



RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/14/2021

RE: 2838622
Summit/85 Hawthorne

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

Site Information:

Customer: Project Name: 2838622
Lot/Block:
Address:
City:

Model:
Subdivision:
State:

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

Design Code: IRC2018/TPI2014
Wind Code: ASCE 7-16
Roof Load: 45.0 psf

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

This package includes 42 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I46271637	A1	6/18/2021	21	I46271657	C4	6/18/2021
2	I46271638	A2	6/18/2021	22	I46271658	C5	6/18/2021
3	I46271639	A2A	6/18/2021	23	I46271659	G1	6/18/2021
4	I46271640	A3	6/18/2021	24	I46271660	G2	6/18/2021
5	I46271641	A4	6/18/2021	25	I46271661	PB1	6/18/2021
6	I46271642	A5	6/18/2021	26	I46271662	PB3	6/18/2021
7	I46271643	A6	6/18/2021	27	I46271663	PB4	6/18/2021
8	I46271644	A7	6/18/2021	28	I46271664	PB5	6/18/2021
9	I46271645	A8	6/18/2021	29	I46271665	V1	6/18/2021
10	I46271646	A9	6/18/2021	30	I46271666	V2	6/18/2021
11	I46271647	A10	6/18/2021	31	I46271667	V3	6/18/2021
12	I46271648	A11	6/18/2021	32	I46271668	V4	6/18/2021
13	I46271649	B1	6/18/2021	33	I46271669	V5	6/18/2021
14	I46271650	B3	6/18/2021	34	I46271670	V6	6/18/2021
15	I46271651	B4	6/18/2021	35	I46271671	V7	6/18/2021
16	I46271652	B5	6/18/2021	36	I46271672	V8	6/18/2021
17	I46271653	B6	6/18/2021	37	I46271673	V9	6/18/2021
18	I46271654	C1	6/18/2021	38	I46271674	V10	6/18/2021
19	I46271655	C2	6/18/2021	39	I46271675	V11	6/18/2021
20	I46271656	C3	6/18/2021	40	I46271676	V12	6/18/2021

The truss drawing(s) referenced above have been prepared by
MiTek USA, Inc. under my direct supervision
based on the parameters provided by Builders FirstSource (Valley Center).
Truss Design Engineer's Name: Sevier, Scott
My license renewal date for the state of Missouri is December 31, 2021.
Missouri COA: 001193

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



June 18, 2021



RE: 2838622 - Summit/85 Hawthorne

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

Site Information:

Project Customer: Project Name: 2838622

Lot/Block:

Subdivision:

Address:

City, County:

State:

No.	Seal#	Truss Name	Date
41	I46271677	V13	6/18/2021
42	I46271678	V14	6/18/2021

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271637
2838622	A1	GABLE	1	1	Job Reference (optional)	

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:27 2021 Page 1

ID:sZNIc9?G94Kxezjx5JOHRWzDFsh-6?UndMVpR83vEDUUr5ldpUeXYIujyDHDf63ZUzDe_U

0-10-8 22-3-14 29-3-5 32-3-8 33-6-0
0-10-8 22-3-14 6-11-6 3-0-3 1-2-8

3x4 =

Scale = 1:62.6

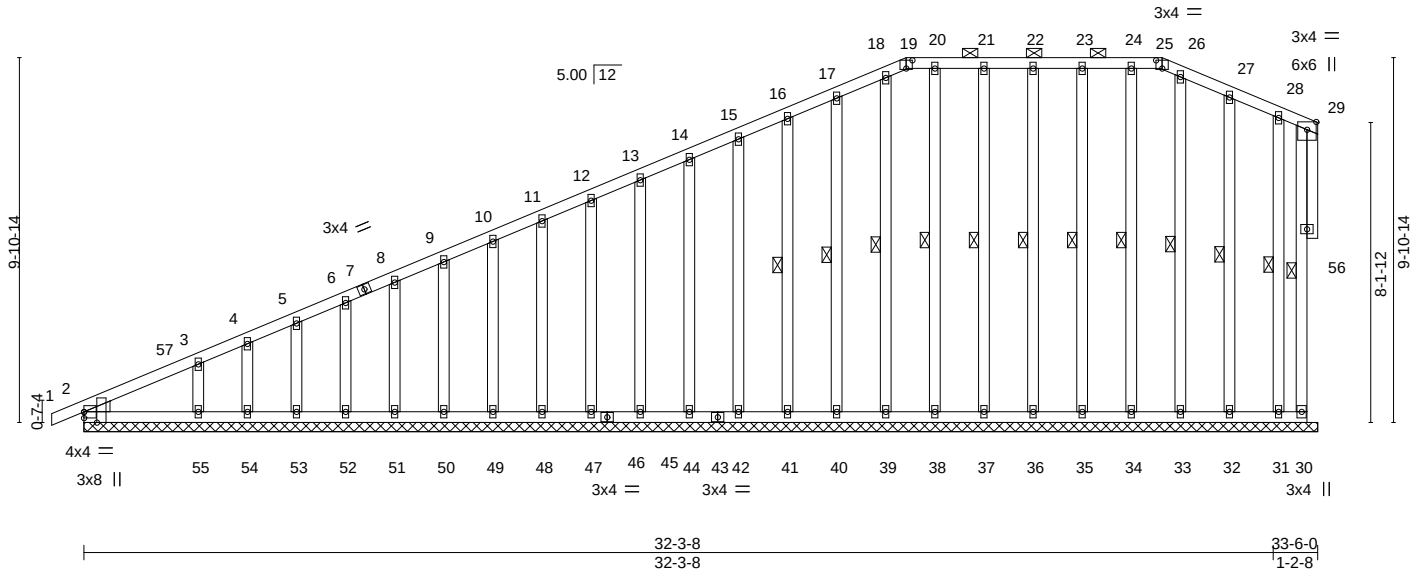


Plate Offsets (X,Y)-- [2:0-3-7,Edge], [19:0-2-0,0-2-11], [25:0-2-0,0-2-11]											
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d			PLATES GRIP		
TCLL	25.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.00	1	n/r	120	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	0.00	1	n/r	120	
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	-0.01	30	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 265 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
Left: 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 19-25.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 29-30, 16-41, 17-40, 18-39, 20-38, 21-37, 22-36, 23-35, 24-34, 26-33, 27-32, 28-31

REACTIONS.

All bearings 33-6-0.
(lb) - Max Horz 2=345(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 30, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31 except 55=110(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 30, 2, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31 except 55=268(LC 25)

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

TOP CHORD 2-3=-421/241, 3-4=-339/195, 4-5=-321/195, 5-6=-293/184, 6-8=-266/175

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-5-11, Exterior(2N) 2-5-11 to 22-3-14, Corner(3R) 22-3-14 to 25-9-4, Exterior(2N) 25-9-4 to 29-3-5, Corner(3R) 29-3-5 to 32-5-4, Exterior(2N) 32-5-4 to 33-2-8 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.
- Provide adequate drainage to prevent water ponding.
- 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) 30, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31 except (jt=lb) 55=110.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 25, 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/85 Hawthorne	146271638
2838622	A2	Piggyback Base	2	1		

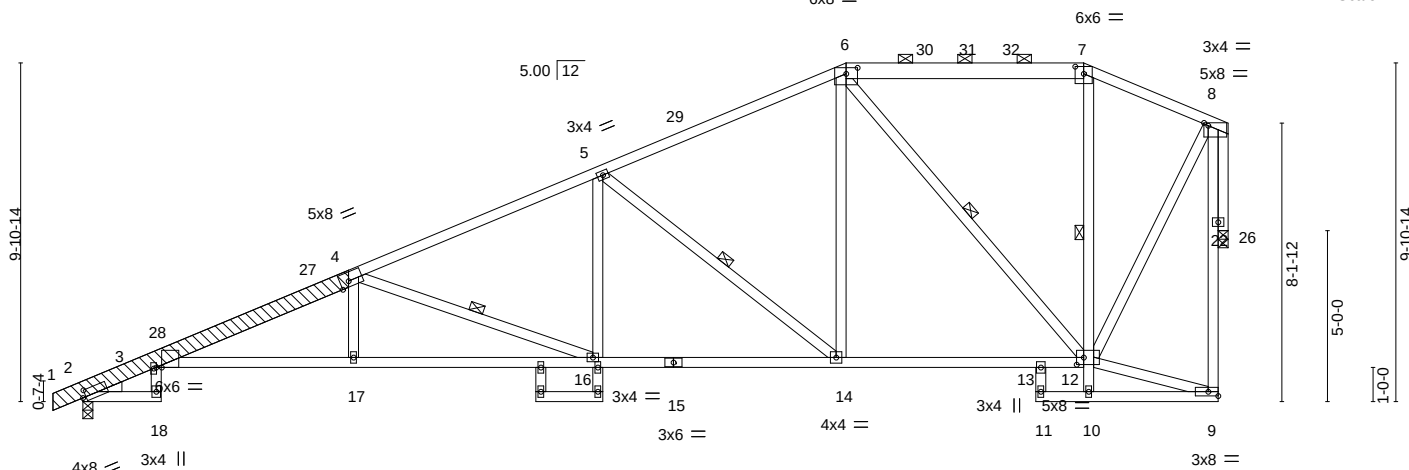
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:33 2021 Page 1

0-10-8 2-3-8 7-9-4 13-3-0 15-2-8 22-3-14 27-10-8 29-3-5 33-6-0
0-10-8 2-3-8 5-5-12 5-5-12 1-11-8 7-1-6 5-6-10 1-4-13 4-2-11

6x8 =

Scale = 1:67.4



2-3-8 7-9-4 13-3-0 15-2-8 22-3-14 27-10-8 29-3-5 33-6-0
2-3-8 5-5-12 5-5-12 1-11-8 7-1-6 5-6-10 1-4-13 4-2-11

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

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 0.66	Vert(LL)	-0.34	3-17	>999	240	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.93	Vert(CT)	-0.62	3-17	>646	180	
BCLL 0.0	Rep Stress Incr	YES	WB 0.61	Horz(CT)	0.38	26	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 200 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
6-7: 2x6 SPF No.2, 1-4: 2x6 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
3-15: 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
LBR SCAB 1-4 2x6 SPF 2100F 1.8E one side
WEDGE
Left: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-12, 7-10, 5-14, 4-16

REACTIONS.

(size) 2=0-3-8, 26=0-3-8
Max Horz 2=296(LC 9)
Max Uplift 2=-304(LC 12), 26=-261(LC 12)
Max Grav 2=1568(LC 1), 26=1474(LC 1)

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

TOP CHORD 3-24=-634/23, 3-4=-3903/805, 4-5=-2580/528, 5-6=-1550/348, 6-7=-654/186, 7-8=-724/181
BOT CHORD 3-17=-941/3680, 16-17=-938/3691, 14-16=-537/2290, 13-14=-332/1321, 12-13=-305/1406
WEBS 4-17=0/305, 6-14=-173/888, 6-12=-1086/307, 8-12=-245/1260, 5-14=-1212/373, 5-16=-81/626, 4-16=-1483/438, 8-26=-1480/274

NOTES-

- Attached 9-6-11 scab 1 to 4, 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 0-0-10 from end at joint 1, nail 2 row(s) at 4" o.c. for 4-8-3; starting at 7-4-13 from end at joint 1, nail 2 row(s) at 7" o.c. for 2-0-0.
- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-10-8 to 2-5-11, Interior(1) 2-5-11 to 22-3-14, Exterior(2R) 22-3-14 to 27-0-12, Interior(1) 27-0-12 to 29-3-5, Exterior(2E) 29-3-5 to 33-0-12 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 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) 26 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) 2=304, 26=261.
- 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 continuous rock applied directly to the bottom chord.



May 25, 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/85 Hawthorne	I46271638
2838622	A2	Piggyback Base	2	1	Job Reference (optional)	

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

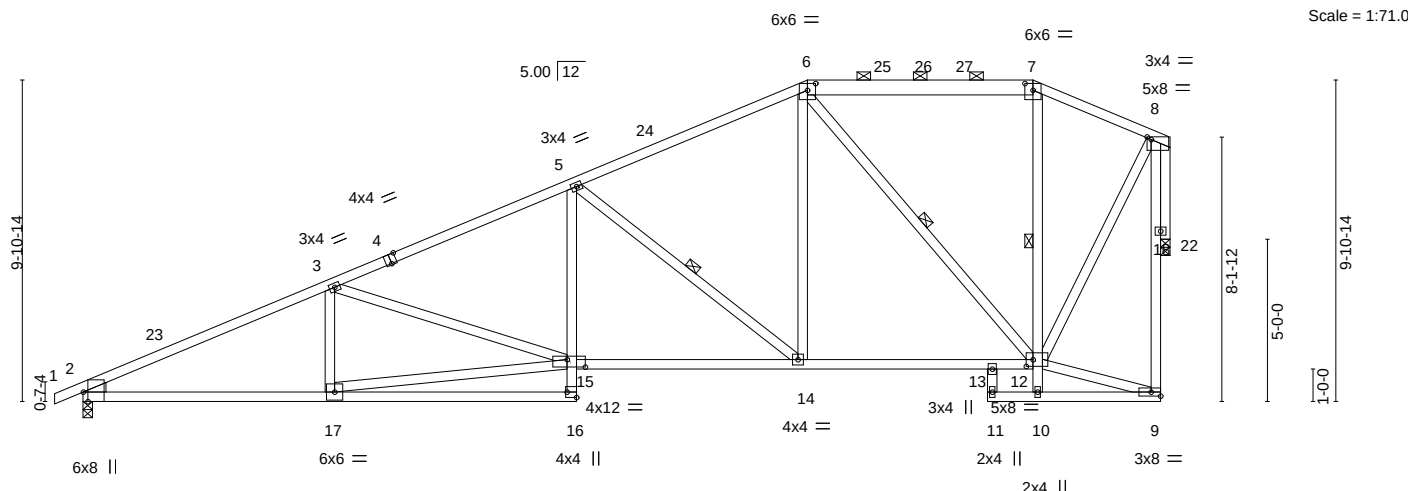
Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271639
2838622	A2A	Piggyback Base	1	1	Job Reference (optional)	

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:35 2021 Page 1

ID:sZNic9?G94Kxezjx5JOhrWzDFsh-tXzpJ5bqZb4nCS50JaFdyVpx9mr4aRrS3v2Ur1zDE_M

-0-10-8	7-7-5	15-2-8	22-3-14	27-10-8	29-3-5	33-6-0
0-10-8	7-7-5	7-7-3	7-1-6	5-6-10	1-4-13	4-2-11



	7-7-5	15-2-8	22-3-14	27-10-8	29-3-5	33-6-0
	7-7-5	7-7-3	7-1-6	5-6-10	1-4-13	4-2-11

Plate Offsets (X,Y)--	[2:0-3-8,Edge], [4:0-2-0,Edge], [6:0-3-0,0-2-9], [7:0-3-0,0-2-9], [8:0-1-8,0-1-0], [12:0-2-8,0-2-8], [15:0-6-12,0-2-12], [16:Edge,0-3-8]
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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 0.61	Vert(LL)	-0.18 14-15	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.84	Vert(CT)	-0.36 16-17	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.63	Horz(CT)	0.22 22	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 182 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
6-7: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-14, 7-10, 6-12

REACTIONS.

(size) 2=0-3-8, 22=0-3-8
Max Horz 2=294(LC 9)
Max Uplift 2=-306(LC 12), 22=-261(LC 12)
Max Grav 2=1563(LC 1), 22=1474(LC 1)

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

TOP CHORD 2-3=-2926/552, 3-5=-2557/527, 5-6=-1554/348, 6-7=-652/186, 7-8=-722/181
BOT CHORD 2-17=-673/2609, 5-15=-79/588, 14-15=-542/2289, 13-14=-332/1322, 12-13=-306/1394
WEBS 15-17=-643/2433, 3-15=-361/156, 5-14=-1209/379, 6-14=-174/900, 8-12=-246/1257, 6-12=-1090/307, 8-22=-1480/274

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-5-11, Interior(1) 2-5-11 to 22-3-14, Exterior(2R) 22-3-14 to 27-0-12, Interior(1) 27-0-12 to 29-3-5, Exterior(2E) 29-3-5 to 33-0-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Bearing at joint(s) 22 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=306, 22=261.
- 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.



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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271640
2838622	A3	Piggyback Base	2	1		

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:36 2021 Page 1

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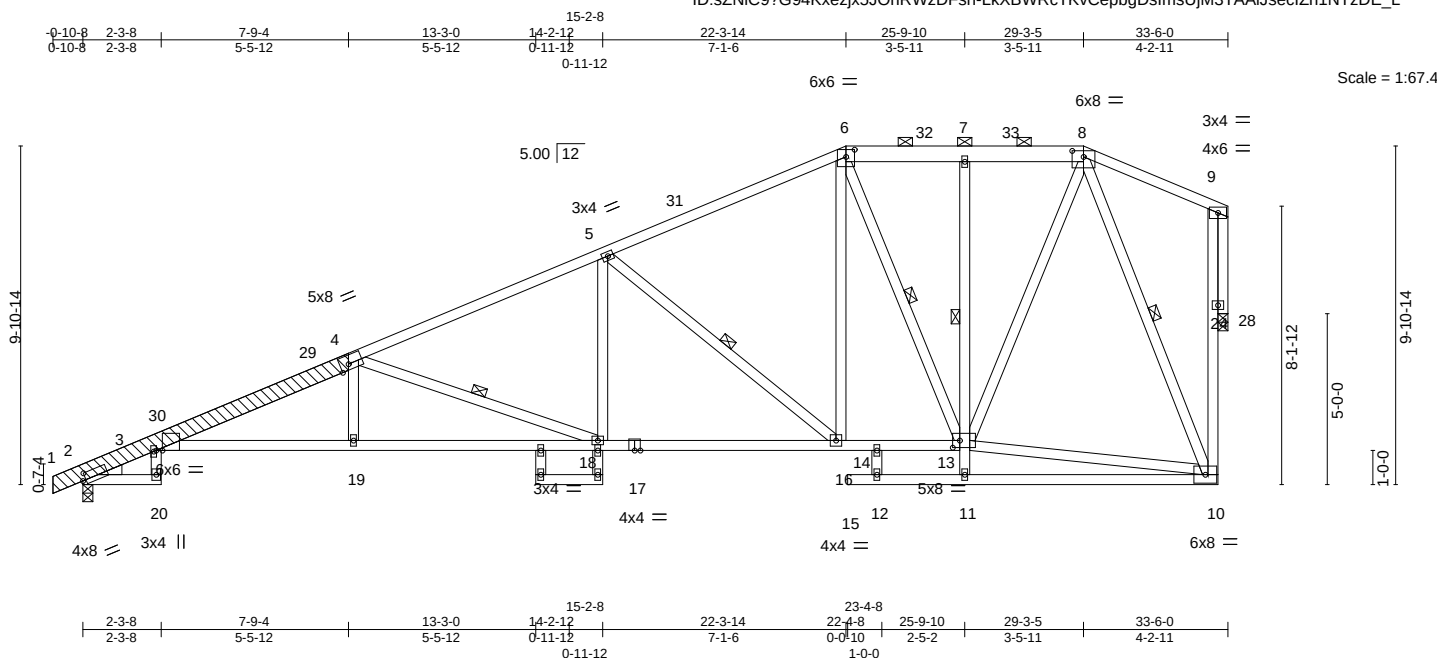


Plate Offsets (X, Y)--		[2:0-1-3,0-2-7], [3:0-2-3,0-0-0], [4:0-3-0,Edge], [6:0-3-0,0-2-9], [8:0-4-0,0-2-2], [13:0-2-8,0-2-8]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 25.0	Plate Grip DOL	1.15	TC 0.77
TCDL 10.0	Lumber DOL	1.15	BC 0.94
BCLL 0.0	Rep Stress Incr	YES	WB 0.73
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS
			DEFL. in (loc) l/defl L/d
			Vert(LL) -0.34 3-19 >999 240
			Vert(CT) -0.63 3-19 >636 180
			Horz(CT) 0.41 28 n/a n/a
			PLATES MT20 GRIP 197/144
			Weight: 217 lb FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
6-8: 2x6 SPF No.2, 1-4: 2x6 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
3-17: 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
LBR SCAB 1-4 2x6 SPF 2100F 1.8E one side
WEDGE
Left: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied. Except: 10-0-0 oc bracing: 14-16
WEBS 1 Row at midpt 4-18, 5-16, 7-11, 8-10, 6-13

REACTIONS.

(size) 2=0-3-8, 28=0-3-8
Max Horz 2=296(LC 9)
Max Uplift 2=-302(LC 12), 28=-255(LC 12)
Max Grav 2=1573(LC 1), 28=1486(LC 1)

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

TOP CHORD 3-26=-636/23, 3-4=-3925/800, 4-5=-2578/517, 5-6=-1558/344, 6-7=-1057/268, 7-8=-1059/268, 10-24=-255/1366, 9-24=-255/1366
BOT CHORD 3-19=-936/3701, 18-19=-933/3712, 16-18=-527/2286, 14-16=-326/1328, 13-14=-326/1328
WEBS 4-19=0/307, 4-18=-1507/446, 5-18=-79/631, 5-16=-1213/369, 6-16=-184/878, 11-13=0/259, 8-10=-1464/322, 8-13=-256/1211, 6-13=-762/239, 10-13=-192/568, 9-28=-1493/269

NOTES-

- Attached 9-6-11 scab 1 to 4, 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 0-0-10 from end at joint 1, nail 2 row(s) at 4" o.c. for 4-8-3; starting at 7-4-13 from end at joint 1, nail 2 row(s) at 7" o.c. for 2-0-0.
- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-5-11, Interior(1) 2-5-11 to 22-3-14, Exterior(2R) 22-3-14 to 27-0-12, Interior(1) 27-0-12 to 29-3-5, Exterior(2E) 29-3-5 to 33-0-12 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 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) 28 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) 2=302, 28=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.

Continued on page 2



May 25, 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/85 Hawthorne	I46271640
2838622	A3	Piggyback Base	2	1	Job Reference (optional)	

- NOTES-**
- 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.

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271642
2838622	A5	Piggyback Base	1	1	Job Reference (optional)	

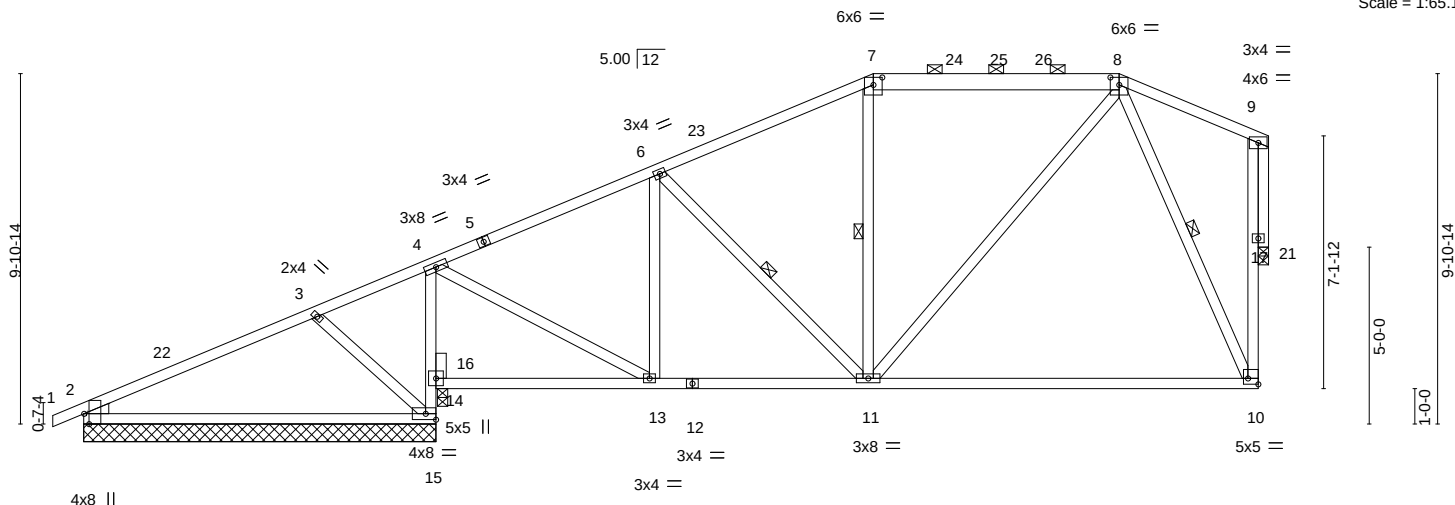
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:39 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOHrWzDFsh-mJDJ9TeLdqaCg3PnYQJZ6L_dkOE_WJv2_W0h_ozDE_I

0-10-8	4-11-13	6-7-3	9-11-8	16-1-11	22-3-14	29-3-5	33-6-0
0-10-8	4-11-13	1-7-6	3-4-5	6-2-3	6-2-3	6-11-6	4-2-11

Scale = 1:65.1



Job 2838622	Truss A7	Truss Type Piggyback Base	Qty 4	Ply 1	Summit/85 Hawthorne 146271644
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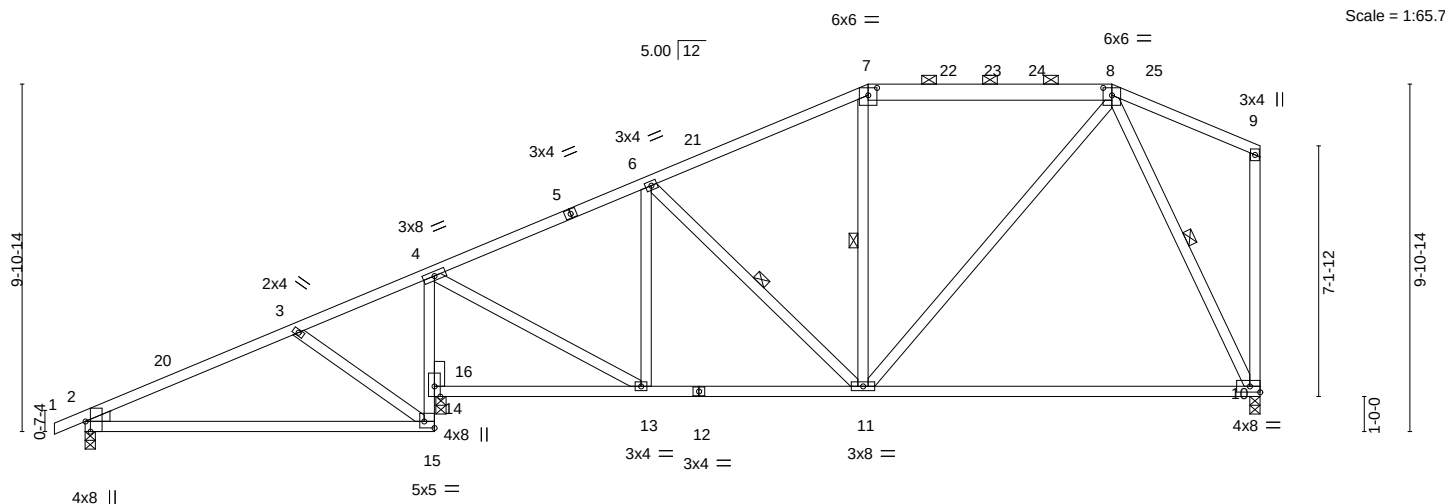
Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:41 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOHrWzDFsh-ihL4a9gb8RqwwNZAFrL1Bm3_sBuN_C4LRqVo3gzDE_G

0-10-8	4-11-13	6-1-0	9-11-8	16-1-11	22-3-14	29-3-5	33-6-0
0-10-8	4-11-13	1-1-3	3-10-8	6-2-3	6-2-3	6-11-6	4-2-11



4-11-13	6-1-0	9-11-8	10-0-0	16-1-11	22-3-14	29-3-5	33-6-0
4-11-13	1-1-3	3-10-8	0-0-8	6-1-11	6-2-3	6-11-6	4-2-11

Plate Offsets (X,Y)-- [2:0-3-8,Edge], [7:0-3-0,0-2-9], [8:0-3-0,0-2-9], [15:Edge,0-2-4]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.54	Vert(LL)	-0.40 10-11	>701	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.84	Vert(CT)	-0.81 10-11	>349	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.39	Horz(CT)	0.02 10	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 160 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
7-8: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-8.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-11, 8-10, 6-11

REACTIONS.

(size) 2=0-3-8, 14=0-3-8, 10=0-3-8
Max Horz 2=324(LC 9)
Max Uplift 2=-60(LC 12), 14=-365(LC 12), 10=-162(LC 9)
Max Grav 2=535(LC 25), 14=1457(LC 1), 10=1071(LC 1)

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

TOP CHORD 2-3=-580/115, 3-4=-343/69, 4-6=-1043/222, 6-7=-939/251, 7-8=-787/261
BOT CHORD 2-15=-149/466, 14-15=-78/349, 4-14=-1039/313, 11-13=-237/890, 10-11=-165/419
WEBS 8-11=-127/611, 8-10=-924/261, 3-15=-428/188, 6-13=-313/144, 4-13=-223/838

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-5-11, Interior(1) 2-5-11 to 22-3-14, Exterior(2R) 22-3-14 to 27-0-12, Interior(1) 27-0-12 to 29-3-5, Exterior(2E) 29-3-5 to 33-4-4 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
- 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) 2 except (jt=lb) 14=365, 10=162.
- 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.



May 25, 2021

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

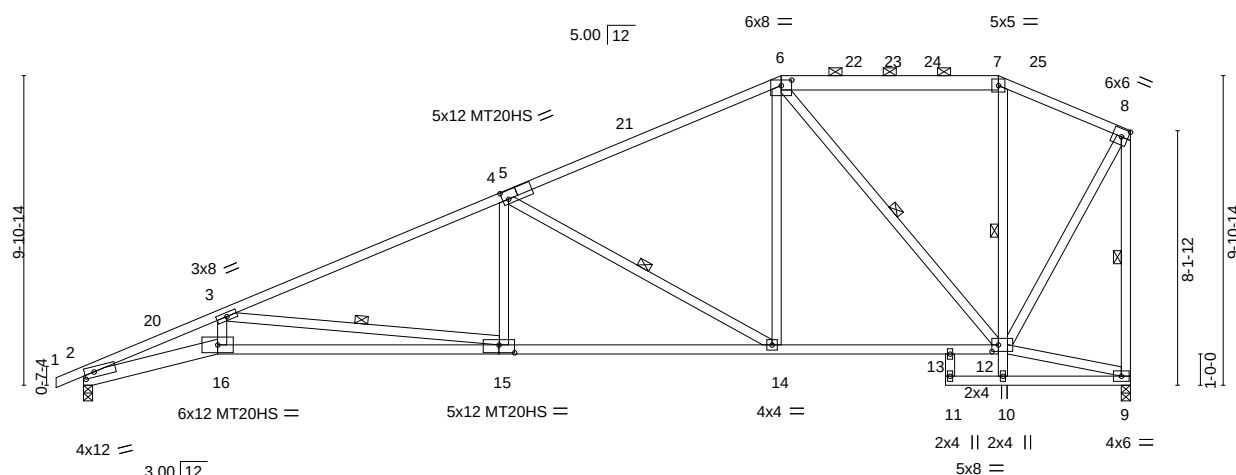
Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271645
2838622	A8	Piggyback Base	2	1	Job Reference (optional)	

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:43 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhrWzDFsh-e4Sq_rhsg34e9gjZnGOVGB8HC?APS_Uev8_v7ZzDE_E

0-10-8	4-3-8	10-3-10	13-3-11	16-3-12	22-3-14	27-7-0	29-3-5	33-6-0
0-10-8	4-3-8	6-0-2	3-0-1	3-0-1	6-0-2	5-3-2	1-8-5	4-2-11



4-3-8	13-3-11	22-3-14	27-7-0	29-3-5	33-6-0
4-3-8	9-0-3	9-0-3	5-3-2	1-8-5	4-2-11

Plate Offsets (X,Y)-- [2:0-3-10,0-2-0], [5:0-2-4,0-3-4], [6:0-4-0,0-2-2], [12:0-2-8,0-2-8], [15:0-6-0,0-3-0]

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 0.74	Vert(LL)	-0.40 15-16	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.87	Vert(CT)	-0.80 15-16	>502	180	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	YES	WB 0.91	Horz(CT)	0.28 9	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 175 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
6-7: 2x6 SPF No.2, 1-5: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF No.2 *Except*
2-16: 2x6 SPF 2100F 1.8E, 15-16: 2x4 SP 2400F 2.0E
WEBS 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-10, 8-9, 6-12, 4-14, 3-15

REACTIONS.

(size) 2=0-3-8, 9=0-3-8
Max Horz 2=344(LC 11)
Max Uplift 2=-318(LC 12), 9=-249(LC 12)
Max Grav 2=1563(LC 1), 9=1500(LC 1)

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

TOP CHORD 2-3=-5548/1242, 3-4=-2921/608, 4-6=-1587/368, 6-7=-650/243, 7-8=-747/245, 8-9=-1474/311
BOT CHORD 2-16=-1303/5137, 15-16=-1264/4939, 14-15=-637/2609, 13-14=-363/1327, 12-13=-340/1377
WEBS 3-16=-159/969, 6-14=-148/862, 8-12=-279/1263, 6-12=-1103/294, 4-14=-1454/443, 4-15=-18/605, 3-15=-2331/690

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-5-11, Interior(1) 2-5-11 to 22-3-14, Exterior(2R) 22-3-14 to 27-0-12, Interior(1) 27-0-12 to 29-3-5, Exterior(2E) 29-3-5 to 33-4-4 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
- 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) 2 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) 2=318, 9=249.
- 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.



May 25, 2021

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271646
2838622	A9	Piggyback Base	2	1	Job Reference (optional)	

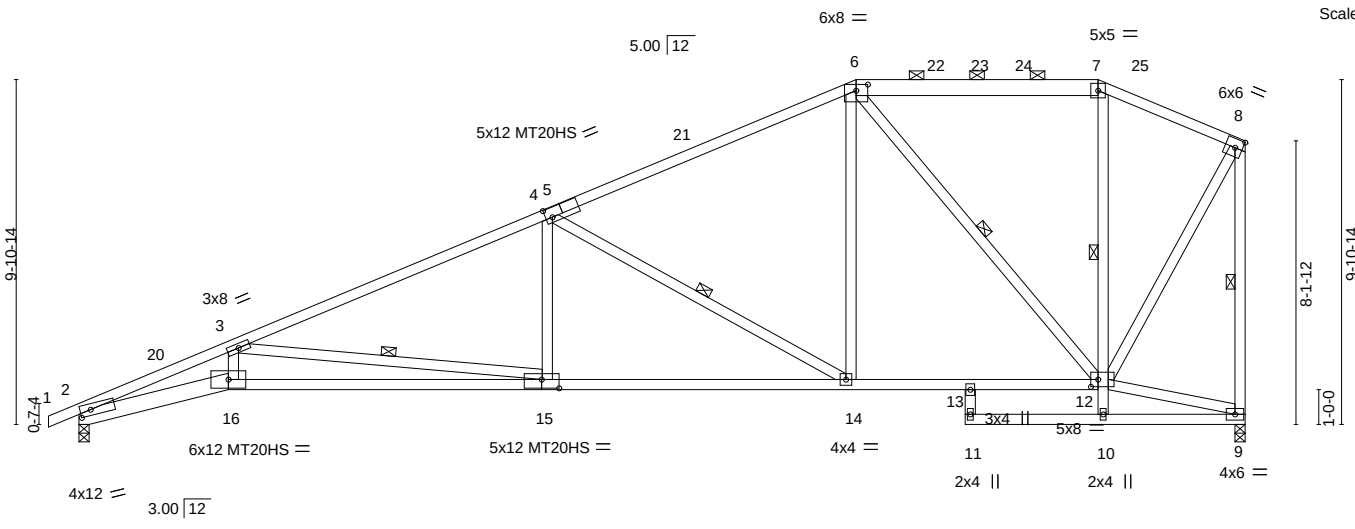
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:44 2021 Page 1

ID:sZNIc9?G94Kxezjx5JOhrWzDFsh-6G0CCAIURMCVnqllKzvKpPhSyPwmBRjn7ojSg?zDe_D

0-10-8	4-3-8	10-3-10	13-3-11	16-3-12	22-3-14	25-5-8	29-3-5	33-6-0
0-10-8	4-3-8	6-0-2	3-0-1	3-0-1	6-0-2	3-1-10	3-9-13	4-2-11

Scale = 1:66.2



	4-3-8	13-3-11	22-3-14	25-5-8	29-3-5	33-6-0
	4-3-8	9-0-3	9-0-3	3-1-10	3-9-13	4-2-11

Plate Offsets (X,Y)--	[2:0-3-10,0-2-0], [5:0-2-4,0-3-4], [6:0-4-0,0-2-2], [12:0-2-8,0-2-8], [15:0-6-0,0-3-0]					
LOADING (psf)	SPACING 2-0-0	CSI	DEFL. in (loc)	l/defl	L/d	PLATES
TCLL 25.0	Plate Grip DOL 1.15	TC 0.74	Vert(LL) -0.40 15-16	>999	240	MT20
TCDL 10.0	Lumber DOL 1.15	BC 0.86	Vert(CT) -0.80 15-16	>501	180	MT20HS
BCLL 0.0	Rep Stress Incr YES	WB 0.91	Horz(CT) 0.28 9	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014	Matrix-AS				
						Weight: 178 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2 *Except*	TOP CHORD Structural wood sheathing directly applied, except end verticals, and
6-7: 2x6 SPF No.2, 1-5: 2x4 SPF 1650F 1.5E	2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD 2x4 SPF No.2 *Except*	BOT CHORD Rigid ceiling directly applied.
2-16: 2x6 SPF 2100F 1.8E, 15-16: 2x4 SP 2400F 2.0E	WEBS 1 Row at midpt 7-10, 8-9, 6-12, 4-14, 3-15
WEBS 2x4 SPF No.2	

REACTIONS.	(size) 2=0-3-8, 9=0-3-8
	Max Horz 2=344(LC 11)
	Max Uplift 2=318(LC 12), 9=249(LC 12)
	Max Grav 2=1563(LC 1), 9=1500(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD 2-3=-5549/1241, 3-4=-2920/608, 4-6=-1589/368, 6-7=-636/247, 7-8=-733/250, 8-9=-1446/311	
BOT CHORD 2-16=-1302/5138, 15-16=-1264/4940, 14-15=-637/2609, 13-14=-363/1329, 12-13=-343/1260	
WEBS 3-16=-159/970, 6-14=-143/881, 8-12=-279/1236, 6-12=-1125/288, 4-14=-1451/444, 4-15=-19/602, 3-15=-2333/690	

- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-5-11, Interior(1) 2-5-11 to 22-3-14, Exterior(2R) 22-3-14 to 27-0-12, Interior(1) 27-0-12 to 29-3-5, Exterior(2E) 29-3-5 to 33-4-4 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) 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) 2 considers parallel to grain value using ANSI/TPI 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) 2=318, 9=249.
 - 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.



May 25, 2021

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271647
2838622	A10	Piggyback Base	1	1		

Builders FirstSource (Valley Center),
Valley Center, KS - 67147,
8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:29 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhRWzDFsh-3OcX22W3zJdUXesyK8DiEZrsMrmBfzahzb9eNzDE_S

-0-10-8 4-3-8 10-3-10 13-3-11 16-3-12 22-3-14 25-1-0 27-9-0 29-3-5 33-6-0
0-10-8 4-3-8 6-0-2 3-0-1 3-0-1 6-0-2 2-9-2 2-8-0 1-6-5 4-2-11

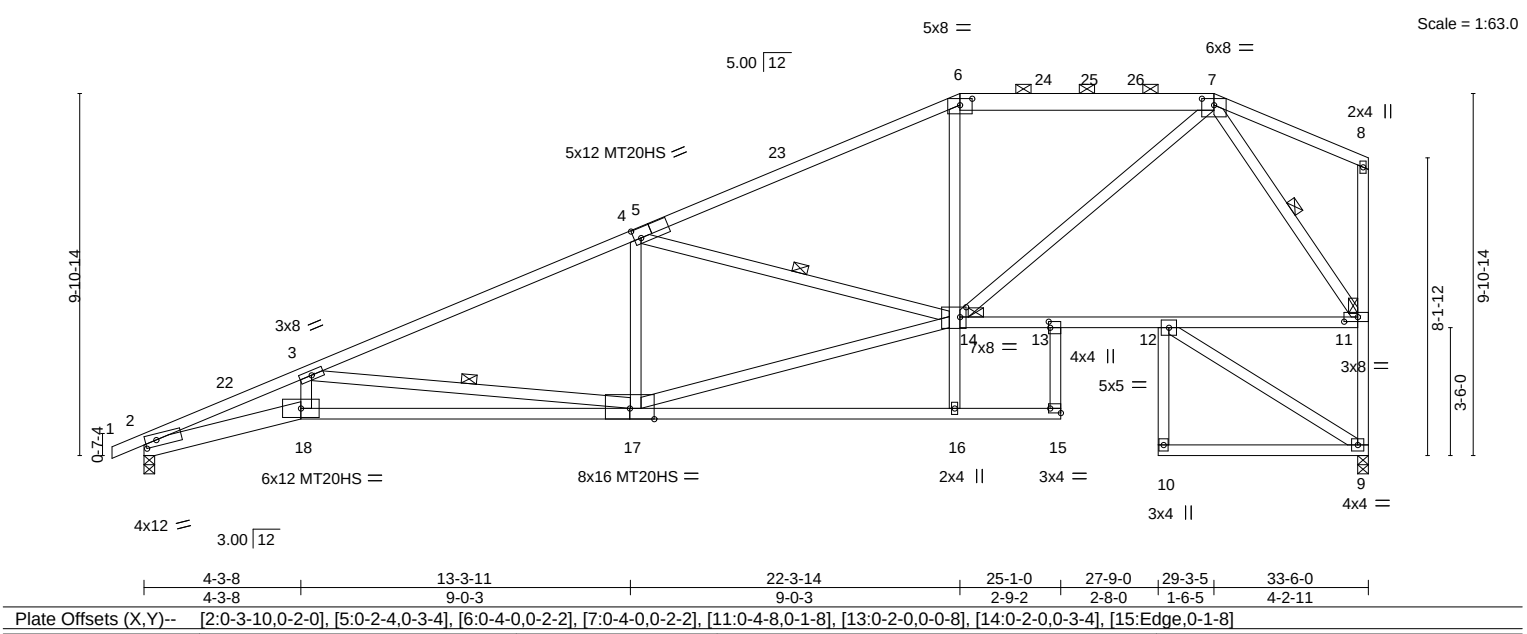


Plate Offsets (X,Y)--		[2:0-3-10,0-2-0], [5:0-2-4,0-3-4], [6:0-4-0,0-2-2], [7:0-4-0,0-2-2], [11:0-4-8,0-1-8], [13:0-2-0,0-0-8], [14:0-2-0,0-3-4], [15:Edge,0-1-8]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 25.0	Plate Grip DOL	1.15	TC 0.86
TCDL 10.0	Lumber DOL	1.15	BC 0.70
BCLL 0.0	Rep Stress Incr	YES	WB 0.91
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-AS
		DEFL.	in (loc) l/defl L/d
		Vert(LL)	-0.40 17-18 >999 240
		Vert(CT)	-0.80 17-18 >500 180
		Horz(CT)	0.43 9 n/a n/a
		PLATES	GRIP
		MT20	197/144
		MT20HS	148/108
		Weight: 186 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD	TOP CHORD
2x4 SPF No.2 *Except*	Structural wood sheathing directly applied, except end verticals, and
6-7: 2x6 SPF No.2, 1-5: 2x4 SPF 1650F 1.5E	2-0-0 oc purlins (4-11-7 max.): 6-7.
BOT CHORD	BOT CHORD
2x4 SPF No.2 *Except*	Rigid ceiling directly applied.
2-18: 2x6 SPF 2100F 1.8E, 17-18: 2x4 SP 2400F 2.0E	WEBS
2x4 SPF No.2	1 Row at midpt 8-9, 7-11, 3-17, 4-14
	JOINTS
	1 Brace at Jt(s): 14

REACTIONS.	(size) 2=0-3-8, 9=0-3-8
	Max Horz 2=344(LC 11)
	Max Uplift 2=-318(LC 12), 9=-249(LC 12)
	Max Grav 2=1563(LC 1), 9=1500(LC 1)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-5551/1239, 3-4=-2919/610, 4-6=-2184/422, 6-7=-1898/440, 9-11=-1425/325
BOT CHORD	2-18=-1300/5140, 17-18=-1262/4941, 13-14=-275/928, 12-13=-309/879, 11-12=-289/886
WEBS	3-18=-159/972, 14-16=0/401, 6-14=0/400, 7-11=-1517/360, 7-14=-284/1388, 3-17=-2336/687, 14-17=-637/2757, 4-14=-776/356

- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-5-11, Interior(1) 2-5-11 to 22-3-14, Exterior(2R) 22-3-14 to 27-0-12, Interior(1) 27-0-12 to 29-3-5, Exterior(2E) 29-3-5 to 33-4-4 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
 - 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) 2 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) 2=318, 9=249.
 - 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.



May 25,2021

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271648
2838622	A11	GABLE	1	1	Job Reference (optional)	

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:31 2021 Page 1
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0-10-8 22-3-14 29-3-5 33-2-8
0-10-8 22-3-14 6-11-6 3-11-3

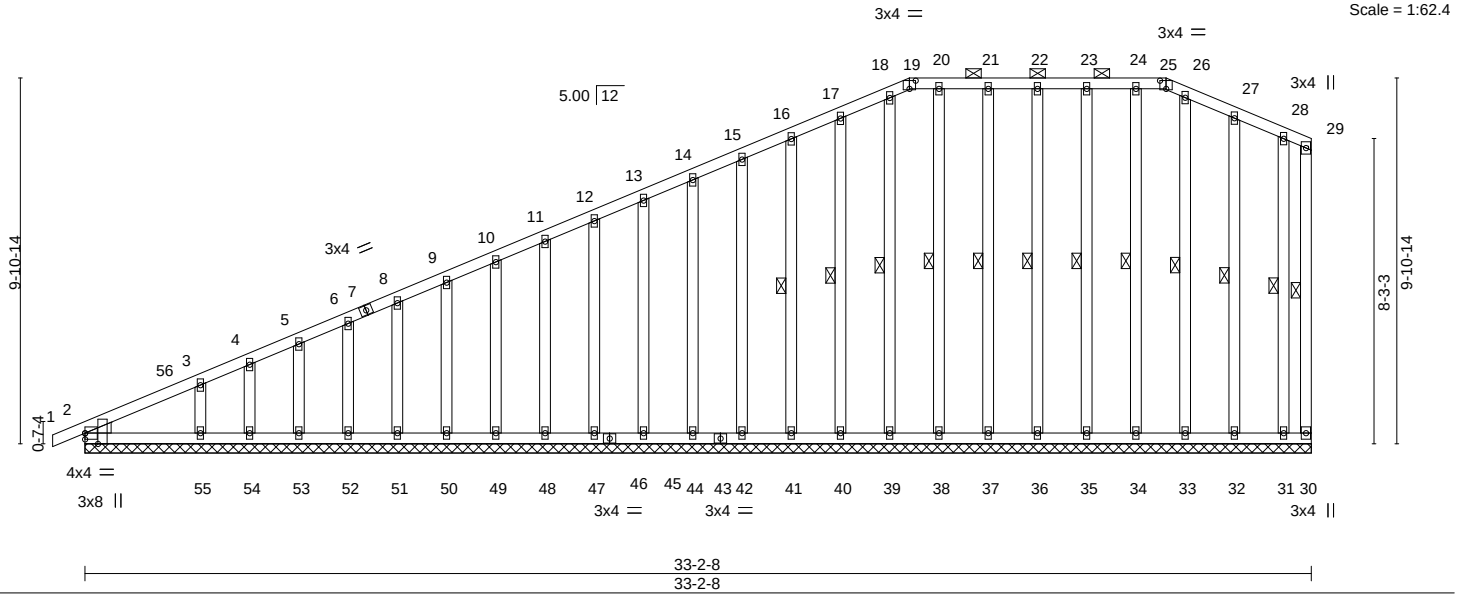


Plate Offsets (X,Y)-- [2:0-3-7,Edge], [19:0-2-0,0-2-11], [25:0-2-0,0-2-11]							
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d
TCLL 25.0	Plate Grip DOL	1.15	TC 0.34	Vert(LL)	-0.00	1	120
TCDL 10.0	Lumber DOL	1.15	BC 0.17	Vert(CT)	0.00	1	120
BCLL 0.0	Rep Stress Incr	YES	WB 0.10	Horz(CT)	-0.01	30	n/a
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S				
				PLATES	GRIP		
				MT20	197/144		
				Weight: 262 lb	FT = 20%		

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 19-25.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 29-30, 16-41, 17-40, 18-39, 20-38, 21-37, 22-36, 23-35, 24-34, 26-33, 27-32, 28-31
OTHERS 2x4 SPF No.2	
WEDGE	
Left: 2x4 SPF No.2	

REACTIONS. All bearings 33-2-8.
(lb) - Max Horz 2=348(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 30, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32 except 55=111(LC 12), 31=101(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 30, 2, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31 except 55=270(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-424/241, 3-4=-341/194, 4-5=-324/195, 5-6=-296/184, 6-8=-269/175

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-5-6, Exterior(2N) 2-5-6 to 22-3-14, Corner(3R) 22-3-14 to 25-9-8, Exterior(2N) 25-9-8 to 29-3-5, Corner(3R) 29-3-5 to 32-5-8, Exterior(2N) 32-5-8 to 33-0-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Provide adequate drainage to prevent water ponding.
- 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) 30, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32 except (jt=lb) 55=111, 31=101.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 25, 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/85 Hawthorne	146271649
2838622	B1	GABLE	1	1		

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

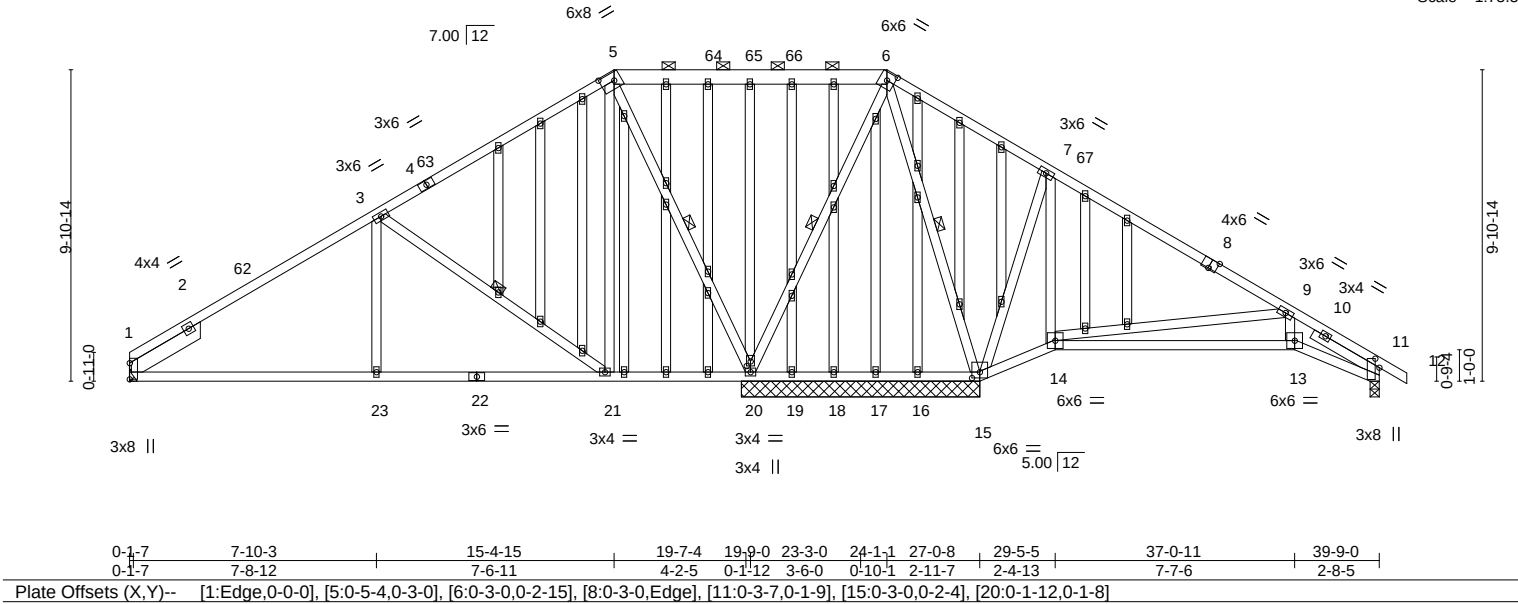
8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:46 2021 Page 1

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Job Reference (optional)

7-10-3	15-4-15	19-9-0	24-1-1	27-0-8	29-5-5	37-0-11	39-9-0	40-7-8
7-10-3	7-6-11	4-4-1	4-4-1	2-11-7	2-4-13	7-7-6	2-8-5	0-10-8

Scale = 1:73.3



0-1-7	7-10-3	15-4-15	19-7-4	19-9-0	23-3-0	24-1-1	27-0-8	29-5-5	37-0-11	39-9-0
0-1-7	7-8-12	7-6-11	4-2-5	0-1-12	3-6-0	0-10-1	2-11-7	2-4-13	7-7-6	2-8-5
Plate Offsets (X,Y)-- [1:Edge,0-0-0], [5:0-5-4,0-3-0], [6:0-3-0,0-2-15], [8:0-3-0,Edge], [11:0-3-7,0-1-9], [15:0-3-0,0-2-4], [20:0-1-12,0-1-8]										
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 0.59	Vert(LL)	-0.10 13-14	>999	240	MT20	197/144	
TCDL 10.0	Lumber DOL	1.15	BC 0.43	Vert(CT)	-0.22 13-14	>694	180			
BCLL 0.0	Rep Stress Incr	YES	WB 0.97	Horz(CT)	-0.04 15	n/a	n/a			
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS							
								Weight: 321 lb	FT = 20%	

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2 *Except* 5-6: 2x6 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (10-0-0 max.): 5-6.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 3-21, 5-20, 6-20, 6-15
OTHERS 2x4 SPF No.2	
SLIDER Left 2x6 SPF No.2 -t 2-9-0, Right 2x4 SPF No.2 -t 2-6-0	

REACTIONS.	All bearings 7-7-0 except (jt=length) 1=Mechanical, 11=0-3-8.
(lb) - Max Horz	11=247(LC 8)
Max Uplift	All uplift 100 lb or less at joint(s) 11, 19 except 1=232(LC 12), 15=513(LC 13), 20=110(LC 12)
Max Grav	All reactions 250 lb or less at joint(s) 19, 18, 17, 16 except 1=794(LC 25), 15=1373(LC 26), 11=312(LC 26), 20=1224(LC 25)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-3=-879/348, 3-5=-373/304, 5-6=-24/418, 6-7=-119/762, 7-9=-205/651, 9-11=-560/116
BOT CHORD	1-23=-187/757, 21-23=-187/757, 19-20=-329/142, 18-19=-329/142, 17-18=-329/142, 16-17=-329/142, 15-16=-329/142, 14-15=-394/168, 13-14=-247/603, 11-13=-255/688
WEBS	3-23=0/320, 3-21=-717/277, 5-21=-99/525, 7-15=-578/219, 9-14=-939/400, 9-13=-22/367, 5-20=-1120/191, 6-15=-752/258

- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-11-11, Interior(1) 3-11-11 to 15-4-15, Exterior(2R) 15-4-15 to 21-0-6, Interior(1) 21-0-6 to 24-1-1, Exterior(2R) 24-1-1 to 29-8-8, Interior(1) 29-8-8 to 40-7-8 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
 - 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.
 - Provide adequate drainage to prevent water ponding.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable studs spaced at 1-4-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - Refer to girder(s) for truss to truss connections.
 - 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 19 except (jt=lb) 1=232, 15=513, 20=110.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and conforms to standard ANSI/TPI 1.



May 25, 2021

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	I46271649
2838622	B1	GABLE	1	1	Job Reference (optional)	

- NOTES-**
- 12) 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.
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:48 2021 Page 1
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7-10-3	15-4-15	19-9-0	24-1-1	27-0-8	29-5-5	37-0-11	39-9-0
7-10-3	7-6-11	4-4-1	4-4-1	2-11-7	2-4-13	7-7-6	2-8-5

Scale = 1:70.4

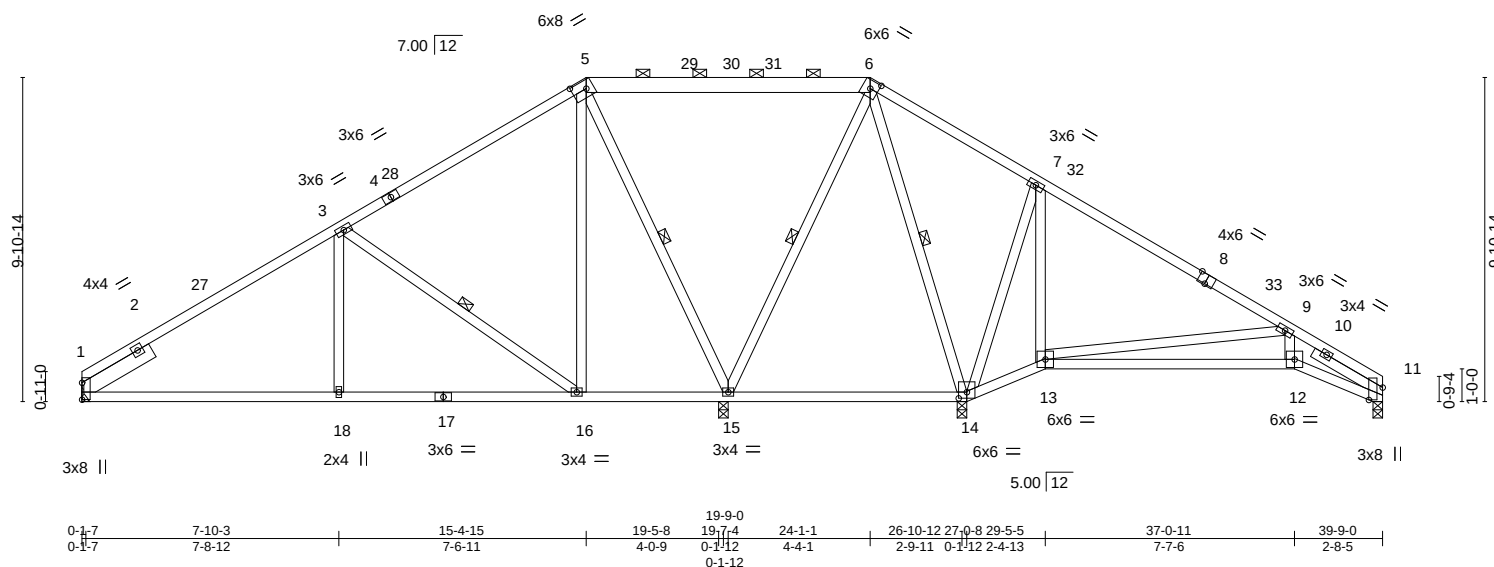


Plate Offsets (X,Y)-- [1:Edge,0-0-0], [5:0-5-4,0-3-0], [6:0-3-0,0-2-15], [8:0-3-0,Edge], [11:0-4-9,Edge], [14:0-3-0,0-2-4]													
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d				PLATES		GRIP	
TCLL	25.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	-0.11	12-13	>999	240	MT20	197/144	
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.23	12-13	>677	180			
BCLL	0.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.03	11	n/a	n/a			
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 194 lb	FT = 20%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SPF No.2 *Except* 5-6: 2x6 SPF No.2	TOP CHORD	Structural wood sheathing directly applied, except 2-0-0 oc purlins (10-0-0 max.): 5-6.
BOT CHORD	2x4 SPF No.2	BOT CHORD	Rigid ceiling directly applied.
WEBS	2x4 SPF No.2	WEBS	1 Row at midpt 3-16, 5-15, 6-15, 6-14
SLIDER	Left 2x6 SPF No.2 -t 2-6-0, Right 2x4 SPF No.2 -t 2-6-0		

REACTIONS. All bearings 0-3-8 except (jt=length) 1=Mechanical.
(lb) - Max Horz 15=-238(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 11, 15 except 1=-210(LC 12), 14=-391(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 11 except 1=789(LC 25), 14=1427(LC 26), 15=1271(LC 25)

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

TOP CHORD 1-3=-871/309, 3-5=-363/264, 5-6=0/384, 6-7=0/700, 7-9=-113/568, 9-11=-578/101

BOT CHORD 1-18=-155/750, 16-18=-155/750, 14-15=-427/244, 13-14=-467/256, 12-13=-80/507, 11-12=-67/579

WEBS 3-18=0/325, 3-16=-724/280, 5-16=-108/513, 7-14=-512/186, 9-13=-867/319, 9-12=0/374, 8-15=-1109/223, 6-14=-749/165

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-11-11, Interior(1) 3-11-11 to 15-4-15, Exterior(2R) 15-4-15 to 21-0-6, Interior(1) 21-0-6 to 24-1-1, Exterior(2R) 24-1-1 to 29-8-8, Interior(1) 29-8-8 to 39-9-0 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) Refer to girder(s) for truss to truss connections.
- 6) 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.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 15 except (jt=lb) 1=210, 14=391.
- 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.



May 25, 2021

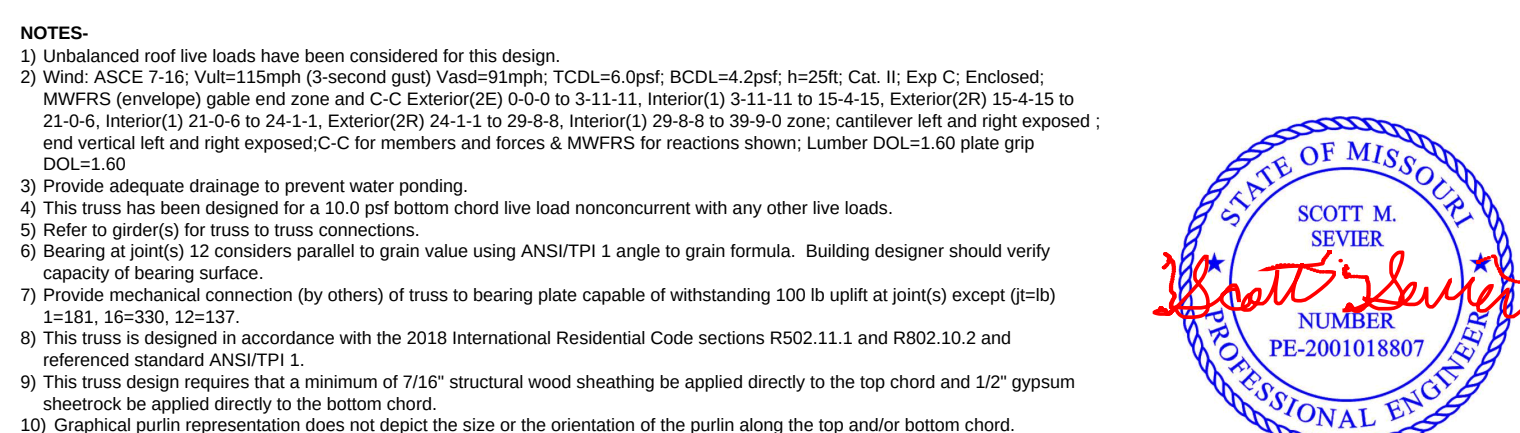
 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED WINTER REFERENCE PAGE MH-1413 (Rev. 3/29/2020) BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:49 2021 Page 1
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May 25, 2021

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271652
2838622	B5	Piggyback Base	1	1		

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

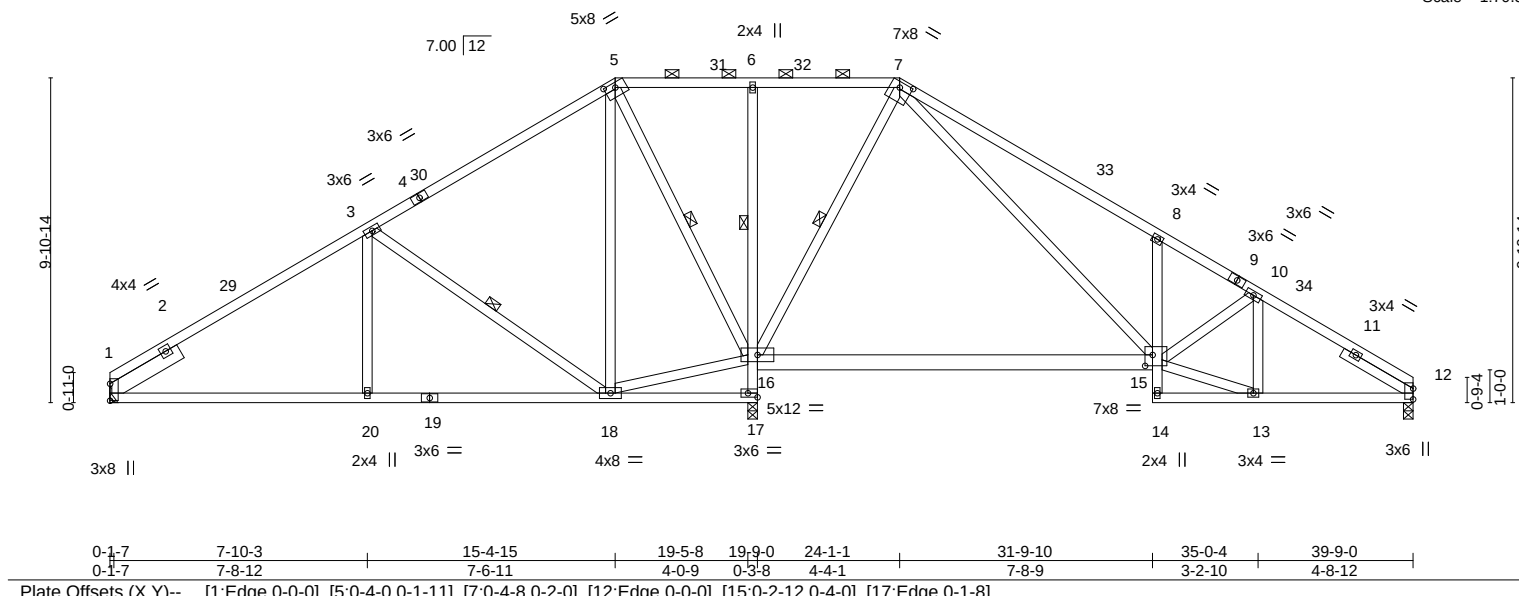
8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:51 2021 Page 1

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Job Reference (optional)

7-10-3	15-4-15	19-9-0	24-1-1	31-9-10	35-0-4	39-9-0
7-10-3	7-6-11	4-4-1	4-4-1	7-8-9	3-2-10	4-8-12

Scale = 1:70.3



0-1-7	7-10-3	15-4-15	19-5-8	19-9-0	24-1-1	31-9-10	35-0-4	39-9-0
0-1-7	7-8-12	7-6-11	4-0-9	0-3-8	4-4-1	7-8-9	3-2-10	4-8-12

Plate Offsets (X,Y)-- [1:Edge,0-0-0], [5:0-4-0,0-1-11], [7:0-4-8,0-2-0], [12:Edge,0-0-0], [15:0-2-12,0-4-0], [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 0.56	Vert(LL)	-0.17 15-16	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.57	Vert(CT)	-0.35 15-16	>694	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.90	Horz(CT)	-0.02 1	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 203 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except
BOT CHORD 2x4 SPF No.2 *Except*	2-0-0 oc purlins (10-0-0 max.): 5-7.
15-16: 2x6 SPF No.2	BOT CHORD Rigid ceiling directly applied. Except:
WEBS 2x4 SPF No.2	1 Row at midpt 6-16
SLIDER Left 2x6 SPF No.2 -t 2-6-0, Right 2x4 SPF No.2 -t 2-6-0	1 Row at midpt 3-18, 5-16, 7-16

REACTIONS. (size) 1=Mechanical, 17=0-3-8, 12=0-3-8
Max Horz 17=-239(LC 8)
Max Uplift 1=-197(LC 12), 17=-254(LC 13), 12=-174(LC 13)
Max Grav 1=750(LC 25), 17=2201(LC 1), 12=720(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-807/289, 3-5=-296/241, 5-6=0/449, 6-7=0/446, 7-8=-1135/479, 8-10=-947/271, 10-12=-877/258
BOT CHORD 1-20=-139/697, 18-20=-139/697, 17-18=-370/154, 16-17=-2168/267, 6-16=-295/146, 8-15=-512/290, 12-13=-146/758
WEBS 3-20=0/318, 3-18=-737/290, 5-18=-109/494, 16-18=-115/329, 5-16=-996/194, 7-16=-961/279, 7-15=-382/1225, 13-15=-54/828

- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-11-11, Interior(1) 3-11-11 to 15-4-15, Exterior(2R) 15-4-15 to 21-0-6, Interior(1) 21-0-6 to 24-1-1, Exterior(2R) 24-1-1 to 29-8-8, Interior(1) 29-8-8 to 39-9-0 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.
 - The Fabrication Tolerance at joint 7 = 8%
 - 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=197, 17=254, 12=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.



May 25, 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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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/85 Hawthorne	146271653
2838622	B6	Piggyback Base	3	1	Job Reference (optional)	

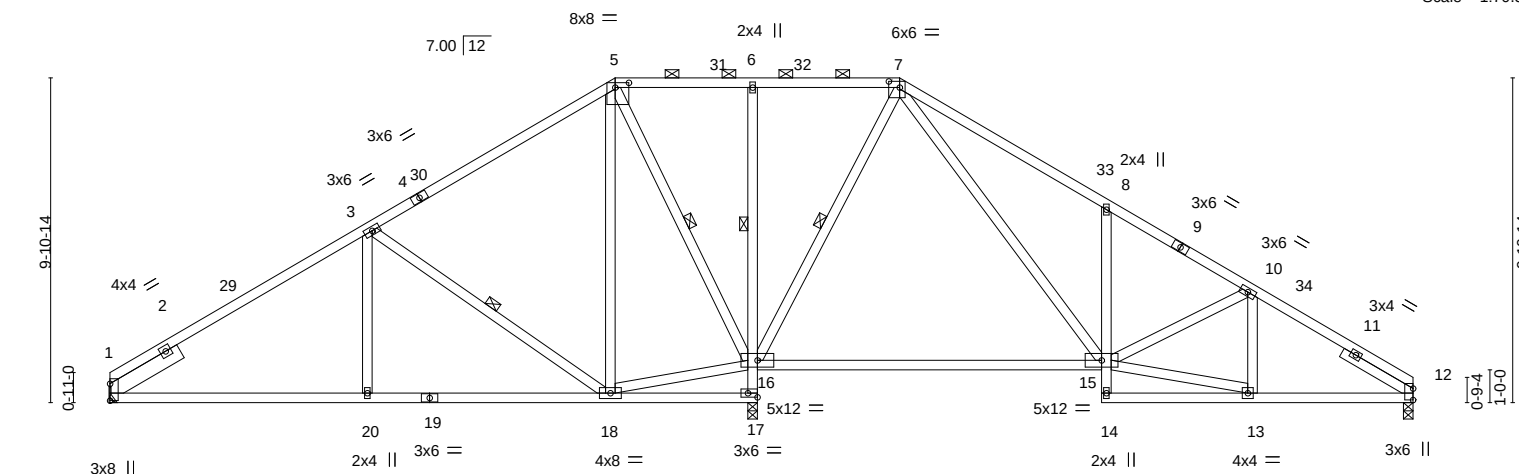
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:53 2021 Page 1

ID:sZNIc9?G94Kxezjx5JOhRWzDFsh-M?3c5Fp7K7LDMDUUMMZrglZ1U122oZu6CIPRU_zDE_4

7-10-3	15-4-15	19-9-0	24-1-1	30-3-0	34-10-4	39-9-0
7-10-3	7-6-11	4-4-1	4-4-1	6-1-15	4-7-4	4-10-12

Scale = 1:70.3



0-1-2	7-10-3	15-4-15	19-5-8	19-9-0	24-1-1	30-3-0	34-10-4	39-9-0
0-1-2	7-9-1	7-6-11	4-0-9	0-3-8	4-4-1	6-1-15	4-7-4	4-10-12

Plate Offsets (X,Y)-- [1:Edge,0-0-0], [5:0-5-0,0-1-12], [7:0-4-0,0-2-4], [12:Edge,0-0-0], [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 0.56	Vert(LL)	-0.31 15-16	>774	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.66	Vert(CT)	-0.63 15-16	>382	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.66	Horz(CT)	-0.02 1	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 199 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
SLIDER Left 2x6 SPF No.2 -t 2-6-0, Right 2x4 SPF No.2 -t 2-6-0

BRACING-
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (10-0-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied. Except:
1 Row at midpt 6-16
1 Row at midpt 3-18, 5-16, 7-16

REACTIONS. (size) 1=Mechanical, 17=0-3-8, 12=0-3-8
Max Horz 17=-239(LC 8)
Max Uplift 1=-199(LC 12), 17=-241(LC 13), 12=-181(LC 13)
Max Grav 1=758(LC 25), 17=2171(LC 1), 12=735(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-821/291, 3-5=-310/243, 5-6=0/413, 6-7=0/409, 7-8=-895/427, 8-10=-818/260,
10-12=-913/271
BOT CHORD 1-20=-141/709, 18-20=-141/709, 17-18=-354/163, 16-17=-2137/254, 6-16=-313/147,
8-15=-442/251, 12-13=-159/789
WEBS 3-20=0/317, 3-18=-736/290, 5-18=-108/496, 16-18=-115/318, 5-16=-977/190,
7-16=-943/253, 13-15=-96/850, 7-15=-329/1056

- 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-11-11, Interior(1) 3-11-11 to 15-4-15, Exterior(2R) 15-4-15 to 21-0-6, Interior(1) 21-0-6 to 24-1-1, Exterior(2R) 24-1-1 to 29-8-8, Interior(1) 29-8-8 to 39-9-0 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.
 - Refer to girder(s) for truss to truss connections.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=199, 17=241, 12=181.
 - 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.



May 25, 2021

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271654
2838622	C1	Common Supported Gable	1	1	Job Reference (optional)	

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:55 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhrWzDFsh-IOBMWxqNrlxbWdsUncJmjeVxqtLGd9Pf0uYYszDE_2

0-10-8 10-4-12 20-9-8 21-8-0
0-10-8 10-4-12 10-4-12 0-10-8

Scale = 1:36.4

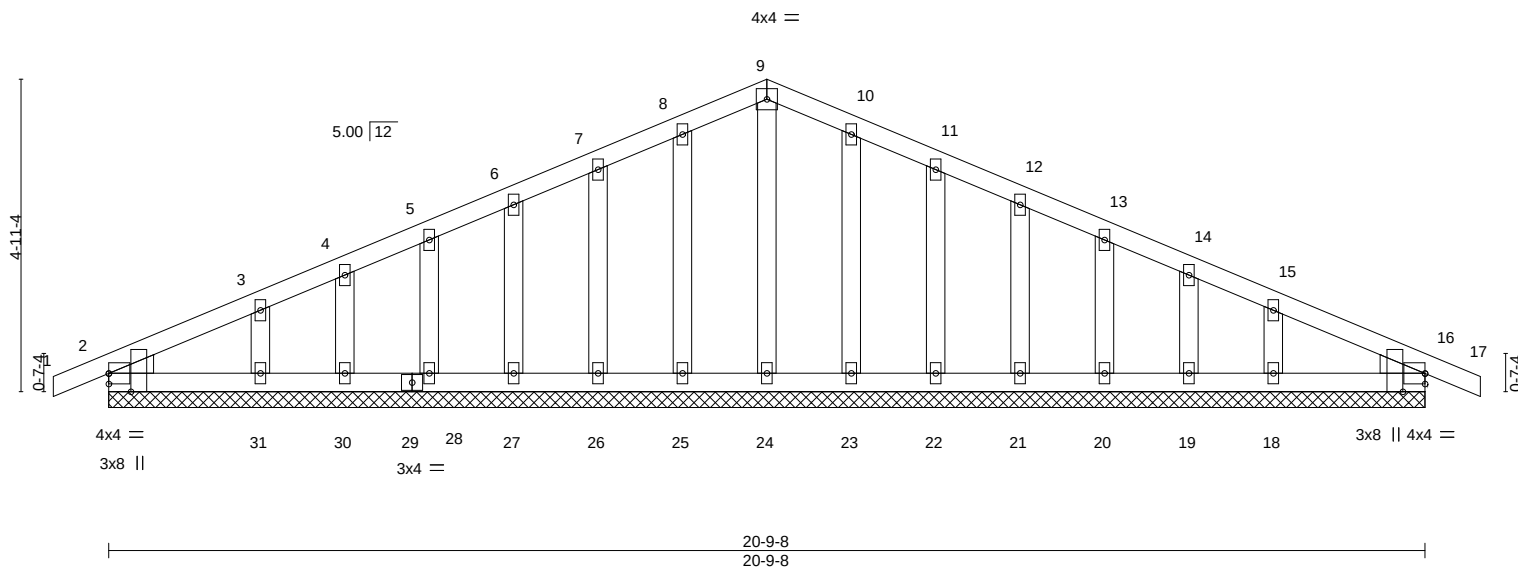


Plate Offsets (X,Y)--		[2:0-3-7,Edge], [16:0-3-7,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 25.0	Plate Grip DOL	1.15	TC 0.05
TCDL 10.0	Lumber DOL	1.15	BC 0.03
BCLL 0.0	Rep Stress Incr	YES	WB 0.03
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-S
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) 0.00 16 n/r 120
			Vert(CT) 0.00 16 n/r 120
			Horz(CT) 0.00 16 n/a n/a
			PLATES
			MT20
			GRIP
			197/144
			Weight: 92 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 20-9-8.
(lb) - Max Horz 2=83(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 2, 25, 26, 27, 28, 30, 31, 23, 22, 21, 20, 19, 18, 16
Max Grav All reactions 250 lb or less at joint(s) 2, 24, 25, 26, 27, 28, 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-10-8 to 2-4-12, Exterior(2N) 2-4-12 to 10-4-12, Corner(3R) 10-4-12 to 13-4-12, Exterior(2N) 13-4-12 to 21-8-0 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
- 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, 26, 27, 28, 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.



May 25, 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/85 Hawthorne	146271655
2838622	C2	Common	4	1		

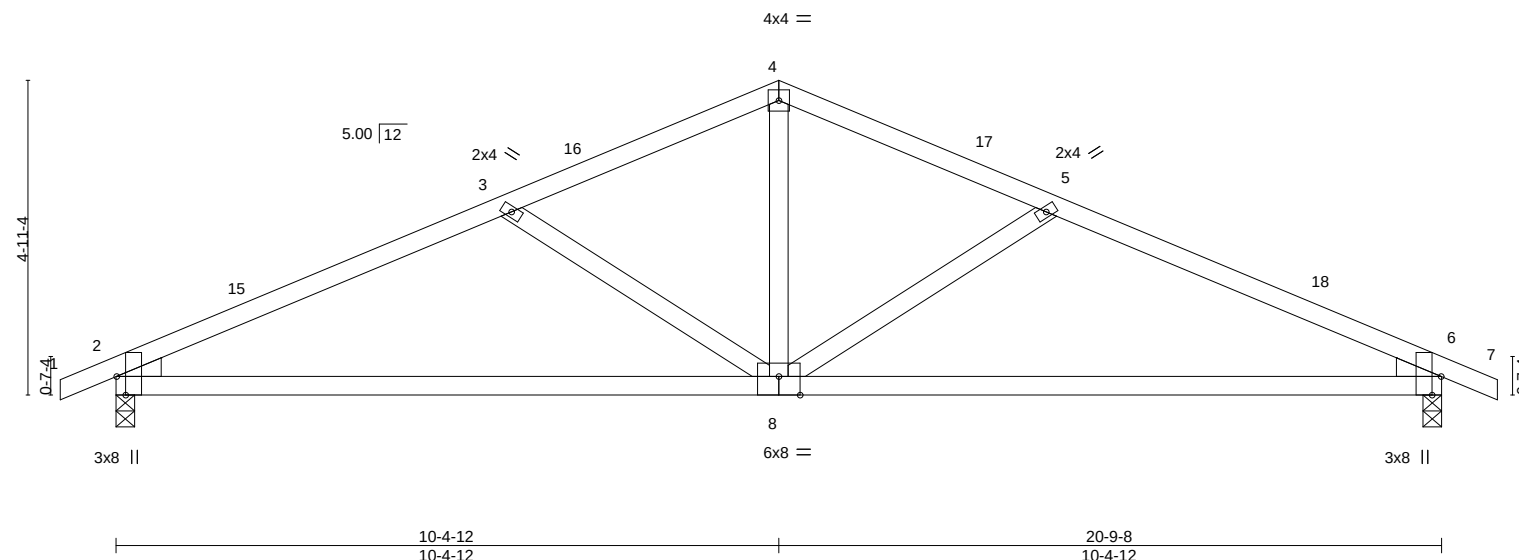
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:56 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhRWzDFsh-malljHr?c2joDgC31V7Y1xBcyE1n?1oYugd55JzDE_1

-0-10-8	6-2-7	10-4-12	14-7-1	20-9-8	21-8-0
0-10-8	6-2-7	4-2-5	4-2-5	6-2-7	0-10-8

Scale = 1:36.1



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.15	MT20	197/144		
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.32				
BCLL	0.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.04				
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							

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

BRACING-

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

REACTIONS.

(size) 2=0-3-8, 6=0-3-8
 Max Horz 2=83(LC 16)
 Max Uplift 2=-178(LC 12), 6=-178(LC 13)
 Max Grav 2=997(LC 1), 6=997(LC 1)

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

TOP CHORD 2-3=-1622/390, 3-4=-1251/312, 4-5=-1251/312, 5-6=-1622/390
 BOT CHORD 2-8=-274/1433, 6-8=-281/1433
 WEBS 4-8=-108/643, 5-8=-434/205, 3-8=-434/205

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=25ft; 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 10-4-12, Exterior(2R) 10-4-12 to 13-4-12, Interior(1) 13-4-12 to 21-8-0 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
- 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) 2=178, 6=178.
- 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.



May 25,2021

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16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	I46271656
2838622	C3	Common Supported Gable	1	1	Job Reference (optional)	

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:57 2021 Page 1

ID:sZNiC9?G94Kxejx5JOhRWzDFsh-Eml7wdseNMfrqnFbCenr8jrNeZukWoh7KNedlzDE_0

0-10-8 10-0-0 20-0-0 20-10-8
0-10-8 10-0-0 10-0-0 0-10-8

4x4 =

Scale = 1:42.0

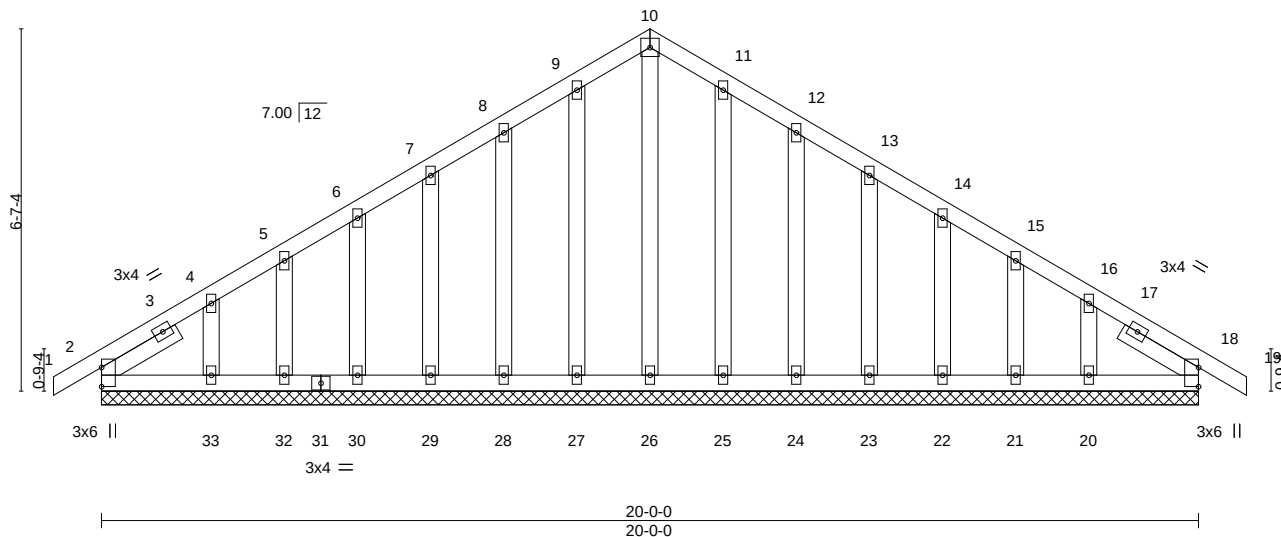


Plate Offsets (X,Y)--		[2:Edge,0-0-0], [18:Edge,0-0-0]							
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES GRIP	
TCLL	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	-0.00 18 n/r 120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00 18 n/r 120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00 18 n/a n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S				Weight: 108 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 1-7-7, Right 2x4 SPF No.2 -t 1-7-7

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 20-0-0.
(lb) - Max Horz 2=166(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 27, 28, 29, 30, 32, 25, 24, 23, 22, 21, 20, 18 except 33=102(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 2, 26, 27, 28, 29, 30, 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-10-8 to 2-0-0, Exterior(2N) 2-0-0 to 10-0-0, Corner(3R) 10-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 20-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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, 28, 29, 30, 32, 25, 24, 23, 22, 21, 20, 18 except (jt=lb) 33=102.
- 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.



May 25, 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 2838622	Truss C4	Truss Type Common	Qty 1	Ply 1	Summit/85 Hawthorne 146271657
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:51:59 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhRWzDFsh-A9QtLJtuvz5N48xdjdgFwZp83S5vCOR_aesliezDE__

0-10-8 5-1-12 10-0-0 14-10-4 20-0-0 20-10-8
0-10-8 5-1-12 4-10-4 4-10-4 5-1-12 0-10-8

4x6 =

Scale = 1:41.1

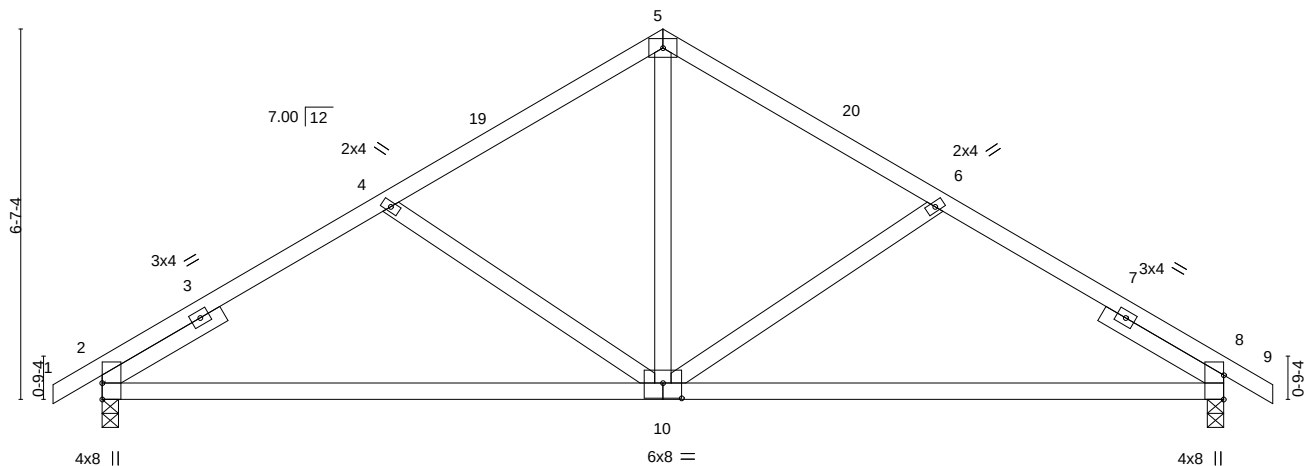


Plate Offsets (X,Y)--	[2:Edge,0-0-0], [8:Edge,0-0-0], [10:0-4-0,0-3-4]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.23	Vert(LL)	-0.13 10-17	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.70	Vert(CT)	-0.27 10-17	>902	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.21	Horz(CT)	0.03 8	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 77 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) 2=0-3-8, 8=0-3-8
Max Horz 2=-166(LC 10)
Max Uplift 2=-163(LC 12), 8=-163(LC 13)
Max Grav 2=961(LC 1), 8=961(LC 1)

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

TOP CHORD 2-4=-1105/226, 4-5=-960/200, 5-6=-960/200, 6-8=-1105/226
BOT CHORD 2-10=-212/1001, 8-10=-113/1001
WEBS 5-10=-67/536, 6-10=-331/202, 4-10=-331/202

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=25ft; 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 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior(1) 13-0-0 to 20-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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=163, 8=163.
- 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.



May 25, 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



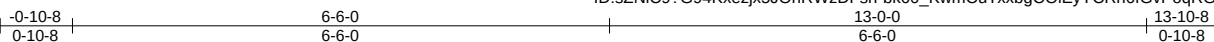
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 2838622	Truss C5	Truss Type Common Supported Gable	Qty 1	Ply 1	Summit/85 Hawthorne 146271658
Job Reference (optional)					

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:02 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhrWzDFsh-bk60_KwmCuTxxbgCOIEyYCRh6fGvPoqRGb4OHyzDDzx



4x4 =

Scale = 1:27.9

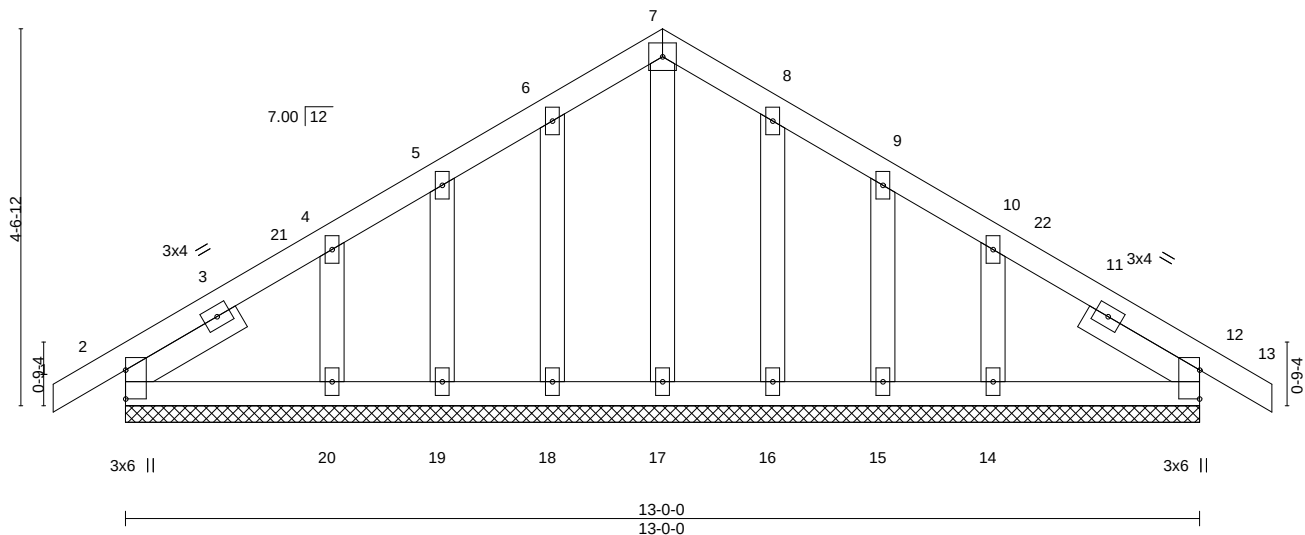


Plate Offsets (X,Y)-- [2:Edge,0-0-0], [12:Edge,0-0-0]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00 12 n/r	120	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00 12 n/r	120	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00 12 n/a	n/a	
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S					
				Weight: 60 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 1-7-5, Right 2x4 SPF No.2 -t 1-7-5

BRACING-

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

REACTIONS.

All bearings 13-0-0.
(lb) - Max Horz 2=-112(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 18, 19, 20, 16, 15, 14
Max Grav All reactions 250 lb or less at joint(s) 2, 12, 17, 18, 19, 20, 16, 15, 14

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=25ft; 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 6-6-0, Corner(3R) 6-6-0 to 9-6-0, Exterior(2N) 9-6-0 to 13-10-8 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.
- 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, 12, 18, 19, 20, 16, 15, 14.
- 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.



May 25, 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



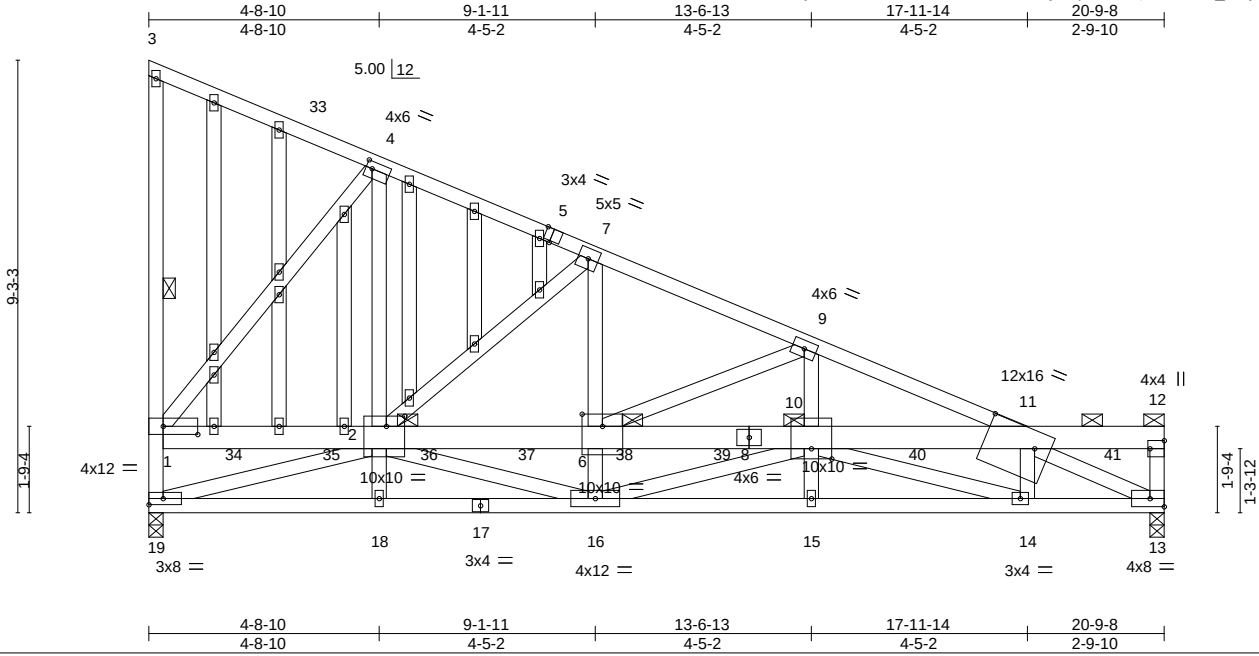
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271659
2838622	G1	GABLE	1	2	Job Reference (optional)	

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:04 2021 Page 1

ID:sZNIc9?G94Kxezjx5JOhRWzDFsh-X7DmO0x1kWjfAvpbVAGQddWwvTr_tXljkvZVMrzDDzv



Scale = 1:47.2

Plate Offsets (X,Y)--		[1:0-8-8,0-2-0], [2:0-4-8,0-2-8], [4:0-1-8,0-1-12], [5:0-1-11,Edge], [6:0-5-0,0-3-0], [10:0-5-0,0-2-8], [11:1-0-4,0-4-4], [12: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)	-0.02	15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC 0.51	Vert(CT)	-0.20	15	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB 0.74	Horz(CT)	0.06	13	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS						Weight: 347 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
8-12: 2x6 SPF 2100F 1.8E
BOT CHORD 2x4 SP 2400F 2.0E *Except*
1-8: 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-12.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-19
JOINTS 1 Brace at Jt(s): 12, 6, 10, 2

REACTIONS.

(size) 19=0-3-8, 13=0-3-8
Max Horz 19=381(LC 8)
Max Grav 19=4572(LC 1), 13=4925(LC 1)

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

TOP CHORD 1-19=-3672/0, 4-7=-2655/0, 7-9=-4804/0, 9-11=-7533/0, 1-2=0/2077, 2-6=-1594/0, 6-10=0/901, 10-11=-1066/0, 11-12=-375/0, 12-13=-797/0
BOT CHORD 18-19=0/3036, 16-18=0/3037, 15-16=0/6860, 14-15=0/6860, 13-14=0/7930
WEBS 1-4=-3777/0, 2-4=0/3580, 2-7=-2597/0, 6-7=0/2249, 6-9=-2719/0, 9-10=0/1989, 6-16=-537/0, 2-19=-2805/0, 10-16=-928/0, 2-16=0/3107, 11-14=-423/0, 10-14=0/1123, 11-13=-8536/0

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 0-5-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc, 2x4 - 1 row at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 13-11 2x4 - 1 row at 0-7-0 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.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; 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 20-7-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.



May 25, 2021

Continued on page 2

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne
2838622	G1	GABLE	1	2	146271659

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:04 2021 Page 2
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NOTES-

- 11) 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.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) . The design/selection of such connection device(s) is the responsibility of others.
- 14) Studding applied to ply: 1(Front)

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 3-11=-70, 11-12=-70, 13-19=-20
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 2) Dead + 0.75 Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 3-11=-58, 11-12=-58, 13-19=-20
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 3-11=-20, 11-12=-20, 13-19=-40
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-33=30, 11-33=20, 11-12=20, 13-19=-8
Horz: 3-19=20, 3-33=42, 11-33=32, 12-13=35
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=20, 11-12=30, 13-19=-8
Horz: 3-19=-35, 3-11=32, 12-13=-20
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-36, 11-12=-36, 13-19=-20
Horz: 3-19=-23, 3-11=-16, 12-13=-32
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-36, 11-12=-36, 13-19=-20
Horz: 3-19=32, 3-11=-16, 12-13=23
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=15, 11-12=11, 13-19=-8
Horz: 3-19=17, 3-11=27, 12-13=22
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=17, 11-12=29, 13-19=-8
Horz: 3-19=-22, 3-11=29, 12-13=-17
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-5, 11-12=-9, 13-19=-20
Horz: 3-19=28, 3-11=15, 12-13=10
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-2, 11-12=9, 13-19=-20
Horz: 3-19=-10, 3-11=18, 12-13=-28
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=11, 11-12=11, 13-19=-8
Horz: 3-19=14, 3-11=23, 12-13=20
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)

Continued on page 3

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Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne
2838622	G1	GABLE	1	2	146271659
Builders FirstSource (Valley Center), Valley Center, KS - 67147,					Job Reference (optional)

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:04 2021 Page 3
ID:sZNiC9?G94Kxezjx5JOhrWzDFsh-X7DmO0x1kWjfAvpbVAGQddWwvTr_tXLjkvZVMrzDDzv

LOAD CASE(S) Standard

- 13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=29, 11-12=29, 13-19=-8
Horz: 3-19=-20, 3-11=41, 12-13=-14
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=6, 11-12=6, 13-19=-8
Horz: 3-19=7, 3-11=18, 12-13=15
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=16, 11-12=16, 13-19=-8
Horz: 3-19=-15, 3-11=28, 12-13=-7
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-9, 11-12=-9, 13-19=-20
Horz: 3-19=26, 3-11=11, 12-13=8
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=9, 11-12=9, 13-19=-20
Horz: 3-19=-8, 3-11=29, 12-13=-26
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 3-11=-20, 11-12=-20, 13-19=-20
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 19) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-46, 11-12=-49, 13-19=-20
Horz: 3-19=21, 3-11=11, 12-13=7
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 20) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-44, 11-12=-36, 13-19=-20
Horz: 3-19=-7, 3-11=13, 12-13=-21
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 21) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-49, 11-12=-49, 13-19=-20
Horz: 3-19=19, 3-11=9, 12-13=6
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 22) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-36, 11-12=-36, 13-19=-20
Horz: 3-19=-6, 3-11=22, 12-13=-19
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 23) Dead + 0.6 C-C Wind Min. Down: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=-28, 11-12=-28, 13-19=-8
Horz: 3-19=-16, 3-11=-16, 12-13=-16
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(F)
- 24) Dead + 0.6 C-C Wind Min. Upward: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 3-11=4, 11-12=4, 13-19=-8
Horz: 3-19=16, 3-11=16, 12-13=16
Concentrated Loads (lb)
Vert: 10=-800(F) 11=-800(F) 34=-760(F) 35=-760(F) 36=-760(F) 37=-750(F) 38=-711(F) 39=-711(F) 40=-800(F) 41=-800(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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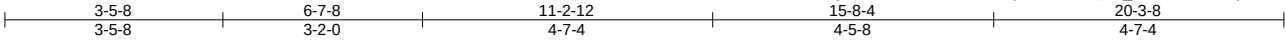
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271660
2838622	G2	Roof Special Girder	1	2	Job Reference (optional)	

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:06 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhRWzDFsh-TVLXpizHG7zNQCz_dbhui2bK8GZqLM?0BD2cQkzDDzt



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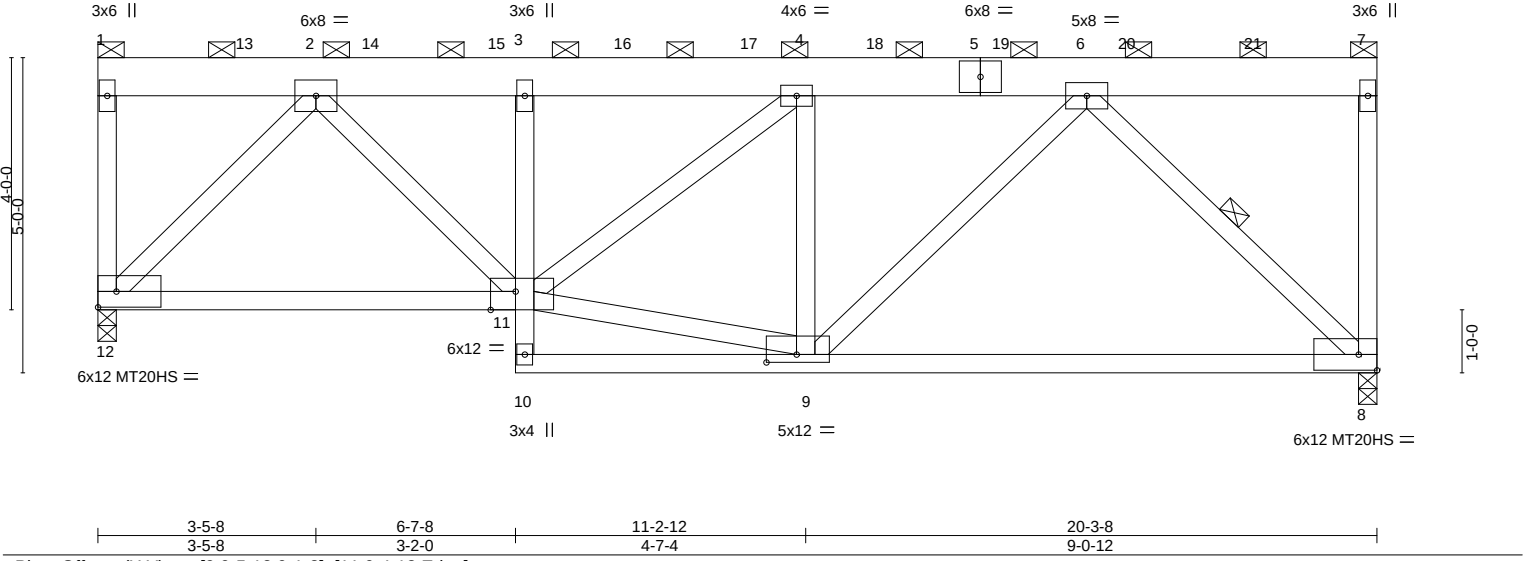


Plate Offsets (X,Y)--		[9:0-5-12,0-1-8], [11:0-4-12,Edge]					
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d
TCLL 25.0	Plate Grip DOL	1.15	TC 0.24	Vert(LL)	-0.09	3	>999
TCDL 10.0	Lumber DOL	1.15	BC 0.36	Vert(CT)	-0.19	8-9	>999
BCLL 0.0	Rep Stress Incr	NO	WB 0.99	Horz(CT)	0.08	8	n/a
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MS				
				PLATES			GRIP
				MT20			197/144
				MT20HS			148/108
				Weight: 289 lb			FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 SP 2400F 2.0E	TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-7, except end verticals.
BOT CHORD 2x4 SP 2400F 2.0E *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
3-10: 2x4 SPF No.2	WEBS 1 Row at midpt 6-8
WEBS 2x4 SPF No.2	

REACTIONS. (size) 12=0-3-8, 8=0-3-8
Max Horz 12=164(LC 24)
Max Uplift 12=-1139(LC 4), 8=-1223(LC 5)
Max Grav 12=7103(LC 1), 8=7097(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-12=-1369/226, 2-3=-8868/1465, 3-4=-8800/1456, 4-6=-8214/1383, 7-8=-943/204
BOT CHORD 11-12=-970/5305, 3-11=-2389/431, 9-10=-118/460, 8-9=-1074/5979
WEBS 2-12=-7714/1296, 2-11=-859/5225, 9-11=-1358/8032, 4-11=-128/633, 4-9=-3950/733,
6-9=-492/3234, 6-8=-8485/1485

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row 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.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=1139, 8=1223.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1009 lb down and 154 lb up at 0-1-12, 981 lb down and 153 lb up at 2-4-4, 981 lb down and 153 lb up at 4-4-4, 979 lb down and 152 lb up at 6-4-4, 1404 lb down and 252 lb up at 8-4-4, 1416 lb down and 246 lb up at 10-4-4, 1416 lb down and 246 lb up at 12-4-4, 1404 lb down and 252 lb up at 14-4-4, 1404 lb down and 252 lb up at 16-4-4, and 1404 lb down and 252 lb up at 18-4-4, and 8 lb down and 27 lb up at 20-1-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.



May 25, 2021

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne
2838622	G2	Roof Special Girder	1	2	I46271660
					Job Reference (optional)

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

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:06 2021 Page 2
ID:sZNiC9?G94Kxezjx5JOhRWzDFsh-TVLXpizHG7zNQCz_dblui2bK8GZqLM?0BD2cQkzDDzt

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
 - Uniform Loads (plf)
 - Vert: 1-7=-70, 11-12=-20, 8-10=-20
 - Concentrated Loads (lb)
 - Vert: 1=-1009 7=-1 13=-981 14=-981 15=-979 16=-1404 17=-1416 18=-1416 19=-1404 20=-1404 21=-1404



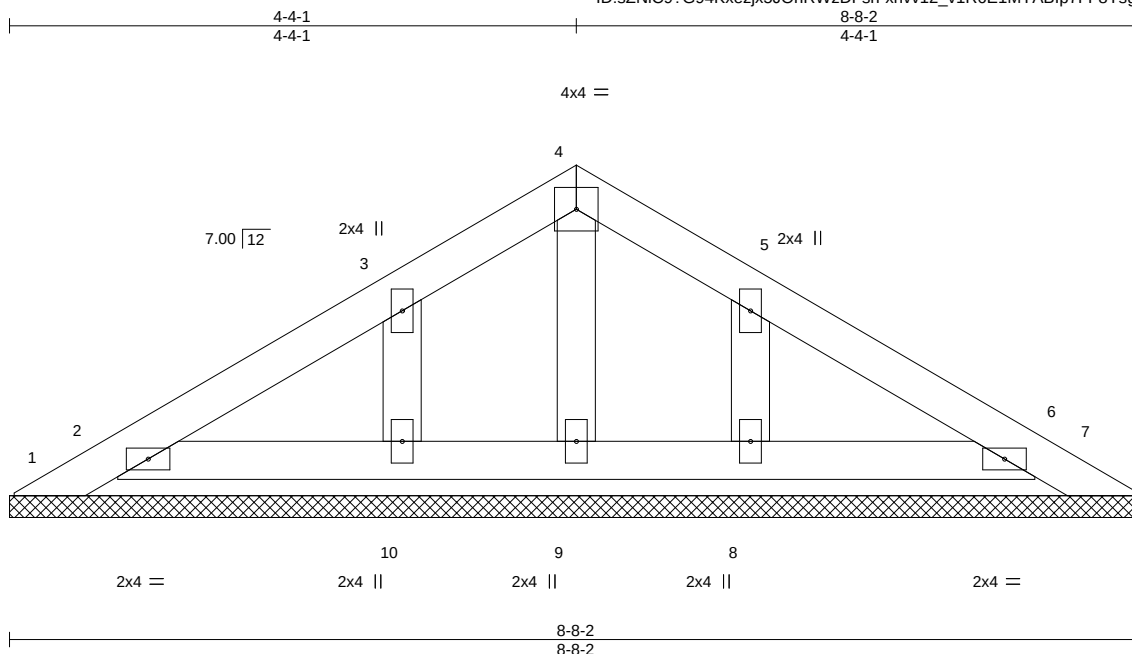
Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271661
2838622	PB1	GABLE	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:07 2021 Page 1

ID:sZNIC9?G94Kxezjx5JOhrWzDFsh-xhvw12_v1R6E1MYABlp7FF8YsgzA42IAQt9zAzDDzs



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 0.05	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	6	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
OTHERS 2x4 SPF No.2

BRACING-

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

REACTIONS.

All bearings 8-8-2.
(lb) - Max Horz 1=-61(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 2, 6, 10, 8
Max Grav All reactions 250 lb or less at joint(s) 1, 7, 2, 6, 9, 10, 8

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior(1) 3-3-11 to 4-4-1, Exterior(2R) 4-4-1 to 7-4-1, Interior(1) 7-4-1 to 8-4-7 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.
- 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) 1, 7, 2, 6, 10, 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



May 25, 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

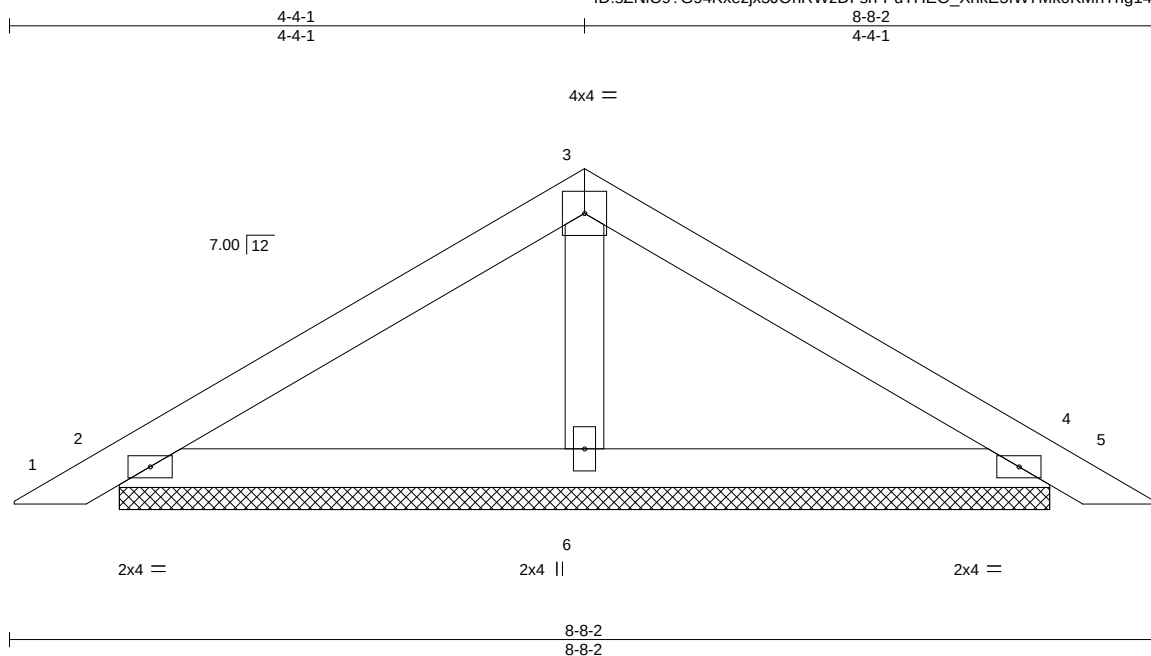
Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271662
2838622	PB3	Piggyback	9	1	Job Reference (optional)	

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:08 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOHRWzDFsh-PuTHEO_XnkE5fW7Mk0KMnThg14IfpVRJfXXjVczDDZr



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 0.22	Vert(LL)	0.01	5	n/r	120	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	0.01	5	n/r	120		
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: 21 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) 2=7-0-4, 4=7-0-4, 6=7-0-4
Max Horz 2=-61(LC 10)
Max Uplift 2=-56(LC 12), 4=-64(LC 13), 6=-15(LC 12)
Max Grav 2=205(LC 1), 4=205(LC 1), 6=295(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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior(1) 3-3-11 to 4-4-1, Exterior(2R) 4-4-1 to 7-4-1, Interior(1) 7-4-1 to 8-4-7 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) 2, 4, 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



May 25, 2021

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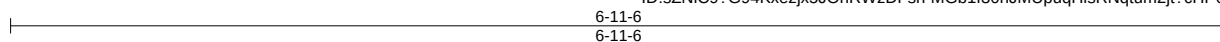
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	146271663
2838622	PB4	GABLE	2	1	Job Reference (optional)	

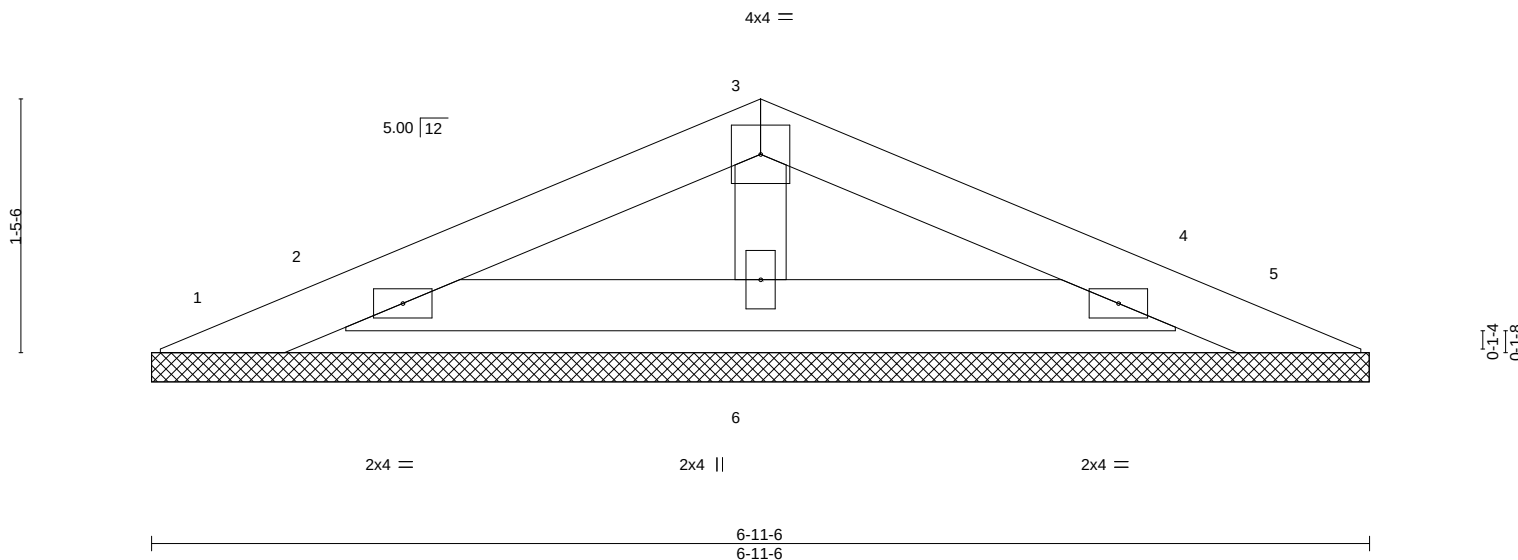
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:10 2021 Page 1

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Scale = 1:13.1



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 15 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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

All bearings 6-11-6.
(lb) - Max Horz 1=23(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5, 2, 4, 6
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 2, 4, 6

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=25ft; 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
- 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.
- 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) 1, 5, 2, 4, 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



May 25, 2021

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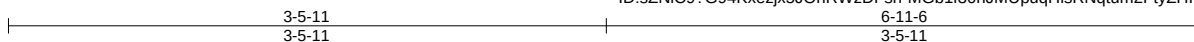
Job	Truss	Truss Type	Qty	Ply	Summit/85 Hawthorne	I46271664
2838622	PB5	Piggyback	19	1		

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:10 2021 Page 1

ID:sZNiC9?G94Kxejx5JOhrWzDFsh-MGb1f30nJMUpuqHlsRNqtum2FtyZHPNc6r0pZVzDDzp



Scale = 1:13.4

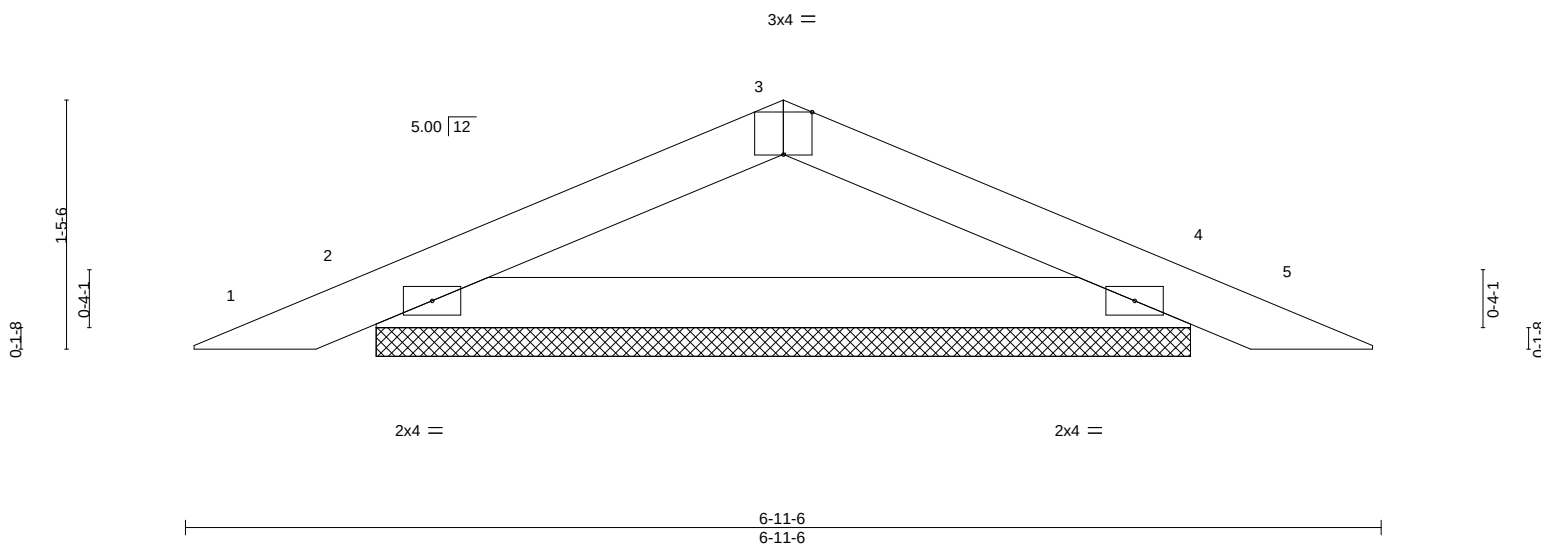


Plate Offsets (X,Y)--		[3:0-2-0,Edge]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc)		l/defl L/d		PLATES GRIP	
TCLL	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	0.00	5	n/r	120	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	0.00	5	n/r	120	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a	
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							
				Weight: 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) 2=4-8-13, 4=4-8-13
Max Horz 2=-23(LC 13)
Max Uplift 2=-53(LC 12), 4=-53(LC 13)
Max Grav 2=262(LC 1), 4=262(LC 1)

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

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; 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) 2, 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



May 25, 2021

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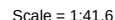
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:12 2021 Page 1
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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.

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCdL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-8-12 to 3-8-12, Exterior(2N) 3-8-12 to 17-2-13 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
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable studs spaced at 1-4-0 oc.
- 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) 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.
- 7) Non Standard bearing condition. Review required.
- 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.

May 25, 2021

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

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

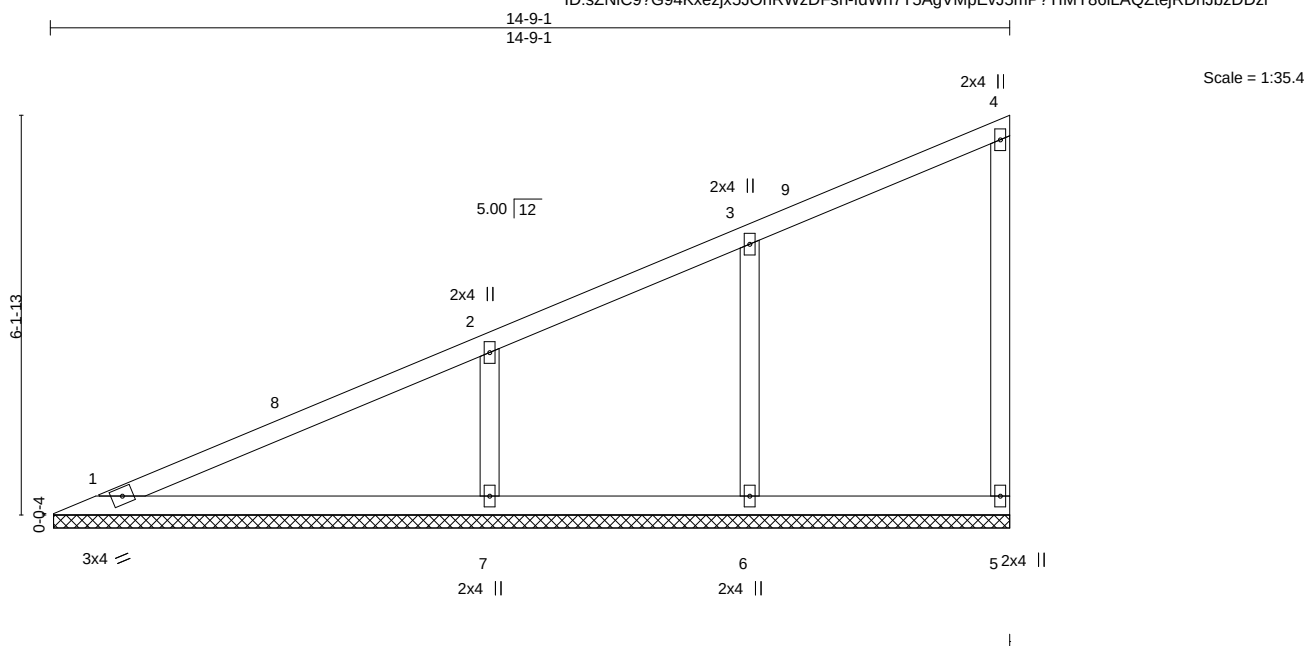
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 2838622	Truss V2	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	I46271666
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Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:17 2021 Page 1

ID:sZNiC9?G94Kxejx5JOhrWzDFsh-fdWh7T5AgVMpEvJ5mP?TfMY86iLAQZtejRDhJbzDDzi



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)	n/a	-	n/a	999	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.24	Vert(CT)	n/a	-	n/a	999	197/144
BCLL 0.0	Rep Stress Incr	YES	WB 0.08	Horz(CT)	-0.00	5	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						
								Weight: 47 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.

All bearings 14-8-8.

(lb) - Max Horz 1=253(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) 5, 6 except 7=169(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=315(LC 1), 7=552(LC 1)

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

TOP CHORD 1-2=-307/190

WEBS 3-6=-252/166, 2-7=-413/241

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 14-7-5 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) 5, 6 except (jt=lb) 7=169.
- 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.



May 25, 2021

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

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

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



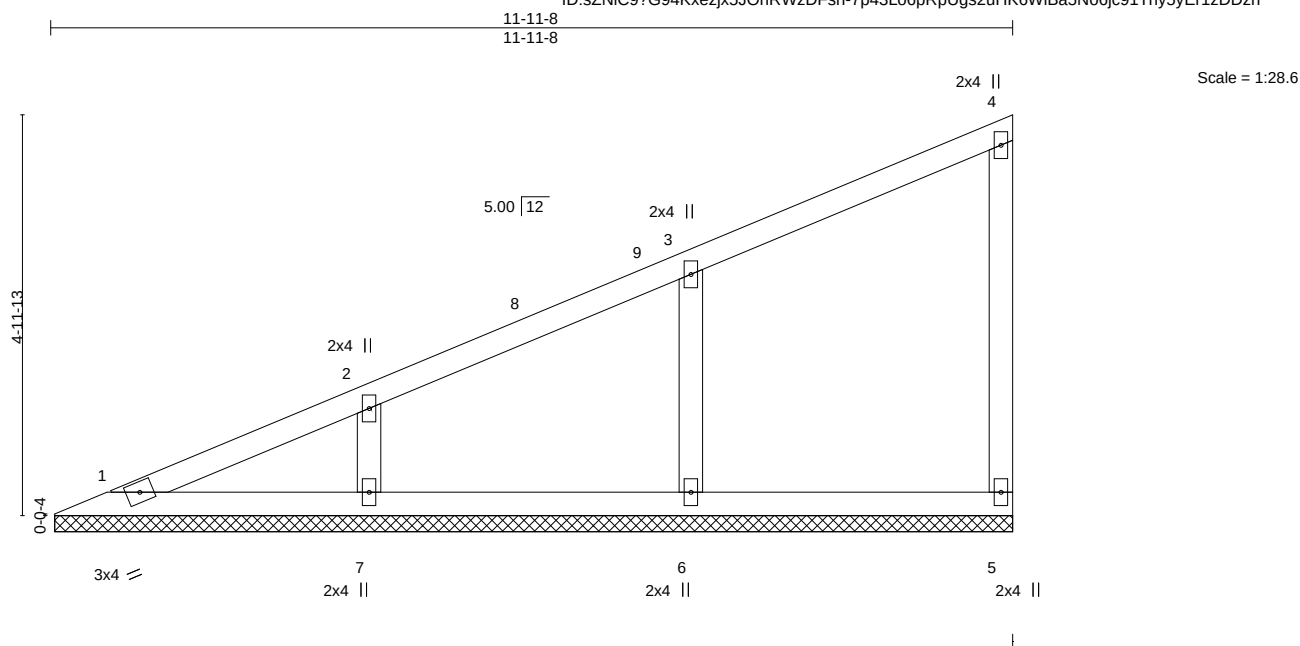
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 2838622	Truss V3	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	146271667
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Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:18 2021 Page 1

ID:SZNIC9?G94Kxezjx5JOhrWzDFsh-7p43Lo6pRpUgs2uHK6WiBa5No6jc91Tny5yEr1zDDzh



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.20	Vert(LL)	n/a	-	n/a	999	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a	999	197/144
BCLL 0.0	Rep Stress Incr	YES	WB 0.06	Horz(CT)	-0.00	5	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						
								Weight: 37 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.

All bearings 11-10-14.

(lb) - Max Horz 1=202(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) 5, 6 except 7=106(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=386(LC 1), 7=354(LC 1)

FORCES.

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

TOP CHORD 1-2=-258/163

WEBS 3-6=-302/200, 2-7=-270/163

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-11-8, Interior(1) 3-11-8 to 11-9-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) 5, 6 except (jt=lb) 7=106.
- 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.



May 25, 2021

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

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

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

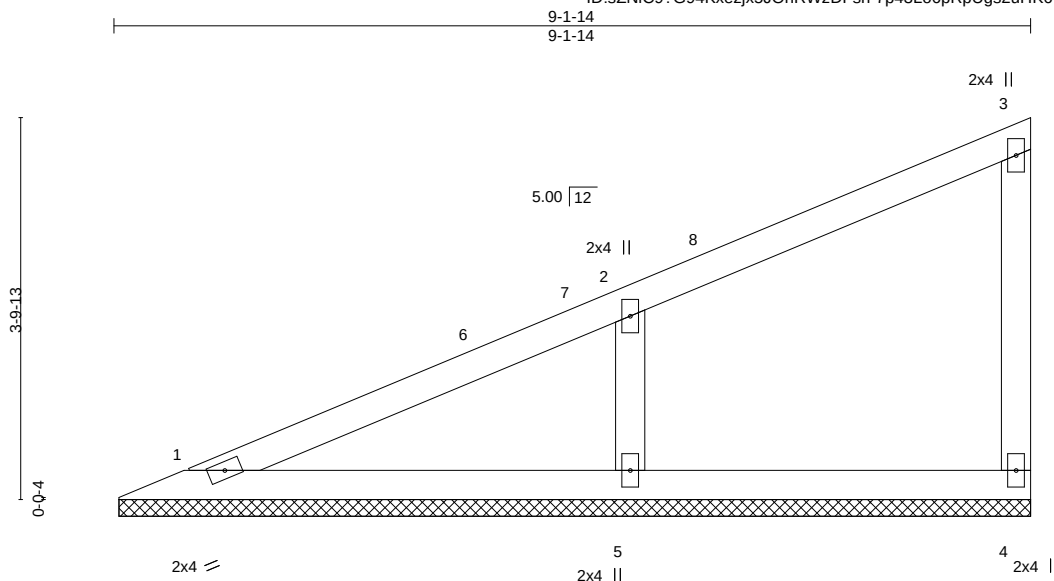
Job 2838622	Truss V4	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	I46271668
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:18 2021 Page 1

ID:sZNIc9?G94Kxezjx5JOhRWzDFsh-7p43Lo6pRpUgs2uHK6WiBa5Mt6i491dny5yEr1zDDzh



Scale = 1:23.0

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 0.26	Vert(LL)	n/a	-	n/a	999	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.14	Vert(CT)	n/a	-	n/a	999	197/144
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-S						
									Weight: 26 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=9-1-5, 4=9-1-5, 5=9-1-5
Max Horz 1=151(LC 9)
Max Uplift 1=-8(LC 12), 4=-28(LC 9), 5=-120(LC 12)
Max Grav 1=159(LC 1), 4=128(LC 1), 5=456(LC 1)

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

WEBS 2-5=-347/243

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 9-0-2 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
- 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, 4 except (jt=lb) 5=120.
- 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.



May 25, 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

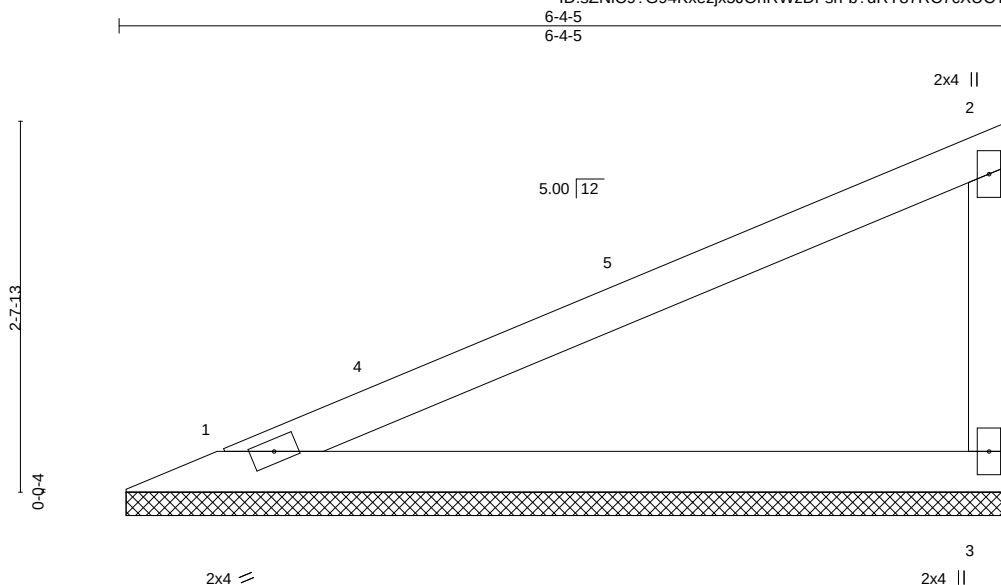
Job 2838622	Truss V5	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	I46271669
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:19 2021 Page 1

ID:sZnIC9?G94Kxezjx5JOhRWzDFsh-b?dRY87RC7cXUCTTuq1xkneSYW?XuUcxAlloTzDDzg



Scale = 1:16.5

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 0.58	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.32	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: 16 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 1=6-3-11, 3=6-3-11
Max Horz 1=100(LC 9)
Max Uplift 1=-43(LC 12), 3=-68(LC 12)
Max Grav 1=246(LC 1), 3=246(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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 6-2-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.



May 25, 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 2838622	Truss V6	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	I46271670
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Builders FirstSource (Valley Center),

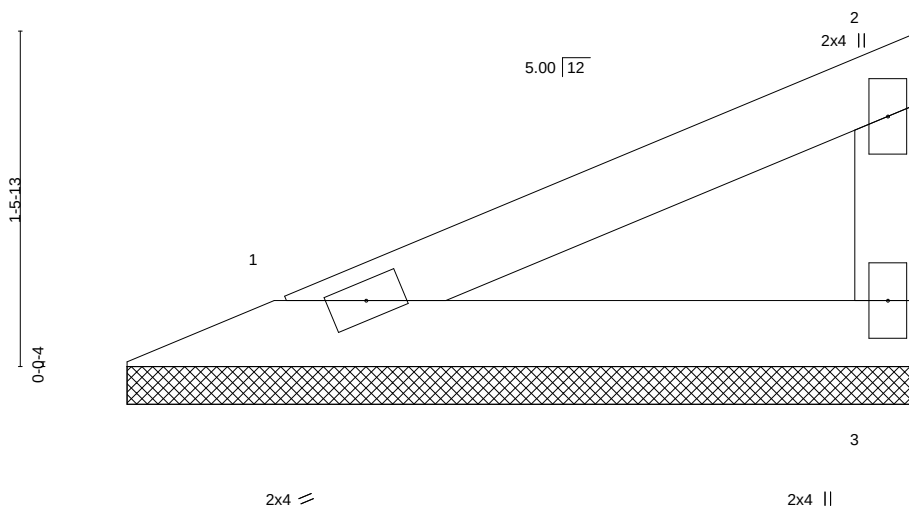
Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:20 2021 Page 1

ID:sZNIC9?G94Kxezjx5JOhrWzDFsh-3CBplU83zQkO5M2gRXyAG?AITvOfdxs4PPRLwwzDDzf

3-6-11
3-6-11

Scale = 1:10.2



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 0.12	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.07	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P					Weight: 8 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 3-6-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 1=3-6-1, 3=3-6-1
Max Horz 1=49(LC 9)
Max Uplift 1=22(LC 12), 3=32(LC 12)
Max Grav 1=120(LC 1), 3=120(LC 1)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; 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) 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.



May 25, 2021

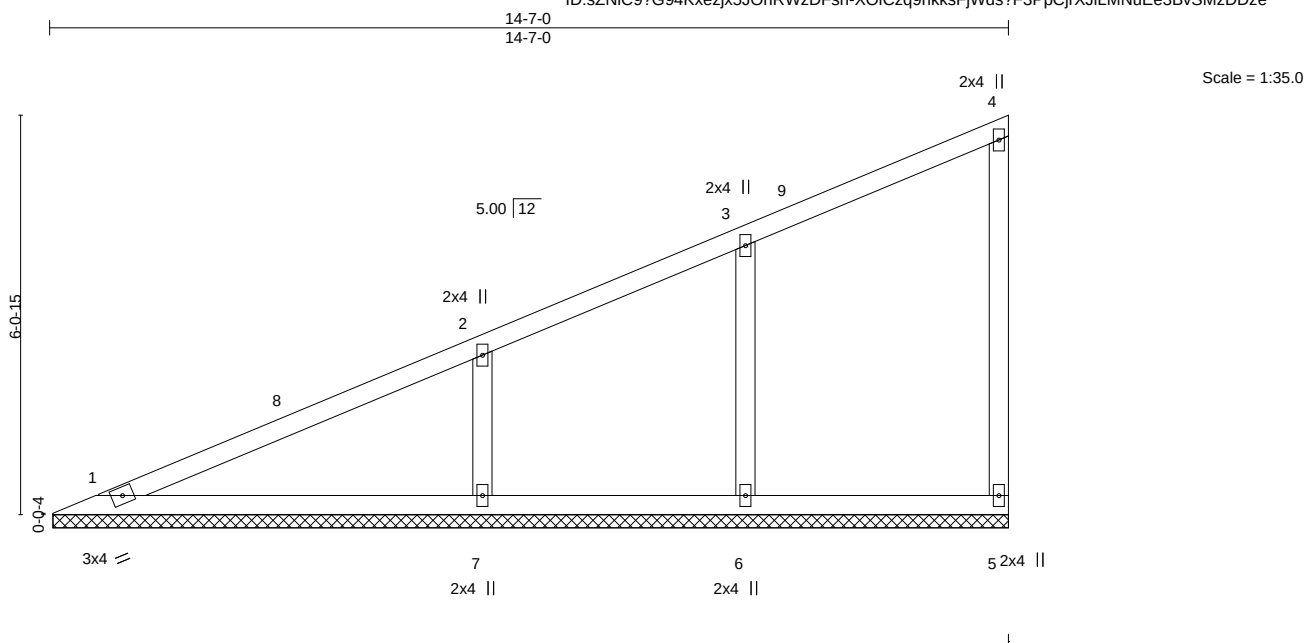
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017



LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc)	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.42	Vert(LL) n/a - n/a 999	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.23	Vert(CT) n/a - n/a 999		
BCLL 0.0	Rep Stress Incr YES	WB 0.08	Horz(CT) -0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S		Weight: 47 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.

ONS. All bearings 14-6-6.
(lb) - Max Horz 1=249(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 5, 6 except 7=-164(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=322(LC 1), 7=537(LC 1)

FORCES.

TOP CHORD 1-2=-305/188
WEBS 3-6=-257/169, 2-7=-403/236

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 14-5-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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) 5, 6 except (jt=lb) 7=164.
- 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.



May 25, 2021



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



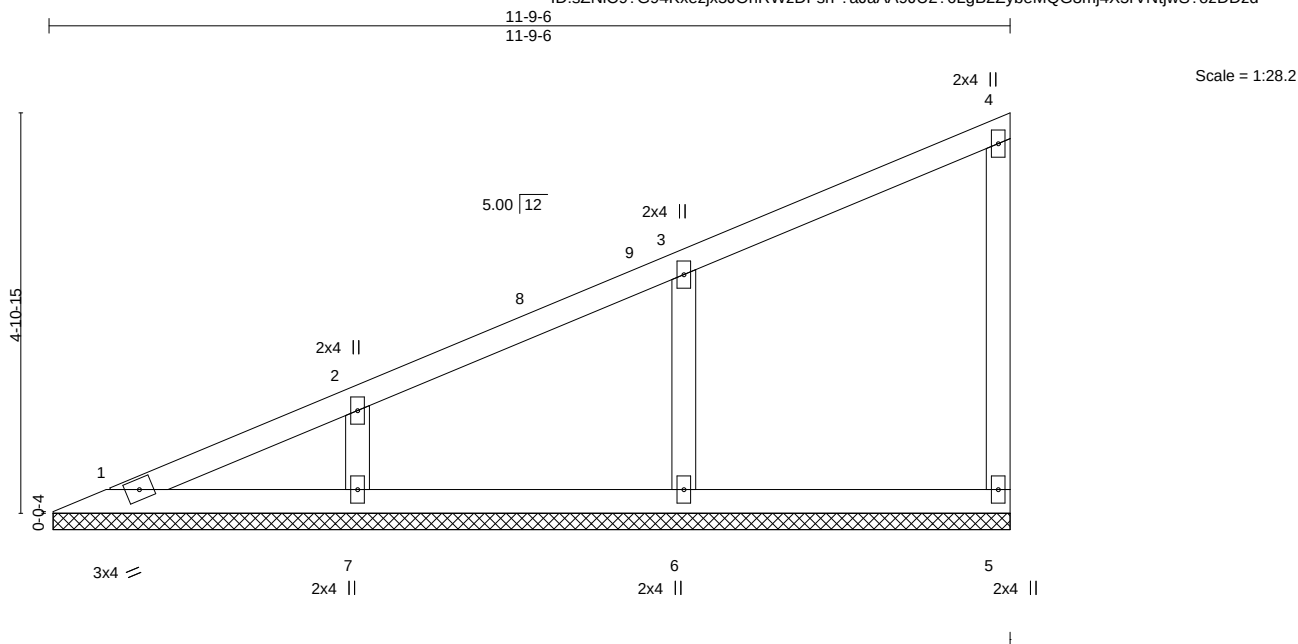
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 2838622	Truss V8	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	146271672
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Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:22 2021 Page 1

ID:sZNiC9?G94Kxejx5JOhRWzDFsh-?aJaAA9JU2?6LgB2ZybeMQG3mj4X5rVNtjwS?ozDDzd



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.06	Horz(CT)	-0.00	5	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						Weight: 36 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.

All bearings 11-8-13.

(lb) - Max Horz 1=199(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) 5, 6 except 7=105(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=389(LC 1), 7=344(LC 1)

FORCES.

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

TOP CHORD 1-2=-256/162

WEBS 3-6=-304/202, 2-7=-263/159

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-6, Interior(1) 3-9-6 to 11-7-10 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) 5, 6 except (jt=lb) 7=105.
- 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.



May 25, 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

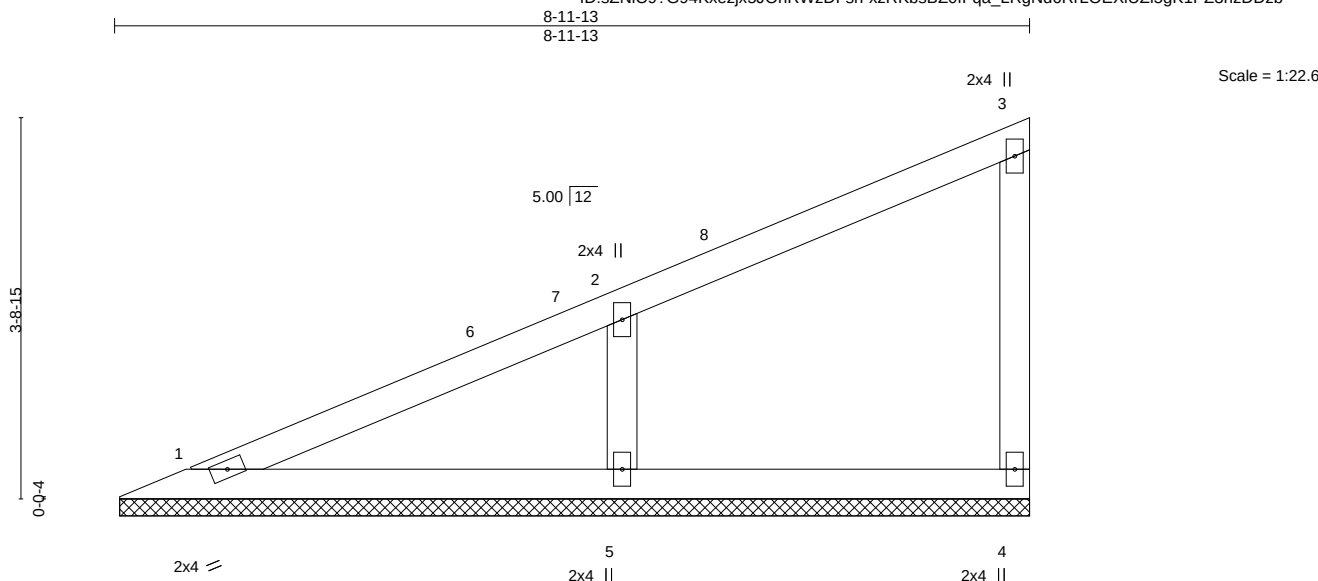
Job 2838622	Truss V9	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	I46271673
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:24 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhrWzDFsh-xzRKbsBZ0fFqa_LRgNd6RrLOEXIUZI5gK1PZ3hzDDzb



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)	n/a	-	n/a	999	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.14	Vert(CT)	n/a	-	n/a	999	197/144
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: 26 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=8-11-3, 4=8-11-3, 5=8-11-3
Max Horz 1=148(LC 9)
Max Uplift 1=-6(LC 12), 4=-28(LC 9), 5=-120(LC 12)
Max Grav 1=147(LC 1), 4=126(LC 1), 5=455(LC 1)

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

WEBS 2-5=-354/252

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 8-10-1 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, 4 except (jt=lb) 5=120.
- 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.



May 25, 2021

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

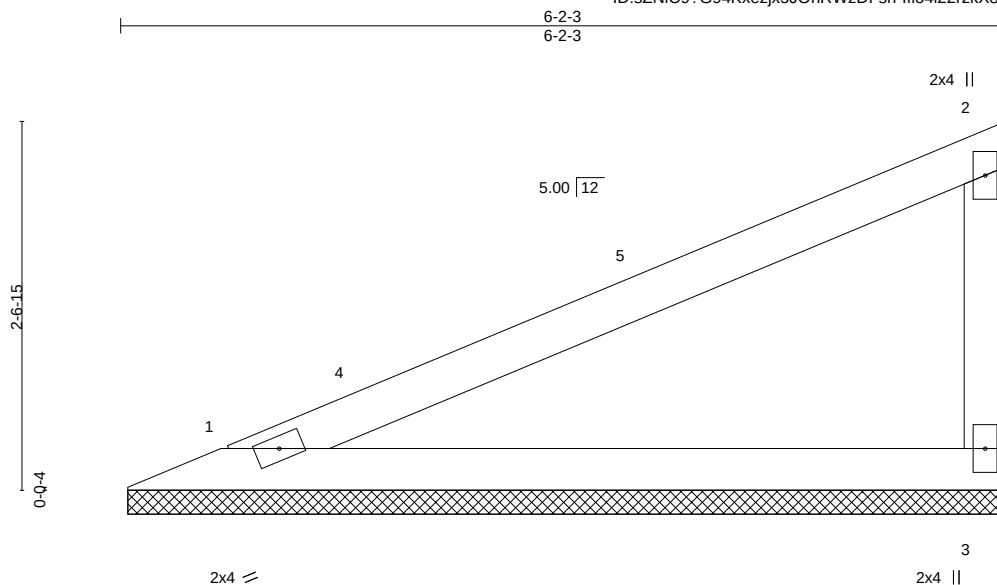
Job 2838622	Truss V10	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	I46271674
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:12 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOHrWzDFsh-lfio4l22rzkX87R7zsPlyJrHwhdDJtvZ9VweNzDDzn



Scale: 3/4"=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 0.54	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: 16 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 1=6-1-9, 3=6-1-9
Max Horz 1=97(LC 9)
Max Uplift 1=-44(LC 12), 3=-64(LC 12)
Max Grav 1=238(LC 1), 3=238(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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 6-0-7 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.



May 25, 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 2838622	Truss V11	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	I46271675
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Builders FirstSource (Valley Center),

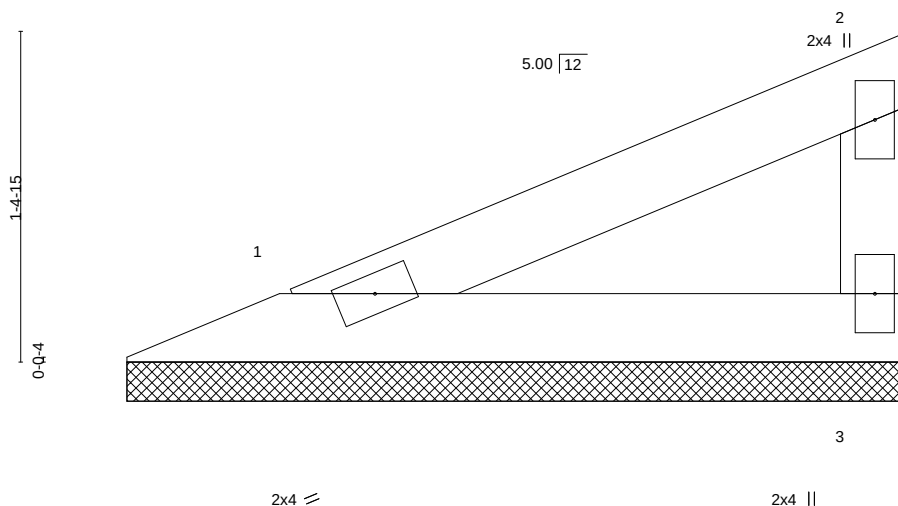
Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:13 2021 Page 1

ID:sZNiC9?G94Kxezjx5JOhrWzDFsh-mrGAH52gcHsOIH?KXZwXUWOZV509Um72opFUAqzDDzm

3-4-9
3-4-9

Scale = 1:9.8



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 0.11	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.06	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: 8 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 3-4-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 1=3-4-0, 3=3-4-0
Max Horz 1=46(LC 9)
Max Uplift 1=-21(LC 12), 3=-30(LC 12)
Max Grav 1=112(LC 1), 3=112(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=25ft; 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) 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.



May 25, 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



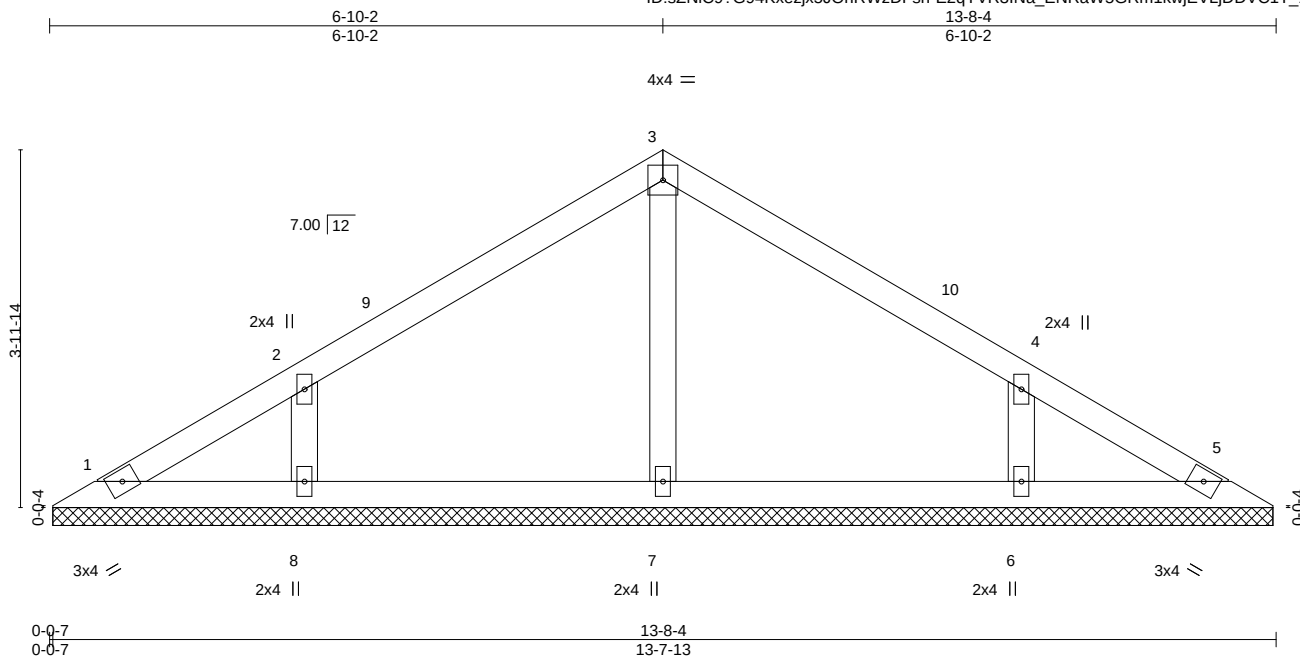
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 2838622	Truss V12	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	146271676
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Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:14 2021 Page 1

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Scale = 1:25.7

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.17	Vert(LL)	n/a	-	n/a	999	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a	999	197/144
BCLL 0.0	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.00	5	n/a	n/a	
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S						
									Weight: 39 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.

All bearings 13-7-6.
(lb) - Max Horz 1=-96(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-138(LC 12), 6=-137(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=310(LC 1), 8=351(LC 19), 6=351(LC 20)

FORCES.

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

WEBS

2-8=-281/167, 4-6=-281/166

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=25ft; 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 6-10-2, Exterior(2R) 6-10-2 to 9-10-2, Interior(1) 9-10-2 to 13-1-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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=138, 6=137.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



May 25, 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

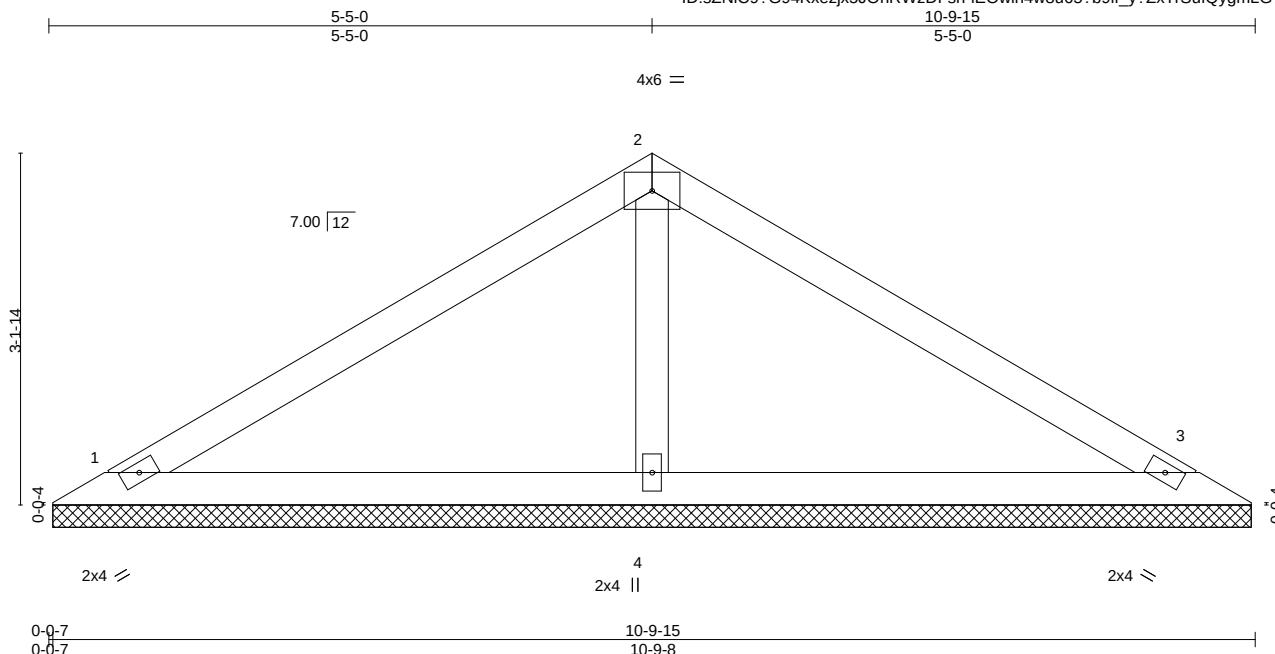
Job 2838622	Truss V13	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	146271677
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Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:15 2021 Page 1

ID:sZNiC9?G94Kxejx5JOhrWzDFsh-iEOwin4w8u65?b9if_y?ZxTrSufQygmLG7kaFizDDzk



Scale = 1:20.7

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.33	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.20	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.06	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=10-9-1, 3=10-9-1, 4=10-9-1
Max Horz 1=-74(LC 8)
Max Uplift 1=-47(LC 12), 3=-57(LC 13), 4=-47(LC 12)
Max Grav 1=208(LC 25), 3=208(LC 26), 4=462(LC 1)

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

WEBS 2-4=-314/125

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=25ft; 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 5-5-0, Exterior(2R) 5-5-0 to 8-5-0, Interior(1) 8-5-0 to 10-3-7 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.



May 25, 2021

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

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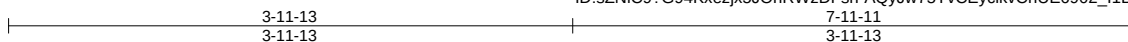
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 2838622	Truss V14	Truss Type Valley	Qty 1	Ply 1	Summit/85 Hawthorne Job Reference (optional)	I46271678
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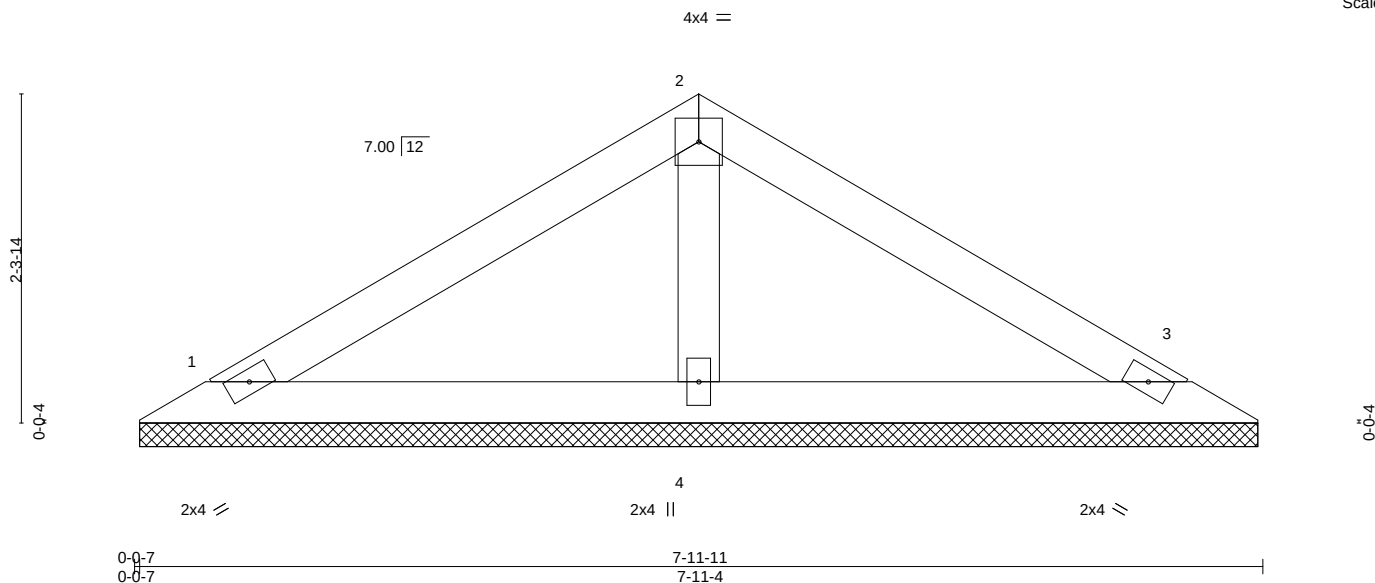
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s May 12 2021 MiTek Industries, Inc. Mon May 24 16:52:16 2021 Page 1

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Scale = 1:16.3



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 0.22	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	3	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
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=7-10-13, 3=7-10-13, 4=7-10-13
Max Horz 1=-53(LC 8)
Max Uplift 1=-41(LC 12), 3=-48(LC 13), 4=-18(LC 12)
Max Grav 1=163(LC 1), 3=163(LC 1), 4=295(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=25ft; 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 3-11-13, Exterior(2R) 3-11-13 to 6-11-13, Interior(1) 6-11-13 to 7-5-3 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
- 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.



May 25, 2021

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

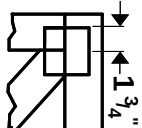
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



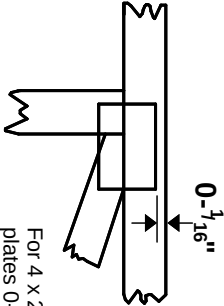
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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 20120 software or upon request.**

PLATE SIZE

4 X 4

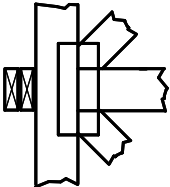
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



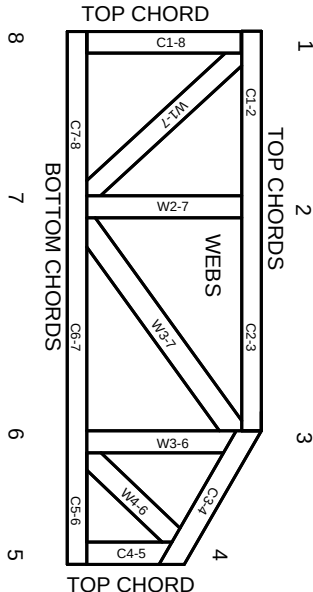
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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