



RE: 210341  
Lot 101 MN

MiTek USA, Inc.  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314-434-1200

**Site Information:**

Customer: Project Name: 210341  
Lot/Block:  
Address:  
City:

Model:  
Subdivision:  
State:

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

Design Code: IRC2018/TPI2014  
Wind Code: N/A  
Roof Load: 45.0 psf

Design Program: MiTek 20/20 8.4  
Wind Speed: 115 mph  
Floor Load: N/A psf

This package includes 39 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I45174487	A1	3/12/2021	21	I45174507	H2	3/12/2021
2	I45174488	A2	3/12/2021	22	I45174508	H3	3/12/2021
3	I45174489	A3	3/12/2021	23	I45174509	H4	3/12/2021
4	I45174490	B1	3/12/2021	24	I45174510	J1	3/12/2021
5	I45174491	B2	3/12/2021	25	I45174511	J2	3/12/2021
6	I45174492	B3	3/12/2021	26	I45174512	J3	3/12/2021
7	I45174493	C1	3/12/2021	27	I45174513	J4	3/12/2021
8	I45174494	C2	3/12/2021	28	I45174514	K1	3/12/2021
9	I45174495	C3	3/12/2021	29	I45174515	K2	3/12/2021
10	I45174496	D1	3/12/2021	30	I45174516	P1	3/12/2021
11	I45174497	D2	3/12/2021	31	I45174517	P2	3/12/2021
12	I45174498	D3	3/12/2021	32	I45174518	P3	3/12/2021
13	I45174499	D4	3/12/2021	33	I45174519	P4	3/12/2021
14	I45174500	D5	3/12/2021	34	I45174520	V1	3/12/2021
15	I45174501	D6	3/12/2021	35	I45174521	V2	3/12/2021
16	I45174502	E1	3/12/2021	36	I45174522	V3	3/12/2021
17	I45174503	E2	3/12/2021	37	I45174523	V4	3/12/2021
18	I45174504	G1	3/12/2021	38	I45174524	V5	3/12/2021
19	I45174505	G2	3/12/2021	39	I45174525	V6	3/12/2021
20	I45174506	H1	3/12/2021				

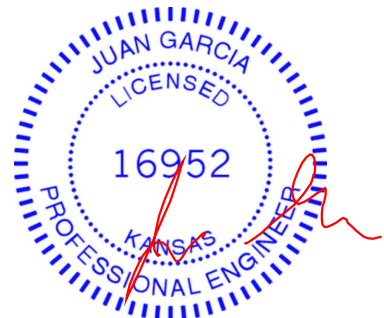
The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Kansas is April 30, 2022.

Kansas COA: E-943

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



March 12, 2021



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

Design Code: IRC2018/TPI2014  
Wind Code: N/A  
Roof Load: 45.0 psf

Design Program: MiTek 20/20 8.4  
Wind Speed: 115 mph  
Floor Load: N/A psf

This package includes 39 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I45174487	A1	3/12/2021	21	I45174507	H2	3/12/2021
2	I45174488	A2	3/12/2021	22	I45174508	H3	3/12/2021
3	I45174489	A3	3/12/2021	23	I45174509	H4	3/12/2021
4	I45174490	B1	3/12/2021	24	I45174510	J1	3/12/2021
5	I45174491	B2	3/12/2021	25	I45174511	J2	3/12/2021
6	I45174492	B3	3/12/2021	26	I45174512	J3	3/12/2021
7	I45174493	C1	3/12/2021	27	I45174513	J4	3/12/2021
8	I45174494	C2	3/12/2021	28	I45174514	K1	3/12/2021
9	I45174495	C3	3/12/2021	29	I45174515	K2	3/12/2021
10	I45174496	D1	3/12/2021	30	I45174516	P1	3/12/2021
11	I45174497	D2	3/12/2021	31	I45174517	P2	3/12/2021
12	I45174498	D3	3/12/2021	32	I45174518	P3	3/12/2021
13	I45174499	D4	3/12/2021	33	I45174519	P4	3/12/2021
14	I45174500	D5	3/12/2021	34	I45174520	V1	3/12/2021
15	I45174501	D6	3/12/2021	35	I45174521	V2	3/12/2021
16	I45174502	E1	3/12/2021	36	I45174522	V3	3/12/2021
17	I45174503	E2	3/12/2021	37	I45174523	V4	3/12/2021
18	I45174504	G1	3/12/2021	38	I45174524	V5	3/12/2021
19	I45174505	G2	3/12/2021	39	I45174525	V6	3/12/2021
20	I45174506	H1	3/12/2021				

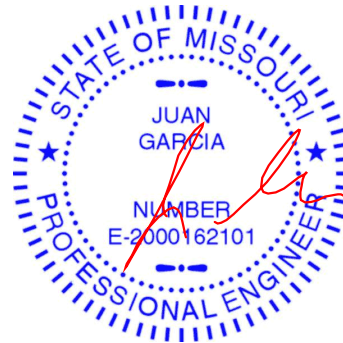
The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2022.

Missouri COA: 001193

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



March 12, 2021

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174487
210341	A1	GABLE	1	1		

Wheeler Lumber, Waverly, KS - 66871,

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0-10-8	16-9-0	25-11-0	30-5-11	34-5-8	35-4-0
0-10-8	16-9-0	9-2-0	4-6-11	3-11-13	0-10-8

Scale = 1:77.2

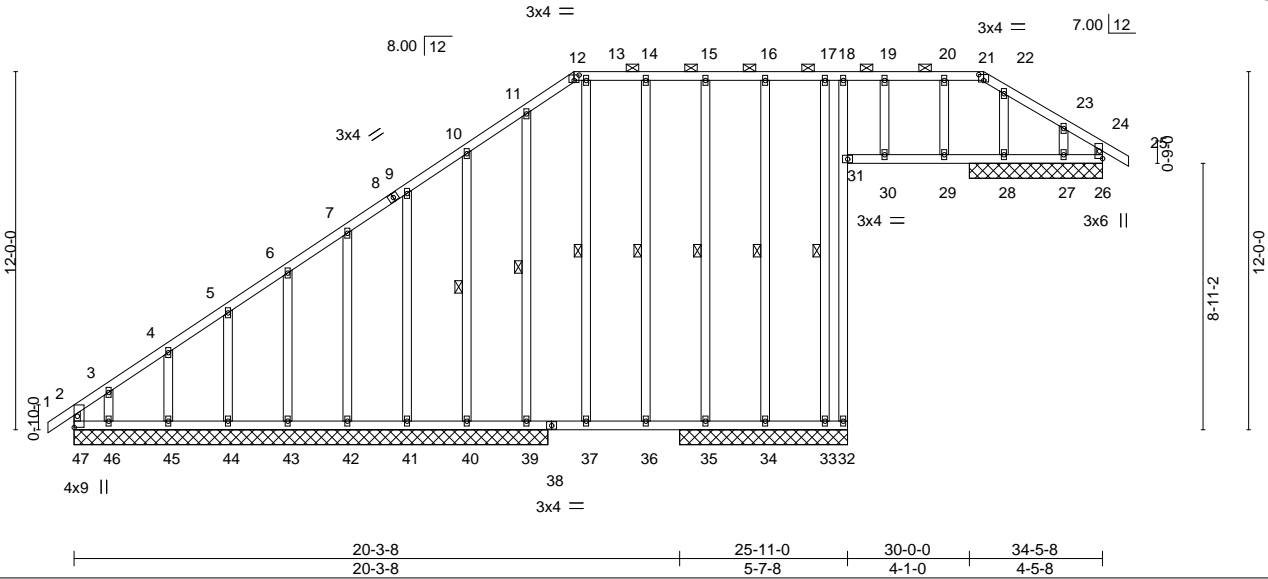


Plate Offsets (X,Y)--		[12:0-2-0,0-2-3], [21:0-2-0,0-2-5]							
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc)	l/defl L/d	PLATES	GRIP
TCLL 25.0		Plate Grip DOL 1.15		TC 0.35		Vert(LL) -0.04 36-37	>999 360	MT20	197/144
TCDL 10.0		Lumber DOL 1.15		BC 0.31		Vert(CT) -0.07 36-37	>982 240		
BCLL 0.0 *		Rep Stress Incr NO		WB 0.20		Horz(CT) -0.04 24	n/a n/a		
BCDL 10.0		Code IRC2018/TPI2014		Matrix-R		Wind(LL) 0.04 36-37	>999 240	Weight: 226 lb	FT = 10%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 12-21.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 10-0-0 oc bracing: 31-32,30-31,29-30,28-29,27-28,26-27.  
WEBS 1 Row at midpt 10-40, 11-39, 13-37, 14-36, 15-35, 16-34, 17-33

**REACTIONS.** All bearings 15-10-8 except (jt=length) 26=4-5-8, 24=4-5-8, 32=5-7-8, 31=5-7-8, 35=5-7-8, 34=5-7-8, 33=5-7-8, 28=4-5-8, 27=4-5-8.  
(lb) - Max Horz 47=396(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 26, 24, 32, 31, 45, 44, 43, 42, 41, 34, 33, 28, 27 except 47=214(LC 6), 46=321(LC 36), 40=104(LC 36), 39=122(LC 5), 35=137(LC 5)  
Max Grav All reactions 250 lb or less at joint(s) 26, 24, 32, 46, 45, 44, 43, 42, 41, 40, 34, 33, 27 except 47=459(LC 36), 31=360(LC 1), 39=544(LC 1), 35=549(LC 1), 28=409(LC 29)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-47=-333/153, 2-3=-514/281, 3-4=-393/230, 4-5=-333/208, 5-6=-266/185  
BOT CHORD 18-31=-275/69  
WEBS 11-39=-292/93, 15-35=-308/104

- 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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - N/A
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - 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.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 24, 31 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) 26, 24, 32, 31, 45, 44, 43, 42, 41, 34, 33, 28, 27 except (jt=lb) 47=214, 46=321, 40=104, 39=122, 35=137.
  - 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.

On Graphical representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 12,2021

**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

**MiTek**  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN
210341	A1	GABLE	1	1	I45174487
Job Reference (optional)					

- NOTES-**
- 15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 37 lb down and 31 lb up at 17'-1-0, and 37 lb down and 31 lb up at 19'-1-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 16) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-2=-70, 2-12=-70, 12-21=-70, 21-24=-70, 24-25=-70, 32-47=-20, 26-31=-20

Concentrated Loads (lb)

Vert: 37=-37(F) 36=-37(F)

Job 210341	Truss A2	Truss Type Piggyback Base	Qty 4	Ply 1	Lot 101 MN Job Reference (optional)	I45174488
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Wheeler Lumber, Waverly, KS - 66871,

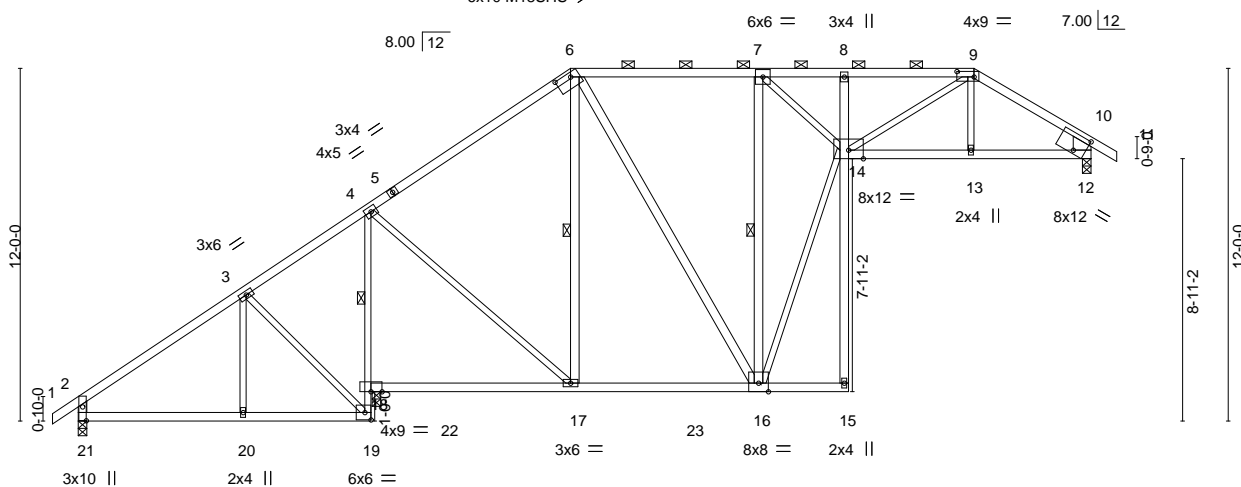
8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:04 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-KLdknomtC0lmhOxSRHIUYAbnvUREz2GwVfd7Jzbh2H

0-10-8 5-7-5 9-11-8 16-9-0 23-1-12 26-2-8 30-5-11 34-5-8 35-4-0  
0-10-8 5-7-5 4-4-3 6-9-8 6-4-12 3-0-12 4-3-3 3-11-13 0-10-8

6x10 M18SHS

Scale = 1:78.4



5-7-5 9-11-8 10-0-0 16-9-0 23-1-12 26-2-8 30-5-11 34-5-8  
5-7-5 4-4-3 0-0-8 6-9-0 6-4-12 3-0-12 4-3-3 3-11-13

Plate Offsets (X,Y)-- [6:0-6-8,0-1-12], [9:0-7-0,0-2-4], [12:0-4-9,0-6-10], [21:0-5-10,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.68	Vert(LL)	-0.17	15	>999	360	MT20 197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.80	Vert(CT)	-0.28	13-14	>999	240	M18SHS 197/144
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.89	Horz(CT)	0.15	12	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S	Wind(LL)	0.12	15	>999	240	
									Weight: 174 lb FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
9-11: 2x4 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF No.2 \*Except\*  
4-19: 2x3 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
6-17,6-16,7-16,2-21: 2x4 SPF No.2, 10-12: 2x8 SP DSS

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-9-2 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-13 max.): 6-9.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:  
1 Row at midpt 4-18  
WEBS 1 Row at midpt 6-17, 7-16

#### REACTIONS.

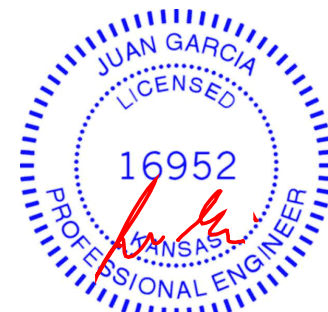
(size) 21=0-3-8, 18=0-3-8, 12=0-3-8  
Max Horz 21=393(LC 8)  
Max Uplift 18=282(LC 8), 12=91(LC 4)  
Max Grav 21=369(LC 16), 18=1903(LC 15), 12=1146(LC 2)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-277/87, 3-4=-142/389, 4-6=-674/85, 6-7=-604/119, 7-8=-2017/332, 8-9=-2068/343,  
9-10=-1483/168, 2-21=-324/18, 10-12=-1005/110  
BOT CHORD 18-19=-99/387, 4-18=-1412/225, 17-18=-259/38, 16-17=-93/459, 13-14=-135/1172,  
12-13=-138/1170  
WEBS 3-20=0/254, 3-19=-498/165, 4-17=-67/915, 6-17=-401/131, 6-16=-129/347,  
7-16=-1671/382, 14-16=-311/1722, 7-14=-319/1954, 9-14=-256/1081

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are MT20 plates unless otherwise indicated.
- 5) The Fabrication Tolerance at joint 6 = 6%
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12 except (jt=lb) 18=282.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 12, 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

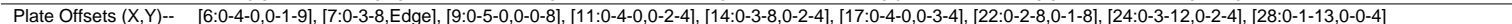


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LUMBER-		BRACING-	
TOP CHORD	2x4 SPF No.2 *Except* 6-11,1-5: 2x4 SPF 2100F 1.8E	TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-11-6 max.): 6-11.
BOT CHORD	2x4 SPF No.2 *Except* 20-23,14-17: 2x4 SPF 2100F 1.8E	BOT CHORD	Rigid ceiling directly applied or 7-8-3 oc bracing.
WEBS	2x3 SPF No.2 *Except* 6-21,7-19,7-17: 2x4 SPF 2100F 1.8E, 6-19,17-19,2-23: 2x4 SPF No.2 2-24,12-14: 2x6 SPF No.2	WEBS	1 Row at midpt 3-22, 4-21, 6-19, 7-19
OTHERS	2x4 SPF No.2	JOINTS	1 Brace at Jt(s): 31


**REACTIONS.** (size) 24=0-3-8, 14=0-3-8  
 Max Horz 24=393(LC 8)  
 Max Uplift 24=-188(LC 8), 14=-157(LC 5)  
 Max Grav 24=1968(LC 2), 14=1958(LC 2)

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

**TOP CHORD** 2-3=-4509/825, 3-4=-2951/306, 4-6=-2233/277, 6-7=-1765/253, 7-8=-5827/858,  
8-9=-5876/856, 9-10=-2410/280, 10-11=-2411/280, 11-12=-2812/331, 2-24=-1998/332,  
12-14=-1881/175

**BOT CHORD** 23-24=-361/279, 22-23=-1049/3815, 21-22=-453/2392, 19-21=-250/1765,  
16-17=-654/4404, 15-16=-654/4404, 14-15=-59/353

**WEBS** 3-23=-194/825, 3-22=-1437/602, 4-22=0/530, 4-21=-976/322, 6-21=-141/933,  
7-19=-2962/564, 17-19=-539/3641, 7-17=-717/4821, 9-17=-251/1768, 11-15=-175/1130,  
12-15=-295/2037, 9-31=-2398/439, 15-31=-2410/437, 2-23=-745/3689



**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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) All plates are 2x4 MT20 unless otherwise indicated.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) Bearing at joint(s) 24 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

Continued on page 2



March 12, 2021



**WARNING – Velly design parameters are listed below and included with the key reference to AISC M14-15 16f, 17f, 18f, 19f, 20f, 21f, 22f, 23f, 24f, 25f, 26f, 27f, 28f, 29f, 30f, 31f, 32f, 33f, 34f, 35f, 36f, 37f, 38f, 39f, 40f, 41f, 42f, 43f, 44f, 45f, 46f, 47f, 48f, 49f, 50f, 51f, 52f, 53f, 54f, 55f, 56f, 57f, 58f, 59f, 60f, 61f, 62f, 63f, 64f, 65f, 66f, 67f, 68f, 69f, 70f, 71f, 72f, 73f, 74f, 75f, 76f, 77f, 78f, 79f, 80f, 81f, 82f, 83f, 84f, 85f, 86f, 87f, 88f, 89f, 90f, 91f, 92f, 93f, 94f, 95f, 96f, 97f, 98f, 99f, 100f, 101f, 102f, 103f, 104f, 105f, 106f, 107f, 108f, 109f, 110f, 111f, 112f, 113f, 114f, 115f, 116f, 117f, 118f, 119f, 120f, 121f, 122f, 123f, 124f, 125f, 126f, 127f, 128f, 129f, 130f, 131f, 132f, 133f, 134f, 135f, 136f, 137f, 138f, 139f, 140f, 141f, 142f, 143f, 144f, 145f, 146f, 147f, 148f, 149f, 150f, 151f, 152f, 153f, 154f, 155f, 156f, 157f, 158f, 159f, 160f, 161f, 162f, 163f, 164f, 165f, 166f, 167f, 168f, 169f, 170f, 171f, 172f, 173f, 174f, 175f, 176f, 177f, 178f, 179f, 180f, 181f, 182f, 183f, 184f, 185f, 186f, 187f, 188f, 189f, 190f, 191f, 192f, 193f, 194f, 195f, 196f, 197f, 198f, 199f, 200f, 201f, 202f, 203f, 204f, 205f, 206f, 207f, 208f, 209f, 210f, 211f, 212f, 213f, 214f, 215f, 216f, 217f, 218f, 219f, 220f, 221f, 222f, 223f, 224f, 225f, 226f, 227f, 228f, 229f, 230f, 231f, 232f, 233f, 234f, 235f, 236f, 237f, 238f, 239f, 240f, 241f, 242f, 243f, 244f, 245f, 246f, 247f, 248f, 249f, 250f, 251f, 252f, 253f, 254f, 255f, 256f, 257f, 258f, 259f, 260f, 261f, 262f, 263f, 264f, 265f, 266f, 267f, 268f, 269f, 270f, 271f, 272f, 273f, 274f, 275f, 276f, 277f, 278f, 279f, 280f, 281f, 282f, 283f, 284f, 285f, 286f, 287f, 288f, 289f, 290f, 291f, 292f, 293f, 294f, 295f, 296f, 297f, 298f, 299f, 300f, 301f, 302f, 303f, 304f, 305f, 306f, 307f, 308f, 309f, 310f, 311f, 312f, 313f, 314f, 315f, 316f, 317f, 318f, 319f, 320f, 321f, 322f, 323f, 324f, 325f, 326f, 327f, 328f, 329f, 330f, 331f, 332f, 333f, 334f, 335f, 336f, 337f, 338f, 339f, 340f, 341f, 342f, 343f, 344f, 345f, 346f, 347f, 348f, 349f, 350f, 351f, 352f, 353f, 354f, 355f, 356f, 357f, 358f, 359f, 360f, 361f, 362f, 363f, 364f, 365f, 366f, 367f, 368f, 369f, 370f, 371f, 372f, 373f, 374f, 375f, 376f, 377f, 378f, 379f, 380f, 381f, 382f, 383f, 384f, 385f, 386f, 387f, 388f, 389f, 390f, 391f, 392f, 393f, 394f, 395f, 396f, 397f, 398f, 399f, 400f, 401f, 402f, 403f, 404f, 405f, 406f, 407f, 408f, 409f, 410f, 411f, 412f, 413f, 414f, 415f, 416f, 417f, 418f, 419f, 420f, 421f, 422f, 423f, 424f, 425f, 426f, 427f, 428f, 429f, 430f, 431f, 432f, 433f, 434f, 435f, 436f, 437f, 438f, 439f, 440f, 441f, 442f, 443f, 444f, 445f, 446f, 447f, 448f, 449f, 450f, 451f, 452f, 453f, 454f, 455f, 456f, 457f, 458f, 459f, 460f, 461f, 462f, 463f, 464f, 465f, 466f, 467f, 468f, 469f, 470f, 471f, 472f, 473f, 474f, 475f, 476f, 477f, 478f, 479f, 480f, 481f, 482f, 483f, 484f, 485f, 486f, 487f, 488f, 489f, 490f, 491f, 492f, 493f, 494f, 495f, 496f, 497f, 498f, 499f, 500f, 501f, 502f, 503f, 504f, 505f, 506f, 507f, 508f, 509f, 510f, 511f, 512f, 513f, 514f, 515f, 516f, 517f, 518f, 519f, 520f, 521f, 522f, 523f, 524f, 525f, 526f, 527f, 528f, 529f, 530f, 531f, 532f, 533f, 534f, 535f, 536f, 537f, 538f, 539f, 540f, 541f, 542f, 543f, 544f, 545f, 546f, 547f, 548f, 549f, 550f, 551f, 552f, 553f, 554f, 555f, 556f, 557f, 558f, 559f, 560f, 561f, 562f, 563f, 564f, 565f, 566f, 567f, 568f, 569f, 570f, 571f, 572f, 573f, 574f, 575f, 576f, 577f, 578f, 579f, 580f, 581f, 582f, 583f, 584f, 585f, 586f, 587f, 588f, 589f, 590f, 591f, 592f, 593f, 594f, 595f, 596f, 597f, 598f, 599f, 600f, 601f, 602f, 603f, 604f, 605f, 606f, 607f, 608f, 609f, 610f, 611f, 612f, 613f, 614f, 615f, 616f, 617f, 618f, 619f, 620f, 621f, 622f, 623f, 624f, 625f, 626f, 627f, 628f, 629f, 630f, 631f, 632f, 633f, 634f, 635f, 636f, 637f, 638f, 639f, 640f, 641f, 642f, 643f, 644f, 645f, 646f, 647f, 648f, 649f, 650f, 651f, 652f, 653f, 654f, 655f, 656f, 657f, 658f, 659f, 660f, 661f, 662f, 663f, 664f, 665f, 666f, 667f, 668f, 669f, 670f, 671f, 672f, 673f, 674f, 675f, 676f, 677f, 678f, 679f, 680f, 681f, 682f, 683f, 684f, 685f, 686f, 687f, 688f, 689f, 690f, 691f, 692f, 693f, 694f, 695f, 696f, 697f, 698f, 699f, 700f, 701f, 702f, 703f, 704f, 705f, 706f, 707f,**



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174490
210341	B1	GABLE COMMON	1	1	Job Reference (optional)	

Wheeler Lumber,      Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:07 2021 Page 2  
ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-lwltQqplVx8LYrNV8ZrS6Ao4A6YTRIdjcTUhkezbh2E

- NOTES-**
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 24=188, 14=157.
  - 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	145174491
210341	B2	Piggyback Base	3	1		

Wheeler Lumber, Waverly, KS - 66871,

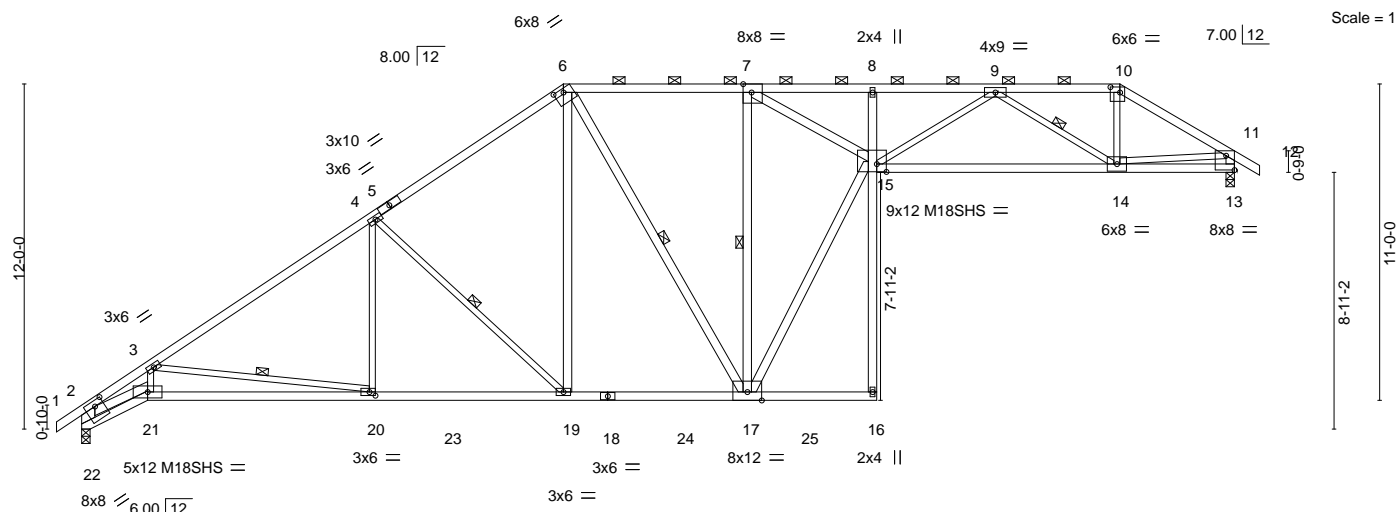
8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:08 2021 Page 1

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Job Reference (optional)

0-10-8 2-3-8 10-1-5 16-9-0 23-1-12 27-7-12 31-9-4 36-1-3 40-1-0 40-11-8  
0-10-8 2-3-8 7-9-13 6-7-12 6-4-12 4-6-0 4-1-8 4-4-0 3-11-13 0-10-8

Scale = 1:80.1



2-3-8 10-1-5 16-9-0 23-1-12 27-7-12 36-1-3 40-1-0  
2-3-8 7-9-13 6-7-12 6-4-12 4-6-0 8-5-7 3-11-13

Plate Offsets (X,Y)-- [6:0-4-0,0-1-9], [7:0-3-8,Edge], [10:0-4-0,0-2-4], [13:Edge,0-6-0], [15:0-4-0,0-3-4], [20:0-2-8,0-1-8], [22:0-3-12,0-2-4]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.80	Vert(LL)	-0.45 14-15	>999	360	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.72	Vert(CT)	-0.80 14-15	>594	240	M18SHS	197/144
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.91	Horz(CT)	0.44 13	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S	Wind(LL)	0.30 16	>999	240		
								Weight: 200 lb	FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
6-10,1-5: 2x4 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF No.2 \*Except\*  
18-21,13-15: 2x4 SPF 2100F 1.8E  
WEBS 2x3 SPF No.2 \*Except\*  
6-19,7-17,7-15: 2x4 SPF 2100F 1.8E  
6-17,15-17,2-21,11-13: 2x4 SPF No.2, 2-22: 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-10-12 max.): 6-10.  
BOT CHORD Rigid ceiling directly applied or 7-8-2 oc bracing.  
WEBS 1 Row at midpt 3-20, 4-19, 6-17, 7-17, 9-14

#### REACTIONS.

(size) 22=0-3-8, 13=0-3-8  
Max Horz 22=393(LC 8)  
Max Uplift 22=188(LC 8), 13=154(LC 5)  
Max Grav 22=1972(LC 2), 13=1957(LC 2)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-4517/826, 3-4=-2959/306, 4-6=-2241/277, 6-7=-1774/254, 7-8=-5871/859,  
8-9=-5932/852, 9-10=-2500/266, 10-11=-2916/314, 2-22=-2002/333, 11-13=-1916/156  
BOT CHORD 21-22=-362/279, 20-21=-1050/3821, 19-20=-453/2398, 17-19=-250/1771,  
14-15=-675/4417, 13-14=-75/372  
WEBS 3-21=-194/826, 3-20=-1438/603, 4-20=0/530, 4-19=-976/322, 6-19=-141/933,  
7-17=-2982/565, 15-17=-539/3660, 7-15=-717/4862, 9-15=-220/1818, 10-14=-128/1258,  
2-21=-746/3695, 11-14=-269/2103, 9-14=-2314/479

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 22 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) except (jt=lb) 22=188, 13=154.
- 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.



March 12, 2021

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

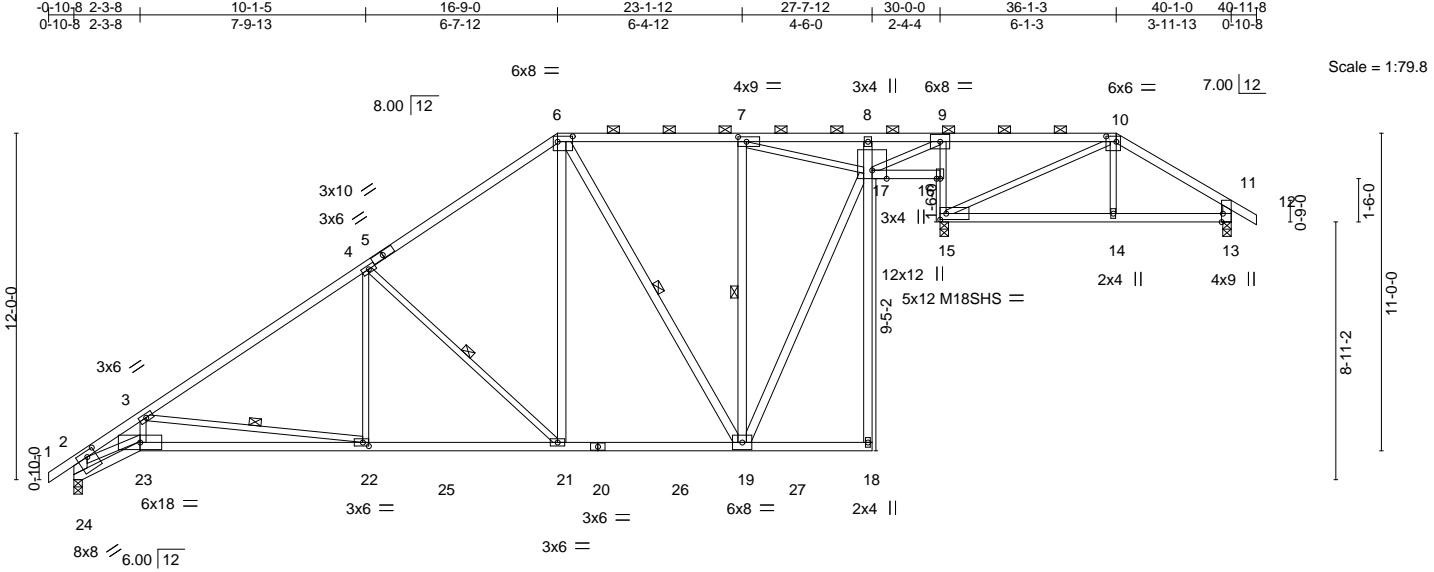
Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	145174492
210341	B3	Piggyback Base	2	1		

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:10 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-9V\_?2srdosVwPJ64phO9kpQcjkWnefD9IRixKyzbh2B

Job Reference (optional)



2-3-8	10-1-5	16-9-0	23-1-12	27-7-12	30-0-0	36-1-3	40-1-0
2-3-8	7-9-13	6-7-12	6-4-12	4-6-0	2-4-4	5-11-7	3-11-13

<b>LOADING</b> (psf)	<b>SPACING</b> 2-0-0	<b>CSI</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.72	Vert(LL) -0.19 22-23 >999 360	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.87	Vert(CT) -0.36 22-23 >994 240	M18SHS	197/144
BCLL 0.0 *	Rep Stress Incr YES	WB 0.91	Horz(CT) 0.08 13 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S	Wind(LL) 0.12 22-23 >999 240	Weight: 197 lb	FT = 10%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-5-8 max.): 6-10.
BOT CHORD 2x4 SPF No.2 *Except* 20-23: 2x4 SPF 2100F 1.8E, 9-15: 2x3 SPF No.2	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x3 SPF No.2 *Except* 6-21,6-19,7-19,17-19,11-13: 2x4 SPF No.2, 2-24: 2x6 SPF No.2	WEBS 1 Row at midpt 3-22, 4-21, 6-19, 7-19

**REACTIONS.** (size) 24=0-3-8, 15=0-3-8, 13=0-3-8  
Max Horz 24=393(LC 8)  
Max Uplift 24=155(LC 8), 15=304(LC 5), 13=84(LC 9)  
Max Grav 24=1516(LC 15), 15=2012(LC 2), 13=472(LC 16)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-3507/754, 3-4=-2030/244, 4-6=-1316/216, 6-7=-714/152, 7-8=-2138/269, 8-9=-2062/244, 10-11=-458/67, 2-24=-1554/299, 11-13=-417/105  
BOT CHORD 23-24=-364/261, 22-23=-994/3014, 21-22=-401/1707, 19-21=-167/1017, 15-16=-1710/336, 9-16=-1580/339, 14-15=0/342, 13-14=-2/335  
WEBS 3-23=-183/686, 3-22=-1320/599, 4-22=0/513, 4-21=-954/320, 6-21=-139/916, 6-19=-670/171, 7-19=-832/237, 17-19=-242/1680, 7-17=-182/1485, 9-17=-358/2566, 10-15=-525/8, 2-23=-685/2891

- 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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) All plates are MT20 plates unless otherwise indicated.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 7) Bearing at joint(s) 24 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) 13 except (jt=lb) 24=155, 15=304.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 12, 2021

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**MiTek**  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174493
210341	C1	Monopitch	2	1		

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:10 2021 Page 1

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0-10-8 7-1-5 15-0-0  
0-10-8 7-1-5 7-10-11

Scale = 1:59.6

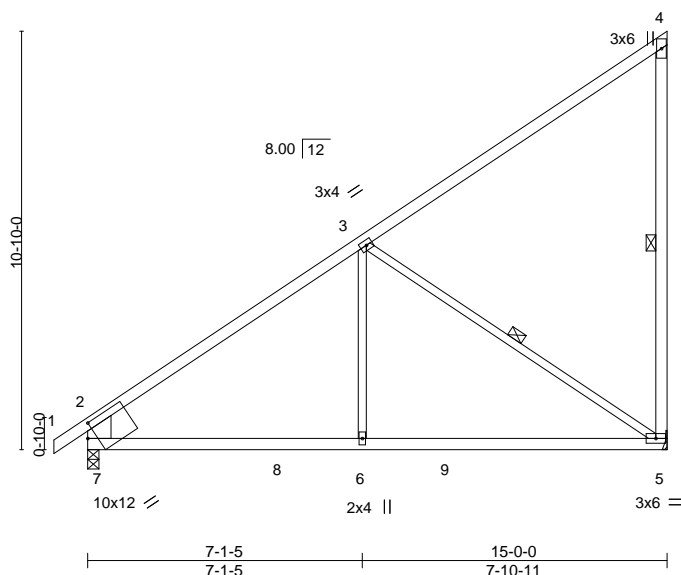


Plate Offsets (X,Y)--	[7:0-2-11,0-4-0]								
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.74	Vert(LL)	-0.13	5-6	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.53	Vert(CT)	-0.24	5-6	>725		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.65	Horz(CT)	0.01	5	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S	Wind(LL)	-0.10	5-6	>999	Weight: 64 lb	FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\*  
4-5: 2x4 SPF No.2, 2-7: 2x8 SP DSS

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-5-2 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 4-5, 3-5

#### REACTIONS.

(size) 5=Mechanical, 7=0-3-8  
Max Horz 7=427(LC 5)  
Max Uplift 5=199(LC 8), 7=73(LC 8)  
Max Grav 5=849(LC 15), 7=811(LC 16)

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

TOP CHORD 2-3=-925/54, 3-4=-299/147, 4-5=-259/112, 2-7=-690/121  
BOT CHORD 6-7=-179/737, 5-6=-179/737  
WEBS 3-6=0/404, 3-5=-825/286

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7 except (jt=lb) 5=199.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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**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	Lot 101 MN	I45174494
210341	C2	Monopitch	5	1		

Wheeler Lumber, Waverly, KS - 66871,

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ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-diYNFBsGZAem1ThHMPvOG0zmKjueNBbIX5SutPzbh2A

0-10-8 2-3-8 7-1-6 13-0-0 15-0-0  
0-10-8 2-3-8 4-9-13 5-10-10 2-0-0

Scale = 1:65.6

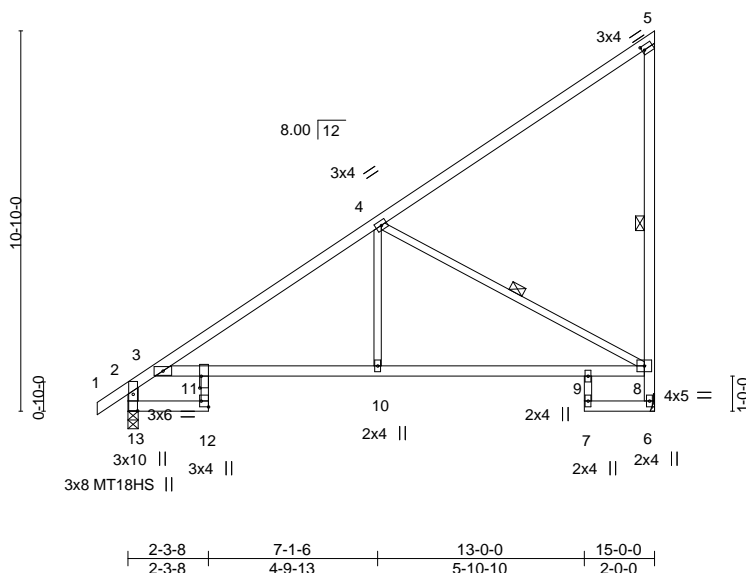


Plate Offsets (X,Y)--										[5:0-0-13,0-1-8], [11:0-4-0,0-0-8], [12:Edge,0-2-8], [13:0-5-10,0-1-8]									
<b>LOADING</b> (psf)		<b>SPACING-</b>		2-0-0		<b>CSI.</b>		<b>DEFL.</b>		in (loc)		l/defl		L/d		<b>PLATES</b>		<b>GRIP</b>	
TCLL	25.0	Plate Grip DOL		1.15		TC 0.79		Vert(LL)		-0.13 10-11		>999		360		MT20		197/144	
TCDL	10.0	Lumber DOL		1.15		BC 0.76		Vert(CT)		-0.24 10-11		>721		240		MT18HS		197/144	
BCLL	0.0 *	Rep Stress Incr		YES		WB 0.59		Horz(CT)		0.15 6		n/a		n/a					
BCDL	10.0	Code IRC2018/TPI2014				Matrix-S		Wind(LL)		0.24 10-11		>748		240		Weight: 66 lb		FT = 10%	

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
11-12,7-9: 2x3 SPF No.2  
WEBS 2x4 SPF No.2 \*Except\*  
4-10,4-8: 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-0-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 5-6, 4-8

#### REACTIONS.

(size) 6=Mechanical, 13=0-3-8  
Max Horz 13=415(LC 8)  
Max Uplift 6=273(LC 8)  
Max Grav 6=690(LC 15), 13=736(LC 1)

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

TOP CHORD 2-3=-512/0, 3-4=-905/16, 6-8=-661/287, 2-13=-748/87  
BOT CHORD 3-11=-114/522, 10-11=-318/745, 9-10=-318/745, 8-9=-321/753  
WEBS 4-10=0/368, 4-8=-830/358

#### 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) gable end zone; cantilever left and right exposed; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=273.
- 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.



March 12, 2021

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 210341	Truss C3	Truss Type GABLE	Qty 1	Ply 1	Lot 101 MN I45174495
Job Reference (optional)					

Wheeler Lumber, Waverly, KS - 66871,

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ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-5u6mTXtuKTmdecGTw6RdpEW0I7MU6m3SmlB2Przbh29

-0-10-8 15-0-0  
0-10-8 15-0-0

Scale = 1:63.2

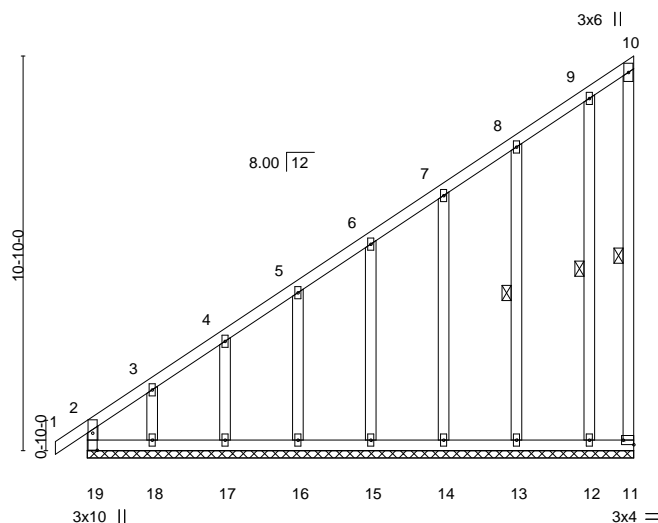


Plate Offsets (X,Y)--		[11:Edge,0-1-8], [19:0-5-10,0-1-8]	
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.49
TCDL 10.0	Lumber DOL	1.15	BC 0.21
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.12
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-R
			<b>DEFL.</b> in (loc) l/defl L/d
			Vert(LL) -0.01 1 n/r 120
			Vert(CT) -0.01 1 n/r 120
			Horz(CT) -0.00 11 n/a n/a
			<b>PLATES</b> <b>GRIP</b>
			MT20 197/144
			Weight: 95 lb FT = 10%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 10-11, 8-13, 9-12

#### REACTIONS.

All bearings 15-0-0.  
(lb) - Max Horz 19=426(LC 5)  
Max Uplift All uplift 100 lb or less at joint(s) 17, 16, 15, 14, 13, 12 except 19=146(LC 6), 11=119(LC 7), 18=226(LC 8)  
Max Grav All reactions 250 lb or less at joint(s) 11, 18, 17, 16, 15, 14, 13, 12 except 19=345(LC 5)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-19=269/118, 2-3=413/261, 3-4=326/210, 4-5=298/191, 5-6=259/167

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 16, 15, 14, 13, 12 except (jt=lb) 19=146, 11=119, 18=226.
- 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.



March 12, 2021

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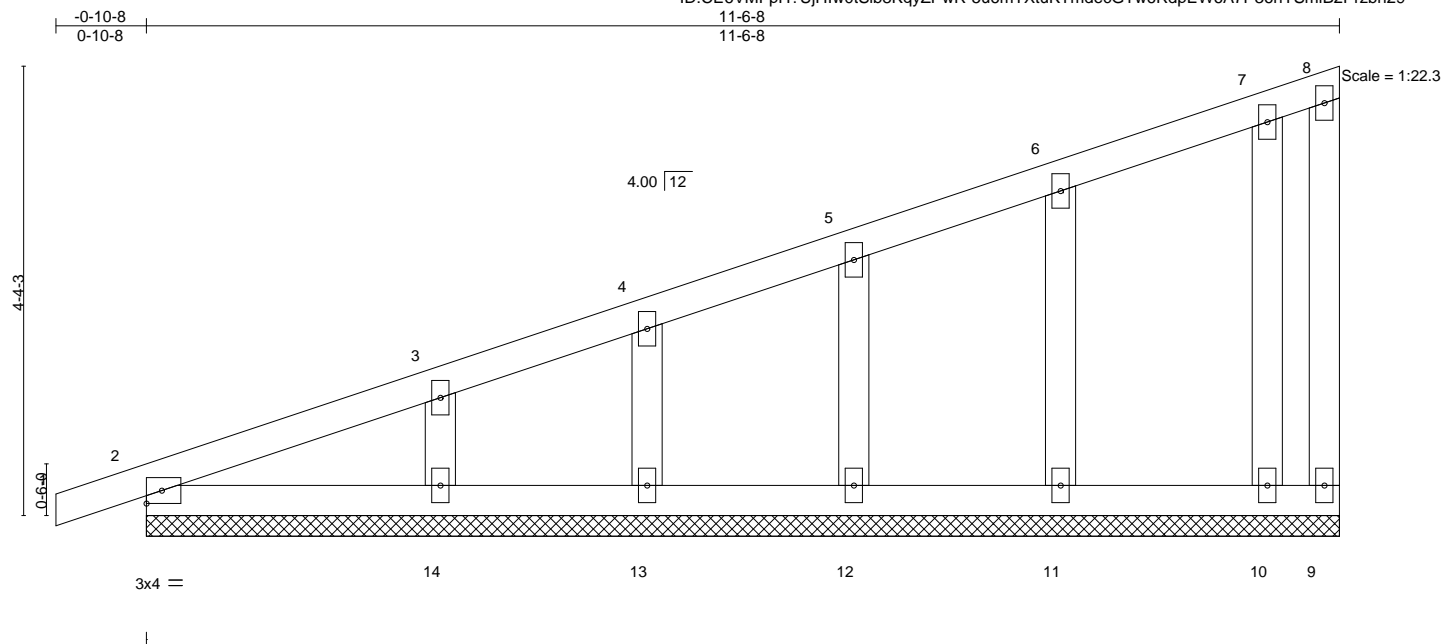


Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174496
210341	D1	GABLE	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-5u6mTXtuKTmdecGTw6RdpEW6A7P36nYSmlB2Przbh29



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.08	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	-0.00	9	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						Weight: 45 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

All bearings 11-6-8.

(lb) - Max Horz 2=180(LC 5)

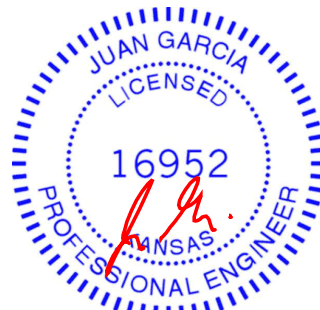
Max Uplift All uplift 100 lb or less at joint(s) 9, 2, 14, 13, 12, 11, 10

Max Grav All reactions 250 lb or less at joint(s) 9, 2, 14, 13, 12, 11, 10

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9, 2, 14, 13, 12, 11, 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.



March 12, 2021

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

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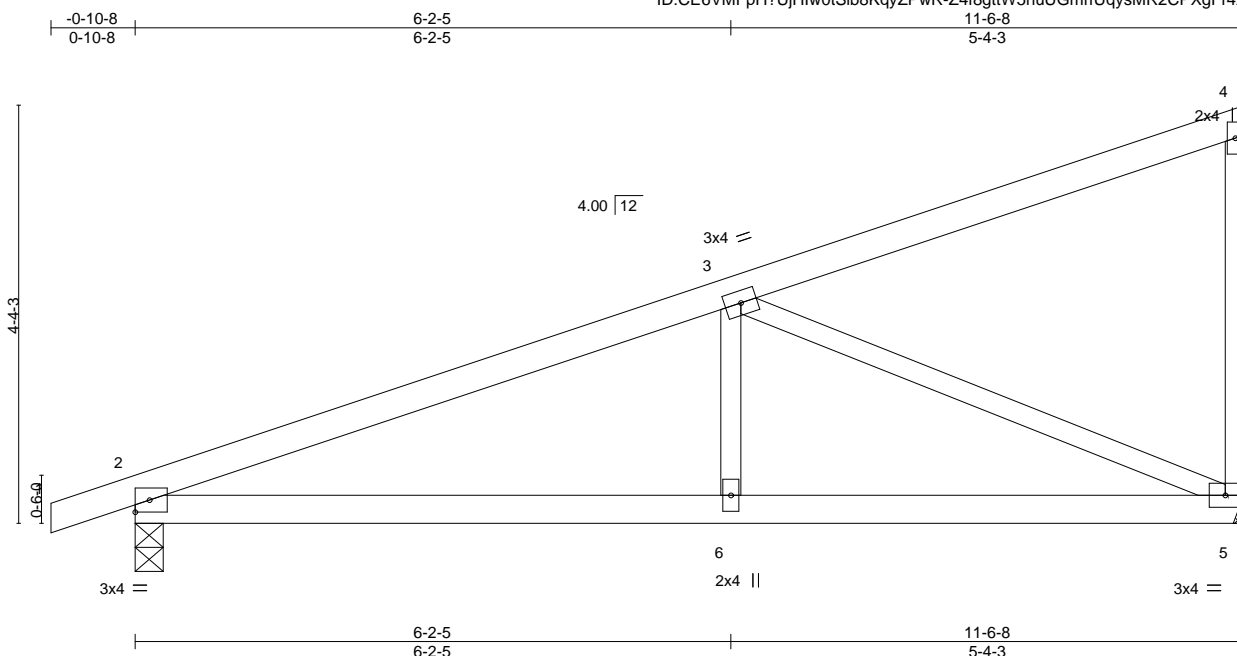


Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174497
210341	D2	Monopitch	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-Z4f8gttW5nuUGmrfUqysMR2CPXgFr4xb\_PxbxHzbh28



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	L/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.43	Vert(LL)	-0.04	2-6	>999	360	MT20	197/144
BCDL 10.0	Lumber DOL	1.15	BC 0.37	Vert(CT)	-0.09	2-6	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.66	Horz(CT)	0.01	5	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S	Wind(LL)	0.03	2-6	>999	240	Weight: 37 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-7-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 5=Mechanical, 2=0-3-8  
Max Horz 2=181(LC 7)  
Max Uplift 5=109(LC 8), 2=126(LC 4)  
Max Grav 5=505(LC 1), 2=583(LC 1)

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

TOP CHORD 2-3=-877/127  
BOT CHORD 2-6=-147/760, 5-6=-147/760  
WEBS 3-6=0/269, 3-5=-817/202

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=109, 2=126.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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

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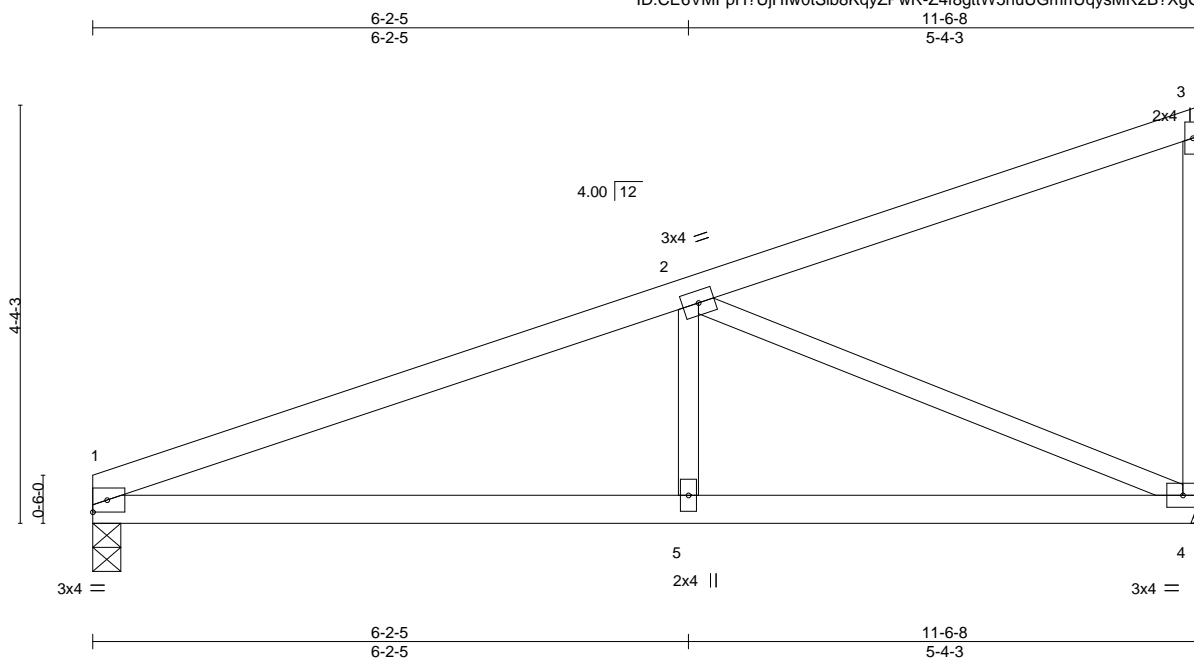
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174498
210341	D3	Monopitch	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:13 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-Z4f8gttW5nuUGmrfUqysMR2B?XgCr4nb\_PxbxHzbh28



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	L/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.46	Vert(LL)	-0.04	1-5	>999	360	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.37	Vert(CT)	-0.09	1-5	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.67	Horz(CT)	0.01	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S	Wind(LL)	0.03	1-5	>999	240	Weight: 36 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

(size) 1=0-3-8, 4=Mechanical  
Max Horz 1=179(LC 5)  
Max Uplift 1=81(LC 4), 4=110(LC 8)  
Max Grav 1=508(LC 1), 4=508(LC 1)

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

TOP CHORD 1-2=-872/133  
BOT CHORD 1-5=-151/772, 4-5=-151/772  
WEBS 2-5=0/271, 2-4=-830/206

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 4=110.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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

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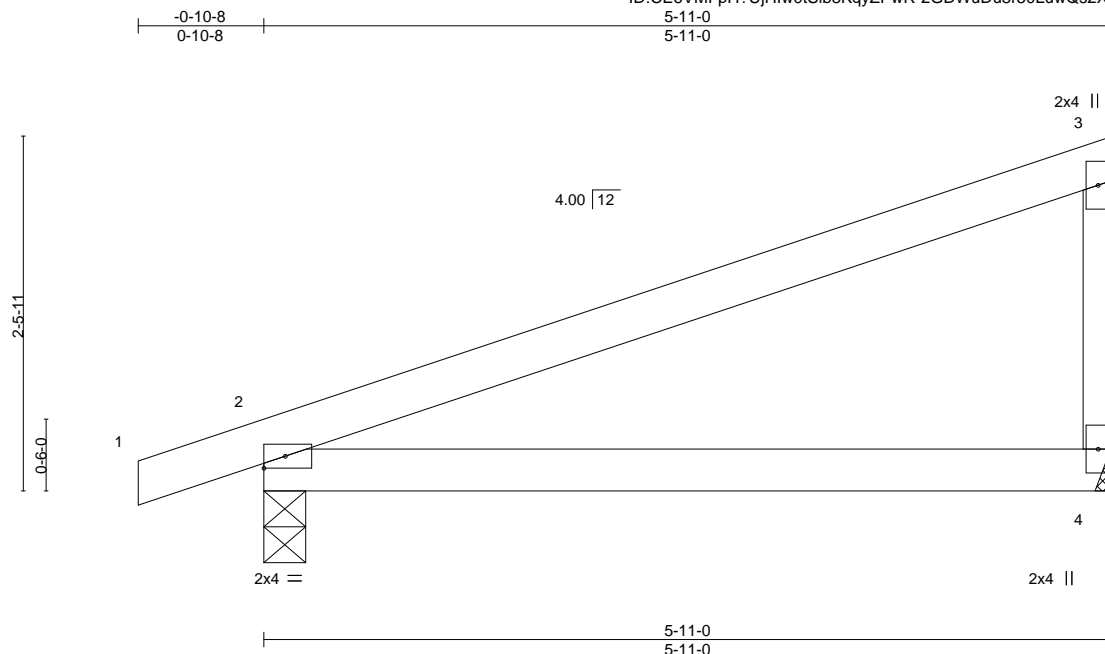
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 210341	Truss D4	Truss Type Monopitch	Qty 4	Ply 1	Lot 101 MN Job Reference (optional)	I45174499
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Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:14 2021 Page 1

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Scale: 3/4"=1'

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.59	Vert(LL)	-0.06	2-4	>999	360	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.34	Vert(CT)	-0.12	2-4	>550	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P	Wind(LL)	0.00	2	****	240		
									Weight: 17 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

(size) 4=Mechanical, 2=0-3-8  
Max Horz 2=97(LC 5)  
Max Uplift 4=54(LC 8), 2=87(LC 4)  
Max Grav 4=249(LC 1), 2=333(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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**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



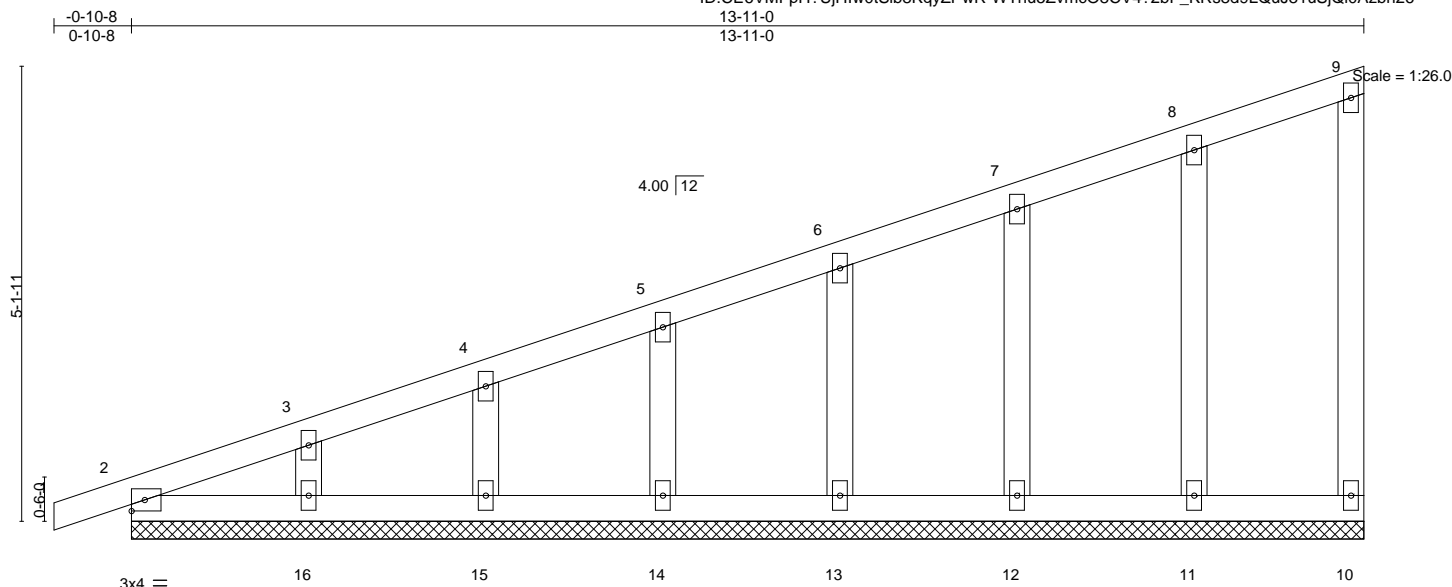
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174500
210341	D5	GABLE	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:15 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-WTnu5ZvmcO8CV4?2bF\_KRs8d9LQuJ81uSjQioAzbh26



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	L/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	0.00	1	n/r	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	0.00	1	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	-0.00	10	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S					Weight: 55 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

All bearings 13-11-0.

(lb) - Max Horz 2=215(LC 5)

Max Uplift All uplift 100 lb or less at joint(s) 10, 2, 16, 15, 14, 13, 12, 11

Max Grav All reactions 250 lb or less at joint(s) 10, 2, 16, 15, 14, 13, 12, 11

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10, 2, 16, 15, 14, 13, 12, 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.



March 12, 2021

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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



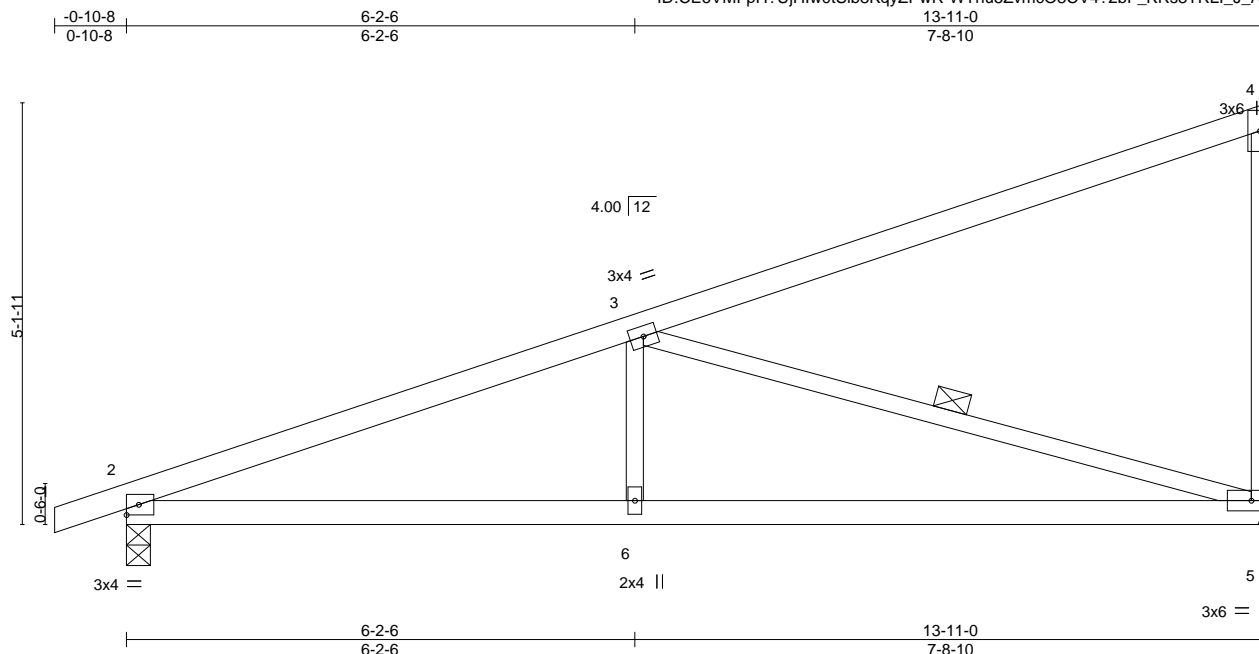
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174501
210341	D6	Monopitch	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:15 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-WTnu5ZvmcO8CV4?2bF\_KRs8TRLI\_J\_AuSjQI0Azbh26



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.72	Vert(LL)	-0.11	5-6	>999	360	MT20	197/144
BCDL 10.0	Lumber DOL	1.15	BC 0.54	Vert(CT)	-0.22	5-6	>739	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.68	Horz(CT)	0.02	5	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S	Wind(LL)	0.04	6	>999	240		
									Weight: 45 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-5-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 3-5

#### REACTIONS.

(size) 5=Mechanical, 2=0-3-8  
Max Horz 2=216(LC 5)  
Max Uplift 5=132(LC 8), 2=143(LC 4)  
Max Grav 5=612(LC 1), 2=689(LC 1)

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

TOP CHORD 2-3=-1240/187  
BOT CHORD 2-6=-224/1108, 5-6=-224/1108  
WEBS 3-6=0/327, 3-5=-1131/278

#### NOTES-

- 1) 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=132, 2=143.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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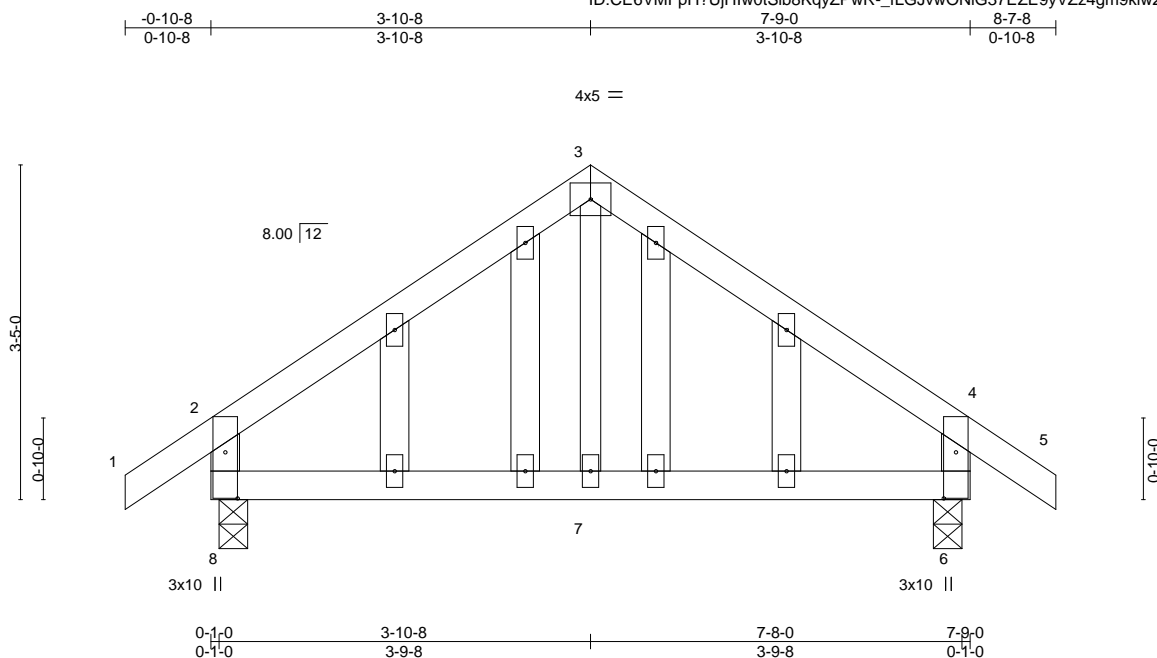
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017





Scale = 1:23.5

Plate Offsets (X,Y)-- [6:0-5-10,0-1-8], [8:0-5-10,0-1-8]													
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d				PLATES		GRIP	
TCLL	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.01	7	>999	360	MT20	197/144	
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	6-7	>999	240			
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	6	n/a	n/a			
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R		Wind(LL)	-0.00	7-8	>999	240	Weight: 34 lb	FT = 10%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SPF No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SPF No.2 *Except*		
	3-7: 2x3 SPF No.2		
OTHERS	2x4 SPF No.2		

**REACTIONS.** (size) 8=0-3-8, 6=0-3-8  
 Max Horz 8=-106(LC 6)  
 Max Uplift 8=-60(LC 8), 6=-60(LC 9)  
 Max Grav 8=407(LC 1), 6=407(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-3=-328/64, 3-4=-328/63, 2-8=-360/90, 4-6=-360/90

**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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable studs spaced at 1-4-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 6.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

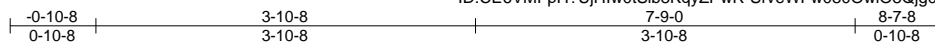


Job 210341	Truss E2	Truss Type Common	Qty 2	Ply 1	Lot 101 MN I45174503
Job Reference (optional)					

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:23.5

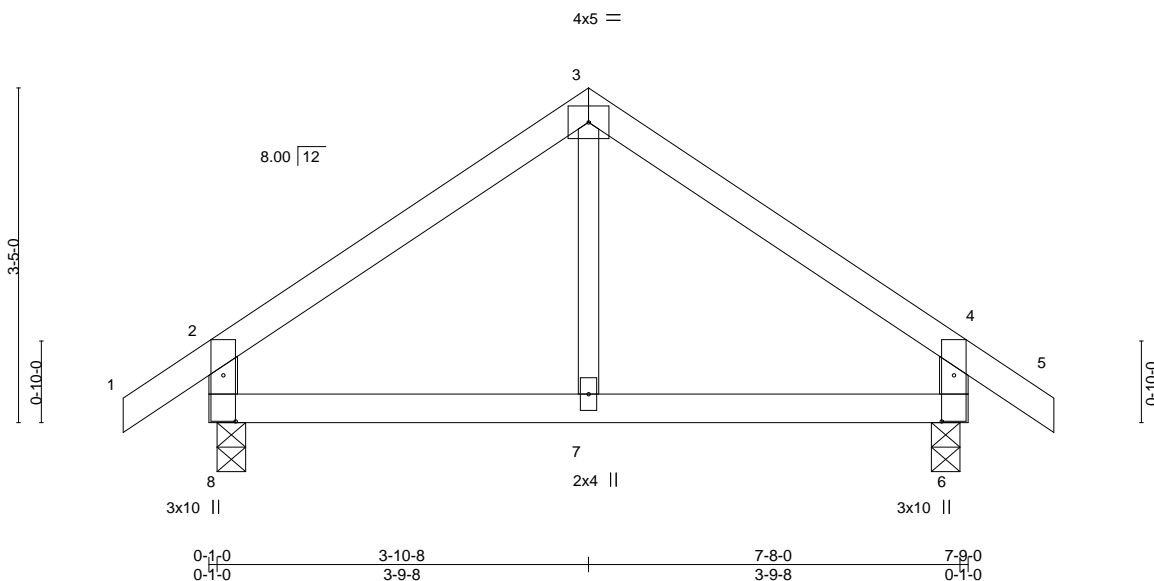


Plate Offsets (X,Y)--		[6:0-5-10,0-1-8], [8:0-5-10,0-1-8]							
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES GRIP	
TCLL	25.0	Plate Grip DOL 1.15		TC	0.21	Vert(LL)	-0.01 7 >999 360	MT20	197/144
TCDL	10.0	Lumber DOL 1.15		BC	0.12	Vert(CT)	-0.01 6-7 >999 240		
BCLL	0.0 *	Rep Stress Incr YES		WB	0.05	Horz(CT)	0.00 6 n/a n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R		Wind(LL)	-0.00 7-8 >999 240	Weight: 25 lb	FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2 \*Except\*  
3-7: 2x3 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 8=0-3-8, 6=0-3-8  
Max Horz 8=106(LC 6)  
Max Uplift 8=60(LC 8), 6=60(LC 9)  
Max Grav 8=407(LC 1), 6=407(LC 1)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-328/64, 3-4=-328/63, 2-8=-360/90, 4-6=-360/90

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 6.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174504
210341	G1	Common Supported Gable	1	1		

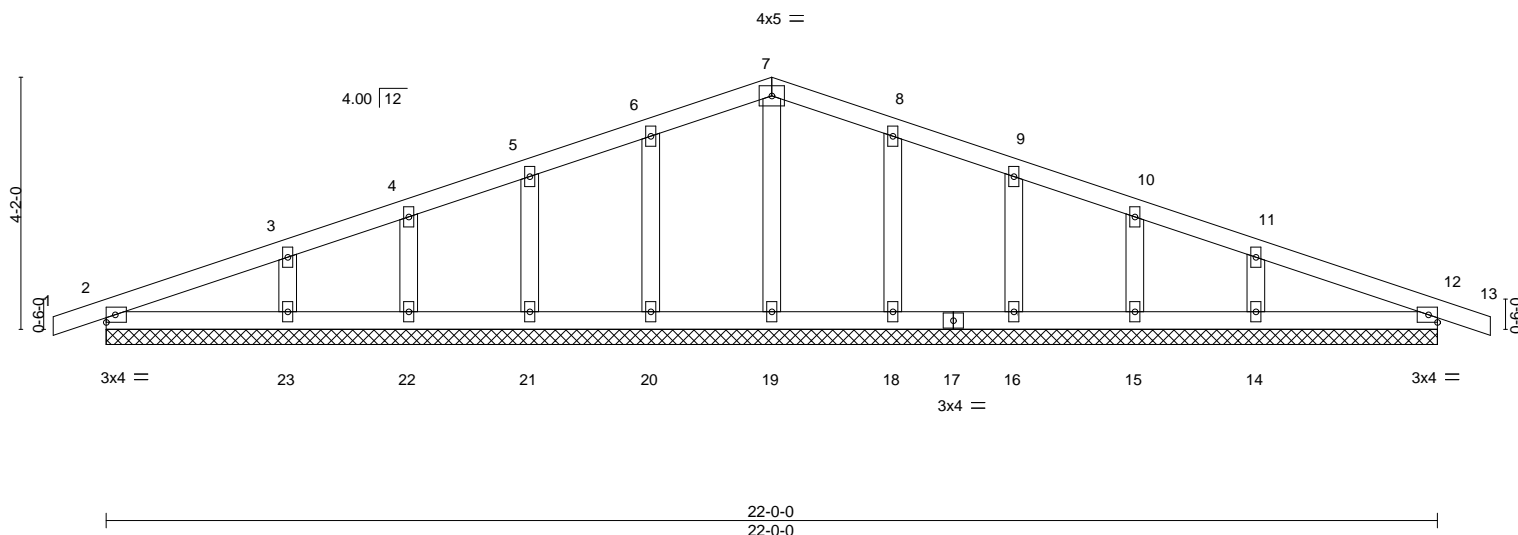
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:17 2021 Page 1

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0-10-8	11-0-0	22-0-0	22-10-8
0-10-8	11-0-0	11-0-0	0-10-8

Scale = 1:38.1



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.08	Vert(LL)	0.00	13	n/r	120	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	0.00	13	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	12	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						Weight: 76 lb	FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

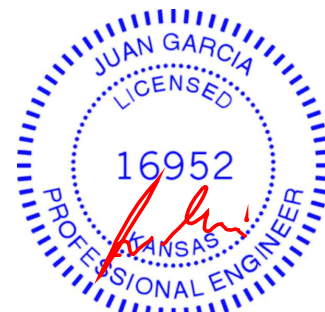
#### REACTIONS.

All bearings 22-0-0.  
(lb) - Max Horz 2=70(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 21, 22, 23, 18, 16, 15, 14, 12  
Max Grav All reactions 250 lb or less at joint(s) 2, 19, 20, 21, 22, 18, 16, 15, 12 except 23=261(LC 21), 14=261(LC 22)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20, 21, 22, 23, 18, 16, 15, 14, 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.



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	145174505
210341	G2	Common	5	1	Job Reference (optional)	

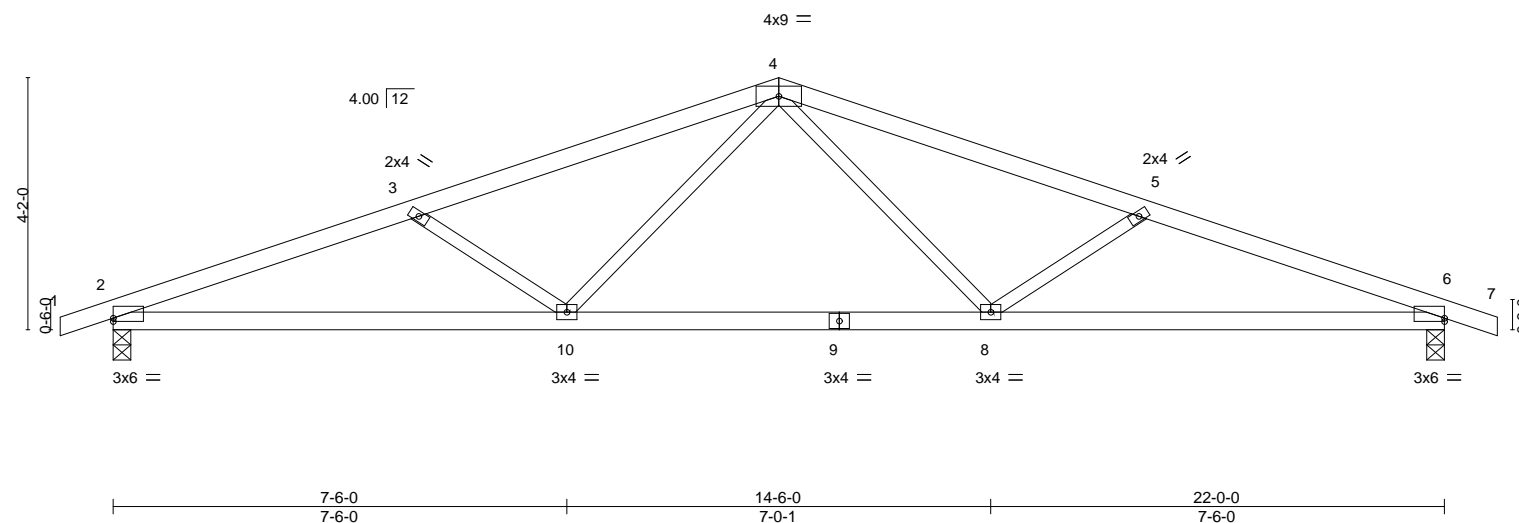
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:18 2021 Page 1

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0-10-8	5-0-10	11-0-0	16-11-6	22-0-0	22-10-8
0-10-8	5-0-10	5-11-6	5-11-6	5-0-10	0-10-8

Scale = 1:38.1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.52	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.67	Vert(LL) -0.12 8-10 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.18	Vert(CT) -0.22 2-10 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.06 6 n/a n/a		
	Code IRC2018/TPI2014		Wind(LL) 0.08 8-10 >999 240	Weight: 67 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-5-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 6=0-3-8  
Max Horz 2=70(LC 12)  
Max Uplift 2=187(LC 4), 6=187(LC 5)  
Max Grav 2=1048(LC 1), 6=1048(LC 1)

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

TOP CHORD 2-3=-2209/355, 3-4=-1883/253, 4-5=-1883/253, 5-6=-2209/355  
BOT CHORD 2-10=-335/2029, 8-10=-127/1384, 6-8=-283/2029  
WEBS 4-8=-52/528, 5-8=-417/224, 4-10=-52/528, 3-10=-417/223

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=187, 6=187.
- 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.



March 12, 2021

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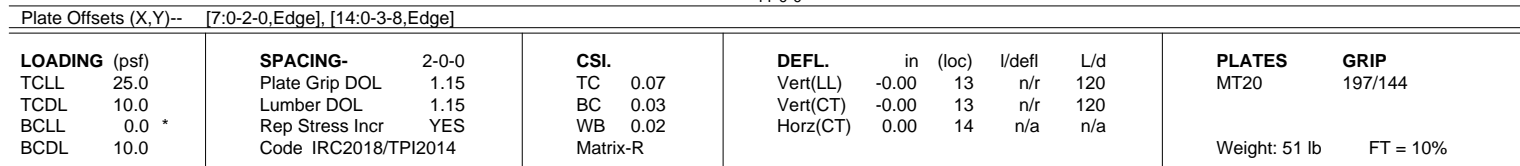
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:19 2021 Page 1  
ID:CE6VMFPpH?UjHlw0tSib8KqyZPwR-OE1PxyHgdee\_hlpq43GbllfyoFyMUNKOw9xzbh22  
-0-10-8 5-6-0 11-0-0 11-10-8  
0-10-8 5-6-0 5-6-0 0-10-8  
3x4 = Scale = 1:28.5



**REACTIONS.** All bearings 11-0-0.  
 (lb) - Max Horz 23=133(LC 7)  
 Max Uplift All uplift 100 lb or less at joint(s) 23, 14, 22, 21, 20, 17, 16, 15  
 Max Grav All reactions 250 lb or less at joint(s) 23, 14, 22, 21, 20, 19, 18, 17, 16, 15

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

- 
- A circular professional engineer seal for the State of Missouri. The outer ring contains the text "STATE OF MISSOURI" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. In the center, the name "JUAN GARCIA" is displayed above the number "E-2000162101". The seal is blue and white.



Job 210341	Truss H2	Truss Type GABLE	Qty 1	Ply 1	Lot 101 MN	I45174507
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Wheeler Lumber, Waverly, KS 66871

8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Mar 12 13:29:48 2021 Page 1  
ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-BFR232i8ql6CVdu0v2st3QLFY2SdzFKpuAGOMzbf?H

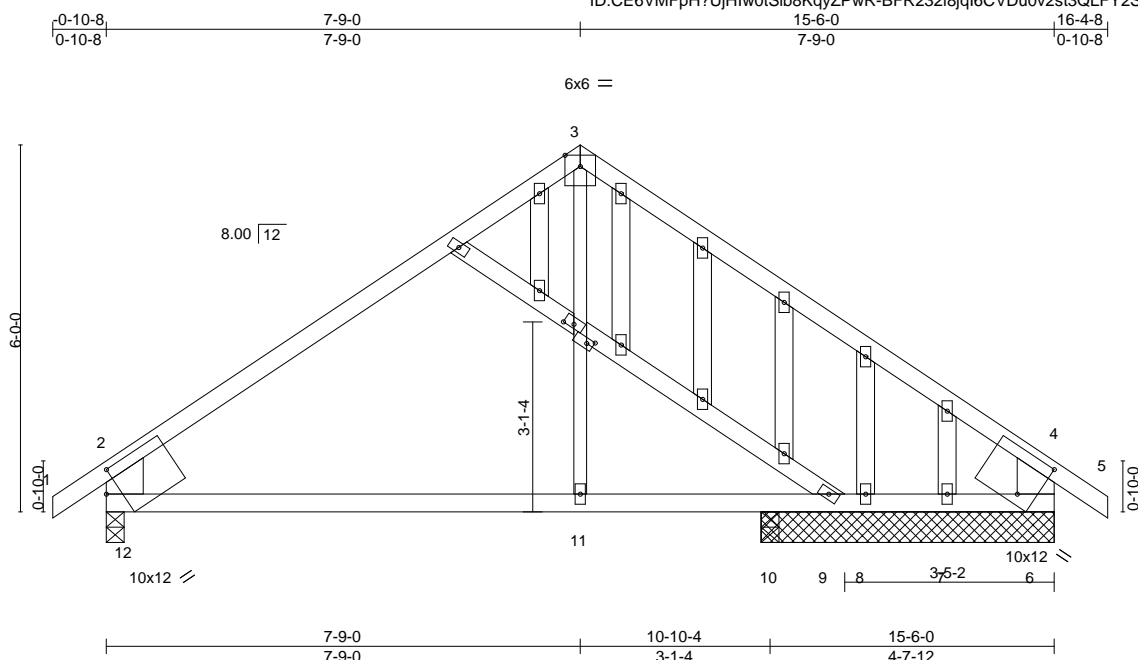


Plate Offsets (X,Y)-- [6:0-3-6,0-8-1], [12:0-2-11,0-4-0], [14:0-1-5,0-1-0], [14:0-2-0,0-0-12]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.73	Vert(LL)	-0.08 11-12	>999	360	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.38	Vert(CT)	-0.17 11-12	>760	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.08	Horz(CT)	0.01 6	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-R	Wind(LL)	-0.04 11	>999	240		
								Weight: 74 lb	FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2 \*Except\*  
3-11: 2x3 SPF No.2, 2-12,4-6: 2x8 SP DSS  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-3-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

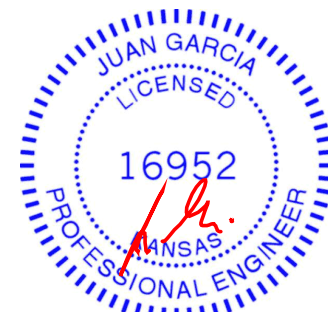
All bearings 4-9-8 except (jt=length) 12=0-3-8, 10=0-3-8.  
(lb) - Max Horz 12=177(LC 7)  
Max Uplift All uplift 100 lb or less at joint(s) 6, 8, 10 except 12=125(LC 8), 9=132(LC 8), 7=258(LC 9)  
Max Grav All reactions 250 lb or less at joint(s) 9, 8, 7, 10 except 12=740(LC 1), 6=680(LC 1)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-713/127, 3-4=-715/172, 2-12=-675/192, 4-6=-680/177  
BOT CHORD 11-12=-40/489, 10-11=-40/489, 9-10=-40/489, 8-9=-40/489, 7-8=-40/489, 6-7=-40/489  
WEBS 3-11=0/267

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 8, 10 except (jt=lb) 12=125, 9=132, 7=258.
- 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.



March 12, 2021

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ANSI/TPI 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 210341	Truss H3	Truss Type Common	Qty 5	Ply 1	Lot 101 MN I45174508
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Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:21 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-Kd89MczXCEuMD?SCyV5kg7NvelLajqAmqet0Dqzbh20

0-10-8	7-9-0	15-6-0	16-4-8
0-10-8	7-9-0	7-9-0	0-10-8

6x6 =

Scale = 1:36.6

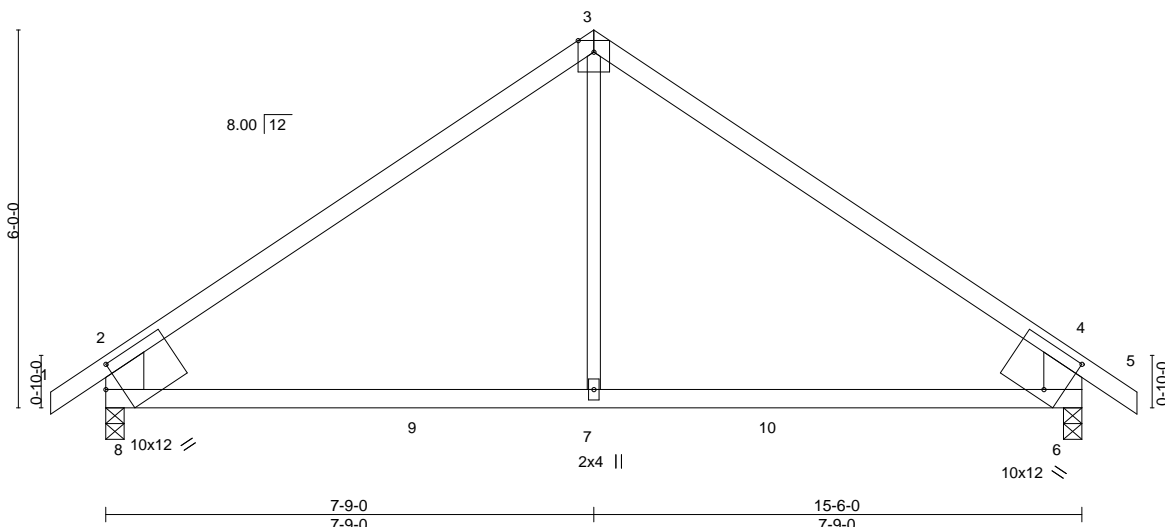


Plate Offsets (X,Y)--		[6:0-3-6,0-8-1], [8:0-2-11,0-4-0]							
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc) l/defl L/d	PLATES	GRIP
TCLL 25.0		Plate Grip DOL	1.15	TC 0.67		Vert(LL)	-0.10 7-8 >999 360	MT20	197/144
TCDL 10.0		Lumber DOL	1.15	BC 0.53		Vert(CT)	-0.16 7-8 >999 240		
BCLL 0.0 *		Rep Stress Incr	YES	WB 0.13		Horz(CT)	0.01 6 n/a n/a		
BCDL 10.0		Code IRC2018/TPI2014		Matrix-R		Wind(LL)	0.06 7-8 >999 240	Weight: 50 lb	FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x8 SP DSS \*Except\*  
3-7: 2x3 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-1-14 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 8=0-3-8, 6=0-3-8  
Max Horz 8=177(LC 7)  
Max Uplift 8=102(LC 8), 6=102(LC 9)  
Max Grav 8=831(LC 15), 6=831(LC 16)

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

TOP CHORD 2-3=-835/126, 3-4=-835/126, 2-8=-718/163, 4-6=-718/163  
BOT CHORD 7-8=-2/621, 6-7=-2/621  
WEBS 3-7=0/419

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=102, 6=102.
- 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.



March 12, 2021

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**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 210341	Truss H4	Truss Type Common Girder	Qty 1	Ply 2	Lot 101 MN	I45174509
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Wheeler Lumber, Waverly, KS 66871

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-E7rjCAuYBRB\_WosnoZpN\_DXwkb9Ydi0XGjZQ\_zbf?2

8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Mar 12 13:30:03 2021 Page 1

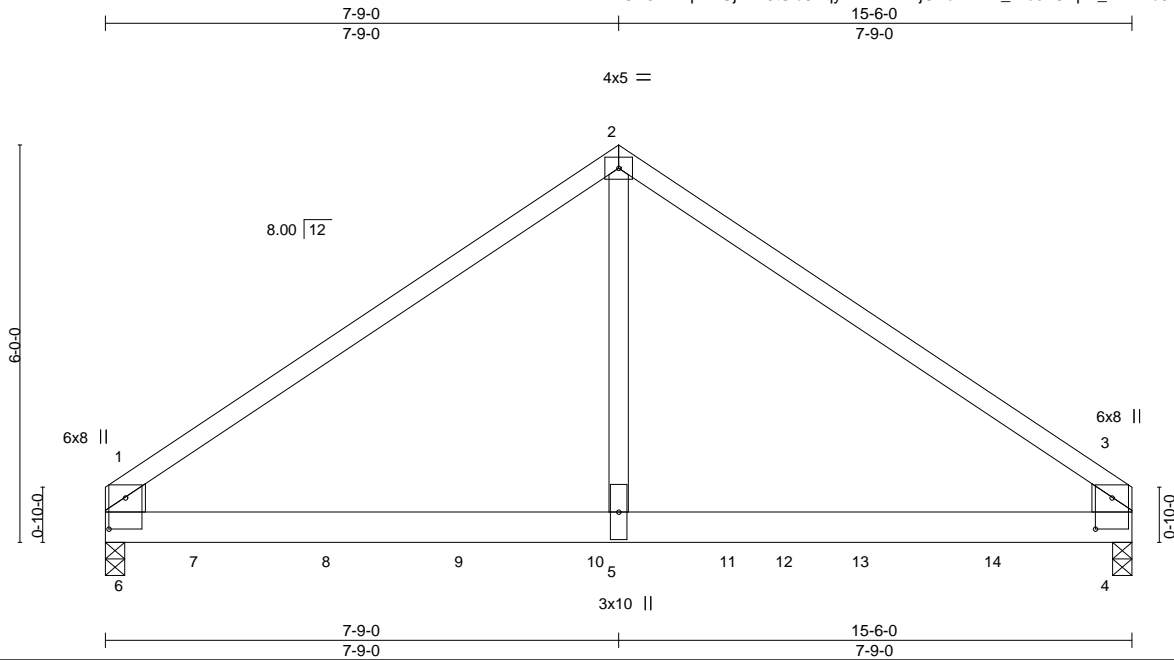


Plate Offsets (X,Y)-- [1:0-5-10,0-3-0], [3:0-5-10,0-3-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.65	Vert(LL)	-0.06	5-6	>999	360	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.34	Vert(CT)	-0.11	5-6	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.27	Horz(CT)	0.01	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-R	Wind(LL)	0.05	5-6	>999	240		
									Weight: 133 lb	FT = 10%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x6 SP 2400F 2.0E	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x8 SP DSS *Except* 2-5: 2x4 SPF No.2		

**REACTIONS.** (lb/size) 6=2629/0-3-8, 4=2471/0-3-8  
Max Horz 6=123(LC 5)  
Max Uplift 6=378(LC 8), 4=348(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=2610/408, 2-3=2610/408, 1-6=1634/260, 3-4=1635/261  
BOT CHORD 6-7=266/2047, 7-8=266/2047, 8-9=266/2047, 9-10=266/2047, 5-10=266/2047,  
5-11=266/2047, 11-12=266/2047, 12-13=266/2047, 13-14=266/2047, 4-14=266/2047  
WEBS 2-5=326/2232

- 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, 2x8 - 2 rows staggered 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=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCdL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=378, 4=348.
  - 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.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 537 lb down and 111 lb up at 1-5-4, 537 lb down and 111 lb up at 3-5-4, 537 lb down and 111 lb up at 5-5-4, 537 lb down and 111 lb up at 7-5-4, 537 lb down and 111 lb up at 9-5-4, and 537 lb down and 111 lb up at 11-5-4, and 537 lb down and 111 lb up at 13-5-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15



March 12, 2021

Continued on page 2

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174509
210341	H4	Common Girder	1	2	Job Reference (optional)	

Wheeler Lumber, Waverly, KS 66871

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-E7rjCAuYBRB\_WosnOZpN\_DXwkb9Ydi0XGjZQ\_zbf?2

8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Mar 12 13:30:03 2021 Page 2

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-2=-70, 2-3=-70, 4-6=-20

Concentrated Loads (lb)

Vert: 7=-537(B) 8=-537(B) 9=-537(B) 10=-537(B) 11=-537(B) 13=-537(B) 14=-537(B)

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174510
210341	J1	Jack-Closed Supported Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

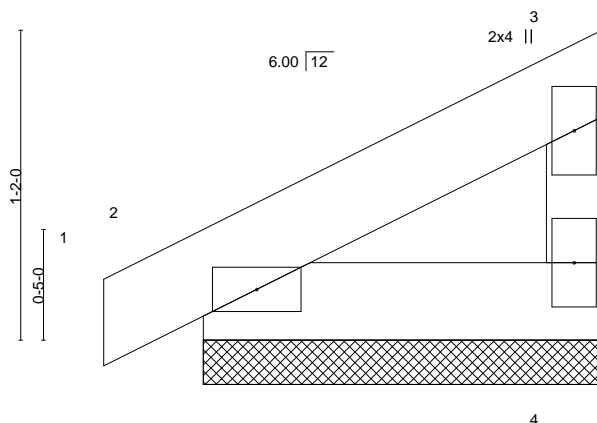
8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:22 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-ppiXZy\_9zY1Cr91OWDczDLwqW9ptSJTW3lcalGzbh2?

-0-4-8  
0-4-8

1-6-0  
1-6-0

Scale = 1:8.7



2x4 = 2x4 ||

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.03	Vert(LL)	-0.00	1	n/r	120	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	0.00	1	n/r	120	197/144
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	4	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						
								Weight: 5 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 1-6-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

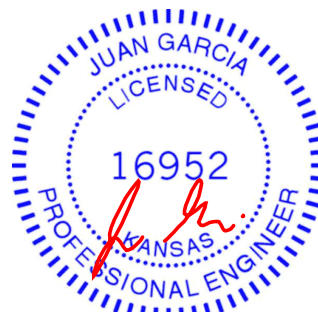
#### REACTIONS.

(size) 4=1-6-0, 2=1-6-0  
Max Horz 2=35(LC 5)  
Max Uplift 4=15(LC 8), 2=17(LC 8)  
Max Grav 4=59(LC 1), 2=93(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174511
210341	J2	Jack-Closed	2	1	Job Reference (optional)	

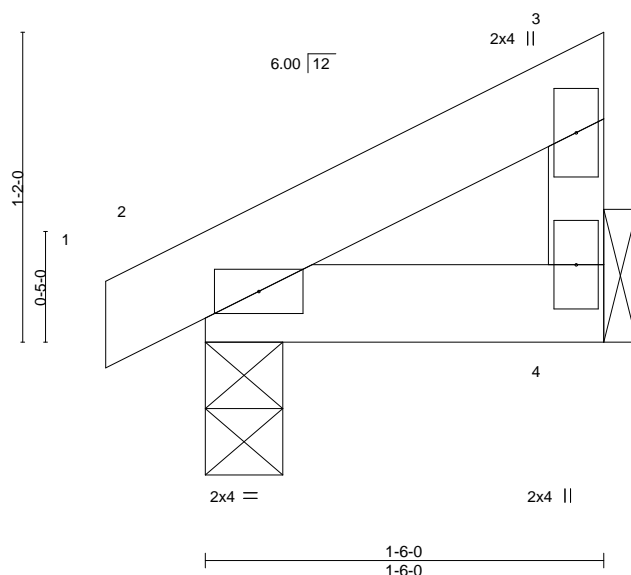
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:22 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-ppiXZy\_9zY1Cr91OWDczDLwqY9puSJTW3lcaGzbh2?

-0-4-8 1-6-0  
0-4-8 1-6-0

Scale = 1:8.7



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	L/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.02	Vert(LL)	-0.00	2	>999	360	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	2	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P	Wind(LL)	0.00	2	****	240	Weight: 5 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 1-6-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 4=Mechanical, 2=0-3-8  
Max Horz 2=35(LC 5)  
Max Uplift 4=15(LC 8), 2=17(LC 8)  
Max Grav 4=57(LC 1), 2=94(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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

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**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

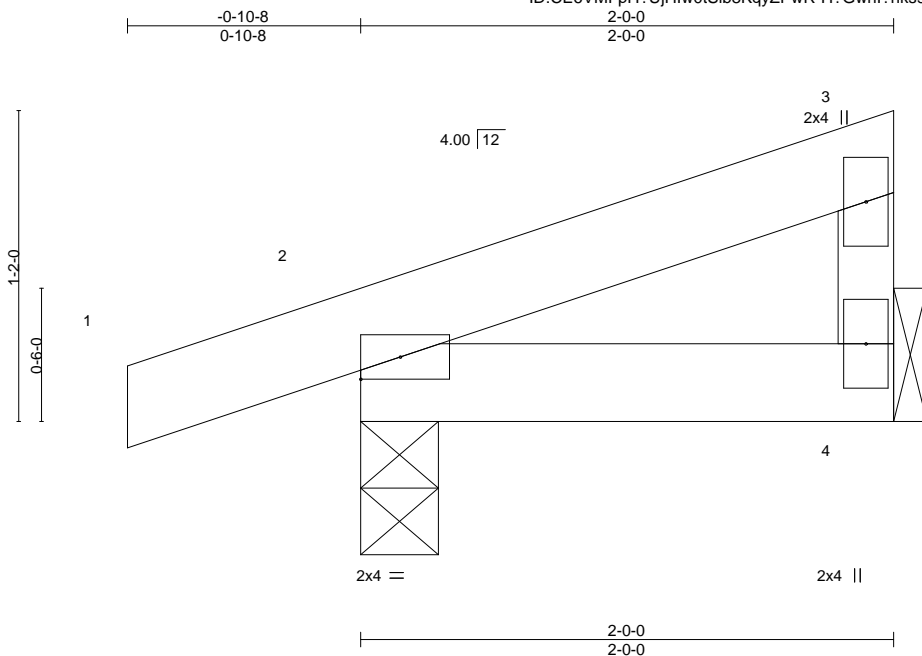


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 210341	Truss J3	Truss Type Jack-Closed	Qty 2	Ply 1	Lot 101 MN Job Reference (optional)	I45174512
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Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:23 2021 Page 1  
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Scale = 1:8.6

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	L/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.05	Vert(LL)	-0.00	2	>999	360	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	-0.00	2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P	Wind(LL)	0.00	2	****	240		
									Weight: 6 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

(size) 4=Mechanical, 2=0-3-8  
Max Horz 2=39(LC 5)  
Max Uplift 4=14(LC 8), 2=60(LC 4)  
Max Grav 4=69(LC 1), 2=163(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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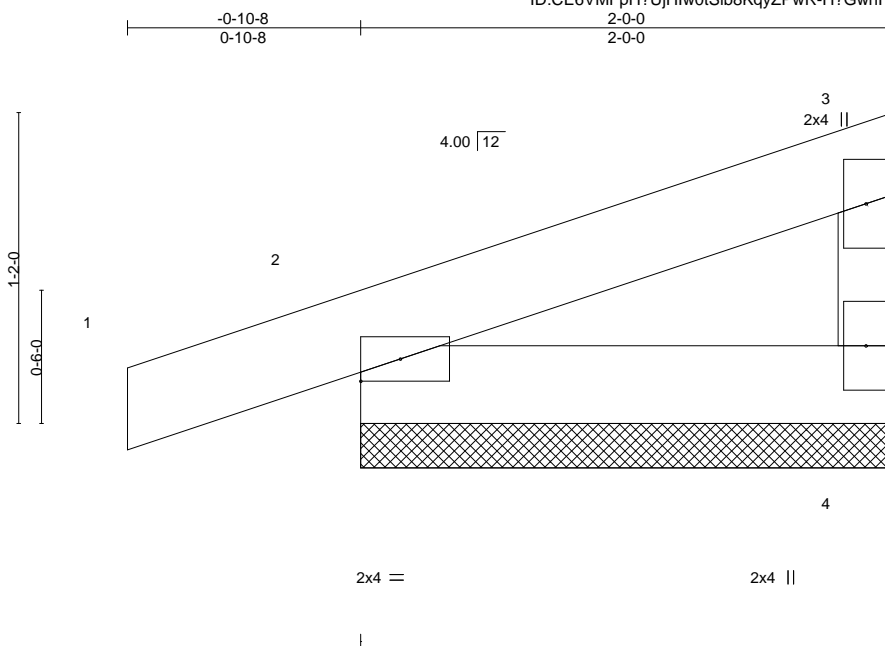


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174513
210341	J4	Jack-Closed Supported Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:23 2021 Page 1  
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Scale = 1:8.6

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	L/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.05	Vert(LL)	0.00	1	n/r	120	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 6 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

(size) 4=2-0-0, 2=2-0-0  
Max Horz 2=39(LC 5)  
Max Uplift 4=15(LC 8), 2=58(LC 4)  
Max Grav 4=71(LC 1), 2=161(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
- 8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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

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

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Chesterfield, MO 63017

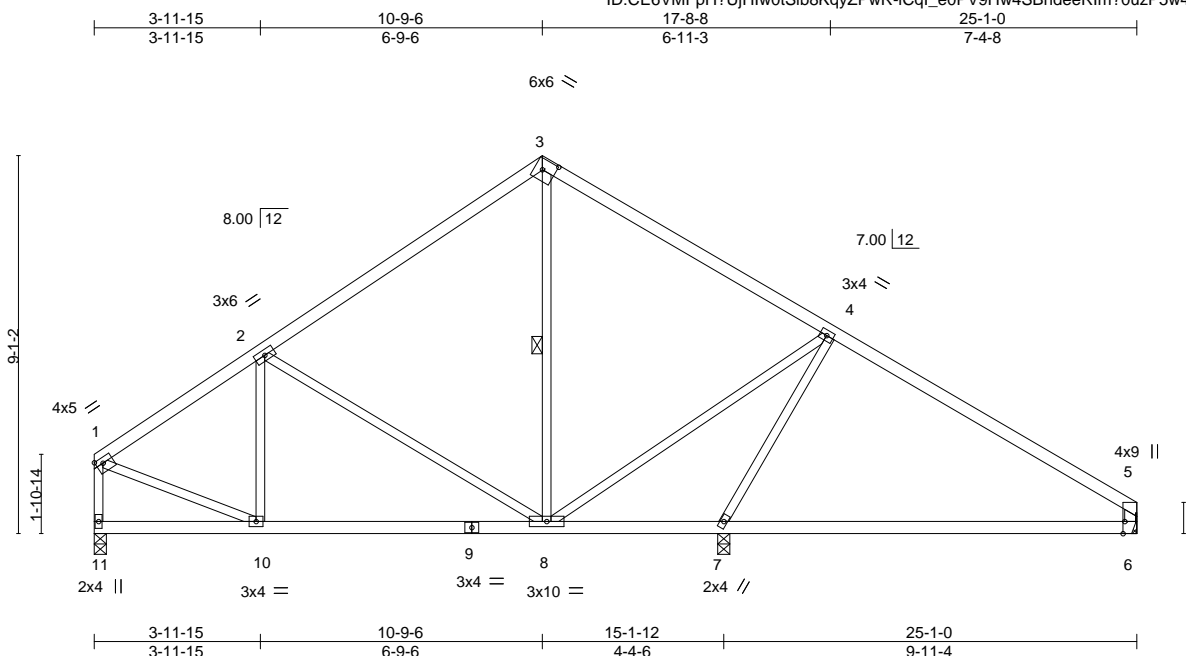


Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174514
210341	K1	Roof Special	7	1		

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:24 2021 Page 1

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Scale = 1:55.4

Plate Offsets (X,Y)--		[1:Edge,0-1-8], [3:0-3-11,0-3-0], [5:0-3-8,Edge]	
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.67	in (loc) l/defl L/d
TCDL 10.0	Lumber DOL 1.15	BC 0.42	Vert(LL) -0.20 6-7 >596 360
BCLL 0.0 *	Rep Stress Incr YES	WB 0.63	Vert(CT) -0.39 6-7 >302 240
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S	Horz(CT) 0.01 6 n/a n/a
			Wind(LL) 0.02 8-10 >999 240
			<b>PLATES</b> MT20 <b>GRIP</b> 197/144
			Weight: 95 lb FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2 \*Except\*  
 6-9: 2x4 SPF 2100F 1.8E  
 WEBS 2x3 SPF No.2 \*Except\*  
 5-6: 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 11=0-3-8, 7=0-3-8, 6=Mechanical  
 Max Horz 11=-251(LC 6)  
 Max Uplift 11=-81(LC 8), 7=-83(LC 9), 6=-91(LC 9)  
 Max Grav 11=747(LC 1), 7=931(LC 1), 6=557(LC 1)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-746/98, 2-3=-553/174, 3-4=-536/158, 4-5=-601/142, 1-11=-724/92, 5-6=-466/148  
 BOT CHORD 8-10=-128/683, 6-7=-36/424  
 WEBS 2-8=-361/194, 4-8=-112/472, 4-7=-872/211, 1-10=-55/643

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 7, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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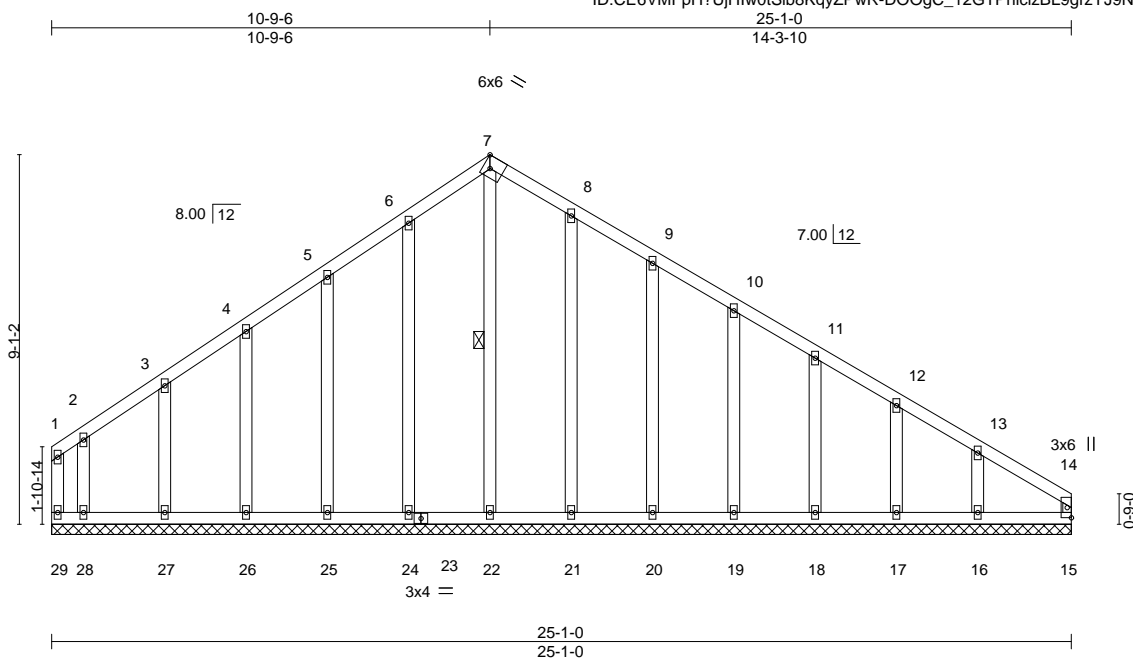


Plate Offsets (X,Y)-- [7:Edge,0-3-8]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d				PLATES GRIP		
TCLL	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	15	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 131 lb	FT = 10%

LUMBER-		BRACING-	
TOP CHORD	2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SPF No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SPF No.2 *Except*	WEBS	1 Row at midpt 7-22
	14-15: 2x3 SPF No.2		
OTHERS	2x4 SPF No.2		

**REACTIONS.** All bearings 25-1-0.  
(lb) - Max Horz 29=251(LC 4)  
Max Uplift All uplift 100 lb or less at joint(s) 22, 24, 25, 26, 27, 21, 20, 19, 18, 17 except 29=188(LC 6),  
15=103(LC 5), 28=197(LC 5), 16=125(LC 9)  
Max Grav All reactions 250 lb or less at joint(s) 29, 15, 22, 24, 25, 26, 27, 21, 20, 19, 18, 17 except  
28=268(LC 6), 16=266(LC 16)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 6-7=-96/258, 7-8=-102/262

**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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Truss to be fully sheathed on one face or securely braced against lateral movement (i.e. diagonal web).
- 7) Gable studs spaced at 2'-0" oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 2'-0" wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22, 24, 25, 26, 27, 21, 20, 19, 18, 17 except (jt=lb) 29=188, 15=103, 28=197, 16=125.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 12, 2021

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**WARNING – Velly design parameters are listed below and included with the key reference to AISC M14-15 16f, 17f, 18f, 19f, 20f, 21f, 22f, 23f, 24f, 25f, 26f, 27f, 28f, 29f, 30f, 31f, 32f, 33f, 34f, 35f, 36f, 37f, 38f, 39f, 40f, 41f, 42f, 43f, 44f, 45f, 46f, 47f, 48f, 49f, 50f, 51f, 52f, 53f, 54f, 55f, 56f, 57f, 58f, 59f, 60f, 61f, 62f, 63f, 64f, 65f, 66f, 67f, 68f, 69f, 70f, 71f, 72f, 73f, 74f, 75f, 76f, 77f, 78f, 79f, 80f, 81f, 82f, 83f, 84f, 85f, 86f, 87f, 88f, 89f, 90f, 91f, 92f, 93f, 94f, 95f, 96f, 97f, 98f, 99f, 100f, 101f, 102f, 103f, 104f, 105f, 106f, 107f, 108f, 109f, 110f, 111f, 112f, 113f, 114f, 115f, 116f, 117f, 118f, 119f, 120f, 121f, 122f, 123f, 124f, 125f, 126f, 127f, 128f, 129f, 130f, 131f, 132f, 133f, 134f, 135f, 136f, 137f, 138f, 139f, 140f, 141f, 142f, 143f, 144f, 145f, 146f, 147f, 148f, 149f, 150f, 151f, 152f, 153f, 154f, 155f, 156f, 157f, 158f, 159f, 160f, 161f, 162f, 163f, 164f, 165f, 166f, 167f, 168f, 169f, 170f, 171f, 172f, 173f, 174f, 175f, 176f, 177f, 178f, 179f, 180f, 181f, 182f, 183f, 184f, 185f, 186f, 187f, 188f, 189f, 190f, 191f, 192f, 193f, 194f, 195f, 196f, 197f, 198f, 199f, 200f, 201f, 202f, 203f, 204f, 205f, 206f, 207f, 208f, 209f, 210f, 211f, 212f, 213f, 214f, 215f, 216f, 217f, 218f, 219f, 220f, 221f, 222f, 223f, 224f, 225f, 226f, 227f, 228f, 229f, 230f, 231f, 232f, 233f, 234f, 235f, 236f, 237f, 238f, 239f, 240f, 241f, 242f, 243f, 244f, 245f, 246f, 247f, 248f, 249f, 250f, 251f, 252f, 253f, 254f, 255f, 256f, 257f, 258f, 259f, 260f, 261f, 262f, 263f, 264f, 265f, 266f, 267f, 268f, 269f, 270f, 271f, 272f, 273f, 274f, 275f, 276f, 277f, 278f, 279f, 280f, 281f, 282f, 283f, 284f, 285f, 286f, 287f, 288f, 289f, 290f, 291f, 292f, 293f, 294f, 295f, 296f, 297f, 298f, 299f, 300f, 301f, 302f, 303f, 304f, 305f, 306f, 307f, 308f, 309f, 310f, 311f, 312f, 313f, 314f, 315f, 316f, 317f, 318f, 319f, 320f, 321f, 322f, 323f, 324f, 325f, 326f, 327f, 328f, 329f, 330f, 331f, 332f, 333f, 334f, 335f, 336f, 337f, 338f, 339f, 340f, 341f, 342f, 343f, 344f, 345f, 346f, 347f, 348f, 349f, 350f, 351f, 352f, 353f, 354f, 355f, 356f, 357f, 358f, 359f, 360f, 361f, 362f, 363f, 364f, 365f, 366f, 367f, 368f, 369f, 370f, 371f, 372f, 373f, 374f, 375f, 376f, 377f, 378f, 379f, 380f, 381f, 382f, 383f, 384f, 385f, 386f, 387f, 388f, 389f, 390f, 391f, 392f, 393f, 394f, 395f, 396f, 397f, 398f, 399f, 400f, 401f, 402f, 403f, 404f, 405f, 406f, 407f, 408f, 409f, 410f, 411f, 412f, 413f, 414f, 415f, 416f, 417f, 418f, 419f, 420f, 421f, 422f, 423f, 424f, 425f, 426f, 427f, 428f, 429f, 430f, 431f, 432f, 433f, 434f, 435f, 436f, 437f, 438f, 439f, 440f, 441f, 442f, 443f, 444f, 445f, 446f, 447f, 448f, 449f, 450f, 451f, 452f, 453f, 454f, 455f, 456f, 457f, 458f, 459f, 460f, 461f, 462f, 463f, 464f, 465f, 466f, 467f, 468f, 469f, 470f, 471f, 472f, 473f, 474f, 475f, 476f, 477f, 478f, 479f, 480f, 481f, 482f, 483f, 484f, 485f, 486f, 487f, 488f, 489f, 490f, 491f, 492f, 493f, 494f, 495f, 496f, 497f, 498f, 499f, 500f, 501f, 502f, 503f, 504f, 505f, 506f, 507f, 508f, 509f, 510f, 511f, 512f, 513f, 514f, 515f, 516f, 517f, 518f, 519f, 520f, 521f, 522f, 523f, 524f, 525f, 526f, 527f, 528f, 529f, 530f, 531f, 532f, 533f, 534f, 535f, 536f, 537f, 538f, 539f, 540f, 541f, 542f, 543f, 544f, 545f, 546f, 547f, 548f, 549f, 550f, 551f, 552f, 553f, 554f, 555f, 556f, 557f, 558f, 559f, 560f, 561f, 562f, 563f, 564f, 565f, 566f, 567f, 568f, 569f, 570f, 571f, 572f, 573f, 574f, 575f, 576f, 577f, 578f, 579f, 580f, 581f, 582f, 583f, 584f, 585f, 586f, 587f, 588f, 589f, 590f, 591f, 592f, 593f, 594f, 595f, 596f, 597f, 598f, 599f, 600f, 601f, 602f, 603f, 604f, 605f, 606f, 607f, 608f, 609f, 610f, 611f, 612f, 613f, 614f, 615f, 616f, 617f, 618f, 619f, 620f, 621f, 622f, 623f, 624f, 625f, 626f, 627f, 628f, 629f, 630f, 631f, 632f, 633f, 634f, 635f, 636f, 637f, 638f, 639f, 640f, 641f, 642f, 643f, 644f, 645f, 646f, 647f, 648f, 649f, 650f, 651f, 652f, 653f, 654f, 655f, 656f, 657f, 658f, 659f, 660f, 661f, 662f, 663f, 664f, 665f, 666f, 667f, 668f, 669f, 670f, 671f, 672f, 673f, 674f, 675f, 676f, 677f, 678f, 679f, 680f, 681f, 682f, 683f, 684f, 685f, 686f, 687f, 688f, 689f, 690f, 691f, 692f, 693f, 694f, 695f, 696f, 697f, 698f, 699f, 700f, 701f, 702f, 703f, 704f, 705f, 706f, 707f,**



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 210341	Truss P1	Truss Type GABLE	Qty 1	Ply 1	Lot 101 MN Job Reference (optional)	I45174516
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Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:26 2021 Page 1

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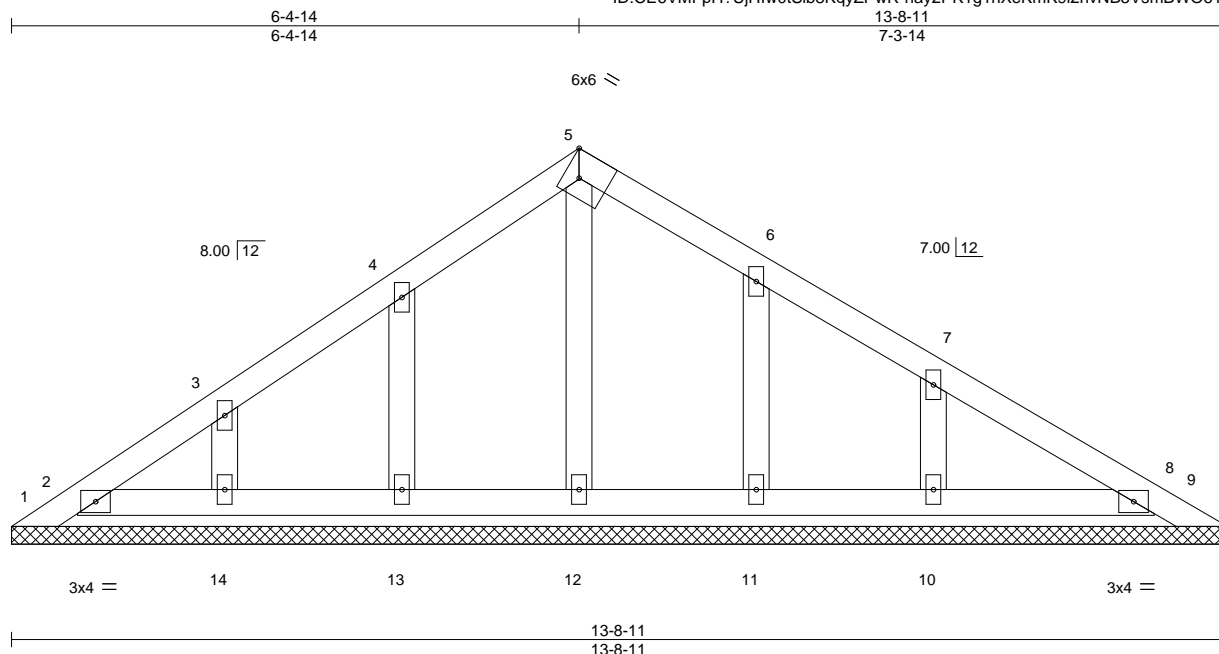


Plate Offsets (X,Y)-- [5:Edge,0-3-8]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S					Weight: 44 lb	FT = 10%

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

All bearings 13-8-11.  
(lb) - Max Horz 1=107(LC 5)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 2, 8, 13, 14, 11, 10  
Max Grav All reactions 250 lb or less at joint(s) 1, 9, 2, 8, 12, 13, 14, 11, 10

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 2, 8, 13, 14, 11, 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



March 12, 2021

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**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 210341	Truss P2	Truss Type Piggyback	Qty 6	Ply 1	Lot 101 MN I45174517
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Wheeler Lumber, Waverly, KS - 66871,

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Job Reference (optional)

13-8-11  
7-3-14

Scale = 1:26.7

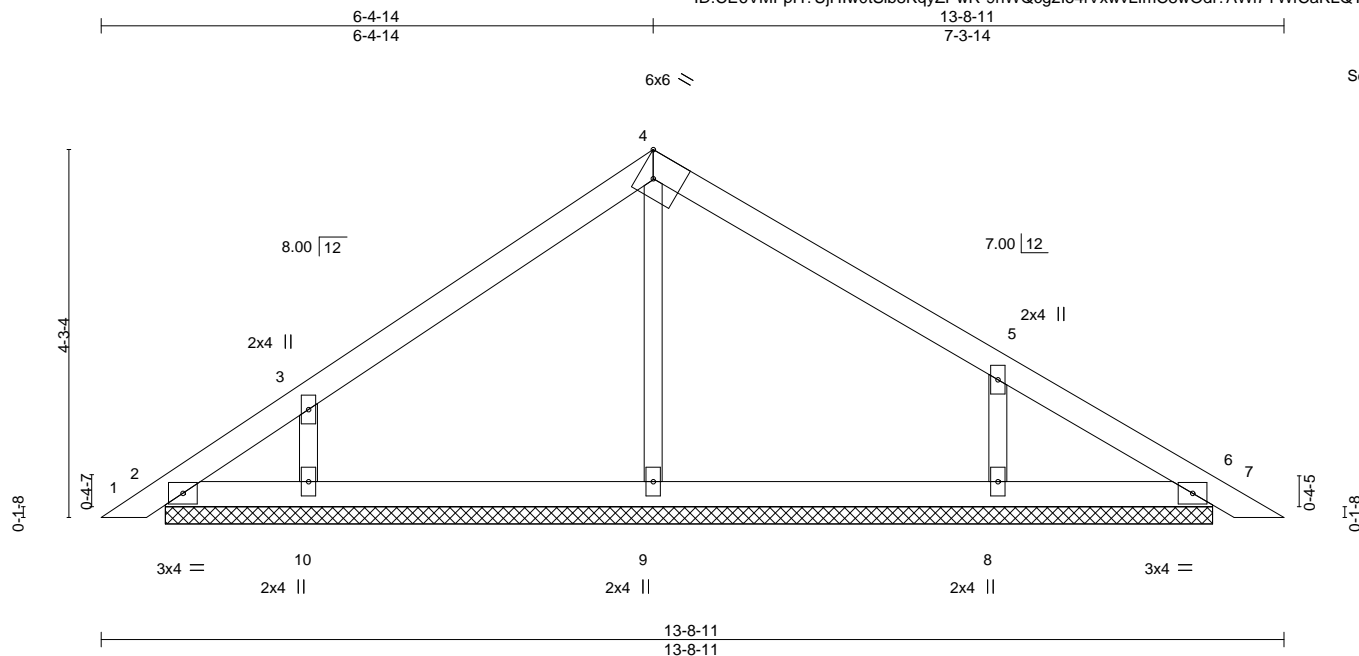


Plate Offsets (X,Y)-- [4:Edge,0-3-8]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.17	Vert(LL)	-0.00	6	n/r	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	0.00	6	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.08	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S					Weight: 37 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

All bearings 12-1-13.

(lb) - Max Horz 2=107(LC 6)

Max Uplift All uplift 100 lb or less at joint(s) 2, 6 except 10=138(LC 8), 8=125(LC 9)

Max Grav All reactions 250 lb or less at joint(s) 2, 6 except 9=291(LC 1), 10=337(LC 15), 8=352(LC 16)

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

**WEBS** 3-10=278/183, 5-8=281/166

#### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6 except (jt=lb) 10=138, 8=125.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



March 12, 2021

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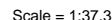
**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**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 Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:29 2021 Page 1  
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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.

- 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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 15, 14, 13, 12 except (jt=lb) 1=295, 2=176, 18=123.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



**WARNING – Velly design parameters are listed below and included with the key reference to AISC M14-15 16f, 3f, 9f, 10f, 11f, 12f, 13f, 14f, 15f, 16f, 17f, 18f, 19f, 20f, 21f, 22f, 23f, 24f, 25f, 26f, 27f, 28f, 29f, 30f, 31f, 32f, 33f, 34f, 35f, 36f, 37f, 38f, 39f, 40f, 41f, 42f, 43f, 44f, 45f, 46f, 47f, 48f, 49f, 50f, 51f, 52f, 53f, 54f, 55f, 56f, 57f, 58f, 59f, 60f, 61f, 62f, 63f, 64f, 65f, 66f, 67f, 68f, 69f, 70f, 71f, 72f, 73f, 74f, 75f, 76f, 77f, 78f, 79f, 80f, 81f, 82f, 83f, 84f, 85f, 86f, 87f, 88f, 89f, 90f, 91f, 92f, 93f, 94f, 95f, 96f, 97f, 98f, 99f, 100f, 101f, 102f, 103f, 104f, 105f, 106f, 107f, 108f, 109f, 110f, 111f, 112f, 113f, 114f, 115f, 116f, 117f, 118f, 119f, 120f, 121f, 122f, 123f, 124f, 125f, 126f, 127f, 128f, 129f, 130f, 131f, 132f, 133f, 134f, 135f, 136f, 137f, 138f, 139f, 140f, 141f, 142f, 143f, 144f, 145f, 146f, 147f, 148f, 149f, 150f, 151f, 152f, 153f, 154f, 155f, 156f, 157f, 158f, 159f, 160f, 161f, 162f, 163f, 164f, 165f, 166f, 167f, 168f, 169f, 170f, 171f, 172f, 173f, 174f, 175f, 176f, 177f, 178f, 179f, 180f, 181f, 182f, 183f, 184f, 185f, 186f, 187f, 188f, 189f, 190f, 191f, 192f, 193f, 194f, 195f, 196f, 197f, 198f, 199f, 200f, 201f, 202f, 203f, 204f, 205f, 206f, 207f, 208f, 209f, 210f, 211f, 212f, 213f, 214f, 215f, 216f, 217f, 218f, 219f, 220f, 221f, 222f, 223f, 224f, 225f, 226f, 227f, 228f, 229f, 230f, 231f, 232f, 233f, 234f, 235f, 236f, 237f, 238f, 239f, 240f, 241f, 242f, 243f, 244f, 245f, 246f, 247f, 248f, 249f, 250f, 251f, 252f, 253f, 254f, 255f, 256f, 257f, 258f, 259f, 260f, 261f, 262f, 263f, 264f, 265f, 266f, 267f, 268f, 269f, 270f, 271f, 272f, 273f, 274f, 275f, 276f, 277f, 278f, 279f, 280f, 281f, 282f, 283f, 284f, 285f, 286f, 287f, 288f, 289f, 290f, 291f, 292f, 293f, 294f, 295f, 296f, 297f, 298f, 299f, 300f, 301f, 302f, 303f, 304f, 305f, 306f, 307f, 308f, 309f, 310f, 311f, 312f, 313f, 314f, 315f, 316f, 317f, 318f, 319f, 320f, 321f, 322f, 323f, 324f, 325f, 326f, 327f, 328f, 329f, 330f, 331f, 332f, 333f, 334f, 335f, 336f, 337f, 338f, 339f, 340f, 341f, 342f, 343f, 344f, 345f, 346f, 347f, 348f, 349f, 350f, 351f, 352f, 353f, 354f, 355f, 356f, 357f, 358f, 359f, 360f, 361f, 362f, 363f, 364f, 365f, 366f, 367f, 368f, 369f, 370f, 371f, 372f, 373f, 374f, 375f, 376f, 377f, 378f, 379f, 380f, 381f, 382f, 383f, 384f, 385f, 386f, 387f, 388f, 389f, 390f, 391f, 392f, 393f, 394f, 395f, 396f, 397f, 398f, 399f, 400f, 401f, 402f, 403f, 404f, 405f, 406f, 407f, 408f, 409f, 410f, 411f, 412f, 413f, 414f, 415f, 416f, 417f, 418f, 419f, 420f, 421f, 422f, 423f, 424f, 425f, 426f, 427f, 428f, 429f, 430f, 431f, 432f, 433f, 434f, 435f, 436f, 437f, 438f, 439f, 440f, 441f, 442f, 443f, 444f, 445f, 446f, 447f, 448f, 449f, 450f, 451f, 452f, 453f, 454f, 455f, 456f, 457f, 458f, 459f, 460f, 461f, 462f, 463f, 464f, 465f, 466f, 467f, 468f, 469f, 470f, 471f, 472f, 473f, 474f, 475f, 476f, 477f, 478f, 479f, 480f, 481f, 482f, 483f, 484f, 485f, 486f, 487f, 488f, 489f, 490f, 491f, 492f, 493f, 494f, 495f, 496f, 497f, 498f, 499f, 500f, 501f, 502f, 503f, 504f, 505f, 506f, 507f, 508f, 509f, 510f, 511f, 512f, 513f, 514f, 515f, 516f, 517f, 518f, 519f, 520f, 521f, 522f, 523f, 524f, 525f, 526f, 527f, 528f, 529f, 530f, 531f, 532f, 533f, 534f, 535f, 536f, 537f, 538f, 539f, 540f, 541f, 542f, 543f, 544f, 545f, 546f, 547f, 548f, 549f, 550f, 551f, 552f, 553f, 554f, 555f, 556f, 557f, 558f, 559f, 560f, 561f, 562f, 563f, 564f, 565f, 566f, 567f, 568f, 569f, 570f, 571f, 572f, 573f, 574f, 575f, 576f, 577f, 578f, 579f, 580f, 581f, 582f, 583f, 584f, 585f, 586f, 587f, 588f, 589f, 590f, 591f, 592f, 593f, 594f, 595f, 596f, 597f, 598f, 599f, 600f, 601f, 602f, 603f, 604f, 605f, 606f, 607f, 608f, 609f, 610f, 611f, 612f, 613f, 614f, 615f, 616f, 617f, 618f, 619f, 620f, 621f, 622f, 623f, 624f, 625f, 626f, 627f, 628f, 629f, 630f, 631f, 632f, 633f, 634f, 635f, 636f, 637f, 638f, 639f, 640f, 641f, 642f, 643f, 644f, 645f, 646f, 647f, 648f, 649f, 650f, 651f, 652f, 653f, 654f, 655f, 656f, 657f, 658f, 659f, 660f, 661f, 662f, 663f, 664f, 665f, 666f, 667f, 668f, 669f, 670f, 671f, 672f, 673f, 674f, 675f, 676f, 677f, 678f, 679f, 680f, 681f, 682f, 683f, 684f, 685f, 686f, 687f, 688f, 689f, 690f, 691f, 692f, 693f, 694f, 695f, 696f, 697f, 698f, 699f, 700f**





Job 210341	Truss P4	Truss Type Piggyback	Qty 5	Ply 1	Lot 101 MN I45174519
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Wheeler Lumber, Waverly, KS - 66871,

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9-0-6 9-0-6 19-4-3 10-3-14

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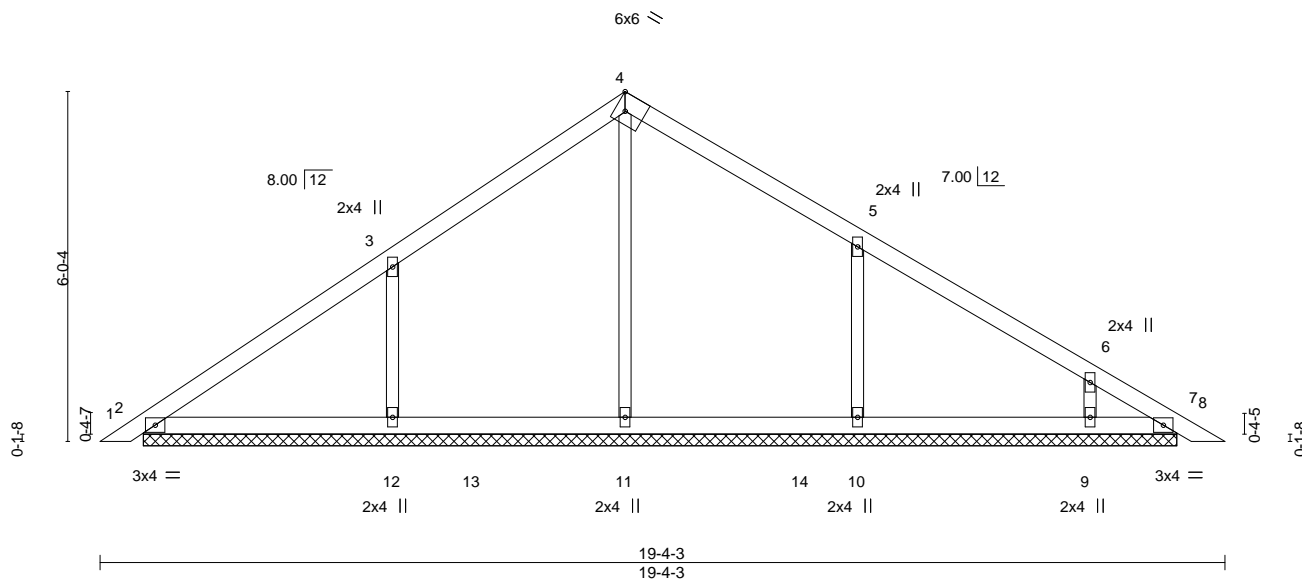


Plate Offsets (X,Y)-- [4:Edge,0-3-8]							
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d
TCLL 25.0	Plate Grip DOL	1.15	TC 0.23	Vert(LL)	-0.00	7	n/r
TCDL 10.0	Lumber DOL	1.15	BC 0.14	Vert(CT)	-0.00	8	n/r
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.15	Horz(CT)	0.00	7	n/a
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-S				
				<b>PLATES</b>	<b>GRIP</b>		
				MT20	197/144		
				Weight: 56 lb	FT = 10%		

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

All bearings 17-9-5.

(lb) - Max Horz 2=153(LC 7)

Max Uplift All uplift 100 lb or less at joint(s) 2, 7, 9 except 12=-179(LC 8), 10=-140(LC 9)

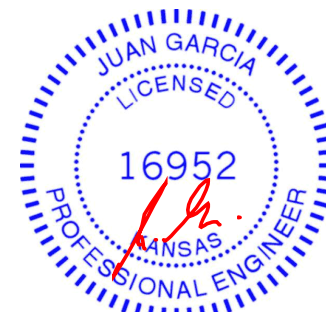
Max Grav All reactions 250 lb or less at joint(s) 2, 7 except 11=370(LC 15), 12=541(LC 15), 10=484(LC 16), 9=336(LC 16)

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

**WEBS** 3-12=-356/223, 5-10=-321/189

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 7, 9 except (jt=lb) 12=179, 10=140.
- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



March 12, 2021

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

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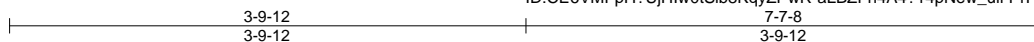
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 210341	Truss V1	Truss Type Valley	Qty 1	Ply 1	Lot 101 MN I45174520
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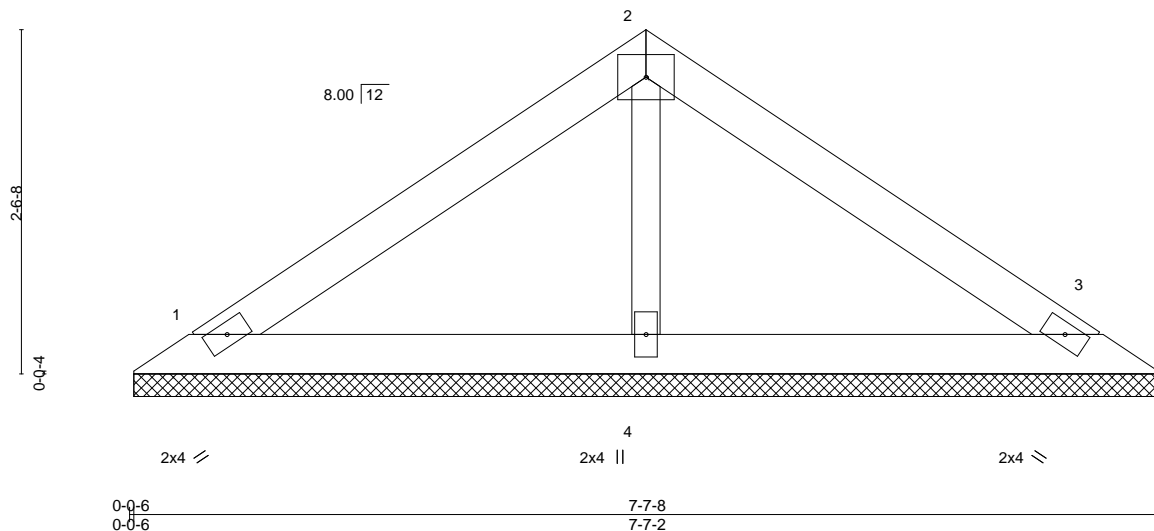
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:30 2021 Page 1

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Scale = 1:17.0



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 19 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

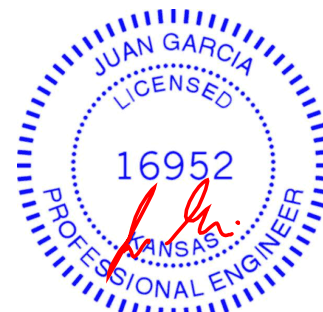
#### REACTIONS.

(size) 1=7-6-12, 3=7-6-12, 4=7-6-12  
Max Horz 1=58(LC 7)  
Max Uplift 1=37(LC 8), 3=45(LC 9)  
Max Grav 1=169(LC 1), 3=169(LC 1), 4=262(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 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.



March 12, 2021

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

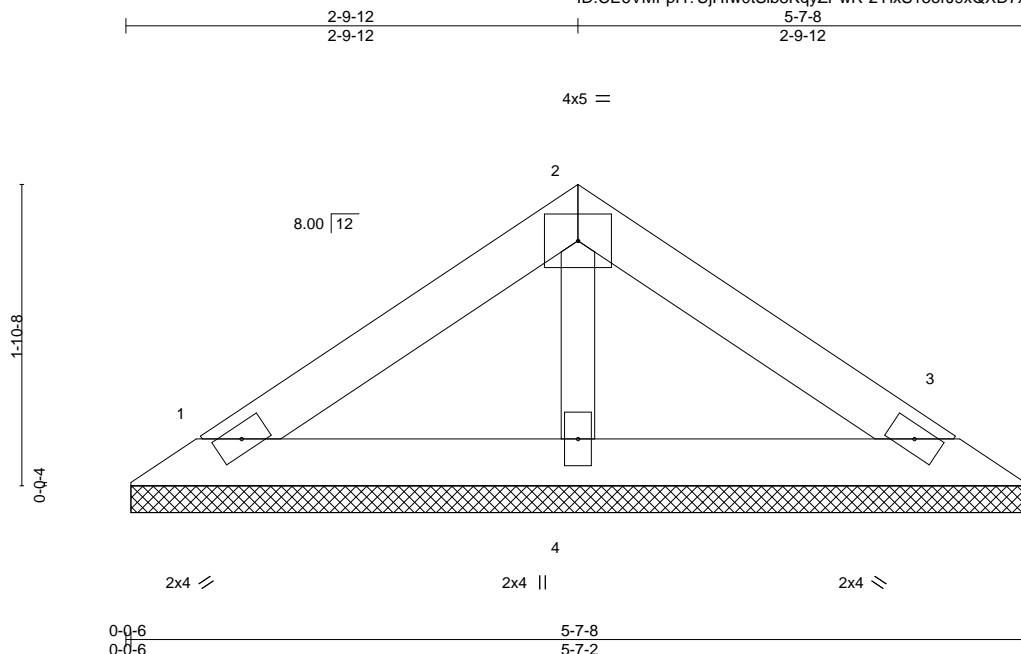
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 210341	Truss V2	Truss Type Valley	Qty 1	Ply 1	Lot 101 MN I45174521
Wheeler Lumber, Waverly, KS - 66871,					Job Reference (optional)

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:31 2021 Page 1  
ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-2YlxS15orJ9xQXD7XcG44EoMCnuV3NLF7CIYZFzbh1s



Scale = 1:14.3

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.09	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 14 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-7-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 1=5-6-12, 3=5-6-12, 4=5-6-12  
Max Horz 1=41(LC 4)  
Max Uplift 1=26(LC 8), 3=31(LC 9)  
Max Grav 1=118(LC 1), 3=118(LC 1), 4=183(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 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.



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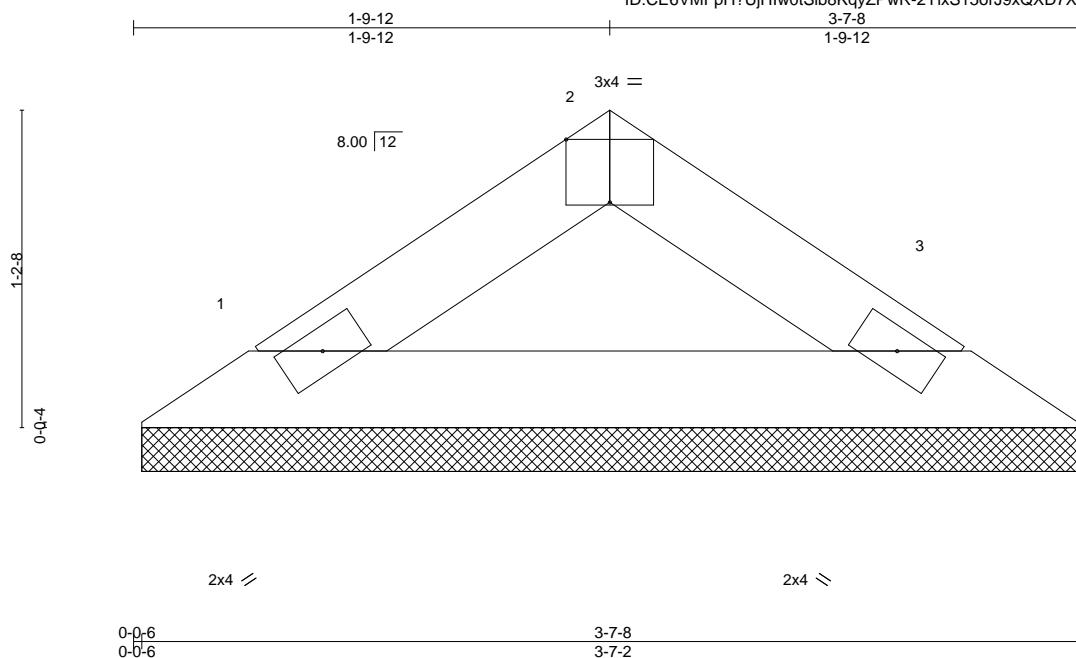
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174522
210341	V3	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:31 2021 Page 1

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Scale = 1:8.8

Plate Offsets (X,Y)--		[2:0-2-0,Edge]							
<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>		<b>DEFL.</b>	in (loc)	l/defl	L/d
TCLL	25.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P					
						<b>PLATES</b>	<b>GRIP</b>		
						MT20	197/144		
						Weight: 8 lb	FT = 10%		

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-7-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 1=3-6-12, 3=3-6-12  
Max Horz 1=23(LC 4)  
Max Uplift 1=14(LC 8), 3=14(LC 9)  
Max Grav 1=120(LC 1), 3=120(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 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.



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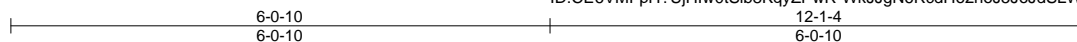
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 101 MN	I45174523
210341	V4	Valley	1	1	Job Reference (optional)	

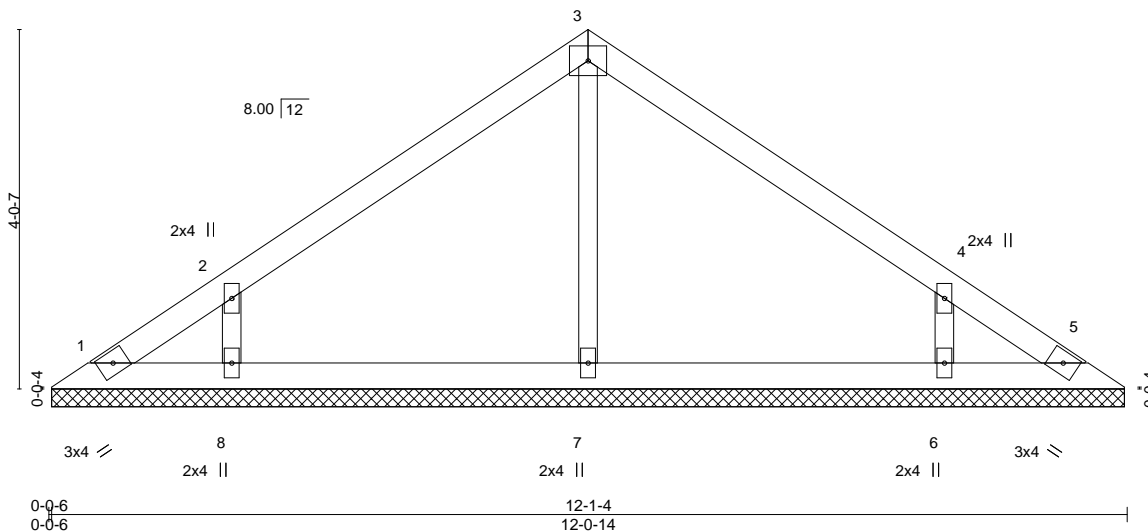
Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:32 2021 Page 1

ID:CE6VMFpH?UjHlw0tSib8KqyZPwR-WkJJgN6RcdHo2hoJ5JdSLWiBDsoprOMs165hzbh1r



Scale = 1:25.9



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.17	Vert(LL)	n/a	-	n/a	999	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a	999	
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.00	5	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						
								Weight: 33 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

All bearings 12'-0"-8.  
(lb) - Max Horz 1=97(LC 4)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=138(LC 8), 6=138(LC 9)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=285(LC 1), 8=342(LC 15), 6=342(LC 16)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-8=281/182, 4-6=281/182

#### 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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 2'-0" wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=138, 6=138.
- 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.



March 12, 2021

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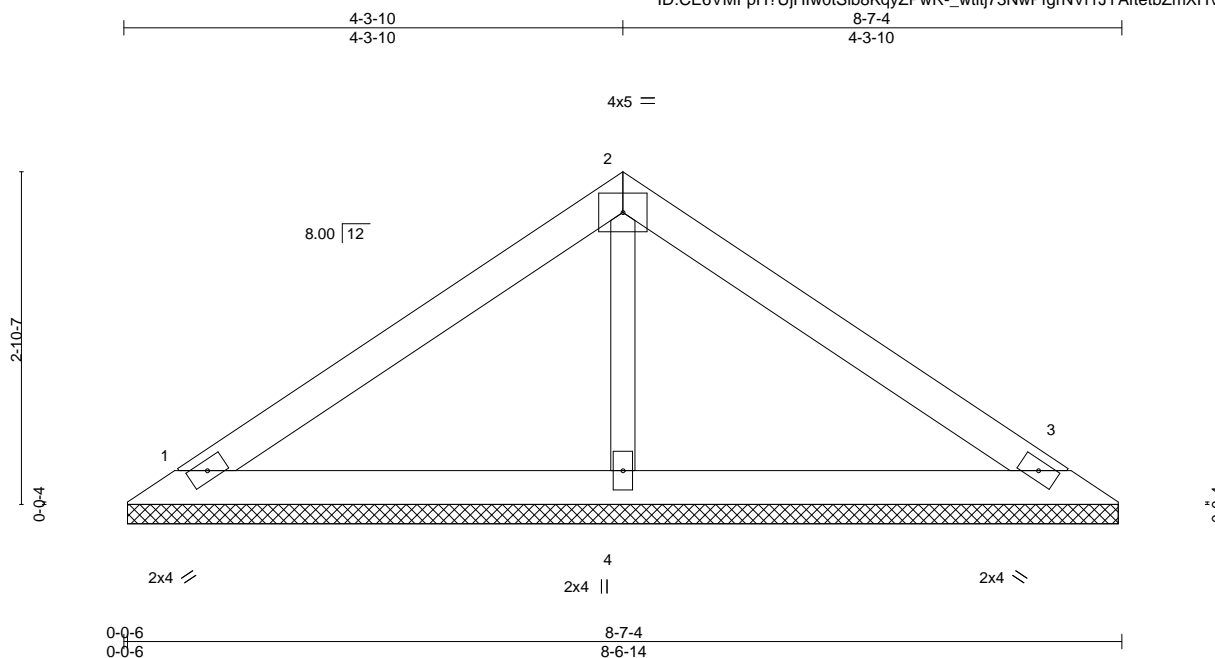
16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job 210341	Truss V5	Truss Type Valley	Qty 1	Ply 1	Lot 101 MN I45174524
Job Reference (optional)					

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:33 2021 Page 1  
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Scale = 1:19.9

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.27	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P					Weight: 22 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

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

#### REACTIONS.

(size) 1=8-6-8, 3=8-6-8, 4=8-6-8  
Max Horz 1=67(LC 5)  
Max Uplift 1=43(LC 8), 3=51(LC 9)  
Max Grav 1=193(LC 1), 3=193(LC 1), 4=301(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 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.



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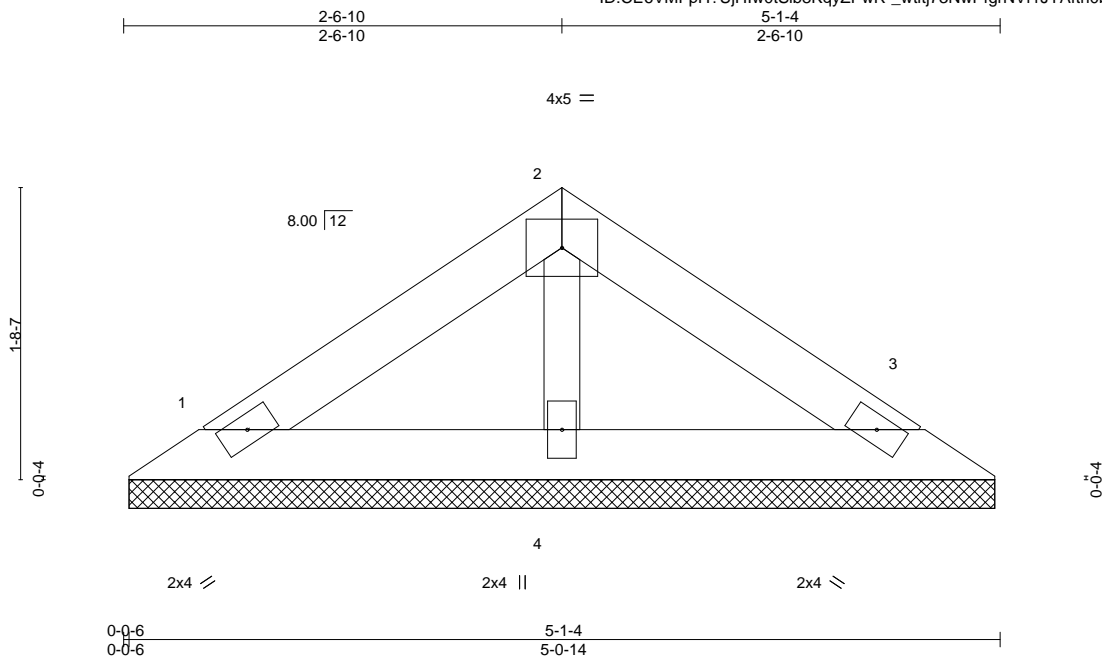
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 210341	Truss V6	Truss Type Valley	Qty 1	Ply 1	Lot 101 MN I45174525
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Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 12 11:10:33 2021 Page 1

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Scale = 1:13.4

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P					Weight: 12 lb	FT = 10%

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-1-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 1=5-0-8, 3=5-0-8, 4=5-0-8  
Max Horz 1=36(LC 4)  
Max Uplift 1=23(LC 8), 3=28(LC 9)  
Max Grav 1=105(LC 1), 3=105(LC 1), 4=163(LC 1)

**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) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 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.



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

**\* Plate location details available in MITek 20/20 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



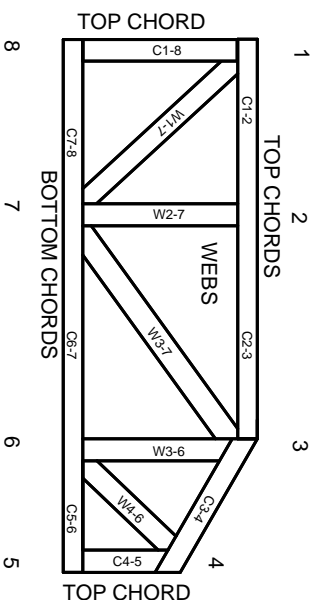
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: 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/TPI 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 Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.