



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

Re: 210567
Boyer Res. - Floors

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

Pages or sheets covered by this seal: I48620987 thru I48621002

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

Missouri COA: Engineering 001193



November 9, 2021

Liu, Xuegang, Engineer

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

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:13 Page: 1
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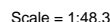


Plate Offsets (X, Y): [23:0-1-8,Edge], [24:Edge,0-1-8], [45:Edge,0-1-8]

LUMBER

TOP CHORD	2x4 SPF No.2(flat)
BOT CHORD	2x4 SPF No.2(flat)
WEBS	2x4 SPF No.2(flat)
OTHERS	2x4 SPF No.2(flat)

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 (lb/size) 24=44/27-8-0, 25=144/27-8-0,
26=180/27-8-0, 27=172/27-8-0,
28=174/27-8-0, 29=173/27-8-0,
30=173/27-8-0, 31=173/27-8-0,
32=173/27-8-0, 33=173/27-8-0,
34=173/27-8-0, 35=173/27-8-0,
36=173/27-8-0, 37=173/27-8-0,
38=173/27-8-0, 39=173/27-8-0,
40=173/27-8-0, 41=173/27-8-0,
42=173/27-8-0, 43=174/27-8-0,
44=173/27-8-0, 45=63/27-8-0

FORCES

(Ib) - Maximum Compression/Maximum Tension

TOP CHORD 1-45=54/0, 23-24=35/0, 1-2=-6/0, 2-3=-6/0,
3-4=-6/0, 4-5=-6/0, 5-6=-6/0, 6-7=-6/0,
7-8=-6/0, 8-9=-6/0, 9-11=-6/0, 11-12=-6/0,
12-13=-6/0, 13-14=-6/0, 14-15=-6/0,
15-16=-6/0, 16-17=-6/0, 17-18=-6/0,
18-19=-6/0, 19-20=-6/0, 20-21=-6/0,
21-22=-6/0, 22-23=-6/0

BOT CHORD 44-45=0/6, 43-44=0/6, 42-43=0/6, 41-42=0/6,
40-41=0/6, 39-40=0/6, 38-39=0/6, 37-38=0/6,
36-37=0/6, 35-36=0/6, 34-35=0/6, 32-34=0/6,
31-32=0/6, 30-31=0/6, 29-30=0/6, 28-29=0/6,
27-28=0/6, 26-27=0/6, 25-26=0/6, 24-25=0/6

WEBS

2-44=145/0, 3-43=147/0, 4-42=146/0,
5-41=147/0, 6-40=147/0, 7-39=147/0,
8-38=147/0, 9-37=147/0, 11-36=147/0,
12-35=147/0, 13-34=147/0, 14-33=147/0,
15-32=147/0, 16-31=147/0, 17-30=147/0,
18-29=147/0, 19-28=147/0, 20-27=145/0,
21-26=152/0, 22-25=124/0

NOTES

- 1) All plates are 2x4 MT20 unless otherwise indicated.
- 2) Gable requires continuous bottom chord bearing.
- 3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 4) Gable studs spaced at 1'-4" oc.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10'-0" oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MH-747.5 (REV. 3/19/2020) BEFORE USE.

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

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



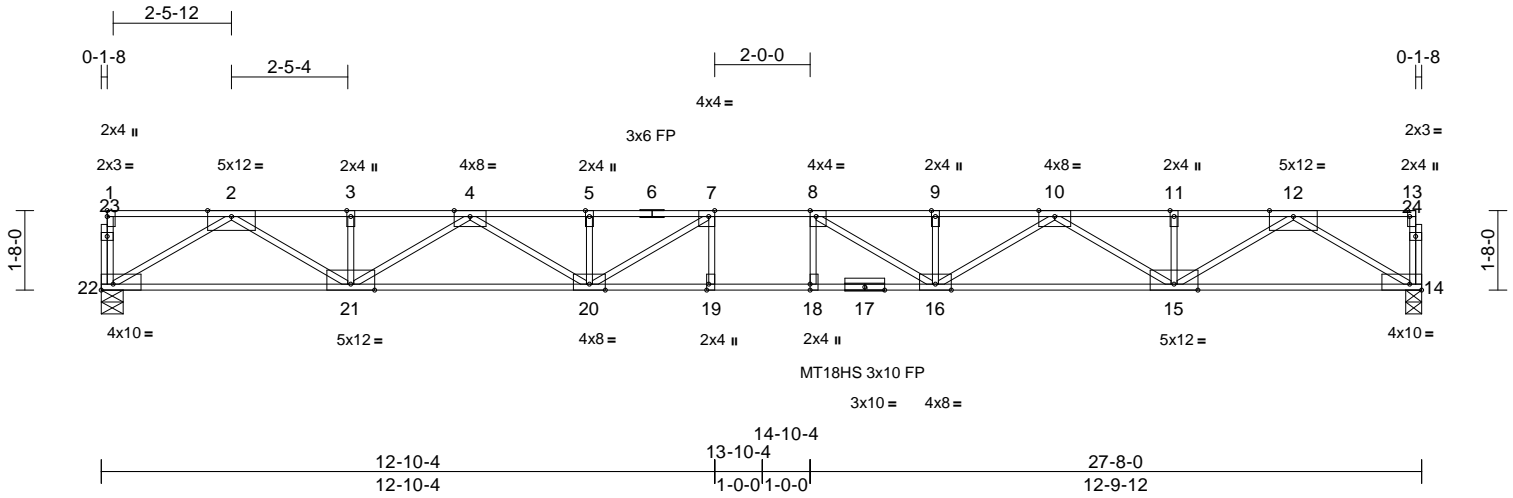
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Floors	
210567	F2	Floor	11	1	Job Reference (optional)	I48620988

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:15
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Page: 1



Scale = 1:48.3

Plate Offsets (X, Y): [7:0-1-8,Edge], [8:0-1-8,Edge], [13:0-1-8,Edge], [14:Edge,0-1-8], [18:0-1-8,Edge], [19:0-1-8,Edge], [22:Edge,0-1-8]

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.59	Vert(LL)	-0.53	18-19	>625	480	MT18HS	197/144
TCDL	15.0	Lumber DOL	1.00	BC	0.88	Vert(CT)	-0.86	18-19	>384	360	MT20	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.15	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S								
											Weight: 111 lb	FT = 5%F, 10%E

LUMBER

TOP CHORD 2x4 SPF 2400F 2.0E(flat)
BOT CHORD 2x4 SPF 2100F 1.8E(flat)
WEBS 2x4 SPF No.2(flat)
OTHERS 2x4 SPF No.2(flat)

- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

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 (lb/size) 14=1419/0-4-0, 22=1419/0-5-8

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-22=-91/0, 13-14=-89/0, 1-2=-4/0, 2-3=-3886/0, 3-4=-3886/0, 4-5=-5929/0, 5-7=-5929/0, 7-8=-6309/0, 8-9=-5918/0, 9-10=-5918/0, 10-11=-3862/0, 11-12=-3862/0, 12-13=-4/0

BOT CHORD 21-22=0/2191, 20-21=0/5085, 19-20=0/6309, 18-19=0/6309, 16-18=0/6309, 15-16=0/5068, 14-15=0/2160

WEBS 7-19=-108/166, 8-18=-105/168, 7-20=-856/105, 5-20=-296/13, 4-20=0/992, 4-21=-1409/0, 3-21=-217/0, 2-21=0/1991, 2-22=-2542/0, 12-14=-2516/0, 12-15=0/2000, 11-15=-217/0, 10-15=-1417/0, 10-16=0/1000, 9-16=-295/14, 8-16=-865/96

NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) The Fabrication Tolerance at joint 17 = 10%
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2021

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

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

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

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



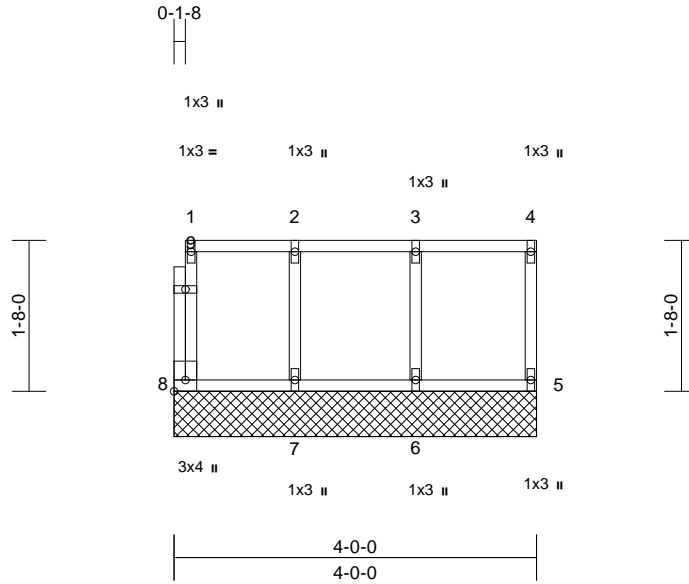
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Floors
210567	F3	Floor Supported Gable	1	1	I48620989
Job Reference (optional)					

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:16
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Page: 1



Scale = 1:25.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	15.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 17 lb	FT = 5%F, 10%E

LUMBER

TOP CHORD 2x4 SPF No.2(flat)
BOT CHORD 2x4 SPF No.2(flat)
WEBS 2x4 SPF No.2(flat)
OTHERS 2x4 SPF No.2(flat)

BRACING

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

REACTIONS (lb/size) 5=76/4-0-0, 6=177/4-0-0,
7=169/4-0-0, 8=66/4-0-0

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-8=-55/0, 4-5=-62/0, 1-2=-7/0, 2-3=-7/0,
3-4=-7/0

BOT CHORD 7-8=0/7, 6-7=0/7, 5-6=0/7

WEBS 2-7=-143/0, 3-6=-153/0

NOTES

- 1) All plates are 1x3 MT20 unless otherwise indicated.
- 2) Gable requires continuous bottom chord bearing.
- 3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 4) Gable studs spaced at 1-4-0 oc.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



November 9,2021

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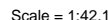
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:16 Page: 1
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Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.75	Vert(LL)	-0.41	16-17	>687	480	MT20	197/144
TCDL	15.0	Lumber DOL	1.00	BC	1.00	Vert(CT)	-0.66	16-17	>423	360	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.09	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 97 lb	FT = 5%F, 10%E

TOP CHORD	2x4 SPF No.2(flat) *Except* 5-12:2x4 SPF 2100F 1.8E(flat)
BOT CHORD	2x4 SPF 2100F 1.8E(flat)
WEBS	2x4 SPF No.2(flat)
OTHERS	2x4 SPF No.2(flat)

TOP CHORD	Structural wood sheathing directly applied or 5-10-6 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-21=-1238/0, 12-13=-89/0, 1-2=-876/0,
2-3=-876/0, 3-4=-3570/0, 4-6=-3570/0,
6-7=-4468/0, 7-8=-4595/0, 8-9=-4595/0,
9-10=-3178/0, 10-11=-3178/0, 11-12=-4/0

BOT CHORD 20-21=0/50, 19-20=0/2419, 18-19=0/4468,
17-18=0/4468, 16-17=0/4468, 14-16=0/4051,
13-14=0/1814

WEBS 6-18=0/264, 7-17=-204/48, 6-19=-1211/0,
4-19=-228/48, 3-19=0/1351, 3-20=-1814/0,
2-20=-185/0, 1-20=0/1475, 11-13=-2112/0,
11-14=0/1603, 10-14=-219/0, 9-14=-1025/0,
9-16=0/640, 8-16=-332/0, 7-16=-332/455

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10'-0" oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

November 9, 2021



WARNING - Velly design parameters and READ NOTES ON THIS AND INCLUDED WITHIN KEY EXERCISE 1 AGE MH-475 (Rev. 3/19/2020) BEFORE USE. Design valid for use only with MITEK® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



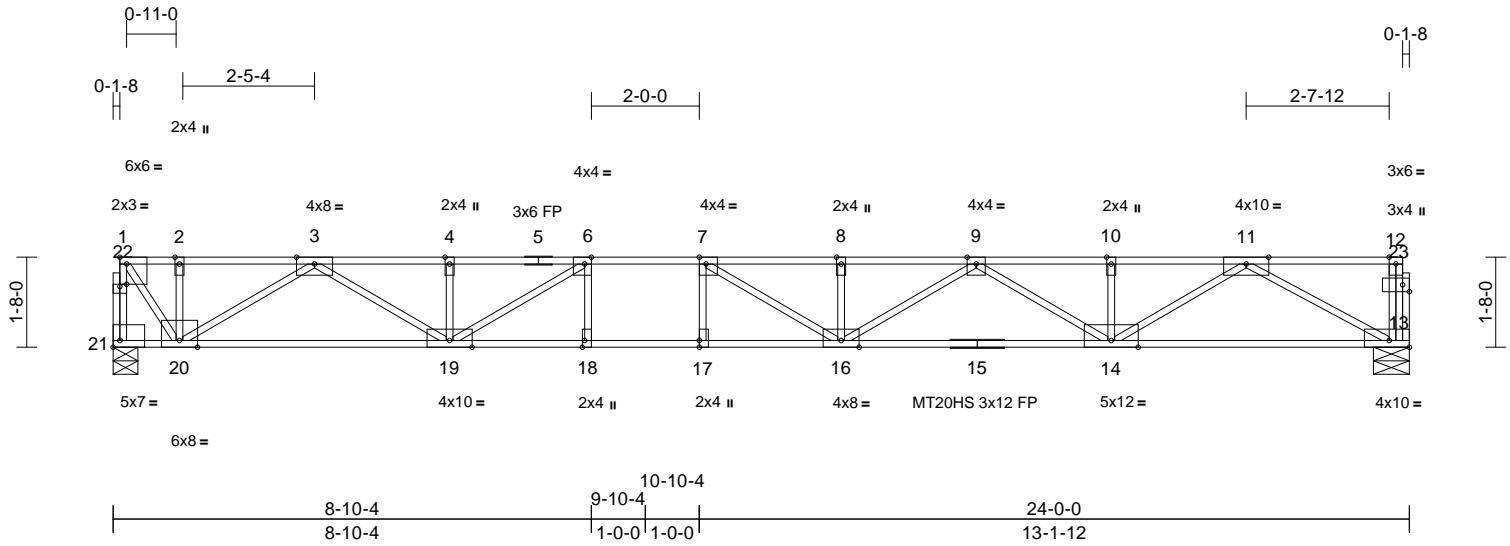
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Floors	148620991
210567	F5	Floor	6	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:16
ID: VQn7XlikdzJsiFZ2xlcaQXyNXtO-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:42.7

Plate Offsets (X, Y): [1:Edge,0-1-8], [6:0-1-8,Edge], [7:0-1-8,Edge], [13:Edge,0-1-8], [17:0-1-8,Edge], [18:0-1-8,Edge], [21:Edge,0-1-8], [22:0-1-8,0-0-8], [23:0-1-8,0-1-8]

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.76	Vert(LL)	-0.41	16-17	>685	480	MT20	197/144
TCDL	15.0	Lumber DOL	1.00	BC	0.91	Vert(CT)	-0.67	16-17	>421	360	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.09	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S								
											Weight: 100 lb	FT = 5%F, 10%E

LUMBER

TOP CHORD 2x4 SPF No.2(flat) *Except* 5-12:2x4 SPF 2100F 1.8E(flat)
BOT CHORD 2x4 SPF 2400F 2.0E(flat) *Except* 15-13:2x4 SPF 2100F 1.8E(flat)
WEBS 2x4 SPF No.2(flat)
OTHERS 2x4 SPF No.2(flat)

BRACING

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

REACTIONS (lb/size) 13=1225/0-8-0, 21=1225/0-5-8

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-21=-1253/0, 12-13=-100/0, 1-2=-886/0, 2-3=-886/0, 3-4=-3622/0, 4-6=-3622/0, 6-7=-4557/0, 7-8=-4717/0, 8-9=-4717/0, 9-10=-3346/0, 10-11=-3346/0, 11-12=-4/0
BOT CHORD 20-21=0/51, 19-20=0/2452, 18-19=0/4557, 17-18=0/4557, 16-17=0/4557, 14-16=0/4197, 13-14=0/2007
WEBS 6-18=0/288, 7-17=-227/45, 6-19=-1250/0, 4-19=-225/48, 3-19=0/1374, 3-20=-1839/0, 2-20=-184/0, 1-20=0/1493, 7-16=-334/490, 8-16=-329/0, 9-16=0/611, 9-14=-1000/0, 10-14=-213/0, 11-14=0/1573, 11-13=-2281/0

NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S)

Standard



November 9, 2021

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Floors
210567	F6	Floor Supported Gable	1	1	Job Reference (optional)

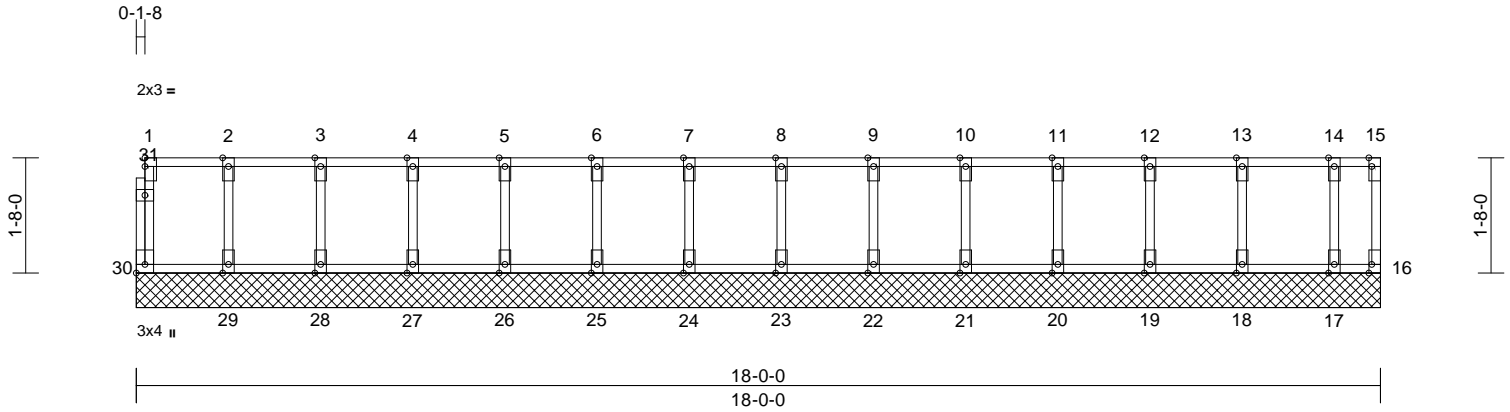
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Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:16

Page: 1

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Scale = 1:33.3

Plate Offsets (X, Y): [15:0-1-8,Edge], [16:0-1-8,Edge], [30:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	15.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	16	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
										Weight: 67 lb	FT = 5%F, 10%E

LUMBER

TOP CHORD 2x4 SPF No.2(flat)
 BOT CHORD 2x4 SPF No.2(flat)
 WEBS 2x4 SPF No.2(flat)
 OTHERS 2x4 SPF No.2(flat)

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 (lb/size) 16=28/18-0-0, 17=132/18-0-0, 18=180/18-0-0, 19=172/18-0-0, 20=174/18-0-0, 21=173/18-0-0, 22=173/18-0-0, 23=173/18-0-0, 24=173/18-0-0, 25=173/18-0-0, 26=173/18-0-0, 27=173/18-0-0, 28=173/18-0-0, 29=176/18-0-0, 30=61/18-0-0

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-30=-53/0, 15-16=-20/0, 1-2=-4/0, 2-3=-4/0, 3-4=-4/0, 4-5=-4/0, 5-6=-4/0, 6-7=-4/0, 7-8=-4/0, 8-9=-4/0, 9-10=-4/0, 10-11=-4/0, 11-12=-4/0, 12-13=-4/0, 13-14=-4/0, 14-15=-4/0
 BOT CHORD 29-30=0/4, 28-29=0/4, 27-28=0/4, 26-27=0/4, 25-26=0/4, 24-25=0/4, 23-24=0/4, 22-23=0/4, 21-22=0/4, 20-21=0/4, 19-20=0/4, 18-19=0/4, 17-18=0/4, 16-17=0/4
 WEBS 2-29=-147/0, 3-28=-147/0, 4-27=-147/0, 5-26=-147/0, 6-25=-147/0, 7-24=-147/0, 8-23=-147/0, 9-22=-147/0, 10-21=-147/0, 11-20=-147/0, 12-19=-145/0, 13-18=-152/0, 14-17=-116/0

NOTES

- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.

- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



November 9, 2021

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

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

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

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



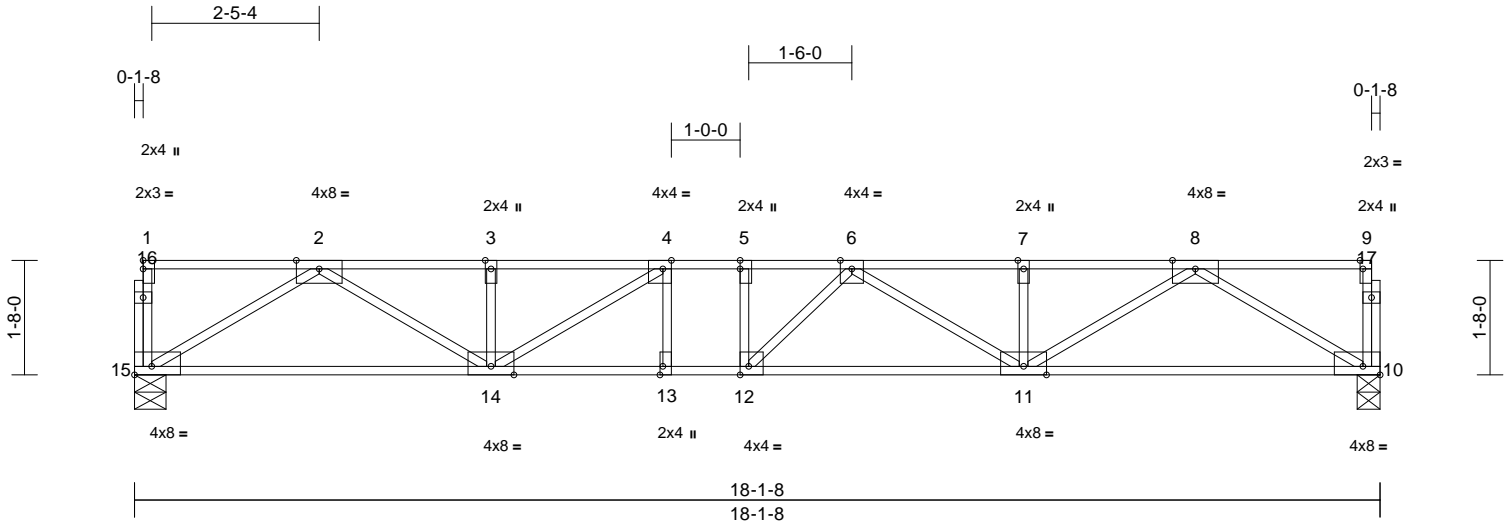
16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job 210567	Truss F7	Truss Type Floor	Qty 12	Ply 1	Boyer Res. - Floors Job Reference (optional)	I48620993
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Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:17
ID:KnU60Pezmk_XOctTFkanpgyNXye-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:33.5

Plate Offsets (X, Y): [4:0-1-8,Edge], [5:0-1-8,Edge], [9:0-1-8,Edge], [10:Edge,0-1-8], [12:0-1-8,Edge], [13:0-1-8,Edge], [15:Edge,0-1-8]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.43	Vert(LL)	-0.15	11-12	>999	480	MT20	197/144
TCDL	15.0	Lumber DOL	1.00	BC	0.85	Vert(CT)	-0.25	11-12	>859	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.06	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 75 lb	FT = 5%F, 10%E

LUMBER

TOP CHORD 2x4 SPF No.2(flat)
BOT CHORD 2x4 SPF No.2(flat)
WEBS 2x4 SPF No.2(flat)
OTHERS 2x4 SPF No.2(flat)

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 (lb/size) 10=923/0-4-0, 15=923/0-5-8

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-15=-89/0, 9-10=-88/0, 1-2=-4/0, 2-3=-2231/0, 3-4=-2231/0, 4-5=-2671/0, 5-6=-2671/0, 6-7=-2236/0, 7-8=-2236/0, 8-9=-4/0

BOT CHORD 14-15=0/1335, 13-14=0/2671, 12-13=0/2671, 11-12=0/2640, 10-11=0/1337

WEBS 8-10=-1557/0, 2-15=-1554/0, 8-11=0/1056, 2-14=0/1052, 7-11=-214/0, 3-14=-238/0, 6-11=-475/0, 4-14=-629/0, 6-12=-164/281, 4-13=-50/97, 5-12=-106/76

NOTES

- Unbalanced floor live loads have been considered for this design.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard



November 9, 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



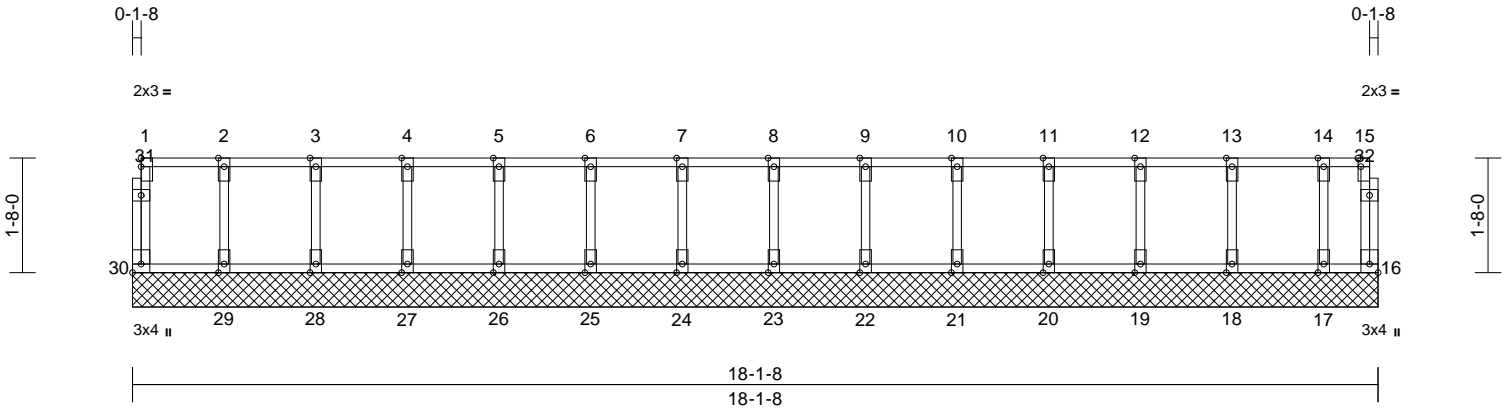
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Floors	I48620994
210567	F8	Floor Supported Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:17
ID:pvrm7?JP3ktKRbVfHY9qIBYNY2E-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:33.5

Plate Offsets (X, Y): [15:0-1-8,Edge], [16:Edge,0-1-8], [30:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	15.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	16	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 68 lb FT = 5%F, 10%E

LUMBER

TOP CHORD	2x4 SPF No.2(flat)
BOT CHORD	2x4 SPF No.2(flat)
WEBS	2x4 SPF No.2(flat)
OTHERS	2x4 SPF No.2(flat) *Except* 16-32:2x4 SPF 2400F 2.0E(flat)

- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

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.

LOAD CASE(S) Standard

REACTIONS	(lb/size)	16=30/18-1-8, 17=131/18-1-8, 18=181/18-1-8, 19=171/18-1-8, 20=174/18-1-8, 21=173/18-1-8, 22=173/18-1-8, 23=173/18-1-8, 24=173/18-1-8, 25=173/18-1-8, 26=173/18-1-8, 27=173/18-1-8, 28=174/18-1-8, 29=174/18-1-8, 30=63/18-1-8
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FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-30=-54/0, 15-16=-20/0, 1-2=-5/0, 2-3=-5/0, 3-4=-5/0, 4-5=-5/0, 5-6=-5/0, 6-7=-5/0, 7-8=-5/0, 8-9=-5/0, 9-10=-5/0, 10-11=-5/0, 11-12=-5/0, 12-13=-5/0, 13-14=-5/0, 14-15=-5/0
BOT CHORD	29-30=0/5, 28-29=0/5, 27-28=0/5, 26-27=0/5, 25-26=0/5, 24-25=0/5, 23-24=0/5, 22-23=0/5, 21-22=0/5, 20-21=0/5, 19-20=0/5, 18-19=0/5, 17-18=0/5, 16-17=0/5
WEBS	2-29=-146/0, 3-28=-147/0, 4-27=-147/0, 5-26=-147/0, 6-25=-147/0, 7-24=-147/0, 8-23=-147/0, 9-22=-147/0, 10-21=-147/0, 11-20=-147/0, 12-19=-145/0, 13-18=-153/0, 14-17=-115/0

NOTES

- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.



November 9,2021

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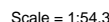
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:17 Page: 1
ID:Tnr7_phWExVB8K8vJaki2CvNZmn-RfC?PsB70Hq3NSaPqnL8w3ulTXbGKWrCDoi7J4zJC?i



[1:Edge,0-1-8], [5:0-1-8,Edge], [6:0-1-8,Edge], [14:0-1-8,Edge], [15:0-1-8,Edge], [16:0-1-8,Edge], [17:Edge,0-1-8], [18:0-1-8,Edge], [19:0-1-8,Edge], [24:0-1-8,Edge], [25:0-1-8,Edge], [28:Edge,0-1-8], [29:0-1-8,0-0-8]

LUMBER
TOP CHORD 2x4 SPF No.2(flat) *Except* 8-16:2x4 SPF 2100F 1.8E(flat)
BOT CHORD 2x4 SPF 2100F 1.8E(flat) *Except* 22-17:2x4 SPF No.2(flat)
WEBS 2x4 SPF No.2(flat)
OTHERS 2x4 SPF No.2(flat)

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

REACTIONS (lb/size) 17=116/0-3-0, 20=2022/0-8-0, 28=1112/0-4-0
Max Uplift 17=-127 (LC 3)
Max Grav 17=288 (LC 4), 20=2027 (LC 9), 28=1120 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-28=-1150/0, 16-17=-158/0, 1-2=-728/0, 2-3=-728/0, 3-4=-3179/0, 4-5=-3179/0, 5-6=-3884/0, 6-7=-3814/0, 7-9=-3814/0, 9-10=-2158/0, 10-11=-2158/0, 11-12=0/1575, 12-13=0/1575, 13-14=-227/483, 14-15=-240/455, 15-16=-6/0
BOT CHORD 17-28=0/47, 26-27=0/2145, 25-26=0/3884, 24-25=0/3884, 23-24=0/3884, 21-23=0/3156, 20-21=0/662, 19-20=-782/82, 18-19=-455/240, 17-18=-455/240
WEBS 12-20=-269/0, 13-20=-1106/0, 15-17=-273/532, 13-19=0/991, 14-19=-761/0, 15-18=-93/0, 5-25=-27/222, 6-24=-162/85, 5-26=-967/0, 4-26=-241/15, 3-26=0/1216, 3-27=-1665/0, 2-27=-185/0, 1-27=0/1332, 11-20=-2323/0, 11-21=0/1792, 10-21=-225/0, 9-21=-1203/0, 9-23=0/802, 7-23=-293/0, 6-23=-478/204

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 17.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10'-0" o.c. and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 7) CAUTION. Do not erect truss backwards.

LOAD CASE(S) Standard



November 9.2021



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MH-747.5 (REV. 3/19/2020) BEFORE USE.

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

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, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:18 Page: 1
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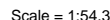


Plate Offsets (X, Y): [27:0-1-8,Edge], [28:Edge,0-1-8], [53:Edge,0-1-8]

LUMBER			
TOP CHORD	2x4 SPF No.2(flat)	BOT CHORD	52-53=0/11, 51-52=0/11, 50-51=0/11, 49-50=0/11, 48-49=0/11, 47-48=0/11, 46-47=0/11, 45-46=0/11, 44-45=0/11, 43-44=0/11, 42-43=0/11, 41-42=0/11, 39-41=0/11, 38-39=0/11, 37-38=0/11, 36-37=0/11, 35-36=0/11, 34-35=0/11, 33-34=0/11, 32-33=0/11, 31-32=0/11, 30-31=0/11, 29-30=0/11, 28-29=0/11
BOT CHORD	2x4 SPF No.2(flat)		
WEBS	2x4 SPF No.2(flat)		
OTHERS	2x4 SPF No.2(flat)		
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	2-52=-96/0, 3-51=-153/0, 4-50=-145/0, 5-49=-147/0, 6-48=-147/0, 7-47=-147/0, 8-46=-147/0, 9-45=-147/0, 10-44=-147/0, 11-43=-147/0, 12-42=-147/0, 13-41=-147/0, 15-39=-147/0, 16-38=-147/0, 17-37=-147/0, 18-36=-147/0, 19-35=-147/0, 20-34=-147/0, 21-33=-147/0, 22-32=-146/0, 23-31=-148/0, 24-30=-143/0, 25-29=-160/0, 26-28=-94/0
REACTIONS (lb/size)			
	28=100/31-7-8, 29=194/31-7-8, 30=168/31-7-8, 31=175/31-7-8, 32=173/31-7-8, 33=173/31-7-8, 34=173/31-7-8, 35=173/31-7-8, 36=173/31-7-8, 37=173/31-7-8, 38=173/31-7-8, 39=173/31-7-8, 41=173/31-7-8, 42=173/31-7-8, 43=173/31-7-8, 44=173/31-7-8, 45=173/31-7-8, 46=173/31-7-8, 47=173/31-7-8, 48=173/31-7-8, 49=174/31-7-8, 50=171/31-7-8, 51=182/31-7-8, 52=92/31-7-8, 53=35/31-7-8		
FORCES (lb) - Maximum Compression/Maximum Tension			
TOP CHORD	1-53=-12/0, 27-28=0/5, 1-2=-11/0, 2-3=-11/0, 3-4=-11/0, 4-5=-11/0, 5-6=-11/0, 6-7=-11/0, 7-8=-11/0, 8-9=-11/0, 9-10=-11/0, 10-11=-11/0, 11-12=-11/0, 12-13=-11/0, 13-15=-11/0, 15-16=-11/0, 16-17=-11/0, 17-18=-11/0, 18-19=-11/0, 19-20=-11/0, 20-21=-11/0, 21-22=-11/0, 22-23=-11/0, 23-24=-11/0, 24-25=-11/0, 25-26=-11/0, 26-27=-1/0		
		NOTES	
		1) All plates are 2x4 MT20 unless otherwise indicated.	
		2) Gable requires continuous bottom chord bearing.	
		3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).	
		4) Gable studs spaced at 1-4-0 oc.	
		5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.	
		6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.	
		LOAD CASE(S) Standard	



November 9, 2021



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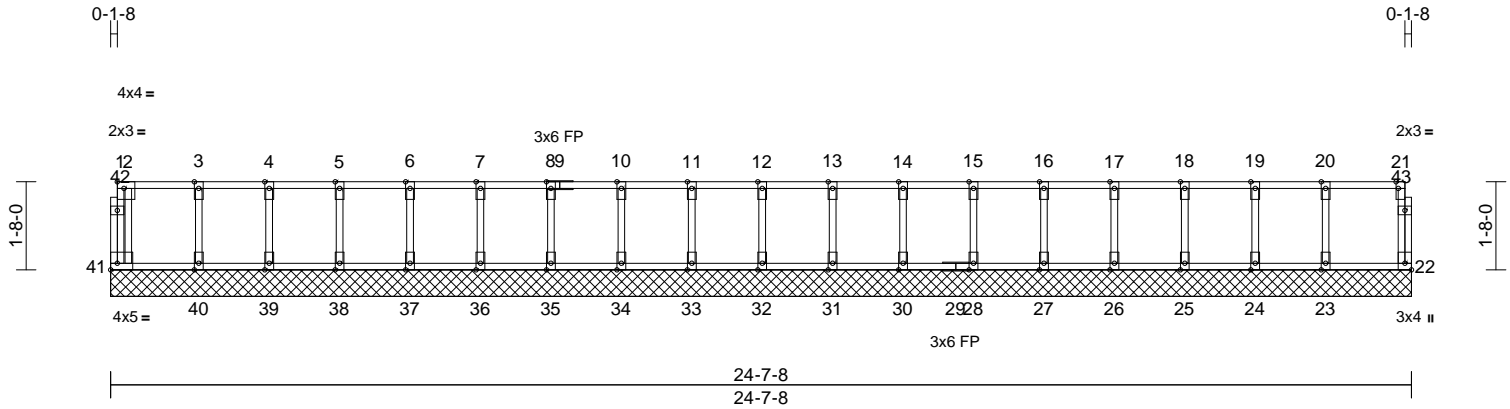
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Floors
210567	F11	Floor Supported Gable	1	1	I48620997
Job Reference (optional)					

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:18
ID:WILr9c1kwZYU4WtM7DyyyNY38-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:43.6									
Plate Offsets (X, Y): [1:Edge,0-1-8], [21:0-1-8,Edge], [22:Edge,0-1-8], [41:Edge,0-1-8]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a
TCDL	15.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	22	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R					
							PLATES	GRIP	
							MT20	197/144	
							Weight: 91 lb	FT = 5%F, 10%E	

LUMBER		WEBS	2-41=-105/0, 3-40=-155/0, 4-39=-145/0, 5-38=-147/0, 6-37=-147/0, 7-36=-147/0, 8-35=-147/0, 10-34=-147/0, 11-33=-147/0, 12-32=-147/0, 13-31=-147/0, 14-30=-147/0, 15-28=-147/0, 16-27=-147/0, 17-26=-146/0, 18-25=-148/0, 19-24=-143/0, 20-23=-160/0
TOP CHORD	2x4 SPF No.2(flat)		
BOT CHORD	2x4 SPF No.2(flat)		
WEBS	2x4 SPF No.2(flat)		
OTHERS	2x4 SPF No.2(flat)		

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	(lb/size)	22=91/24-7-8, 23=187/24-7-8, 24=170/24-7-8, 25=174/24-7-8, 26=173/24-7-8, 27=173/24-7-8, 28=173/24-7-8, 30=173/24-7-8, 31=173/24-7-8, 32=173/24-7-8, 33=173/24-7-8, 34=173/24-7-8, 35=173/24-7-8, 36=173/24-7-8, 37=173/24-7-8, 38=174/24-7-8, 39=170/24-7-8, 40=184/24-7-8, 41=97/24-7-8
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- NOTES**
- 1) All plates are 2x4 MT20 unless otherwise indicated.
 - 2) Gable requires continuous bottom chord bearing.
 - 3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 4) Gable studs spaced at 1-4-0 oc.
 - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-41=0/21, 21-22=-75/0, 1-2=-5/0, 2-3=-14/0, 3-4=-14/0, 4-5=-14/0, 5-6=-14/0, 6-7=-14/0, 7-8=-14/0, 8-10=-14/0, 10-11=-14/0, 11-12=-14/0, 12-13=-14/0, 13-14=-14/0, 14-15=-14/0, 15-16=-14/0, 16-17=-14/0, 17-18=-14/0, 18-19=-14/0, 19-20=-14/0, 20-21=-14/0
BOT CHORD	40-41=0/14, 39-40=0/14, 38-39=0/14, 37-38=0/14, 36-37=0/14, 35-36=0/14, 34-35=0/14, 33-34=0/14, 32-33=0/14, 31-32=0/14, 30-31=0/14, 28-30=0/14, 27-28=0/14, 26-27=0/14, 25-26=0/14, 24-25=0/14, 23-24=0/14, 22-23=0/14



November 9, 2021

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

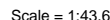
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

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



16023 Swingley Ridge Rd
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Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:19 Page: 1
ID:14wKivXGQTOaLUrnsPx4HyNY 4-RfC?PsB70Hg3NSqPqnL8w3ulTXbGKWRCdoi7J4zJC?fi



Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.67	Vert(LL)	-0.41	16-17	>717	480	MT20HS	148/108
TCDL	15.0	Lumber DOL	1.00	BC	0.90	Vert(CT)	-0.65	16-17	>447	360	MT20	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.11	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 99 lb	FT = 5%F, 10%E

WARNING: - verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MMF/473 Rev. 3/19/2020 BEFORE USE.

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

16023 Swingley Ridge Rd
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Page: 1

Scale = 1:43.6

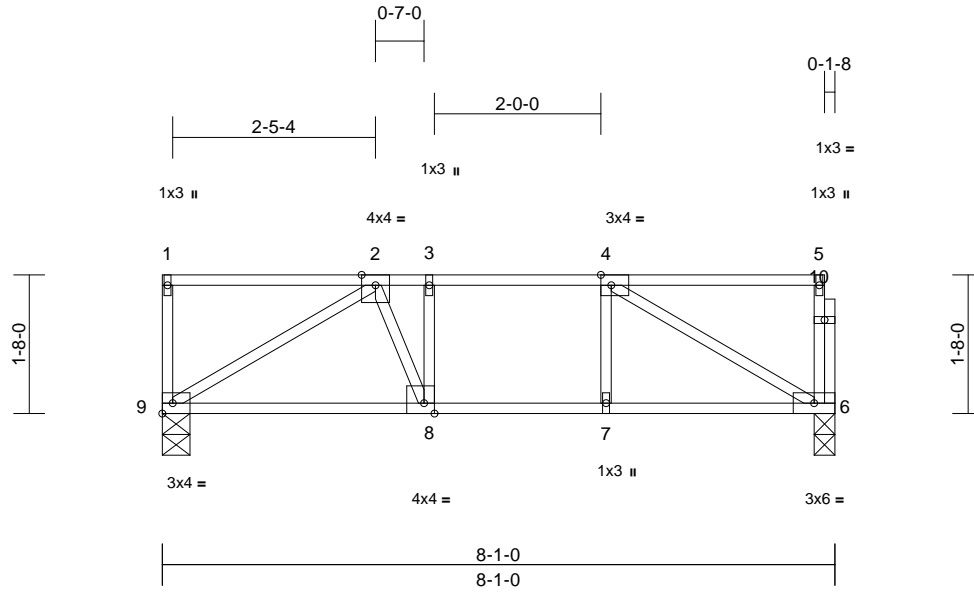
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 210567	Truss F14	Truss Type Floor Girder	Qty 1	Ply 1	Boyer Res. - Floors Job Reference (optional)	I48621000
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Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:20
ID:xiWgldGkbjDgTm2D2QNkyNXND-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:27.7

Plate Offsets (X, Y): [4:0-1-8,Edge], [8:0-1-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.33	Vert(LL)	-0.04	8-9	>999	480	MT20	197/144
TCDL	15.0	Lumber DOL	1.00	BC	0.31	Vert(CT)	-0.06	8-9	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 34 lb	FT = 5%F, 10%E

LUMBER

TOP CHORD 2x4 SPF No.2(flat)
BOT CHORD 2x4 SPF No.2(flat)
WEBS 2x4 SPF No.2(flat)
OTHERS 2x4 SPF No.2(flat)

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 (lb/size) 6=405/0-3-0, 9=410/0-4-0

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-9=-89/0, 5-6=-97/0, 1-2=0/0, 2-3=-512/0, 3-4=-512/0, 4-5=-4/0

BOT CHORD 8-9=0/485, 7-8=0/512, 6-7=0/512

WEBS 4-6=-590/0, 2-9=-570/0, 3-8=-141/33, 4-7=0/68, 2-8=-14/223

NOTES

- Unbalanced floor live loads have been considered for this design.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



November 9, 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

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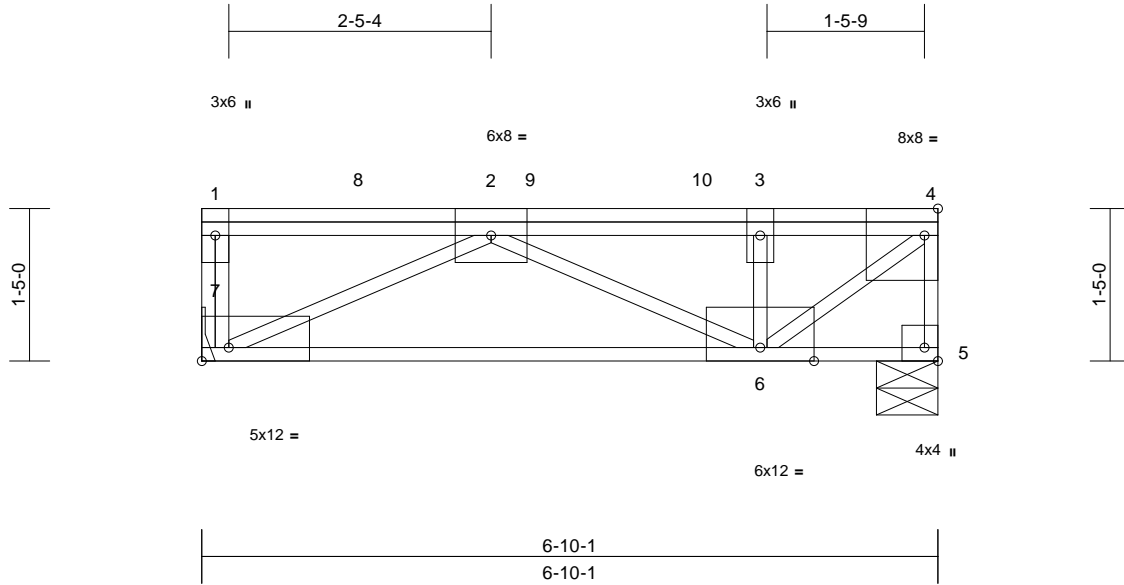
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 210567	Truss F15	Truss Type Floor Girder	Qty 1	Ply 1	Boyer Res. - Floors Job Reference (optional)	I48621001
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Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:21
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Page: 1



Scale = 1:21.4

Plate Offsets (X, Y): [4:0-1-8,Edge], [5:Edge,0-1-8], [7:Edge,0-1-8]

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.49	Vert(LL)	-0.02	6-7	>999	480	MT20	197/144
TCDL	15.0	Lumber DOL	1.00	BC	0.48	Vert(CT)	-0.10	6-7	>772	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.65	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 36 lb	FT = 5%F, 10%E

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E(flat)
BOT CHORD 2x4 SPF 2100F 1.8E(flat)
WEBS 2x4 SPF No.2(flat)

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 (lb/size) 5=1372/0-6-14, 7=1651/
Mechanical

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-7=-353/0, 4-5=-1377/0, 1-2=0/0,
2-3=-1833/0, 3-4=-1833/0

BOT CHORD 6-7=0/2634, 5-6=0/0

WEBS 2-7=-2921/0, 2-6=-893/0, 3-6=-947/0,
4-6=0/2317

NOTES

- 1) Refer to girder(s) for truss to truss connections.
- 2) 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.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10'-0"-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00,
Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 5-7=-16, 1-4=-88
Concentrated Loads (lb)
Vert: 8=-777, 9=-777, 10=-777



November 9, 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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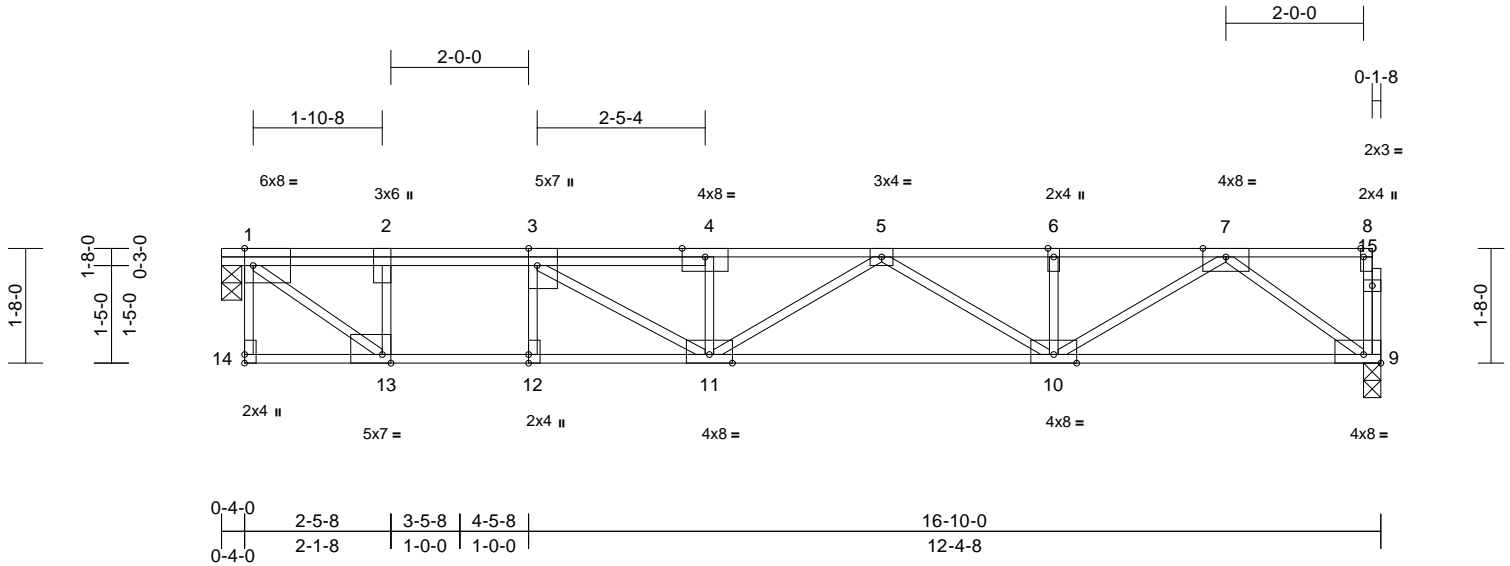
Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Floors	
210567	F16	Floor	3	1	Job Reference (optional)	I48621002

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Nov 01 15:39:22

Page: 1

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Scale = 1:33.5

Plate Offsets (X, Y): [1:0-1-8,Edge], [3:0-3-0,Edge], [8:0-1-8,Edge], [9:Edge,0-1-8], [12:0-1-8,Edge], [13:0-1-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.86	Vert(LL)	-0.22	11-12	>870	480	MT20	197/144
TCDL	15.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.36	11-12	>544	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 75 lb	FT = 5%F, 10%E

LUMBER

TOP CHORD	2x4 SPF No.2(flat)
BOT CHORD	2x4 SPF No.2(flat)
WEBS	2x4 SPF No.2(flat)
OTHERS	2x4 SPF No.2(flat)

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: 2-2-0 oc bracing: 12-13.

REACTIONS

(lb/size) 1=848/0-3-8, 9=842/0-3-0

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-14=-39/0, 8-9=-70/0, 1-2=-1420/0, 2-3=-1420/0, 3-4=-2246/0, 4-5=-2247/0, 5-6=-1871/0, 6-7=-1871/0, 7-8=-3/0
BOT CHORD	13-14=0/0, 12-13=0/1420, 11-12=0/1420, 10-11=0/2216, 9-10=0/1026
WEBS	2-13=-868/0, 3-12=-114/0, 3-11=0/985, 4-11=-390/0, 5-11=0/98, 5-10=-406/0, 6-10=-225/0, 7-10=0/992, 7-9=-1265/0, 1-13=0/1766

NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) 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.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 4) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 5) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



November 9,2021

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

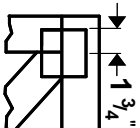
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



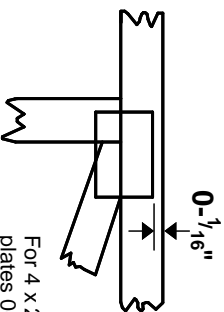
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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.

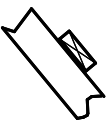
* Plate location details available in **MiTek 20/20** software or upon request.

PLATE SIZE

4 X 4

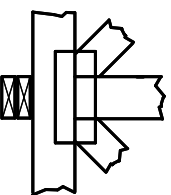
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



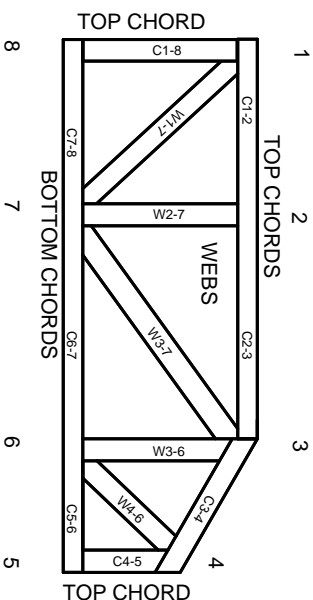
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: 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/TP1 1 section 6.3 These truss designs rely on lumber values established by others.

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



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.