



CRANE CONSTRUCTION COMPANY

404 N US HIGHWAY 71, SAVANNAH, MO 64485

PO BOX 298, SAVANNAH, MO 64485

816-324-5951 • 816-324-3835

CRANE-CONSTRUCTION.COM

LETTER OF TRANSMITTAL

DATE 5/26/2022

TO Joe Stewart Architect

125 Highland Park Avenue

Excelsior Springs, MO 64024

PHONE 816-830-2754

FAX _____

EMAIL joe@jsa-kc.com

ATTENTION	Joe Stewart
JOB NO	
RE: Market Street Center Lee's Summit, MO Submittal #09 - Trusses	

WE ARE SENDING YOU via Email

COPIES	DATE CREATED	DESCRIPTION
1		Submittal #09 - Trusses - Layout, Calculations Mid-America Truss

REMARKS

For Review and Approval; Prompt Handling Requested, Thank You.

Crane Construction Company has reviewed the attached submittal and has approved on the basis that all materials will be provided and installed in strict accordance with the Contract Documents, no exceptions/substitutions. Crane Construction Company's review does no relieve the Subcontractor and/or Supplier the requirements set forth in the Contract Documents

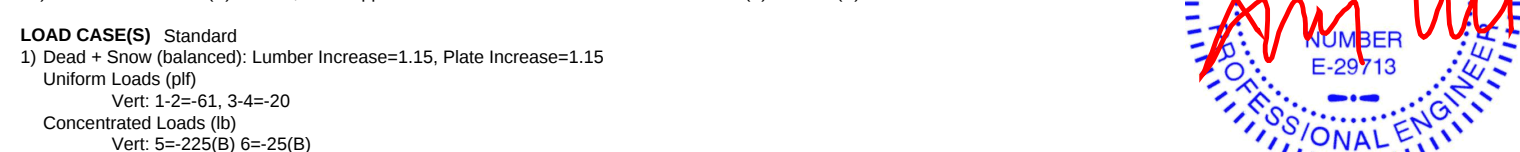
NCS

By: _____

Date: 5/26/22

SIGNED _____ Nick Salmons

Mid America Truss, Jefferson City, MO - 65101, 8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:07 2022 Page 1
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May 24, 2022

WARNING: Velly design parameters are READ NOTES ON THIS AND INCLUDED WITH REFERENCE PAGE MM-1473 (Rev. 3/29/2020) BEFORE USE. Design valid for use only with MITEK® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



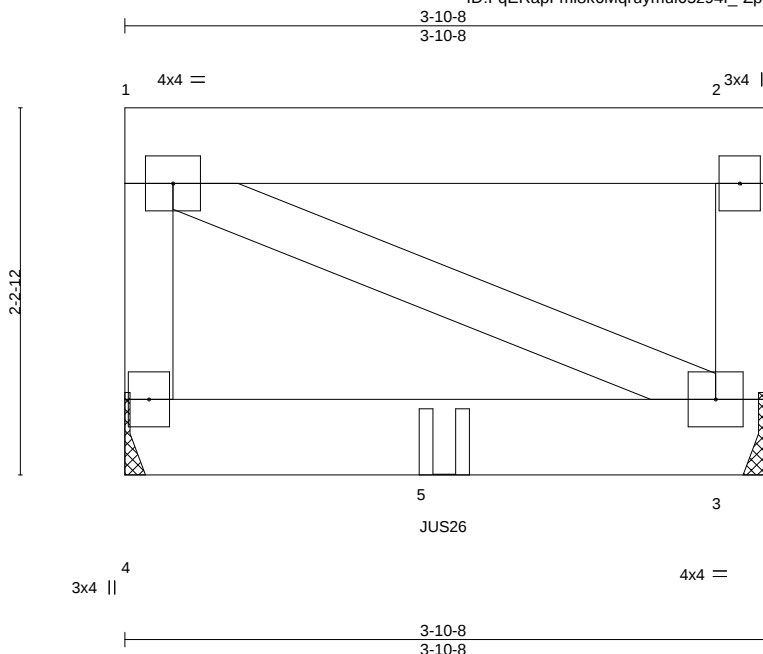
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	G02	Roof Special Girder	1	1	I52119458
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:09 2022 Page 1

ID:FqERapFml8k6Mqruymui65z94f_-Zp6MCKrYPG7xtimCb4BxO30YofOL_XtxNOBOLszDY0o



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.12	Vert(LL) -0.02	3-4	>999	360	MT20	244/190
Snow (Pf/Pg) 20.4/20.0	Plate Grip DOL 1.15	BC 0.70	Vert(CT) -0.04	3-4	>999	240		
TCDL 10.0	Lumber DOL 1.15	WB 0.02	Horz(CT) 0.00	3	n/a	n/a		
BCLL 0.0	Rep Stress Incr NO	Matrix-P						
BCDL 10.0	Code IBC2018/TPI2014						Weight: 27 lb	FT = 3%

LUMBER-

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

BRACING-

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

REACTIONS.

(size) 4=Mechanical, 3=Mechanical
Max Horz 4=-54(LC 11)
Max Uplift 4=-46(LC 11), 3=-46(LC 12)
Max Grav 4=480(LC 1), 3=481(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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- 3) Unbalanced snow loads have been considered for this design.
- 4) Provide adequate drainage to prevent water ponding.
- 5) Plates checked for a plus or minus 3 degree rotation about its center.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 4 and 46 lb uplift at joint 3.
- 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 9) Use USP JUS26 (With 4-10d nails into Girder & 4-10d nails into Truss) or equivalent at 1-11-4 from the left end to connect truss(es) to front face of bottom chord.
- 10) Fill all nail holes where hanger is in contact with lumber.
- 11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-61, 3-4=-20
Concentrated Loads (lb)
Vert: 5=-671(F)



May 24, 2022

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

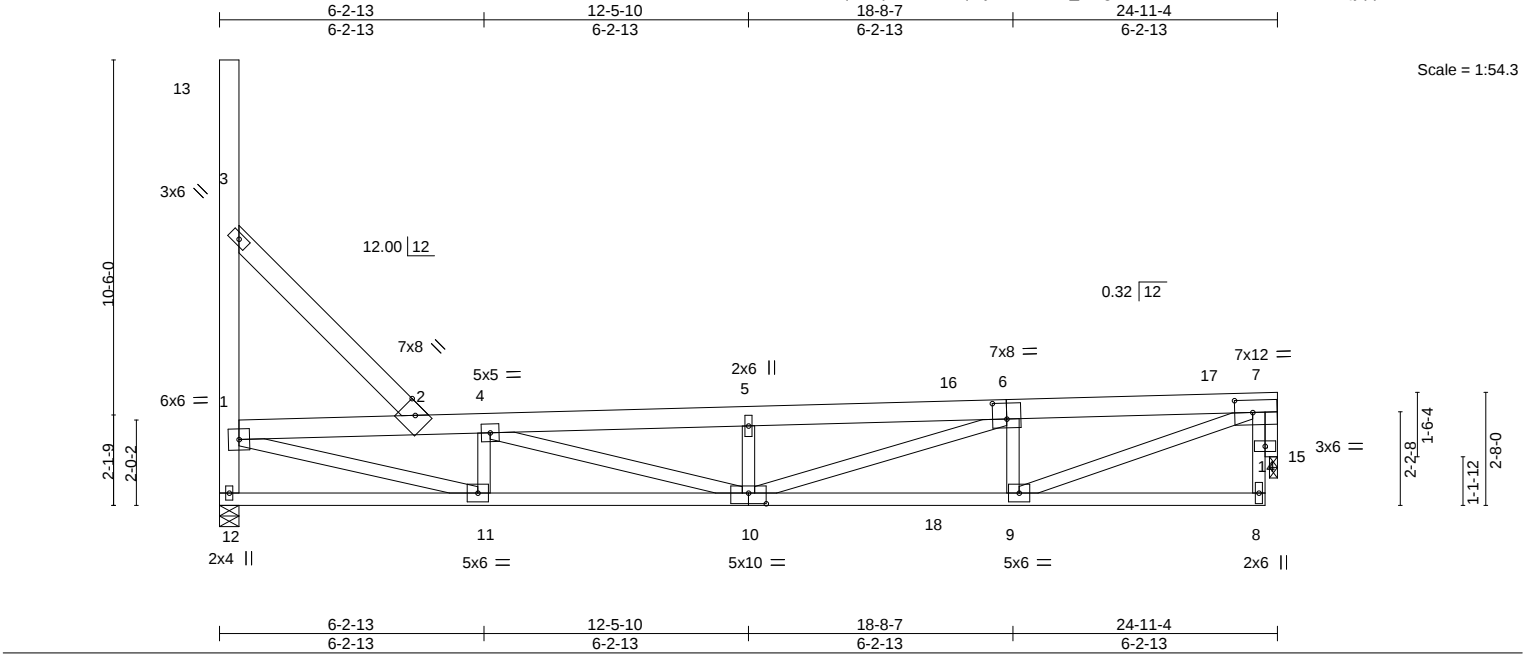
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M1	Monopitch	20	1	152119459
Mid America Truss, Jefferson City, MO - 65101,					Job Reference (optional)

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:10 2022 Page 1
ID:FqERapFmI8k6Mqruymui65z94f_-10gkPBIAAaFnVsLO9oiAwHYa03fQjq4c2xxulzDYo?



Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M1	Monopitch	20	1	I52119459
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:10 2022 Page 2
ID:FqERapFml8k6Mqruymui65z94f_-10gkPBIAAaFnVsLO9oiAwHYa03fQjq4c2xxulzDY0?

- LOAD CASE(S) Standard

Uniform Loads (plf)

Vert: 4-16=-51, 7-16=-71, 8-12=-20, 2-3=-51

Trapezoidal Loads (plf)

Vert: 1=-80-to-2=-19, 2=-69-to-4=-51

2) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 2-16=-60, 7-16=-103, 12-18=-20, 8-18=-40, 2-3=-60

3) Dead + 0.75 Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 2-16=-50, 7-16=-85, 12-18=-20, 8-18=-35, 2-3=-50

4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 4-16=-43, 7-16=-61, 8-12=-20, 2-3=-43

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-57-to-4=-43

5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 4-16=-27, 7-16=-40, 8-12=-20, 2-3=-27

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-41-to-4=-27

6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 4-16=-49, 16-17=-67, 7-17=-61, 8-12=-20, 2-3=-49

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-63-to-4=-49

21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 4-16=-29, 7-16=-43, 8-12=-20, 2-3=-29

Trapezoidal Loads (plf)

Vert: 1=-80-to-2=-19, 2=-48-to-4=-29

22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 4-16=-58, 16-17=-78, 7-17=-71, 8-12=-20, 2-3=-58

Trapezoidal Loads (plf)

Vert: 1=-80-to-2=-19, 2=-77-to-4=-58

24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 4-16=-38, 7-16=-68, 8-12=-20, 2-3=-37

Horz: 1-12=18, 1-3=18, 3-13=38, 2-7=-5, 8-14=5, 2-3=6

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-52-to-4=-38

25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 4-16=-31, 7-16=-51, 8-12=-20, 2-3=-53

Horz: 1-12=-5, 1-3=-5, 3-13=-38, 2-7=-12, 8-14=-18, 2-3=-10

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-45-to-4=-31

26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 4-16=-38, 7-16=-60, 8-12=-20, 2-3=-38

Horz: 1-12=14, 1-3=14, 3-13=-25, 2-7=-5, 8-14=3, 2-3=5

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-52-to-4=-38

27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 4-16=-31, 7-16=-50, 8-12=-20, 2-3=-31

Horz: 1-12=-3, 1-3=-3, 3-13=-25, 2-7=-12, 8-14=-14, 2-3=12

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-45-to-4=-31

28) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 2-16=-45, 7-16=-92, 12-18=-20, 8-18=-35, 2-3=-44

Horz: 1-12=18, 1-3=18, 3-13=38, 2-7=-5, 8-14=5, 2-3=6

29) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 2-16=-38, 7-16=-75, 12-18=-20, 8-18=-35, 2-3=-60

Horz: 1-12=-5, 1-3=-5, 3-13=-38, 2-7=-12, 8-14=-18, 2-3=-10

30) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 2-16=-45, 7-16=-84, 12-18=-20, 8-18=-35, 2-3=-45

Horz: 1-12=14, 1-3=14, 3-13=-25, 2-7=-5, 8-14=3, 2-3=5

31) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 2-16=-38, 7-16=-74, 12-18=-20, 8-18=-35, 2-3=-38

Horz: 1-12=-3, 1-3=-3, 3-13=-25, 2-7=-12, 8-14=-14, 2-3=12



May 24,2022

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M1	Monopitch	20	1	I52119459
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:10 2022 Page 3
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LOAD CASE(S) Standard

- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 4-16=-60, 7-16=-83, 8-12=-20, 2-3=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-2=-19, 2=-79-to-4=-60
- 35) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-16=-20, 7-16=-51, 12-18=-20, 8-18=-40, 2-3=-20
- 36) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-16=-60, 7-16=-103, 12-18=-20, 8-18=-40, 2-3=-60
- 37) 3rd Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-16=-20, 7-16=-46, 12-18=-20, 8-18=-35, 2-3=-20
- 38) 4th Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-16=-50, 7-16=-85, 12-18=-20, 8-18=-35, 2-3=-50



May 24, 2022

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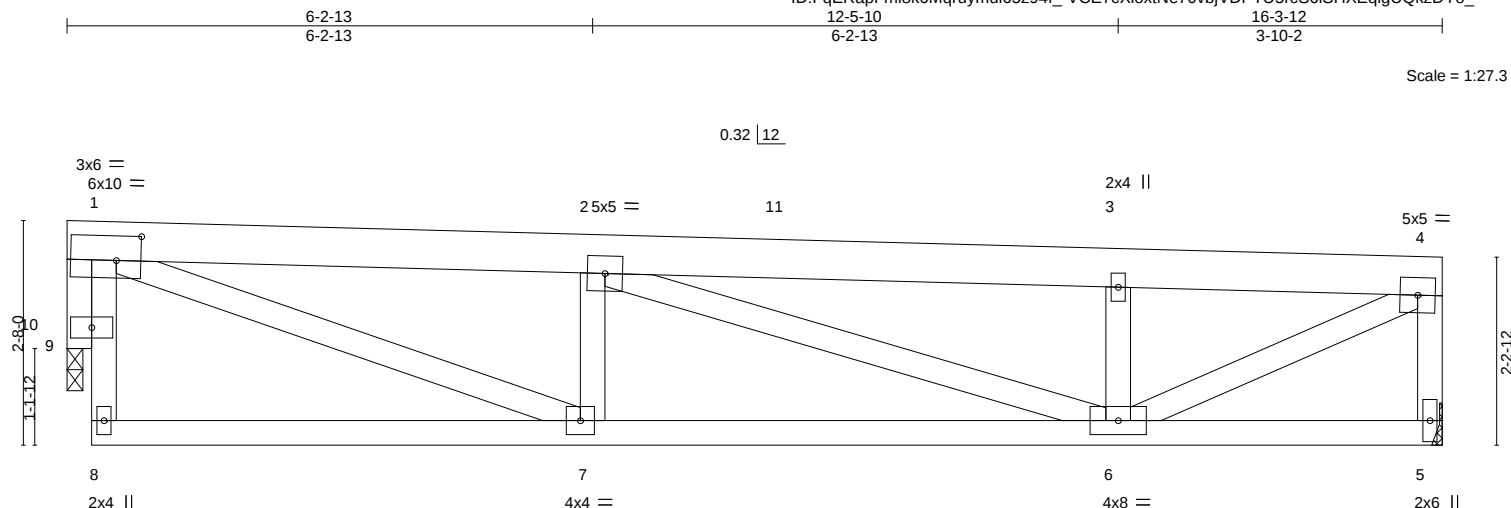
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



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6-2-13										12-5-10										16-3-12																													
6-2-13										6-2-13										3-10-2																													
Plate Offsets (X,Y)-- [1:0-3-8,0-3-8]																																																	
LOADING (psf)										SPACING- 2-0-0										CSI.					DEFL. in (loc) l/defl L/d										PLATES					GRIP									
TCLL (roof) 20.0										Plate Grip DOL 1.15										TC 0.29					Vert(LL) 0.07 6-7 >999 360										MT20					244/190									
Snow (Pf/Pg) 15.4/20.0										Lumber DOL 1.15										BC 0.51					Vert(CT) -0.11 6-7 >999 240																								
TCDL 10.0										Rep Stress Incr NO										WB 0.65																													
BCLL 0.0										Code IBC2018/TPI2014										Matrix-P																													
BCDL 10.0																																								Weight: 97 lb					FT = 3%				

LUMBER-		BRACING-	
TOP CHORD	2x6 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2		
WEBS	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 5-10-3 oc bracing.
OTHERS	2x4 SP No.2		

REACTIONS. (size) 5=Mechanical, 10=0-2-4
 Max Horz 10=-41(LC 11)
 Max Uplift 5=-37(LC 16), 10=-42(LC 12)
 Max Grav 5=691(LC 2), 10=748(LC 2)

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

TOP CHORD	1-2=-1483/1036, 2-3=-1119/786, 3-4=-1115/776, 4-5=-667/474
BOT CHORD	6-7=-997/1475
WEBS	1-7=-989/1463, 2-7=-403/449, 2-6=-382/250, 3-6=-327/356, 4-6=-830/1246, 1-10=-774/521

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
- 3) Unbalanced snow loads have been considered for this design.
- 4) Plates checked for a plus or minus 3 degree rotation about its center.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 10.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 5 and 42 lb uplift at joint 10.
- 9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-11=-71, 4-11=-51, 5-8=-20



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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M1B	Monopitch	1	1	152119461
Job Reference (optional)					

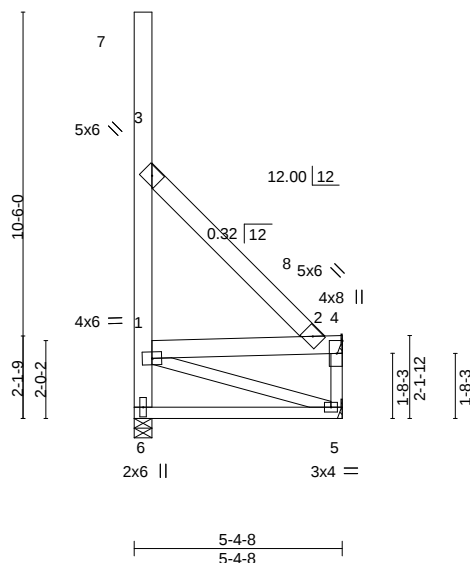
Mid America Truss, Jefferson City, MO - 65101,

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5-4-8
5-4-8

Scale = 1:59.5



LOADING (psf)	SPACING-	CSL.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.61	Vert(LL) 0.00	6	****	360		MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.27	Vert(CT) -0.04	5-6	>999	240			
TCDL 10.0	Lumber DOL 1.15	WB 0.38	Horz(CT) 0.01	4	n/a	n/a			
BCLL 0.0	Rep Stress Incr NO	Matrix-P							
BCDL 10.0	Code IBC2018/TPI2014								
								Weight: 67 lb	FT = 3%

LUMBER-

TOP CHORD 2x6 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
6-7: 2x6 SP No.1

BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-4-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS.

(size) 6=0-5-8, 4=Mechanical, 5=Mechanical
Max Horz 6=-406(LC 13)
Max Uplift 6=-460(LC 11), 4=-307(LC 12), 5=-62(LC 12)
Max Grav 6=696(LC 25), 4=467(LC 24), 5=162(LC 13)

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

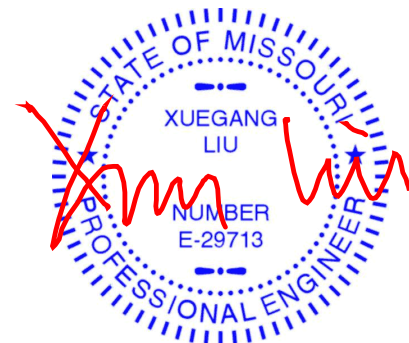
TOP CHORD 1-6=-646/1123, 1-3=-550/891, 1-2=-390/854, 2-3=-1035/570
BOT CHORD 5-6=-301/839
WEBS 1-5=-844/297

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-12 to 3-2-12, Interior(1) 3-2-12 to 5-2-12 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 3 degree rotation about its center.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 460 lb uplift at joint 6, 307 lb uplift at joint 4 and 62 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- Load case(s) 1, 4, 5, 6, 21, 22, 24, 25, 26, 27, 32 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 5-6=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-2=-6, 2=-57-to-4=-51, 3=-131-to-2=-57



May 24, 2022

Continued on page 2

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

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

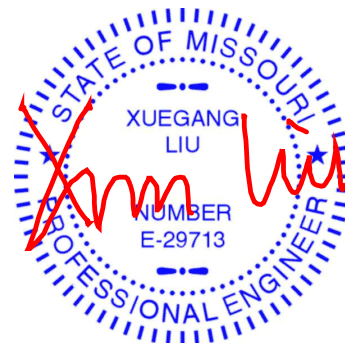
Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M1B	Monopitch	1	1	I52119461
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:12 2022 Page 2
ID:FqERapFml8k6Mqruymui65z94f_-zOoVqtmQiBVVKAUnHDke0iexPsVgBpwN3MQ2xAzDYnz

LOAD CASE(S) Standard

- 4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 5-6=-20
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-5, 2=-48-to-4=-43, 3=-103-to-2=-48
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 5-6=-20
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-5, 2=-32-to-4=-27, 3=-87-to-2=-32
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 5-6=-20
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-5, 2=-53-to-4=-48, 3=-108-to-2=-53
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 5-6=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-2=-6, 2=-36-to-4=-29, 3=-109-to-2=-36
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 5-6=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-2=-6, 2=-64-to-4=-57, 3=-137-to-2=-64
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 5-6=-20
Horz: 1-6=18, 1-3=18, 3-7=38, 2-4=-5, 4-5=5, 2-3=6
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-5, 2=-43-to-4=-38, 3=-97-to-2=-42
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 5-6=-20
Horz: 1-6=-5, 1-3=-5, 3-7=-38, 2-4=-12, 4-5=-18, 2-3=-10
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-5, 2=-35-to-4=-31, 3=-113-to-2=-57
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 5-6=-20
Horz: 1-6=14, 1-3=14, 3-7=-25, 2-4=-5, 4-5=3, 2-3=5
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-5, 2=-43-to-4=-38, 3=-98-to-2=-43
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 5-6=-20
Horz: 1-6=-3, 1-3=-3, 3-7=-25, 2-4=-12, 4-5=-14, 2-3=12
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-5, 2=-35-to-4=-31, 3=-91-to-2=-35
- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 5-6=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-2=-6, 2=-66-to-4=-60, 3=-100-to-2=-26



May 24, 2022

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER	152119462
MKT_ST_CTR	M1G	Roof Special Girder	2	1	Job Reference (optional)	

Mid America Truss, Jefferson City, MO 65101, Mitek

8.430 s Oct 22 2021 Mitek Industries, Inc. Tue May 24 12:53:30 2022 Page 1
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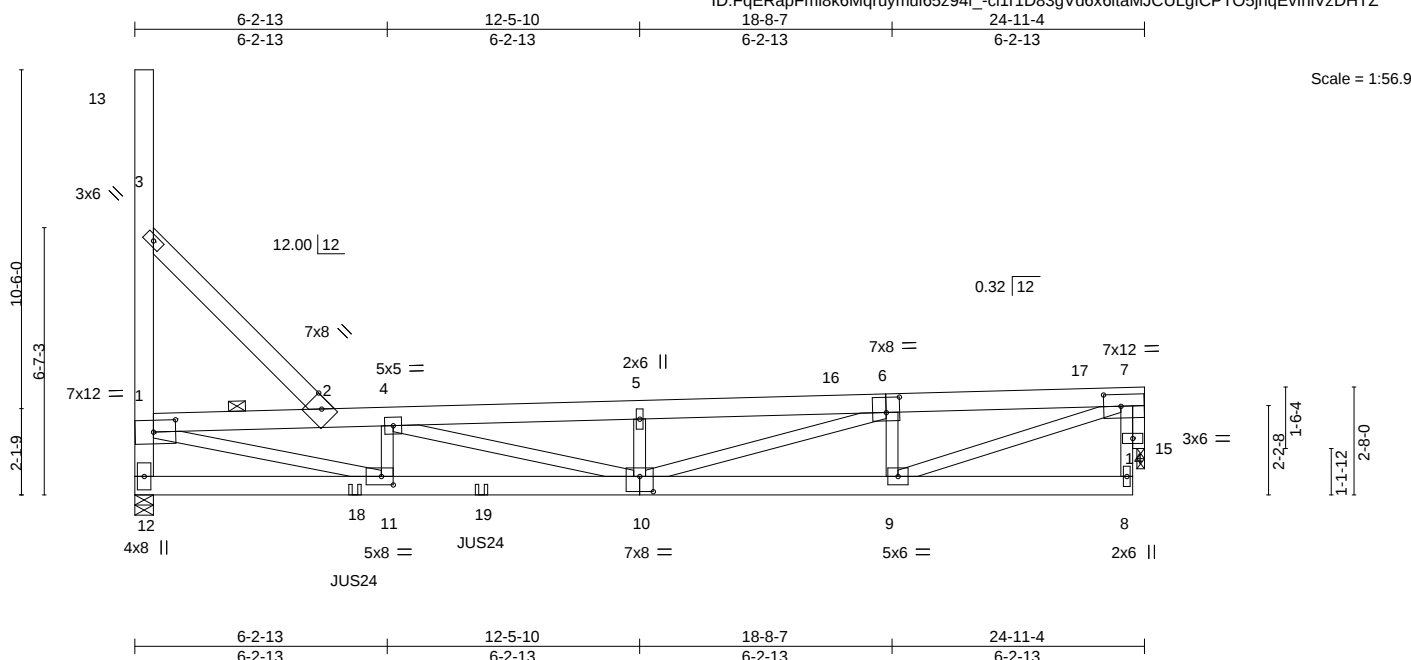


Plate Offsets (X,Y)--										[1:0-6-9,0-3-8], [6:0-4-0,0-4-8], [7:0-5-1,0-3-8], [10:0-4-0,0-4-8], [11:0-3-8,0-2-8]													
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.				in (loc)		l/defl		L/d		PLATES		GRIP			
TCLL (roof) 20.0		Plate Grip DOL		1.15		TC 0.93		Vert(LL)				-0.29		10-11		>999		360		MT20		244/190	
Snow (Pf/Pg) 15.4/20.0		Lumber DOL		1.15		BC 0.62		Vert(CT)				-0.53		10-11		>557		240					
TCDL 10.0		Rep Stress Incr		NO		WB 0.87		Horz(CT)				0.02		15		n/a		n/a					
BCLL 0.0		Code IBC2018/TPI2014				Matrix-SH														Weight: 199 lb		FT = 3%	
BCDL 10.0																							

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 3-2-5 oc purlins, except end verticals. Except:
BOT CHORD 2x6 SP No.1 *Except*	1 Row at midpt 1-2
10-12: 2x6 SP 2400F 2.0E	Rigid ceiling directly applied or 7-4-14 oc bracing.
WEBS 2x4 SP No.2 *Except*	
12-13: 2x6 SP No.1, 1-11: 2x4 SP No.1	

REACTIONS. (size) 12=0-5-8, 15=0-2-4
Max Horz 12=-395(LC 45)
Max Uplift 12=-232(LC 11), 15=-247(LC 12)
Max Grav 12=1921(LC 22), 15=1324(LC 32)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-12=-1803/531, 1-3=-494/520, 1-2=-4772/1711, 2-4=-4749/1911, 4-5=-5009/1515,
5-16=-5008/1519, 6-16=-5002/1520, 6-17=-3178/859, 7-17=-3168/860, 2-3=-665/513
BOT CHORD 12-18=-450/721, 11-18=-450/721, 11-19=-1955/4751, 10-19=-1955/4751, 9-10=-908/3247,
8-9=-96/325
WEBS 1-11=-1564/4437, 4-11=-624/493, 4-10=-1021/1044, 5-10=-367/200, 6-10=-673/1877,
6-9=-1024/393, 7-9=-837/3042, 7-15=-1386/356

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2R) 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
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.00; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 3 degree rotation about its center.
 - All bearings are assumed to be SYP No.2 crushing capacity of 565 psi.
 - Bearing at joint(s) 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 15.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 232 lb uplift at joint 12 and 247 lb uplift at joint 15.
 - This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - Load case(s) 1, 4, 5, 6, 21, 22, 24, 25, 26, 27, 32, 53, 54, 55, 56 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
 - Use USP JUS24 (With 4-10d nails into Girder & 2-10d nails into Truss) or equivalent spaced at 3-1-8 oc max. starting at 5-5-4 from the left end to 8-6-12 to connect truss(es) to front face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.

Down to 6-5-16 CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).



May 24, 2022

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Mitek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER	I52119462
MKT_ST_CTR	M1G	Roof Special Girder	2	1	Job Reference (optional)	

Mid America Truss, Jefferson City, MO 65101, Mitek

8.430 s Oct 22 2021 Mitek Industries, Inc. Tue May 24 12:53:31 2022 Page 2
ID:FqERapFml8k6Mqruymui65z94f_-4ubDEZ9hRplzZGH383rR1YDqxpodqAxzSZ1KHyzDHTY

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 4-16=-51, 7-16=-71, 8-12=-20
Concentrated Loads (lb)
Vert: 18=-249(F) 19=-461(F)
Trapezoidal Loads (plf)
Vert: 1=-80-to-2=-19, 2=-69-to-4=-51, 3=-131-to-2=-69
- 4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 4-16=-43, 7-16=-61, 8-12=-20
Concentrated Loads (lb)
Vert: 18=-207(F) 19=-399(F)
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-14, 2=-57-to-4=-43, 3=-103-to-2=-57
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 4-16=-27, 7-16=-40, 8-12=-20
Concentrated Loads (lb)
Vert: 18=-207(F) 19=-399(F)
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-14, 2=-41-to-4=-27, 3=-87-to-2=-41
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 4-16=-49, 16-17=-67, 7-17=-61, 8-12=-20
Concentrated Loads (lb)
Vert: 18=-207(F) 19=-399(F)
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-14, 2=-63-to-4=-49, 3=-109-to-2=-63
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 4-16=-29, 7-16=-43, 8-12=-20
Concentrated Loads (lb)
Vert: 18=-249(F) 19=-461(F)
Trapezoidal Loads (plf)
Vert: 1=-80-to-2=-19, 2=-48-to-4=-29, 3=-109-to-2=-48
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 4-16=-58, 16-17=-78, 7-17=-71, 8-12=-20
Concentrated Loads (lb)
Vert: 18=-249(F) 19=-461(F)
Trapezoidal Loads (plf)
Vert: 1=-80-to-2=-19, 2=-77-to-4=-58, 3=-138-to-2=-77
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 4-16=-38, 7-16=-68, 8-12=-20
Horz: 1-12=18, 1-3=18, 3-13=38, 2-7=-5, 8-14=5, 2-3=6
Concentrated Loads (lb)
Vert: 18=83(F) 19=19(F)
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-14, 2=-52-to-4=-38, 3=-97-to-2=-51
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 4-16=-31, 7-16=-51, 8-12=-20
Horz: 1-12=-5, 1-3=-5, 3-13=-38, 2-7=-12, 8-14=-18, 2-3=-10
Concentrated Loads (lb)
Vert: 18=83(F) 19=19(F)
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-14, 2=-45-to-4=-31, 3=-113-to-2=-67
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 4-16=-38, 7-16=-60, 8-12=-20
Horz: 1-12=14, 1-3=14, 3-13=-25, 2-7=-5, 8-14=3, 2-3=5
Concentrated Loads (lb)
Vert: 18=83(F) 19=19(F)
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-14, 2=-52-to-4=-38, 3=-98-to-2=-52
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 4-16=-31, 7-16=-50, 8-12=-20
Horz: 1-12=-3, 1-3=-3, 3-13=-25, 2-7=-12, 8-14=-14, 2-3=12
Concentrated Loads (lb)
Vert: 18=83(F) 19=19(F)
Trapezoidal Loads (plf)
Vert: 1=-60-to-2=-14, 2=-45-to-4=-31, 3=-91-to-2=-45
- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 4-16=-60, 7-16=-83, 8-12=-20



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Continued on page 3

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER	I52119462
MKT_ST_CTR	M1G	Roof Special Girder	2	1	Job Reference (optional)	

Mid America Truss, Jefferson City, MO 65101, Mitek

8.430 s Oct 22 2021 MiTek Industries, Inc. Tue May 24 12:53:31 2022 Page 3
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LOAD CASE(S) Standard

Concentrated Loads (lb)

Vert: 18=-249(F) 19=-461(F)

Trapezoidal Loads (plf)

Vert: 1=-80-to-2=-19, 2=-79-to-4=-60, 3=-100-to-2=-39

53) Reversal: Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 4-16=-38, 7-16=-68, 8-12=-20

Horz: 1-12=18, 1-3=18, 3-13=38, 2-7=-5, 8-14=5, 2-3=6

Concentrated Loads (lb)

Vert: 18=-317(F) 19=-305(F)

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-52-to-4=-38, 3=-97-to-2=-51

54) Reversal: Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 4-16=-31, 7-16=-51, 8-12=-20

Horz: 1-12=-5, 1-3=-5, 3-13=-38, 2-7=-12, 8-14=-18, 2-3=-10

Concentrated Loads (lb)

Vert: 18=-317(F) 19=-305(F)

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-45-to-4=-31, 3=-113-to-2=-67

55) Reversal: Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 4-16=-38, 7-16=-60, 8-12=-20

Horz: 1-12=14, 1-3=14, 3-13=-25, 2-7=-5, 8-14=3, 2-3=5

Concentrated Loads (lb)

Vert: 18=-317(F) 19=-305(F)

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-52-to-4=-38, 3=-98-to-2=-52

56) Reversal: Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33

Uniform Loads (plf)

Vert: 4-16=-31, 7-16=-50, 8-12=-20

Horz: 1-12=-3, 1-3=-3, 3-13=-25, 2-7=-12, 8-14=-14, 2-3=12

Concentrated Loads (lb)

Vert: 18=-317(F) 19=-305(F)

Trapezoidal Loads (plf)

Vert: 1=-60-to-2=-14, 2=-45-to-4=-31, 3=-91-to-2=-45



May 24, 2022

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



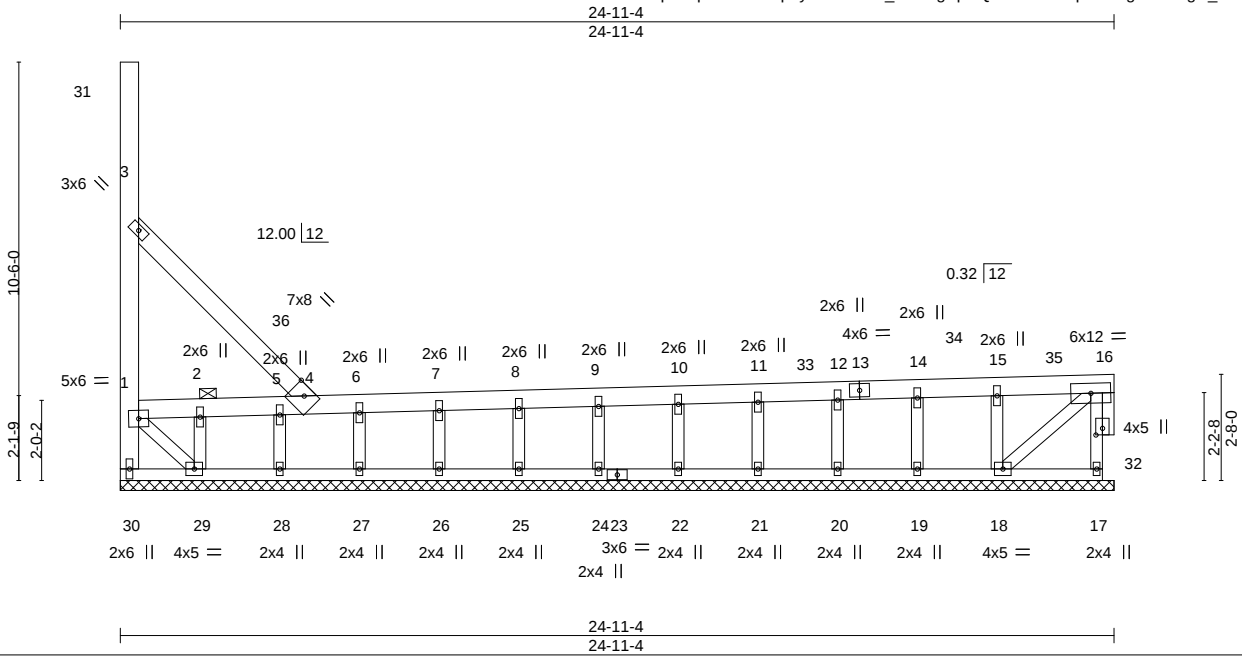
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M1GE	GABLE	2	1	I52119463
Job Reference (optional)					

Mid America Truss, Jefferson City, MO - 65101,

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Scale = 1:57.8

Plate Offsets (X,Y)-- [32:0-2-0,0-2-0]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d			PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.00	17	n/a	n/a		
BCLL	0.0	Code IBC2018/TPI2014		Matrix-SH							Weight: 170 lb	FT = 3%
BCDL	10.0											

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M1GE	GABLE	2	1	I52119463
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:16 2022 Page 2
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LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 6-33=-51, 16-33=-71, 17-30=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-4=-19, 4=-69-to-6=-54, 3=-131-to-4=-69
- 4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 6-33=-43, 16-33=-61, 17-30=-20
Trapezoidal Loads (plf)
Vert: 1=-60-to-4=-14, 4=-57-to-6=-45, 3=-103-to-4=-57
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 6-33=-27, 16-33=-40, 17-30=-20
Trapezoidal Loads (plf)
Vert: 1=-60-to-4=-14, 4=-41-to-6=-29, 3=-87-to-4=-41
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 6-33=-49, 33-35=-67, 16-35=-61, 17-30=-20
Trapezoidal Loads (plf)
Vert: 1=-60-to-4=-14, 4=-63-to-6=-51, 3=-109-to-4=-63
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 6-33=-29, 16-33=-43, 17-30=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-4=-19, 4=-48-to-6=-32, 3=-109-to-4=-48
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 6-33=-58, 33-35=-78, 16-35=-71, 17-30=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-4=-19, 4=-77-to-6=-62, 3=-138-to-4=-77
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 6-33=-38, 16-33=-68, 16-32=-5, 17-30=-20
Horz: 1-30=18, 1-3=18, 3-31=38, 4-16=-5, 16-17=5, 3-4=6
Trapezoidal Loads (plf)
Vert: 1=-60-to-4=-14, 4=-52-to-6=-41, 3=-97-to-4=-51
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 6-33=-31, 16-33=-51, 16-32=18, 17-30=-20
Horz: 1-30=-5, 1-3=-5, 3-31=-38, 4-16=-12, 16-17=-18, 3-4=-10
Trapezoidal Loads (plf)
Vert: 1=-60-to-4=-14, 4=-45-to-6=-33, 3=-113-to-4=-67
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 6-33=-38, 16-33=-60, 16-32=-3, 17-30=-20
Horz: 1-30=14, 1-3=14, 3-31=-25, 4-16=-5, 16-17=3, 3-4=5
Trapezoidal Loads (plf)
Vert: 1=-60-to-4=-14, 4=-52-to-6=-41, 3=-98-to-4=-52
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 6-33=-31, 16-33=-50, 16-32=14, 17-30=-20
Horz: 1-30=-3, 1-3=-3, 3-31=-25, 4-16=-12, 16-17=-14, 3-4=12
Trapezoidal Loads (plf)
Vert: 1=-60-to-4=-14, 4=-45-to-6=-33, 3=-91-to-4=-45
- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 6-33=-60, 16-33=-83, 17-30=-20
Trapezoidal Loads (plf)
Vert: 1=-80-to-4=-19, 4=-79-to-6=-63, 3=-100-to-4=-39



May 24, 2022

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M2	Monopitch	52	1	I52119464
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:17 2022 Page 1
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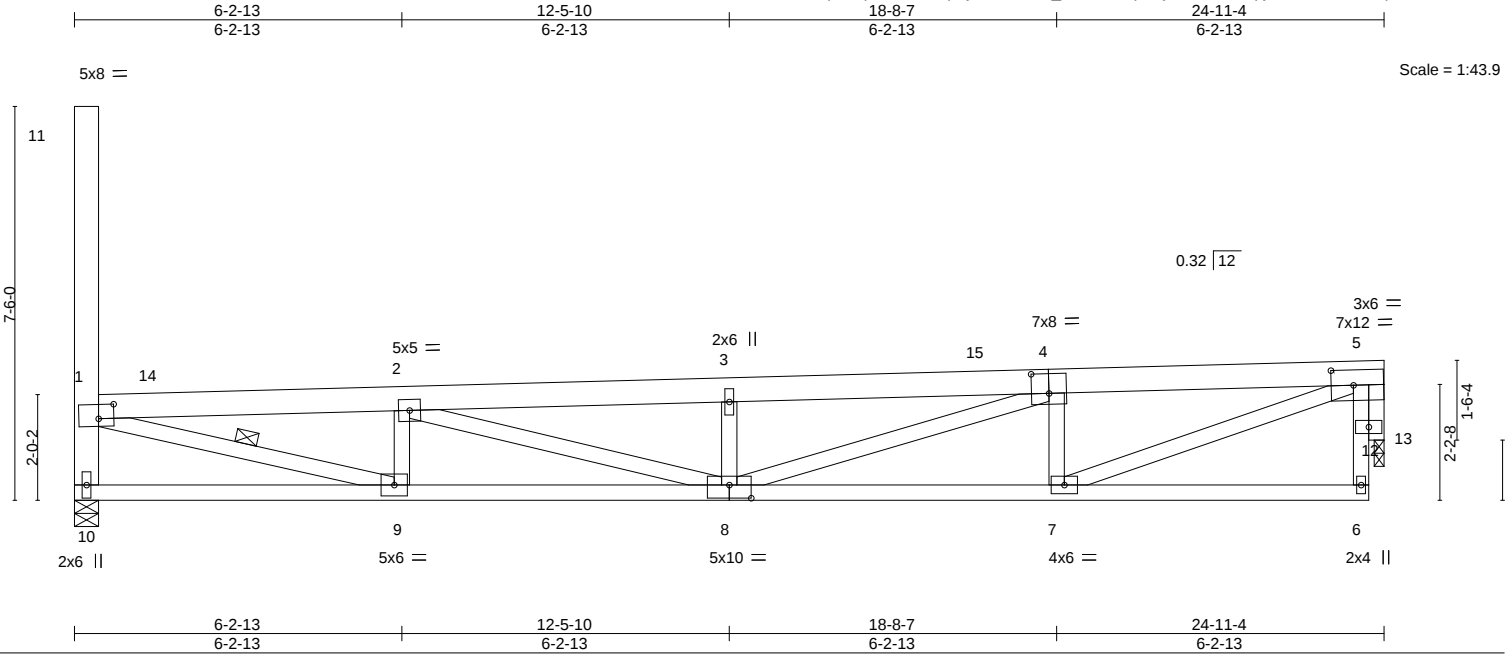


Plate Offsets (X,Y)--		[1:0-3-8,0-3-4], [4:0-4-0,0-4-8], [5:0-5-1,0-3-8], [8:0-5-0,0-3-0]	
LOADING (psf)		SPACING-	2-0-0
TCLL (roof)	20.0	Plate Grip DOL	1.15
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15
TCDL	10.0	Rep Stress Incr	NO
BCLL	0.0	Code IBC2018/TPI2014	
BCDL	10.0		
		CSI.	
		TC	0.73
		BC	0.88
		WB	0.91
		Matrix-SH	
		DEFL.	
		in (loc)	l/defl L/d
		Vert(LL)	0.23 8-9 >999 360
		Vert(CT)	-0.39 8-9 >762 240
		Horz(CT)	0.04 13 n/a n/a
		PLATES	GRIP
		MT20	244/190
		Weight: 158 lb	FT = 3%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
10-11: 2x6 SP 2400F 2.0E

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 4-0-14 oc bracing.
WEBS 1 Row at midpt 1-9

REACTIONS. (size) 10=0-5-8, 13=0-2-4
Max Horz 10=342(LC 12)
Max Uplift 10=-108(LC 11), 13=-115(LC 15)
Max Grav 10=1232(LC 32), 13=1116(LC 32)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-10=-1165/633, 1-2=-2865/1950, 2-3=-3464/2064, 3-4=-3464/2074, 4-5=-2496/1406
BOT CHORD 9-10=-958/1168, 8-9=-2005/2854, 7-8=-1472/2543
WEBS 1-9=-1615/2728, 2-9=-604/505, 2-8=-761/789, 3-8=-373/329, 4-8=-673/969, 4-7=-775/597, 5-7=-1385/2419, 5-13=-1168/653

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) Plates checked for a plus or minus 3 degree rotation about its center.
 - 5) Bearing at joint(s) 13 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 at joint(s) 13.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=108, 13=115.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 9) Load case(s) 1, 4, 5, 6, 21, 22, 24, 25, 26, 27, 32 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-15=-51, 5-15=-71, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-131-to-2=-51



May 24,2022

Continued on page 2

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M2	Monopitch	52	1	I52119464
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:17 2022 Page 2
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LOAD CASE(S) Standard

- 4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-15=-43, 5-15=-61, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-103-to-2=-43
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-15=-49, 5-15=-67, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-103-to-14=-91, 14=-97-to-2=-49
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-15=-27, 5-15=-40, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-87-to-2=-27
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-15=-58, 5-15=-78, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-131-to-14=-115, 14=-123-to-2=-58
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-15=-29, 5-15=-43, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-109-to-2=-29
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 2-15=-31, 5-15=-60, 6-10=-20
Horz: 1-10=18, 1-11=38, 1-5=-12, 6-12=5
Trapezoidal Loads (plf)
Vert: 1=-91-to-2=-31
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 2-15=-38, 5-15=-58, 6-10=-20
Horz: 1-10=-5, 1-11=-38, 1-5=-5, 6-12=-18
Trapezoidal Loads (plf)
Vert: 1=-98-to-2=-38
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 2-15=-31, 5-15=-52, 6-10=-20
Horz: 1-10=14, 1-11=-25, 1-5=-12, 6-12=3
Trapezoidal Loads (plf)
Vert: 1=-91-to-2=-31
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 2-15=-38, 5-15=-58, 6-10=-20
Horz: 1-10=-3, 1-11=-25, 1-5=-5, 6-12=-14
Trapezoidal Loads (plf)
Vert: 1=-98-to-2=-38
- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-15=-60, 5-15=-83, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-140-to-2=-60



May 24, 2022

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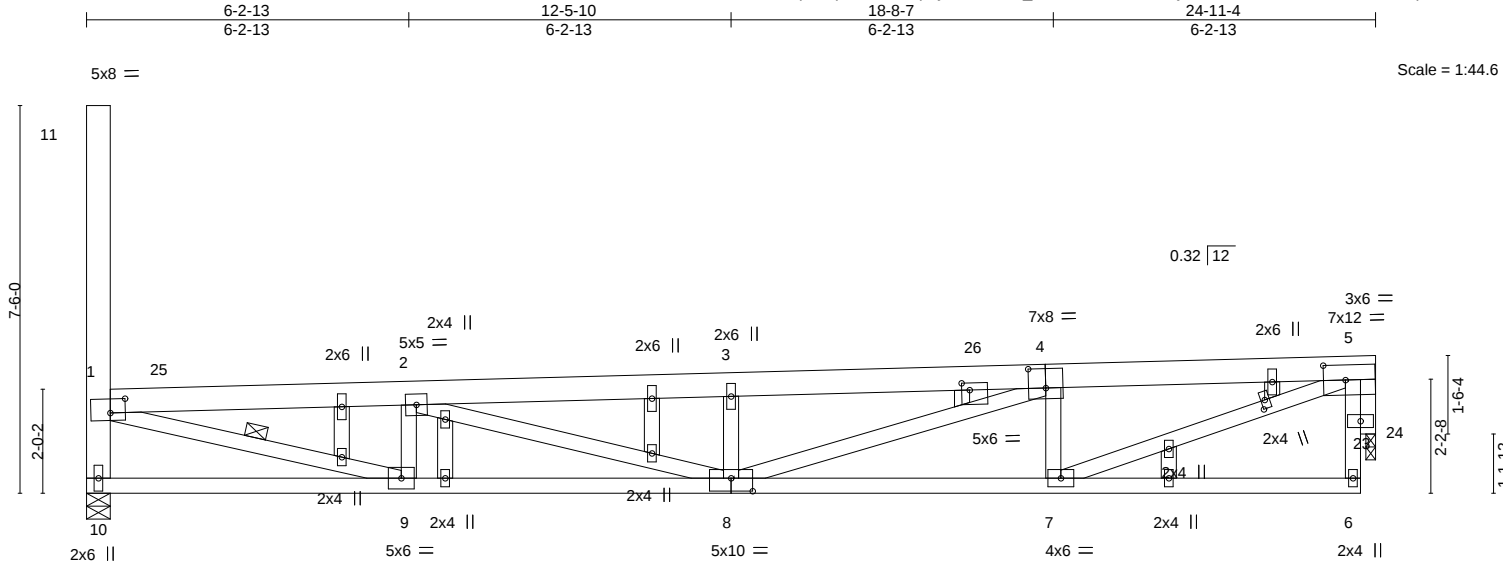


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M2SGE	Monopitch Structural Gable	1	1	I52119465
Job Reference (optional)					

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:18 2022 Page 1
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	6-2-13	12-5-10	18-8-7	24-11-4
	6-2-13	6-2-13	6-2-13	6-2-13
Plate Offsets (X,Y)--	[1:0-3-8,0-3-4], [4:0-4-0,0-4-8], [5:0-5-1,0-3-8], [8:0-5-0,0-3-0], [12:0-2-0,0-0-14], [16:0-1-13,0-1-10]			

LOADING (psf)		SPACING-2-0-0		CSI.		DEFL. in (loc) l/defl L/d				PLATES GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	0.23	8-9	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.39	8-9	>762	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.91	Horz(CT)	0.04	24	n/a	n/a		
BCLL	0.0	Code IBC2018/TPI2014		Matrix-SH							Weight: 165 lb	FT = 3%
BCDL	10.0											

LUMBER-		BRACING-	
TOP CHORD	2x6 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 4-0-14 oc bracing.
WEBS	2x4 SP No.2 *Except*	WEBS	1 Row at midpt
OTHERS	10-11: 2x6 SP 2400F 2.0E		1-9
	2x4 SP No.2		

REACTIONS. (size) 10=0-5-8, 24=0-2-4
Max Horz 10=342(LC 12)
Max Uplift 10=108(LC 11), 24=115(LC 15)
Max Grav 10=1232(LC 32), 24=1116(LC 32)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-10=-1165/633, 1-2=-2865/1950, 2-3=-3464/2064, 3-4=-3464/2074, 4-5=-2496/1406
BOT CHORD 9-10=-958/1168, 8-9=-2005/2854, 7-8=-1472/2543
WEBS 1-9=-1615/2728, 2-9=-604/505, 2-8=-761/789, 3-8=-373/329, 4-8=-673/969, 4-7=-775/597, 5-7=-1385/2419, 5-24=-1168/653

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) Plates checked for a plus or minus 3 degree rotation about its center.
 - 6) Gable studs spaced at 2-0-0 oc.
 - 7) Bearing at joint(s) 24 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 at joint(s) 24.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=108, 24=115.
 - 10) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 11) Load case(s) 1, 4, 5, 6, 21, 22, 24, 25, 26, 27, 32 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard

Continued on page 2



May 24,2022

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MiTek®
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M2SGE	Monopitch Structural Gable	1	1	I52119465
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:18 2022 Page 2
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LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-26=-51, 5-26=-71, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-131-to-2=-51
- 4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-26=-43, 5-26=-61, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-103-to-2=-43
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-26=-49, 5-26=-67, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-103-to-25=-91, 25=-97-to-2=-49
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-26=-27, 5-26=-40, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-87-to-2=-27
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-26=-58, 5-26=-78, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-131-to-25=-115, 25=-123-to-2=-58
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-26=-29, 5-26=-43, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-109-to-2=-29
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 2-26=-31, 5-26=-60, 6-10=-20
Horz: 1-10=18, 1-11=38, 1-5=-12, 6-23=5
Trapezoidal Loads (plf)
Vert: 1=-91-to-2=-31
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 2-26=-38, 5-26=-58, 6-10=-20
Horz: 1-10=-5, 1-11=-38, 1-5=-5, 6-23=-18
Trapezoidal Loads (plf)
Vert: 1=-98-to-2=-38
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 2-26=-31, 5-26=-52, 6-10=-20
Horz: 1-10=14, 1-11=-25, 1-5=-12, 6-23=3
Trapezoidal Loads (plf)
Vert: 1=-91-to-2=-31
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 2-26=-38, 5-26=-58, 6-10=-20
Horz: 1-10=-3, 1-11=-25, 1-5=-5, 6-23=-14
Trapezoidal Loads (plf)
Vert: 1=-98-to-2=-38
- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-26=-60, 5-26=-83, 6-10=-20
Trapezoidal Loads (plf)
Vert: 1=-140-to-2=-60



May 24, 2022

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER	I52119466
MKT_ST_CTR	M3	MONOPITCH	20	1	Job Reference (optional)	

Mid America Truss, Jefferson City, MO - 65101,

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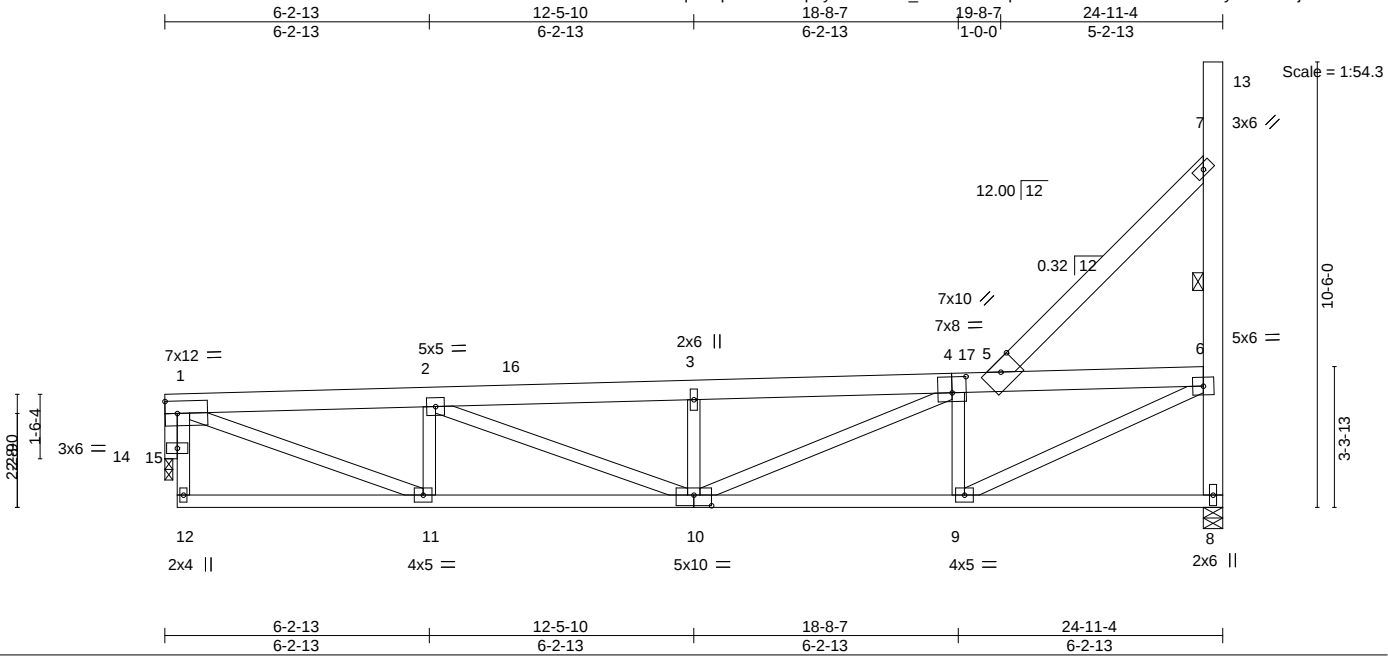


Plate Offsets (X,Y)-- [4:0-4-0,0-4-8], [10:0-5-0,0-3-0]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d			PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.11	10-11	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.23	10-11	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.51	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0	Code IBC2018/TPI2014		Matrix-SH							Weight: 186 lb	FT = 3%
BCDL	10.0											

LUMBER-

TOP CHORD 2x6 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
8-13: 2x6 SP No.1

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-9-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-10-14 oc bracing.
WEBS 1 Row at midpt 7-8

REACTIONS.

(size) 8=0-5-8, 15=0-2-4
Max Horz 15=364(LC 14)
Max Uplift 8=-42(LC 15), 15=-101(LC 11)
Max Grav 8=1174(LC 5), 15=1102(LC 2)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2147/421, 2-3=-2530/552, 3-4=-2529/557, 4-5=-1934/576, 5-6=-1766/489, 6-8=-1111/225, 6-7=-284/307, 5-7=-385/291
BOT CHORD 11-12=-236/276, 10-11=-263/2140, 9-10=-349/1819
WEBS 1-11=-303/2062, 2-11=-648/188, 2-10=-135/464, 3-10=-376/132, 4-10=-288/851, 4-9=-723/260, 6-9=-408/1916, 1-15=-1151/163

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior(1) 3-5-4 to 24-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 3 degree rotation about its center.
- Bearing at joint(s) 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 15.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8 except (jt=lb) 15=101.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- Load case(s) 1, 4, 5, 6, 21, 22, 24, 25, 26, 27, 32 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard Except:

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15



May 24,2022

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M3	MONOPITCH	20	1	I52119466
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon May 23 17:11:20 2022 Page 2
ID:FqERapFmI8k6Mqruymui65z94f_-kxHVVcsRpeVNiP6JlUtWKOzKK58C3OyYvbMTDjzDYnr

LOAD CASE(S) Standard Except:

- Uniform Loads (plf)
Vert: 1-16=-71, 16-17=-51, 8-12=-20, 5-7=-51
- Trapezoidal Loads (plf)
Vert: 17=-51-to-5=-59, 5=-8-to-6=-80
- 4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-16=-61, 4-16=-43, 9-12=-20, 5-7=-43
Trapezoidal Loads (plf)
Vert: 4=-43-to-5=-52, 5=-9-to-6=-60, 9=-18-to-8=-80
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-16=-67, 4-16=-49, 9-12=-20, 5-7=-43
Trapezoidal Loads (plf)
Vert: 4=-49-to-5=-58, 5=-9-to-6=-60, 9=-18-to-8=-80
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-16=-40, 4-16=-27, 9-12=-20, 5-7=-27
Trapezoidal Loads (plf)
Vert: 4=-27-to-5=-36, 5=-9-to-6=-60, 9=-18-to-8=-80
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-16=-78, 16-17=-58, 8-12=-20, 5-7=-51
Trapezoidal Loads (plf)
Vert: 17=-58-to-5=-66, 5=-8-to-6=-80
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-16=-43, 16-17=-29, 8-12=-20, 5-7=-29
Trapezoidal Loads (plf)
Vert: 17=-29-to-5=-37, 5=-8-to-6=-80
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-16=-60, 4-16=-31, 9-12=-20, 5-7=-53
Horz: 12-14=18, 1-5=-12, 6-8=5, 6-7=5, 7-13=38, 5-7=10
Trapezoidal Loads (plf)
Vert: 4=-31-to-5=-40, 5=-9-to-6=-60, 9=-18-to-8=-80
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-16=-58, 4-16=-38, 9-12=-20, 5-7=-37
Horz: 12-14=-5, 1-5=-5, 6-8=-18, 6-7=-18, 7-13=-38, 5-7=-6
Trapezoidal Loads (plf)
Vert: 4=-38-to-5=-47, 5=-9-to-6=-60, 9=-18-to-8=-80
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-16=-57, 4-16=-31, 9-12=-20, 5-7=-31
Horz: 12-14=14, 1-5=-12, 6-8=3, 6-7=3, 7-13=25, 5-7=-12
Trapezoidal Loads (plf)
Vert: 4=-31-to-5=-40, 5=-9-to-6=-60, 9=-18-to-8=-80
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-16=-65, 4-16=-38, 9-12=-20, 5-7=-38
Horz: 12-14=-3, 1-5=-5, 6-8=-14, 6-7=-14, 7-13=25, 5-7=-5
Trapezoidal Loads (plf)
Vert: 4=-38-to-5=-47, 5=-9-to-6=-60, 9=-18-to-8=-80
- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-16=-83, 16-17=-60, 8-12=-20, 5-7=-20
Trapezoidal Loads (plf)
Vert: 17=-60-to-5=-68, 5=-8-to-6=-80



May 24, 2022

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

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

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M3GE	GABLE	2	1	I52119467
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

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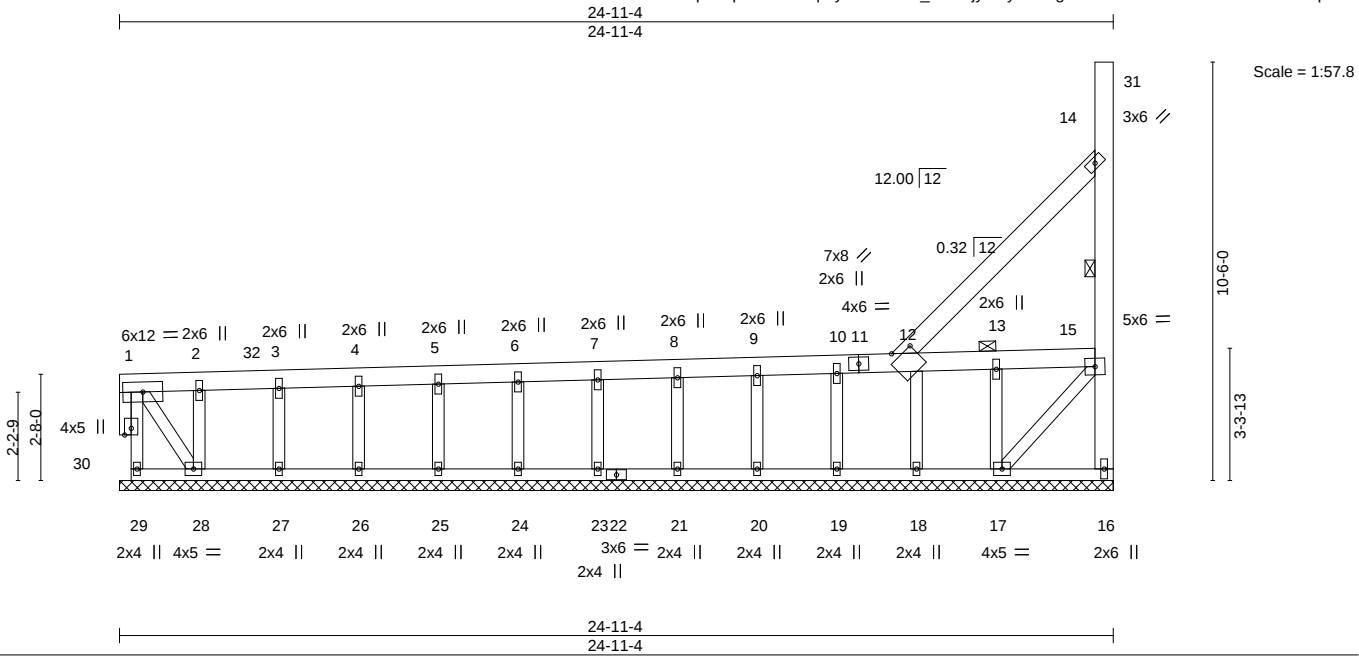


Plate Offsets (X,Y)--		[12:0-5-10,0-2-4], [30:0-2-0,0-2-0]	
LOADING (psf)		SPACING-	2-0-0
TCLL (roof)	20.0	Plate Grip DOL	1.15
Snow (Pl/Pg)	15.4/20.0	Lumber DOL	1.15
TCDL	10.0	Rep Stress Incr	NO
BCLL	0.0	Code	IBC2018/TPI2014
BCDL	10.0		
		CSI.	
		TC	0.15
		BC	0.07
		WB	0.13
		Matrix-SH	
		DEFL.	
		in (loc)	l/defl
		Vert(LL)	n/a - 999
		Vert(CT)	n/a - 999
		Horz(CT)	-0.01 16 n/a
		PLATES	GRIP
		MT20	244/190
		Weight: 184 lb	FT = 3%

LUMBER-		BRACING-	
TOP CHORD	2x6 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
WEBS	2x4 SP No.2 *Except*		7-10-1 oc bracing: 28-29.
	16-31: 2x6 SP No.1	WEBS	1 Row at midpt 14-16
OTHERS	2x4 SP No.2	JOINTS	1 Brace at Jt(s): 13

REACTIONS.	All bearings 24-11-4.
(lb) - Max Horz	29=372(LC 12)
Max Uplift	All uplift 100 lb or less at joint(s) 27, 26, 25, 24, 23, 21, 20, 19, 17 except 16=383(LC 12), 29=241(LC 11), 28=315(LC 12), 18=126(LC 11)
Max Grav	All reactions 250 lb or less at joint(s) 27, 26, 25, 24, 23, 21, 20, 19 except 16=410(LC 24), 29=349(LC 14), 28=346(LC 28), 18=331(LC 25), 17=314(LC 25)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-29=478/245, 1-2=-299/144, 2-3=-297/146, 3-4=-294/147, 4-5=-292/149, 5-6=-290/150, 6-7=-288/152, 7-8=-286/153, 8-9=-284/155, 9-10=-282/156, 10-12=-282/158, 15-16=-384/604, 14-15=-279/376, 12-14=-448/297
BOT CHORD	28-29=-573/274
WEBS	12-18=-297/245, 15-17=-308/144, 1-28=-282/599

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3E) 0-3-8 to 3-3-8, Exterior(2N) 3-3-8 to 24-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 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.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 3 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27, 26, 25, 24, 23, 21, 20, 19, 17 except (jt=lb) 16=383, 29=241, 28=315, 18=126.
 - This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - Load case(s) 1, 4, 5, 6, 21, 22, 24, 25, 26, 27, 32 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

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



May 24,2022

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16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M3GE	GABLE	2	1	I52119467
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

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LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-71, 5-11=-51, 16-29=-20, 12-14=-51
Trapezoidal Loads (plf)
Vert: 11=-53-to-12=-68, 12=-17-to-15=-80
- 4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-61, 5-11=-43, 16-29=-20, 12-14=-43
Trapezoidal Loads (plf)
Vert: 11=-45-to-12=-56, 12=-13-to-15=-60
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-67, 5-11=-49, 16-29=-20, 12-14=-43
Trapezoidal Loads (plf)
Vert: 11=-50-to-12=-62, 12=-13-to-15=-60
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-40, 5-11=-27, 16-29=-20, 12-14=-27
Trapezoidal Loads (plf)
Vert: 11=-28-to-12=-40, 12=-13-to-15=-60
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-78, 5-11=-58, 16-29=-20, 12-14=-51
Trapezoidal Loads (plf)
Vert: 11=-60-to-12=-76, 12=-17-to-15=-80
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-43, 5-11=-29, 16-29=-20, 12-14=-29
Trapezoidal Loads (plf)
Vert: 11=-31-to-12=-47, 12=-17-to-15=-80
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-30=-18, 1-5=-60, 5-11=-31, 16-29=-20, 12-14=-53
Horz: 1-29=18, 1-12=-12, 15-16=5, 14-15=5, 14-31=38, 12-14=10
Trapezoidal Loads (plf)
Vert: 11=-32-to-12=-44, 12=-13-to-15=-60
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-30=5, 1-5=-58, 5-11=-38, 16-29=-20, 12-14=-37
Horz: 1-29=-5, 1-12=-5, 15-16=-18, 14-15=-18, 14-31=-38, 12-14=-6
Trapezoidal Loads (plf)
Vert: 11=-40-to-12=-51, 12=-13-to-15=-60
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-30=-14, 1-5=-57, 5-11=-31, 16-29=-20, 12-14=-31
Horz: 1-29=14, 1-12=-12, 15-16=3, 14-15=3, 14-31=25, 12-14=-12
Trapezoidal Loads (plf)
Vert: 11=-32-to-12=-44, 12=-13-to-15=-60
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-30=3, 1-5=-65, 5-11=-38, 16-29=-20, 12-14=-38
Horz: 1-29=-3, 1-12=-5, 15-16=-14, 14-15=-14, 14-31=25, 12-14=-5
Trapezoidal Loads (plf)
Vert: 11=-40-to-12=-51, 12=-13-to-15=-60
- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-83, 5-11=-60, 16-29=-20, 12-14=-20
Trapezoidal Loads (plf)
Vert: 11=-62-to-12=-77, 12=-17-to-15=-80



May 24, 2022

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M4	MONOPITCH	52	1	152119468

Mid America Truss, Jefferson City, MO - 65101,

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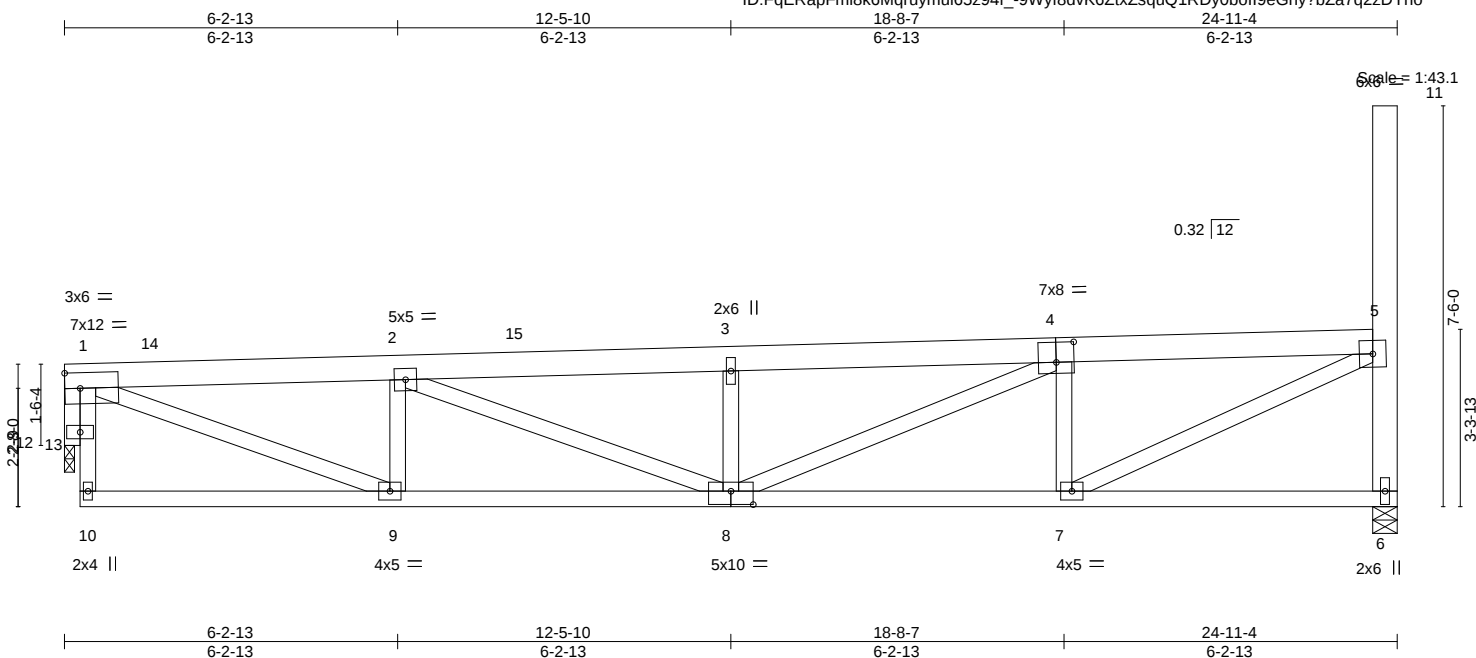


Plate Offsets (X, Y)-- [4:0-4-0,0-4-8], [8:0-5-0,0-3-0]							
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc) l/defl L/d
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	0.13 8 >999 360
Snow (Pl/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.24 8-9 >999 240
TCDL	10.0	Rep Stress Incr	NO	WB	0.75	Horz(CT)	0.04 6 n/a n/a
BCLL	0.0	Code IBC2018/TPI2014		Matrix-SH			
BCDL	10.0						
						PLATES	GRIP
						MT20	244/190
						Weight: 162 lb	FT = 3%

LUMBER-

TOP CHORD 2x6 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
6-11: 2x6 SP No.1

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-3-5 oc bracing.

REACTIONS.

(size) 6=0-5-8, 13=0-2-4
Max Horz 13=303(LC 14)
Max Uplift 6=-31(LC 15), 13=-98(LC 11)
Max Grav 6=1242(LC 32), 13=1127(LC 32)

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

TOP CHORD 1-2=-2212/1327, 2-3=-2628/1605, 3-4=-2626/1615, 4-5=-1895/1297, 5-6=-1182/619
BOT CHORD 9-10=-340/266, 8-9=-1217/2206, 7-8=-985/1928
WEBS 1-9=-1137/2128, 2-9=-673/501, 2-8=-286/449, 3-8=-369/328, 4-8=-573/836,
4-7=-763/516, 5-7=-991/2004, 1-13=-1176/633

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 3 degree rotation about its center.
- Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 13.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- Load case(s) 1, 4, 5, 6, 21, 22, 24, 25, 26, 27, 32 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-15=-71, 4-15=-51, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-51-to-5=-131



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Continued on page 2

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MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M4	MONOPITCH	52	1	I52119468
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

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ID:FqERapFml8k6Mqruymui65z94f_-9WYf8dvK6ZtxZsquQ1RDy0boll9eGhy?bZa7q2zDYno

LOAD CASE(S) Standard

- 4) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-15=-61, 4-15=-43, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-43-to-5=-103
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-14=-61, 14-15=-67, 4-15=-49, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-49-to-5=-109
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-15=-40, 4-15=-27, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-27-to-5=-87
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-14=-71, 14-15=-78, 4-15=-58, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-58-to-5=-138
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-15=-43, 4-15=-29, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-29-to-5=-109
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-15=-60, 4-15=-31, 6-10=-20
Horz: 10-12=18, 1-5=-12, 5-6=5, 5-11=38
Trapezoidal Loads (plf)
Vert: 4=-31-to-5=-91
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-15=-58, 4-15=-38, 6-10=-20
Horz: 10-12=-5, 1-5=-5, 5-6=-18, 5-11=-38
Trapezoidal Loads (plf)
Vert: 4=-38-to-5=-98
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-15=-57, 4-15=-31, 6-10=-20
Horz: 10-12=14, 1-5=-12, 5-6=3, 5-11=25
Trapezoidal Loads (plf)
Vert: 4=-31-to-5=-91
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33
Uniform Loads (plf)
Vert: 1-15=-65, 4-15=-38, 6-10=-20
Horz: 10-12=-3, 1-5=-5, 5-6=-14, 5-11=25
Trapezoidal Loads (plf)
Vert: 4=-38-to-5=-98
- 32) Dead + Minimum Snow: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-15=-83, 4-15=-60, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-60-to-5=-140



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

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

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



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Job	Truss	Truss Type	Qty	Ply	CRANE CONST - MARKET ST CENTER
MKT_ST_CTR	M4SGE	Monopitch Structural Gable	1	1	I52119469
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101,

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ID:FqERapFml8k6Mquymui65z94f_-diW1Lzwytt?oA0P4_kySVE7z1iVu?8R8qDKhMUzDYnn

LOAD CASE(S) Standard

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Vert: 1-32=-71, 4-32=-51, 6-10=-20
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Vert: 4=-51-to-5=-131
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Vert: 1-32=-61, 4-32=-43, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-43-to-5=-103
- 5) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-31=-61, 31-32=-67, 4-32=-49, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-49-to-5=-109
- 6) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
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Uniform Loads (plf)
Vert: 1-32=-65, 4-32=-38, 6-10=-20
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Vert: 1-32=-83, 4-32=-60, 6-10=-20
Trapezoidal Loads (plf)
Vert: 4=-60-to-5=-140



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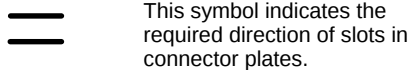
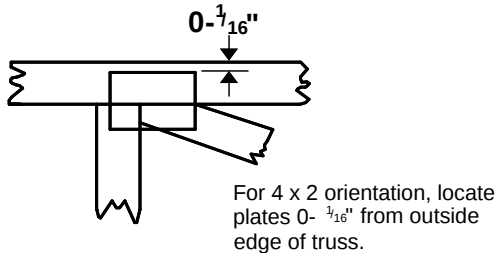
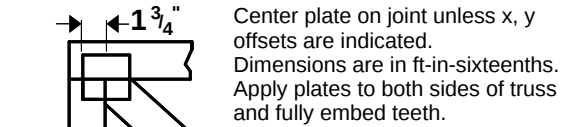
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



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Symbols

PLATE LOCATION AND ORIENTATION



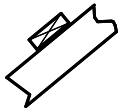
*Plate location details available in MiTek 20/20 software or upon request.

PLATE SIZE

4 x 4

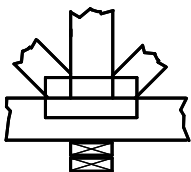
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

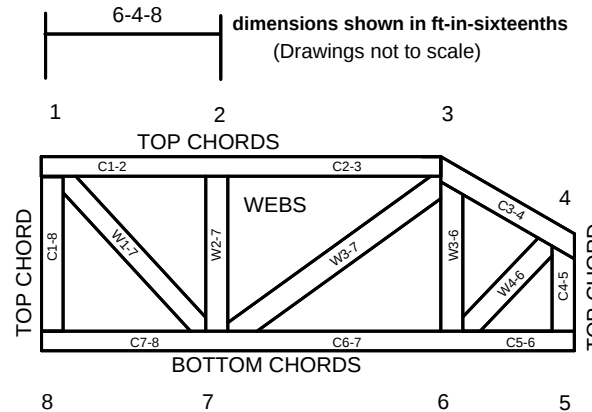


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.

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



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/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.