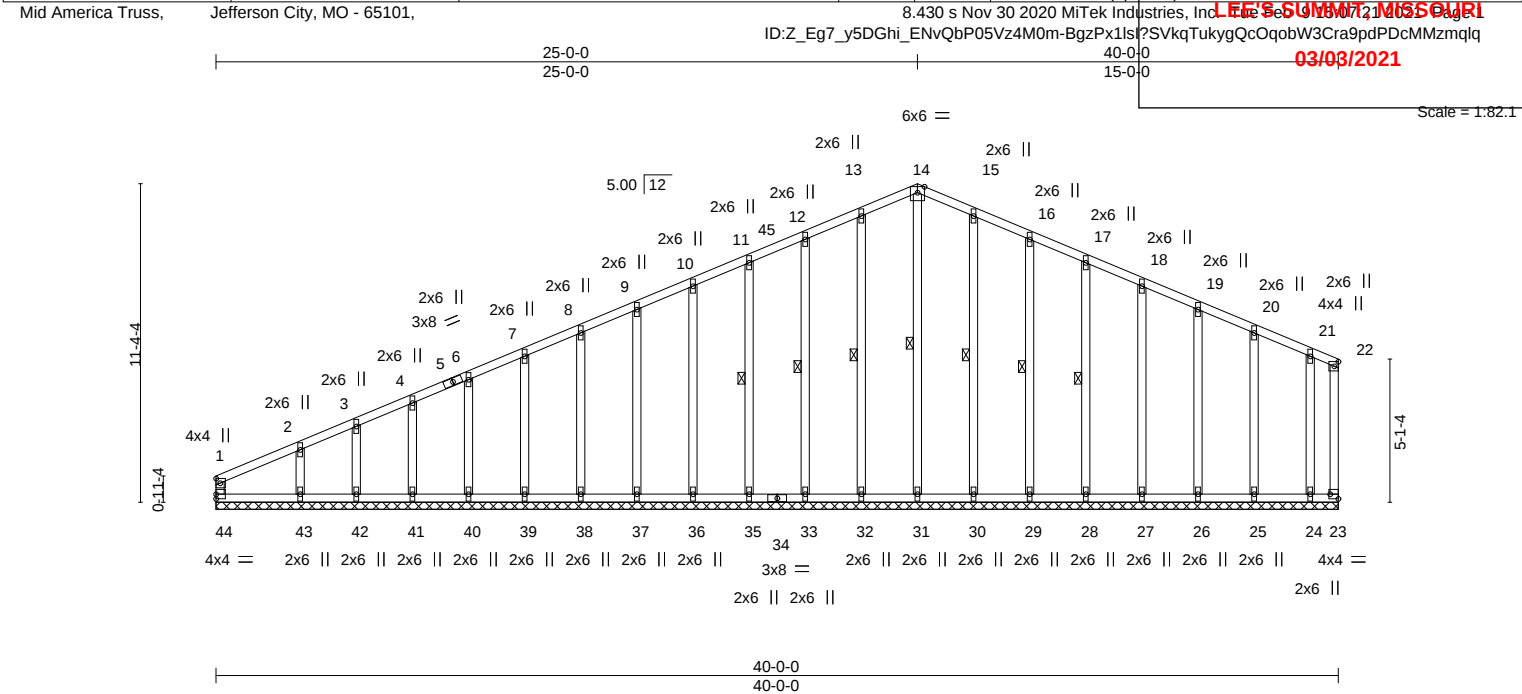


Plate Offsets (X,Y)-- [23:Edge,0-2-0]									
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a
Snow (Pl/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	-0.00	23	n/a
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R					
BCDL	10.0								
								Weight: 321 lb	
								FT = 3%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.2	WEBS	1 Row at midpt
OTHERS	2x4 SP No.2		14-31, 13-32, 12-33, 11-35, 15-30, 16-29, 17-28

REACTIONS. All bearings 40-0-0.

(lb) - Max Horz 44=163(LC 8)

Max Uplift All uplift 100 lb or less at joint(s) 23, 32, 33, 35, 36, 37, 38, 39, 40, 41, 43, 30, 29, 28, 27, 26, 25, 24

Max Grav All reactions 250 lb or less at joint(s) 44, 23, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 43, 30, 29, 28, 27, 26, 25, 24

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 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.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23, 32, 33, 35, 36, 37, 38, 39, 40, 41, 43, 30, 29, 28, 27, 26, 25, 24.
 - 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.



February 10,2021

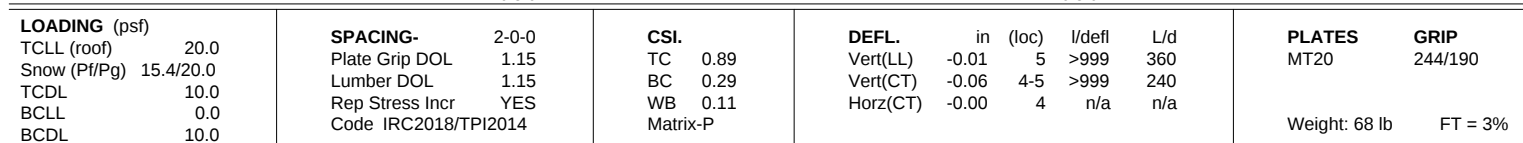
RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
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ustries, Inc. The S e o U N I T 7 2 3 4 1 2 Page 1
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03/03/2021

8.430 s Nov 30 2020 MiTek Industries, Inc. File Size: 9 MB 07/23/2021 Page 1

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03/03/2021

Scale = 1:27.3



LUMBER-

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2

BRACING-

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

REACTIONS.

(size) 6=0-4-0, 4=0-4-0
 Max Horz 6=61(LC 8)
 Max Uplift 6=-6(LC 11), 4=-6(LC 12)
 Max Grav 6=522(LC 2), 4=522(LC 2)

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

TOP CHORD 1-2=-568/10, 2-3=-568/0, 1-6=-472/35, 3-4=-472/35
WEBS 1-5=0/449, 3-5=0/449

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDD=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Plates checked for a plus or minus 2 degree rotation about its center.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 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.



February 10, 2021



Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personnel injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Code**

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job

H3-91

Truss

T3GE

Truss Type

Common Supported Gable

Qty

1

Ply

1

SUMMIT HOMES

Job Reference (optional)

Mid America Truss,

Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc.

File No: 20180724015501

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13-4-0

6-8-0

RELEASE FOR CONSTRUCTION

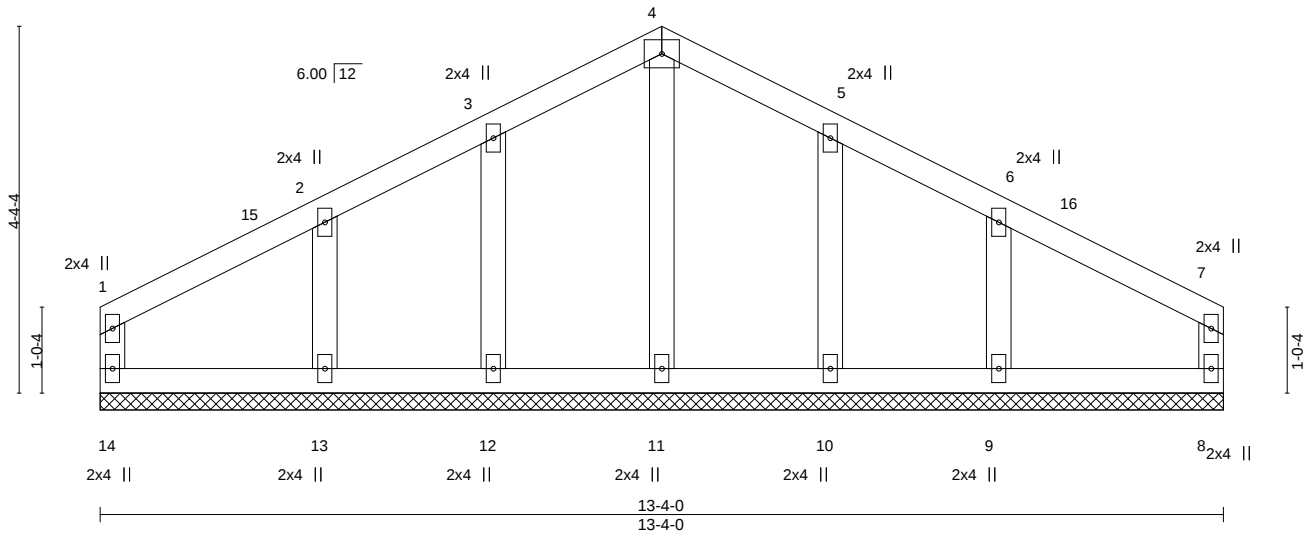
AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

Scale = 1:27.3



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	MT20	244/190		
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a				
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00				
BCLL	0.0	Code IRC2018/TPI2014		Matrix-R							
BCDL	10.0										

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.2		
OTHERS	2x4 SP No.2		

REACTIONS.	
All bearings	13-4-0.
(lb) - Max Horz	14=61(LC 8)
Max Uplift	All uplift 100 lb or less at joint(s) 14, 8, 12, 13, 10, 9
Max Grav	All reactions 250 lb or less at joint(s) 14, 8, 11, 12, 13, 10, 9

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 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.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 14, 8, 12, 13, 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.



February 10, 2021

Job

H3-91

Truss

T4

Truss Type

COMMON

Qty

2

Ply

1

SUMMIT HOMES

Job Reference (optional)

Mid America Truss,

Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File See 844738414

Lee's Summit, Missouri

03/03/2021

0-10-8

0-10-8

6-7-8

6-7-8

13-3-0

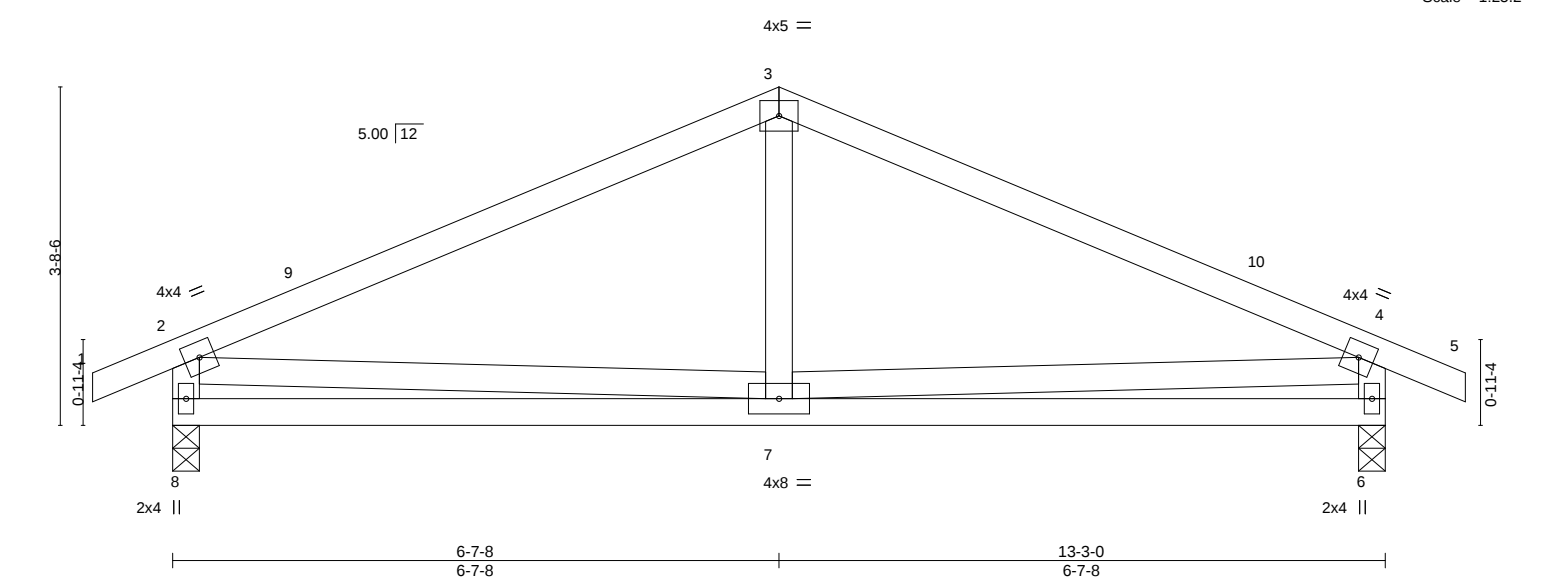
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14-1-8

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LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP
TCLL (roof)	20.0	2-0-0		TC	0.85	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Plate Grip DOL	1.15	BC	0.28	-0.01	7	>999	360		
TCDL	10.0	Lumber DOL	1.15	WB	0.13	-0.06	6-7	>999	240		
BCLL	0.0	Rep Stress Incr	YES	Matrix-P		-0.00	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014								Weight: 69 lb	FT = 3%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.2		

REACTIONS. (size) 8=0-3-8, 6=0-3-8
 Max Horz 8=22(LC 10)
 Max Uplift 8=-19(LC 11), 6=-19(LC 12)
 Max Grav 8=580(LC 2), 6=580(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-619/2, 3-4=-619/0, 2-8=-530/48, 4-6=-530/48
 WEBS 2-7=0/517, 4-7=0/517

- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 4) Unbalanced snow loads have been considered for this design.
 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 6) Plates checked for a plus or minus 2 degree rotation about its center.
 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 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.



February 10,2021

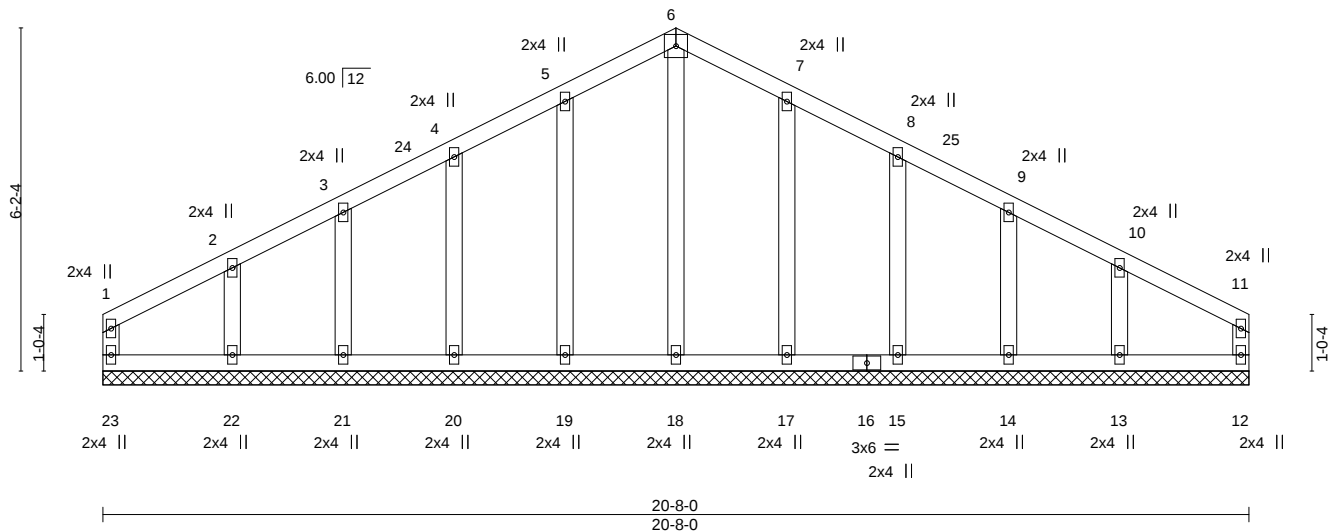
Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	T4GE	COMMON SUPPORTED GAB	1	1	

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File See Summit Missouri

**RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
03/03/2021**

Scale = 1:41.5



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.06	Vert(LL)	n/a	-	n/a	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.04	Vert(CT)	n/a	-	n/a		
TCDL 10.0	Lumber DOL 1.15	WB 0.07	Horz(CT)	0.00	12	n/a		
BCLL 0.0	Rep Stress Incr YES	Matrix-R						
BCDL 10.0	Code IRC2018/TPI2014						Weight: 113 lb	FT = 3%

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING-

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

REACTIONS.

All bearings 20-8-0.
(lb) - Max Horz 23=-82(LC 7)
Max Uplift All uplift 100 lb or less at joint(s) 23, 12, 19, 20, 21, 22, 17, 15, 14, 13
Max Grav All reactions 250 lb or less at joint(s) 23, 12, 18, 19, 20, 21, 22, 17, 15, 14, 13

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

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 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.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 2 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23, 12, 19, 20, 21, 22, 17, 15, 14, 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.



February 10, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job

H3-91

Truss

T5

Truss Type

KINGPOST

Qty

5

Ply

1

SUMMIT HOMES

Job Reference (optional)

Mid America Truss,

Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc.

Lee's Summit, Missouri

ID:Z_Eg7_y5DGhi_ENvQbP05Vz4M0m-0qKhC4qdurCeSlx15Dnqsf4oax51FIPI0LgxZ0zmqlk

03/03/2021

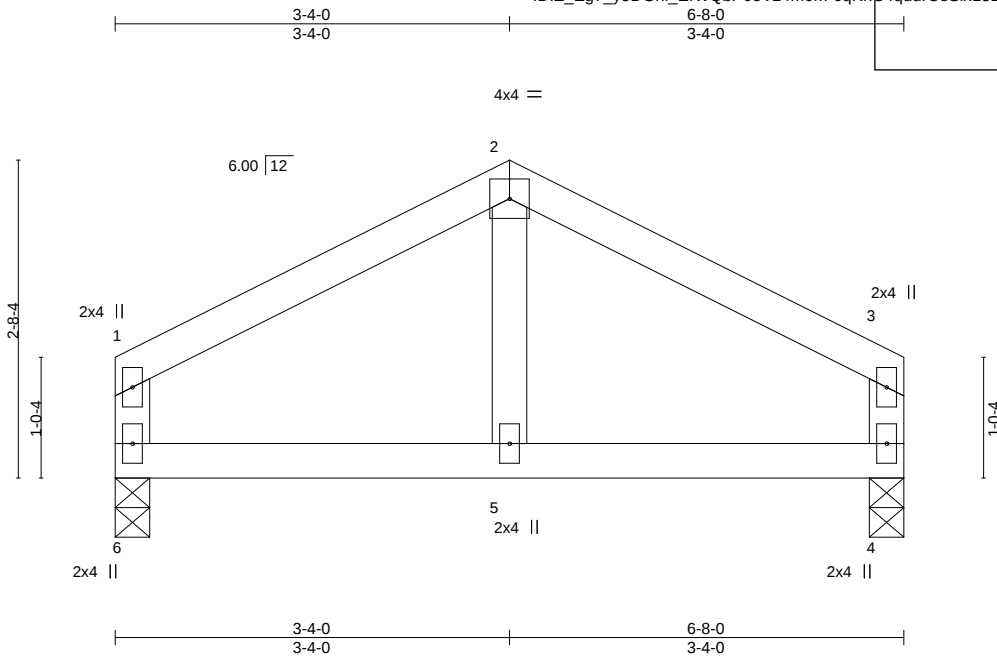
RELEASE FOR CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

03/03/2021

Scale = 1:19.5



LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.					PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.01	5	>999	L/defl	L/d	MT20	244/190			
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.02	5	>999							
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a						
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-R								Weight: 26 lb	FT = 3%			
BCDL	10.0															

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.2		

REACTIONS. (size) 6=0-3-8, 4=0-3-8
 Max Horz 6=42(LC 8)
 Max Uplift 6=3(LC 11), 4=3(LC 12)
 Max Grav 6=263(LC 15), 4=263(LC 16)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 4.
 - 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.



February 10, 2021

Job

H3-91

Truss

T5GE

Truss Type

GABLE

Qty

1

Ply

1

SUMMIT HOMES

Job Reference (optional)

Mid America Truss,

Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc.

File Loc: C:\Users\m38417\Documents\Truss\H3-91\H3-91.dwg

ID: Z_Eg7_y5DGhi_ENvQbP05Vz4M0m-U1u3PQrF8KV4vWEfwl3Psd_8LTU_IzrE?QU5SzmqIj

RELEASE FOR

CONSTRUCTION

AS NOTED ON PLANS REVIEW

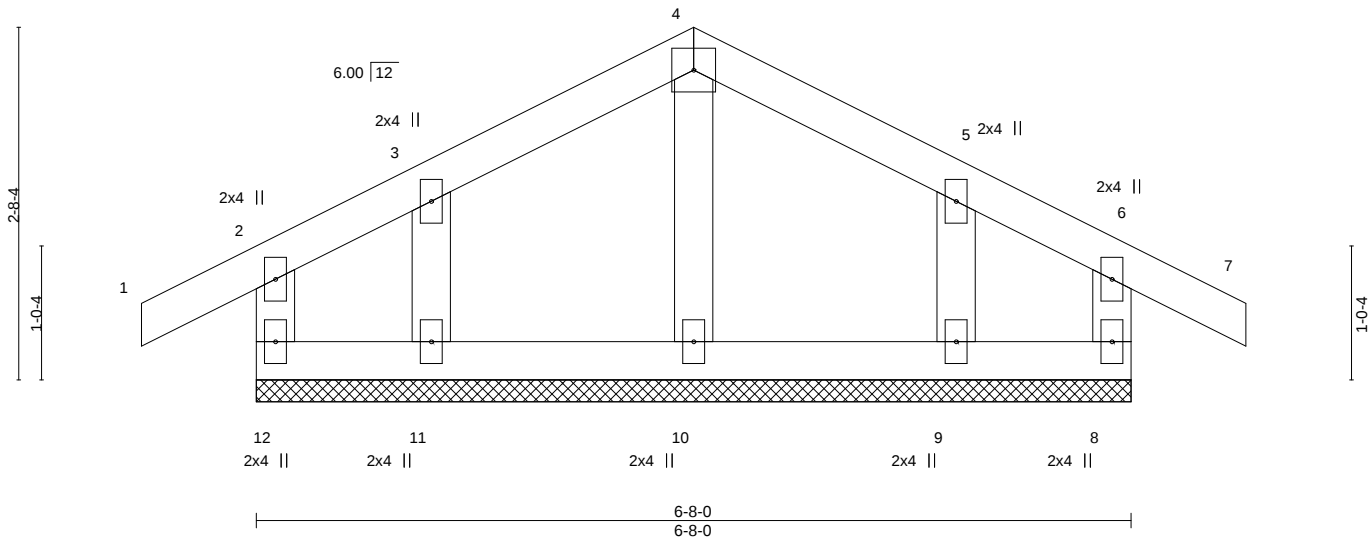
DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

144738417

Scale = 1:17.6



LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP
TCLL (roof)	20.0		2-0-0	TC	0.10	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Plate Grip DOL	1.15	BC	0.02	Vert(LL)	-0.00	7	n/r		
TCDL	10.0	Lumber DOL	1.15	WB	0.02	Vert(CT)	-0.00	7	n/r		
BCLL	0.0	Rep Stress Incr	YES	Matrix-R		Horz(CT)	0.00	8	n/a		
BCDL	10.0	Code IRC2018/TPI2014								Weight: 32 lb	FT = 3%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-8-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	2x4 SP No.2		
OTHERS	2x4 SP No.2		

REACTIONS. All bearings 6-8-0.
 (lb) - Max Horz 12=48(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 12, 8, 11, 9
 Max Grav All reactions 250 lb or less at joint(s) 12, 8, 10, 11, 9

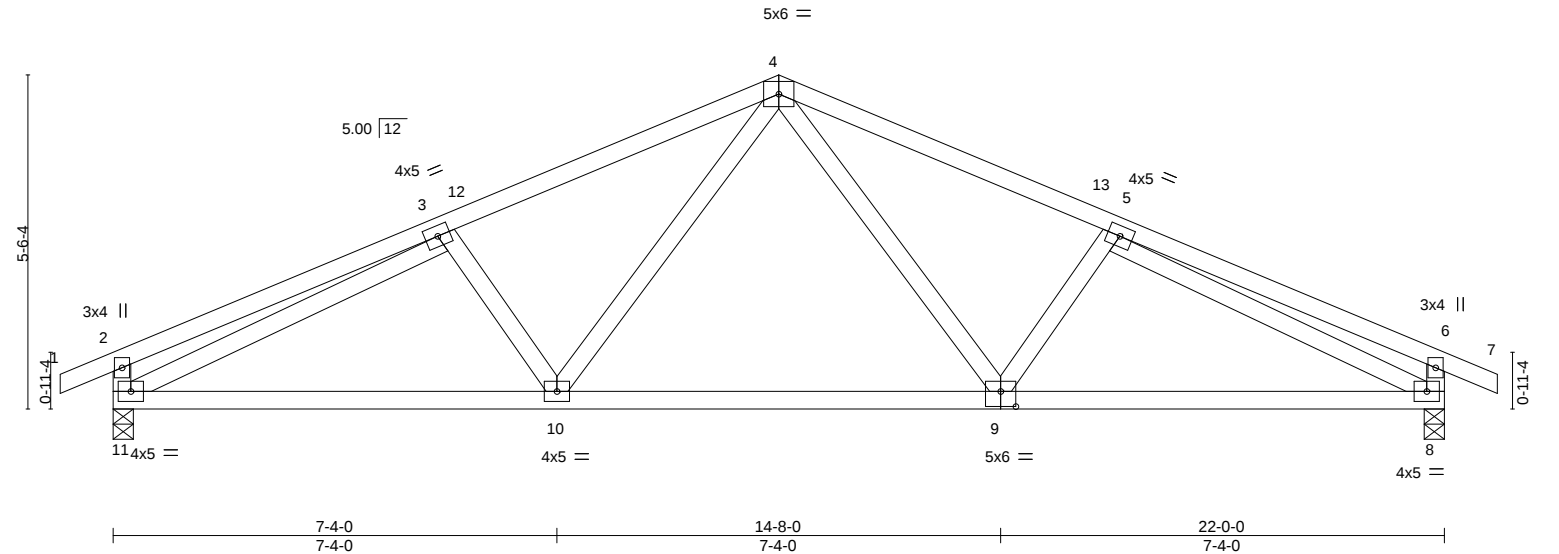
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 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.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 8, 11, 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.



February 10, 2021

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES	RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 03/03/2021
H3-91	T6	Common	4	1	Job Reference (optional)	
Mid America Truss, Jefferson City, MO - 65101,		8.430 s Nov 30 2020 MiTek Industries, Inc. File See ID:Z_Eg7_y5DGhi_ENvQbP05Vz4M0m-yDRRcmruQSSMh35QCeplx4926ilmj10?Tf92evzmqli				
0-10-8	5-6-0	11-0-0	16-6-0	22-0-0	22-10-8	
0-10-8	5-6-0	5-6-0	5-6-0	5-6-0	0-10-8	
Scale = 1:38.1						



LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES		GRIP	
TCLL (roof)	20.0		2-0-0	TC	0.53	in	(loc)	l/defl	L/d	MT20		244/190	
Snow (Pf/Pg)	15.4/20.0	Plate Grip DOL	1.15	BC	0.47	Vert(LL)	-0.05	9-10	>999				
TCDL	10.0	Lumber DOL	1.15	WB	0.71	Vert(CT)	-0.13	9-10	>999				
BCLL	0.0	Rep Stress Incr	YES	Matrix-SH		Horz(CT)	0.04	8	n/a				
BCDL	10.0	Code IRC2018/TPI2014											
										Weight: 118 lb		FT = 3%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 4-3-8 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.2		

REACTIONS.	
(size)	11=0-4-0, 8=0-4-0
Max Horz	11=36(LC 11)
Max Uplift	11=-24(LC 11), 8=-24(LC 12)
Max Grav	11=930(LC 2), 8=930(LC 2)

FORCES.	
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	2-3=-329/52, 3-4=-1286/51, 4-5=-1286/51, 5-6=-329/52, 2-11=-322/64, 6-8=-322/64
BOT CHORD	10-11=-36/1231, 9-10=0/905, 8-9=-0/1231
WEBS	4-9=-12/413, 4-10=-12/413, 3-11=-1121/0, 5-8=-1121/0

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 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.



February 10, 2021

Job

H3-91

Truss

T6GE

Truss Type

Common Supported Gable

Qty

1

Ply

1

SUMMIT HOMES

Job Reference (optional)

8.430 s Nov 30 2020 MiTek Industries, Inc. File See 844738419

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22-0-0

11-0-0

Mid America Truss,

Jefferson City, MO - 65101,

0-10-8

0-10-8

11-0-0

11-0-0

22-0-0

11-0-0

0-10-8

0-10-8

03/03/2021

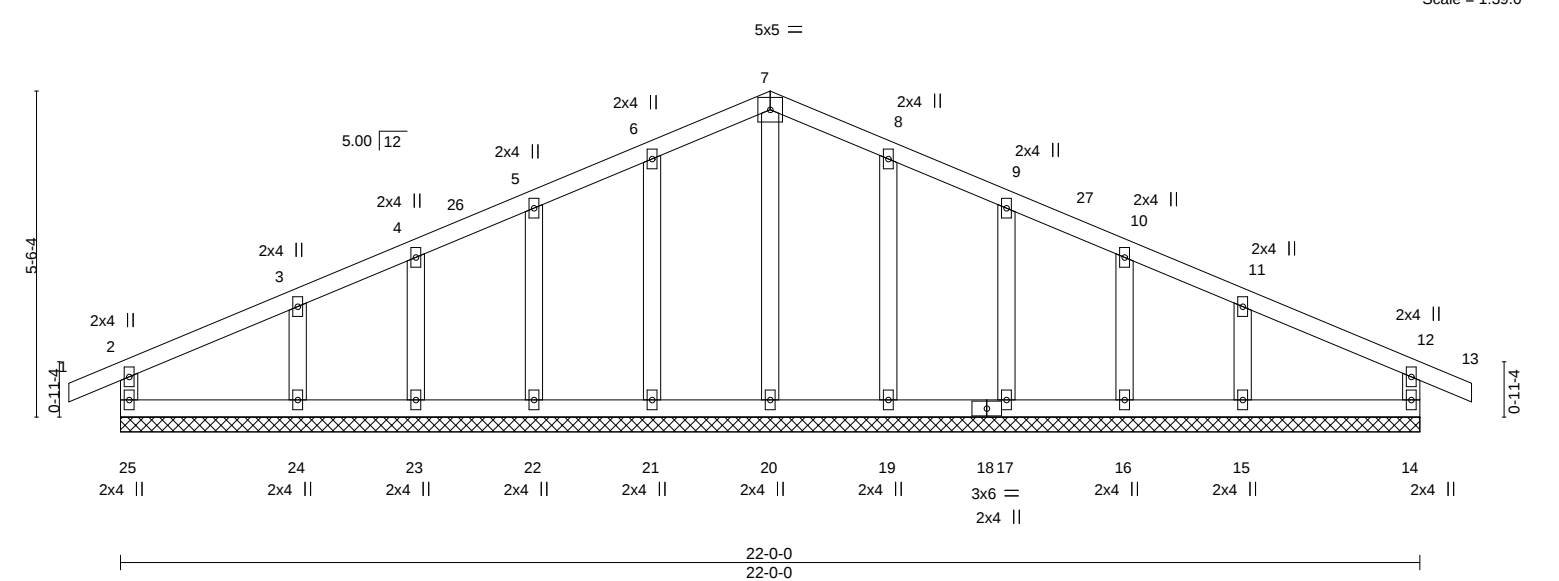
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RELEASE FOR CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	-0.00 12 n/r 120	MT20		244/190	
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.00 12 n/r 90				
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00 14 n/a n/a				
BCLL	0.0	Code IRC2018/TPI2014		Matrix-R							
BCDL	10.0										
								Weight: 114 lb		FT = 3%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	2x4 SP No.2		
OTHERS	2x4 SP No.2		

REACTIONS. All bearings 22-0-0.
 (lb) - Max Horz 25=36(LC 11)
 Max Uplift All uplift 100 lb or less at joint(s) 25, 14, 21, 22, 23, 24, 19, 17, 16, 15
 Max Grav All reactions 250 lb or less at joint(s) 25, 14, 20, 21, 22, 23, 24, 19, 17, 16, 15

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

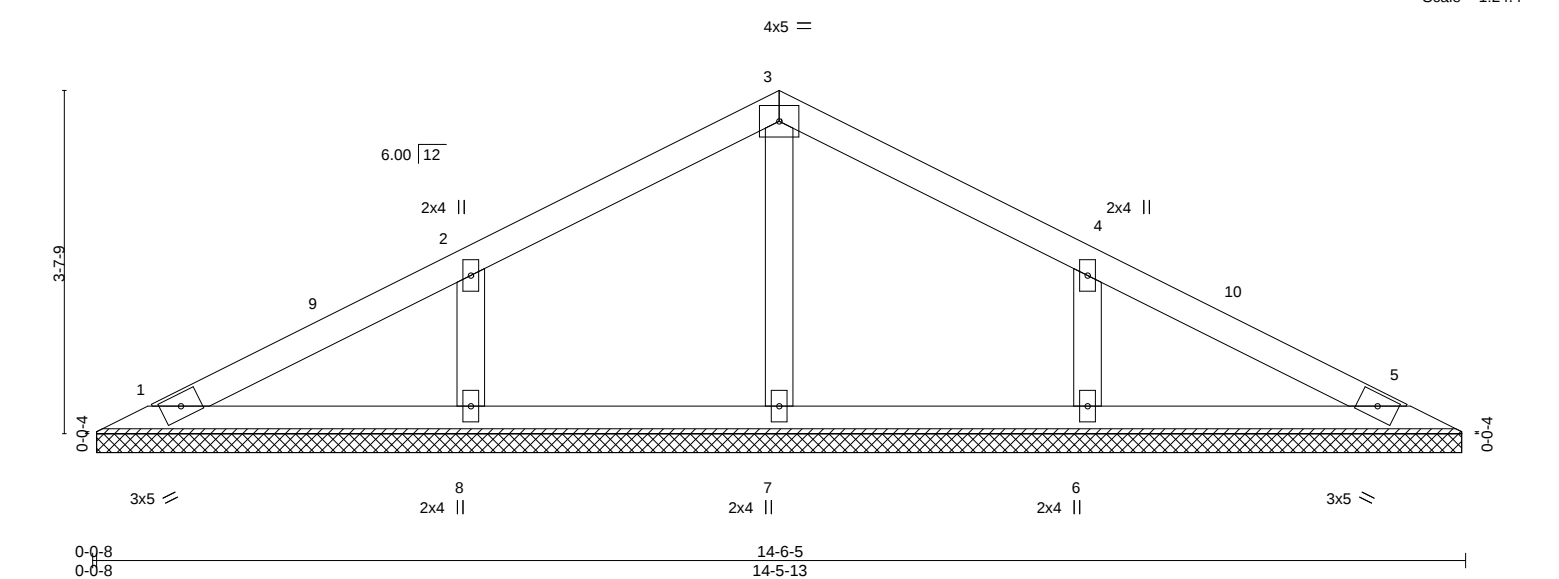
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 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.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 14, 21, 22, 23, 24, 19, 17, 16, 15.
 - 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.



February 10, 2021

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES	RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 03/03/2021 Scale = 1:24.4
H3-91	V1	Valley	1	1	Job Reference (optional)	
Mid America Truss, Jefferson City, MO - 65101,					8.430 s Nov 30 2020 MiTek Industries, Inc. File No. 144738420	

ID: Z_Eg7_y5DGhi_ENvQbP05Vz4M0m-ubZB1S8y3i4xMEpK3rm0VFTZYTSB60Hxe8inzmqglg



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	MT20	244/190		
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a				
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00				
BCLL	0.0	Code IRC2018/TPI2014		Matrix-P							
BCDL	10.0										

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS	2x4 SP No.2		

REACTIONS.	
(lb) - Max Horz	1=-38(LC 7)
Max Uplift	All uplift 100 lb or less at joint(s) 6, 8
Max Grav	All reactions 250 lb or less at joint(s) 1, 5, 7 except 6=382(LC 16), 8=382(LC 15)

FORCES.	
(lb) - Max. Comp./Max. Ten.	- All forces 250 (lb) or less except when shown.
WEBS	
	4-6=-306/97, 2-8=-306/97

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 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.



February 10, 2021

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	V2	GABLE	1	1	

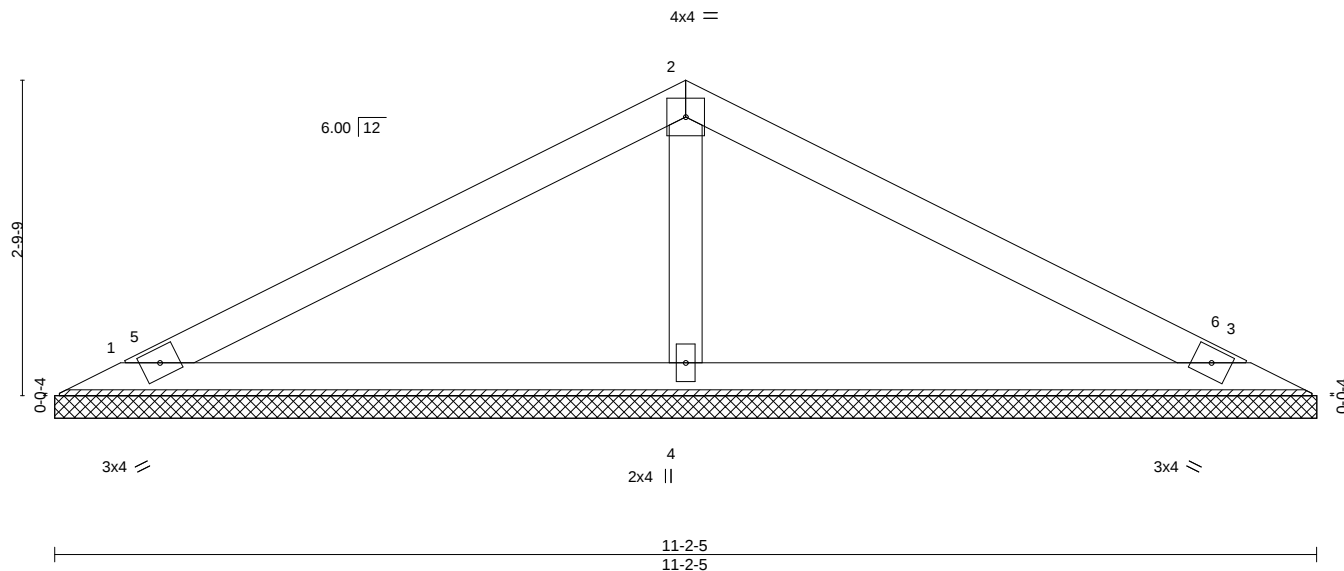
Mid America Truss, Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File Loc: C:\Users\m31\OneDrive\Documents\144738421

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**RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
03/03/2021**

Scale = 1:20.4



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	n/a	MT20		244/190	
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a				
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00				
BCLL	0.0	Code IRC2018/TPI2014		Matrix-P							
BCDL	10.0										

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 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=11-2-5, 3=11-2-5, 4=11-2-5
Max Horz 1=28(LC 8)
Max Uplift 1=-21(LC 11), 3=-26(LC 12)
Max Grav 1=238(LC 15), 3=238(LC 16), 4=394(LC 2)

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

WEBS 2-4=-270/44

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.0; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 2 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 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.



February 10, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job

H3-91

Truss

V3

Truss Type

Valley

Qty

1

Ply

1

SUMMIT HOMES

Job Reference (optional)

8.430 s Nov 30 2020 MiTek Industries, Inc.

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RELEASE FOR CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

Mid America Truss,

Jefferson City, MO - 65101,

3-11-2

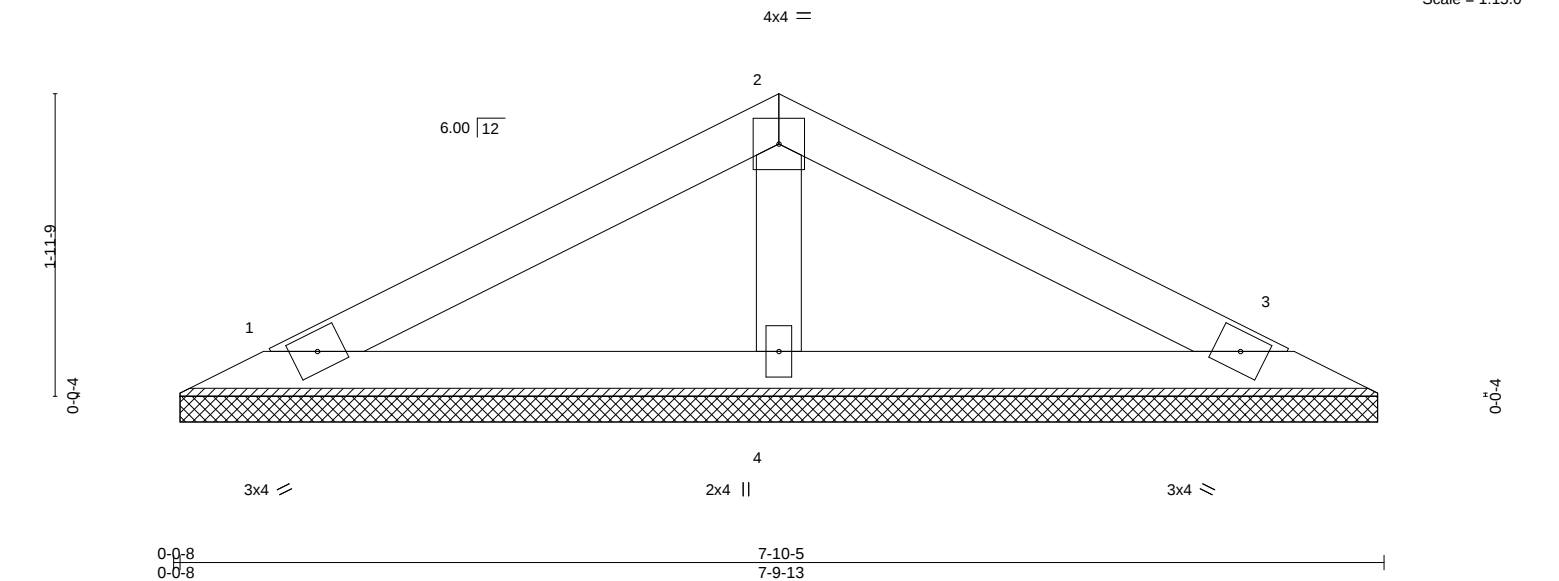
3-11-2

7-10-5

3-11-2

4x4 =

Scale = 1:15.0



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	MT20		244/190	
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a				
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00				
BCLL	0.0	Code IRC2018/TPI2014		Matrix-P							
BCDL	10.0										

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS	2x4 SP No.2		

REACTIONS. (size) 1=7-9-5, 3=7-9-5, 4=7-9-5
Max Horz 1=19(LC 8)
Max Uplift 1=14(LC 11), 3=17(LC 12)
Max Grav 1=155(LC 15), 3=155(LC 16), 4=262(LC 2)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
 - 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.



February 10, 2021

Job

H3-91

Truss

V4

Truss Type

Valley

Qty

1

Ply

1

SUMMIT HOMES

Job Reference (optional)

Mid America Truss,

Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc.

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RELEASE FOR

CONSTRUCTION

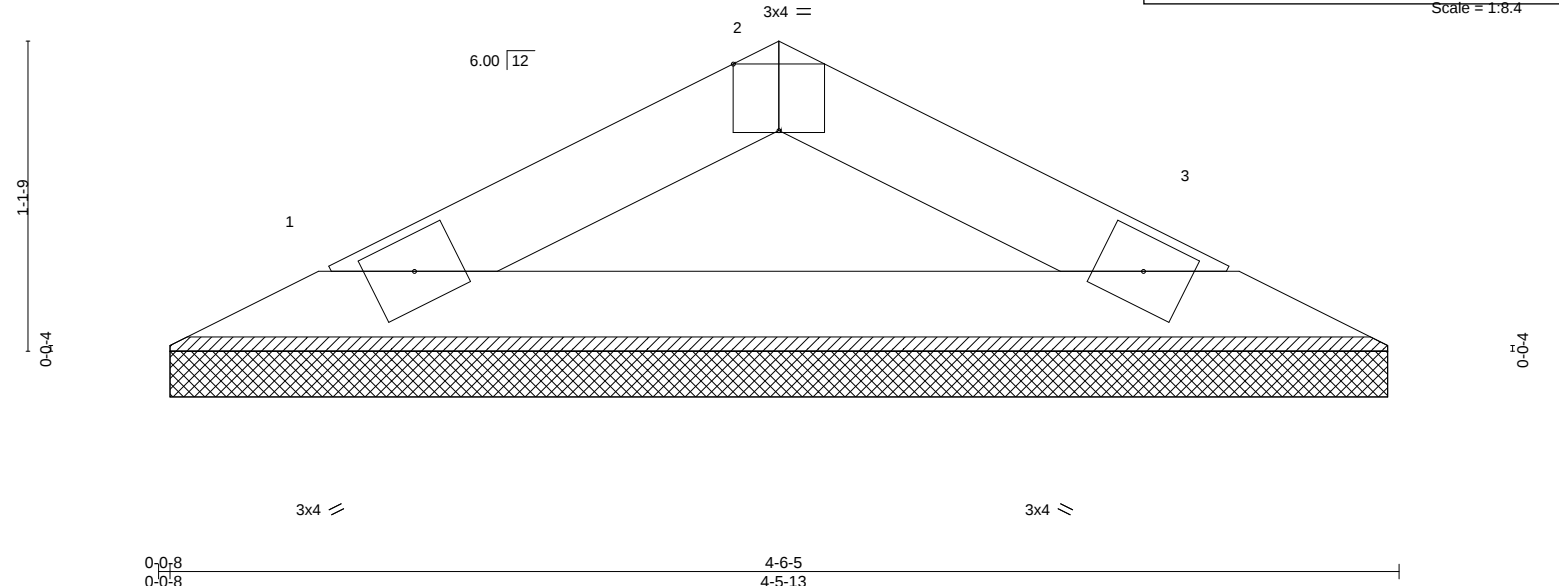
AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

Scale = 1:8.4



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	MT20	244/190		
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a				
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00				
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P							
BCDL	10.0										

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 4-6-5 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=4-5-5, 3=4-5-5
 Max Horz 1=-9(LC 7)
 Max Uplift 1=-2(LC 11), 3=-2(LC 12)
 Max Grav 1=131(LC 2), 3=131(LC 2)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
 - 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.



February 10, 2021

Job	Truss	Truss Type	Qty	Ply	SUMMIT HOMES
H3-91	V5	GABLE	1	1	

RELEASE FOR

CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

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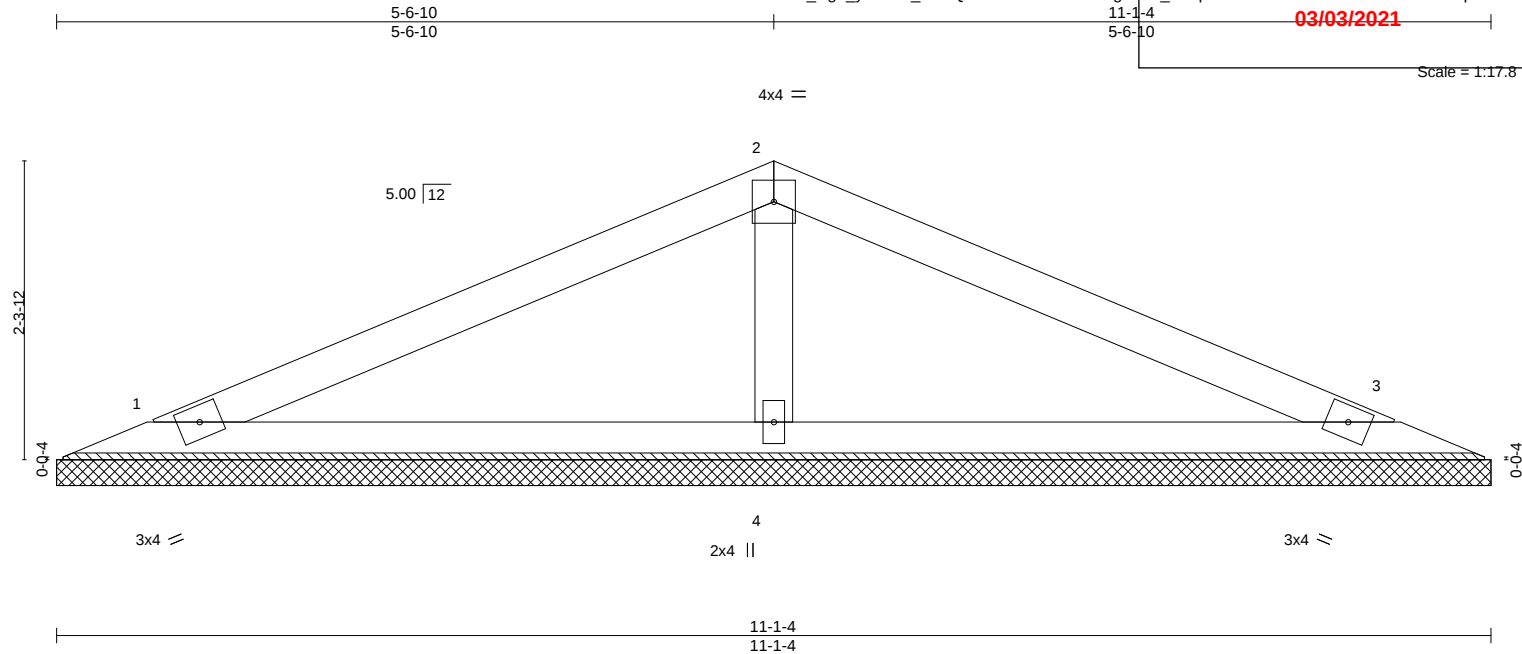
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Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

Scale = 1:17.8



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	n/a	MT20		244/190	
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a				
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00				
BCLL	0.0	Code IRC2018/TPI2014		Matrix-P							
BCDL	10.0										

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS	2x4 SP No.2		

REACTIONS.	
(size)	1=11-1-4, 3=11-1-4, 4=11-1-4
Max Horz	1=-21(LC 12)
Max Uplift	1=-19(LC 11), 3=-23(LC 12)
Max Grav	1=227(LC 15), 3=227(LC 16), 4=390(LC 2)

FORCES.	
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
WEBS	2-4=-270/46

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 2 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
 - 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.



February 10,2021

Job

H3-91

Truss

V6

Truss Type

GABLE

Qty

1

Ply

1

SUMMIT HOMES

Job Reference (optional)

Mid America Truss,

Jefferson City, MO - 65101,

8.430 s Nov 30 2020 MiTek Industries, Inc. File See Truss M0350101 Page 1

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RELEASE FOR CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

03/03/2021

3-6-10

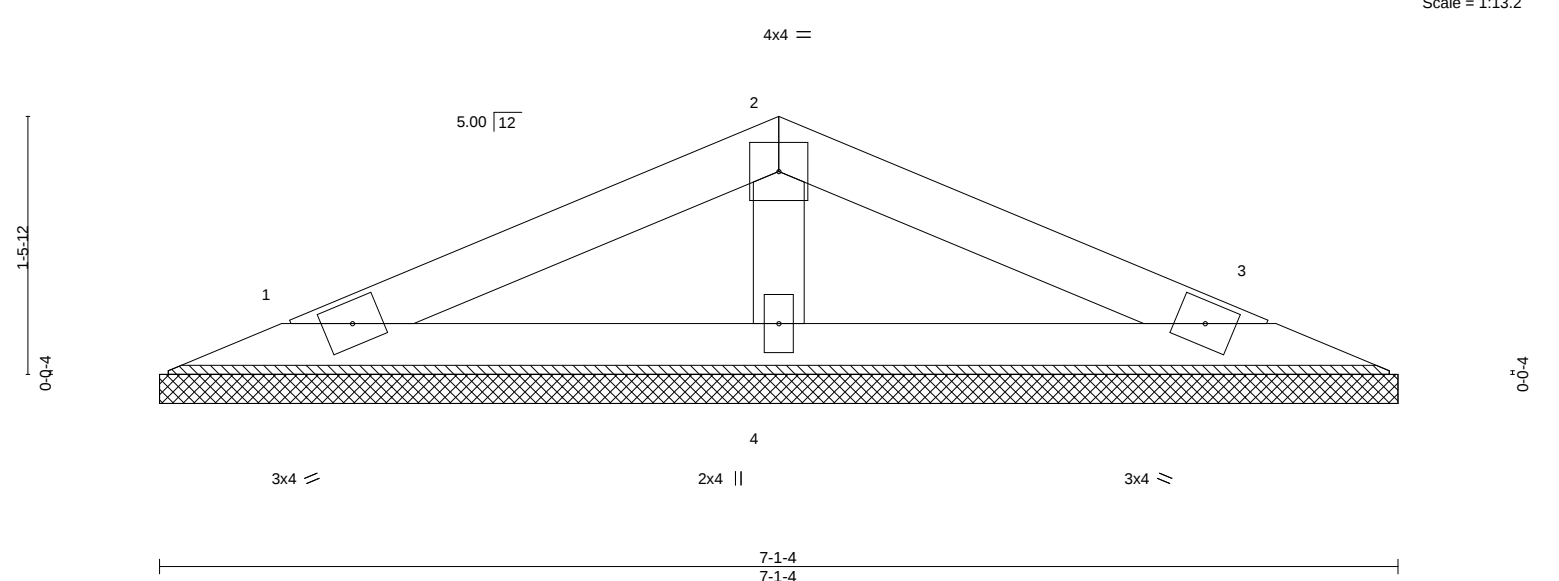
3-6-10

7-1-4

3-6-10

44738425

Scale = 1:13.2



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	n/a	MT20		244/190	
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a				
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00				
BCLL	0.0	Code IRC2018/TPI2014		Matrix-P							
BCDL	10.0										
								Weight: 21 lb		FT = 3%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS	2x4 SP No.2		

REACTIONS. (size) 1=7-1-4, 3=7-1-4, 4=7-1-4
 Max Horz 1=12(LC 13)
 Max Uplift 1=-11(LC 11), 3=-13(LC 12)
 Max Grav 1=124(LC 15), 3=124(LC 16), 4=228(LC 2)

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

- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 4) Unbalanced snow loads have been considered for this design.
 5) Plates checked for a plus or minus 2 degree rotation about its center.
 6) Gable requires continuous bottom chord bearing.
 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



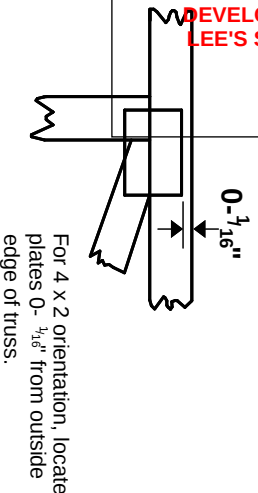
February 10, 2021

Symbols

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
03/03/2021

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.



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

* Plate location details available in **MiTek 20120** software or upon request.

PLATE SIZE

4 X 4

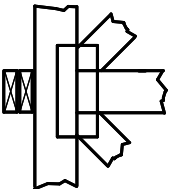
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



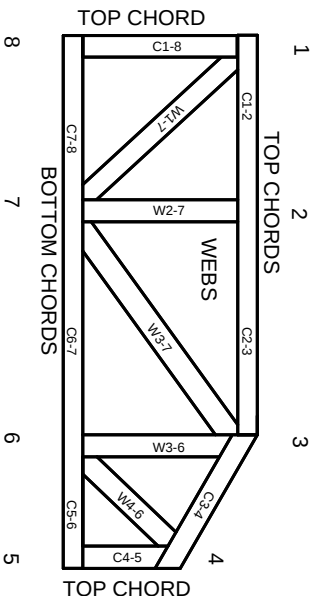
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3 These truss designs rely on lumber values established by others.

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MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020



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 T or 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.