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

11/11/2020

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

Re: 201753
Walker Custom

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

Pages or sheets covered by this seal: I42983777 thru I42983788

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

Missouri COA: Engineering 001193

September 28,2020

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.

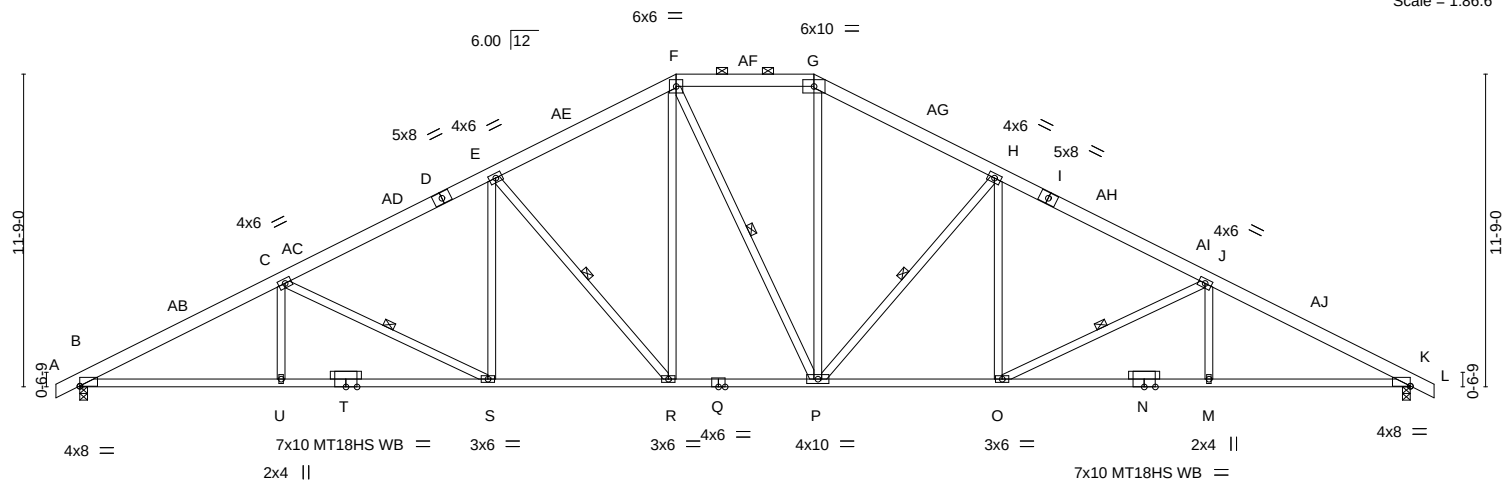
Job	Truss	Truss Type		Qty	Ply	Walker Custom
201753	A1	Piggyback Base		2	1	I42983777
						Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI
11/11/2020

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:24 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-_At6x2gOU12FrGbuRonOPea_9Jjzrrby5U9TqWyZ7?9

-0-10-12	7-6-13	15-5-13	22-4-15	27-7-1	34-6-3	42-5-3	50-0-0	50-10-12
0-10-12	7-6-13	7-11-0	6-11-2	5-2-3	6-11-2	7-11-0	7-6-13	0-10-12

Scale = 1:86.6



7-6-13	15-5-13	22-4-15	27-7-1	34-6-3	42-5-3	50-0-0
7-6-13	7-11-0	6-11-2	5-2-3	6-11-2	7-11-0	7-6-13

Plate Offsets (X,Y)-- [B:0-0-0,0-0-2], [K:0-0-0,0-0-2]

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	25.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.40	R	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.64	S-U	>939	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.33	K	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 351 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-0-5 oc purlins, except 2-0-0 oc purlins (4-3-9 max.): F-G.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: B-U,K-M.
WEBS 1 Row at midpt C-S, E-R, F-P, H-P, J-O

REACTIONS. (size) B=0-3-8, K=0-3-8
Max Horz B=196(LC 12)
Max Uplift B=-266(LC 12), K=-266(LC 13)
Max Grav B=2910(LC 33), K=2910(LC 33)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-5597/477, C-E=-4823/483, E-F=-3834/491, F-G=-3216/479, G-H=-3836/491, H-J=-4821/483, J-K=-5598/477
BOT CHORD B-U=-505/4900, S-U=-505/4900, R-S=-306/4161, P-R=-123/3212, O-P=-198/4159, M-O=-313/4901, K-M=-313/4901
WEBS C-U=0/299, C-S=-825/222, E-S=-7/529, E-R=-1432/278, F-R=-141/1197, F-P=-347/360, G-P=-84/1191, H-P=-1423/278, H-O=-7/527, J-O=-828/223, J-M=0/299

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-12 to 4-1-4, Interior(1) 4-1-4 to 15-4-1, Exterior(2R) 15-4-1 to 34-6-3, Interior(1) 34-6-3 to 45-10-12, Exterior(2E) 45-10-12 to 50-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
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) except (jt=lb) B=266, K=266.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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

Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	A1G	GABLE	2	1	I42983778

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:28 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-sx7cmPjuYGYgKtuggerKZUknIwJTnnuX067gzHyZ7?5

11/12/2020

-0-10-12 22-4-15 27-7-1 50-0-0 50-10-12
0-10-12 22-4-15 5-2-3 22-4-15 0-10-12

Scale = 1:87.5

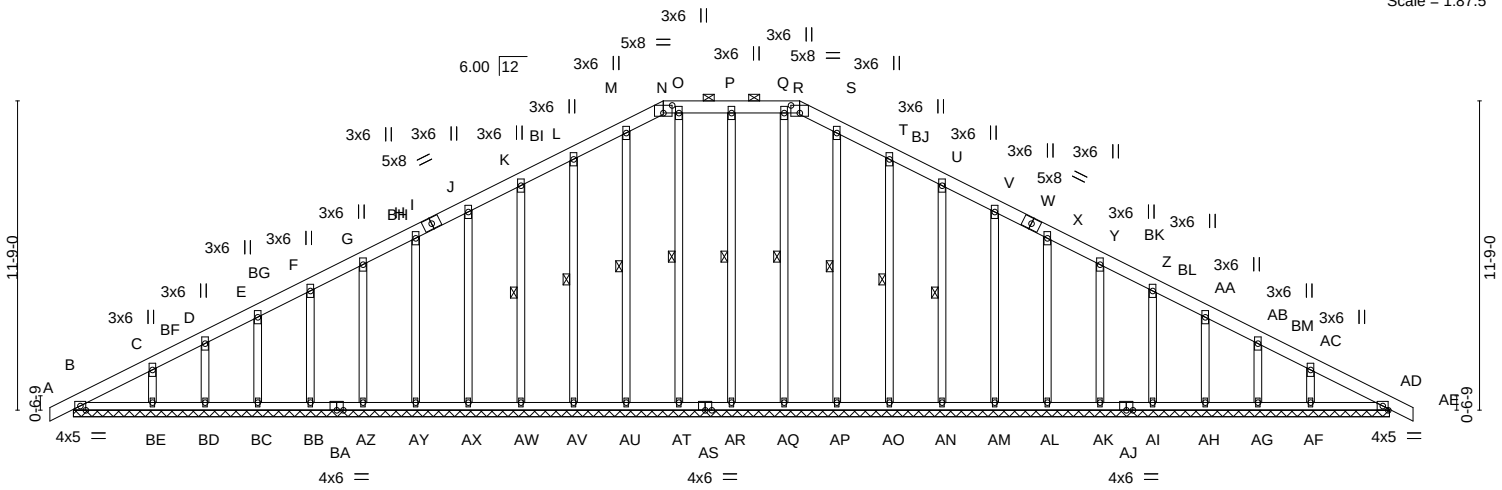


Plate Offsets (X,Y)-- [N:0-4-0,0-3-8], [R:0-4-0,0-3-8]

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	0.08	Vert(LL)	0.00	AD	n/r	120	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	AD	n/r	90		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.01	AD	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 431 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): N-R.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt P-AR, O-AT, M-AU, L-AV, K-AW, Q-AQ, S-AP, T-AO, U-AN

REACTIONS. All bearings 50-0-0.
(lb) - Max Horz B=196(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) B, AR, AU, AV, AW, AX, AY, AZ, BB, BC, BD, BE, AO, AN, AM, AL, AK, AI, AH, AG, AF
Max Grav All reactions 250 lb or less at joint(s) B, AD, AT, BC, BD, AQ, AH, AG except AR=287(LC 32), AU=260(LC 33), AV=284(LC 33), AW=279(LC 33), AX=278(LC 33), AY=278(LC 33), AZ=282(LC 33), BB=253(LC 33), BE=256(LC 33), AP=260(LC 33), AO=284(LC 33), AN=279(LC 33), AM=278(LC 33), AL=278(LC 33), AK=282(LC 33), AI=253(LC 33), AF=256(LC 33)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD J-K=-102/293, K-L=-121/342, L-M=-141/394, M-N=-147/407, N-O=-139/396, O-P=-139/396, P-Q=-139/396, Q-R=-139/396, R-S=-147/407, S-T=-141/394, T-U=-121/342, U-V=-102/293

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-12 to 4-1-4, Exterior(2N) 4-1-4 to 17-4-15, Corner(3R) 17-4-15 to 32-7-1, Exterior(2N) 32-7-1 to 45-10-12, Corner(3E) 45-10-12 to 50-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) B, AR, AU, AV, AW, AX, AY, AZ, BB, BC, BD, BE, AO, AN, AM, AL, AK, AI, AH, AG, AF.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type		Qty	Ply	Walker Custom
201753	A2	PIGGYBACK	BASE	13	1	I42983779

Job Reference (optional)

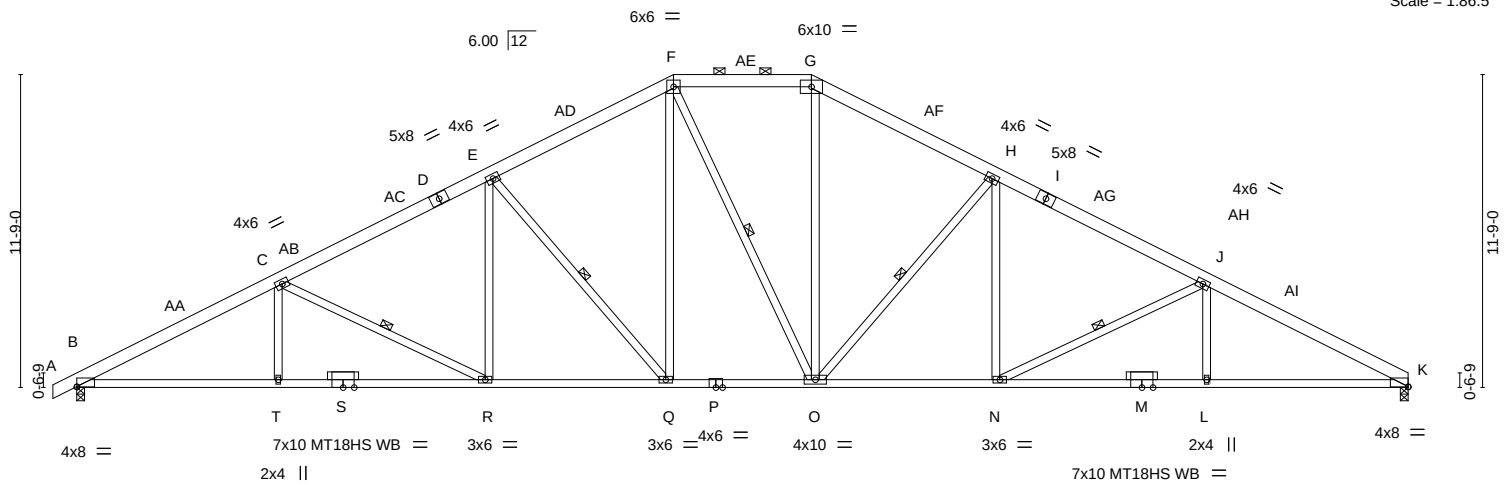
Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:30 2020 Page 1

ID:qtLxzIWUQcDgpd39wasymGzsryy-oKFNB5k94toOaB22o3uoevq0ekmMFZ4qUQcn2AyZ7?3

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
11/12/2020

-0-10-12	7-6-13	15-5-13	22-4-15	27-7-1	34-6-3	42-5-3	50-0-0
0-10-12	7-6-13	7-11-0	6-11-2	5-2-3	6-11-2	7-11-0	7-6-13

Scale = 1:86.5



7-6-13	15-5-13	22-4-15	27-7-1	34-6-3	42-5-3	50-0-0
7-6-13	7-11-0	6-11-2	5-2-3	6-11-2	7-11-0	7-6-13

Plate Offsets (X,Y)-- [B:0-0-0,0-0-2], [K:0-0-0,0-0-2]

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	25.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.40	Q	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.64	R-T	>939	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.33	K	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 349 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x4 SP 1650F 1.5E
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-0-6 oc purlins, except 2-0-0 oc purlins (4-3-9 max.): F-G.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt C-R, E-Q, F-O, H-O, J-N

REACTIONS. (size) B=0-3-8, K=0-3-8
Max Horz B=204(LC 12)
Max Uplift B=-266(LC 12), K=-246(LC 13)
Max Grav B=2911(LC 33), K=2847(LC 33)

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

TOP CHORD	B-C=-5599/480, C-E=-4824/486, E-F=-3835/493, F-G=-3217/482, G-H=-3838/494, H-J=-4824/489, J-K=-5605/490
BOT CHORD	B-T=-512/4901, R-T=-512/4901, Q-R=-313/4162, O-Q=-130/3213, N-O=-228/4162, L-N=-352/4909, K-L=-352/4909
WEBS	C-T=0/299, C-R=-825/222, E-R=-6/529, E-Q=-1432/278, F-Q=-140/1197, F-O=-342/360, G-O=-84/1191, H-O=-1425/278, H-N=-8/529, J-N=-834/225, J-L=0/300

NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-12 to 4-1-4, Interior(1) 4-1-4 to 15-4-1, Exterior(2R) 15-4-1 to 34-6-3, Interior(1) 34-6-3 to 45-0-0, Exterior(2E) 45-0-0 to 50-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
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) except (jt=lb) B=266, K=246.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

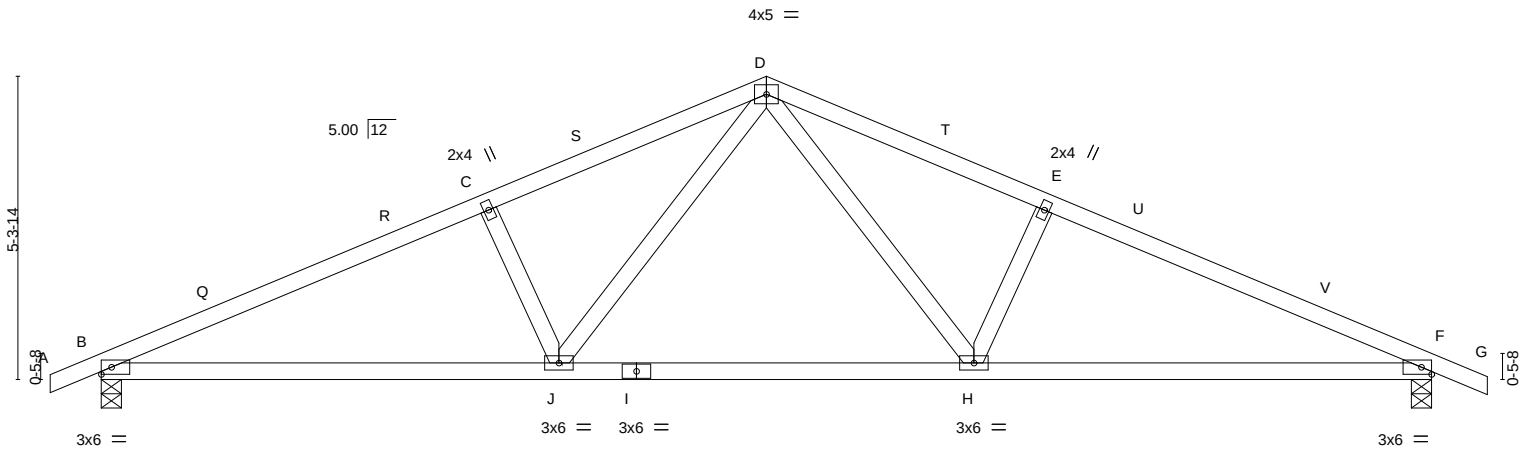
Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	B	Roof Special	5	1	I42983780

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:31 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-HWolPRlnrBwFBLdFMmP1B7MAE7Ap_7U_i4MKacyZ7?2

-0-10-12	6-9-9	11-8-2	16-6-11	23-4-4	24-4-0
0-10-12	6-9-9	4-10-9	4-10-9	6-9-9	0-11-12

Scale = 1:40.4



8-0-7	15-3-13	23-4-4
8-0-7	7-3-7	8-0-7

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.09	H-J	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.20	J-M	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.05	F	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 102 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3

BRACING-

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

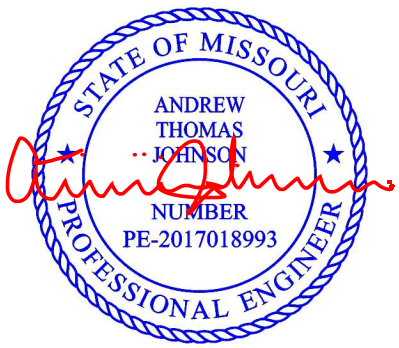
REACTIONS. (size) B=0-4-4, F=0-4-4
Max Horz B=-89(LC 13)
Max Uplift B=-136(LC 12), F=-137(LC 13)
Max Grav B=1163(LC 19), F=1169(LC 20)

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

TOP CHORD	B-C=-2122/324, C-D=-1920/344, D-E=-1918/343, E-F=-2120/323
BOT CHORD	B-J=-206/1883, H-J=-92/1221, F-H=-205/1881
WEBS	D-H=-117/811, E-H=-546/195, D-J=-117/813, C-J=-547/195

NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-12 to 2-1-4, Interior(1) 2-1-4 to 8-8-2, Exterior(2R) 8-8-2 to 14-8-2, Interior(1) 14-8-2 to 21-4-0, Exterior(2E) 21-4-0 to 24-4-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) B=136, F=137.
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.



September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

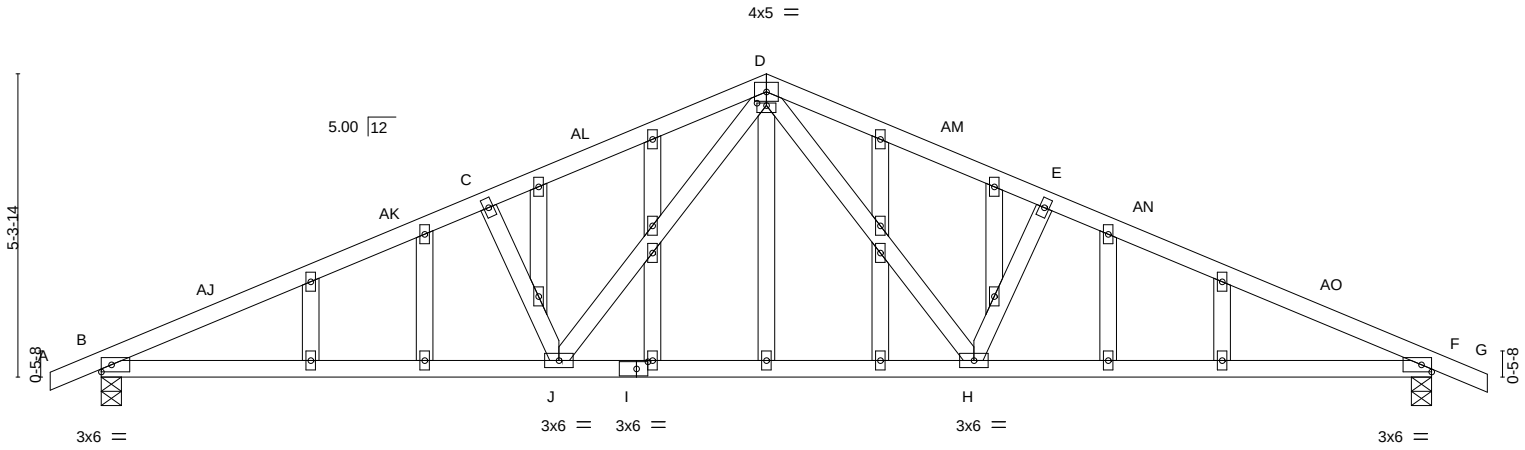
Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	BG	GABLE	1	1	I42983781

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:32 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-liM7cnmPcU26pUCRvUwGjKvL_XW2jak7xk5u63yZ7?1

-0-10-12 6-9-9 11-8-2 16-6-11 23-4-4 24-4-0
0-10-12 6-9-9 4-10-9 4-10-9 6-9-9 0-11-12

Scale = 1:40.4



8-0-7 15-3-13 23-4-4
8-0-7 7-3-7 8-0-7

Plate Offsets (X,Y)-- [D:0-2-0,0-0-8], [I:0-2-6,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.09	H-J	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.20	J-AF	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.05	F	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 138 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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

REACTIONS. (size) B=0-4-4, F=0-4-4
Max Horz B=-89(LC 13)
Max Uplift B=-136(LC 12), F=-137(LC 13)
Max Grav B=1163(LC 19), F=1169(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-2122/324, C-D=-1920/344, D-E=-1918/343, E-F=-2120/323
BOT CHORD B-J=-206/1883, H-J=-92/1221, F-H=-205/1881
WEBS D-H=-117/811, E-H=-546/195, D-J=-117/813, C-J=-547/195

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-12 to 2-1-4, Interior(1) 2-1-4 to 8-8-2, Exterior(2R) 8-8-2 to 14-8-2, Interior(1) 14-8-2 to 21-4-0, Exterior(2E) 21-4-0 to 24-4-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) B=136, F=137.
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.

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	C	Common	11	1	I42983782

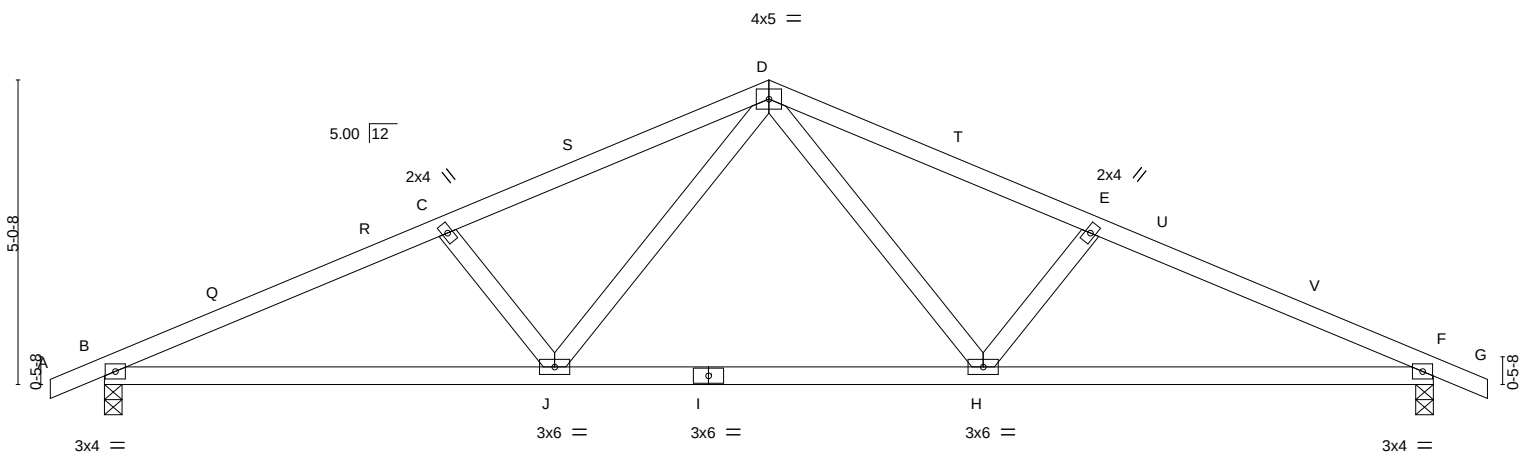
Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
11/11/2020

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:33 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-DvwVq7n1MoAzRendTBRVGYSUdxt0S2IGAOrRfVyZ7?0

-0-10-12	5-8-2	11-0-0	16-3-14	22-0-0	22-10-12
0-10-12	5-8-2	5-3-14	5-3-14	5-8-2	0-10-12

Scale = 1:38.1



7-5-7	14-6-9	22-0-0
7-5-7	7-1-2	7-5-7

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.10	H-J	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.19	H-J	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.05	F	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 97 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-9-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) B=0-3-8, F=0-3-8
Max Horz B=-83(LC 13)
Max Uplift B=-129(LC 12), F=-129(LC 13)
Max Grav B=1110(LC 19), F=1110(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-2077/335, C-D=-1792/319, D-E=-1792/319, E-F=-2077/335
BOT CHORD B-J=-227/1858, H-J=-98/1153, F-H=-227/1858
WEBS D-H=-80/694, E-H=-524/186, D-J=-80/694, C-J=-524/186

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-12 to 2-1-4, Interior(1) 2-1-4 to 8-0-0, Exterior(2R) 8-0-0 to 14-0-0, Interior(1) 14-0-0 to 19-10-12, Exterior(2E) 19-10-12 to 22-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) B=129, F=129.
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

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

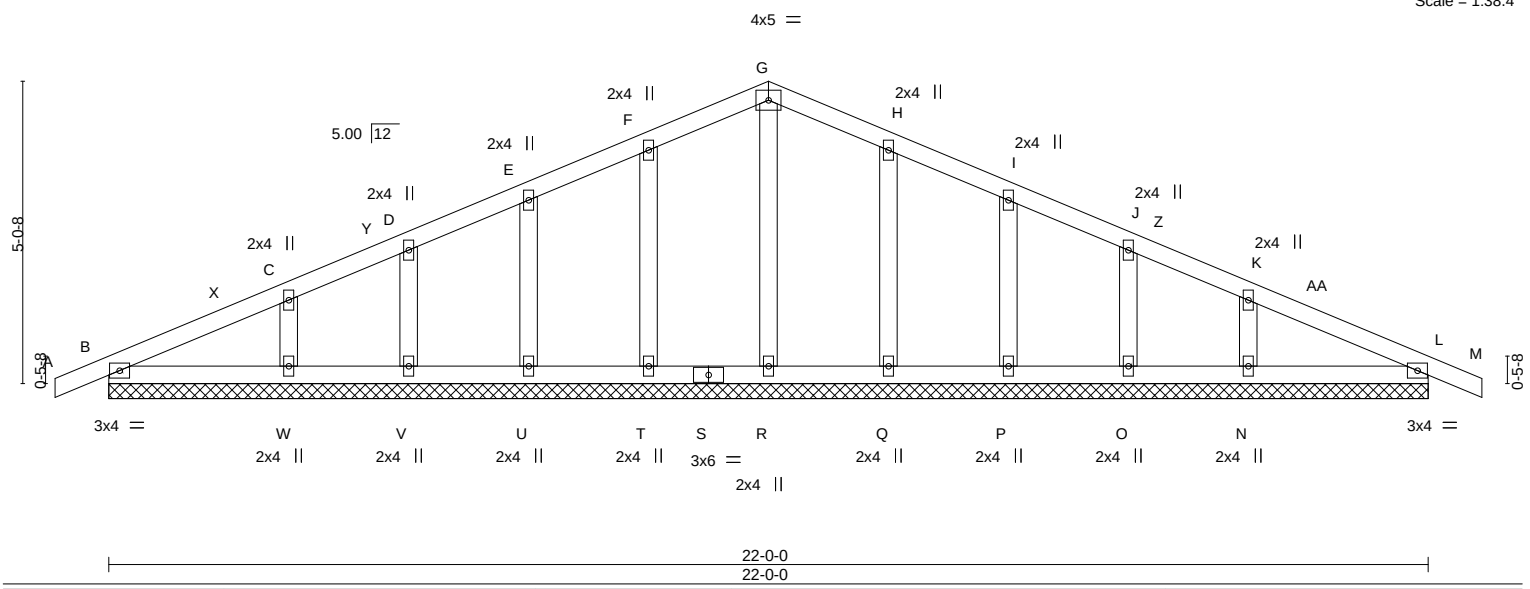
Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	CG	GABLE	2	1	I42983783

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:34 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-h5Uu1Tnf76Iq2oMp1vykpl_pKLMpBYIQO1a?BxyZ7??

-0-10-12 11-0-0 22-0-0 22-10-12
0-10-12 11-0-0 11-0-0 0-10-12

Scale = 1:38.4



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	0.11	Vert(LL)	-0.00	L	n/r	120	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	L	n/r	90		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	L	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 107 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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 B=-83(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) B, L, T, U, V, W, Q, P, O, N
Max Grav All reactions 250 lb or less at joint(s) B, L, R, V, O except T=268(LC 19), U=262(LC 19), W=259(LC 1), Q=268(LC 20), P=262(LC 20), N=259(LC 1)

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

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-12 to 2-1-4, Exterior(2N) 2-1-4 to 8-0-0, Corner(3R) 8-0-0 to 14-0-0, Exterior(2N) 14-0-0 to 19-10-12, Corner(3E) 19-10-12 to 22-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) B, L, T, U, V, W, Q, P, O, N.
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.

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

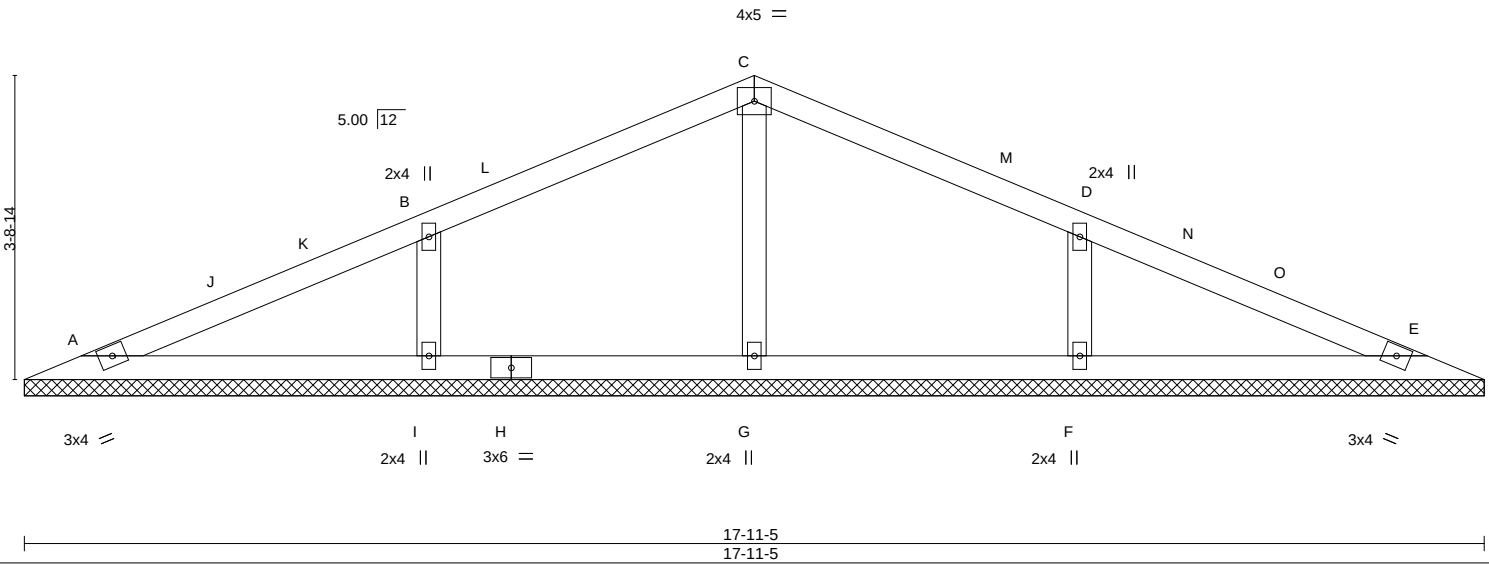
Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	V1	Valley	1	1	I42983784

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:35 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-9H2GEpoHuPQhgyw0bcTzLzXv8lglw_6ZdhKYjNyZ7?_

8-11-10 17-11-5
8-11-10 8-11-10

Scale = 1:28.3



17-11-5
17-11-5

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.15	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	E	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 63 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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 17-11-5.
(lb) - Max Horz A=58(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) A, E except I=-112(LC 12), F=-112(LC 13)
Max Grav All reactions 250 lb or less at joint(s) A, E except G=295(LC 18), I=609(LC 18), F=609(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS B-I=-504/179, D-F=-504/179

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-8-12 to 3-8-12, Interior(1) 3-8-12 to 5-11-10, Exterior(2R) 5-11-10 to 11-11-10, Interior(1) 11-11-10 to 14-2-9, Exterior(2E) 14-2-9 to 17-2-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) A, E except (jt=lb) I=112, F=112.
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.

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

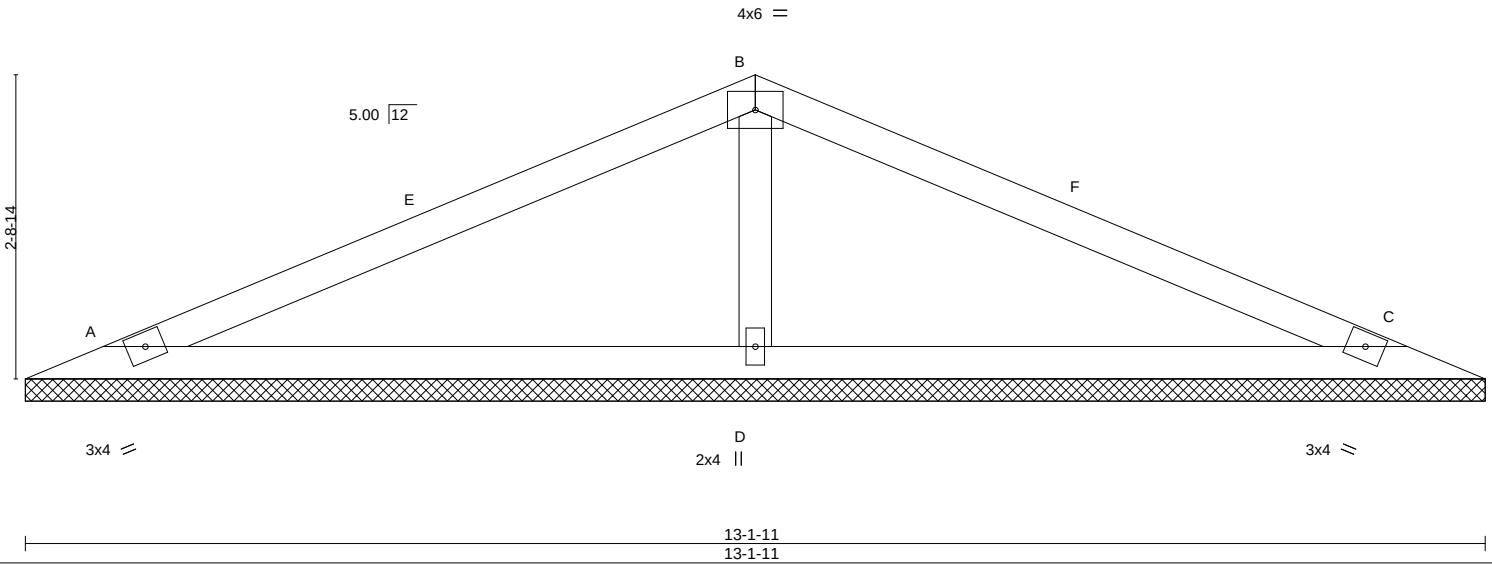
Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	V2	Valley	1	1	I42983785

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:35 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-9H2GEpoHuPQhgyw0bcTzLzXovldmw_HZdhKYjNyZ7?_

6-6-14 13-1-11
6-6-14 6-6-14

Scale = 1:20.7



13-1-11
13-1-11

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.34	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	C	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 42 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) A=13-1-11, C=13-1-11, D=13-1-11
Max Horz A=41(LC 12)
Max Uplift A=-44(LC 12), C=-51(LC 13), D=-29(LC 12)
Max Grav A=341(LC 18), C=341(LC 19), D=594(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS B-D=-417/230

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-8-12 to 3-8-12, Exterior(2R) 3-8-12 to 9-4-15, Exterior(2E) 9-4-15 to 12-4-15 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) A, C, D.
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.

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
11/11/2020

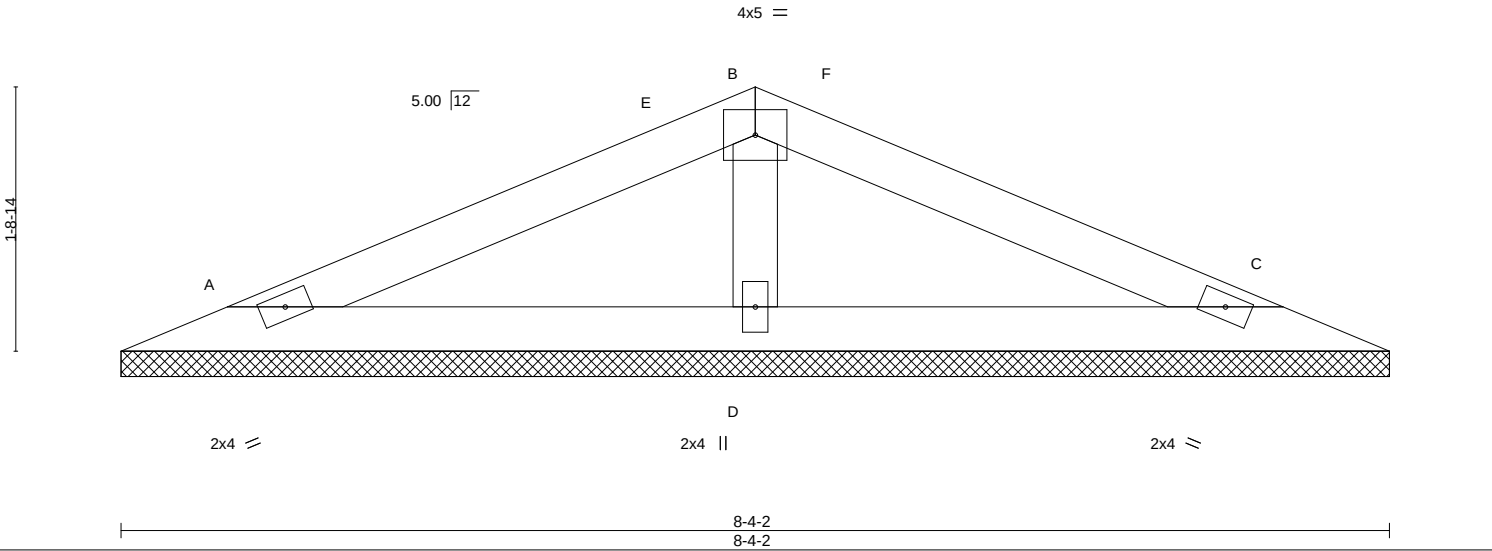
Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	V3	Valley	1	1	I42983786

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:36 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-dUceS8pwfjYYI6VC8K?CuA44i80OfS9jsL35EqyZ7_z

4-2-1 4-2-1 8-4-2 4-2-1

Scale = 1:15.2



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	C	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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

REACTIONS. (size) A=8-4-2, C=8-4-2, D=8-4-2
Max Horz A=-24(LC 13)
Max Uplift A=-32(LC 12), C=-36(LC 13), D=-5(LC 12)
Max Grav A=207(LC 18), C=207(LC 19), D=312(LC 1)

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

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-8-12 to 3-8-12, Exterior(2R) 3-8-12 to 4-7-6, Exterior(2E) 4-7-6 to 7-7-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) A, C, D.
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.

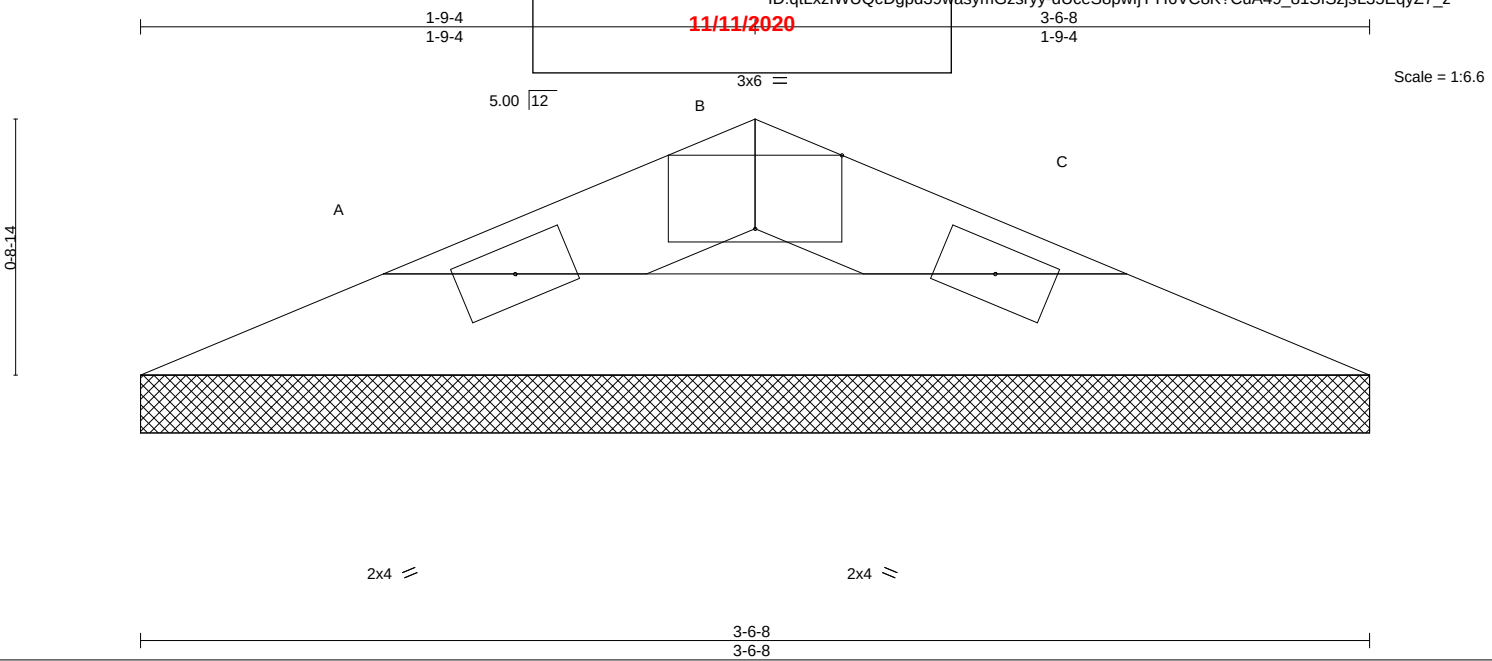
September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	V4	Valley	1	1	I42983787

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:36 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-dUceS8pwfjYYI6VC8K?CuA49_81SfSzjsL35EqyZ7_z



Scale = 1:6.6

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	C	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 9 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) A=3-6-8, C=3-6-8
Max Horz A=7(LC 12)
Max Uplift A=-10(LC 12), C=-10(LC 13)
Max Grav A=98(LC 18), C=98(LC 19)

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

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) A, C.
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.

September 28,2020

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

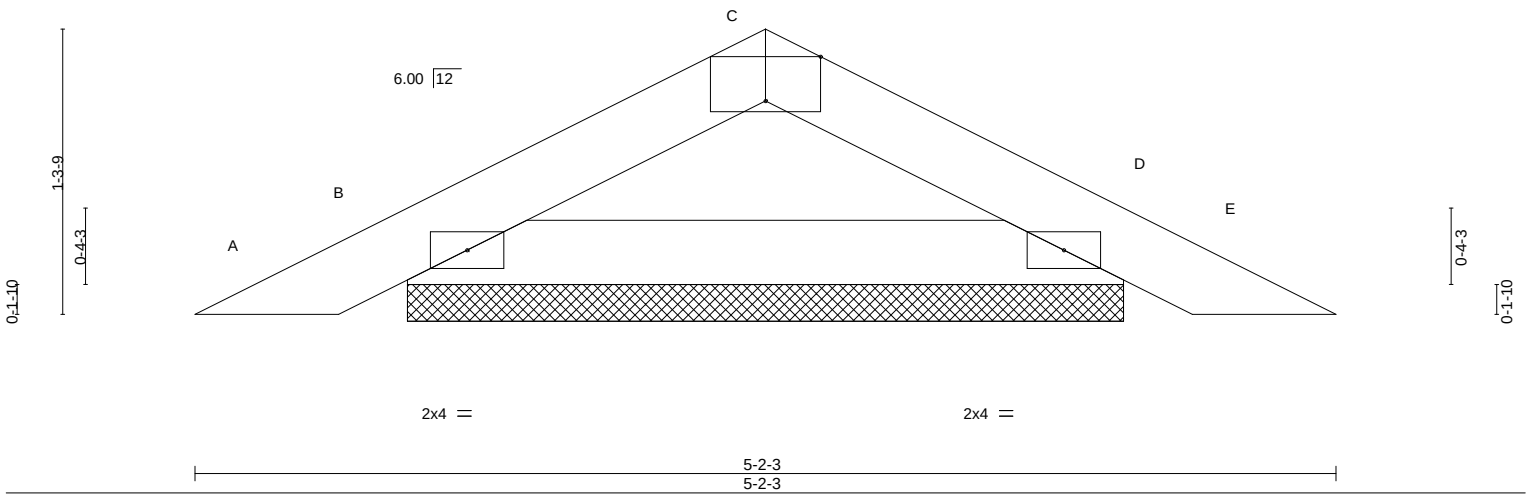
Job	Truss	Truss Type	Qty	Ply	Walker Custom
201753	Z	Piggyback	17	1	I42983788

Job Reference (optional)

Heartland Truss, Inc, Plattsburg, MO - 64477, 8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 28 11:09:37 2020 Page 1
ID:qtLxzIWUQcDgpd39wasymGzsryy-5gA0fUqYQ1hPvG4Oi1WRQOcKKYMVOvDs5?pfnGyZ7_y

2-7-1 5-2-3
2-7-1 2-7-1

Scale = 1:10.5



5-2-3
5-2-3

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	-0.00	D	n/r	120	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.13	Vert(CT)	0.00	D	n/r	90		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	D	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-2-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) B=3-3-0, D=3-3-0
Max Horz B=19(LC 12)
Max Uplift B=-30(LC 12), D=-30(LC 13)
Max Grav B=232(LC 19), D=232(LC 20)

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

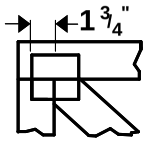
NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) Gable requires continuous bottom chord bearing.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) B, D.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

September 28,2020

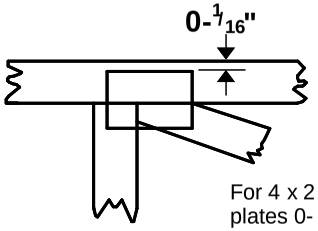
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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.

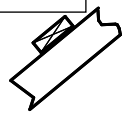
***Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 X 4

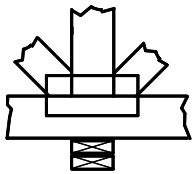
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



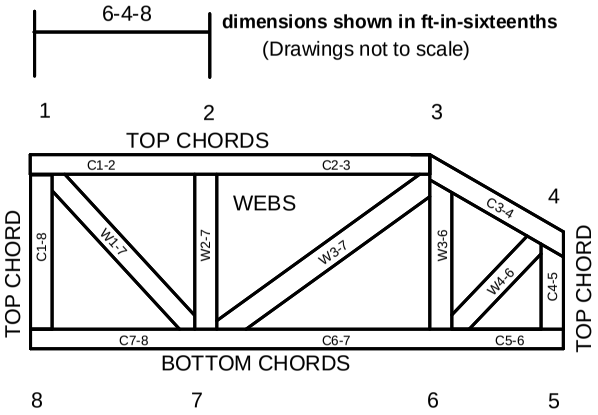
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
11/11/2020

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.