



RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/14/2021

MiTek USA, Inc.

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

Re: 2768614
Summit/148 Hawthorne

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

Pages or sheets covered by this seal: I45835053 thru I45835092

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

Missouri COA: Engineering 001193



April 27, 2021

Johnson, Andrew ,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.

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835053
2768614	A1	Common Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:PbcM7Cmw3VcWB1iOD2INEz7P5p-w?nH9UYJE_8hLKwlsj2MDA_GOISdbmaNd4eUxzMoFY

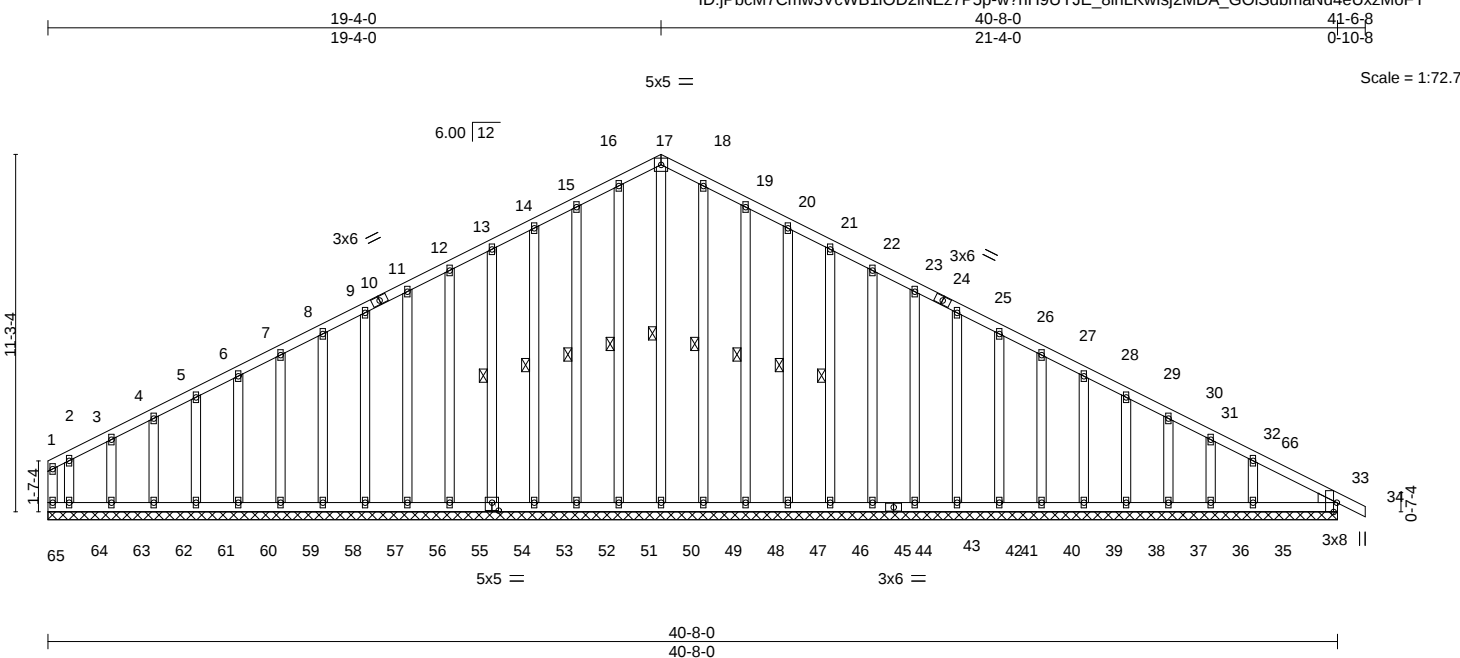


Plate Offsets (X,Y)-- [33:0-3-8,Edge], [54:0-2-8,0-3-0]							
LOADING (psf)	SPACING	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d
TCLL 25.0	Plate Grip DOL	1.15	TC 0.09	Vert(LL)	0.00	33	n/r
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	0.00	34	n/r
BCLL 0.0	Rep Stress Incr	YES	WB 0.14	Horz(CT)	0.01	33	n/a
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S				
				PLATES	GRIP		
				MT20	197/144		
				Weight: 297 lb		FT = 20%	

LUMBER-

TOP CHORD 2x4 SPF No.2
 BOT CHORD 2x4 SPF No.2
 WEBS 2x4 SPF No.2
 OTHERS 2x4 SPF No.2
 WEDGE
 Right: 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 17-50, 16-51, 15-52, 14-53, 13-54, 18-49, 19-48, 20-47, 21-46

REACTIONS.

All bearings 40-8-0.
 (lb) - Max Horz 65=-182(LC 17)
 Max Uplift All uplift 100 lb or less at joint(s) 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 49, 48, 47, 46, 45, 43, 42, 41, 40, 39, 38, 37, 36, 35, 33 except 65=-115(LC 10), 64=-260(LC 12)
 Max Grav All reactions 250 lb or less at joint(s) 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 49, 48, 47, 46, 45, 43, 42, 41, 40, 39, 38, 37, 36, 35, 33 except 65=269(LC 12)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 12-13=-103/267, 13-14=-114/297, 14-15=-124/327, 15-16=-137/363, 16-17=-141/375, 17-18=-141/375, 18-19=-137/363, 19-20=-124/327, 20-21=-114/297, 21-22=-103/267

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-1-12 to 3-4-0, Exterior(2N) 3-4-0 to 19-4-0, Corner(3R) 19-4-0 to 22-4-0, Exterior(2N) 22-4-0 to 41-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 1-4-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 49, 48, 47, 46, 45, 43, 42, 41, 40, 39, 38, 37, 36, 35, 33 except (jt=lb) 65=115, 64=260.
- 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.



April 27, 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	Summit/148 Hawthorne	I45835054
2768614	A2	Roof Special	6	1		

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

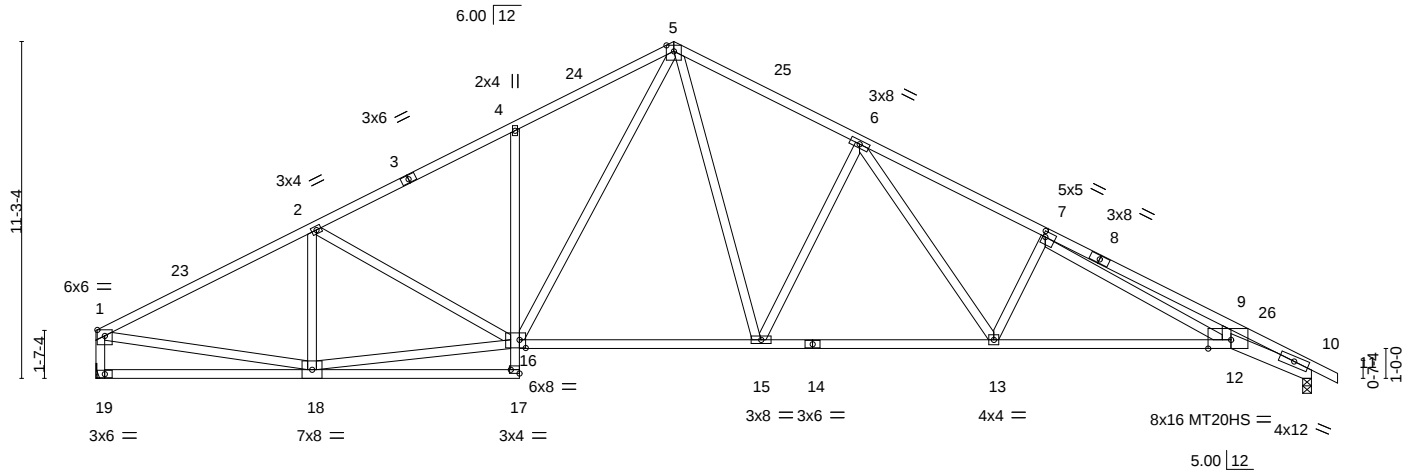
8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:30 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-dBvUqjtFtHYwQVu6N1iNyvoOHHm4SckZbJ7ZxszMof7

7-2-12	14-2-0	19-4-0	25-6-9	31-9-2	37-11-11	40-8-0	41-6-8
7-2-12	6-11-4	5-2-0	6-2-9	6-2-9	6-2-9	2-8-5	0-10-8

6x6 =

Scale = 1:77.1



7-2-12	14-2-0	22-1-4	30-0-7	37-11-11	40-8-0
7-2-12	6-11-4	7-11-4	7-11-4	7-11-4	2-8-5

Plate Offsets (X,Y)-- [7:0-1-0,0-2-4], [12:0-9-3,Edge], [16:0-2-8,0-3-4], [17:Edge,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 1.00	Vert(LL)	-0.46 12-13	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.95	Vert(CT)	-0.90 12-13	>538	180	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	YES	WB 0.95	Horz(CT)	0.32 10	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 199 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
5-8: 2x4 SPF 1650F 1.5E, 8-11: 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except*
10-12: 2x6 SPF 2100F 1.8E, 12-14: 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS.

(size) 19=Mechanical, 10=0-3-8
Max Horz 19=184(LC 17)
Max Uplift 19=218(LC 12), 10=251(LC 13)
Max Grav 19=1823(LC 1), 10=1885(LC 1)

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

TOP CHORD 1-2=-2612/315, 2-4=-2687/367, 4-5=-2666/471, 5-6=-2487/403, 6-7=-3621/500,
7-9=-6800/920, 9-10=-7062/816, 1-19=-1747/243
BOT CHORD 18-19=-161/295, 4-16=-434/207, 15-16=-90/1856, 13-15=-148/2545, 12-13=-304/3474,
10-12=-694/6395
WEBS 2-18=-579/145, 16-18=-305/2166, 5-16=-285/991, 5-15=-198/1026, 6-15=-924/293,
6-13=-188/1087, 7-13=-768/241, 7-12=-459/3031, 9-12=0/388, 1-18=-181/2075

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 19-4-0, Exterior(2R) 19-4-0 to 22-4-0, Interior(1) 22-4-0 to 41-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 10 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) 19=218, 10=251.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 27, 2021

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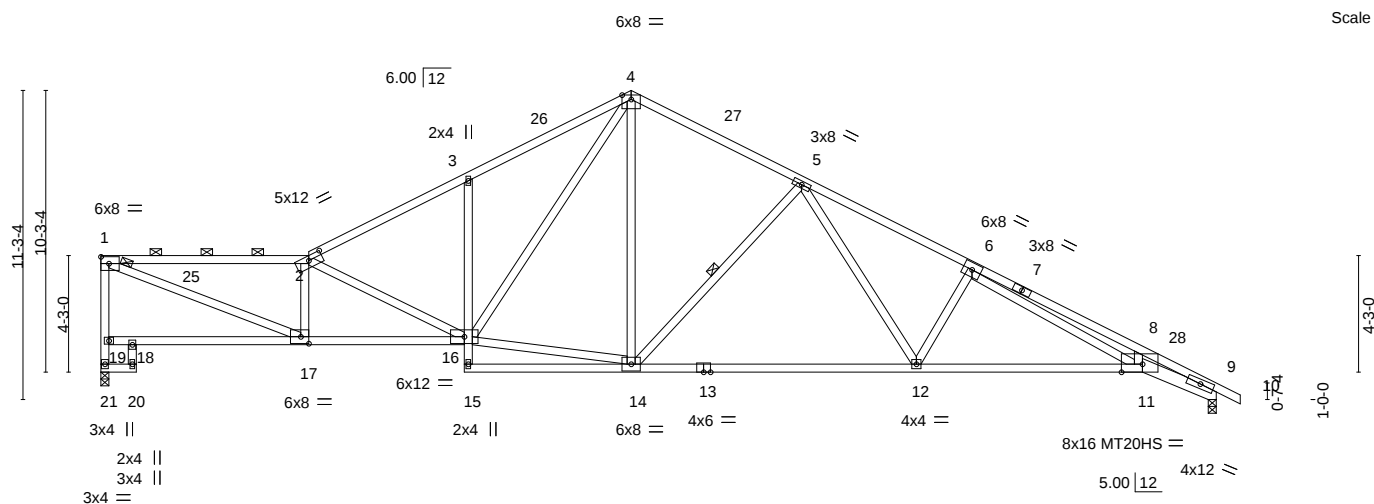


16023 Swingley Ridge Rd
Chesterfield, MO 63017

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ID:iPbcM7Cmw3VcWB1iOD2iNEz7P5p-Za1FFPuVPuoegp2VURkr2Ktkn4RYwWss2dca0IzMoF5

1-3-8	7-6-15	13-3-0	19-4-0	25-6-9	31-9-2	37-11-11	40-8-0 41-6-8
1-3-8	6-3-7	5-8-1	6-1-0	6-2-9	6-2-9	6-2-9	2-8-5 0-10-8

Scale = 1:84.0



1-3-8	7-6-15	13-3-0	19-4-0	29-8-13	37-11-11	40-8-0
1-3-8	6-3-7	5-8-1	6-1-0	10-4-13	8-2-14	2-8-5

Plate Offsets (X,Y)-- [2:0-6-0,0-1-15], [11:0-9-3,Edge], [17:0-3-8,0-3-0]												
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	1.00	Vert(LL)	-0.49	11-12	>997	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.93	11-12	>522	180	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.37	9	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 201 lb	FT = 20%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP 2400F 2.0E *Except* 2-4: 2x4 SPF No.2, 4-7: 2x4 SPF 1650F 1.5E	TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-2-10 max.): 1-2.
BOT CHORD	2x4 SPF No.2 *Except* 9-11: 2x6 SPF 2100F 1.8E, 11-13: 2x4 SPF 1650F 1.5E	BOT CHORD	Rigid ceiling directly applied.
WEBS	2x4 SPF No.2	WEBS	1 Row at midpt 5-14

REACTIONS. (size) 21=0-3-8, 9=0-3-8
 Max Horz 21=-239(LC 8)
 Max Uplift 21=-230(LC 12), 9=-255(LC 13)
 Max Gray 21=1823(LC 1), 9=1885(LC 1)

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

TOP CHORD
19-21=-1779/217, 1-19=-1731/251, 1-2=-3670/396, 2-3=-3177/385, 3-4=-3145/488,
4-5=-2207/365, 5-6=-3575/491, 6-8=-6797/943, 8-9=-7060/843

BOT CHORD
18-19=-4/308, 17-18=-82/310, 16-17=-385/3732, 3-16=-401/208, 12-14=-140/2537,
11-12=-311/3478, 9-11=-718/6393

WEBS
1-17=-425/3814, 2-17=-1318/2399, 2-16=-1107/171, 14-16=-48/1789, 4-16=-313/1538,
4-14=-153/674, 5-14=-979/291, 5-12=-158/1080, 6-12=-770/244, 6-11=-475/3024,
8-11=0/381

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDF=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12; Interior(1) 3-1-12 to 19-4-0; Exterior(2R) 19-4-0 to 22-4-0; Interior(1) 22-4-0 to 41-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TP1 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 21=230, 9=255.
- 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/TP1 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 27, 2021

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

WARNING: Velly design parameters are READ NOTES ON THIS AND INCLUDED WITH REFERENCE PAGE MM-1475 (Rev. 3/25/2020) BEFORE USE. Design valid for use only with MITEK® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	145835056
2768614	A4	ROOF SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

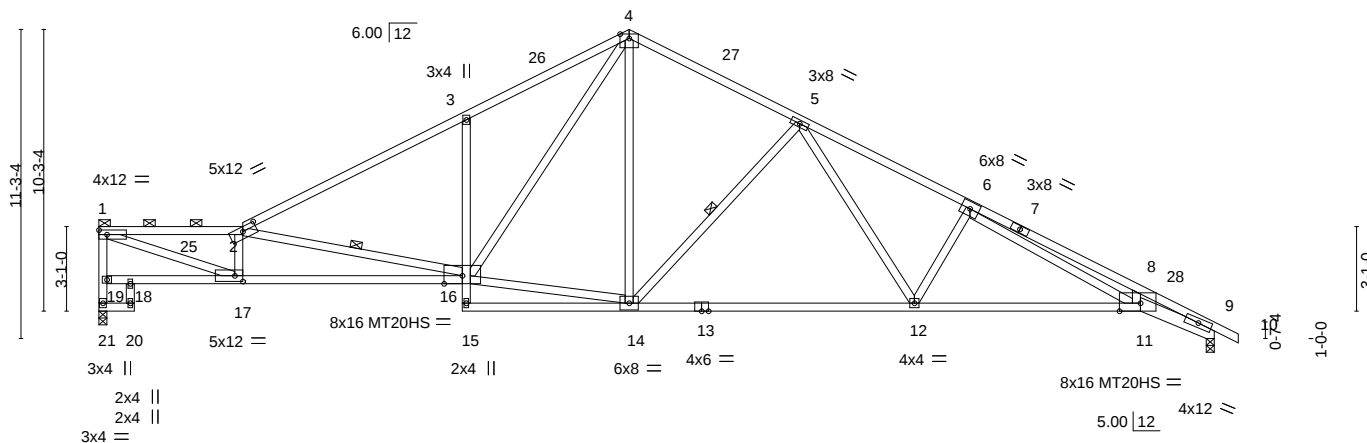
8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:34 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2lNEz7P5p-Wz9?7f5wXW2Mv6CucsmJ7ly3Hu70OTy8Wx5n4ezMoF3

1-3-8 5-2-15 13-3-0 19-4-0 25-6-9 31-9-2 37-11-11 40-8-0 41-6-8
1-3-8 3-11-7 8-0-1 6-1-0 6-2-9 6-2-9 6-2-9 2-8-5 0-10-8

6x8 =

Scale = 1:84.0



1-3-8 5-2-15 13-3-0 19-4-0 29-8-13 37-11-11 40-8-0
1-3-8 3-11-7 8-0-1 6-1-0 10-4-13 8-2-14 2-8-5

Plate Offsets (X,Y)--		[2:0-6-0,0-1-15], [11:0-9-3,Edge], [17:0-3-8,0-2-8]					
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d
TCLL 25.0	Plate Grip DOL	1.15	TC 1.00	Vert(LL)	-0.50 11-12	>982	240
TCDL 10.0	Lumber DOL	1.15	BC 0.95	Vert(CT)	-0.95 11-12	>514	180
BCLL 0.0	Rep Stress Incr	YES	WB 0.74	Horz(CT)	0.43 9	n/a	n/a
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS				
				PLATES			GRIP
				MT20			197/144
				MT20HS			148/108
				Weight: 195 lb		FT = 20%	

LUMBER-

TOP CHORD 2x4 SPF 1650F 1.5E *Except*
1-2: 2x4 SPF No.2, 7-10: 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except*
16-19,11-13: 2x4 SPF 1650F 1.5E, 9-11: 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF No.2 *Except*
1-17: 2x4 SPF 1650F 1.5E

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-4-1 max.): 1-2.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 2-16, 5-14

REACTIONS.

(size) 21=0-3-8, 9=0-3-8
Max Horz 21=209(LC 8)
Max Uplift 21=225(LC 12), 9=255(LC 13)
Max Grav 21=1823(LC 1), 9=1885(LC 1)

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

TOP CHORD 19-21=1783/228, 1-19=1746/231, 1-2=4356/501, 2-3=3253/379, 3-4=3183/506,
4-5=2206/365, 5-6=3575/492, 6-8=6798/945, 8-9=7061/844
BOT CHORD 18-19=56/295, 17-18=75/313, 16-17=554/4467, 3-16=526/264, 12-14=145/2538,
11-12=311/3477, 9-11=719/6393
WEBS 1-17=518/4476, 2-17=1433/250, 2-16=1711/294, 14-16=24/1821, 4-16=342/1586,
4-14=158/667, 5-14=983/292, 5-12=158/1079, 6-12=768/244, 6-11=476/3026,
8-11=0/381

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 19-4-0, Exterior(2R) 19-4-0 to 22-4-0, Interior(1) 22-4-0 to 41-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Bearing at joint(s) 9 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) 21=225, 9=255.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 27, 2021

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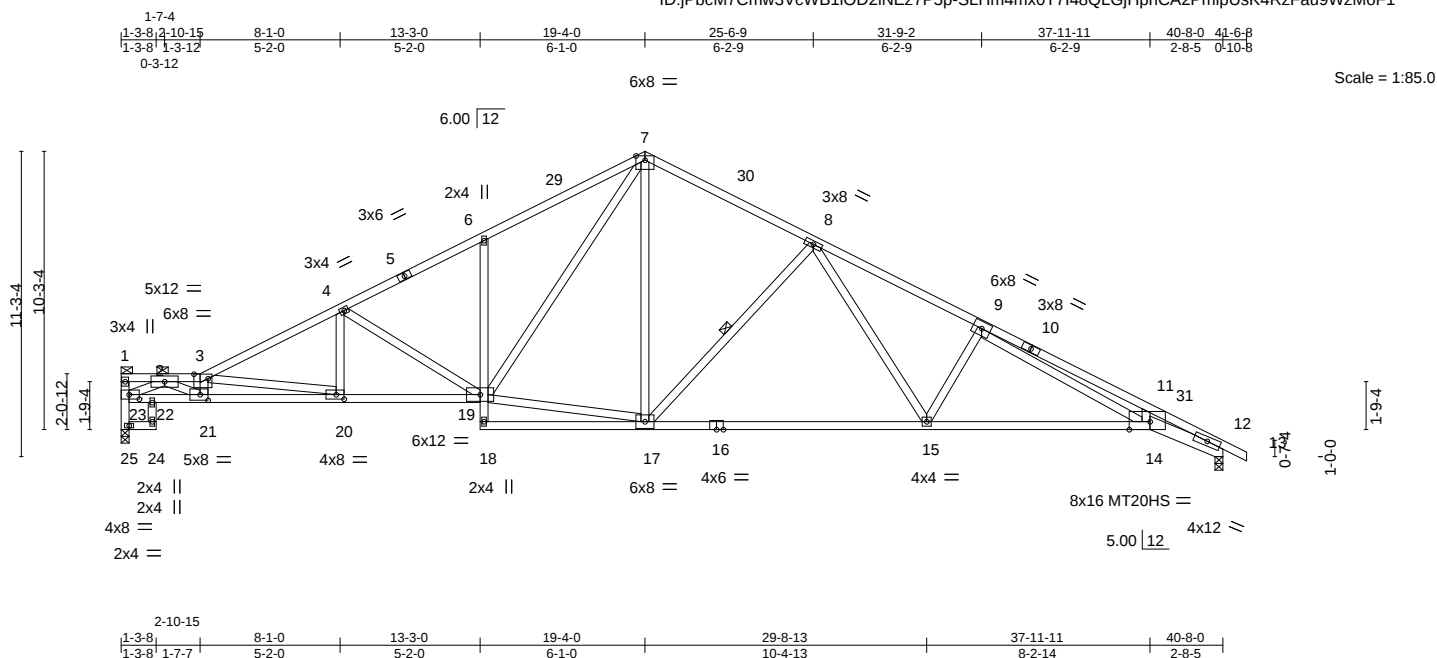
Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	145835057
2768614	A5	ROOF SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-SLHm4mx0T7I48QLGjHpnCA2PmipUsK4RzFau9WzMoF1



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 1.00	Vert(LL)	-0.49 14-15	>983	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.95	Vert(CT)	-0.94 14-15	>515	180	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	YES	WB 0.96	Horz(CT)	0.48 12	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 201 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
7-10: 2x4 SPF 1650F 1.5E, 10-13: 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except*
19-23: 2x4 SP 2400F 2.0E, 12-14: 2x6 SPF 2100F 1.8E
14-16: 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-1-3 max.): 1-3.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 8-17

REACTIONS.

(size) 25=0-3-8, 12=0-3-8
Max Horz 25=-202(LC 13)
Max Uplift 25=-222(LC 12), 12=-255(LC 13)
Max Grav 25=1823(LC 1), 12=1885(LC 1)

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

TOP CHORD 23-25=-1778/242, 3-4=-4037/481, 4-6=-3139/390, 6-7=-3132/507, 7-8=-2207/365,
8-9=-3575/493, 9-11=-6797/945, 11-12=-7060/844, 1-2=-335/72, 2-3=-5979/789
BOT CHORD 22-23=-474/3215, 21-22=-495/3190, 20-21=-813/5674, 19-20=-448/3579, 6-19=-400/199,
15-17=-150/2537, 14-15=-312/3478, 12-14=-720/6393
WEBS 3-21=-1638/250, 3-20=-2118/370, 4-20=-20/522, 4-19=-1000/218, 17-19=-58/1745,
7-19=-341/1519, 7-17=-154/678, 8-17=-978/291, 8-15=-158/1080, 9-15=-770/244,
9-14=-476/3024, 11-14=0/381, 2-21=-413/3154, 2-23=-3250/398

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 2-10-15, Interior(1) 2-10-15 to 19-4-0, Exterior(2R) 19-4-0 to 22-4-0, Interior(1) 22-4-0 to 41-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Bearing at joint(s) 25, 12 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) 25=222, 12=255.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 27, 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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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835058
2768614	A6	ROOF SPECIAL	1	1		

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

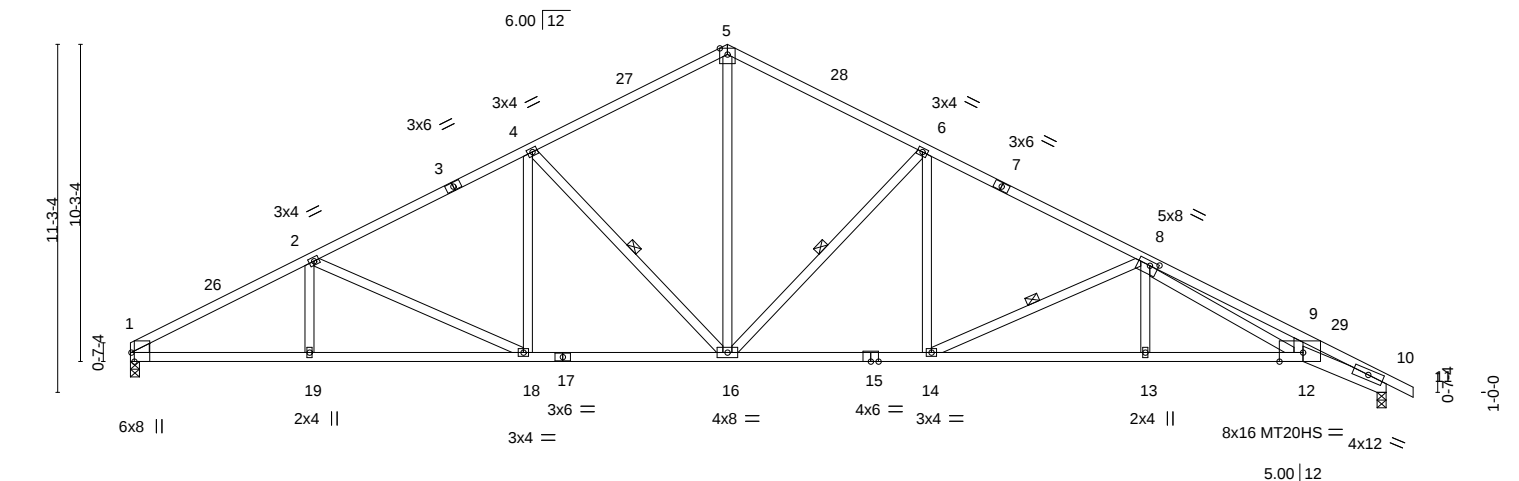
8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:37 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-wYq8l6yeDRQxmawTH?K0lOac45B9bs0bCvJRhyzMoF0

5-9-9	12-10-7	19-4-0	25-9-9	32-10-7	37-11-11	40-8-0	41-6-8
5-9-9	7-0-14	6-5-9	6-5-9	7-0-14	5-1-5	2-8-5	0-10-8

6x6 =

Scale = 1:74.6



5-9-9	12-10-7	19-4-0	25-9-9	32-10-7	37-11-11	40-8-0
5-9-9	7-0-14	6-5-9	6-5-9	7-0-14	5-1-5	2-8-5

Plate Offsets (X,Y)-- [1:0-3-8,Edge], [8:0-3-5,0-1-12], [12:0-9-3,Edge]

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 0.84	Vert(LL)	-0.34	12-13	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.80	Vert(CT)	-0.62	12-13	>783	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	YES	WB 0.59	Horz(CT)	0.28	10	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 194 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
7-11: 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 2400F 2.0E *Except*
10-12: 2x6 SPF 2100F 1.8E, 15-17: 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-16, 6-16, 8-14

REACTIONS.

(size) 1=0-3-8, 10=0-3-8
Max Horz 1=-203(LC 13)
Max Uplift 1=-222(LC 12), 10=-256(LC 13)
Max Grav 1=1829(LC 1), 10=1892(LC 1)

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

TOP CHORD 1-2=-3312/402, 2-4=-2840/375, 4-5=-2219/372, 5-6=-2215/369, 6-8=-3031/389,
8-9=-6498/877, 9-10=-6763/814
BOT CHORD 1-19=-418/2876, 18-19=-418/2876, 16-18=-255/2451, 14-16=-151/2607, 13-14=-356/3756,
12-13=-356/3758, 10-12=-686/6100
WEBS 2-18=-510/179, 4-18=-15/423, 4-16=-840/248, 5-16=-184/1468, 6-16=-1042/275,
6-14=-50/641, 8-14=-1263/271, 8-13=0/339, 9-12=0/331, 8-12=-375/2423

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 19-4-0, Exterior(2R) 19-4-0 to 22-4-0, Interior(1) 22-4-0 to 41-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Bearing at joint(s) 10 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) 1=222, 10=256.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 27, 2021

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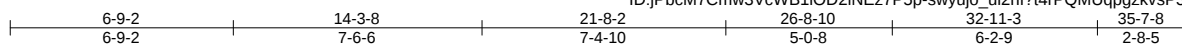
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	145835059
2768614	A7	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-swyujo_ul2hf?4rPQMUqpgzkvsP3l_ufDoYmrzMoF_



Scale = 1:69.8

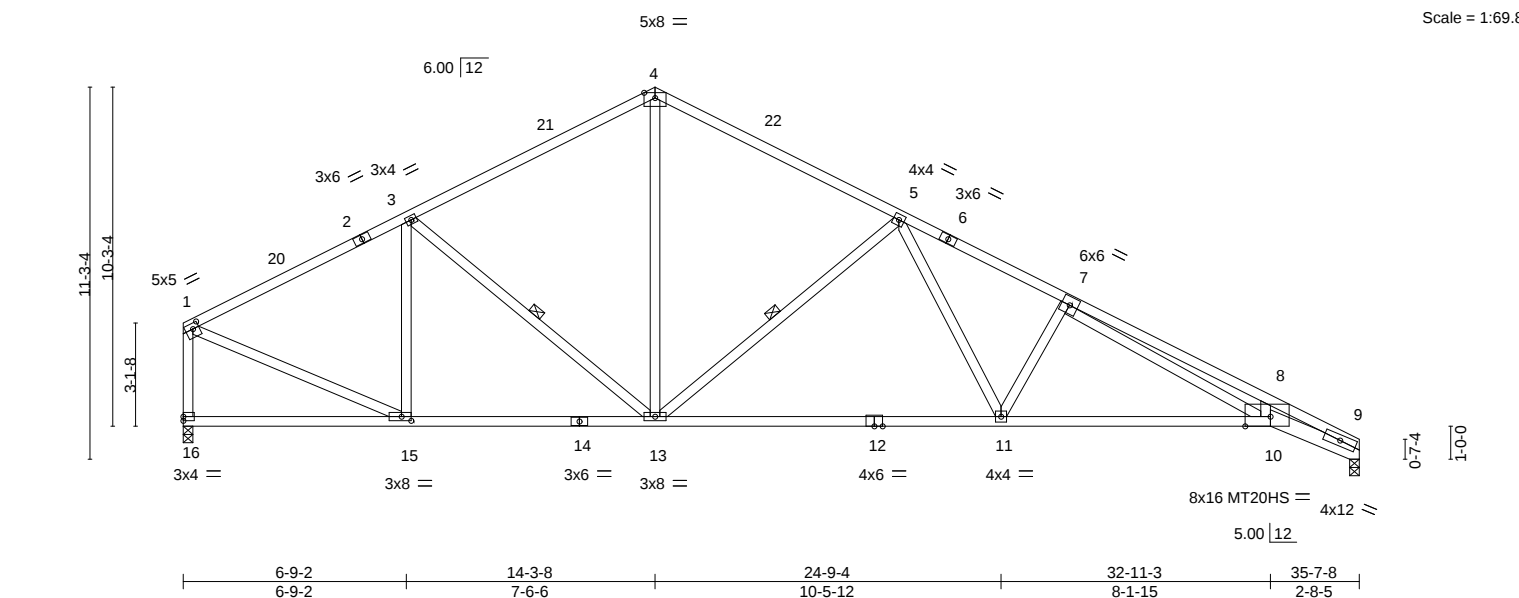


Plate Offsets (X,Y)-- [1:0-2-4,0-2-0], [10:0-9-3,Edge], [15:0-3-8,0-1-8]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d				PLATES	GRIP	
TCLL	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.38	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.73	10-11	>585	180	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.23	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 164 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
6-9: 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SPF 1650F 1.5E *Except*
9-10: 2x6 SPF 2100F 1.8E, 12-14: 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-13, 5-13

REACTIONS.

(size) 16=0-3-8, 9=0-3-8
Max Horz 16=-205(LC 8)
Max Uplift 16=-170(LC 12), 9=-221(LC 13)
Max Grav 16=1597(LC 1), 9=1597(LC 1)

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

TOP CHORD 1-3=-1712/241, 3-4=-1690/295, 4-5=-1681/306, 5-7=-3001/444, 7-8=-6013/927,
8-9=-6209/818, 1-16=-1531/216
BOT CHORD 13-15=-144/1452, 11-13=-139/2187, 10-11=-285/2942, 9-10=-712/5632
WEBS 3-15=-474/124, 4-13=-112/889, 5-13=-1031/301, 5-11=-124/946, 7-11=-690/217,
7-10=-502/2821, 8-10=0/316, 1-15=-160/1517

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-3-8, Exterior(2R) 14-3-8 to 17-3-8, Interior(1) 17-3-8 to 35-7-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Bearing at joint(s) 9 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) 16=170, 9=221.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 27, 2021

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835060
2768614	A8	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-oJ4f7U?8HfxMFBEWqOyvEIMPjbrXaCA7XHfpkzMoEy

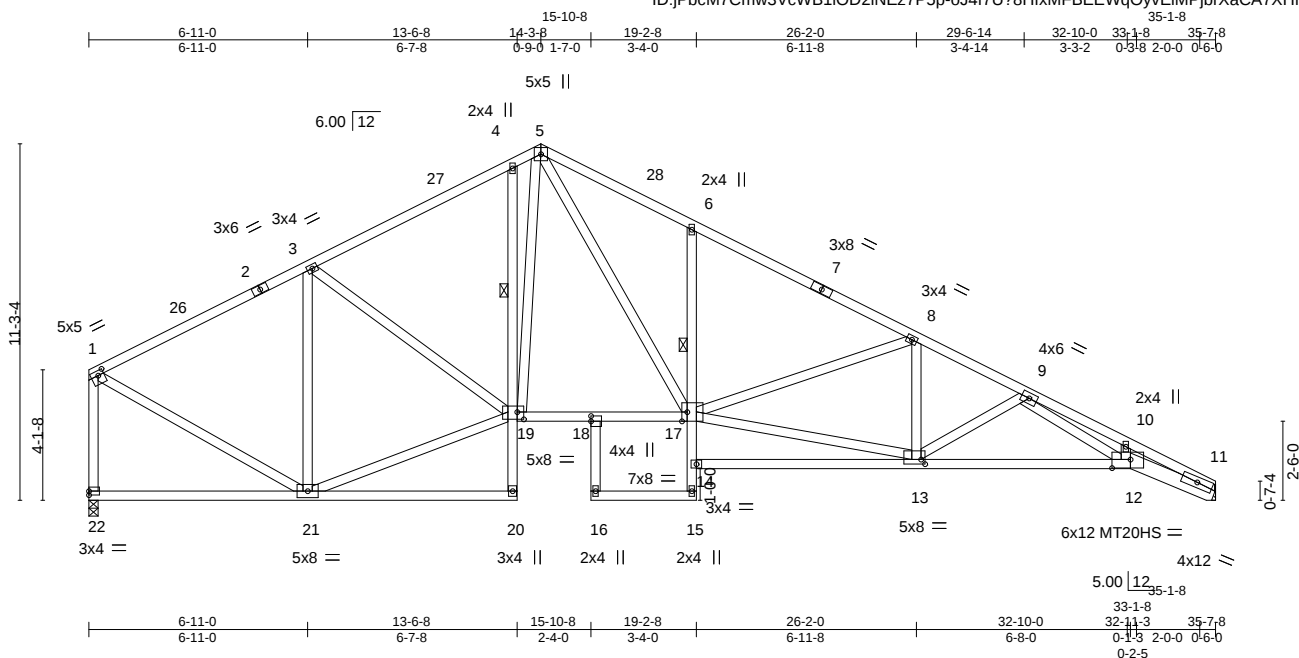


Plate Offsets (X,Y)--										[1:0-2-4,0-1-12], [12:0-7-0,0-3-4], [13:0-1-8,0-1-12], [17:0-2-0,Edge], [18:0-2-0,0-0-0], [19:0-2-8,0-2-12]									
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.		in (loc)		l/defl		L/d		PLATES		GRIP	
TCLL	25.0	Plate Grip DOL		1.15		TC 0.62		Vert(LL)		-0.27 12-13		>999		240		MT20		197/144	
TCDL	10.0	Lumber DOL		1.15		BC 0.62		Vert(CT)		-0.51 12-13		>841		180		MT20HS		148/108	
BCLL	0.0	Rep Stress Incr		YES		WB 0.97		Horz(CT)		0.24 11		n/a		n/a					
BCDL	10.0	Code IRC2018/TPI2014				Matrix-AS													
										Weight: 212 lb FT = 20%									

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
7-11: 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except*
12-14: 2x4 SP 2400F 2.0E, 11-12: 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied. Except:
1 Row at midpt 4-19, 6-14

REACTIONS.

(size) 22=0-3-8, 11=Mechanical
Max Horz 22=-224(LC 10)
Max Uplift 22=-170(LC 12), 11=-216(LC 13)
Max Grav 22=1597(LC 1), 11=1597(LC 1)

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

TOP CHORD 1-3=-1498/231, 3-4=-1987/303, 4-5=-1899/366, 5-6=-2678/436, 6-8=-2706/348,
8-9=-3215/430, 9-10=-5834/807, 10-11=-6149/769, 1-22=-1532/219
BOT CHORD 4-19=-302/147, 18-19=-23/1612, 17-18=-19/1544, 6-17=-446/215, 12-13=-381/3473,
11-12=-662/5568
WEBS 3-21=-1037/167, 19-21=-128/1344, 3-19=0/523, 5-19=-203/670, 13-17=-230/2688,
1-21=-154/1394, 5-17=-318/1436, 8-17=-593/228, 9-12=-317/2158, 10-12=0/424,
9-13=-760/163

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-3-8, Exterior(2R) 14-3-8 to 17-3-8, Interior(1) 17-3-8 to 35-7-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) 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) 22=170, 11=216.
- 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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 27, 2021

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835061
2768614	A9	ROOF SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:43 2021 Page 2
ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-liCPY91PpHB4UVOCeFRQ_fqeoWC1?YRTarmuczMoEw

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-4=-70, 4-8=-70, 8-9=-70, 9-12=-70, 18-22=-20, 15-17=-20, 14-15=-20, 14-23=-20
 Concentrated Loads (lb)
 Vert: 26=-963(F)

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	Summit/148 Hawthorne	145835062
2768614	A10	Roof Special	1	1	Job Reference (optional)	

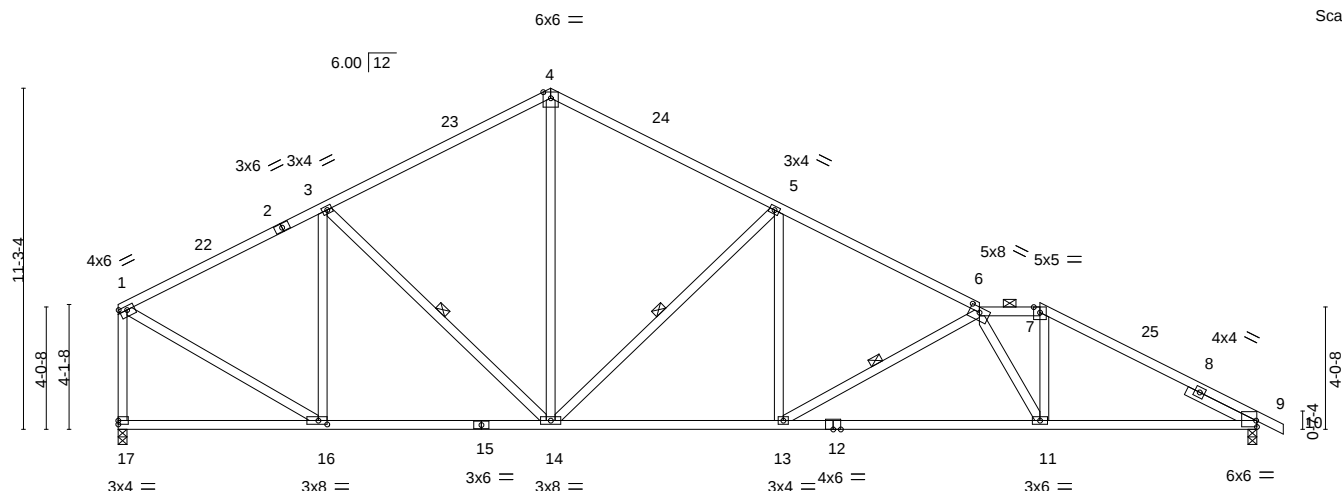
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:06 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-KaTQnWaBXvXKYp3Vz_Gl_roJicahqsq13aJl5FzMoFV

6-9-2	14-3-8	21-10-0	28-5-8	30-5-8	37-7-8	38-6-0
6-9-2	7-6-6	7-6-8	6-7-8	2-0-0	7-2-0	0-10-8

Scale = 1:76.1



6-9-2	14-3-8	21-10-0	28-5-8	30-5-8	37-7-8
6-9-2	7-6-6	7-6-8	6-7-8	2-0-0	7-2-0

Plate Offsets (X,Y)-- [1:0-3-0,0-1-8], [6:0-4-0,0-1-15], [9:Edge,0-2-8], [16:0-3-8,0-1-8]

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 0.85	Vert(LL)	-0.19 11-13	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.87	Vert(CT)	-0.47 11-13	>960	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.56	Horz(CT)	0.12 9	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 176 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
SLIDER Right 2x4 SPF No.2 - t 2-6-0

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-6-12 max.): 6-7.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-14, 5-14, 6-13

REACTIONS.

(size) 17=0-3-8, 9=0-3-8
Max Horz 17=-231(LC 10)
Max Uplift 17=-174(LC 12), 9=-255(LC 13)
Max Grav 17=1679(LC 1), 9=1752(LC 1)

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

TOP CHORD 1-3=-1573/244, 3-4=-1661/314, 4-5=-1661/329, 5-6=-2542/369, 6-7=-2485/398, 7-9=-2909/402, 1-17=-1617/232
BOT CHORD 14-16=-119/1329, 13-14=-128/2186, 11-13=-326/3018, 9-11=-259/2526
WEBS 3-16=-613/155, 4-14=-134/878, 5-14=-1125/302, 5-13=-47/654, 6-13=-960/241, 6-11=-1085/158, 7-11=-74/1074, 1-16=-172/1495

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-3-8, Exterior(2R) 14-3-8 to 17-3-8, Interior(1) 17-3-8 to 30-5-8, Exterior(2R) 30-5-8 to 33-5-8, Interior(1) 33-5-8 to 38-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 17=174, 9=255.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 27, 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

Builders FirstSource (Valley Center),

Valley Center, KS - 37147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:08 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-GzaACcS3Wn2n7Cu4PJD3GtfOPHAlmIJXu0PA8zMoFT

23-0-826-1-828-1-835-4-037-7-838-6-02-3-80-10-8

7-3-87-3-814-3-87-0-018-8-04-4-84-4-83-1-02-0-07-2-82-3-8

Scale = 1:76.1

5x5 =

6.00 12

4

25

26

4x8 =

5

2x4 ||

6

5x12 MT20HS =

6x6 =

7

23

27

19

3x6 =

18

3x8 =

3x6 =

17

16

10x10 =

15

4x6 ||

6x12 =

14

13

3x4 =

12

3x4 ||

4x8 =

7x8 =

8

0-7-8

1-0-0

5-2-8

7-3-87-3-814-3-87-0-023-0-88-9-026-1-83-1-028-1-82-0-035-4-07-2-837-7-82-3-8

Plate Offsets (X,Y)-- [1:Edge,0-1-12], [7:0-3-0,0-1-15], [8:0-7-12,0-3-0], [9:0-5-12,Edge], [10:0-1-2,0-2-3], [15:Edge,0-3-8], [16:0-4-8,Edge], [18:0-3-8,0-1-8]

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 0.84	Vert(LL)	-0.47 9-13	>956	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.81	Vert(CT)	-0.87 9-13	>514	180	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	YES	WB 0.57	Horz(CT)	0.39 10	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 223 lb	FT = 20%

 LUMBER- TOP CHORD 2x4 SPF No.2 *Except* 8-11: 2x6 SPF 2100F 1.8E BOT CHORD 2x4 SPF No.2 *Except* 9-14: 2x4 SP 2400F 2.0E WEBS 2x4 SPF No.2 OTHERS 2x6 SPF 2100F 1.8E LBR SCAB 8-11 2x6 SPF 2100F 1.8E one side WEDGE Right: 2x4 SP No.3 **BRACING-** TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 7-8. BOT CHORD Rigid ceiling directly applied. WEBS 1 Row at midpt 3-16, 5-16 || **REACTIONS.** (size) 19=0-3-8, 10=0-3-8 Max Horz 19=-232(LC 10) Max Uplift 19=-174(LC 12), 10=-253(LC 13) Max Grav 19=1686(LC 1), 10=1749(LC 1) **FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 1-3=-1623/254, 3-4=-1663/319, 4-5=-1602/340, 5-6=-3015/505, 6-7=-3021/426, 7-8=-3226/469, 8-9=-3484/444, 9-10=-868/152, 1-19=-1615/240 BOT CHORD 16-18=-114/1364, 15-16=0/301, 13-14=-293/3378, 9-13=-281/3200 WEBS 3-18=-577/147, 4-16=-185/998, 5-16=-1160/296, 14-16=-91/1604, 5-14=-274/1559, 7-14=-1138/218, 7-13=-380/71, 8-13=-15/511, 1-18=-175/1494 **NOTES-** 1) Attached 11-9-15 scab 8 to 11, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 0-0-3 from end at joint 8, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 7-2-11 from end at joint 8, nail 2 row(s) at 3" o.c. for 4-4-13. 2) Unbalanced roof live loads have been considered for this design. 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-3-8, Exterior(2R) 14-3-8 to 17-3-8, Interior(1) 17-3-8 to 28-1-8, Exterior(2R) 28-1-8 to 31-1-8, Interior(1) 31-1-8 to 38-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60 4) Provide adequate drainage to prevent water ponding. 5) All plates are MT20 plates unless otherwise indicated. 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads. 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 19=174, 10=253. 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1. 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord. 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord. |

STATE OF MISSOURI

ANDREW THOMAS JOHNSON

REGISTERED PROFESSIONAL ENGINEER

PE-2017018993

April 27, 2021



April 27, 2021



WARNING: Velly design parameters are READ NOTES ON THIS AND INCLUDED WITH REFERENCE PAGE MM-1475 (Rev. 3/25/2020) BEFORE USE. Design valid for use only with MITEK® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



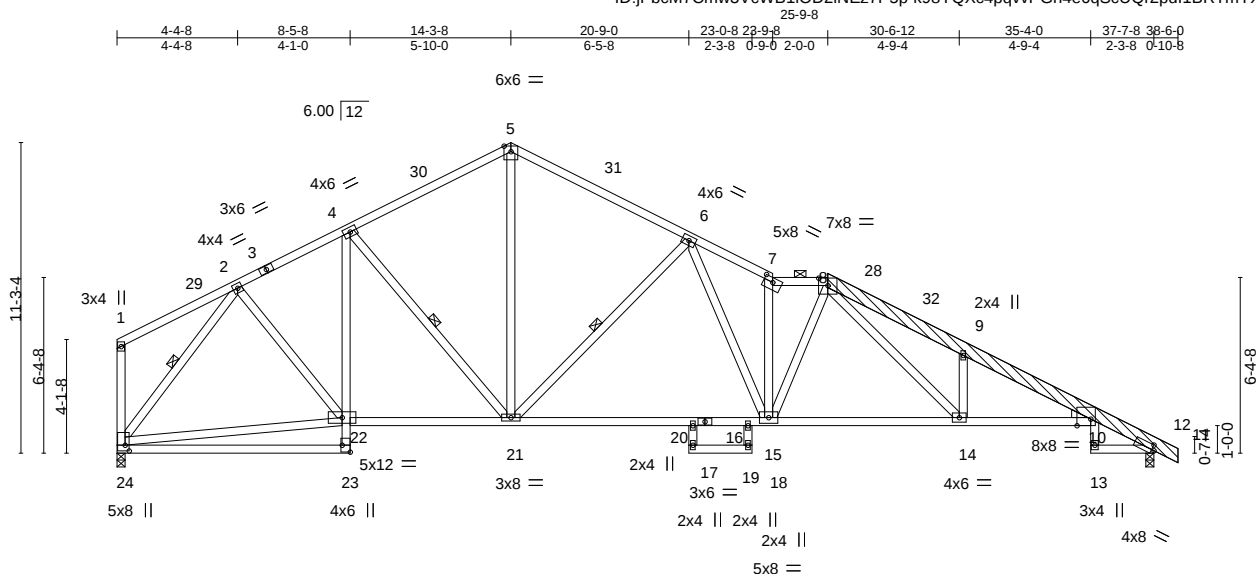
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	145835064
2768614	A12	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:jPbcM7Cmw3VcWB1iOD2lNEz7P5p-k98YQXc4pqvVPn4e6qScUQR2pd11BRTmYXyiazMoFS



Scale = 1:83.6

Plate Offsets (X,Y)--	[7:0-4-0,0-1-15], [8:0-4-0,0-3-4], [10:0-6-0,Edge], [11:0-1-2,0-2-3], [23:Edge,0-3-8], [24:0-2-8,0-1-12]
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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 0.78	Vert(LL)	-0.34	10-14	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.82	Vert(CT)	-0.64	20-21	>703		
BCLL 0.0	Rep Stress Incr	YES	WB 0.70	Horz(CT)	0.35	11	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 237 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
8-12: 2x6 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
10-17: 2x4 SP 2400F 2.0E
WEBS 2x4 SPF No.2
OTHERS 2x6 SPF 2100F 1.8E
LBR SCAB 8-12 2x6 SPF 2100F 1.8E one side
WEDGE
Right: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-3-8 max.): 7-8.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-21, 6-21, 2-24

REACTIONS.

(size) 11=0-3-8, 24=0-3-8
Max Horz 24=-232(LC 10)
Max Uplift 11=-253(LC 13), 24=-174(LC 12)
Max Grav 11=1749(LC 1), 24=1686(LC 1)

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

TOP CHORD 2-4=-1797/286, 4-5=-1794/322, 5-6=-1804/334, 6-7=-3204/475, 7-8=-2883/406,
8-9=-4334/674, 9-10=-3987/526, 10-11=-868/152
BOT CHORD 4-22=-284/83, 21-22=-113/1570, 20-21=-136/2343, 16-20=-130/2307, 15-16=-136/2343,
14-15=-190/2697, 10-14=-402/3789
WEBS 5-21=-149/1091, 6-21=-1187/310, 22-24=-143/981, 2-22=-22/674, 2-24=-1915/257,
7-15=-1421/221, 8-15=-23/467, 6-15=-183/1254, 8-14=-306/1568, 9-14=-1112/272

NOTES-

- Attached 14-5-4 scab 8 to 12, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c. except : starting at 4-5-15 from end at joint 8, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 9-10-0 from end at joint 8, nail 2 row(s) at 3" o.c. for 4-4-13.
- 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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-3-8, Exterior(2R) 14-3-8 to 17-3-8, Interior(1) 17-3-8 to 25-9-8, Exterior(2R) 25-9-8 to 28-9-8, Interior(1) 28-9-8 to 38-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=253, 24=174.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 27, 2021

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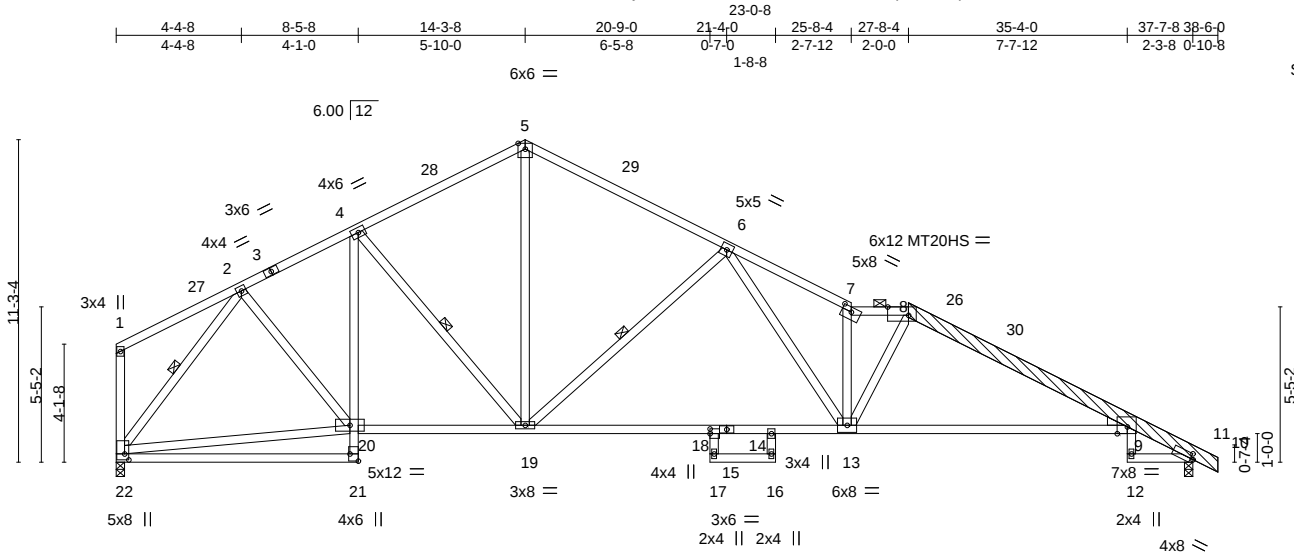
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835065
2768614	A13	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:11 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-hYGJqDeKLR9deaxTmXswhvV9udHIV6YmDs03mTzMoFQ



Scale = 1:80.5

Plate Offsets (X,Y)-- [7:0-4-0,0-1-15], [8:0-8-12,Edge], [9:0-4-4,Edge], [10:0-1-2,0-2-3], [18:0-2-0,0-0-0], [21:Edge,0-3-8], [22:0-2-8,0-1-12]									
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 0.95		Vert(LL) -0.59 9-13 >764 240				MT20 197/144
TCDL 10.0	Lumber DOL 1.15		BC 0.94		Vert(CT) -1.15 9-13 >390 180				MT20HS 148/108
BCLL 0.0	Rep Stress Incr YES		WB 0.53		Horz(CT) 0.47 10 n/a n/a				
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						Weight: 215 lb FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
8-11: 2x6 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
9-15: 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF No.2
OTHERS 2x6 SPF 2100F 1.8E
LBR SCAB 8-11 2x6 SPF 2100F 1.8E one side
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-1-0 max.): 7-8.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-19, 6-19, 2-22

REACTIONS. (size) 10=0-3-8, 22=0-3-8
Max Horz 22=-232(LC 10)
Max Uplift 10=-253(LC 13), 22=-174(LC 12)
Max Grav 10=1749(LC 1), 22=1686(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1796/285, 4-5=-1796/318, 5-6=-1819/328, 6-7=-3702/538, 7-8=-3334/449,
8-9=-3394/437, 9-10=-781/142
BOT CHORD 4-20=-286/77, 19-20=-114/1569, 18-19=-155/2439, 14-18=-184/2376, 13-14=-155/2439,
9-13=-270/3120
WEBS 5-19=-139/1076, 6-19=-1241/333, 6-13=-214/1523, 7-13=-1493/236, 8-13=-9/447,
20-22=-150/978, 2-20=-22/672, 2-22=-1915/255

NOTES-

- 1) Attached 12-3-13 scab 8 to 11, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 0-0-3 from end at joint 8, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 7-8-9 from end at joint 8, nail 2 row(s) at 4" o.c. for 4-4-13.
- 2) Unbalanced roof live loads have been considered for this design.
- 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-3-8, Exterior(2R) 14-3-8 to 17-3-8, Interior(1) 17-3-8 to 27-8-4, Exterior(2R) 27-8-4 to 30-8-4, Interior(1) 30-8-4 to 38-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=253, 22=174.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheathing be applied directly to the bottom chord.



April 27, 2021

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Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835065
2768614	A13	Roof Special	1	1	Job Reference (optional)	

NOTES-
 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835066
2768614	A14	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID: jPbcM7Cmw3VcWB1iOD2INEz7P5p-9kqh2Zfy6IHUGKwJFN9E62M90dkEZfvSWmcJvzMoFP

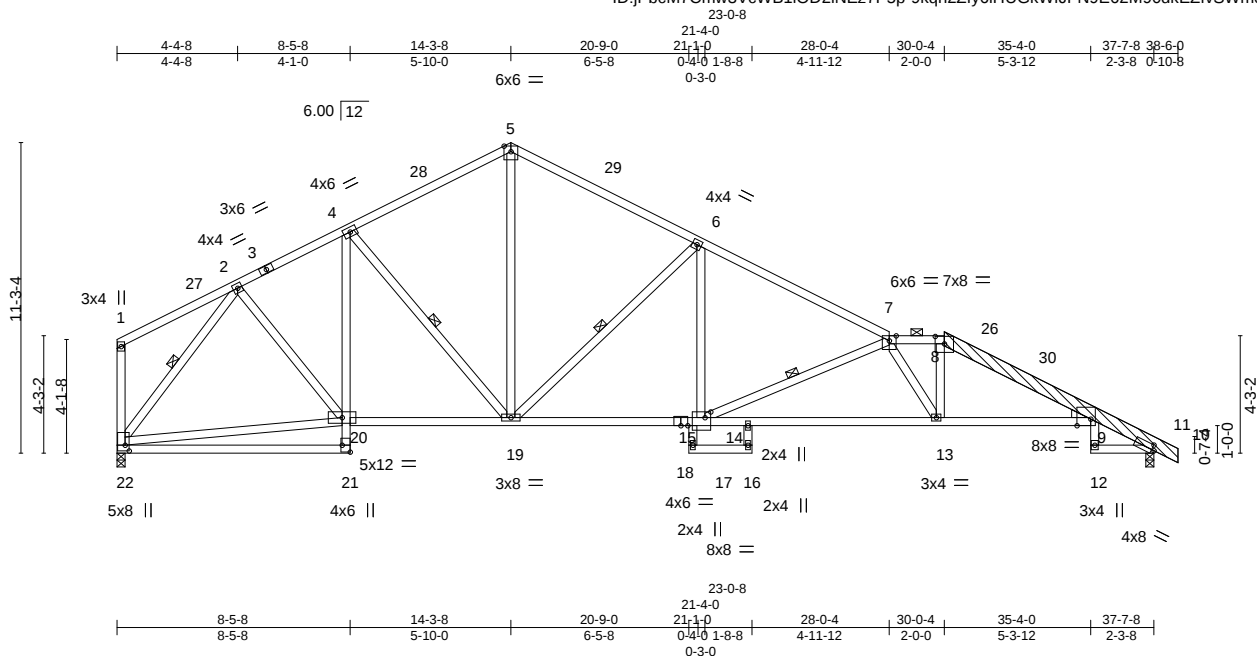


Plate Offsets (X,Y)--											[8:0-4-0,0-3-4], [9:0-6-0,Edge], [10:0-1-2,0-2-3], [15:0-2-8,0-2-8], [21:Edge,0-3-8], [22:0-2-8,0-1-12]										
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.		in (loc)		l/defl		L/d		PLATES		GRIP			
TCLL	25.0	Plate Grip DOL		1.15		TC	0.79	Vert(LL)	-0.38	9-13	>999		240		MT20		197/144				
TCDL	10.0	Lumber DOL		1.15		BC	0.83	Vert(CT)	-0.69	9-13	>651		180								
BCLL	0.0	Rep Stress Incr		YES		WB	0.54	Horz(CT)	0.38	10	n/a		n/a								
BCDL	10.0	Code IRC2018/TPI2014				Matrix-AS										Weight: 223 lb		FT = 20%			

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
5-7: 2x4 SP 2400F 2.0E, 8-11: 2x6 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
9-18: 2x4 SP 2400F 2.0E
WEBS 2x4 SPF No.2
OTHERS 2x6 SPF 2100F 1.8E
LBR SCAB 8-11 2x6 SPF 2100F 1.8E one side
WEDGE
Right: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-5-2 max.): 7-8.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-19, 2-22, 6-19, 7-15

REACTIONS.

(size) 10=0-3-8, 22=0-3-8
Max Horz 22=-232(LC 10)
Max Uplift 10=-252(LC 13), 22=-173(LC 12)
Max Grav 10=1752(LC 1), 22=1688(LC 1)

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

TOP CHORD 2-4=-1802/280, 4-5=-1792/319, 5-6=-1817/331, 6-7=-2851/377, 7-8=-3623/493,
8-9=-3820/472, 9-10=-869/151
BOT CHORD 4-20=-273/89, 19-20=-111/1576, 15-19=-131/2458, 14-15=-390/3999, 13-14=-412/4014,
9-13=-339/3582
WEBS 5-19=-147/1092, 8-13=-59/738, 2-20=-21/676, 2-22=-1921/248, 20-22=-136/997,
7-13=-761/148, 6-15=-60/839, 6-19=-1292/308, 7-15=-1702/334

NOTES-

- 1) Attached 9-8-8 scab 8 to 11, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c. except : starting at 0-0-3 from end at joint 8, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 5-1-4 from end at joint 8, nail 2 row(s) at 3" o.c. for 4-4-13.
- 2) Unbalanced roof live loads have been considered for this design.
- 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-3-8, Exterior(2R) 14-3-8 to 17-3-8, Interior(1) 17-3-8 to 30-0-4, Exterior(2R) 30-0-4 to 33-0-4, Interior(1) 33-0-4 to 38-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 4) Provide adequate drainage to prevent water ponding.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=252, 22=173.
- 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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 27, 2021

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	145835067
2768614	A15	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:14 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-56xRTFgDeMXCV2g2RfPdJX7gwqJjiP8CvqFjNozMoFN

7-3-8	14-3-8	18-8-0	23-0-8	30-4-4	32-4-4	35-4-0	37-7-8	38-6-0
7-3-8	7-0-0	4-4-8	4-4-8	7-3-12	2-0-0	2-11-12	2-3-8	0-10-8

Scale = 1:76.7

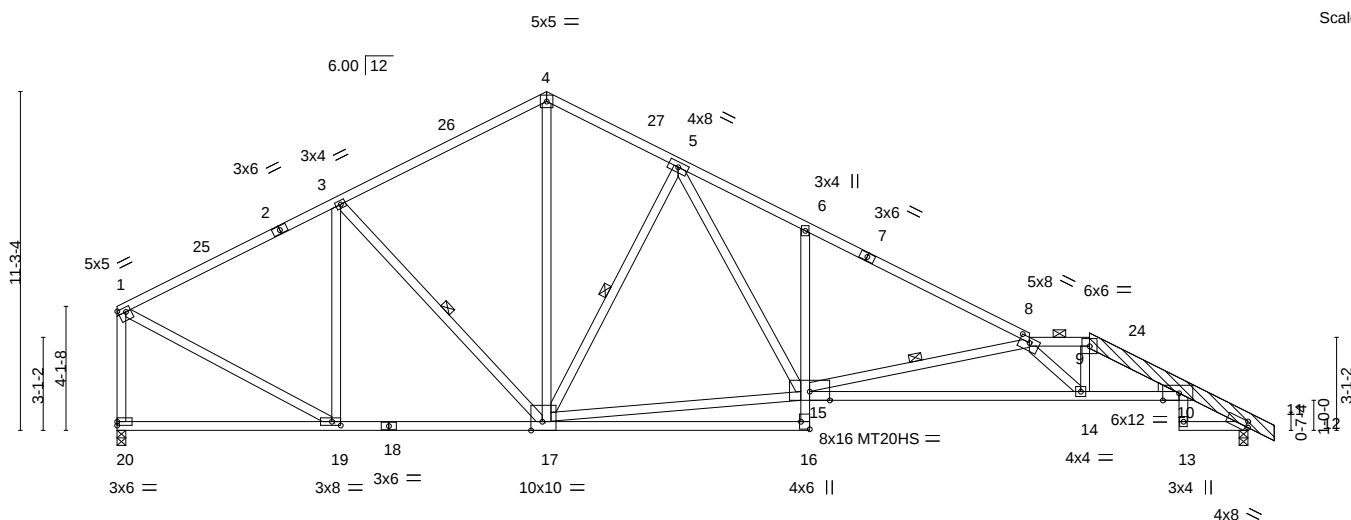


Plate Offsets (X,Y)--	[1:Edge,0-1-12], [8:0-4-0,0-1-15], [10:0-6-8,Edge], [11:0-1-2,0-2-3], [16:Edge,0-3-8], [17:0-4-8,Edge], [19:0-3-8,0-1-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.90	Vert(LL)	-0.40 14-15	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.86	Vert(CT)	-0.83 14-15	>543	180	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	YES	WB 0.80	Horz(CT)	0.34 11	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 210 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
9-12: 2x6 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
10-15: 2x4 SP 2400F 2.0E
WEBS 2x4 SPF No.2
OTHERS 2x6 SPF 2100F 1.8E
LBR SCAB 9-12 2x6 SPF 2100F 1.8E one side
WEDGE
Right: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-5-3 max.): 8-9.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-17, 5-17, 8-15

REACTIONS.

(size) 20=0-3-8, 11=0-3-8
Max Horz 20=-232(LC 10)
Max Uplift 20=-174(LC 12), 11=-253(LC 13)
Max Grav 20=1686(LC 1), 11=1749(LC 1)

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

TOP CHORD 1-3=-1623/251, 3-4=-1663/315, 4-5=-1599/335, 5-6=-3073/520, 6-8=-3166/411,
8-9=-4437/563, 9-10=-4480/538, 10-11=-868/152, 1-20=-1615/235
BOT CHORD 17-19=-114/1364, 6-15=-414/214, 14-15=-642/5338, 10-14=-449/4367
WEBS 3-19=-577/145, 4-17=-180/990, 5-17=-1165/286, 15-17=-51/1706, 5-15=-295/1632,
8-15=-2691/485, 8-14=-1282/267, 9-14=-92/857, 1-19=-169/1494

NOTES-

- Attached 7-1-3 scab 9 to 12, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c. except : starting at 0-0-3 from end at joint 9, nail 2 row(s) at 3" o.c. for 2-0-0; starting at 2-5-15 from end at joint 9, nail 2 row(s) at 2" o.c. for 4-4-13.
- 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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-3-8, Exterior(2R) 14-3-8 to 17-3-8, Interior(1) 17-3-8 to 32-4-4, Exterior(2R) 32-4-4 to 35-5-12, Interior(1) 35-5-12 to 38-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 20=174, 11=253.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 27, 2021

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	145835068
2768614	A16	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-1V3CuxiTA_nvLqQY4S5OyD0ne3KAGqVN8kqSgzMoFL

7-3-8 14-3-8 18-8-0 23-0-8 30-9-8 32-9-8 35-4-0 37-7-8 38-6-0
7-3-8 7-0-0 4-4-8 4-4-8 7-9-0 2-0-0 2-6-8 2-3-8 0-10-8

Scale = 1:76.0

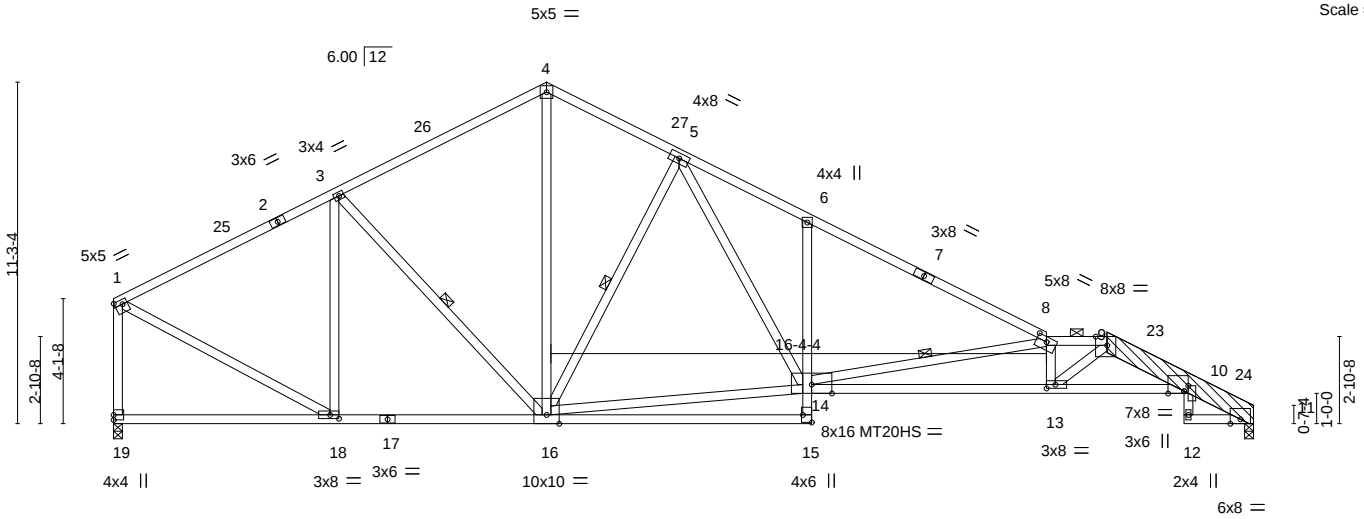


Plate Offsets (X,Y)--	[1:Edge,0-1-12], [8:0-4-0,0-1-15], [9:0-4-8,Edge], [10:0-2-2,0-1-10], [10:0-6-6,Edge], [13:0-3-8,0-1-8], [15:Edge,0-3-8], [18:0-3-8,0-1-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.94	Vert(LL)	-0.37 13-14	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.60	Vert(CT)	-0.73 13-14	>612	180	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	YES	WB 0.98	Horz(CT)	0.25 11	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 219 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2 *Except* 9-11: 2x8 SP 2400F 2.0E	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 8-9.
BOT CHORD 2x4 SPF No.2 *Except* 10-14: 2x4 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 3-16, 8-14, 5-16
OTHERS 2x8 SP 2400F 2.0E	
LBR SCAB 9-11 2x8 SP 2400F 2.0E one side	

REACTIONS.	(size) 19=0-3-8, 11=0-3-8 Max Horz 19=-225(LC 10) Max Uplift 19=-174(LC 12), 11=-235(LC 13) Max Grav 19=1680(LC 1), 11=1680(LC 1)
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FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-3=-1617/257, 3-4=-1655/322, 4-5=-1591/344, 5-6=-3054/524, 6-8=-3154/415, 8-9=-5591/758, 9-10=-4608/595, 10-11=-816/134, 1-19=-1609/244
BOT CHORD	16-18=-121/1358, 6-14=-438/224, 13-14=-690/5674, 10-13=-522/4530
WEBS	3-18=-573/148, 4-16=-178/981, 8-14=-3025/510, 8-13=-966/217, 9-13=-197/1399, 1-18=-175/1487, 14-16=-91/1697, 5-14=-302/1620, 5-16=-1151/287

- NOTES-**
- 1) Attached 5-8-1 scab 9 to 11, front face(s) 2x8 SP 2400F 2.0E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c. except : starting at 0-0-4 from end at joint 9, nail 2 row(s) at 2" o.c. for 4-0-5.
 - 2) Unbalanced roof live loads have been considered for this design.
 - 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-10-14, Interior(1) 3-10-14 to 14-3-8, Exterior(2R) 14-3-8 to 18-0-10, Interior(1) 18-0-10 to 32-9-8, Exterior(2R) 32-9-8 to 36-6-10, Interior(1) 36-6-10 to 37-5-13 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 4) Provide adequate drainage to prevent water ponding.
 - 5) All plates are MT20 plates unless otherwise indicated.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) Bearing at joint(s) 11 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) except (jt=lb) 19=174, 11=235.
 - 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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
 - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 27, 2021

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MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 2768614	Truss A17	Truss Type ROOF SPECIAL	Qty 1	Ply 1	Summit/148 Hawthorne 145835069
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:18 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p_uByJcjb1d_fzpgVUZTNINRRhmeHmoqSDxWZzMoFJ

7-3-8	14-3-8	20-6-13	26-10-3	33-1-8	35-1-8	37-7-8	38-6-0
7-3-8	7-0-0	6-3-5	6-3-5	6-3-5	2-0-0	2-6-0	0-10-8

Scale = 1:74.9

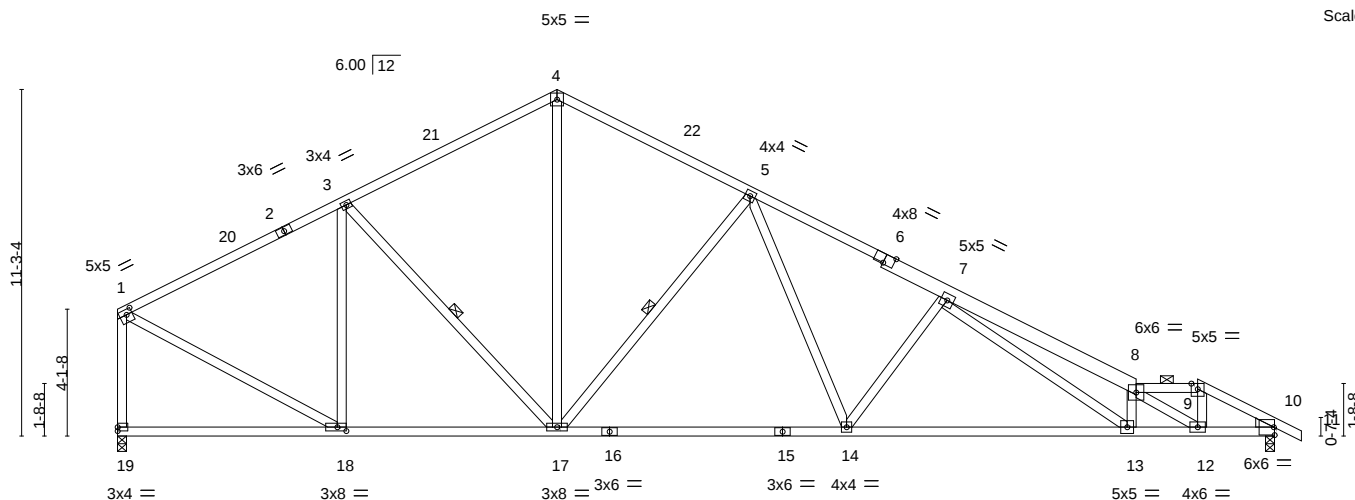


Plate Offsets (X,Y)--	[1:0-2-4,0-2-0], [6:0-4-0,Edge], [10:Edge,0-3-1], [18:0-3-8,0-1-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.80	Vert(LL)	-0.24 13-14	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.86	Vert(CT)	-0.54 13-14	>833	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.57	Horz(CT)	0.11 10	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S					Weight: 184 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
6-8: 2x6 SPF No.2

BOT CHORD 2x4 SPF 1650F 1.5E *Except*

15-16: 2x4 SPF No.2

WEBS 2x4 SPF No.2

WEDGE

Right: 2x4 SPF No.2

REACTIONS.

(size) 19=0-3-8, 10=0-3-8

Max Horz 19=-230(LC 10)

Max Uplift 19=-174(LC 12), 10=-255(LC 13)

Max Grav 19=1679(LC 1), 10=1752(LC 1)

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

TOP CHORD 1-3=-1616/254, 3-4=-1654/318, 4-5=-1633/335, 5-7=-2753/431, 7-8=-4920/708,
8-9=-2316/351, 9-10=-2941/413, 1-19=-1612/240

BOT CHORD 17-18=-115/1359, 14-17=-117/2005, 13-14=-292/2829, 12-13=-537/4448,
10-12=-310/2453

WEBS 3-18=-577/146, 4-17=-158/947, 5-17=-1019/300, 5-14=-147/933, 7-14=-812/269,

7-13=-276/1900, 8-13=-1011/241, 8-12=-2566/294, 9-12=-176/1405, 1-18=-172/1502

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed;
MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-10-14, Interior(1) 3-10-14 to 14-3-8, Exterior(2R) 14-3-8 to
18-0-10, Interior(1) 18-0-10 to 35-1-8, Exterior(2E) 35-1-8 to 38-6-0 zone; cantilever left and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)
19=174, 10=255.

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.

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



April 27, 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	Summit/148 Hawthorne	I45835070
2768614	A18	Common Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:25 2021 Page 1
ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-GE6bn0p62lweKk09aT6CGs4loGF?nZLqR2PpGfzMoFC

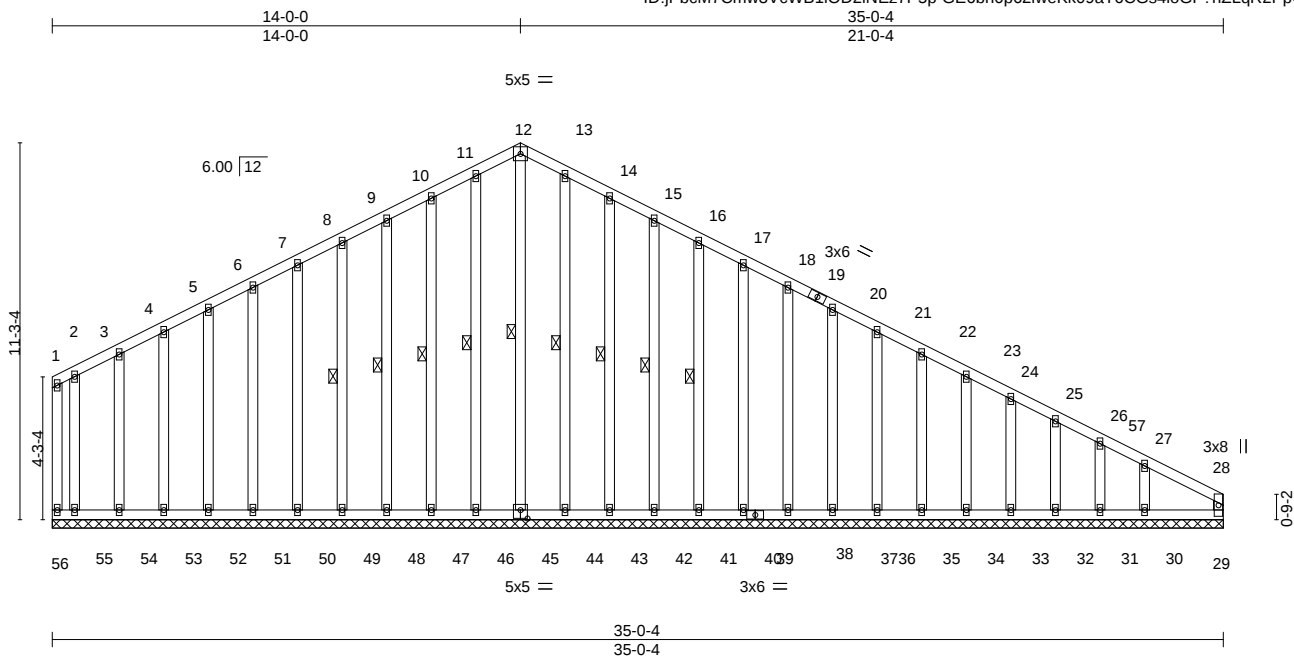


Plate Offsets (X,Y)-- [45:0-2-8,0-3-0]										
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES	GRIP	
TCLL	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a - n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a - n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01 29	n/a n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R					Weight: 274 lb	FT = 20%

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 12-45, 11-46, 10-47, 9-48, 8-49, 13-44, 14-43, 15-42, 16-41

REACTIONS.

All bearings 35-0-4.
(lb) - Max Horz 56=-229(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 56, 29, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 44, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31 except 30=-148(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 56, 29, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 44, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31, 30

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

TOP CHORD 8-9=-134/276, 9-10=-145/306, 10-11=-158/341, 11-12=-160/354, 12-13=-160/354, 13-14=-158/341, 14-15=-145/306, 15-16=-134/276

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-1-12 to 3-4-0, Exterior(2N) 3-4-0 to 14-0-0, Corner(3R) 14-0-0 to 17-0-0, Exterior(2N) 17-0-0 to 34-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- 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 has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 56, 29, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 44, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31 except (jt=lb) 30=148.
- 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.



April 27, 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	Summit/148 Hawthorne	I45835071
2768614	B1	Common Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

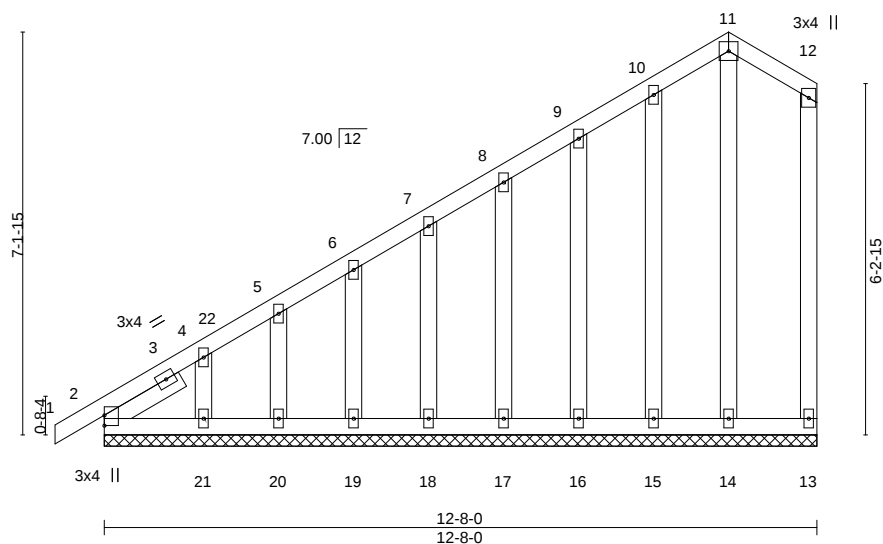
8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:46 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-9GtYBB3H6CZfly6BJO_7cHSJIKQ?C2KvGp?QUxzMoEt

0-10-8 11-1-3 12-8-0
0-10-8 11-1-3 1-6-13

4x4 =

Scale = 1:41.0



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 0.23	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.11	Vert(CT)	-0.00	1	n/r	120		
BCLL 0.0	Rep Stress Incr	YES	WB 0.14	Horz(CT)	0.00	13	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						Weight: 77 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 - t 1-6-10

BRACING-

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

REACTIONS.

All bearings 12-8-0.
(lb) - Max Horz 2=237(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 13, 2, 14, 15, 16, 17, 18, 19, 20, 21
Max Grav All reactions 250 lb or less at joint(s) 13, 2, 14, 15, 16, 17, 18, 19, 20, 21

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-392/266, 4-5=-292/213, 5-6=-255/196

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 11-1-3, Corner(3E) 11-1-3 to 12-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 2, 14, 15, 16, 17, 18, 19, 20, 21.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 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.



April 27, 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

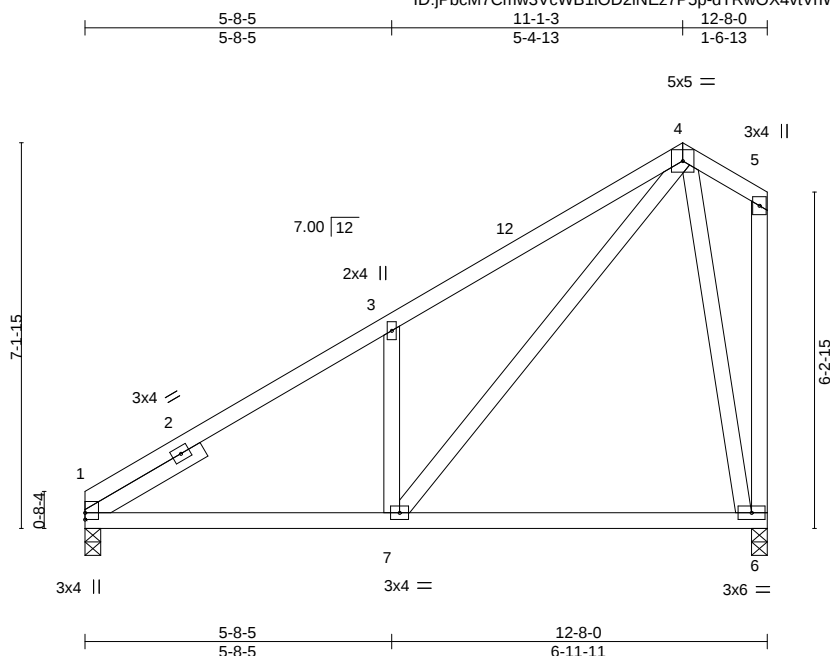
Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835072
2768614	B2	Common	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:14:47 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-dTRwOX4vtVhWz6hOt5VM9V?TB7iixQs3VTkz1NzMoEs



Scale = 1:42.8

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 0.29	Vert(LL)	-0.06	6-7	>999	240	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.33	Vert(CT)	-0.12	6-7	>999	180	197/144
BCLL 0.0	Rep Stress Incr	YES	WB 0.44	Horz(CT)	0.01	1	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 62 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2
 BOT CHORD 2x4 SPF No.2
 WEBS 2x4 SPF No.2
 SLIDER Left 2x4 SPF No.2 - t 2-6-0

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS.

(size) 1=0-3-8, 6=0-3-8
 Max Horz 1=231(LC 11)
 Max Uplift 1=-67(LC 12), 6=-114(LC 12)
 Max Grav 1=563(LC 1), 6=563(LC 1)

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

TOP CHORD 1-3=-553/144, 3-4=-738/289
 BOT CHORD 1-7=-259/580
 WEBS 3-7=-413/233, 4-7=-237/716, 4-6=-544/296

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 11-1-3, Exterior(2E) 11-1-3 to 12-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 6=114.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 27, 2021

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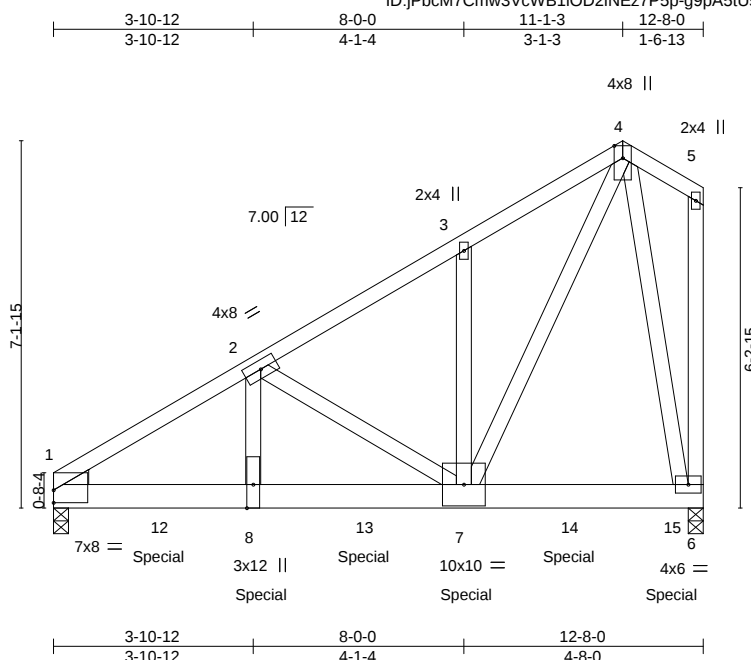
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job 2768614	Truss B3	Truss Type COMMON GIRDER	Qty 1	Ply 2	Summit/148 Hawthorne Job Reference (optional)	I45835073
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ID: jPbcM7Cmw3VcWB1iOD2INEz7P5p-g9pA5tUsNVq5BnX0rW7ks?wFlq0QGS5wVtxSktzMZ2V
8.430 s Nov 18 2020 MiTek Industries, Inc. Tue Apr 27 09:31:58 2021 Page 1



Scale = 1:44.9

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

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 0.45	Vert(LL)	-0.08	7-8	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.49	Vert(CT)	-0.14	7-8	>999	180		
BCLL 0.0	Rep Stress Incr	NO	WB 0.87	Horz(CT)	0.02	6	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MS							
									Weight: 164 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-1-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=0-3-8, 6=0-3-8
Max Horz 1=229(LC 7)
Max Uplift 1=-663(LC 8), 6=-873(LC 8)
Max Grav 1=5312(LC 1), 6=6637(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-7691/965, 2-3=-4568/593, 3-4=-4571/684
BOT CHORD 1-12=-893/6561, 8-12=-893/6561, 8-13=-893/6561, 7-13=-893/6561, 7-14=-179/942, 14-15=-179/942, 6-15=-179/942
WEBS 2-8=-357/3025, 2-7=-3137/478, 3-7=-274/145, 4-7=-1008/7105, 4-6=-4369/582

- 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 0-7-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-4-0 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=4.2psf; h=15ft; 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 663 lb uplift at joint 1 and 873 lb uplift at joint 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.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1803 lb down and 238 lb up at 2-0-12, 1803 lb down and 238 lb up at 4-0-12, 1803 lb down and 238 lb up at 6-0-12, 1803 lb down and 238 lb up at 8-0-12, and 1803 lb down and 238 lb up at 10-0-12, and 1808 lb down and 232 lb up at 12-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard



April 27, 2021

Continued on page 2

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835073
2768614	B3	COMMON GIRDER	1	2	Job Reference (optional)	

8.430 s Nov 18 2020 MiTek Industries, Inc. Tue Apr 27 09:31:58 2021 Page 2
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LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-70, 4-5=-70, 6-9=-20
Concentrated Loads (lb)
Vert: 8=-1803(B) 7=-1803(B) 12=-1803(B) 13=-1803(B) 14=-1803(B) 15=-1808(B)

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835074
2768614	C1	Common Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

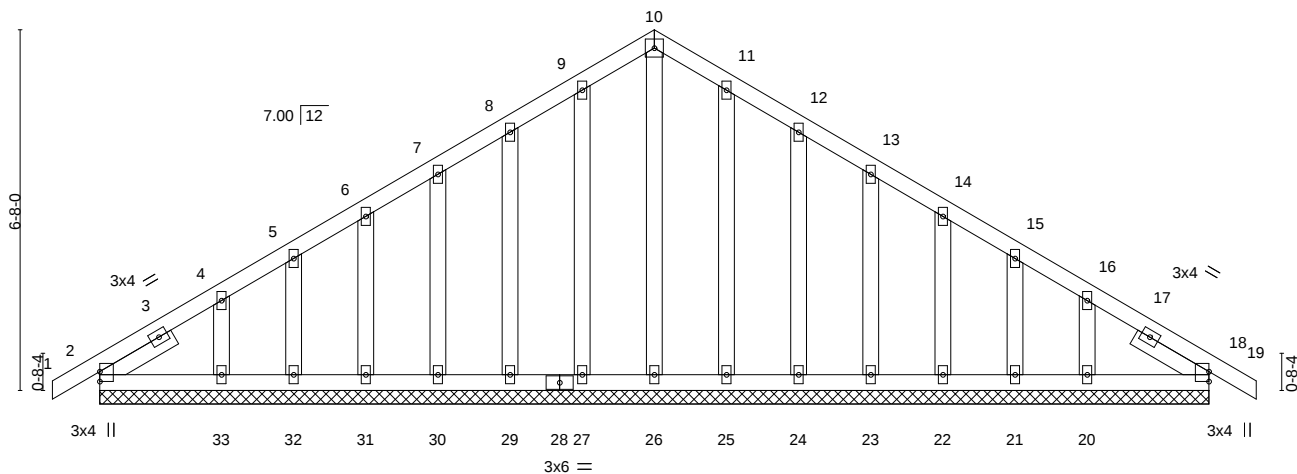
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ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-sCUKHcBZIGqEYVt6uUAT0Ot3YmsbYahOZMQyrMzMoEj

0-10-8 10-3-0 20-6-0 21-4-8
0-10-8 10-3-0 10-3-0 0-10-8

4x4 =

Scale = 1:42.6



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	18	n/r	120	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	0.00	18	n/r	120		
BCLL 0.0	Rep Stress Incr	YES	WB 0.08	Horz(CT)	0.00	18	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						Weight: 110 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 -t 1-6-9, Right 2x4 SPF No.2 -t 1-6-9

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 20-6-0.

(lb) - Max Horz 2=-152(LC 10)

Max Uplift All uplift 100 lb or less at joint(s) 2, 27, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20

Max Grav All reactions 250 lb or less at joint(s) 2, 26, 27, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20, 18

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-3-0, Exterior(2N) 2-3-0 to 10-3-0, Corner(3R) 10-3-0 to 13-3-0, Exterior(2N) 13-3-0 to 21-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 27, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 18.
- 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.



April 27, 2021

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835075
2768614	C2	Common	11	1		

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-pac4iCpHu4yno1V0vCx5pyM7ZSi0Ulh1gv2wFzMoEh

0-10-8	5-3-4	10-3-0	15-2-12	20-6-0
0-10-8	5-3-4	4-11-12	4-11-12	5-3-4

4x6 ||

Scale = 1:41.2

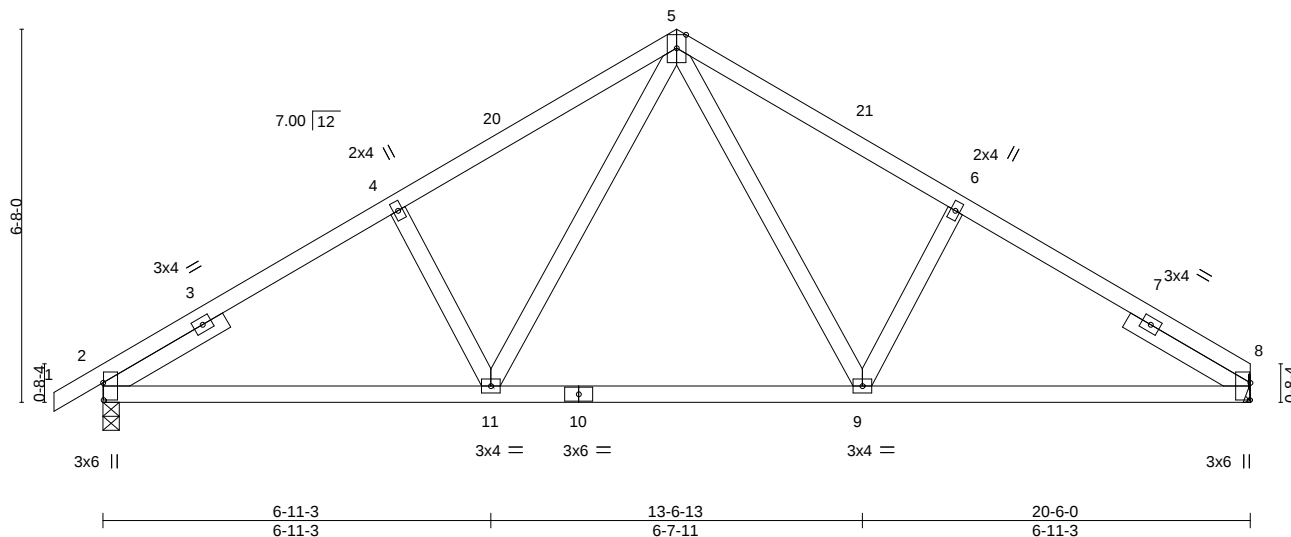


Plate Offsets (X,Y)-- [2:0-3-11,0-0-2], [8:0-3-11,0-0-2]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	-0.04 9-11 >999 240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.10 9-11 >999 180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.03 8 n/a n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS				Weight: 82 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2
 BOT CHORD 2x4 SPF No.2
 WEBS 2x4 SPF No.2
 SLIDER Left 2x4 SPF No.2 -t 2-6-0, Right 2x4 SPF No.2 -t 2-6-0

BRACING-

TOP CHORD Structural wood sheathing directly applied.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS.

(size) 8=Mechanical, 2=0-3-8
 Max Horz 2=148(LC 11)
 Max Uplift 8=110(LC 13), 2=128(LC 12)
 Max Grav 8=921(LC 1), 2=985(LC 1)

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

TOP CHORD 2-4=-1188/173, 4-5=-1188/214, 5-6=-1192/215, 6-8=-1192/174
 BOT CHORD 2-11=-175/1074, 9-11=-44/754, 8-9=-91/1079
 WEBS 5-9=-116/458, 6-9=-304/173, 5-11=-114/451, 4-11=-299/172

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-3-0, Exterior(2R) 10-3-0 to 13-3-0, Interior(1) 13-3-0 to 20-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) 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) 8=110, 2=128.
- 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.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 27, 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

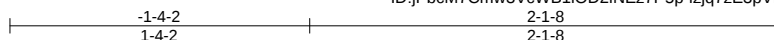
Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835076
2768614	CJ1	Jack-Open	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

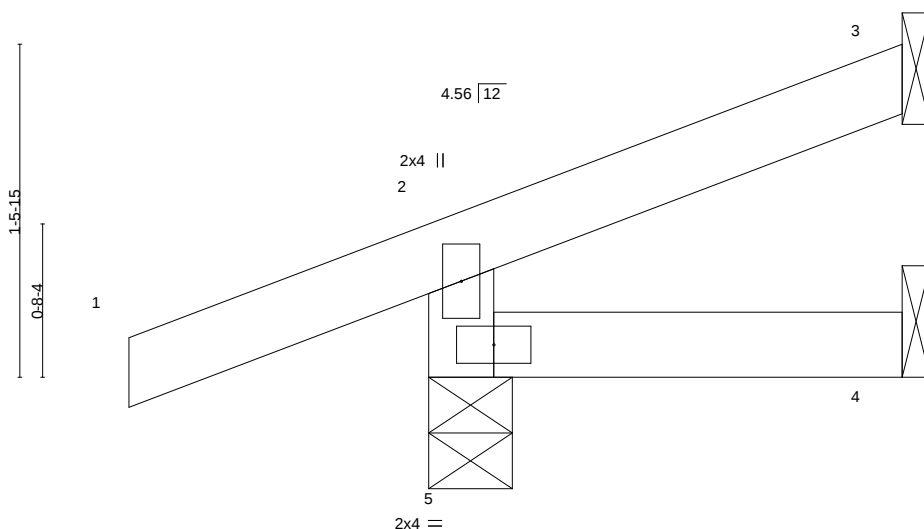
Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:00 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-lzjq7zE3pVKg16Bt7KEPAE1j3NDMUP_zU_O9_7zMoEf



Scale = 1:10.3



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 0.15	Vert(LL)	0.00	5	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	-0.00	4-5	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MR						Weight: 7 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-1-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 5=0-4-8, 3=Mechanical, 4=Mechanical
Max Horz 5=44(LC 8)
Max Uplift 5=71(LC 8), 3=21(LC 12)
Max Grav 5=231(LC 1), 3=38(LC 1), 4=32(LC 3)

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
- 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.



April 27, 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

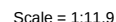
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:01 2021 Page 1
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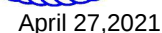


LUMBER-		BRACING-	
TOP CHORD	2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 2-11-2 oc purlins, except end verticals.
BOT CHORD	2x4 SPF No.2		
WEBS	2x4 SPF No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCdL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5. 3.
- 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.



Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	145835078
2768614	D1	Common Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:02 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-hLrbYfGJL6aOGQLGFIHtFf755AvxyJiGyltG30zMoEd

0-10-8 10-4-0 20-8-0 21-6-8
0-10-8 10-4-0 10-4-0 0-10-8

Scale = 1:38.5

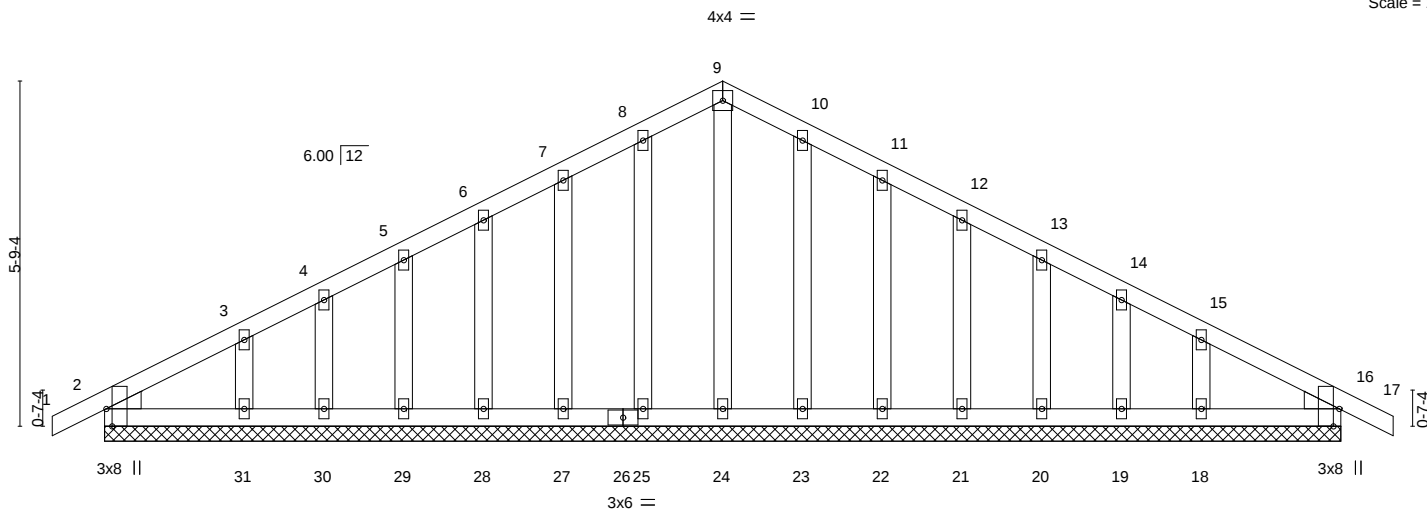


Plate Offsets (X,Y)-- [2'-0-3-8,Edge], [16'-0-3-8,Edge]		20-8-0 20-8-0			
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	PLATES GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.05	in (loc) l/defl L/d	MT20 197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(LL) -0.00 16 n/r 120	
BCLL 0.0	Rep Stress Incr	YES	WB 0.05	Vert(CT) 0.00 16 n/r 120	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S	Horz(CT) 0.00 16 n/a n/a	
				Weight: 99 lb	FT = 20%

LUMBER-

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

Left: 2x4 SPF No.2 , Right: 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 20-8-0.

(lb) - Max Horz 2--89(LC 13)

Max Uplift All uplift 100 lb or less at joint(s) 2, 25, 27, 28, 29, 30, 31, 23, 22, 21, 20, 19, 18, 16

Max Grav All reactions 250 lb or less at joint(s) 2, 24, 25, 27, 28, 29, 30, 31, 23, 22, 21, 20, 19, 18, 16

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

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-4-0, Exterior(2N) 2-4-0 to 10-4-0, Corner(3R) 10-4-0 to 13-4-0, Exterior(2N) 13-4-0 to 21-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1'-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 25, 27, 28, 29, 30, 31, 23, 22, 21, 20, 19, 18, 16.
- 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.



April 27, 2021

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835079
2768614	D2	Common	4	1		

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

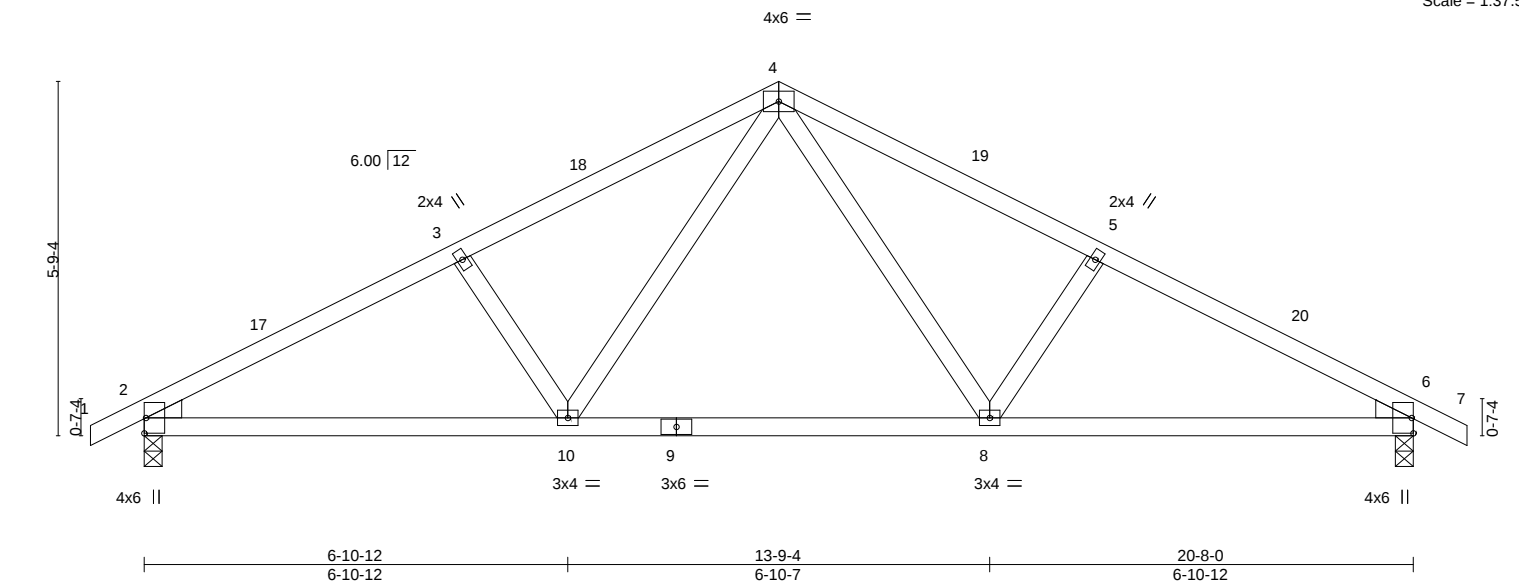
8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:07 2021 Page 1

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Job Reference (optional)

0-10-8	5-2-3	10-4-0	15-5-13	20-8-0	21-6-8
0-10-8	5-2-3	5-1-13	5-1-13	5-2-3	0-10-8

Scale = 1:37.5



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 0.26	Vert(LL)	-0.07	8-10	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.42	Vert(CT)	-0.15	8-10	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.12	Horz(CT)	0.04	6	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						Weight: 75 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2

WEBS 2x4 SPF No.2

WEDGE

Left: 2x4 SPF No.2 , Right: 2x4 SPF No.2

REACTIONS.

(size) 2=0-3-8, 6=0-3-8

Max Horz 2=-89(LC 13)

Max Uplift 2=-133(LC 12), 6=-133(LC 13)

Max Grav 2=991(LC 1), 6=991(LC 1)

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

TOP CHORD 2-3=-1507/285, 3-4=-1337/300, 4-5=-1337/300, 5-6=-1507/285

BOT CHORD 2-10=-193/1282, 8-10=-64/888, 6-8=-183/1282

WEBS 4-8=-96/473, 5-8=-320/162, 4-10=-96/473, 3-10=-320/162

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-4-0, Exterior(2R) 10-4-0 to 13-4-0, Interior(1) 13-4-0 to 21-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=133, 6=133.

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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 27, 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

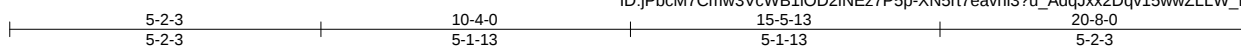


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 2768614	Truss D3	Truss Type COMMON GIRDER	Qty 1	Ply 2	Summit/148 Hawthorne	I45835080
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Job Reference (optional)

8.430 s Nov 18 2020 MiTek Industries, Inc. Tue Apr 27 09:36:19 2021 Page 1
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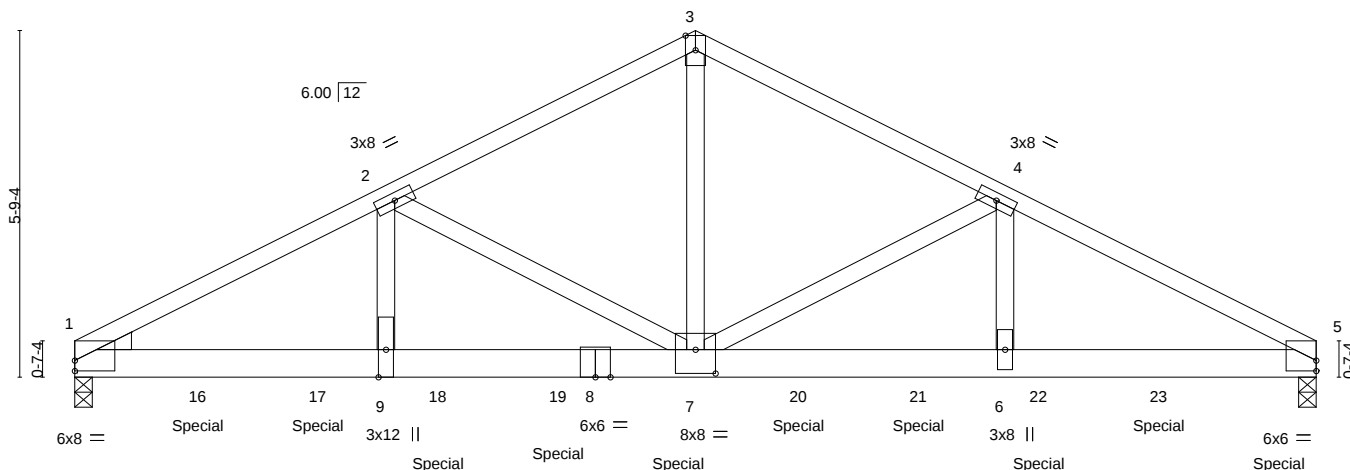


Plate Offsets (X,Y)--	[1:Edge,0-2-1], [5:0-0-0,0-2-1], [7:0-4-0,0-4-12]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.58	Vert(LL)	-0.14	6-7	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.53	Vert(CT)	-0.25	6-7	>993	180		
BCLL 0.0	Rep Stress Incr	NO	WB 0.64	Horz(CT)	0.05	5	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MS							
									Weight: 189 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 3-9-15 oc purlins.
BOT CHORD 2x6 SPF 2100F 1.8E *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
5-8: 2x6 SP 2400F 2.0E	
WEBS 2x4 SPF No.2	
WEDGE	
Left: 2x4 SPF No.2	

REACTIONS. (size) 1=0-3-8, 5=0-3-8
Max Horz 1=82(LC 33)
Max Uplift 1=-666(LC 8), 5=-761(LC 9)
Max Grav 1=5093(LC 1), 5=5764(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-8821/1156, 2-3=-6319/853, 3-4=-6319/853, 4-5=-8867/1169
BOT CHORD 1-16=-1055/7812, 16-17=-1055/7812, 9-17=-1055/7812, 9-18=-1055/7812,
18-19=-1055/7812, 8-19=-1055/7812, 7-8=-1055/7812, 7-20=-985/7854, 20-21=-985/7854,
6-21=-985/7854, 6-22=-985/7854, 22-23=-985/7854, 5-23=-985/7854
WEBS 3-7=-660/5201, 4-7=-2616/451, 4-6=-236/2072, 2-7=-2568/437, 2-9=-224/2030

- 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 0-7-0 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=4.2psf; h=15ft; 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 666 lb uplift at joint 1 and 761 lb uplift at joint 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.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 901 lb down and 130 lb up at 2-0-12, 901 lb down and 130 lb up at 4-0-12, 901 lb down and 130 lb up at 6-0-12, 901 lb down and 130 lb up at 8-0-12, 901 lb down and 130 lb up at 10-0-12, 901 lb down and 130 lb up at 12-0-12, 901 lb down and 130 lb up at 14-0-12, 895 lb down and 134 lb up at 16-0-12, and 895 lb down and 133 lb up at 18-0-12, and 899 lb down and 129 lb up at 20-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.



April 27, 2021

LOAD CASE(S) Standard

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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	Summit/148 Hawthorne	I45835080
2768614	D3	COMMON GIRDER	1	2	Job Reference (optional)	

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LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)
 - Vert: 1-3=-70, 3-5=-70, 10-13=-20
- Concentrated Loads (lb)
 - Vert: 7=-901(B) 15=-899(B) 16=-901(B) 17=-901(B) 18=-901(B) 19=-901(B) 20=-901(B) 21=-901(B) 22=-895(B) 23=-895(B)

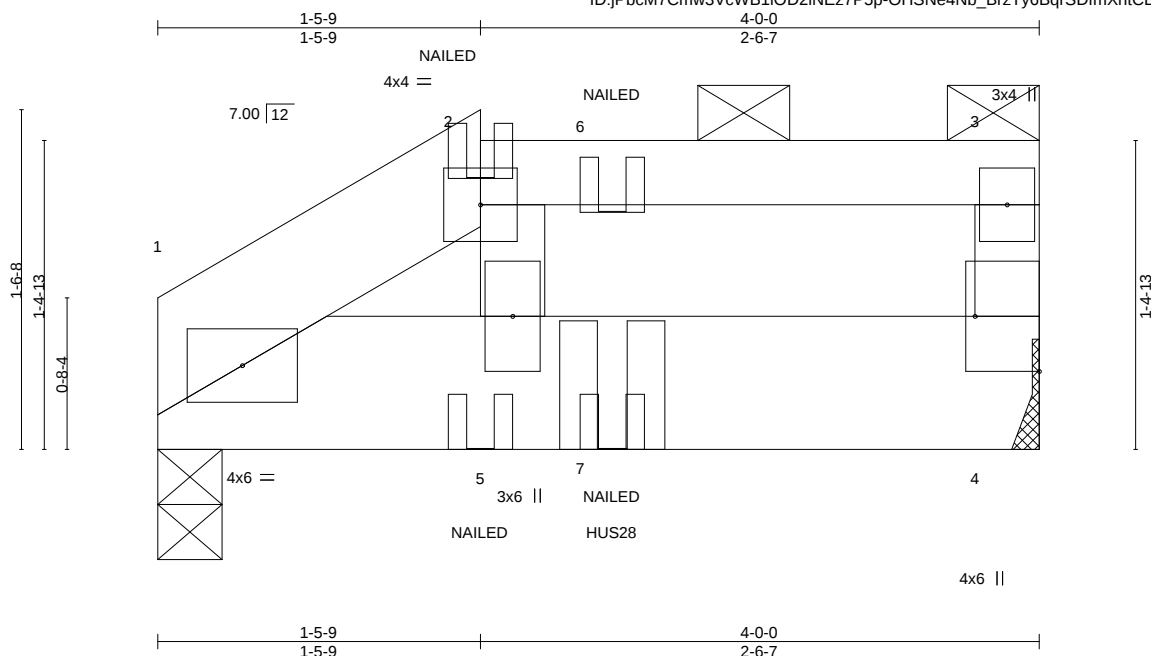


Plate Offsets (X,Y)-- [4:Edge,0-3-8]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d					PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.01	5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.02	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.05	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 20 lb	FT = 20%

LUMBER-		BRACING-	
TOP CHORD	2x6 SPF No.2 *Except* 2-3: 2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-3. Rigid ceiling directly applied or 10-0-0 oc bracing.
BOT CHORD	2x8 SP 2400F 2.0E	BOT CHORD	
WEBS	2x4 SPF No.2		

REACTIONS. (size) 1=0-3-8, 4=Mechanical
Max Horz 1=34(LC 28)
Max Uplift 1=-133(LC 8), 4=-152(LC 5)
Max Grav 1=928(LC 1), 4=983(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-429/75, 2-3=-351/60
 BOT CHORD 1-5=-63/323, 4-5=-64/351

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCCL=4.2psf; h=15ft; 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 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) 1=133, 4=152.
- 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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 9) Use Simpson Strong-Tie HUS28 (22-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent at 2'-0" to 12' from the left end to connect truss(es) to back face of bottom chord, skewed 0.0 deg. to the left, sloping 0.0 deg. down.
- 10) Fill all nail holes where hanger is in contact with lumber.
- 11) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 12) 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, 2-3=-70, 1-4=-20
Concentrated Loads (lb)
Vert: 5=5(F) 7=-1583(F=-6, B=-1577)



April 27, 2021



WARNING: Velly design parameters are READ NOTES ON THIS AND INCLUDED WITH REFERENCE PAGE MM-1475 (Rev. 3/25/2020) 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

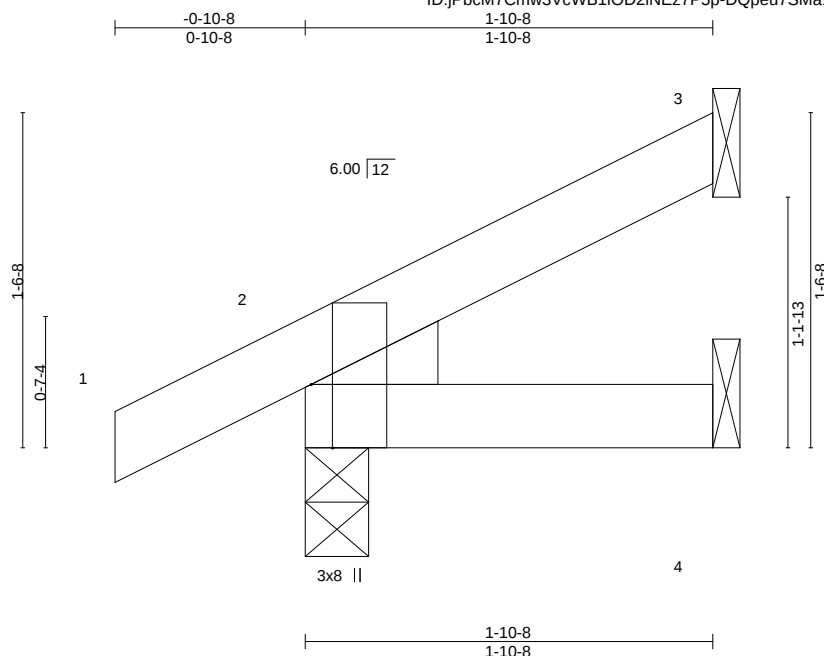
Job 2768614	Truss J2	Truss Type Jack-Open	Qty 1	Ply 1	Summit/148 Hawthorne Job Reference (optional)	I45835082
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:18 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-DQpeu7SMa1b6BtZLB6Zdv1nq?dMniYSddn16d4zMoEN



Scale = 1:10.6

Plate Offsets (X,Y)--		[2:0-3-8,Edge]									
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0		Plate Grip DOL	1.15	TC 0.05		Vert(LL)	-0.00 7	>999	240	MT20	197/144
TCDL 10.0		Lumber DOL	1.15	BC 0.03		Vert(CT)	-0.00 7	>999	180		
BCLL 0.0		Rep Stress Incr	YES	WB 0.00		Horz(CT)	0.00 3	n/a	n/a		
BCDL 10.0		Code IRC2018/TPI2014		Matrix-MP						Weight: 6 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2

WEDGE

Left: 2x4 SPF No.2

BRACING-

TOP CHORD

BOT CHORD

Structural wood sheathing directly applied or 1-10-8 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical

Max Horz 2=48(LC 12)

Max Uplift 3=-23(LC 12), 2=-22(LC 12), 4=-3(LC 12)

Max Grav 3=46(LC 1), 2=159(LC 1), 4=31(LC 3)

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.
- 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.



April 27, 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

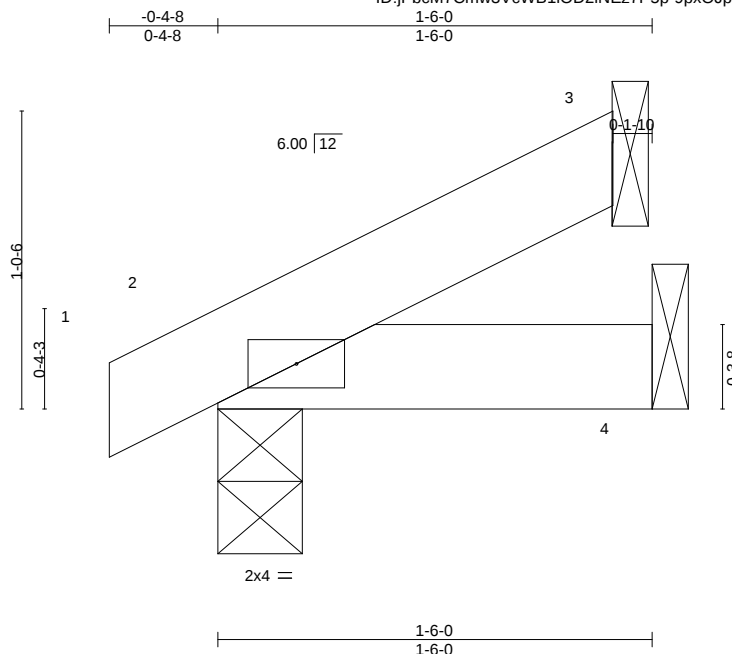
Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835083
2768614	J3	Jack-Closed	4	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:20 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-9pxOJpTc5erqQBjIXb5_SsAgR1QASxw55EDhzzMoEL



Scale: 1.5"=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 0.04	Vert(LL)	-0.00	7	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	-0.00	7	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MP						Weight: 4 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS.

(size) 2=0-3-8, 4=Mechanical
Max Horz 2=29(LC 12)
Max Uplift 2=-13(LC 12), 4=-12(LC 9)
Max Grav 2=96(LC 1), 4=55(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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- 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.



April 27, 2021

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

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Chesterfield, MO 63017

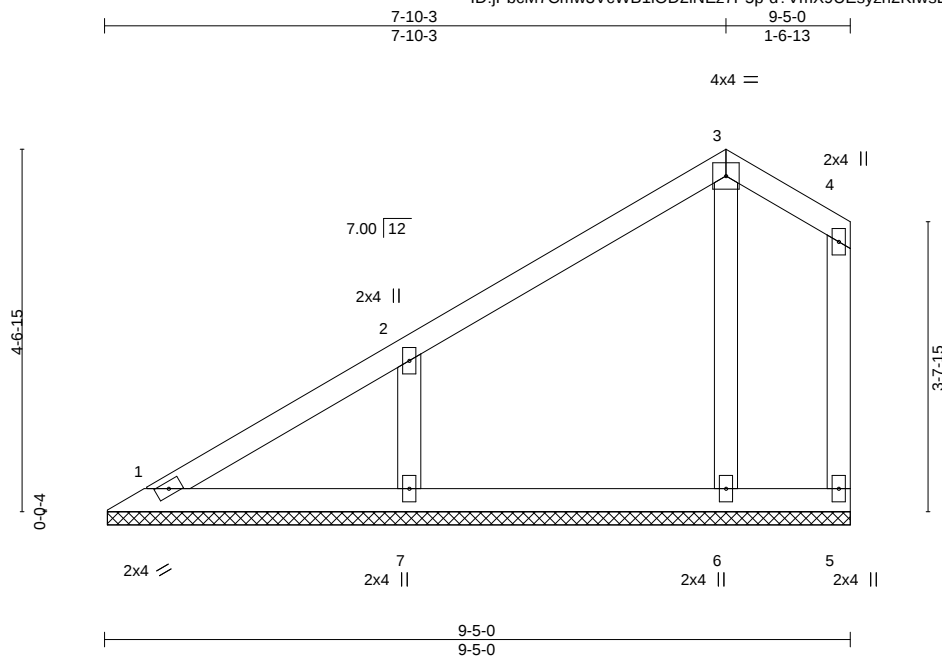
Job 2768614	Truss V1	Truss Type Valley	Qty 1	Ply 1	Summit/148 Hawthorne Job Reference (optional)	I45835084
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:21 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2lNEz7P5p-d?VmX9UEsyzh2KlwsE6KXgPlurNPvuB3JzmEPzMoEK



4x4 =

Scale = 1:29.1

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 0.20	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.09	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.06	Horz(CT)	-0.00	5	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S					Weight: 33 lb	FT = 20%

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 6-0-0 oc bracing.

REACTIONS.

All bearings 9-4-9.

(lb) - Max Horz 1=142(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) 1, 5, 6 except 7=-127(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=266(LC 19), 7=395(LC 19)

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

WEBS 2-7=-306/203

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 7-10-3, Exterior(2E) 7-10-3 to 9-3-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5, 6 except (jt=lb) 7=127.
- 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.



April 27, 2021

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

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Chesterfield, MO 63017

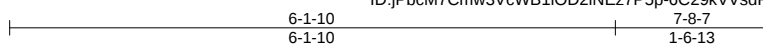
Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835085
2768614	V2	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

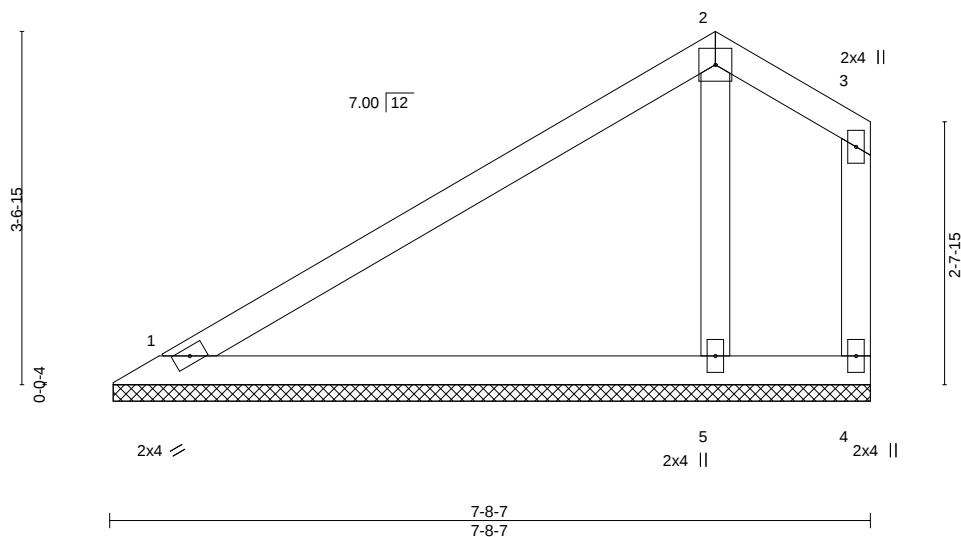
8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:22 2021 Page 1

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4x4 =

Scale = 1:23.3



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 0.62	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.22	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.05	Horz(CT)	-0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 24 lb	FT = 20%

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

REACTIONS.

(size) 1=7-8-0, 4=7-8-0, 5=7-8-0
Max Horz 1=106(LC 11)
Max Uplift 1=-38(LC 12), 4=-46(LC 3), 5=-17(LC 12)
Max Grav 1=240(LC 1), 4=34(LC 20), 5=374(LC 19)

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 6-1-10, Exterior(2E) 6-1-10 to 7-6-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4, 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.



April 27, 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

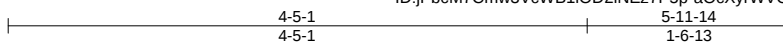
Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835086
2768614	V3	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

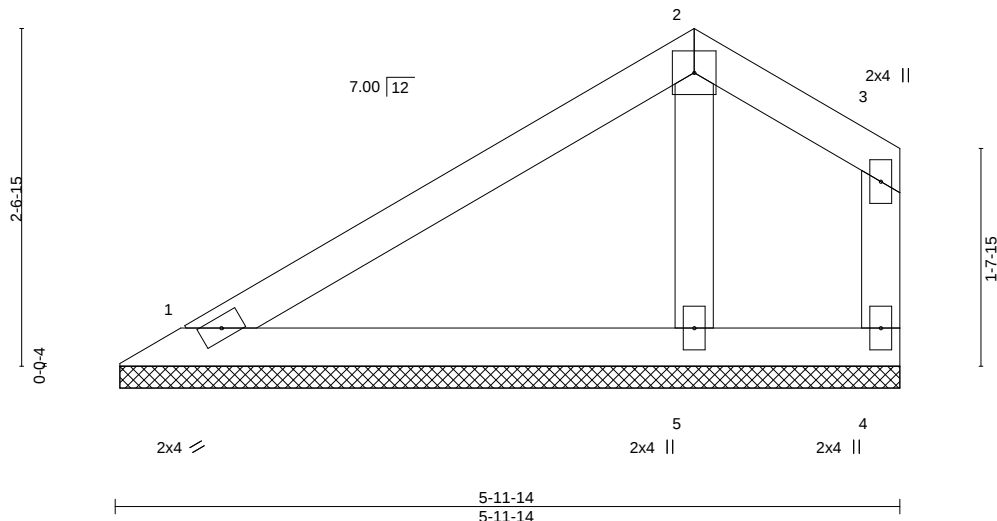
8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:23 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-aOcXyrWVOZDPHeRI_f9oc5UcAe2oNpGMn3StllzMoEI



4x4 =

Scale = 1:17.6



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 0.28	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 0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 18 lb	FT = 20%

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 5-11-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 1=5-11-7, 4=5-11-7, 5=5-11-7
Max Horz 1=71(LC 11)
Max Uplift 1=-28(LC 12), 4=-24(LC 13), 5=-14(LC 12)
Max Grav 1=167(LC 1), 4=52(LC 20), 5=266(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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 4-5-1, Exterior(2E) 4-5-1 to 5-10-2 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4, 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.



April 27, 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



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Chesterfield, MO 63017

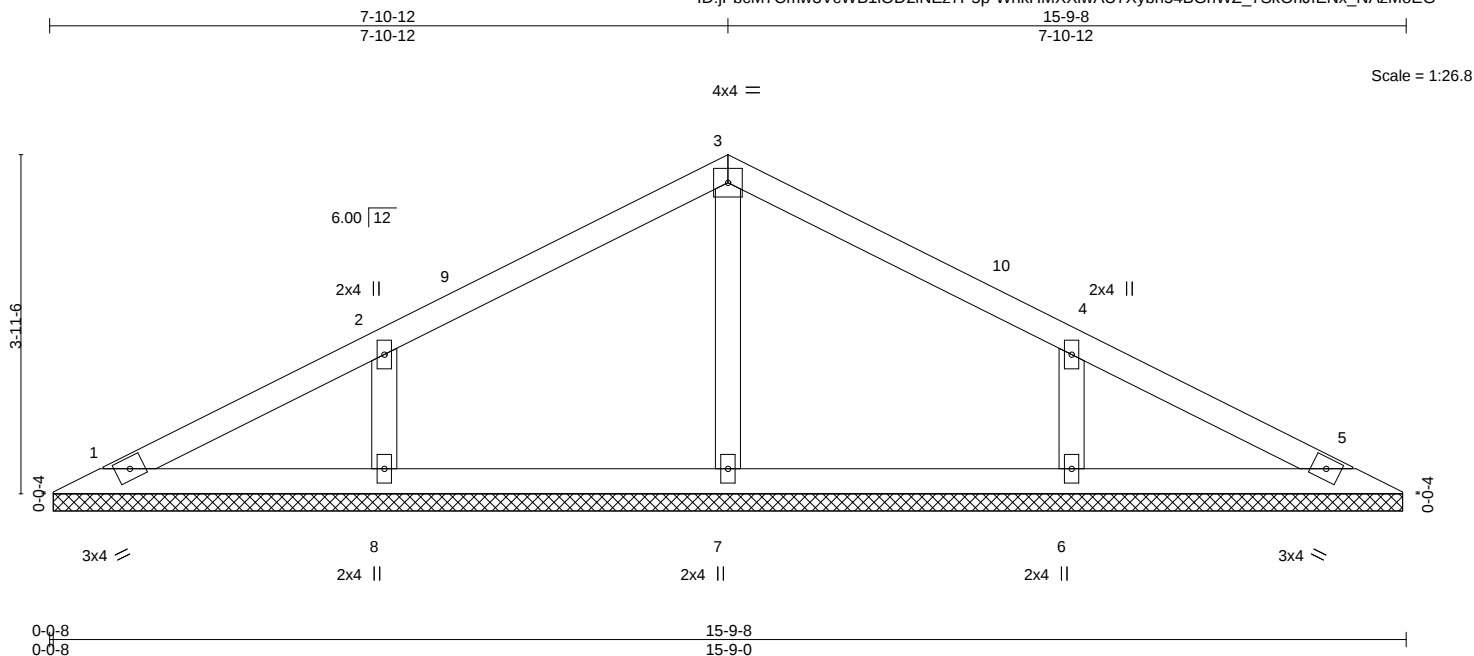
Job 2768614	Truss V5	Truss Type Valley	Qty 1	Ply 1	Summit/148 Hawthorne Job Reference (optional)	I45835088
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:25 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-WnkHMXxlwAU7Xybh54BGhWZ_7SkOriJfENx_NAzMoEG



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	MT20		197/144	
BCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a				
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00				
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							
								Weight: 43 lb		FT = 20%	

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" oc purlins.
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.

REACTIONS.

All bearings 15'-8".
(lb) - Max Horz 1=58(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=114(LC 12), 6=114(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=307(LC 1), 8=388(LC 25), 6=388(LC 26)

FORCES.

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

WEBS

2-8=-303/171, 4-6=-303/171

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-10-12, Interior(1) 3-10-12 to 7-10-12, Exterior(2R) 7-10-12 to 10-10-12, Interior(1) 10-10-12 to 15-1-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- 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=114, 6=114.
- 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.



April 27, 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



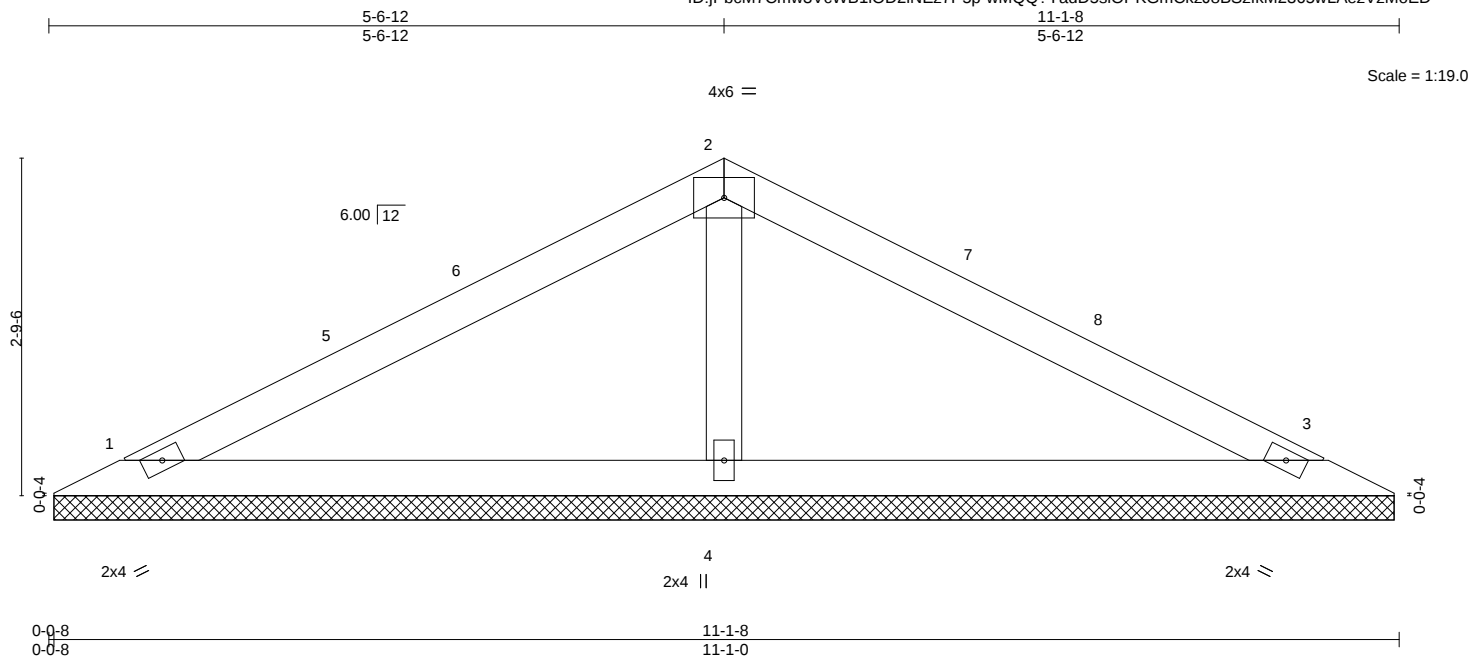
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835089
2768614	V6	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:28 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-wMQQ?YadD5siOPKGmCkzJ8BSzfkM2365wLAezVzMoED



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 0.34	Vert(LL)	n/a	-	n/a	999	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.20	Vert(CT)	n/a	-	n/a	999	197/144
BCLL 0.0	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	3	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						
									Weight: 28 lb FT = 20%

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.

(size) 1=11-0-8, 3=11-0-8, 4=11-0-8
Max Horz 1=39(LC 12)
Max Uplift 1=-38(LC 12), 3=-46(LC 13), 4=-34(LC 12)
Max Grav 1=205(LC 25), 3=205(LC 26), 4=483(LC 1)

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

WEBS 2-4=-334/167

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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-7-9, Interior(1) 3-7-9 to 5-6-12, Exterior(2R) 5-6-12 to 8-6-12, Interior(1) 8-6-12 to 10-5-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 27, 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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Chesterfield, MO 63017

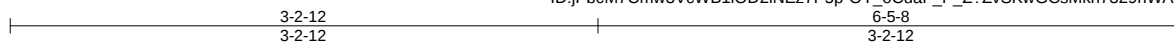
Job 2768614	Truss V7	Truss Type Valley	Qty 1	Ply 1	Summit/148 Hawthorne 145835090
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

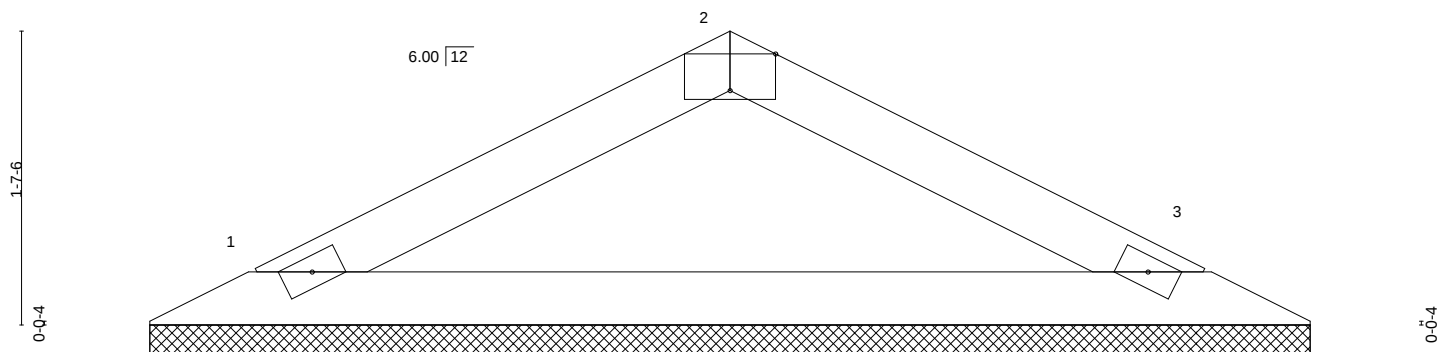
8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:29 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-OY_oCuaF_P_Z?ZvSKwGCsMkh7329nWAF9?vBWyzMoEC



3x6 =

Scale = 1:12.7



2x4

2x4

0-0-8
0-0-8

6-5-8
6-5-0

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

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 0.12	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.29	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 14 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2
BOT CHORD 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.

(size) 1=6-4-8, 3=6-4-8
Max Horz 1=-21(LC 13)
Max Uplift 1=-29(LC 12), 3=-29(LC 13)
Max Grav 1=234(LC 1), 3=234(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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- 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.



April 27, 2021

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

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Chesterfield, MO 63017

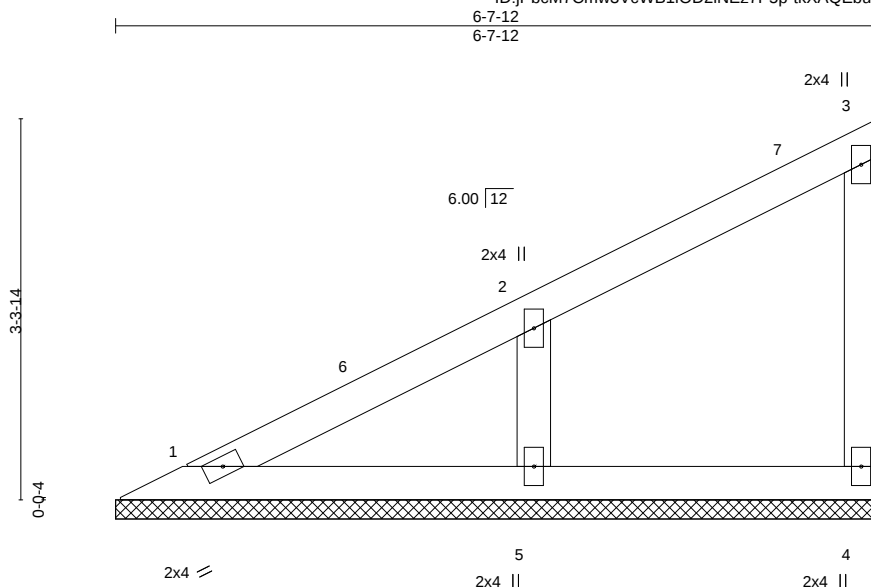
Job	Truss	Truss Type	Qty	Ply	Summit/148 Hawthorne	I45835091
2768614	V8	GABLE	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:30 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-tkXAQEbulj6PdJueudnROZHRyTRsWzqOOfl2OzMoEB



Scale = 1:20.1

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 0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.07	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 20 lb	FT = 20%

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.

(size) 1=6-7-12, 4=6-7-12, 5=6-7-12
Max Horz 1=110(LC 9)
Max Uplift 4=19(LC 9), 5=92(LC 12)
Max Grav 1=104(LC 1), 4=95(LC 1), 5=330(LC 1)

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

WEBS 2-5=-256/219

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-7-12, Interior(1) 3-7-12 to 6-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5.
- 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.



April 27, 2021

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Chesterfield, MO 63017

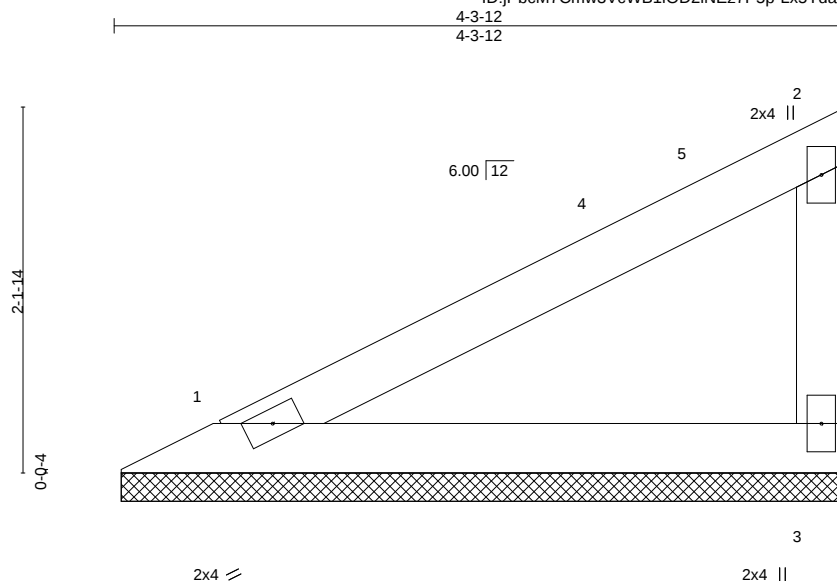
Job 2768614	Truss V9	Truss Type Valley	Qty 1	Ply 1	Summit/148 Hawthorne Job Reference (optional)	I45835092
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s Apr 20 2021 MiTek Industries, Inc. Mon Apr 26 16:15:31 2021 Page 1

ID:jPbcM7Cmw3VcWB1iOD2INEz7P5p-Lx5YdacWW0EGFt2rRKlgxnp?ztnlFQgXcJOLAqzMoEA



Scale = 1:13.6

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 0.23	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 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P					Weight: 11 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-3-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 1=4-3-4, 3=4-3-4
Max Horz 1=66(LC 9)
Max Uplift 1=-20(LC 12), 3=-37(LC 12)
Max Grav 1=159(LC 1), 3=159(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=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-7-9, Interior(1) 3-7-9 to 4-2-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 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.



April 27, 2021

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

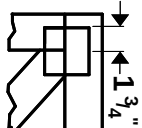
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



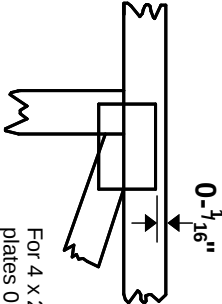
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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- $\frac{3}{16}$ " from outside edge of truss.

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

*** Plate location details available in MiTek 2012 software or upon request.**

PLATE SIZE

4 X 4

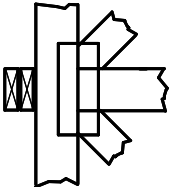
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



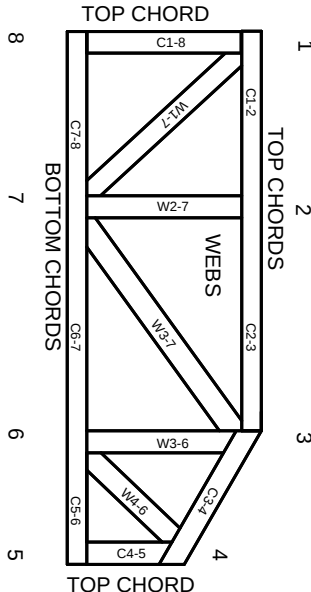
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: 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.