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

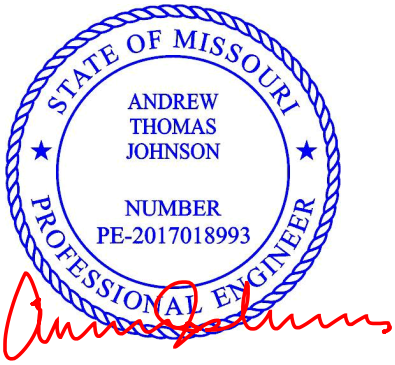
Re: 3008813
C&H/152 Cobey

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

Pages or sheets covered by this seal: I49195018 thru I49195043

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

Missouri COA: Engineering 001193



December 10,2021

Johnson, Andrew ,Engineer

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

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	A1	GABLE	1	1	I49195018

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:17 2021 Page 1
ID:xKFGJ7evN?7xhJE66FFHnCzvA57-mNGRiGmgqTR0CEgjQ3IkMXErBhgb4?9rvIBzvDyAZBe

-0-10-8 13-6-0 27-0-0 27-10-8
0-10-8 13-6-0 13-6-0 0-10-8

Scale = 1:47.1

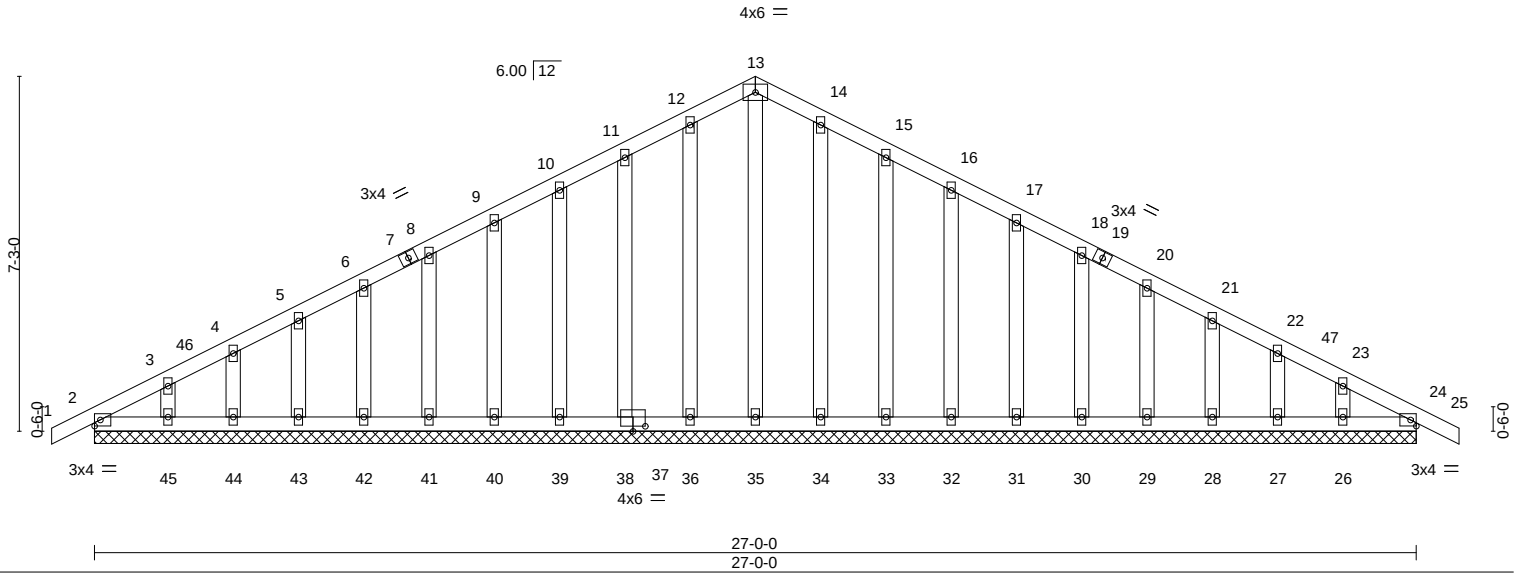


Plate Offsets (X,Y)-- [37:0-3-0,0-1-4]

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	0.05	Vert(LL)	-0.00	25	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	-0.00	25	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	24	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 145 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 27-0-0.
(lb) - Max Horz 2=-114(LC 17)
Max Uplift All uplift 100 lb or less at joint(s) 2, 36, 38, 39, 40, 41, 42, 43, 44, 45, 34, 33, 24, 32, 31, 30, 29, 28, 27, 26
Max Grav All reactions 250 lb or less at joint(s) 2, 35, 36, 38, 39, 40, 41, 42, 43, 44, 45, 34, 33, 24, 32, 31, 30, 29, 28, 27, 26

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 13-6-0, Corner(3R) 13-6-0 to 16-6-0, Exterior(2N) 16-6-0 to 27-10-8 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 36, 38, 39, 40, 41, 42, 43, 44, 45, 34, 33, 24, 32, 31, 30, 29, 28, 27, 26.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 10,2021

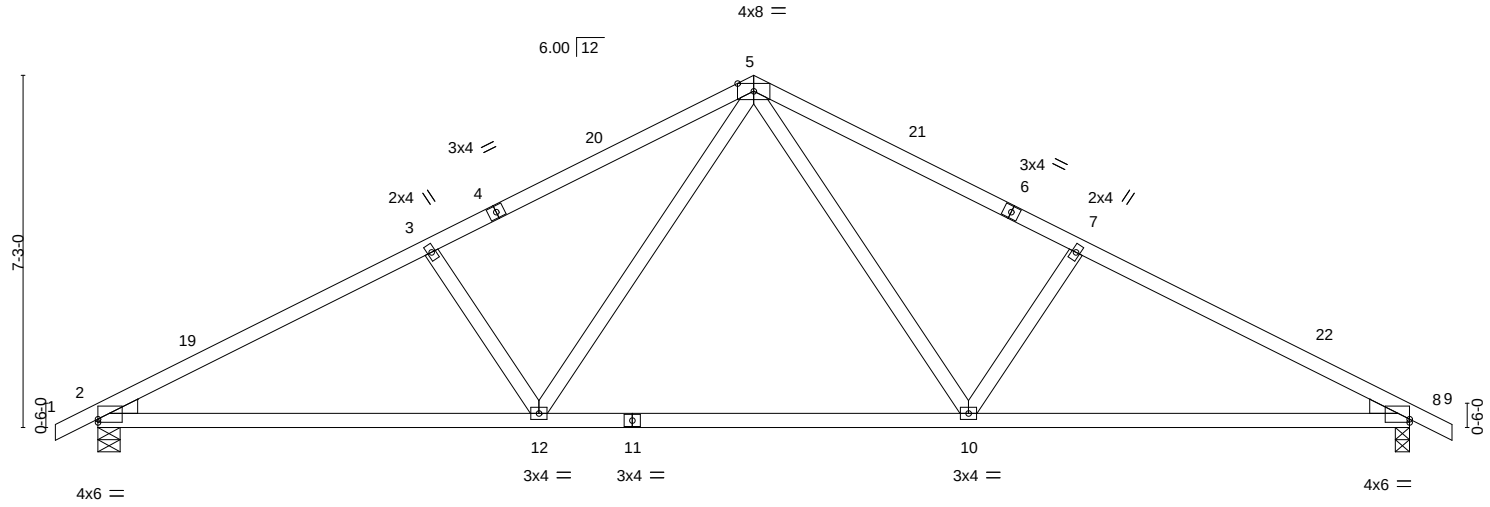
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	A2	Common	2	1	I49195019
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:19 2021 Page 1
ID:xKFGJ7evN?7xhJE66FFHnCzvA57-imOB7yowL5hkRXq5YUKCRyJ4EaCp1uj8NBg4_6yAZBc

-0-10-8 6-10-7 13-6-0 20-1-9 27-0-0 27-10-8
0-10-8 6-10-7 6-7-9 6-7-9 6-10-7 0-10-8

Scale = 1:47.4



9-0-15 17-11-1 27-0-0
9-0-15 8-10-2 9-0-15

Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [8:0-0-0,0-0-13]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.12	12-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.27	12-15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 97 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

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

REACTIONS. (size) 2=0-5-8, 8=0-3-8
Max Horz 2=-114(LC 13)
Max Uplift 2=-169(LC 12), 8=-169(LC 13)
Max Grav 2=1276(LC 1), 8=1276(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2089/301, 3-5=-1838/321, 5-7=-1838/321, 7-8=-2089/301
BOT CHORD 2-12=-265/1781, 10-12=-74/1194, 8-10=-187/1781
WEBS 5-10=-135/679, 7-10=-462/220, 5-12=-135/679, 3-12=-462/220

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 13-6-0, Exterior(2R) 13-6-0 to 16-6-0, Interior(1) 16-6-0 to 27-10-8 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=169, 8=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.
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.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

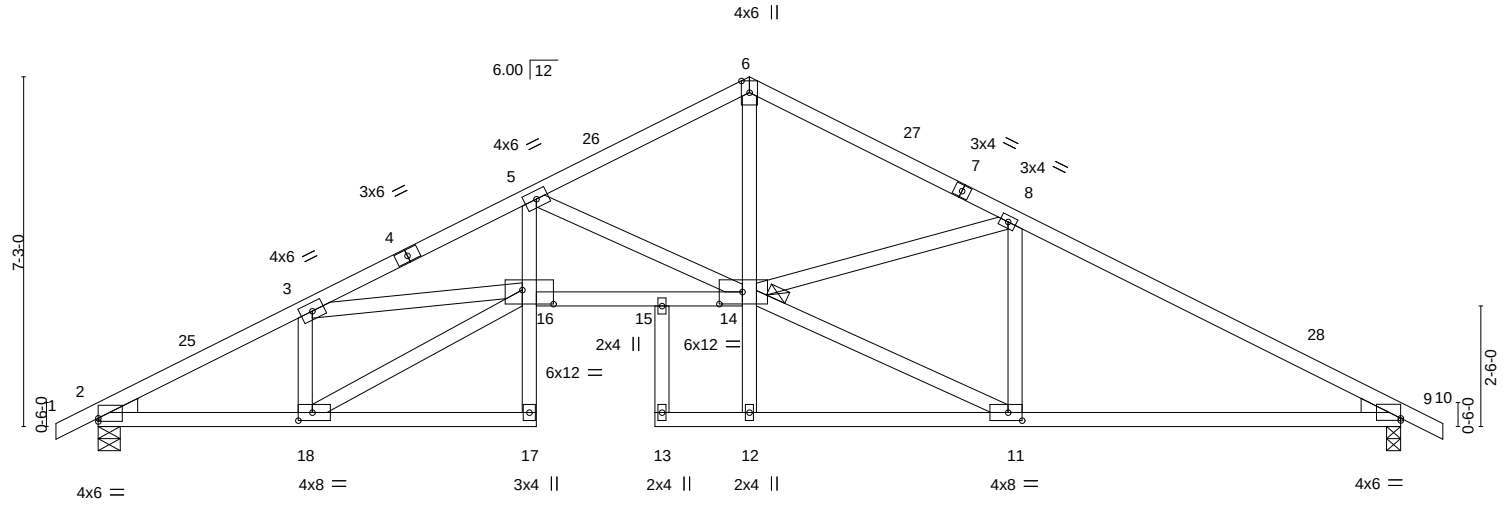
Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	A2A	Roof Special	1	1	I49195020

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:20 2021 Page 1
ID:xKFGJ7evN?7xhJE66FFHnCzvA57-AyxZLIpY6Opb3hPI5BrR_9sEN_TeHB_IbFQdWYyAZBb

0-10-8	4-3-8	9-1-0	11-6-8	13-6-0	19-1-13	20-1-9	27-0-0	27-10-8
0-10-8	4-3-8	4-9-8	2-5-8	1-11-8	5-7-13	0-11-12	6-10-7	0-10-8

Scale: 1/4"=1'



4-3-8	9-1-0	11-6-8	13-6-0	19-1-13	27-0-0
4-3-8	4-9-8	2-5-8	1-11-8	5-7-13	7-10-3

Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [9:0-0-0,0-0-9], [11:0-3-8,0-2-0], [14:0-5-12,0-3-0], [16:0-7-12,0-3-8], [18:0-3-8,0-2-0]

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	0.57	Vert(LL)	-0.23	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.41	15-16	>788	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.23	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 122 lb	FT = 20%

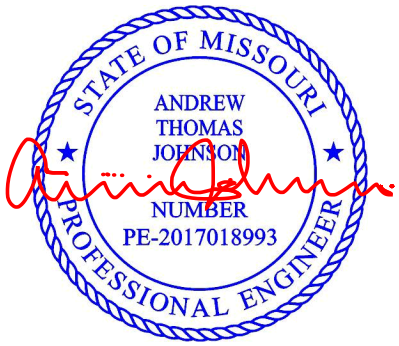
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 14

REACTIONS. (size) 2=0-5-8, 9=0-3-8
Max Horz 2=114(LC 12)
Max Uplift 2=-169(LC 12), 9=-169(LC 13)
Max Grav 2=1276(LC 1), 9=1276(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2180/286, 3-5=-3962/492, 5-6=-2158/300, 6-8=-2128/292, 8-9=-2044/285
BOT CHORD 2-18=-288/1881, 5-16=-142/1287, 15-16=-409/3511, 14-15=-402/3470, 9-11=-159/1722
WEBS 5-14=-1828/345, 6-14=-149/1522, 8-11=-578/118, 11-14=-167/1825, 3-18=-981/201, 16-18=-321/2061, 3-16=-120/1601

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 13-6-0, Exterior(2R) 13-6-0 to 16-6-0, Interior(1) 16-6-0 to 27-10-8 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=169, 9=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.
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.



December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	A3	Common	2	1	I49195021
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:21 2021 Page 1
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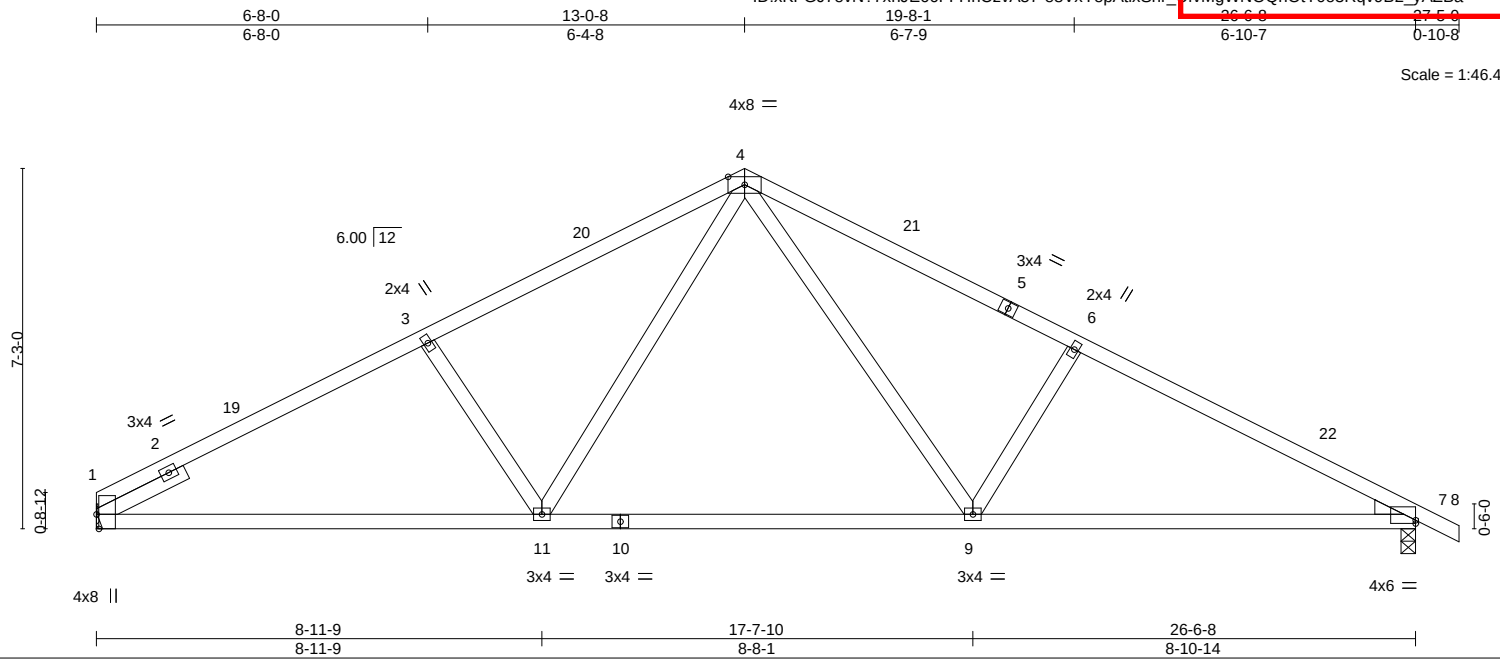


Plate Offsets (X,Y)-- [1:0-3-8,Edge], [7:0-0-0,0-0-13]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.11	9-18	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.25	9-11	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 96 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 2x4 SP No.3
SLIDER Left 2x4 SPF No.2 2-0-0

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

REACTIONS. (size) 1=Mechanical, 7=0-3-8
Max Horz 1=-125(LC 13)
Max Uplift 1=-147(LC 12), 7=-168(LC 13)
Max Grav 1=1193(LC 1), 7=1257(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-1901/296, 3-4=-1704/315, 4-6=-1814/325, 6-7=-2050/300
BOT CHORD 1-11=-241/1633, 9-11=-69/1156, 7-9=-188/1746
WEBS 3-11=-403/206, 4-11=-120/590, 4-9=-143/693, 6-9=-458/220

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 13-0-8, Exterior(2R) 13-0-8 to 16-0-8, Interior(1) 16-0-8 to 27-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=147, 7=168.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

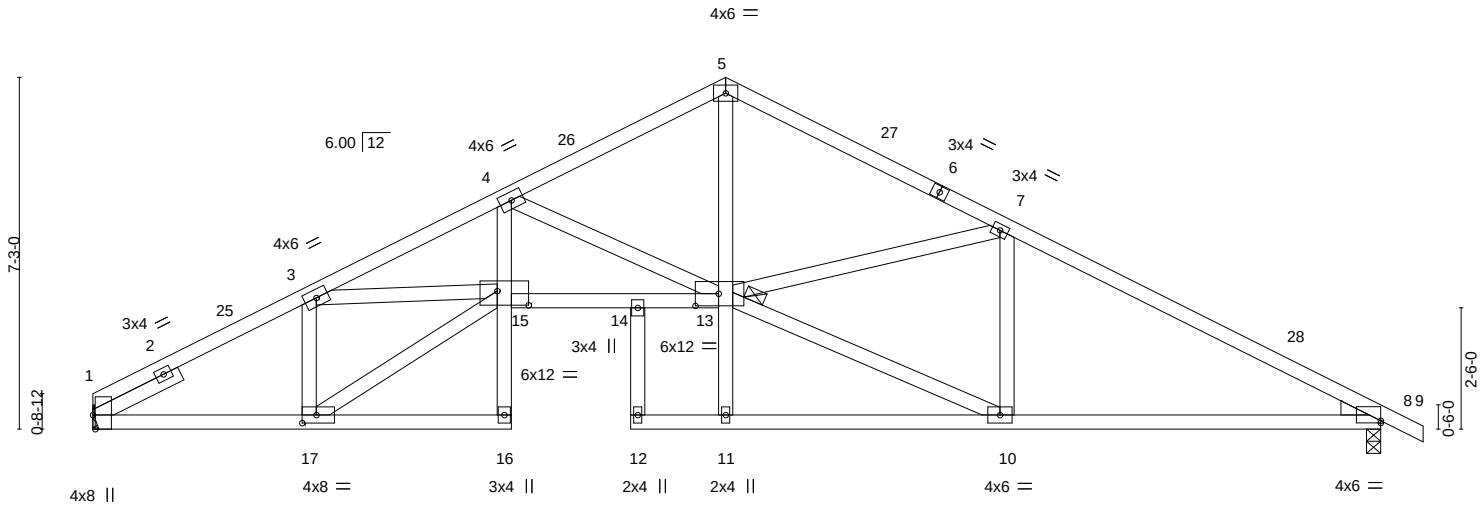
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
12/17/2021

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey	I49195022
3008813	A3A	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:22 2021 Page 1
ID:xKFGJ7evN?7xhJE66FFHnCzvA57-6L3Klzqoe03J?ZgDctv5axb4oACl66a3ZvkbRyAZBZ

4-5-8	8-7-8	11-1-0	13-0-8	18-8-5	19-8-1	26-6-8	27-5-8
4-5-8	4-2-0	2-5-8	1-11-8	5-7-13	0-11-12	6-10-7	0-10-8

Scale = 1:47.5



4-5-8	8-7-8	11-1-0	13-0-8	18-8-5	26-6-8
4-5-8	4-2-0	2-5-8	1-11-8	5-7-13	7-10-3

Plate Offsets (X,Y)-- [1:0-3-8,Edge], [8:Edge,0-0-9], [13:0-5-12,0-3-0], [15:0-7-12,0-3-8], [17:0-3-8,0-2-0]

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	0.49	Vert(LL)	-0.21	14-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.37	14-15	>858	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.21	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 121 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 2x4 SP No.3
SLIDER Left 2x4 SPF No.2 2-0-0

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 13

REACTIONS. (size) 1=Mechanical, 8=0-3-8
Max Horz 1=-125(LC 13)
Max Uplift 1=-147(LC 12), 8=-168(LC 13)
Max Grav 1=1193(LC 1), 8=1257(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-1919/279, 3-4=-3780/471, 4-5=-2088/299, 5-7=-2065/286, 7-8=-2020/286
BOT CHORD 1-17=-253/1653, 4-15=-141/1219, 14-15=-390/3369, 13-14=-382/3322, 8-10=-165/1705
WEBS 4-13=-1735/332, 5-13=-138/1442, 7-10=-538/118, 10-13=-172/1787, 3-17=-1024/197, 15-17=-292/1884, 3-15=-133/1691

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 13-0-8, Exterior(2R) 13-0-8 to 16-0-8, Interior(1) 16-0-8 to 27-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=147, 8=168.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
12/17/2021

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	A3B	Roof Special	2	1	I49195023 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:28 2021 Page 1
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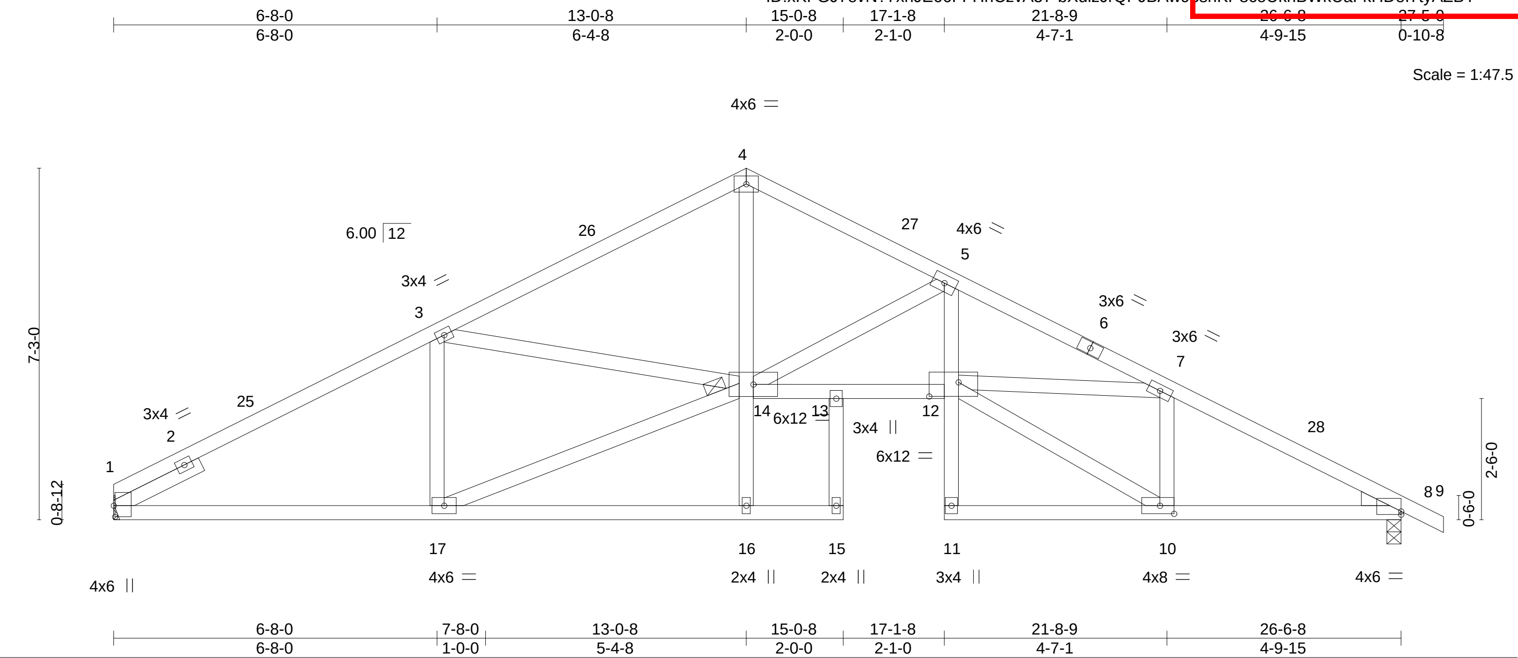

Plate Offsets (X,Y)-- [1:0-2-12,0-0-5], [8:0-0-0,0-0-13], [10:0-3-8,0-2-0], [12:0-7-4,0-3-8]

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	0.56	Vert(LL)	-0.20	12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.37	12-13	>867	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.21	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 123 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 2x4 SP No.3
SLIDER Left 2x4 SPF No.2 2-0-0

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 14

REACTIONS. (size) 1=Mechanical, 8=0-3-8
Max Horz 1=-125(LC 13)
Max Uplift 1=-147(LC 12), 8=-168(LC 13)
Max Grav 1=1193(LC 1), 8=1257(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-1918/286, 3-4=-2082/289, 4-5=-2094/296, 5-7=-3653/438, 7-8=-2125/287
BOT CHORD 1-17=-232/1645, 13-14=-257/3163, 12-13=-265/3211, 5-12=-91/1205, 8-10=-191/1826
WEBS 5-14=-1595/235, 4-14=-133/1409, 7-10=-984/153, 10-12=-216/2032, 7-12=-74/1377,
3-17=-500/134, 14-17=-242/1695, 3-14=-82/270

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 13-0-8, Exterior(2R) 13-0-8 to 16-0-8, Interior(1) 16-0-8 to 27-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=147, 8=168.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

December 10,2021

MiTek®
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	A4	Roof Special	4	1	I49195024
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:24 2021 Page 1
ID:xKFGJ7evN?7xhJE66FFHnCzvA57-3jB4Afs3AdJ0YJj3K1wN8?0vvbsiB4MtWtOfiJyAZBX

-0-10-8	6-10-7	7-11-15	13-6-0	15-9-0	20-2-12	23-4-5	24-8-8	27-0-0	27-10-8
0-10-8	6-10-7	1-1-8	5-6-1	2-3-0	4-5-12	3-1-9	1-4-3	2-3-8	0-10-8

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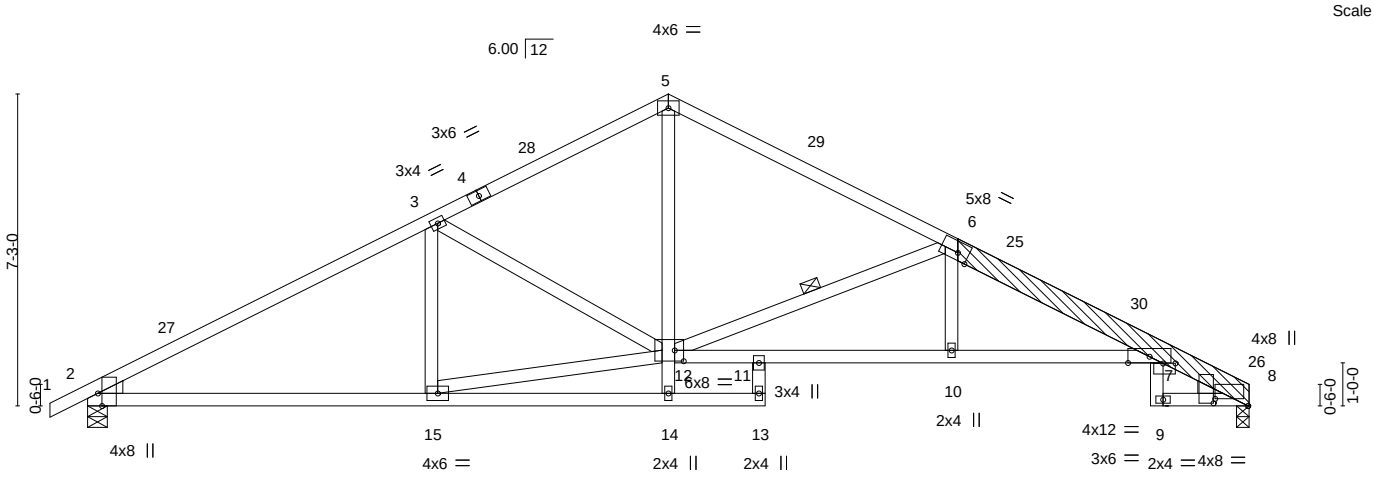

7-11-15	13-6-0	15-9-0	20-2-12	24-8-8	27-0-0
7-11-15	5-6-1	2-3-0	4-5-12	4-5-12	2-3-8

Plate Offsets (X,Y)-- [2:0-3-8,Edge], [6:0-3-0,Edge], [7:0-3-7,0-0-1], [8:0-9-3,0-2-0], [8:0-0-12,0-9-11], [12:0-2-8,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.19	10-21	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.36	10-11	>907	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.20	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 135 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
6-8: 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x6 SP 2400F 2.0E
LBR SCAB 6-8 2x6 SP 2400F 2.0E one side
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.
WEBS 1 Row at midpt 6-12

REACTIONS. (size) 2=0-5-8, 8=0-3-8
Max Horz 2=120(LC 16)
Max Uplift 2=-169(LC 12), 8=-152(LC 13)
Max Grav 2=1276(LC 1), 8=1212(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2025/287, 3-5=-1634/277, 5-6=-1687/277, 6-7=-2714/374, 7-8=-485/91
BOT CHORD 2-15=-234/1719, 11-12=-229/2467, 10-11=-272/2551, 7-10=-274/2540
WEBS 5-12=-110/1018, 12-15=-199/1615, 3-12=-483/189, 6-10=0/268, 6-12=-1233/287

NOTES-
1) Attached 7-9-8 scab 6 to 8, front face(s) 2x6 SP 2400F 2.0E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 0-0-8 from end at joint 6, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 3-2-3 from end at joint 6, nail 2 row(s) at 4" o.c. for 4-4-5.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 13-6-0, Exterior(2R) 13-6-0 to 16-6-0, Interior(1) 16-6-0 to 26-11-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=169, 8=152.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) 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.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	A5	Roof Special	5	1	I49195025
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:26 2021 Page 1
ID:xKFGJ7evN?7xhJE66FFHnCzvA57-XwlSO?shxxSt9SIFulRchDzZQ?DlyH1fX7OBmyAZBW

3-2-10	5-2-8	13-0-8	19-8-1	26-6-8	27-5-0
3-2-10	1-11-14	7-10-0	6-7-9	6-10-7	0-10-8

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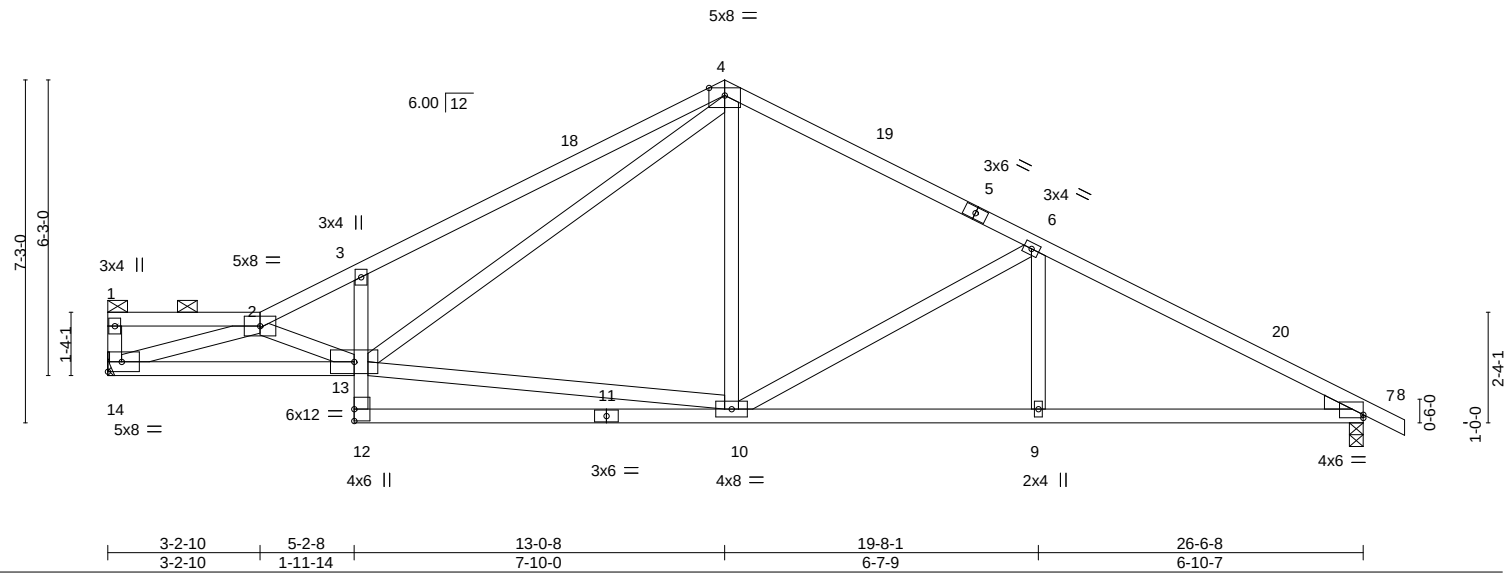


3-2-10	5-2-8	13-0-8	19-8-1	26-6-8
3-2-10	1-11-14	7-10-0	6-7-9	6-10-7

Plate Offsets (X,Y)-- [7:0-0-0,0-0-13]

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	0.99	Vert(LL)	-0.16	13	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.33	10-12	>960	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.07	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 115 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 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.): 1-2.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 14=Mechanical, 7=0-3-8
Max Horz 14=-140(LC 13)
Max Uplift 14=-150(LC 12), 7=-172(LC 13)
Max Grav 14=1187(LC 1), 7=1250(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2681/367, 3-4=-2788/515, 4-6=-1436/270, 6-7=-2048/290
BOT CHORD 13-14=-384/2912, 3-13=-511/247, 10-12=-2/317, 9-10=-177/1741, 7-9=-177/1741
WEBS 2-14=-2889/416, 10-13=-53/865, 4-13=-370/1525, 4-10=-45/445, 6-10=-673/216, 2-13=-530/85

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-2-10, Interior(1) 3-2-10 to 13-0-8, Exterior(2R) 13-0-8 to 16-0-8 , Interior(1) 16-0-8 to 27-5-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=150, 7=172.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

December 10,2021

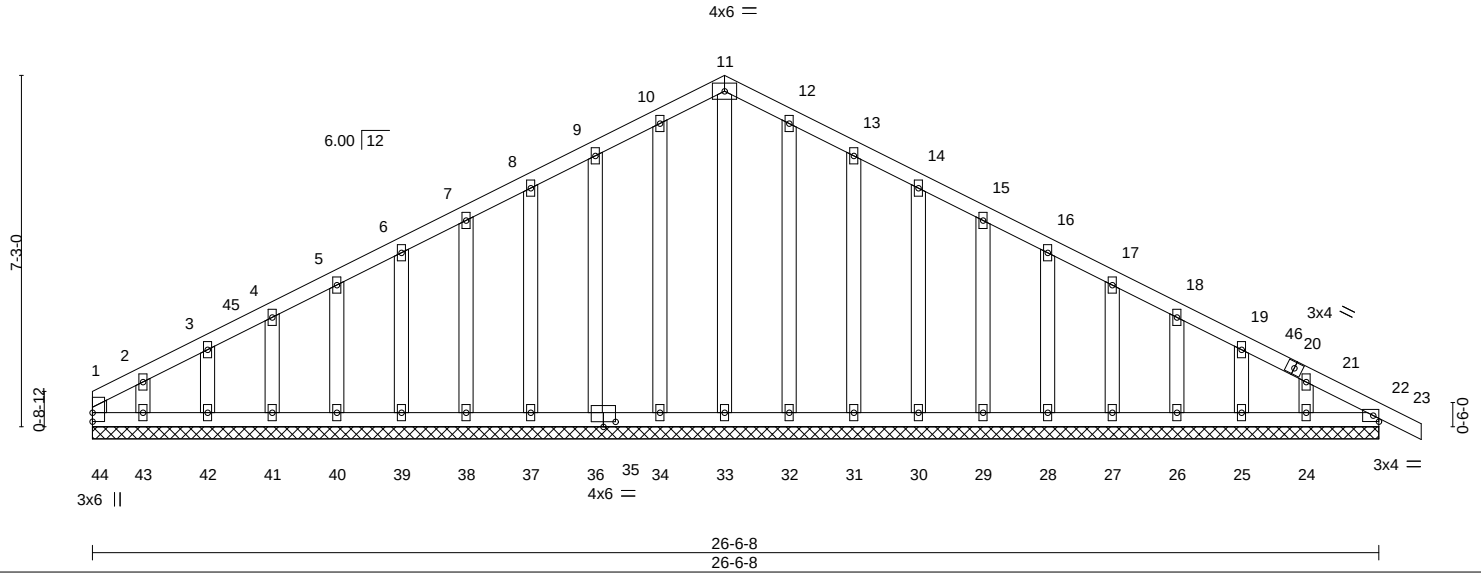
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey	
3008813	A6	GABLE	1	1	Job Reference (optional)	I49195026

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:27 2021 Page 1
ID:xKFGJ7evN?7xhJE66FFHnCzvA57-TItDphuxTYibPmRe0AT4mee?ep4eQWXKCrcVGeyAZBO

13-0-8 / 13-0-8 | 26-6-8 / 13-6-0 | 27-5-9 / 0-10-8

Scale: 1/4"=1'



26-6-8 / 26-6-8

Plate Offsets (X,Y)-- [35:0-3-0,0-1-4]

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	0.05	Vert(LL)	-0.00	23	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.00	23	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	22	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 143 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 26-6-8.
(lb) - Max Horz 44=-119(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 44, 34, 36, 37, 38, 39, 40, 41, 42, 32, 31, 22, 30, 29, 28, 27, 26, 25, 24 except 43=-109(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 44, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 32, 31, 22, 30, 29, 28, 27, 26, 25, 24

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 13-0-8, Corner(3R) 13-0-8 to 16-0-8, Exterior(2N) 16-0-8 to 27-5-0 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 44, 34, 36, 37, 38, 39, 40, 41, 42, 32, 31, 22, 30, 29, 28, 27, 26, 25, 24 except (jt=lb) 43=109.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	B1	ROOF SPECIAL GIRDER	1	2	I49195027

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:29 2021 Page 1
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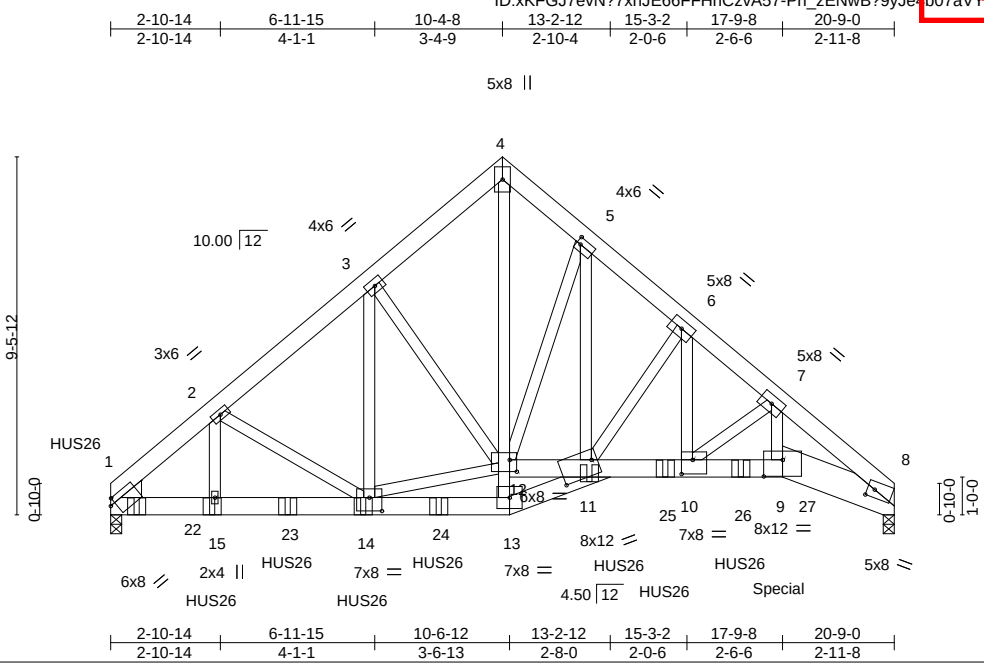


Plate Offsets (X,Y)-- [1:0-1-10,0-1-14], [5:0-1-4,0-2-0], [8:0-2-4,0-2-8], [9:0-6-0,0-5-4], [10:0-3-8,0-4-8], [11:0-10-4,0-4-12], [12:0-2-4,0-3-12], [14:0-4-0,0-4-4]

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	0.38	Vert(LL)	-0.10	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.20	10-11	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.86	Horz(CT)	-0.10	1	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 354 lb	FT = 20%

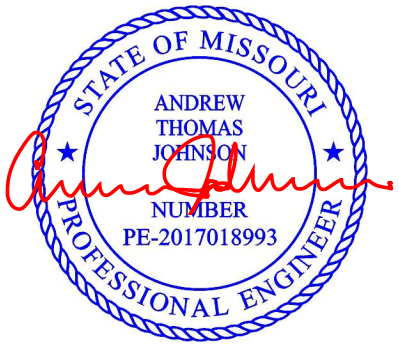
LUMBER-
TOP CHORD 2x6 SPF No.2 *Except*
4-8: 2x6 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E *Except*
9-12: 2x6 SPF 2100F 1.8E, 8-9: 2x10 SP 2400F 2.0E
WEBS 2x4 SPF No.2
WEDGE
Left: 2x6 SP No.2

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

REACTIONS. (size) 1=0-3-8, 8=0-3-8
Max Horz 8=203(LC 5)
Max Uplift 1=-262(LC 8), 8=-140(LC 9)
Max Grav 1=7207(LC 1), 8=6397(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-8586/217, 2-3=-7287/14, 3-4=-5689/0, 4-5=-5687/0, 5-6=-7390/0, 6-7=-9443/25, 7-8=-12280/243
BOT CHORD 1-15=-127/6411, 14-15=-127/6411, 13-14=0/2044, 11-13=0/2114, 11-12=-220/3524, 10-11=-21/7356, 9-10=-238/8965, 8-9=-303/9692
WEBS 3-14=-394/2374, 12-13=-328/0, 4-12=0/6672, 5-11=-228/4312, 12-14=-335/3570, 3-12=-1918/467, 5-12=-3179/314, 2-14=-1041/329, 2-15=-263/1403, 6-10=-375/3475, 6-11=-3204/382, 7-9=-260/3336, 7-10=-2054/278

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-2-0 oc, 2x10 - 2 rows staggered at 0-8-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
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) 8 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) 1=262, 8=140.
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.



December 10,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	B1	ROOF SPECIAL GIRDER	1	2	I49195027
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:29 2021 Page 2
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NOTES-

9) 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.
10) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-8-4 from the left end to 8-8-4 to connect truss(es) to front face of bottom chord.
11) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 12-8-4 from the left end to 16-8-4 to connect truss(es) to front face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1167 lb down and 170 lb up at 18-8-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-70, 4-8=-70, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=-1173(F) 11=-1167(F) 15=-1173(F) 22=-1176(F) 23=-1173(F) 24=-1173(F) 25=-1167(F) 26=-1167(F) 27=-1167(F)
2) Dead + 0.75 Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-58, 4-8=-58, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=-1008(F) 11=-1002(F) 15=-1008(F) 22=-1011(F) 23=-1008(F) 24=-1008(F) 25=-1002(F) 26=-1002(F) 27=-1002(F)
3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-4=-20, 4-8=-20, 13-16=-40, 11-13=-40, 9-11=-40, 9-19=-40
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=-756(F) 11=-752(F) 15=-756(F) 22=-762(F) 23=-756(F) 24=-756(F) 25=-752(F) 26=-752(F) 27=-752(F)
4) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-4=-15, 4-8=9, 13-16=-8, 11-13=-8, 9-11=-8, 9-19=-8
   Horz: 1-4=3, 4-8=21
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=155(F) 11=158(F) 15=155(F) 22=154(F) 23=155(F) 24=155(F) 25=158(F) 26=158(F) 27=158(F)
5) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-4=9, 4-8=-15, 13-16=-8, 11-13=-8, 9-11=-8, 9-19=-8
   Horz: 1-4=-21, 4-8=-3
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=155(F) 11=158(F) 15=155(F) 22=154(F) 23=155(F) 24=155(F) 25=158(F) 26=158(F) 27=158(F)
6) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-4=-33, 4-8=-10, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
   Horz: 1-4=13, 4-8=10
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=167(F) 11=170(F) 15=167(F) 22=164(F) 23=167(F) 24=167(F) 25=170(F) 26=170(F) 27=170(F)
7) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-4=-10, 4-8=-33, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
   Horz: 1-4=-10, 4-8=-13
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=167(F) 11=170(F) 15=167(F) 22=164(F) 23=167(F) 24=167(F) 25=170(F) 26=170(F) 27=170(F)
8) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-4=25, 4-8=9, 13-16=-8, 11-13=-8, 9-11=-8, 9-19=-8
   Horz: 1-4=-37, 4-8=21
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=155(F) 11=158(F) 15=155(F) 22=154(F) 23=155(F) 24=155(F) 25=158(F) 26=158(F) 27=158(F)
9) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-4=9, 4-8=25, 13-16=-8, 11-13=-8, 9-11=-8, 9-19=-8
   Horz: 1-4=-21, 4-8=37
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=155(F) 11=158(F) 15=155(F) 22=154(F) 23=155(F) 24=155(F) 25=158(F) 26=158(F) 27=158(F)
10) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-4=14, 4-8=4, 13-16=-8, 11-13=-8, 9-11=-8, 9-19=-8
   Horz: 1-4=-26, 4-8=16
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=155(F) 11=158(F) 15=155(F) 22=154(F) 23=155(F) 24=155(F) 25=158(F) 26=158(F) 27=158(F)
11) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-4=4, 4-8=14, 13-16=-8, 11-13=-8, 9-11=-8, 9-19=-8
   Horz: 1-4=-16, 4-8=26
   Concentrated Loads (lb)
   Vert: 12=-1200(F) 14=155(F) 11=158(F) 15=155(F) 22=154(F) 23=155(F) 24=155(F) 25=158(F) 26=158(F) 27=158(F)
12) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60

Continued on page 3

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	B1	ROOF SPECIAL GIRDER	1	2	I49195027

Job Reference (optional)

LOAD CASE(S) Standard

Uniform Loads (plf)
Vert: 1-4=6, 4-8=-10, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Horz: 1-4=-26, 4-8=10
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=167(F) 11=170(F) 15=167(F) 22=164(F) 23=167(F) 24=167(F) 25=170(F) 26=170(F) 27=170(F)

13) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-4=-10, 4-8=6, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Horz: 1-4=-10, 4-8=26
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=167(F) 11=170(F) 15=167(F) 22=164(F) 23=167(F) 24=167(F) 25=170(F) 26=170(F) 27=170(F)

14) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-4=-20, 4-8=-20, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=-511(F) 11=-508(F) 15=-511(F) 22=-514(F) 23=-511(F) 24=-511(F) 25=-508(F) 26=-508(F) 27=-508(F)

15) 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: 1-4=-67, 4-8=-50, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Horz: 1-4=10, 4-8=8
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=63(F) 11=65(F) 15=63(F) 22=59(F) 23=63(F) 24=63(F) 25=65(F) 26=65(F) 27=65(F)

16) 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: 1-4=-50, 4-8=-67, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Horz: 1-4=-8, 4-8=-10
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=63(F) 11=65(F) 15=63(F) 22=59(F) 23=63(F) 24=63(F) 25=65(F) 26=65(F) 27=65(F)

17) 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: 1-4=-38, 4-8=-50, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Horz: 1-4=-20, 4-8=8
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=63(F) 11=65(F) 15=63(F) 22=59(F) 23=63(F) 24=63(F) 25=65(F) 26=65(F) 27=65(F)

18) 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: 1-4=-50, 4-8=-38, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Horz: 1-4=-8, 4-8=20
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=63(F) 11=65(F) 15=63(F) 22=59(F) 23=63(F) 24=63(F) 25=65(F) 26=65(F) 27=65(F)

19) Dead + 0.6 MWFRS Wind Min. Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-4=-17, 4-8=-12, 13-16=-8, 11-13=-8, 9-11=-8, 9-19=-8
Horz: 1-4=5
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=85(F) 11=88(F) 15=85(F) 22=84(F) 23=85(F) 24=85(F) 25=88(F) 26=88(F) 27=88(F)

20) Dead + 0.6 MWFRS Wind Min. Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-4=-12, 4-8=-17, 13-16=-8, 11-13=-8, 9-11=-8, 9-19=-8
Horz: 4-8=-5
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=85(F) 11=88(F) 15=85(F) 22=84(F) 23=85(F) 24=85(F) 25=88(F) 26=88(F) 27=88(F)

21) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-70, 4-8=-20, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=-1173(F) 11=-1167(F) 15=-1173(F) 22=-1176(F) 23=-1173(F) 24=-1173(F) 25=-1167(F) 26=-1167(F) 27=-1167(F)

22) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-20, 4-8=-70, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=-1173(F) 11=-1167(F) 15=-1173(F) 22=-1176(F) 23=-1173(F) 24=-1173(F) 25=-1167(F) 26=-1167(F) 27=-1167(F)

23) 3rd Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-58, 4-8=-20, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20
Concentrated Loads (lb)
Vert: 12=-1200(F) 14=-1008(F) 11=-1002(F) 15=-1008(F) 22=-1011(F) 23=-1008(F) 24=-1008(F) 25=-1002(F) 26=-1002(F) 27=-1002(F)

24) 4th Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-20, 4-8=-58, 13-16=-20, 11-13=-20, 9-11=-20, 9-19=-20

Continued on page 4

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	B1	ROOF SPECIAL GIRDER	1	2	I49195027

Job Reference (optional)

LOAD CASE(S) Standard

Concentrated Loads (lb)

Vert: 12=-1200(F) 14=-1008(F) 11=-1002(F) 15=-1008(F) 22=-1011(F) 23=-1008(F) 24=-1008(F) 25=-1002(F) 26=-1002(F) 27=-1002(F)

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	B2	ROOF SPECIAL	3	1	I49195028

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:30 2021 Page 1
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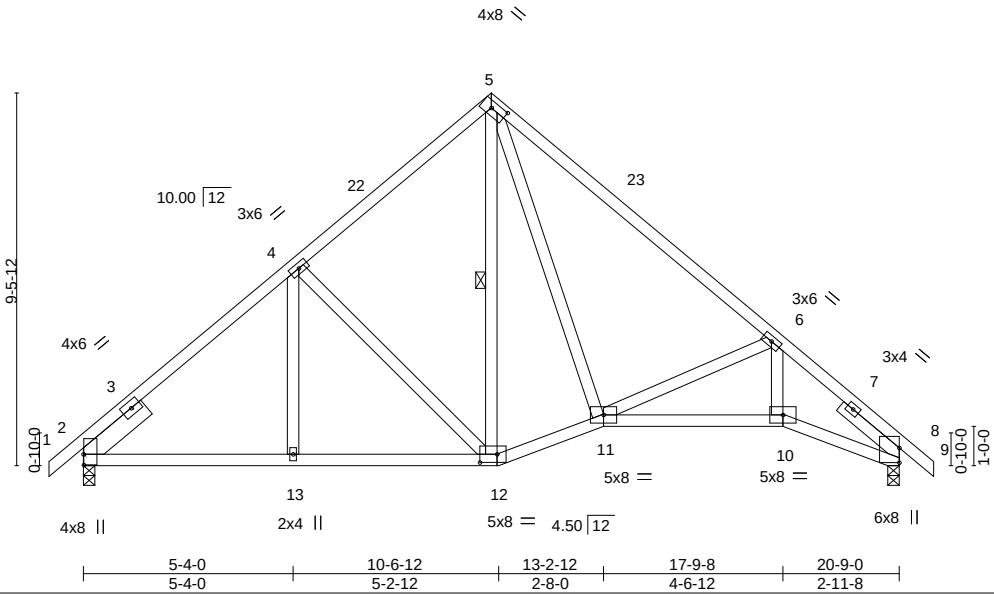

Plate Offsets (X,Y)-- [2:0-3-4,0-0-2], [5:0-4-13,0-2-0], [12:0-5-4,0-2-8]

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)	-0.07	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.14	10-11	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.09	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 104 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 2-0-0, Right 2x4 SPF No.2 2-0-0

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-12

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-220(LC 10)
Max Uplift 2=-113(LC 12), 8=-113(LC 13)
Max Grav 2=995(LC 1), 8=995(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1093/155, 4-5=-813/202, 5-6=-1114/196, 6-8=-1672/185
BOT CHORD 2-13=-133/812, 12-13=-133/812, 11-12=0/604, 10-11=-101/1208, 8-10=-100/1276
WEBS 4-12=-354/193, 6-11=-543/252, 6-10=0/365, 5-11=-32/557

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-4-8, Exterior(2R) 10-4-8 to 13-4-8, Interior(1) 13-4-8 to 21-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=113, 8=113.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	B3	GABLE	1	1	I49195029

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:31 2021 Page 1
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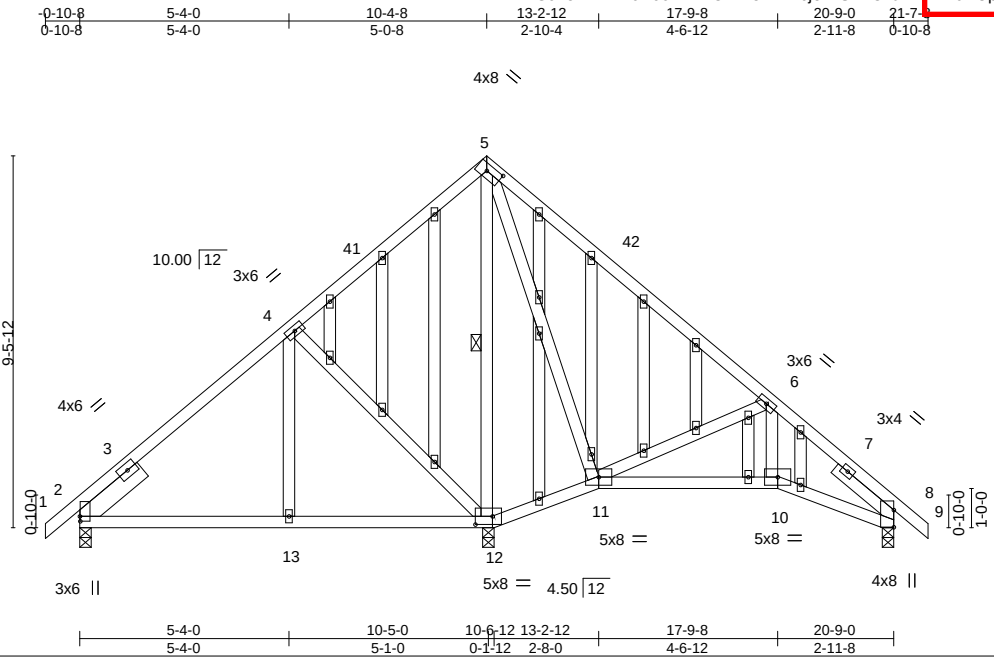

Plate Offsets (X,Y)-- [2:0-1-8,0-0-2], [5:0-4-13,0-2-0], [12:0-5-4,0-2-8]

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	0.52	Vert(LL)	0.03	13-35	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.05	10-11	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 144 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 5-12

REACTIONS. (size) 2=0-3-8, 12=0-3-8, 8=0-3-8
Max Horz 2=-220(LC 10)
Max Uplift 2=-66(LC 12), 12=-121(LC 13), 8=-52(LC 13)
Max Grav 2=481(LC 25), 12=1221(LC 1), 8=376(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 4-5=-60/296, 5-6=-97/264, 6-8=-386/89
BOT CHORD 2-13=-149/269, 12-13=-149/269, 10-11=-25/354, 8-10=-23/379
WEBS 4-12=-423/199, 5-12=-827/39, 6-11=-496/247

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-4-8, Exterior(2R) 10-4-8 to 13-4-8, Interior(1) 13-4-8 to 21-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Bearing at joint(s) 12, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8 except (jt=lb) 12=121.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	C1	GABLE	1	1	I49195030

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:32 2021 Page 1
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-0-10-8 5-3-6 10-6-12 11-5-4
0-10-8 5-3-6 5-3-6 0-10-8

4x6 =

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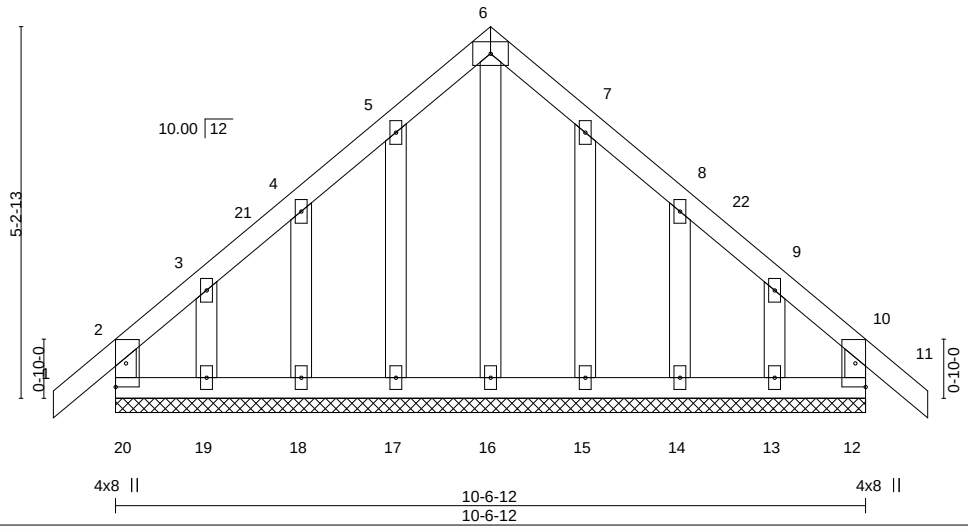

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	-0.00	11	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.00	11	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 54 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS. All bearings 10-6-12.
(lb) - Max Horz 20=-142(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 20, 12, 17, 18, 19, 15, 14, 13
Max Grav All reactions 250 lb or less at joint(s) 20, 12, 16, 17, 18, 19, 15, 14, 13

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

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 5-3-6, Corner(3R) 5-3-6 to 8-3-6, Exterior(2N) 8-3-6 to 11-5-4 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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 20, 12, 17, 18, 19, 15, 14, 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	D1	GABLE	1	1	I49195031

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:38 2021 Page 1
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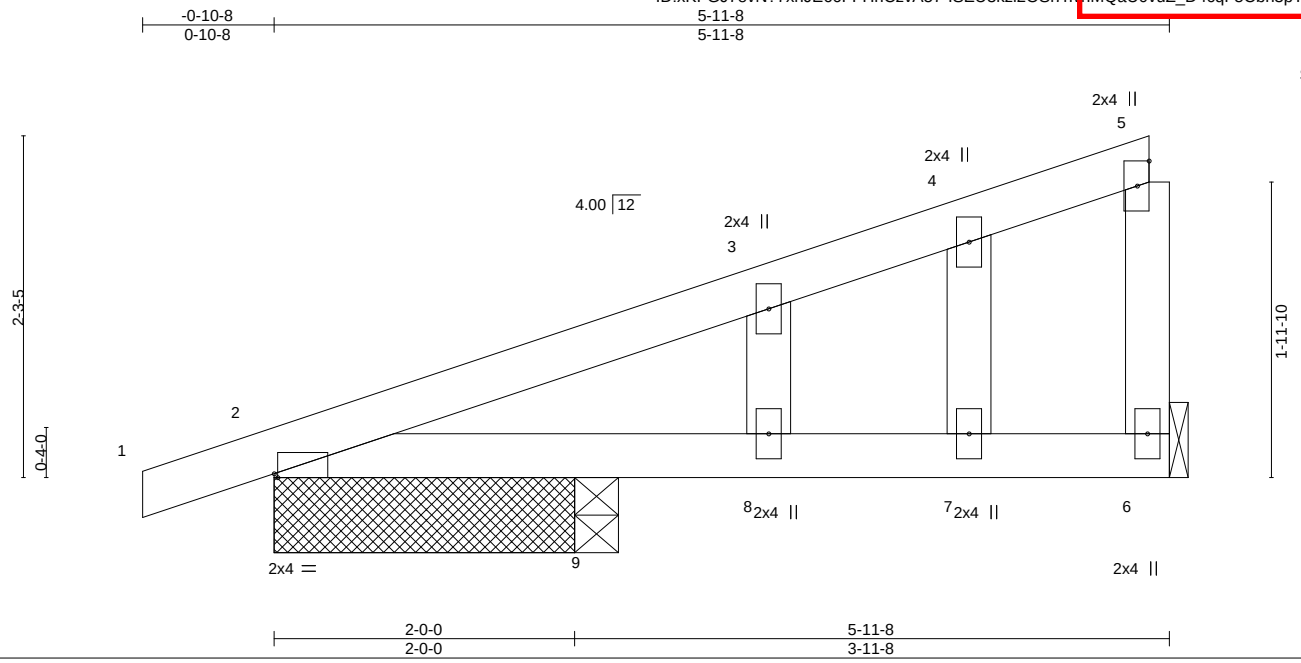

Plate Offsets (X,Y)-- [2:0-0-5,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	0.02	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	-0.02	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 19 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=2-0-0, 9=0-3-8, 6=Mechanical
Max Horz 2=83(LC 9)
Max Uplift 2=-44(LC 8), 9=-56(LC 12), 6=-31(LC 12)
Max Grav 2=158(LC 1), 9=269(LC 1), 6=155(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-8=-205/250

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 5-9-5 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable studs spaced at 1-4-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 9, 6.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	D2	Monopitch	5	1	I49195032

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:38 2021 Page 1
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Plate Offsets (X,Y)-- [2:0-1-13,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	0.44	Vert(LL)	-0.06	4-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.12	4-7	>569	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 17 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 4=Mechanical, 2=0-3-8
Max Horz 2=84(LC 11)
Max Uplift 4=-52(LC 12), 2=-76(LC 8)
Max Grav 4=257(LC 1), 2=327(LC 1)

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

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-9-12 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
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.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	D3	Monopitch	5	1	I49195033

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:34 2021 Page 1
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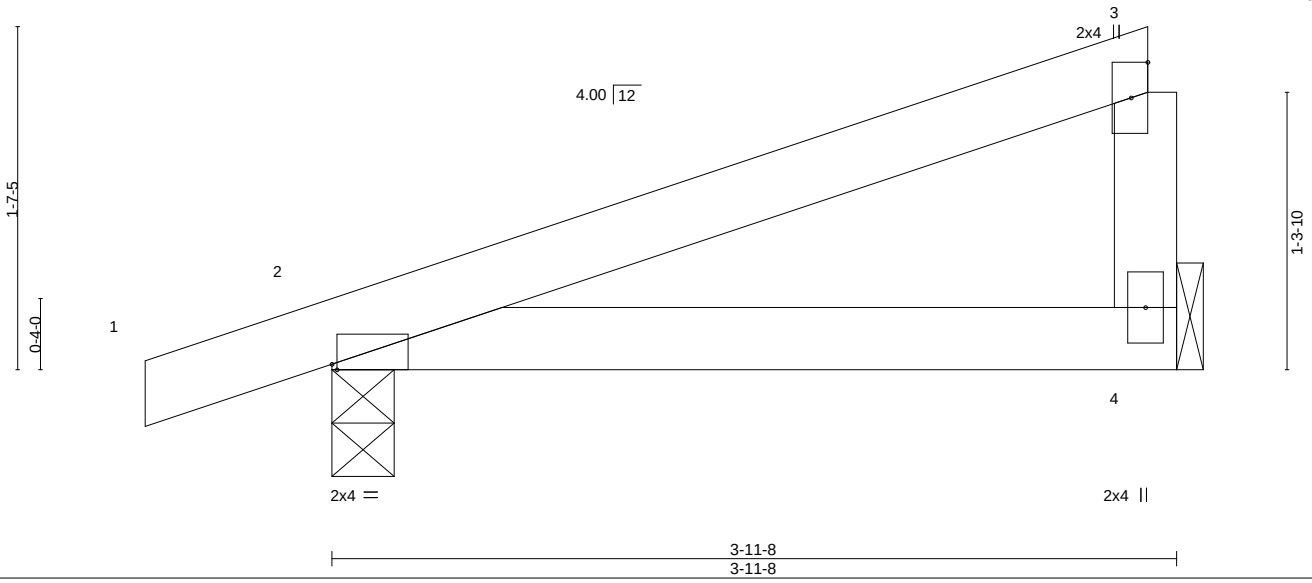

Plate Offsets (X,Y)-- [2:0-0-5,Edge]

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	0.17	Vert(LL)	-0.01	4-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-MP							Weight: 11 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 2=0-3-8
Max Horz 2=57(LC 11)
Max Uplift 4=-33(LC 12), 2=-63(LC 8)
Max Grav 4=165(LC 1), 2=240(LC 1)

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

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-9-12 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
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.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	D4	GABLE	1	1	I49195034
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:34 2021 Page 1
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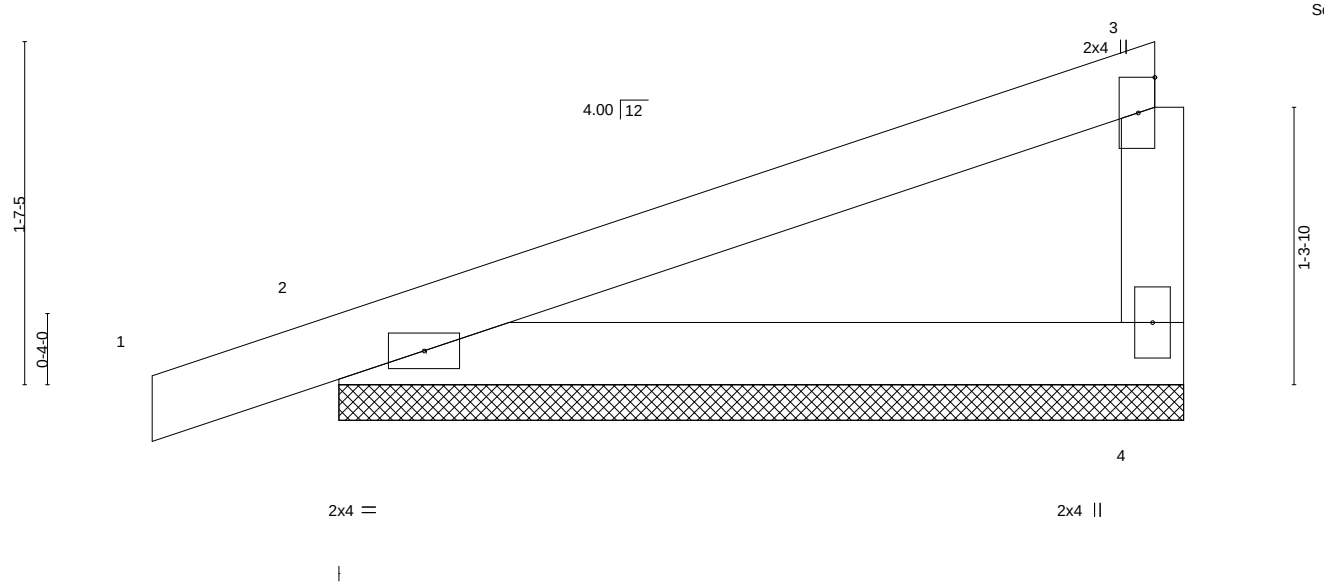

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 11 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=3-11-8, 2=3-11-8
Max Horz 2=57(LC 9)
Max Uplift 4=-33(LC 12), 2=-64(LC 8)
Max Grav 4=162(LC 1), 2=240(LC 1)

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

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 3-9-5 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 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) 4, 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	D5	Monopitch Structural Gable	7	1	I49195035

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:35 2021 Page 1
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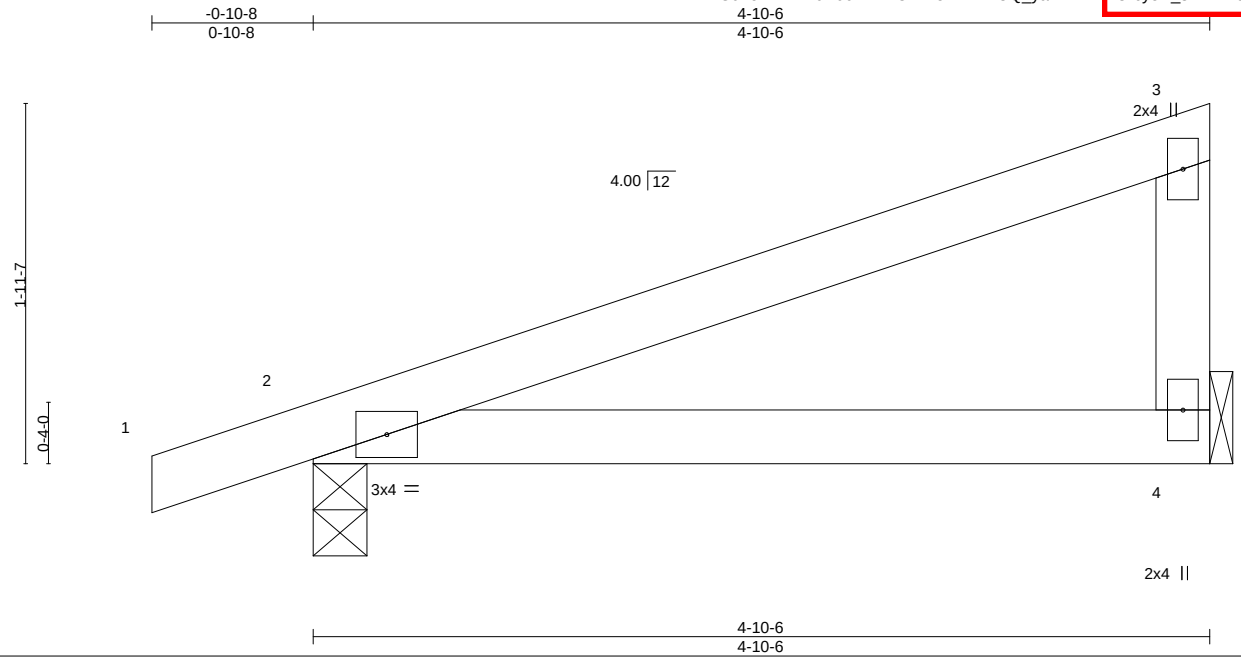

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.03	4-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.05	4-7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 14 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 4=Mechanical, 2=0-3-8
Max Horz 2=69(LC 11)
Max Uplift 4=-42(LC 12), 2=-69(LC 8)
Max Grav 4=207(LC 1), 2=279(LC 1)

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

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-8-10 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable studs spaced at 2-0-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	D6	Monopitch Supported Gable	1	1	I49195036 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:36 2021 Page 1
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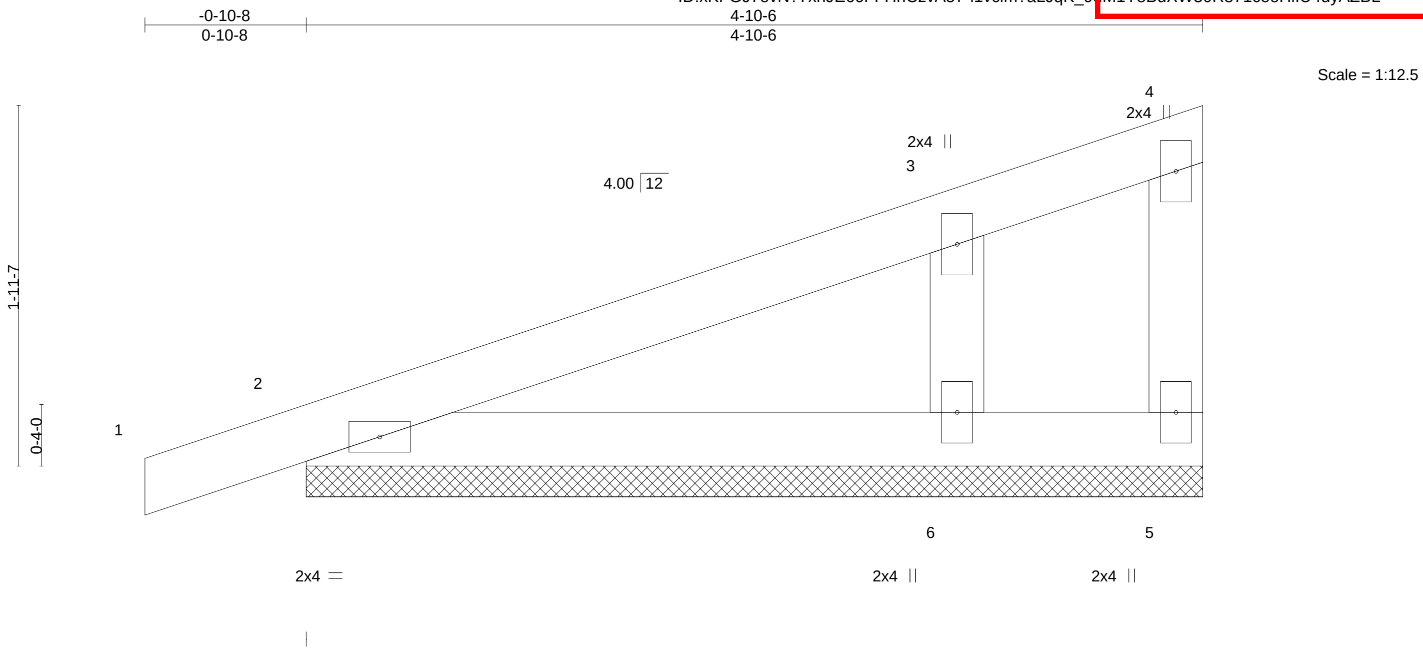

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 15 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 4-10-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=4-10-6, 2=4-10-6, 6=4-10-6
Max Horz 2=69(LC 11)
Max Uplift 5=-29(LC 1), 2=-53(LC 8), 6=-70(LC 12)
Max Grav 5=10(LC 12), 2=200(LC 1), 6=314(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-6=-240/318

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 4-8-10 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 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) 5, 2, 6.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	E1	Common Supported Gable	1	1	I49195037

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:37 2021 Page 1
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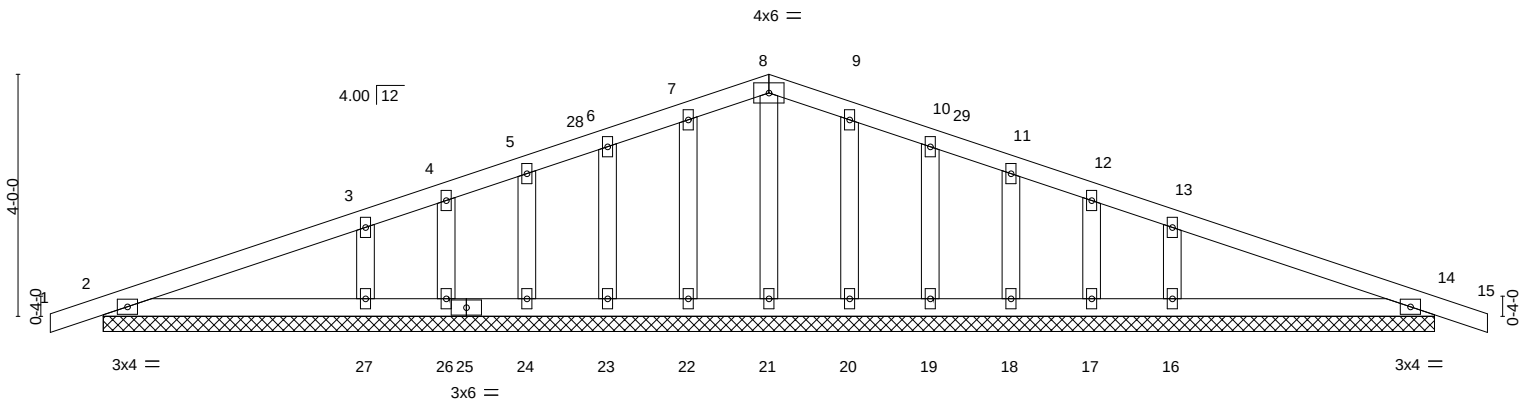

22-0-0
22-0-0

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	0.21	Vert(LL)	0.01	15	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.01	15	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 82 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 22-0-0.
(lb) - Max Horz 2=63(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 2, 22, 23, 24, 26, 27, 20, 19, 18, 17, 16, 14
Max Grav All reactions 250 lb or less at joint(s) 2, 21, 22, 23, 24, 26, 20, 19, 18, 17, 14 except 27=417(LC 25), 16=417(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-27=-303/147, 13-16=-303/147

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 11-0-0, Corner(3R) 11-0-0 to 14-0-0, Exterior(2N) 14-0-0 to 22-10-8 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 22, 23, 24, 26, 27, 20, 19, 18, 17, 16, 14.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey	I49195038
3008813	E2	Common	4	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:38 2021 Page 1
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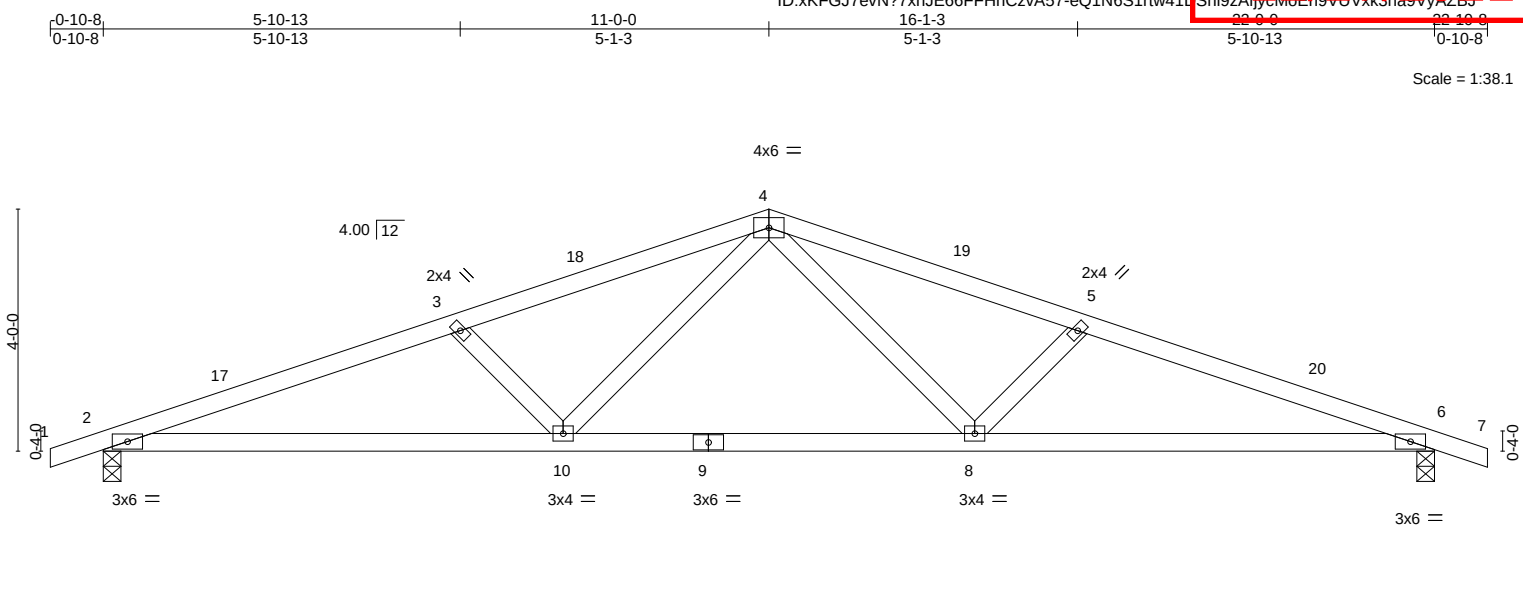

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.12	10	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.25	10-13	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.06	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 70 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 2=0-3-8, 6=0-3-8
Max Horz 2=63(LC 12)
Max Uplift 2=-176(LC 8), 6=-176(LC 9)
Max Grav 2=1051(LC 1), 6=1051(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2359/458, 3-4=-2082/411, 4-5=-2082/411, 5-6=-2359/458
BOT CHORD 2-10=-380/2208, 8-10=-213/1483, 6-8=-381/2208
WEBS 4-8=-96/659, 5-8=-448/170, 4-10=-95/659, 3-10=-448/169

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior(1) 14-0-0 to 22-10-8 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=176, 6=176.
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.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	V1	Valley	1	1	I49195039

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:39 2021 Page 1
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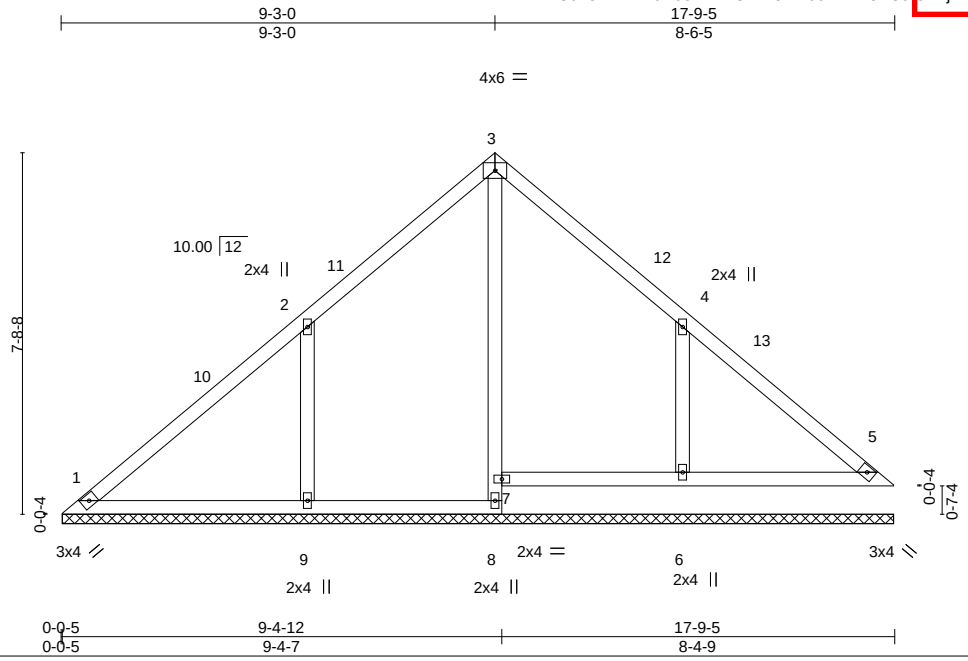

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 62 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 17-8-11.
(lb) - Max Horz 1=171(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 9=-227(LC 12), 6=-198(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 8 except 7=260(LC 22), 9=508(LC 19), 6=460(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-390/258, 4-6=-354/236

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 9-3-0, Exterior(2R) 9-3-0 to 12-3-0, Interior(1) 12-3-0 to 17-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 9=227, 6=198.
7) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 5, 6.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	V2	Valley	1	1	I49195040

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:39 2021 Page 1
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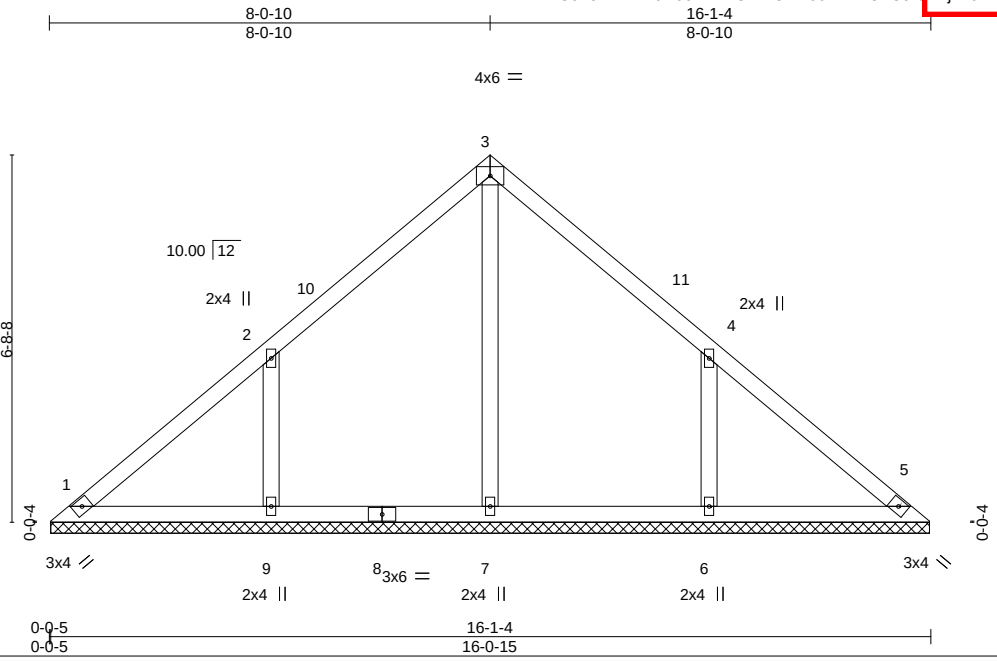

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 54 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 16-0-10.
(lb) - Max Horz 1=149(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-194(LC 12), 6=-193(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=255(LC 1), 9=426(LC 19), 6=426(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-333/222, 4-6=-333/222

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 8-0-10, Exterior(2R) 8-0-10 to 11-0-10, Interior(1) 11-0-10 to 15-8-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=194, 6=193.
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.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	V3	Valley	1	1	I49195041
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:40 2021 Page 1
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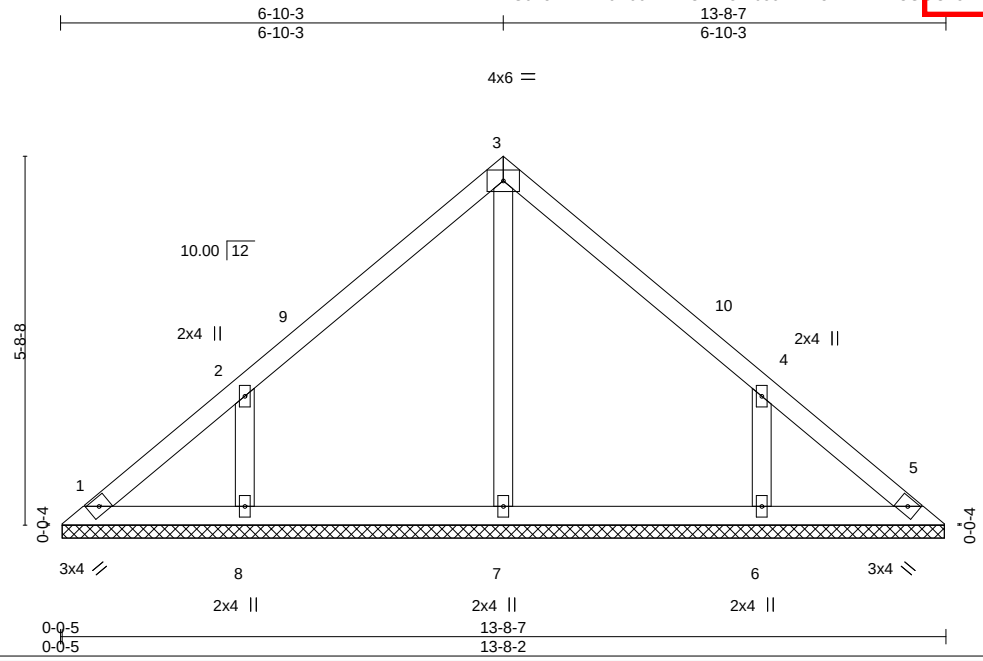


LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 45 lb	FT = 20%

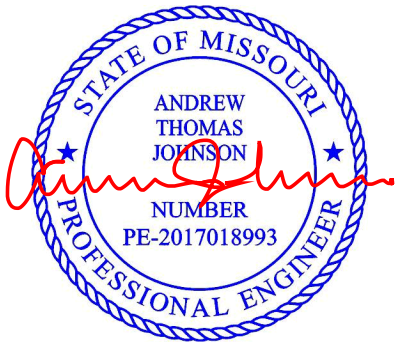
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 SPF No.2

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 13-7-13.
(lb) - Max Horz 1=-126(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-168(LC 12), 6=-168(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=273(LC 1), 8=364(LC 19), 6=364(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-292/197, 4-6=-292/196

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 6-10-3, Exterior(2R) 6-10-3 to 9-10-3 , Interior(1) 9-10-3 to 13-3-9 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
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=168, 6=168.
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.



December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	V4	GABLE	1	1	I49195042
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:41 2021 Page 1
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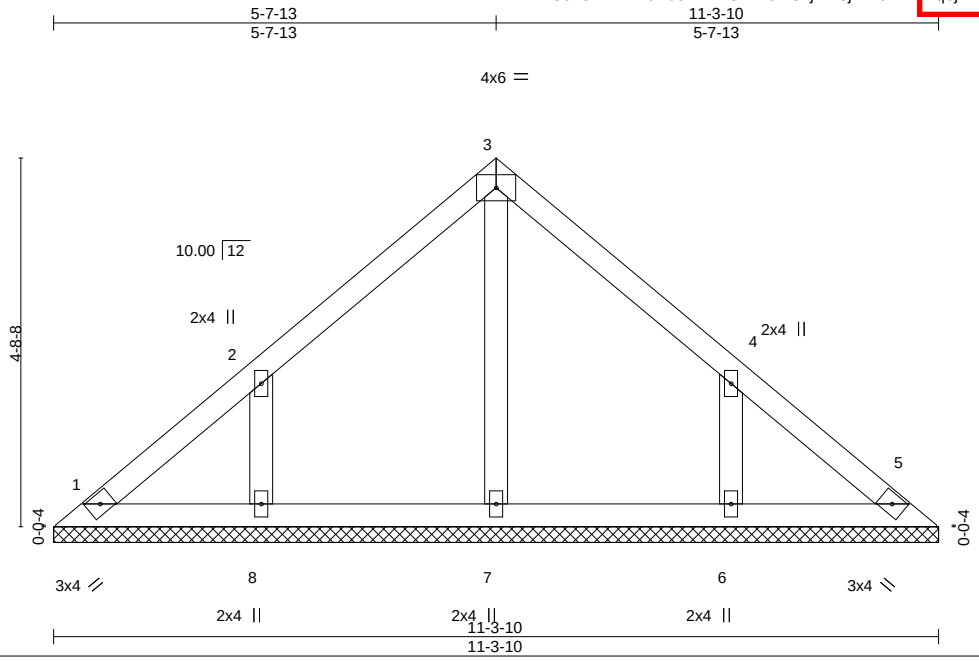

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 37 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
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 11-3-10.
(lb) - Max Horz 1=103(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-133(LC 12), 6=-133(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=292(LC 19), 6=291(LC 20)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 5-7-13, Exterior(2R) 5-7-13 to 8-7-13 , Interior(1) 8-7-13 to 10-10-13 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
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=133, 6=133.
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.

December 10,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/152 Cobey
3008813	V5	GABLE	1	1	I49195043
					Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Dec 9 12:31:42 2021 Page 1
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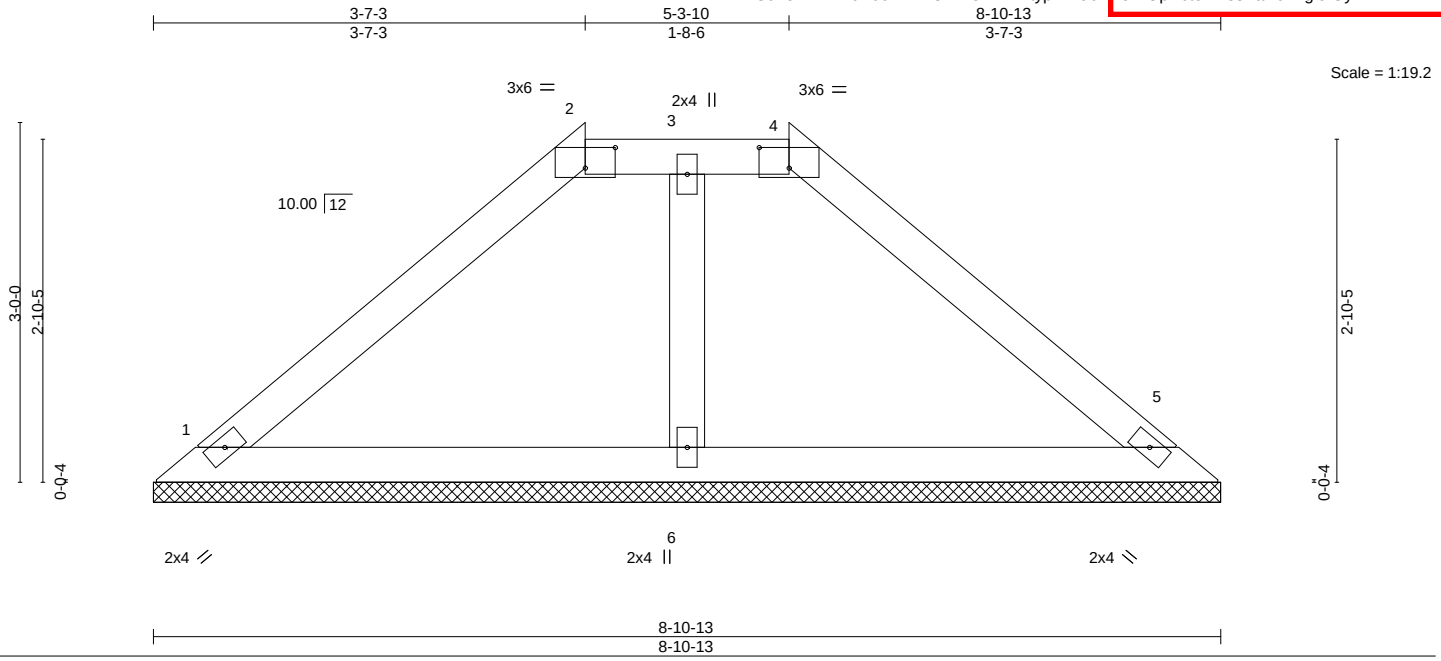


Plate Offsets (X,Y)-- [2:0-3-0,0-2-1], [4:0-3-0,0-2-1]

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	0.17	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							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, except 2-0-0 oc purlins (6-0-0 max.): 2-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=8-10-13, 5=8-10-13, 6=8-10-13
Max Horz 1=61(LC 9)
Max Uplift 1=-55(LC 12), 5=-60(LC 13)
Max Grav 1=255(LC 1), 5=255(LC 1), 6=226(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-263/134, 4-5=-263/143

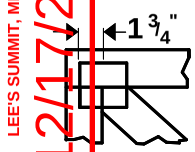
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical 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) Gable requires continuous bottom chord bearing.
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) 1, 5.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

December 10,2021

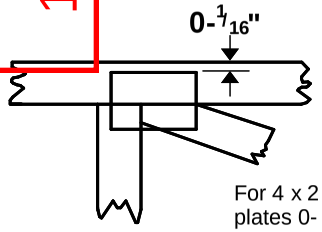
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

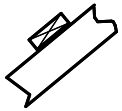
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

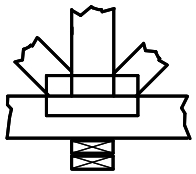
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

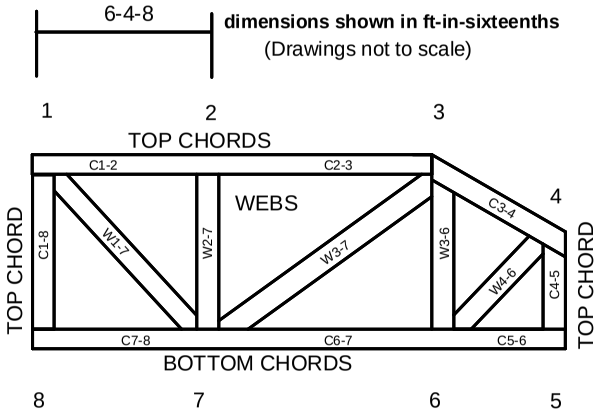


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

21.The design does not take into account any dynamic or other loads other than those expressly stated.