

MiTek, Inc.  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200

Re: 2503400-A  
Discovery Animal Hospital

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Lumber Specialties-Dyersville, IA.

Pages or sheets covered by this seal: I73884340 thru I73884407

My license renewal date for the state of Missouri is December 31, 2026.

Missouri COA: Engineering 001193

**REVIEWED**  
JAB-Porter, Berendzen & Associates  
07-31-2025



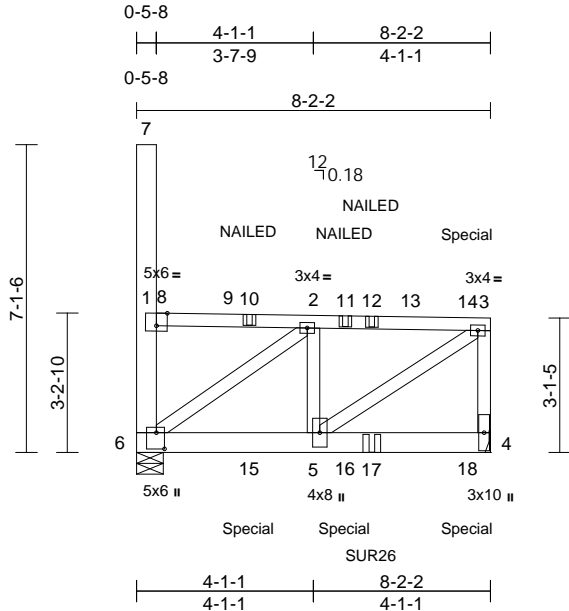
June 3, 2025

Lu, Jie ,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.

<input checked="" type="checkbox"/> REVIEWED	<input type="checkbox"/> REJECTED
<input type="checkbox"/> REVISE AND RESUBMIT	<input type="checkbox"/> FURNISH AS CORRECTED
<p>Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for: Confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating the work with all other trades and performing all work in a safe and satisfactory manner.</p>	
CROCKETT ENGINEERING CONSULTANTS	
DATE: 2025-07-30	
BY: JVV	

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	CJ21	Roof Special Girder	2	1	Job Reference (optional)
					I73884340



Scale = 1:53.2

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

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	0.34	Vert(LL)	0.03	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.03	5-6	>999	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.59	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 66 lb	FT = 12%

**LUMBER**  
TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x4 SP No.2 \*Except\* 7-6:2x6 SP 2400F 2.0E

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-7-7 oc bracing.

**REACTIONS**  
(size) 4= Mechanical, 6=0-7-6  
Max Horiz 6=-309 (LC 9)  
Max Uplift 4=-1106 (LC 10), 6=-988 (LC 9)  
Max Grav 4=1462 (LC 18), 6=1177 (LC 19)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-769/532, 2-3=-1446/1260, 3-4=-1144/1045, 1-6=-179/214, 1-7=0/0  
BOT CHORD 5-6=-1330/1527, 4-5=-53/57  
WEBS 2-5=-655/805, 3-5=-1574/1808, 2-6=-1563/1632

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00  
4) Provide adequate drainage to prevent water ponding.

5) Plates checked for a plus or minus 5 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 1106 lb uplift at joint 4 and 988 lb uplift at joint 6.  
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 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.  
10) Use Simpson Strong-Tie SUR26 (6-10dx1 1/2 Girder, 6-10dx1 1/2 Truss, Single Ply Girder) or equivalent at 5-5-4 from the left end to connect truss(es) to back face of bottom chord, skewed 45.0 deg.to the right, sloping 0.0 deg. down.  
11) Fill all nail holes where hanger is in contact with lumber.  
12) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.  
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 175 lb down and 83 lb up at 7-7-13 on top chord, and 688 lb down and 664 lb up at 2-7-5, and 372 lb down and 342 lb up at 4-9-14, and 277 lb down and 206 lb up at 7-7-13 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.  
14) 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 (lb/ft)  
Vert: 1-8=-58, 4-6=-20  
Concentrated Loads (lb)  
Vert: 3=-1, 9=-1, 10=-21 (B), 11=-70 (F), 12=-63 (B), 14=-175 (F), 15=-13 (B), 16=-50 (F), 17=-52 (B), 18=-112 (F)

Trapezoidal Loads (lb/ft)  
Vert: 8=-112-to-9=-88, 9=-83-to-10=-79, 10=-99-to-2=-76, 2=-75-to-11=-63, 11=-81-to-12=-73, 12=-90-to-13=-78, 13=-78-to-14=-62, 14=-61-to-3=-59

STATE OF MISSOURI

JIE LU

NUMBER

PE-029327

PROFESSIONAL ENGINEER

June 3,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

MiTek®

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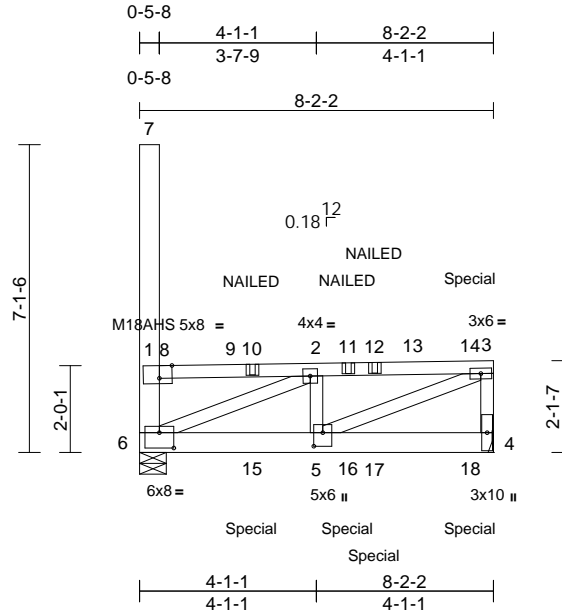
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	CJ50	Diagonal Hip Girder	2	1	Job Reference (optional)
					I73884341

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:35

Page: 1

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Scale = 1:53.2

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

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	0.64	Vert(LL)	0.05	5-6	>999	240	M18AHS	186/179
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.06	5-6	>999	180	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.71	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 61 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x4 SP No.2 \*Except\* 7-6:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-8-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-9-1 oc bracing.

**REACTIONS** (size) 4= Mechanical, 6=0-7-6  
Max Horiz 6=330 (LC 36)  
Max Uplift 4=-1162 (LC 10), 6=-1040 (LC 9)  
Max Grav 4=1494 (LC 18), 6=1209 (LC 12)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1464/989, 2-3=-2424/2103,  
3-4=-1155/1048, 1-6=-194/210, 1-7=0/0  
BOT CHORD 5-6=-2151/2475, 4-5=-34/36  
WEBS 2-5=-653/769, 3-5=-2327/2678,  
2-6=-2271/2433

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- Provide adequate drainage to prevent water ponding.

- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 1162 lb uplift at joint 4 and 1040 lb uplift at joint 6.
- 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 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 172 lb down and 85 lb up at 7-7-13 on top chord, and 703 lb down and 700 lb up at 2-7-5, 392 lb down and 367 lb up at 4-9-14, and 348 lb down and 320 lb up at 5-5-4, and 285 lb down and 217 lb up at 7-7-13 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-8=-58, 4-6=-20  
Concentrated Loads (lb)  
Vert: 3=-1, 9=-1, 10=-20 (B), 11=-69 (F), 12=-65 (B), 14=-172 (F), 15=-14 (B), 16=-54 (F), 17=-55 (B), 18=-113 (F)  
Trapezoidal Loads (lb/ft)

Vert: 8=-112-to-9=-88, 9=-83-to-10=-79, 10=-99-to-2=-75, 2=-75-to-11=-63, 11=-81-to-12=-73, 12=-90-to-13=-78, 13=-78-to-14=-62, 14=-61-to-3=-59



June 3, 2025

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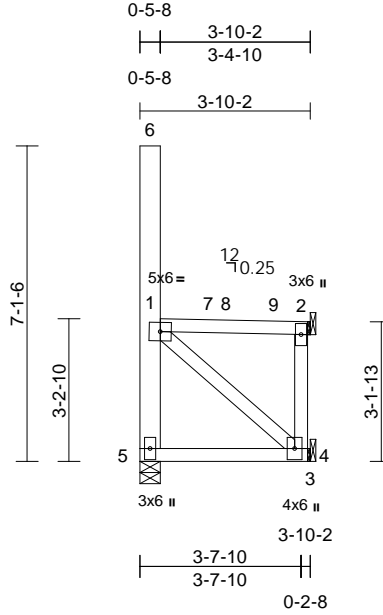
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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	J22	Jack-Open	2	1	Job Reference (optional)
					I73884342

Lumber Specialties, Dyersville, IA - 52040,

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Page: 1



Scale = 1:52

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	0.34	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.01	4-5	>999		
TCDL	15.0	Rep Stress Incr	NO	WB	0.33	Horz(CT)	0.01	2	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 36 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 6-5:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-10-2 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 9-7-1 oc bracing.

REACTIONS	(size)	2= Mechanical, 4= Mechanical, 5=0-5-8
	Max Horiz	5=-311 (LC 9)
	Max Uplift	2=-59 (LC 10), 4=-306 (LC 10), 5=-373 (LC 9)
	Max Grav	2=143 (LC 26), 4=371 (LC 11), 5=442 (LC 19)

FORCES	(lb) - Maximum Compression/Maximum Tension	
	TOP CHORD	1-2=-56/63, 2-4=0/0, 1-5=-560/876, 1-6=0/0
	BOT CHORD	4-5=-602/830, 3-4=0/0
WEBS		1-4=-1038/744

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- Provide adequate drainage to prevent water ponding.

- Plates checked for a plus or minus 5 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 373 lb uplift at joint 5, 306 lb uplift at joint 4 and 59 lb uplift at joint 2.
- 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 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 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 (lb/ft)  
Vert: 3-5=-20  
Concentrated Loads (lb)  
Vert: 7=-10  
Trapezoidal Loads (lb/ft)  
Vert: 1=-119-to-7=-109, 7=-84-to-8=-82, 8=-105-to-9=-91, 9=-90-to-2=-83



June 3, 2025

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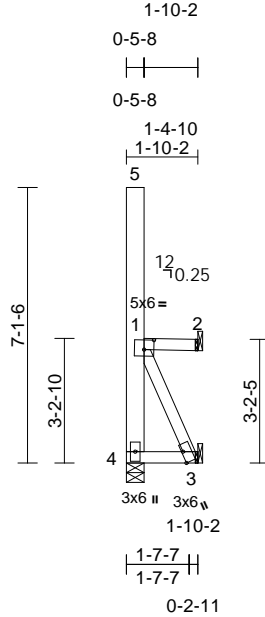
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Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	J23	Jack-Open	2	1	Job Reference (optional)
					I73884343

Lumber Specialties, Dyersville, IA - 52040,

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Page: 1



Scale = 1:59.5

Plate Offsets (X, Y): [1:0-3-0,0-3-0], [3:0-3-10,Edge]

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	0.35	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	3-4	>999		
TCDL	15.0	Rep Stress Incr	NO	WB	0.28	Horz(CT)	0.02	2	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 25 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x6 SP 2400F 2.0E \*Except\* 1-3:2x4 SP No.2

#### BRACING

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

**REACTIONS** (size) 2= Mechanical, 3= Mechanical, 4=0-5-8  
Max Horiz 4=-286 (LC 11)  
Max Uplift 2=-100 (LC 10), 3=-653 (LC 10), 4=-748 (LC 9)  
Max Grav 2=119 (LC 18), 3=705 (LC 11), 4=745 (LC 12)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-4/4, 1-4=-1044/1591, 1-5=0/0  
BOT CHORD 3-4=-468/685  
WEBS 1-3=-1539/1053

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00

- Provide adequate drainage to prevent water ponding.
  - Plates checked for a plus or minus 5 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 100 lb uplift at joint 2, 748 lb uplift at joint 4 and 653 lb uplift at joint 3.
  - 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 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 (lb/ft)  
Vert: 3-4=-20  
Concentrated Loads (lb)  
Vert: 2=-9  
Trapezoidal Loads (lb/ft)  
Vert: 1=-109-to-2=-91



June 3,2025

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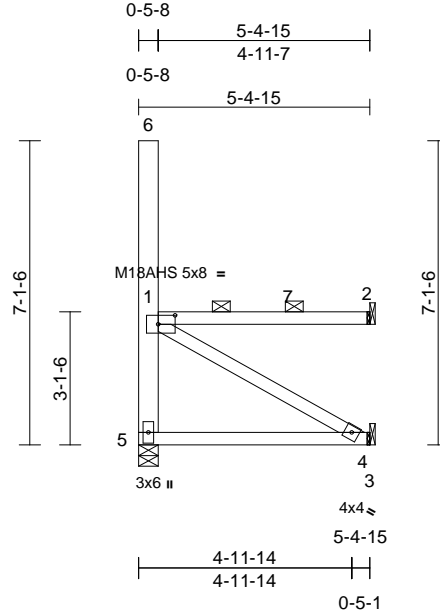


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	J24	Jack-Open	2	1	Job Reference (optional)
					I73884344

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:36  
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Page: 1



Scale = 1:53.9

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

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	0.61	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	4-5	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.49	Horz(CT)	0.01	2	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 39 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x6 SP 2400F 2.0E *Except* 1-4:2x4 SP No.2

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-6, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 9-3-15 oc bracing.

<b>REACTIONS</b>	(size)	2= Mechanical, 4= Mechanical, 5=0-5-8
	Max Horiz	5=-288 (LC 11)
	Max Uplift	2=-69 (LC 10), 4=-195 (LC 10), 5=-263 (LC 9)
	Max Grav	2=227 (LC 26), 4=288 (LC 11), 5=487 (LC 19)

<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/0, 1-5=-436/694, 1-6=0/0
BOT CHORD	4-5=-624/823, 3-4=0/0
WEBS	1-4=-944/716

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0

- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 69 lb uplift at joint 2, 263 lb uplift at joint 5 and 195 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-7=-124, 7=-121-to-2=-89



June 3,2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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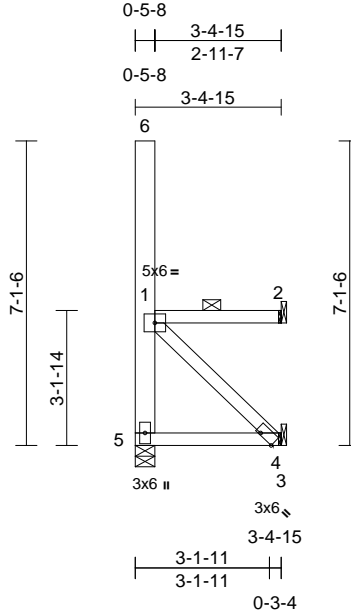
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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	J25	Jack-Open	2	1	Job Reference (optional)
					I73884345

Lumber Specialties, Dyersville, IA - 52040,

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Page: 1



Scale = 1:53.8

Plate Offsets (X, Y): [4:Edge,0-0-7]

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	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	0.00	4-5	>999	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.29	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 31 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x6 SP 2400F 2.0E \*Except\* 1-4:2x4 SP No.2

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-6, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2= Mechanical, 4= Mechanical, 5=0-5-8  
Max Horiz 5=-287 (LC 11)  
Max Uplift 2=-60 (LC 10), 4=-325 (LC 10), 5=-382 (LC 9)  
Max Grav 2=147 (LC 26), 4=389 (LC 11), 5=466 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/0, 1-5=-557/882, 1-6=0/0  
BOT CHORD 4-5=-538/760, 3-4=0/0  
WEBS 1-4=-1041/737

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0

- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 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 60 lb uplift at joint 2, 382 lb uplift at joint 5 and 325 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-165-to-2=-98



June 3,2025

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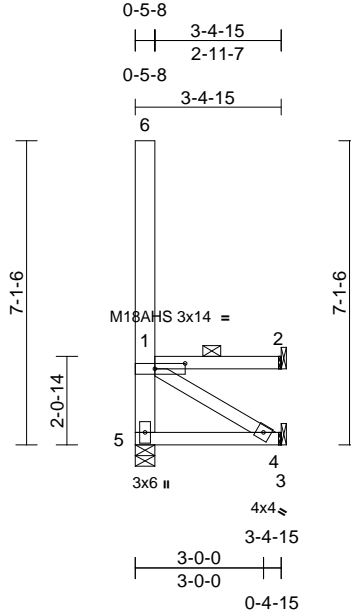
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	J52	Jack-Open	2	1	Job Reference (optional)
					I73884346

Lumber Specialties, Dyersville, IA - 52040,

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Scale = 1:53.9

Plate Offsets (X, Y): [1:0-8-8,0-1-8]

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	0.62	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	0.00	4-5	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.28	Horz(CT)	0.01	2	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 30 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
 BOT CHORD 2x4 SP 1650F 1.6E  
 WEBS 2x6 SP 2400F 2.0E \*Except\* 1-4:2x4 SP No.2

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-6, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 7-10-12 oc bracing.

**REACTIONS** (size) 2= Mechanical, 4= Mechanical, 5=0-5-8  
 Max Horiz 5=-311 (LC 11)  
 Max Uplift 2=-65 (LC 10), 4=-350 (LC 10), 5=-415 (LC 9)  
 Max Grav 2=145 (LC 26), 4=409 (LC 11), 5=496 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/0, 1-5=-595/957, 1-6=0/0  
 BOT CHORD 4-5=-894/1302, 3-4=0/0  
 WEBS 1-4=-1511/1038

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0

- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 65 lb uplift at joint 2, 415 lb uplift at joint 5 and 350 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 3-5=-20  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-166 to -2=-98



June 3,2025

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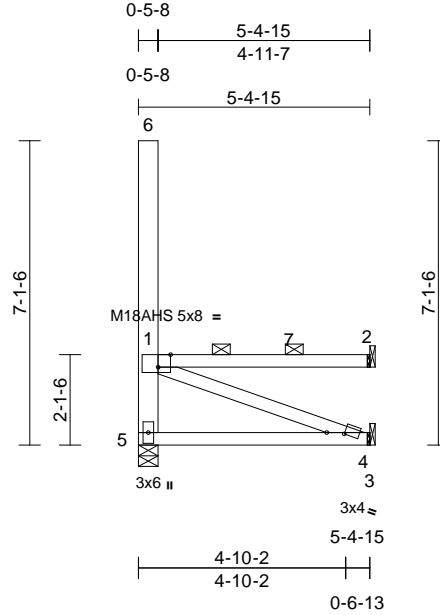
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	J53	Jack-Open	2	1	Job Reference (optional)
					I73884347

Lumber Specialties, Dyersville, IA - 52040,

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Scale = 1:53.9

Plate Offsets (X, Y): [1:0-3-8,Edge], [4:0-4-12,0-1-4]

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	0.63	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.03	4-5	>999	180	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.60	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 39 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x6 SP 2400F 2.0E *Except* 1-4:2x4 SP No.2

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-6, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-4-12 oc bracing.

<b>REACTIONS</b>	(size)	2= Mechanical, 4= Mechanical, 5=0-5-8
	Max Horiz	5=-310 (LC 11)
	Max Uplift	2=-71 (LC 10), 4=-207 (LC 10), 5=-278 (LC 9)
	Max Grav	2=224 (LC 26), 4=295 (LC 11), 5=501 (LC 19)

<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/0, 1-5=-451/730, 1-6=0/0
BOT CHORD	4-5=-996/1349, 3-4=0/0
WEBS	1-4=-1435/1059

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0

- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 71 lb uplift at joint 2, 278 lb uplift at joint 5 and 207 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-5=-20  
Concentrated Loads (lb)  
Vert: 2=0, 1=-1, 7=-2  
Trapezoidal Loads (lb/ft)  
Vert: 1=-149-to-7=-123, 7=-120-to-2=-89



June 3,2025

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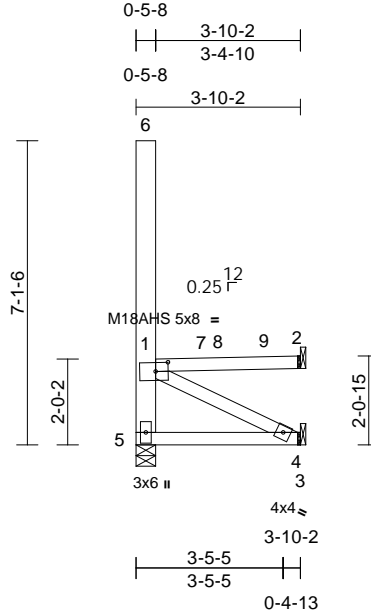
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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	J54	Jack-Open	2	1	Job Reference (optional)
					I73884348

Lumber Specialties, Dyersville, IA - 52040,

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Page: 1



Scale = 1:53.9

Plate Offsets (X, Y): [1:0-3-8,0-2-8]

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	0.64	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.01	4-5	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.35	Horz(CT)	0.01	2	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 32 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x6 SP 2400F 2.0E \*Except\* 1-4:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-10-2 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 7-7-1 oc bracing.

**REACTIONS** (size) 2= Mechanical, 4= Mechanical, 5=0-5-8  
Max Horiz 5=-313 (LC 11)  
Max Uplift 2=-64 (LC 10), 4=-303 (LC 10), 5=-363 (LC 9)  
Max Grav 2=145 (LC 26), 4=365 (LC 11), 5=442 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-5/2, 1-5=-532/864, 1-6=0/0  
BOT CHORD 4-5=-964/1376, 3-4=0/0  
WEBS 1-4=-1531/1072

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00

- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 64 lb uplift at joint 2, 363 lb uplift at joint 5 and 303 lb uplift at joint 4.
- 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 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 (lb/ft)  
Vert: 3-5=-20  
Concentrated Loads (lb)  
Vert: 7=-10  
Trapezoidal Loads (lb/ft)  
Vert: 1=-119-to-7=-109, 7=-84-to-8=-82, 8=-105-to-9=-91, 9=-90-to-2=-83



June 3,2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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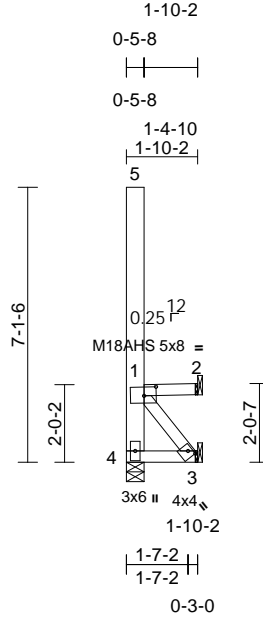
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	J55	Jack-Open	2	1	Job Reference (optional)
					I73884349

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:37  
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Page: 1



Scale = 1:59.6

Plate Offsets (X, Y): [1:0-3-12,0-2-12]

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	0.64	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	0.00	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.23	Horz(CT)	0.01	2	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 24 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x6 SP 2400F 2.0E \*Except\* 1-3:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 1-10-2 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-2-5 oc bracing.

**REACTIONS** (size) 2= Mechanical, 3= Mechanical, 4=0-5-8  
Max Horiz 4=-313 (LC 11)  
Max Uplift 2=-115 (LC 10), 3=-689 (LC 10), 4=-797 (LC 9)  
Max Grav 2=130 (LC 18), 3=720 (LC 11), 4=814 (LC 12)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-4/5, 1-4=-1098/1706, 1-5=0/0  
BOT CHORD 3-4=-837/1256  
WEBS 1-3=-1920/1279

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00

- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 115 lb uplift at joint 2, 797 lb uplift at joint 4 and 689 lb uplift at joint 3.
- 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 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 (lb/ft)  
Vert: 3-4=-20  
Concentrated Loads (lb)  
Vert: 2=-9  
Trapezoidal Loads (lb/ft)  
Vert: 1=-109-to-2=-91



June 3,2025

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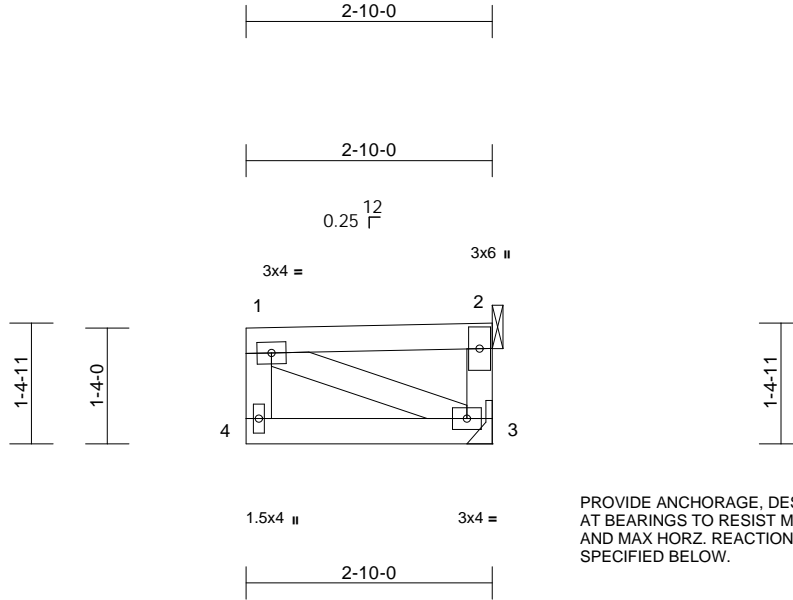
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M01	Monopitch	39	1	Job Reference (optional)
					I73884350

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:37  
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Page: 1



PROVIDE ANCHORAGE, DESIGNED BY OTHERS,  
AT BEARINGS TO RESIST MAX. VERTICAL  
AND MAX HORZ. REACTIONS  
SPECIFIED BELOW.

Scale = 1:26.5											
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	0.12	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	15.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	n/a	-	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 14 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2

#### BRACING

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

**REACTIONS** (size) 2= Mechanical, 3= Mechanical  
Max Horiz 2=265 (LC 2), 3=265 (LC 2)  
Max Uplift 2=-102 (LC 9)  
Max Grav 2=229 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum  
Tension

TOP CHORD 1-4=-26/25, 1-2=-361/266, 2-3=-171/134  
BOT CHORD 3-4=-20/22  
WEBS 1-3=-286/380

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed ; end vertical left and  
right exposed;C-C for members and forces & MWFRS  
for reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15  
Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL =  
1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially  
Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation  
about its center.
- Refer to girder(s) for truss to truss connections.
- Refer to girder(s) for truss to truss connections.

- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 102 lb uplift at joint  
2.
- Non Standard bearing condition. Review required.
- This truss is designed in accordance with the 2018  
International Building Code section 2306.1 and  
referenced standard ANSI/TPI 1.
- Gap between inside of top chord bearing and first  
diagonal or vertical web shall not exceed 0.500in.

**LOAD CASE(S)** Standard



June 3, 2025

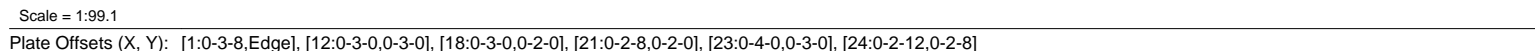
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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Lumber Specialties, Dyersville, IA - 52040, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:38 Page: 1  
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<b>LUMBER</b>		WEBS	2-24=560/440, 5-21=1226/591,	1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
TOP CHORD	2x4 SP 1650F 1.6E *Except* 3-1:2x4 SP 2400F 2.0E		8-18=1125/470, 7-20=3121/1106,	
BOT CHORD	2x4 SP 1650F 1.6E		10-16=446/254, 8-16=568/1825,	Uniform Loads (lb/ft)
WEBS	2x4 SP No.2 *Except* 12-15,7-21,5-23,23-2,1-24:2x4 SP 1650F 1.6E, 26-25,27-13:2x6 SP 2400F 2.0E		11-15=523/308, 11-16=181/63,	Vert: 2-11=58, 13-25=20
			12-15=599/1784, 7-21=1700/4713,	Trapezoidal Loads (lb/ft)
			4-23=573/323, 5-23=1080/2639,	Vert: 1=118-to-2=59, 11=59-to-12=118
			2-23=567/449, 1-24=1598/3374,	
			7-18=1165/3763	

## NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed;  
 MWFRS (directional) and C-C Corner (3) 0-2-12 to  
 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4  
 to 58-9-4 zone; cantilever left and right exposed ; end  
 vertical left and right exposed; C-C for members and  
 forces & MWFRS for reactions shown; Lumber  
 DOL=1.60 plate grip DOL=1.60
- 3) TCLK: ASCE 7-16; Pr=20.0 psf (roof LL; Lum DOL=1.15  
 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL =  
 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially  
 Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- 4) Provide adequate drainage to prevent water ponding.
- 5) Plates checked for a plus or minus 5 degree rotation  
 about its center.
- 6) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 143 lb uplift at joint  
 25, 123 lb uplift at joint 13 and 343 lb uplift at joint 20.
- 7) This truss is designed in accordance with the 2018  
 International Building Code section 2306.1 and  
 referenced standard ANSI/TPI 1.
- 8) Load case(s) 1 has/have been modified. Building  
 designer must review loads to verify that they are correct  
 for the intended use of this truss.

June 3, 2025

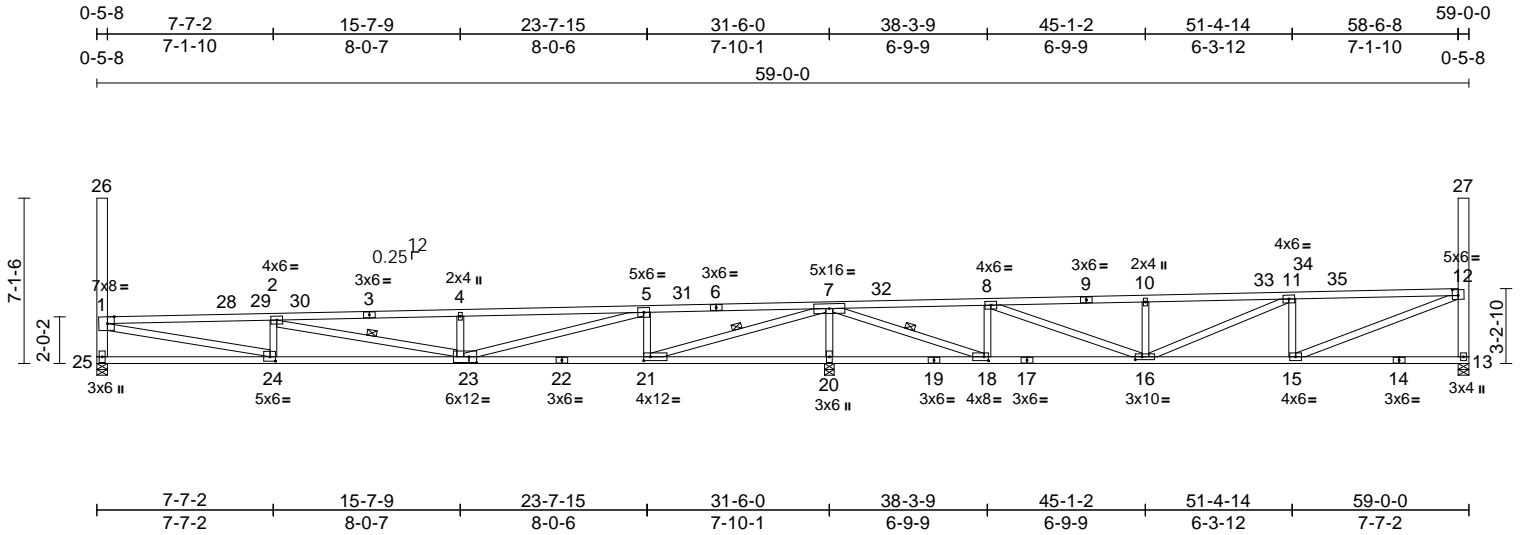


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884352
2503400-A	M02A	Monopitch	4	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:38  
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Page: 1



Scale = 1:99.1

Plate Offsets (X, Y): [1:0-3-8,Edge], [12:0-3-0,0-3-0], [16:0-3-8,0-1-8], [18:0-2-4,0-2-0], [21:0-3-8,0-2-0], [23:0-4-0,0-3-0], [24:0-2-12,0-2-4]

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	0.92	Vert(LL)	-0.38	23-24	>975	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.83	23-24	>454	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.03	20	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 314 lb	FT = 12%

<b>LUMBER</b>		
TOP CHORD	2x4 SP 1650F 1.6E *Except* 3-1:2x4 SP 2400F 2.0E	
BOT CHORD	2x4 SP 1650F 1.6E	
WEBS	2x4 SP No.2 *Except* 12-15,7-21,5-23,23-2,1-24:2x4 SP 1650F 1.6E, 26-25,27-13:2x6 SP 2400F 2.0E	
<b>BRACING</b>		
TOP CHORD	Structural wood sheathing directly applied or 2-8-14 oc purlins, except end verticals.	
BOT CHORD	Rigid ceiling directly applied or 3-3-7 oc bracing.	
WEBS	1 Row at midpt                      7-21, 2-23, 7-18	
<b>REACTIONS</b>	(size)	13=0-5-8, 20=0-5-0, (req. 0-5-9), 25=0-5-8
	Max Horiz	25=491 (LC 10)
	Max Uplift	13=123 (LC 10), 20=343 (LC 13), 25=143 (LC 9)
	Max Grav	13=1123 (LC 26), 20=3551 (LC 26), 25=1366 (LC 26)
<b>FORCES</b>		
	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-3764/1554, 2-4=-3756/1229, 4-5=-3645/1180, 5-7=-938/300, 7-8=-523/482, 8-10=-1728/929, 10-11=-1727/936, 11-12=-1874/993, 1-25=-1288/483, 1-26=0/0, 12-13=-1049/368, 12-27=0/0	
BOT CHORD	24-25=-1613/2017, 21-24=-2116/3744, 20-21=-3911/1082, 18-20=-3911/1082, 16-18=-261/190, 15-16=-600/1866, 13-15=-150/289	

- WEBS**
- 2-24=-604/440, 5-21=-1327/591, 8-18=-1214/470, 7-20=-3363/1106, 10-16=-477/254, 8-16=-568/1945, 11-15=-558/308, 11-16=-158/63, 12-15=-599/1879, 7-21=-1700/5058, 4-23=-622/323, 5-23=-1080/2815, 2-23=-567/449, 1-24=-1598/3579, 7-18=-1165/4031
- 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; B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4 to 58-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Provide adequate drainage to prevent water ponding.
  - Plates checked for a plus or minus 5 degree rotation about its center.
  - WARNING: Required bearing size at joint(s) 20 greater than input bearing size.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 25, 123 lb uplift at joint 13 and 343 lb uplift at joint 20.
  - 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 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 (lb/ft)
- Vert: 2-29=-64, 2-11=-65, 11-34=-64, 13-25=-20
- Concentrated Loads (lb)
- Vert: 11=-1, 29=-1
- Trapezoidal Loads (lb/ft)
- Vert: 1=-118-to-28=-75, 28=-73-to-29=-67, 34=-67-to-35=-73, 35=-75-to-12=-118



June 3,2025

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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

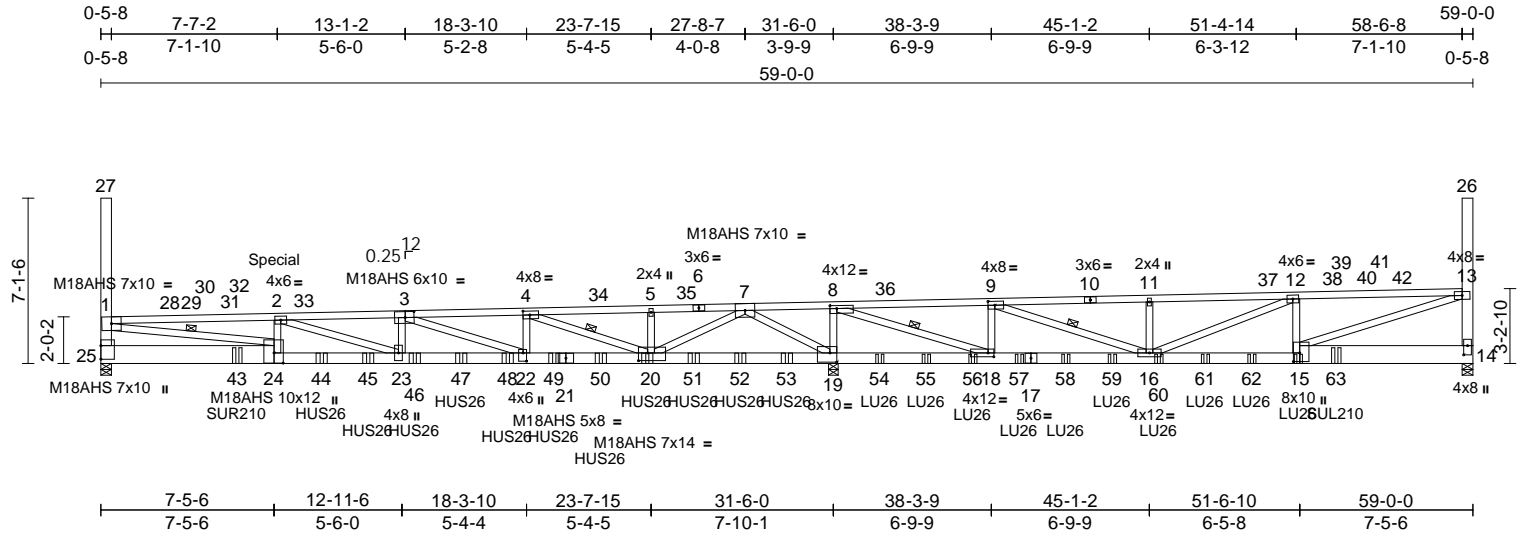
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884353
2503400-A	M02G	Roof Special Girder	1	2	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:39

Page: 1

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Scale = 1:99.1

[3:0-4-8,0-3-0], [4:0-3-8,0-2-0], [8:0-3-8,0-1-8], [9:0-3-8,0-2-0], [14:0-4-12,0-2-0], [15:0-4-8,0-3-4], [18:0-3-0,0-2-0], [19:0-3-8,0-4-12], [20:0-4-12,0-4-0],

Plate Offsets (X, Y): [22:0-4-4,0-1-12], [24:0-5-4,0-4-12]

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	0.96	Vert(LL)	1.13	22-23	>333	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-1.24	22-23	>302	180	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.06	19	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 774 lb	FT = 12%

**LUMBER**  
TOP CHORD 2x4 SP 1650F 1.6E \*Except\* 3-1,6-10:2x4 SP 2400F 2.0E  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 15-14,24-25:2x10 SP M 23  
WEBS 2x4 SP No.2 \*Except\* 26-14,25-27:2x6 SP 2400F 2.0E, 13-15,1-24,8-18,7-20:2x4 SP 1650F 1.6E

**WEBS**  
2-24=-1835/1693, 5-20=-429/211, 9-18=-3249/2473, 8-19=-5461/3525, 11-16=-500/257, 9-16=-6293/8107, 12-15=-1213/1236, 12-16=-2659/2444, 13-15=-2137/6296, 1-24=-12440/14312, 8-18=-9430/14690, 4-20=-10223/8591, 3-23=-1236/1617, 2-23=-3786/3924, 3-22=-4915/3976, 4-22=-2975/3567, 7-19=-12517/10734, 7-20=-12020/14056

- 5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are MT20 plates unless otherwise indicated.
- 8) Plates checked for a plus or minus 5 degree rotation about its center.
- 9) WARNING: Required bearing size at joint(s) 19 greater than input bearing size.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 887 lb uplift at joint 14, 3383 lb uplift at joint 25 and 9911 lb uplift at joint 19.
- 11) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 12) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 4-6-11 oc bracing.  
WEBS 1 Row at midpt 9-16, 1-24, 8-18, 4-20  
**REACTIONS** (size) 14=0-5-8, 19=0-5-0, (req. 0-5-6), 25=0-5-8  
Max Horiz 25=479 (LC 46)  
Max Uplift 14=-887 (LC 10), 19=-9911 (LC 13), 25=-3383 (LC 9)  
Max Grav 14=2856 (LC 26), 19=12918 (LC 18), 25=4211 (LC 12)

#### NOTES

- 1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-6-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 3) Unbalanced roof live loads have been considered for this design.
- 4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4 to 58-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-15794/13163, 2-4=-19135/16367, 4-5=-4850/4544, 5-7=-4851/4547, 7-8=-15339/18356, 8-9=-6592/6863, 9-11=-6736/1006, 11-12=-6735/1013, 12-13=-6152/2425, 13-14=-2573/906, 13-26=0/0, 1-25=-3675/3190, 1-27=0/0  
BOT CHORD 23-25=-13839/16291, 22-23=-16817/19376, 20-22=-13081/14758, 19-20=-8085/6076, 18-19=-18289/15107, 16-18=-6599/6288, 14-16=-2008/6190



June 3,2025

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M02G	Roof Special Girder	1	2	Job Reference (optional)
					I73884353

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:39  
ID:YtoTyrGaUxcWJkvBccFue0zF?Xq-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 2

- 13) Use Simpson Strong-Tie SUR210 (10-10d Girder, 10-10dx1 1/2 Truss) or equivalent at 5-10-7 from the left end to connect truss(es) to back face of bottom chord, skewed 45.0 deg.to the right, sloping 0.0 deg. down.
- 14) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 9-6-0 from the left end to 29-6-0 to connect truss(es) to back face of bottom chord.
- 15) Use Simpson Strong-Tie LU26 (6-10d Girder, 4-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 33-6-0 from the left end to 51-6-0 to connect truss(es) to back face of bottom chord.
- 16) Use Simpson Strong-Tie SUL210 (10-10d Girder, 10-10dx1 1/2 Truss) or equivalent at 53-1-9 from the left end to connect truss(es) to back face of bottom chord, skewed 45.0 deg.to the left, sloping 0.0 deg. down.
- 17) Fill all nail holes where hanger is in contact with lumber.
- 18) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 440 lb down and 279 lb up at 7-6-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 2-32=-79, 2-34=-70, 6-12=-70, 12-38=-79, 14-25=-20  
Concentrated Loads (lb)  
Vert: 15=-372 (B), 2=-331 (B), 20=-38 (B), 29=-10, 40=-10, 43=-793 (B), 44=-38 (B), 45=-38 (B), 46=-38 (B), 47=-38 (B), 48=-38 (B), 49=-38 (B), 50=-38 (B), 51=-38 (B), 52=-38 (B), 53=-38 (B), 54=-369 (B), 55=-369 (B), 56=-369 (B), 57=-369 (B), 58=-369 (B), 59=-369 (B), 60=-369 (B), 61=-369 (B), 62=-369 (B), 63=-789 (B)  
Trapezoidal Loads (lb/ft)  
Vert: 1=-111-to-28=-92, 28=-92-to-29=-88, 29=-70-to-30=-68, 30=-81-to-31=-74, 31=-73-to-32=-70, 34=-70-to-5=-70, 5=-70-to-35=-70, 35=-70-to-6=-70, 38=-70-to-39=-73, 39=-74-to-40=-81, 40=-68-to-41=-70, 41=-88-to-42=-92, 42=-92-to-13=-111



June 3, 2025

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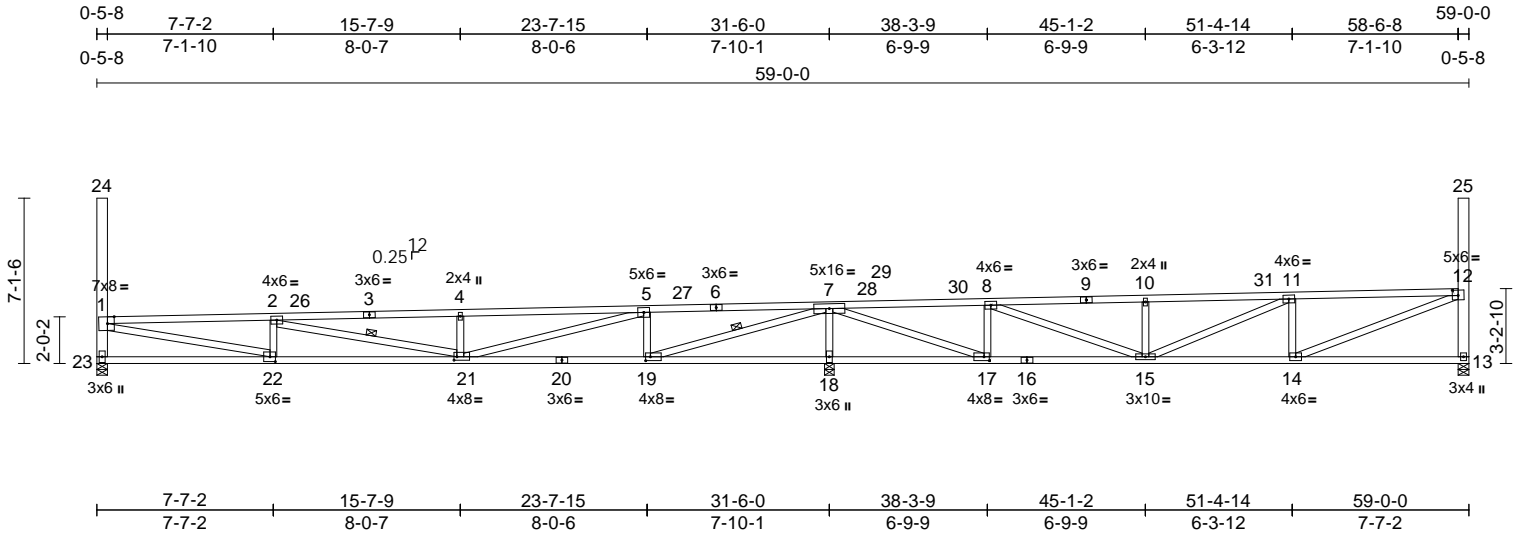
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	173884354
2503400-A	M02X	Monopitch	2	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:40  
ID:2k1eDacKJjsWckhJA1Sh3zBh3R-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:99.1

Plate Offsets (X, Y): [1:0-3-8,Edge], [12:0-3-0,0-2-12], [17:0-2-12,0-2-0], [19:0-2-8,0-2-0], [21:0-1-8,0-1-12], [22:0-2-12,0-2-8]

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	0.81	Vert(LL)	-0.34	21-22	>999	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.77	21-22	>486	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.03	18	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 314 lb	FT = 12%

**LUMBER**  
TOP CHORD 2x4 SP 1650F 1.6E \*Except\* 3-1:2x4 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\*  
12-14,5-21,1-22,7-19,21-2:2x4 SP 1650F 1.6E, 24-23,25-13:2x6 SP 2400F 2.0E

**WEBS**  
7-18=-3233/987, 10-15=-431/269, 11-14=-522/294, 11-15=-129/88, 12-14=-563/1782, 5-19=-1218/597, 4-21=-573/319, 5-21=-1069/2674, 2-22=-558/443, 1-22=-1616/3360, 8-17=-1172/416, 7-19=-1721/4691, 2-21=-575/437, 8-15=-638/1739, 7-17=-1003/3904

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 13-23=-20, 2-28=-58, 28-30=-91, 11-30=-58  
Trapezoidal Loads (lb/ft)  
Vert: 1=-118-to-2=-59, 11=-58-to-12=-101

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-0-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 3-5-6 oc bracing.  
WEBS 1 Row at midpt 7-19, 2-21

**REACTIONS**  
(size) 13=0-5-8, 18=0-5-0, 23=0-5-8  
Max Horiz 23=491 (LC 10)  
Max Uplift 13=-110 (LC 10), 18=-224 (LC 13), 23=-147 (LC 9)  
Max Grav 13=1047 (LC 26), 18=3418 (LC 26), 23=1313 (LC 26)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3550/1571, 2-4=-3481/1259, 4-5=-3398/1220, 5-7=-831/351, 7-8=-647/359, 8-10=-1734/872, 10-11=-1735/879, 11-12=-1850/960, 1-23=-1236/488, 1-24=0/0, 12-13=-973/356, 12-25=0/0  
BOT CHORD 22-23=-1613/2017, 21-22=-2133/3554, 19-21=-735/898, 18-19=-3671/1052, 17-18=-3671/1052, 15-17=-137/313, 14-15=-567/1766, 13-14=-150/288

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4 to 58-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00  
4) Provide adequate drainage to prevent water ponding.  
5) Plates checked for a plus or minus 5 degree rotation about its center.  
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 13, 224 lb uplift at joint 18 and 147 lb uplift at joint 23.  
7) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.  
8) Load case(s) 1 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



June 3,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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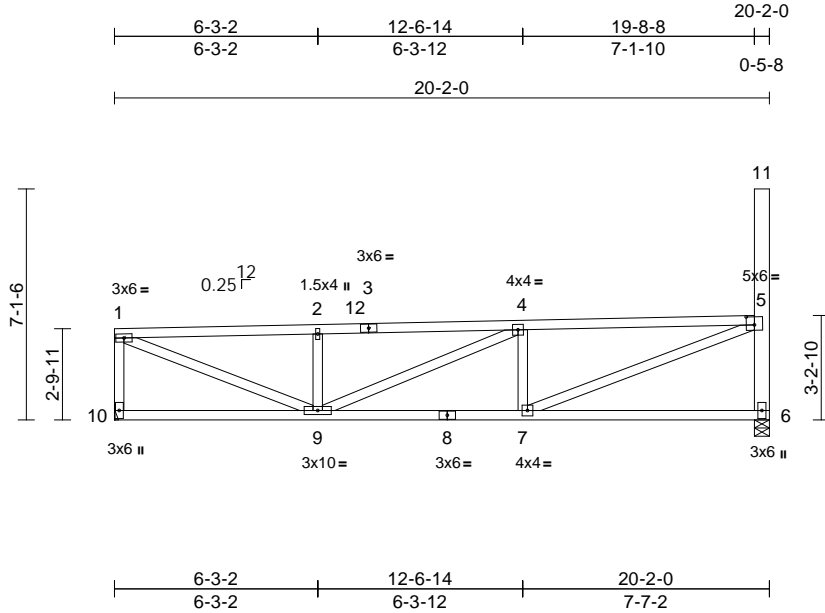


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884355
2503400-A	M04	Jack-Closed	2	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:40  
ID:WYK5D\_w5L9CSVDbJcXmSOzF07i-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:71

Plate Offsets (X, Y): [5:0-3:0,0-3:0]

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	0.93	Vert(LL)	0.09	7-9	>999	240	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.16	7-9	>999	180	
TCDL	15.0	Rep Stress Incr	NO	WB	0.77	Horz(CT)	0.02	6	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 116 lb FT = 12%											

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-7:2x4 SP 1650F 1.6E, 11-6:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-0-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 7-11-3 oc bracing.

**REACTIONS** (size) 6=0-5-8, 10= Mechanical  
Max Horiz 10=316 (LC 10)  
Max Uplift 6=215 (LC 10), 10=195 (LC 9)  
Max Grav 6=1085 (LC 26), 10=934 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1583/948, 2-4=-1582/958, 4-5=-1772/1188, 1-10=-873/556, 5-6=-1011/631, 5-11=0/0  
BOT CHORD 9-10=-610/450, 7-9=-873/1765, 6-7=-168/287  
WEBS 2-9=-443/380, 4-7=-515/514, 4-9=-356/240, 5-7=-1154/1770, 1-9=-1023/1645

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00

- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 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 215 lb uplift at joint 6 and 195 lb uplift at joint 10.
- 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 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 (lb/ft)  
Vert: 1-4=-58, 6-10=-20  
Concentrated Loads (lb)  
Vert: 1=-15  
Trapezoidal Loads (lb/ft)  
Vert: 4=-59-to-5=-118



June 3,2025

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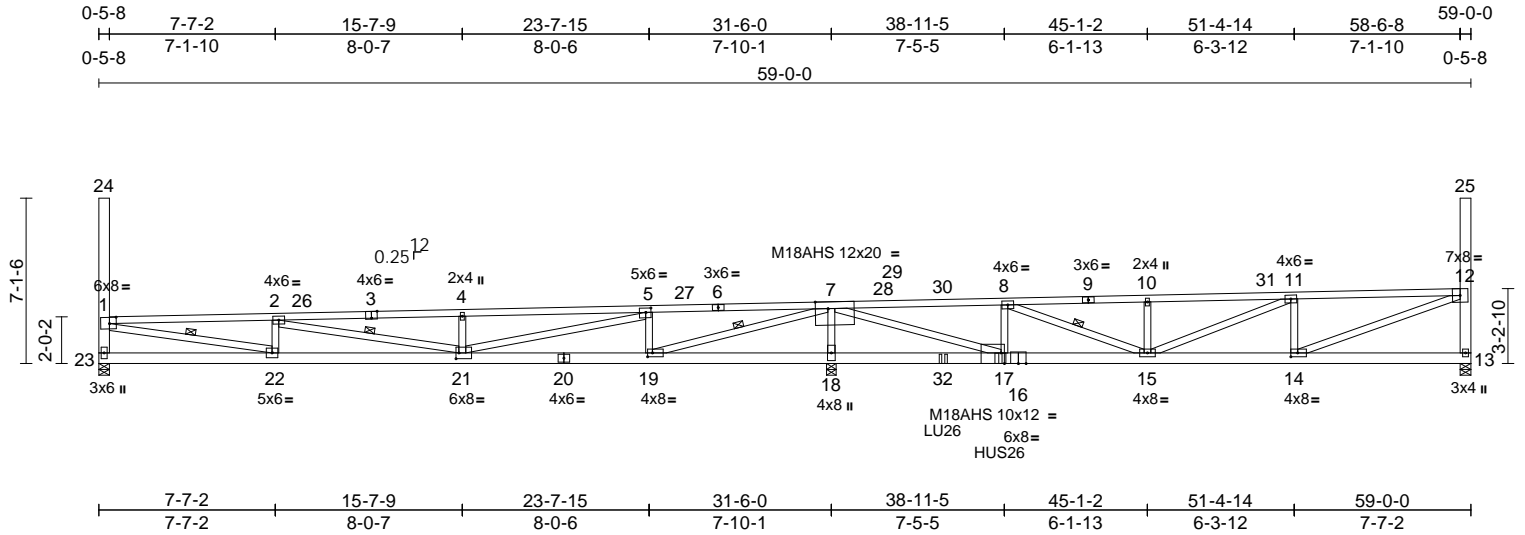
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884356
2503400-A	M05G	Monopitch Girder	2	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:41

Page: 1

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Scale = 1:99.1

Plate Offsets (X, Y): [1:0-3-8,0-3-4], [3:0-3-0,Edge], [5:0-2-12,0-2-4], [7:0-6-8,Edge], [14:0-3-8,0-2-0], [17:0-1-12,Edge], [19:0-2-8,0-2-0], [21:0-1-8,0-3-0]

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	1.00	Vert(LL)	0.32	21-22	>999	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.61	15-17	>540	180	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.98	Horz(CT)	-0.03	18	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 361 lb	FT = 12%

**LUMBER**  
TOP CHORD 2x4 SP 2400F 2.0E \*Except\* 3-1,3-6:2x4 SP 1650F 1.6E  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x4 SP No.2 \*Except\*  
12-14,7-19,5-21,21-2,1-22:2x4 SP 1650F  
1.6E, 7-17:2x4 SP 2400F 2.0E,  
23-24,25-13:2x6 SP 2400F 2.0E

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 3-3-11 oc bracing.  
WEBS 1 Row at midpt 8-15, 7-19, 2-21, 1-22  
**REACTIONS** (size) 13=0-5-8, 18=0-5-0, (req. 0-5-2), 23=0-5-8  
Max Horiz 23=484 (LC 36)  
Max Uplift 13=161 (LC 10), 18=311 (LC 13), 23=239 (LC 35)  
Max Grav 13=1669 (LC 26), 18=6164 (LC 26), 23=1117 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=2809/1939, 2-4=2071/1936, 4-5=2071/1945, 5-7=200/1496, 7-8=4888/469, 8-10=4683/1044, 10-11=4682/1051, 11-12=3384/1038, 1-23=1003/562, 1-24=0/0, 12-13=1571/389, 12-25=0/0  
BOT CHORD 22-23=1607/1995, 21-22=2497/3070, 19-21=1716/262, 18-19=6068/1402, 17-18=6068/1402, 15-17=461/4882, 14-15=649/3377, 13-14=175/331

**WEBS**  
2-22=460/509, 5-19=1361/602,  
7-18=5498/1153, 10-15=404/255,  
8-15=1890/610, 11-14=1129/338,  
11-15=265/1595, 12-14=671/3453,  
7-19=1817/4863, 4-21=570/318,  
5-21=1191/3578, 2-21=896/390,  
1-22=1909/2570, 7-17=1570/11381,  
8-17=551/897

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4 to 58-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00  
4) Provide adequate drainage to prevent water ponding.  
5) All plates are MT20 plates unless otherwise indicated.  
6) Plates checked for a plus or minus 5 degree rotation about its center.  
7) WARNING: Required bearing size at joint(s) 18 greater than input bearing size.  
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 13, 239 lb uplift at joint 23 and 311 lb uplift at joint 18.  
9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

10) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.  
11) Use Simpson Strong-Tie LU26 (6-10d Girder, 4-10dx1 1/2 Truss, Single Ply Girder) or equivalent at 36-3-12 from the left end to connect truss(es) to back face of bottom chord.  
12) Use Simpson Strong-Tie HUS26 (14-16d Girder, 6-16d Truss, Single Ply Girder) or equivalent at 38-9-4 from the left end to connect truss(es) to back face of bottom chord.  
13) Fill all nail holes where hanger is in contact with lumber.  
14) 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 (lb/ft)  
Vert: 2-29=58, 29-30=104, 8-30=81, 8-11=58, 13-23=20  
Concentrated Loads (lb)  
Vert: 8=9, 17=-2448 (B), 32=620 (B)



June 3,2025

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M05G	Monopitch Girder	2	1	Job Reference (optional)

I73884356

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:41  
ID:p5cfCmtZygjQFYs9GZZY8zF\_r8-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 2

Trapezoidal Loads (lb/ft)  
Vert: 1=-118-to-2=-59, 11=-59-to-12=-118



June 3,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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, and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

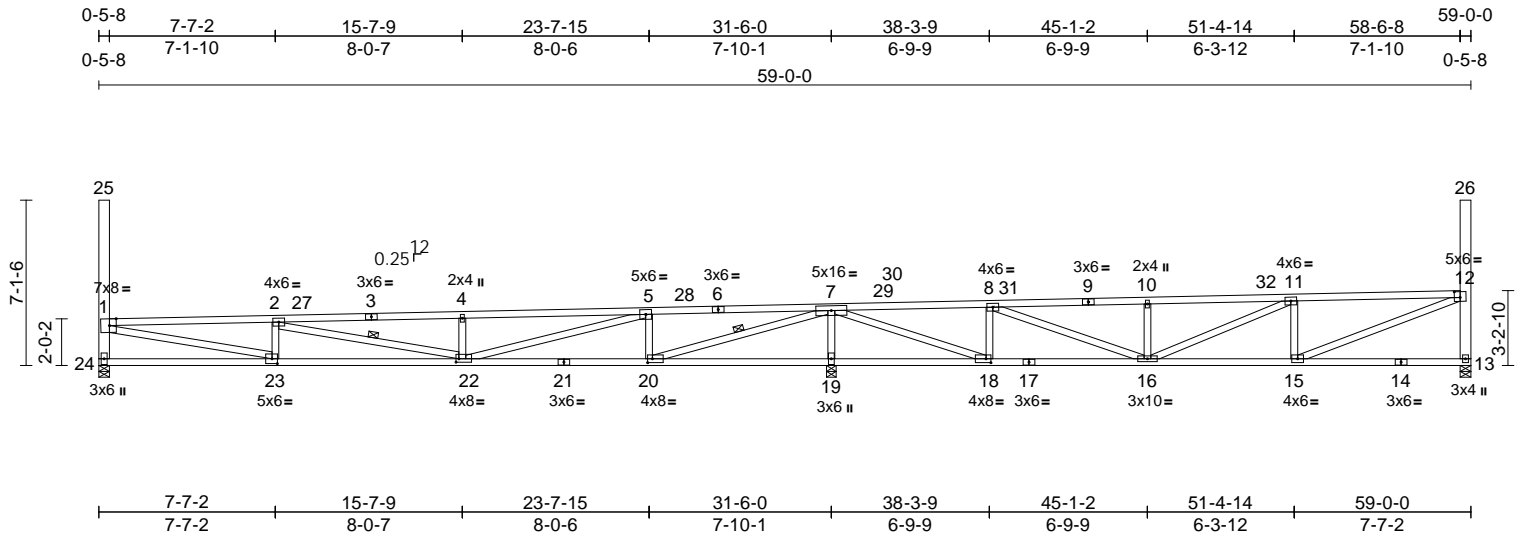
**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884357
2503400-A	M05X	Monopitch	1	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:41  
ID:f1?cZuwyJO8TOebKV4dKBqzBgj4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:99.1

Plate Offsets (X, Y): [1:0-3-8,Edge], [12:0-3-0,0-3-0], [18:0-2-8,0-2-0], [20:0-2-8,0-2-0], [22:0-1-8,0-1-12], [23:0-2-12,0-2-8]

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)	-0.34	22-23	>999	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.77	22-23	>487	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.03	19	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 314 lb	FT = 12%

<b>LUMBER</b>			WEBS	7-19=-3233/995, 10-16=-436/263, 11-15=-543/288, 11-16=-135/108, 12-15=-547/1836, 5-20=-1223/593, 4-22=-572/320, 5-22=-1070/2676, 2-23=-556/444, 1-23=-1619/3354, 8-18=-1200/395, 7-20=-1706/4707, 2-22=-579/432, 8-16=-644/1748, 7-18=-940/3987	1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (lb/ft) Vert: 2-30=-58, 30-31=-83, 11-31=-58, 13-24=-20 Trapezoidal Loads (lb/ft) Vert: 1=-118-to-2=-59, 11=-59-to-12=-118
TOP CHORD	2x4 SP 1650F 1.6E *Except* 3-1:2x4 SP 2400F 2.0E				
BOT CHORD	2x4 SP 1650F 1.6E				
WEBS	2x4 SP No.2 *Except* 12-15,5-22,1-23,7-20,22-2:2x4 SP 1650F 1.6E, 25-24,26-13:2x6 SP 2400F 2.0E				
<b>BRACING</b>					
TOP CHORD	Structural wood sheathing directly applied or 2-11-6 oc purlins, except end verticals.				
BOT CHORD	Rigid ceiling directly applied or 3-5-2 oc bracing.				
WEBS	1 Row at midpt 7-20, 2-22				
<b>REACTIONS</b>					
(size)	13=0-5-8, 19=0-5-0, 24=0-5-8				
Max Horiz	24=491 (LC 10)				
Max Uplift	13=-105 (LC 10), 19=-231 (LC 13), 24=-148 (LC 9)				
Max Grav	13=1109 (LC 26), 19=3418 (LC 26), 24=1312 (LC 26)				
<b>FORCES</b>					
(lb) - Maximum Compression/Maximum Tension					
TOP CHORD	1-2=-3544/1574, 2-4=-3468/1266, 4-5=-3385/1228, 5-7=-824/358, 7-8=-684/321, 8-10=-1766/840, 10-11=-1767/847, 11-12=-1865/945, 1-24=-1234/488, 1-25=0/0, 12-13=-1034/350, 12-26=0/0				
BOT CHORD	23-24=-1613/2017, 22-23=-2137/3550, 20-22=-742/891, 19-20=-3702/1031, 18-19=-3702/1031, 16-18=-99/351, 15-16=-552/1827, 13-15=-150/289				

#### 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; B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4 to 58-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 105 lb uplift at joint 13, 148 lb uplift at joint 24 and 231 lb uplift at joint 19.
- 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 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



June 3,2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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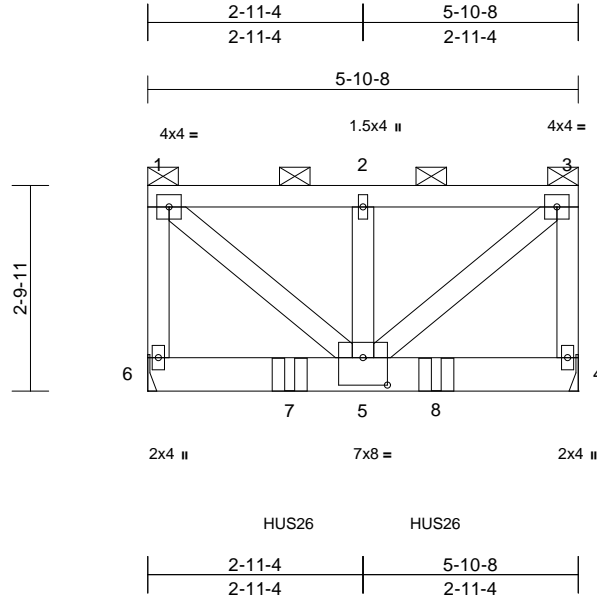
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	
2503400-A	M06G	Flat Girder	1	1	Job Reference (optional)	I73884358

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:42  
ID:5Unqo5q3W5nm7iCCT9XzRlZF02g-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?i

Page: 1



Scale = 1:31.4

Plate Offsets (X, Y): [5:0-4-0,0-4-8]

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	0.14	Vert(LL)	0.01	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.02	4-5	>999	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.33	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 41 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x4 SP No.2

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-3, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 4= Mechanical, 6= Mechanical  
Max Horiz 6=88 (LC 11)  
Max Uplift 4=197 (LC 10), 6=197 (LC 9)  
Max Grav 4=1244 (LC 26), 6=1244 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-6=999/356, 1-2=1014/291,  
2-3=1014/291, 3-4=999/356

BOT CHORD 5-6=130/134, 4-5=47/51

WEBS 1-5=429/1345, 2-5=318/244, 3-5=429/1345

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) 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;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 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 197 lb uplift at joint 6 and 197 lb uplift at joint 4.
- 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 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 Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 3-11-4 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-96, 4-6=-20  
Concentrated Loads (lb)  
Vert: 7=-914 (B), 8=-914 (B)



June 3,2025

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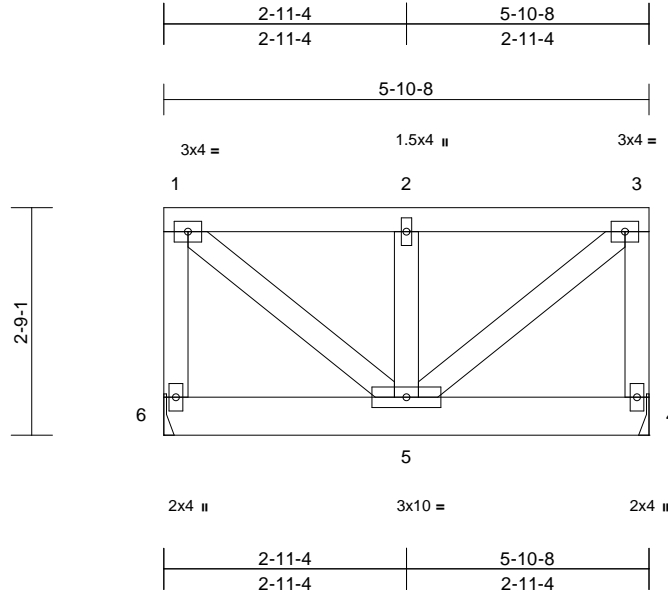
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884359
2503400-A	M07G	Flat Girder	1	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:42  
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Page: 1



Scale = 1:27.9

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	0.14	Vert(LL)	0.00	5	>999	240	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	5	>999	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.07	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 41 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x6 SP 2400F 2.0E
WEBS	2x4 SP No.2

#### BRACING

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

<b>REACTIONS</b>	(size)	4= Mechanical, 6= Mechanical
	Max Horiz	6=-86 (LC 11)
	Max Grav	4=330 (LC 2), 6=330 (LC 2)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-6=-293/195, 1-2=-219/111, 2-3=-219/111, 3-4=-293/195
BOT CHORD	5-6=-127/131, 4-5=-46/50
WEBS	1-5=-188/288, 2-5=-336/232, 3-5=-188/288

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Refer to girder(s) for truss to truss connections.

- 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 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 (lb/ft)  
Vert: 1-3=-96, 4-6=-20



June 3,2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com



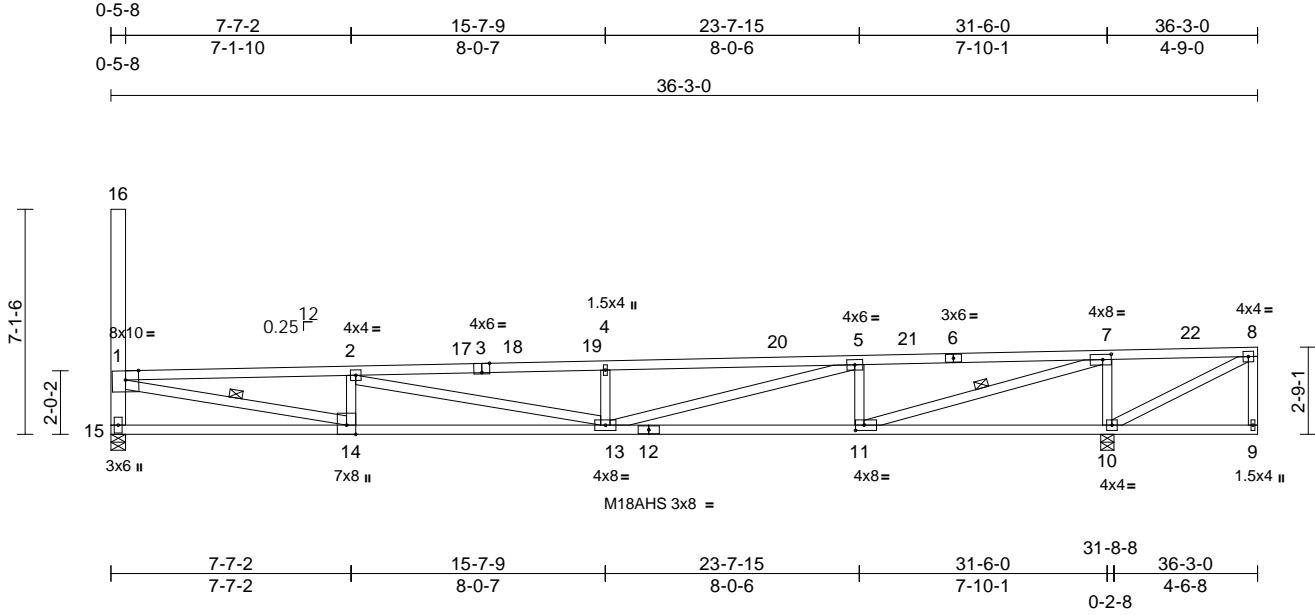
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884360
2503400-A	M08	Jack-Closed	2	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:42

Page: 1

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Scale = 1:72.8

Plate Offsets (X, Y): [3:0-3-0,Edge], [7:0-3-4,0-2-0], [11:0-3-4,0-2-0]

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	0.87	Vert(LL)	-0.44	13-14	>857	240	MT20	220/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.98	13-14	>384	180	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.09	10	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 189 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 DF-N 2850F 2.3E \*Except\* 6-8:2x4 SP 1650F 1.6E, 6-3:2x4 SP 2400F 2.0E  
 BOT CHORD 2x4 SP 1650F 1.6E  
 WEBS 2x4 SP No.2 \*Except\* 5-13,1-14,7-11,13-2:2x4 SP 1650F 1.6E, 15-16:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-8-6 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 5-0-15 oc bracing.  
 WEBS 1 Row at midpt 1-14, 7-11

#### REACTIONS

(size) 10=0-5-0, 15=0-5-8  
 Max Horiz 15=320 (LC 10)  
 Max Uplift 10=217 (LC 10), 15=187 (LC 9)  
 Max Grav 10=1970 (LC 26), 15=1571 (LC 26)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-4543/2054, 2-4=-5451/2141, 4-5=-5368/2101, 5-7=-3568/1350, 7-8=-77/343, 1-15=-1491/560, 1-16=0/0  
 BOT CHORD 14-15=-1014/1533, 13-14=-2087/4531, 11-13=-1358/3561, 10-11=-341/74, 9-10=0/0  
 WEBS 7-10=-1625/671, 5-11=-1034/538, 4-13=-569/331, 5-13=-790/1871, 2-14=-850/505, 1-14=-1771/4404, 7-11=-1492/4076, 2-13=-767/1122, 8-9=-48/22, 8-10=-387/84

#### NOTES

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=34ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 15-2-12, Exterior (2) 15-2-12 to 21-1-4, Corner (3) 21-1-4 to 36-1-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 217 lb uplift at joint 10 and 187 lb uplift at joint 15.
- 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 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 (lb/ft)  
 Vert: 2-22=-58, 8-22=-104, 9-15=-20  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-118 to -2=-59



June 3,2025

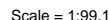
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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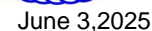
Lumber Specialties, Dyersville, IA - 52040, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:42 Page: 1  
ID:0d11XH4SpLz T?Qep63vHHZEvzU-RfC?PsB70Hg3NSoPanL8w3ulTXbGKWRcDoI7J4zJC?f

[illegible]

- 10) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss, Single Ply Girder) or equivalent at 24-0-4 from the left end to connect truss(es) to front face of bottom chord.
- 11) Use Simpson Strong-Tie LU24 (4-16d Girder, 2-10dx1 1/2 Truss, Single Ply Girder) or equivalent at 28-7-4 from the left end to connect truss(es) to front face of bottom chord.
- 12) Fill all nail holes where hanger is in contact with lumber.
- 13) 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 (lb/ft)  
Vert: 2-29=-58, 6-29=-113, 6-31=-80, 12-31=-58, 14-25=-20  
Concentrated Loads (lb)  
Vert: 20=-1665 (F), 31=-9, 34=-442 (F)  
Trapezoidal Loads (lb/ft)  
Vert: 1=-118-to-2=-59, 12=-59-to-13=-118



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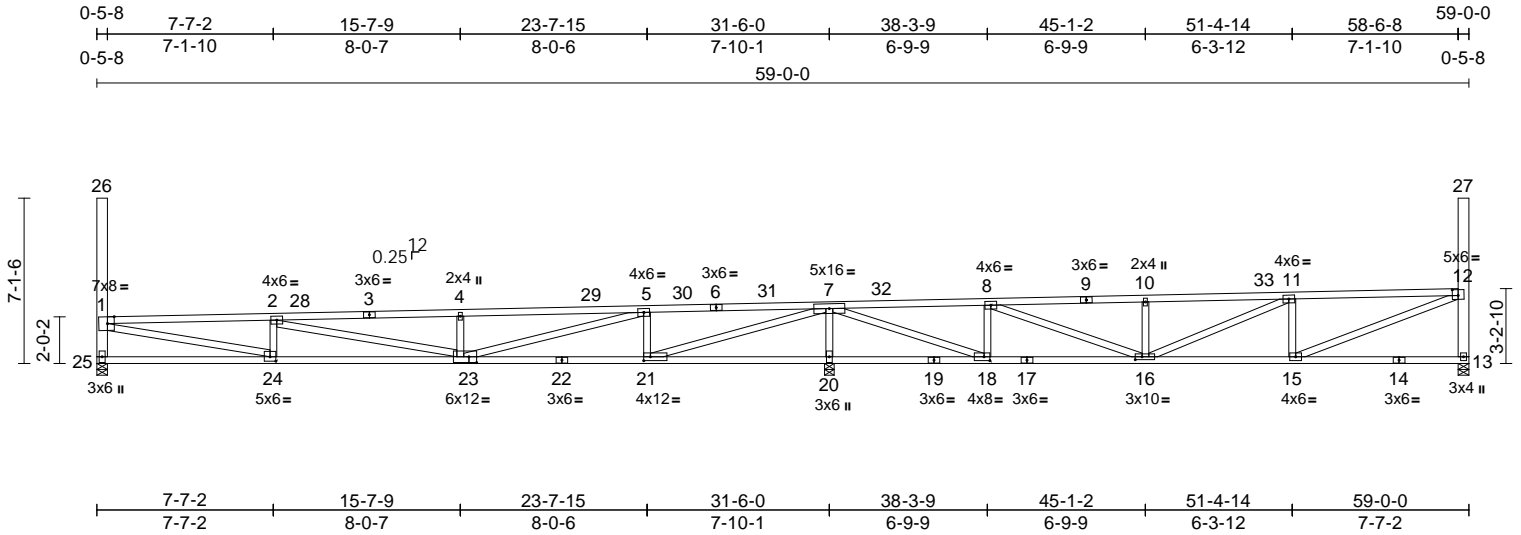
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Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884362
2503400-A	M09X	Monopitch	1	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:43  
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Page: 1



Scale = 1:99.1

Plate Offsets (X, Y): [1:0-3-8,Edge], [12:0-3-0,0-3-0], [16:0-3-8,0-1-8], [18:0-3-0,0-2-0], [21:0-3-8,0-2-0], [23:0-4-0,0-3-0], [24:0-3-0,0-2-4]

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)	-0.34	23-24	>999	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.83	23-24	>454	180		
TCDL	15.0	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.04	20	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 314 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E \*Except\* 3-1:2x4 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\*  
12-15,7-21,5-23,23-2,1-24:2x4 SP 1650F 1.6E, 26-25,27-13:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-9-9 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 3-3-10 oc bracing.

#### REACTIONS

(size) 13=0-5-8, 20=0-5-0, 25=0-5-8  
Max Horiz 25=491 (LC 10)  
Max Uplift 13=146 (LC 10), 20=91 (LC 13), 25=110 (LC 9)  
Max Grav 13=1067 (LC 26), 20=3559 (LC 26), 25=1349 (LC 26)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3693/1424, 2-4=-3751/978, 4-5=-3652/930, 5-7=-1235/0, 7-8=-322/683, 8-10=-1555/1049, 10-11=-1557/1055, 11-12=-1753/1056, 1-25=-1272/451, 1-26=0/0, 12-13=-993/392, 12-27=0/0  
BOT CHORD 24-25=-1611/2019, 21-24=-1987/3700, 20-21=-3892/845, 18-20=-3892/845, 16-18=-462/0, 15-16=-663/1715, 13-15=-150/288  
WEBS 2-24=-588/412, 5-21=-1408/409, 8-18=-1139/456, 7-20=-3370/857, 10-16=-450/249, 8-16=-481/1912, 11-15=-498/333, 11-16=-243/1, 12-15=-666/1716, 7-21=-1081/5331, 4-23=-568/327, 5-23=-1187/2531, 2-23=-443/573, 1-24=-1467/3505, 7-18=-1127/3801

#### 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; B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4 to 58-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 25, 146 lb uplift at joint 13 and 91 lb uplift at joint 20.
- 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 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 (lb/ft)  
Vert: 2-29=-58, 29-31=-92, 11-31=-58, 13-25=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-118-to-2=-59, 11=-59-to-12=-118



June 3,2025

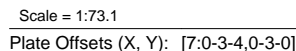
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Lumber Specialties, Dyersville, IA - 52040, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:43 Page: 1  
ID:FhpXOI?OYMost YYCkxw8izGZee-RfC?PsB70Ha3NSaPqnL8w3ulTXbGKWrCDoi7J4zJC?f



**LUMBER**  
TOP CHORD 2x4 SP 1650F 1.6E \*Except\* 4-7:2x4 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 7-9:2x4 SP 1650F 1.6E, 14-8:2x6 SP 2400F 2.0E

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-6:12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

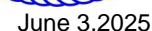
**REACTIONS** (size) 8=0-5-8, 12=0-5-0  
Max Horiz 12=315 (LC 10)  
Max Uplift 8=-157 (LC 10), 12=-217 (LC 9)  
Max Grav 8=1416 (LC 26), 12=1517 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-59/46, 2-3=-2574/985, 3-5=-3291/1373, 5-6=-3292/1381, 6-7=-2643/1266, 1-13=-35/4, 7-8=-1340/565, 7-14=0/0  
BOT CHORD 12-13=-52/48, 11-12=-558/419, 9-11=-1196/2635, 8-9=-155/288  
WEBS 2-12=-1373/654, 5-10=-441/273, 6-9=-862/489, 6-10=-469/795, 7-9=-1084/2701, 3-11=-770/454, 3-10=-405/765, 2-11=-1097/2732, 1-12=-28/52

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf;  $\eta$ =25ft;  
B=45ft; L=41ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) 0-1-12 to  
5-1-12, Exterior (2) 5-1-12 to 25-1-4, Corner (3) 25-1-4  
to 30-1-4 zone; cantilever left and right exposed ; end  
vertical left and right exposed; C-C for members and  
forces & MWFRS for reactions shown; Lumber  
DOL=1.60 plate grip DOL=1.60
- 3) TCTL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15  
Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL =  
1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially  
Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- 4) Provide adequate drainage to prevent water ponding.
- 5) Plates checked for a plus or minus 5 degree rotation  
about its center.
- 6) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 157 lb uplift at joint  
8 and 217 lb uplift at joint 12.
- 7) This truss is designed in accordance with the 2018  
International Building Code section 2306.1 and  
referenced standard ANSI/TPI 1.
- 8) Load case(s) 1 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 (lb/ft)  
Vert: 1-6=-58, 8-13=-20  
Concentrated Loads (lb)  
Vert: 1=-14  
Trapezoidal Loads (lb/ft)  
Vert: 6=-59-to-18=-78, 18=-78-to-7=-118



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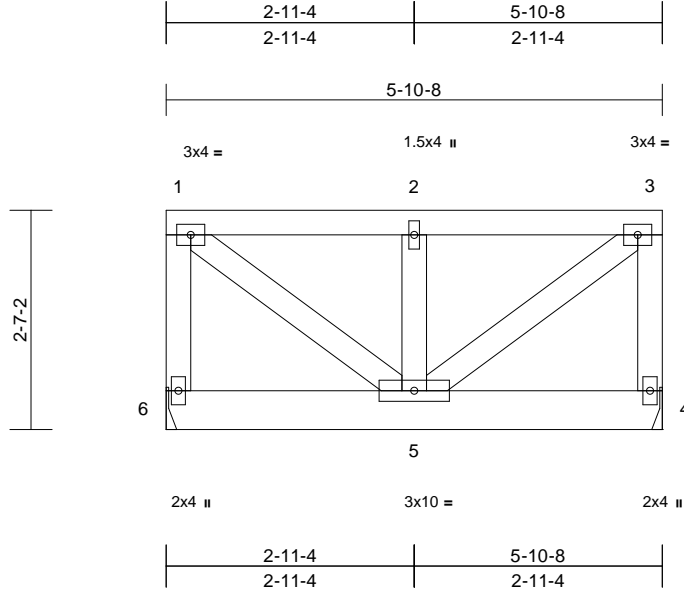


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M12G	Flat Girder	1	1	Job Reference (optional)
					I73884364

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:44  
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Page: 1



Scale = 1:27.3

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	0.20	Vert(LL)	0.00	5	>999	240	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	-0.01	5	>999	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.10	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 40 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x6 SP 2400F 2.0E
WEBS	2x4 SP No.2

#### BRACING

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

<b>REACTIONS</b>	(size)	4= Mechanical, 6= Mechanical
	Max Horiz	6=80 (LC 9)
	Max Grav	4=462 (LC 2), 6=462 (LC 2)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-6=-418/64, 1-2=-328/24, 2-3=-328/24, 3-4=-418/64
BOT CHORD	5-6=-119/122, 4-5=-43/46
WEBS	1-5=-69/419, 2-5=-498/70, 3-5=-69/419

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Refer to girder(s) for truss to truss connections.

- 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 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 (lb/ft)  
Vert: 1-3=-144, 4-6=-20



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

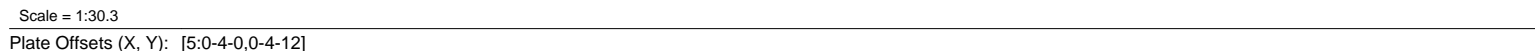
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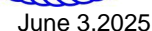


Lumber Specialties, Dyersville, IA - 52040, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:44 Page: 1  
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<b>LUMBER</b>		7) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
TOP CHORD	2x4 SP 1650F 1.6E	8) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
BOT CHORD	2x6 SP 2400F 2.0E	
WEBS	2x4 SP No.2	
<b>BRACING</b>		9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
TOP CHORD	2-0-0 oc purlins (5-8-3 max.): 1-3, except end verticals.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	10) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 3-11-4 to connect truss(es) to front face of bottom chord.
<b>REACTIONS</b>	(size) 4= Mechanical, 6= Mechanical	
	Max Horiz 6=-77 (LC 9)	
	Max Grav 4=1685 (LC 26), 6=1685 (LC 26)	11) Fill all nail holes where hanger is in contact with lumber.
<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-6=-1353/119, 1-2=-1552/98, 2-3=-1552/98, 3-4=-1353/119	12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
BOT CHORD	5-6=-114/117, 4-5=-41/44	
WEBS	1-5=-159/1951, 2-5=-470/88, 3-5=-159/1951	
<b>LOAD CASE(S)</b> Standard		1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15.

- 7) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
  - 8) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 10) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent spaced at 2'-0" oc max. starting at 1'-11"4 from the left end to 3'-11"4 to connect truss(es) to front face of bottom chord.
  - 11) Fill all nail holes where hanger is in contact with lumber.
  - 12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- LOAD CASE(S)** Standard
- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-144, 4-6=-20  
Concentrated Loads (lb)  
Vert: 7=-1222 (F), 8=-1222 (F)

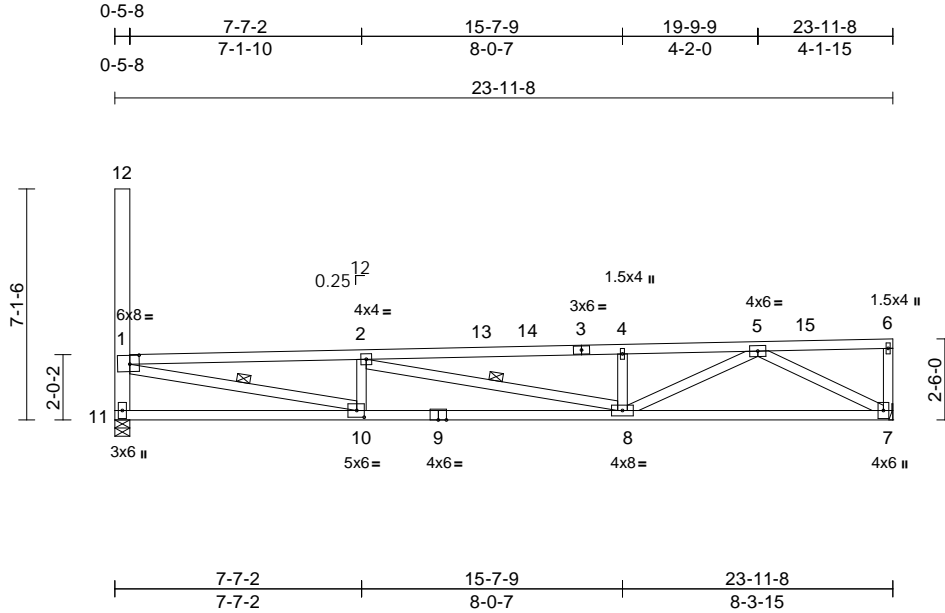


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884366
2503400-A	M14	Jack-Closed	2	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

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Page: 1



Scale = 1:71

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

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	0.72	Vert(LL)	0.22	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.45	8-10	>631	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.76	Horz(CT)	0.06	7	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 130 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 2400F 2.0E \*Except\* 3-6:2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 1-10,2-8:2x4 SP 1650F 1.6E, 12-11:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 5-1-11 oc bracing.  
WEBS 1 Row at midpt 1-10, 2-8

#### REACTIONS

(size) 7= Mechanical, 11=0-5-8  
Max Horiz 11=322 (LC 10)  
Max Uplift 7=-62 (LC 10), 11=-208 (LC 9)  
Max Grav 7=1242 (LC 26), 11=1269 (LC 26)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3385/2006, 2-4=-3107/1555, 4-5=-3067/1532, 5-6=-5/4, 1-11=-1190/623, 1-12=0/0  
BOT CHORD 10-11=-1110/1649, 8-10=-2034/3366, 7-8=-861/1800  
WEBS 4-8=-442/365, 2-10=-533/517, 1-10=-1973/3196, 6-7=-228/0, 5-7=-2036/974, 5-8=-767/1430, 2-8=-575/476

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 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 208 lb uplift at joint 11 and 62 lb uplift at joint 7.
- 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 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 (lb/ft)  
Vert: 2-15=-58, 6-15=-124, 7-11=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-118-to-2=-59



June 3, 2025

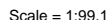
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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Lumber Specialties, Dyersville, IA - 52040, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:44 Page: 1  
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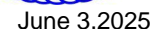
WEBS

2-23=483/444, 5-20=1316/206,  
7-19=1756/748, 11-16=432/247,  
12-15=604/323, 12-16=202/362,  
13-15=679/2115, 7-20=1829/4776,  
4-22=560/319, 5-22=1223/3225,  
2-22=673/404, 1-23=1725/2911,  
9-18=790/677, 9-16=1164/1007,  
8-18=882/3463, 8-19=3860/1033

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4 to 58-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TC LL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- 4) Provide adequate drainage to prevent water ponding.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 175 lb uplift at joint 24, 538 lb uplift at joint 19 and 155 lb uplift at joint 14.
- 7) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 8) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

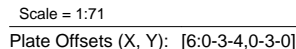
- 9) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent at 36-9-4 from the left end to connect truss(es) to front face of bottom chord.
  - 10) Fill all nail holes where hanger is in contact with lumber.
  - 11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- LOAD CASE(S)** Standard
- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 2-29=58, 29-30=67, 12-30=58, 14-24=20  
Concentrated Loads (lb)  
Vert: 31=-3, 33=-251 (F), 34=-1062 (F)  
Trapezoidal Loads (lb/ft)  
Vert: 1=-118-to-2=-59, 12=-59-to-13=-118



**WARNING – verify design parameters and noted notes on this and included MiTek Reference Tag M7473 Rev. 1/2/2023 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/TP1 Quality Criteria, and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

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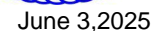


- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- 4) Provide adequate drainage to prevent water ponding.
- 5) Plates checked for a plus or minus 5 degree 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 217 lb uplift at joint 7 and 203 lb uplift at joint 12.
- 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 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 (lb/ft)  
Vert: 1-5=-58, 7-12=-20  
Concentrated Loads (lb)  
Vert: 1=-10  
Trapezoidal Loads (lb/ft)  
Vert: 5=-59-to-6=-118

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed ; end vertical left and  
right exposed;C-C for members and forces & MWFRS  
for reactions shown; Lumber DOL=1.60 plate grip  
DOI=1.60



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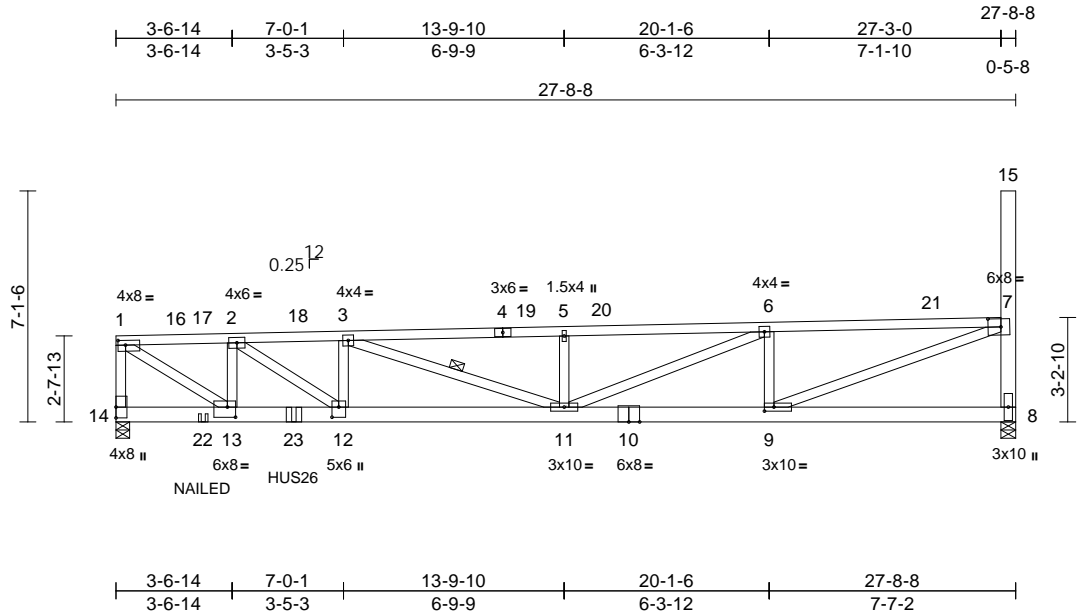


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	173884369
2503400-A	M17G	Monopitch Girder	1	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:45  
ID:M37U6ZsHX0mLPABx9pYN1gzEzis-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWwCDoi7J4zJC?f

Page: 1



Scale = 1:71  
Plate Offsets (X, Y): [1:0-2-12,0-1-12], [7:0-4-12,0-3-0], [9:0-3-8,0-1-8], [12:0-3-12,0-2-8], [13:0-3-0,0-3-12]

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	0.91	Vert(LL)	0.24	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.50	11	>651	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.92	Horz(CT)	0.05	8	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 178 lb	FT = 12%

**LUMBER**

TOP CHORD 2x4 SP 1650F 1.6E \*Except\* 4-7:2x4 SP 2400F 2.0E

BOT CHORD 2x6 SP 2400F 2.0E

WEBS 2x4 SP No.2 \*Except\* 7-9,13-1:2x4 SP 1650F 1.6E, 15-8:2x6 SP 2400F 2.0E

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-10 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 7-11-2 oc bracing.

WEBS 1 Row at midpt 3-11

**REACTIONS** (size) 8=0-5-8, 14=0-5-0

Max Horiz 14=313 (LC 10)

Max Uplift 8=-236 (LC 10), 14=-251 (LC 9)

Max Grav 8=1645 (LC 26), 14=2693 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-3724/845, 2-3=-5443/1548, 3-5=-5038/1834, 5-6=-5037/1842, 6-7=-3504/1558, 1-14=-2659/666, 7-8=-1550/673, 7-15=0/0

BOT CHORD 13-14=-591/441, 12-13=-1247/3721, 11-12=-1742/5440, 9-11=-1169/3497, 8-9=-189/332

WEBS 5-11=-457/329, 6-9=-1163/586, 6-11=-649/1693, 7-9=-1398/3600, 3-12=-275/692, 3-11=-1155/295, 1-13=-1028/4405, 2-13=-1425/588, 2-12=-848/2084

**NOTES**

1) 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; B=45ft; L=28ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 236 lb uplift at joint 8 and 251 lb uplift at joint 14.
- 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 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent at 5-5-12 from the left end to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 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 (lb/ft)

Vert: 1-16=-58, 16-17=-81, 17-18=-68, 6-18=-58, 8-14=-20

Concentrated Loads (lb)

Vert: 18=-4, 22=-266 (B), 23=-1448 (B)

Trapezoidal Loads (lb/ft)

Vert: 6=-58-to-21=-79, 21=-79-to-7=-88



June 3,2025

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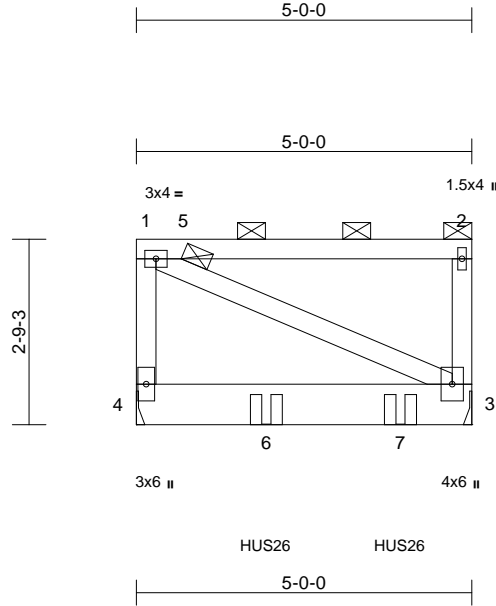
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M18G	Flat Girder	1	1	Job Reference (optional)
					I73884370

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:46

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Scale = 1:34.4

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	0.56	Vert(LL)	0.03	3-4	>999	240	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.07	3-4	>843	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.04	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 36 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x8 SP M 23
WEBS	2x4 SP No.2

#### BRACING

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

<b>REACTIONS</b>	(size)	3= Mechanical, 4= Mechanical
	Max Horiz	4=84 (LC 12)
	Max Uplift	3=-242 (LC 10), 4=-179 (LC 9)
	Max Grav	3=1468 (LC 26), 4=1082 (LC 26)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-4=-224/212, 1-2=-45/48, 2-3=-239/157
BOT CHORD	3-4=-124/128
WEBS	1-3=-89/89

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00; Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 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 179 lb uplift at joint 4 and 242 lb uplift at joint 3.
- 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 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 Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 3-11-4 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-5=-68, 2-5=-100, 3-4=-20  
Concentrated Loads (lb)  
Vert: 6=-996 (B), 7=-997 (B)



June 3, 2025

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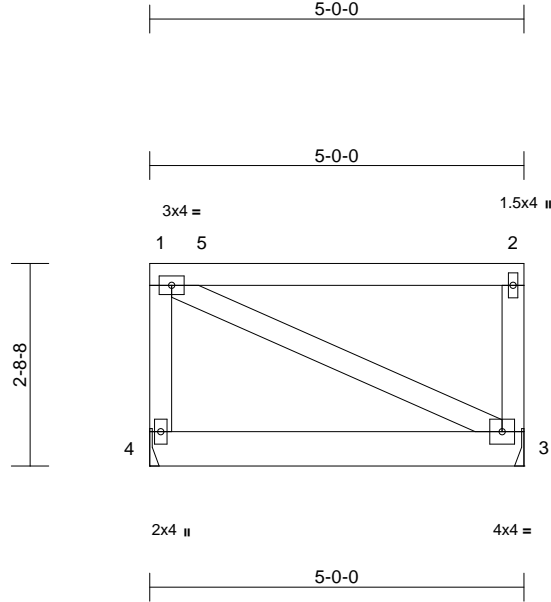
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M19G	Flat Girder	1	1	Job Reference (optional)
					I73884371

Lumber Specialties, Dyersville, IA - 52040,

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Scale = 1:30.8

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	0.55	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.01	3-4	>999	180	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.04	Horz(CT)	0.00	3	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 32 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x6 SP 2400F 2.0E
WEBS	2x4 SP No.2

#### BRACING

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

<b>REACTIONS</b>	(size) 3= Mechanical, 4= Mechanical
	Max Horiz 4=-84 (LC 9)
	Max Uplift 4=-4 (LC 9)
	Max Grav 3=286 (LC 2), 4=271 (LC 2)

<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-4=-224/212, 1-2=-45/49, 2-3=-239/157
BOT CHORD	3-4=-125/129
WEBS	1-3=-89/89

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 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 4 lb uplift at joint 4.
- 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 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 (lb/ft)  
Vert: 1-5=-68, 2-5=-100, 3-4=-20



June 3,2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

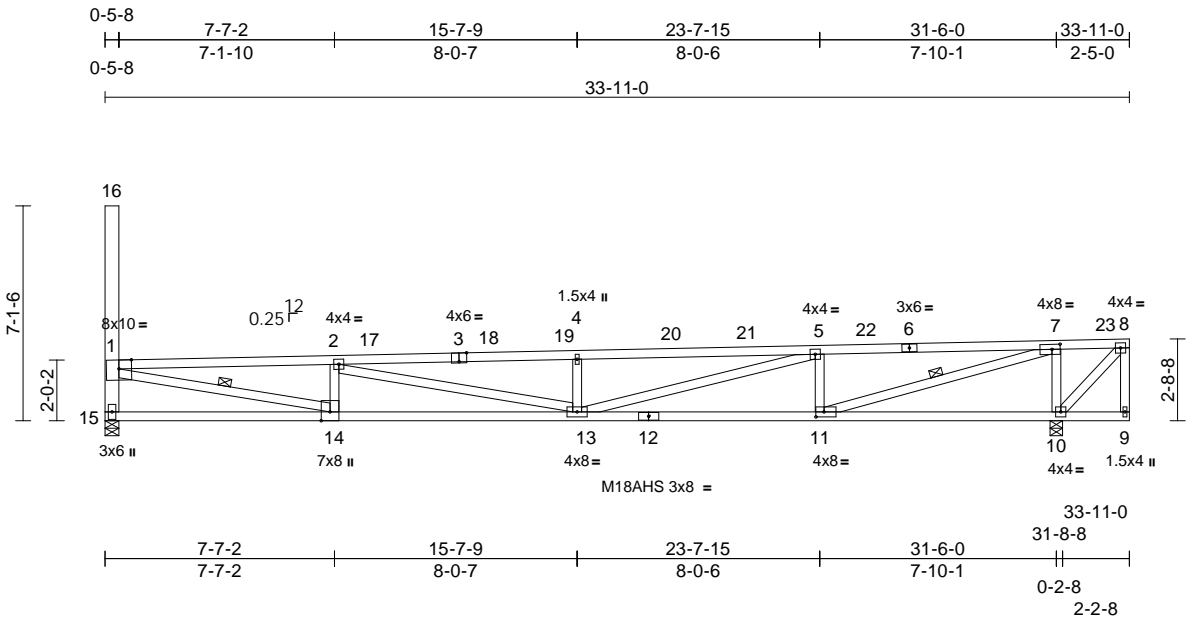
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	173884372
2503400-A	M20	Jack-Closed	2	1	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,
Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:46
ID:IKvUjgir2lagibDeX2c\_szGZhb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?#
Page: 1



Scale = 1:76.3

Plate Offsets (X, Y): [3:0-3-0,Edge], [7:0-3-4,0-2-0], [11:0-3-4,0-2-0]

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	0.93	Vert(LL)	-0.44	13-14	>846	240	MT20	220/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-1.00	13-14	>375	180	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.10	10	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
Weight: 179 lb											FT = 12%	

- LUMBER**  
TOP CHORD 2x4 DF-N 2850F 2.3E \*Except\* 6-8:2x4 SP 1650F 1.6E, 6-3:2x4 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 12-9:2x4 SP 2400F 2.0E  
WEBS 2x4 SP No.2 \*Except\* 5-13,1-14,7-11,13-2:2x4 SP 1650F 1.6E, 16-15:2x6 SP 2400F 2.0E
- BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 4-11-1 oc bracing.  
WEBS 1 Row at midpt 1-14, 7-11
- REACTIONS** (size) 10=0-5-0, 15=0-5-8  
Max Horiz 15=326 (LC 10)  
Max Uplift 10=222 (LC 10), 15=182 (LC 9)  
Max Grav 10=1664 (LC 26), 15=1603 (LC 26)
- FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-4677/2183, 2-4=-5692/2319, 4-5=-5609/2277, 5-7=-3904/1515, 7-8=-85/30, 1-15=-1523/597, 1-16=0/0  
BOT CHORD 14-15=-1103/1663, 13-14=-2217/4656, 11-13=-1521/3897, 10-11=-30/81, 9-10=0/0  
WEBS 7-10=-1567/714, 5-11=-1015/556, 4-13=-567/346, 5-13=-802/1772, 2-14=-798/524, 1-14=-1988/4491, 7-11=-1565/3992, 2-13=-822/1217, 8-9=-55/0, 8-10=-43/119
- NOTES**  
1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 15-2-12, Exterior (2) 15-2-12 to 18-9-4, Corner (3) 18-9-4 to 33-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00  
4) Provide adequate drainage to prevent water ponding.  
5) All plates are MT20 plates unless otherwise indicated.  
6) Plates checked for a plus or minus 5 degree rotation about its center.  
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 182 lb uplift at joint 15 and 222 lb uplift at joint 10.  
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 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 (lb/ft)  
Vert: 2-23=-58, 8-23=-101, 9-15=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-118-to-2=-59

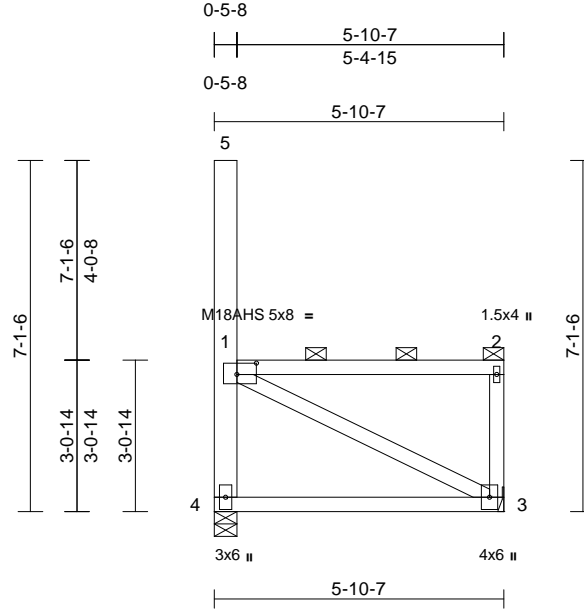


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M27	Flat	2	1	Job Reference (optional)
					I73884373

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:46  
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Page: 1



Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 45 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-7-8 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
Max Horiz 4=-311 (LC 9)  
Max Uplift 3=-262 (LC 10), 4=-262 (LC 9)  
Max Grav 3=486 (LC 18), 4=515 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-54/58, 2-3=-256/216, 1-4=-460/703, 1-5=0/0  
BOT CHORD 3-4=-725/930  
WEBS 1-3=-996/770

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 262 lb uplift at joint 3 and 262 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-106



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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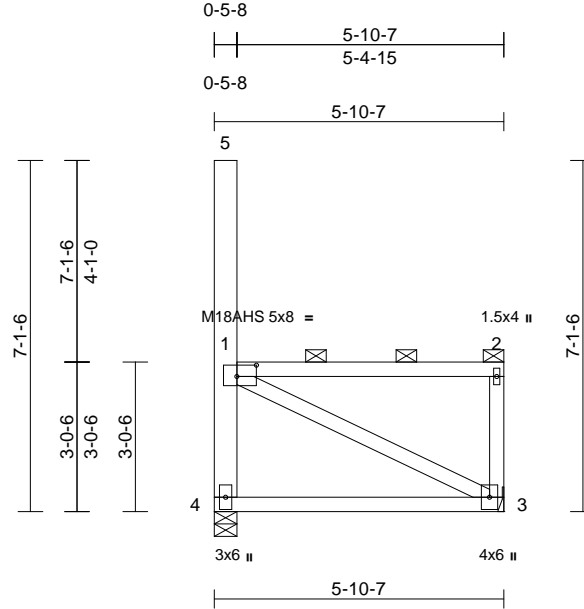
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M28	Flat	2	1	Job Reference (optional)
					I73884374

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:47

Page: 1

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Scale = 1:46.7

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

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	0.71	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 45 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
 BOT CHORD 2x4 SP 1650F 1.6E  
 WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 8-6-13 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
 Max Horiz 4=-312 (LC 9)  
 Max Uplift 3=-262 (LC 10), 4=-262 (LC 9)  
 Max Grav 3=484 (LC 18), 4=514 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-53/57, 2-3=-253/216, 1-4=-460/704, 1-5=0/0

BOT CHORD 3-4=-734/945

WEBS 1-3=-1009/780

#### 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;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
 MWFRS (directional) and C-C Corner (3) zone;  
 cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 262 lb uplift at joint 3 and 262 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 3-4=-20  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-150-to-2=-105



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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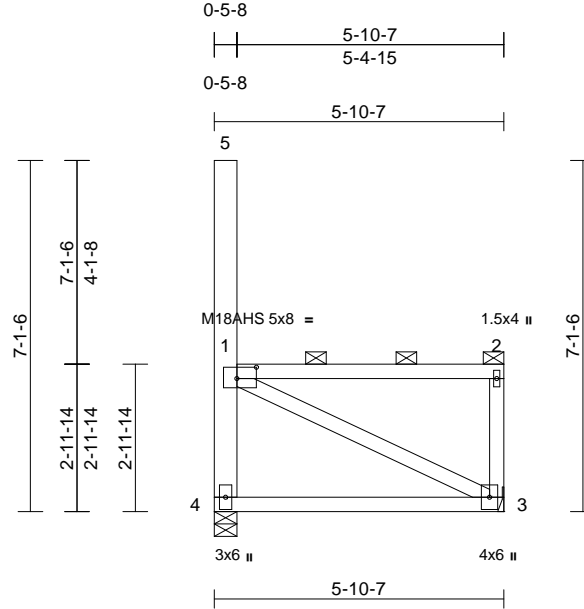


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M29	Flat	2	1	Job Reference (optional)
					I73884375

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:47  
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Page: 1



Scale = 1:46.7

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

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	0.71	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.63	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 45 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-6-2 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
Max Horiz 4=-312 (LC 9)  
Max Uplift 3=-262 (LC 10), 4=-262 (LC 9)  
Max Grav 3=484 (LC 18), 4=515 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-52/56, 2-3=-253/216, 1-4=-460/705, 1-5=0/0  
BOT CHORD 3-4=-745/959  
WEBS 1-3=-1023/789

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 262 lb uplift at joint 3 and 262 lb uplift at joint 4.
  - 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 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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**MiTek®**

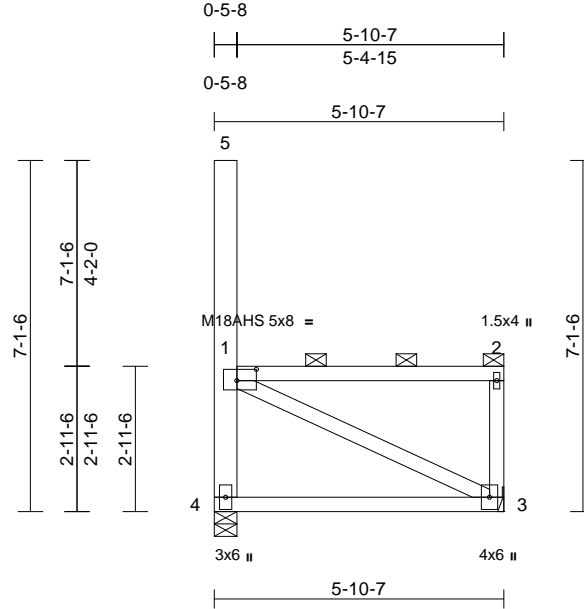
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M30	Flat	2	1	Job Reference (optional)
					I73884376

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:47  
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Page: 1



Scale = 1:46.7

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

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	0.71	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.63	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 45 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-5-7 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
Max Horiz 4=-313 (LC 9)  
Max Uplift 3=-263 (LC 10), 4=-263 (LC 9)  
Max Grav 3=484 (LC 18), 4=515 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-51/55, 2-3=-253/216, 1-4=-460/705, 1-5=0/0  
BOT CHORD 3-4=-755/974  
WEBS 1-3=-1038/799

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 263 lb uplift at joint 3 and 263 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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, and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

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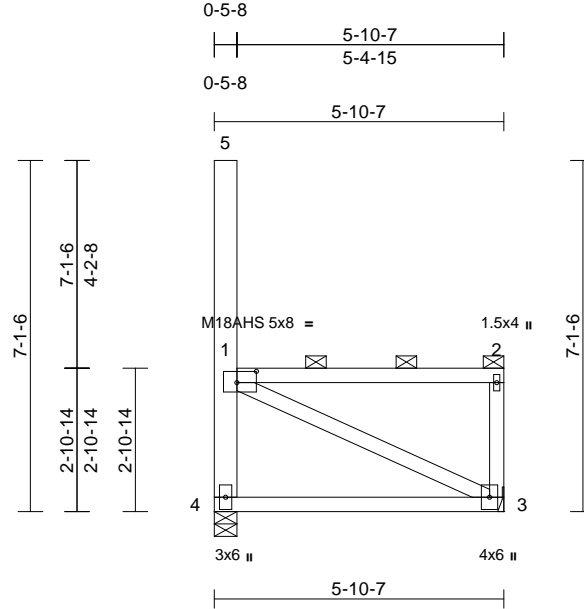
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M31	Flat	2	1	Job Reference (optional)
					I73884377

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:47  
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Page: 1



Scale = 1:46.7

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

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	0.71	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 45 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-4-12 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
Max Horiz 4=-314 (LC 9)  
Max Uplift 3=-263 (LC 10), 4=-263 (LC 9)  
Max Grav 3=484 (LC 18), 4=515 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-50/55, 2-3=-253/216, 1-4=-460/706, 1-5=0/0  
BOT CHORD 3-4=-766/990  
WEBS 1-3=-1052/809

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 263 lb uplift at joint 3 and 263 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

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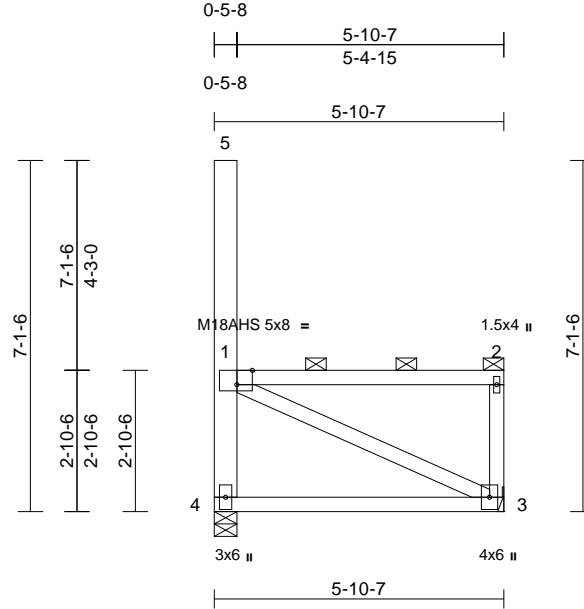
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M32	Flat	2	1	Job Reference (optional)
					I73884378

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:47

Page: 1

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Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
 BOT CHORD 2x4 SP 1650F 1.6E  
 WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 8-4-1 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
 Max Horiz 4=-314 (LC 9)  
 Max Uplift 3=-263 (LC 10), 4=-263 (LC 9)  
 Max Grav 3=484 (LC 18), 4=515 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-50/54, 2-3=-253/216, 1-4=-460/707, 1-5=0/0  
 BOT CHORD 3-4=-777/1006  
 WEBS 1-3=-1068/820

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 263 lb uplift at joint 3 and 263 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 3-4=-20  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-150-to-2=-105



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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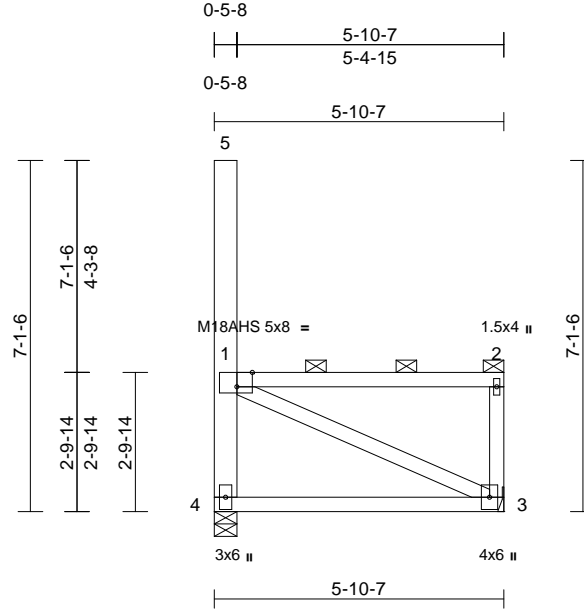
16023 Swingley Ridge Rd.  
 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M33	Flat	2	1	Job Reference (optional)
					I73884379

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:48  
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Page: 1



Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.65	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-3-6 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
Max Horiz 4=-315 (LC 9)  
Max Uplift 3=-264 (LC 10), 4=-264 (LC 9)  
Max Grav 3=485 (LC 18), 4=516 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-49/53, 2-3=-253/216, 1-4=-461/708, 1-5=0/0  
BOT CHORD 3-4=-788/1022  
WEBS 1-3=-1084/831

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 264 lb uplift at joint 3 and 264 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

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314.434.1200 / MiTek-US.com



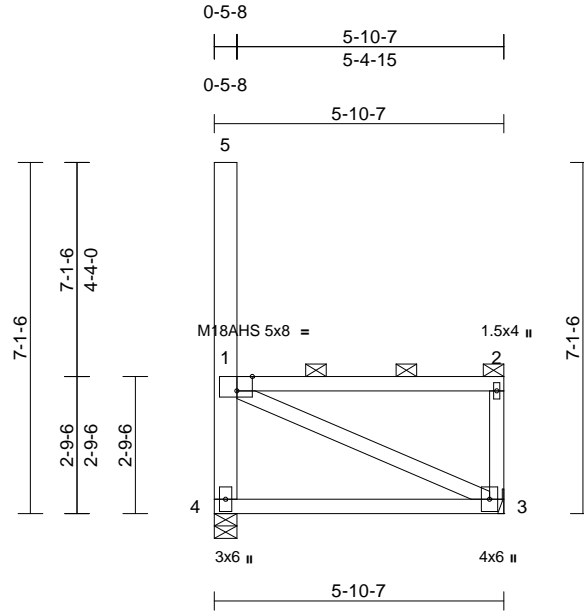
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M34	Flat	2	1	Job Reference (optional)
					I73884380

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:48

Page: 1

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Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.66	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
 BOT CHORD 2x4 SP 1650F 1.6E  
 WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 8-2-9 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
 Max Horiz 4=-315 (LC 9)  
 Max Uplift 3=-264 (LC 10), 4=-264 (LC 9)  
 Max Grav 3=485 (LC 18), 4=516 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-48/52, 2-3=-253/216, 1-4=-461/708, 1-5=0/0  
 BOT CHORD 3-4=-800/1039  
 WEBS 1-3=-1100/842

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 264 lb uplift at joint 3 and 264 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 3-4=-20  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-150-to-2=-105



June 3, 2025

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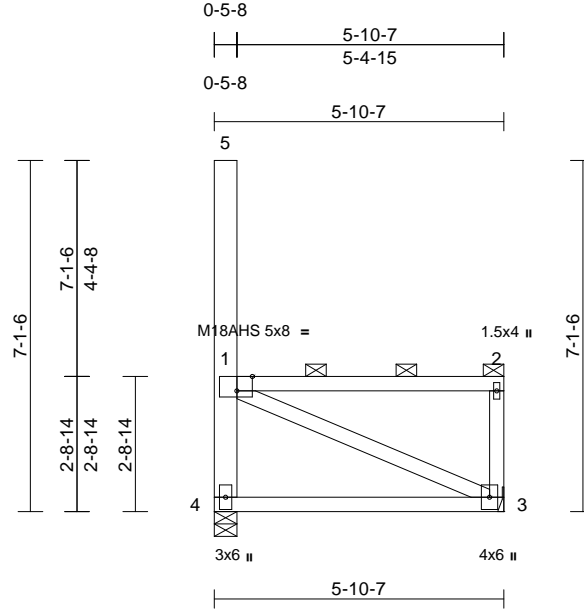
16023 Swingley Ridge Rd.  
 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M35	Flat	2	1	Job Reference (optional)
					I73884381

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:48  
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Page: 1



Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.66	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-1-14 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
Max Horiz 4=-316 (LC 9)  
Max Uplift 3=-264 (LC 10), 4=-264 (LC 9)  
Max Grav 3=485 (LC 18), 4=516 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-47/51, 2-3=-253/216, 1-4=-461/709, 1-5=0/0  
BOT CHORD 3-4=-813/1057  
WEBS 1-3=-1117/854

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 264 lb uplift at joint 3 and 264 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

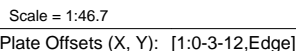
#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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, and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

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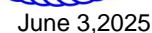
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Lumber Specialties, Dyersville, IA - 52040, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:48 Page: 1  
ID:0uybSEPGRIF870z9Q2CXTEzGciM-RfC?PsB70Hg3NSaPanL8w3uITXGKWRCDoi7J4zJC?f



## NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
 MWFRS (directional) and C-C Corner (3) zone;  
 cantilever left and right exposed ; end vertical left and  
 right exposed; C-C for members and forces & MWFRS  
 for reactions shown; Lumber DOL=1.60 plate grip  
 DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15  
 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL =  
 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially  
 Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.

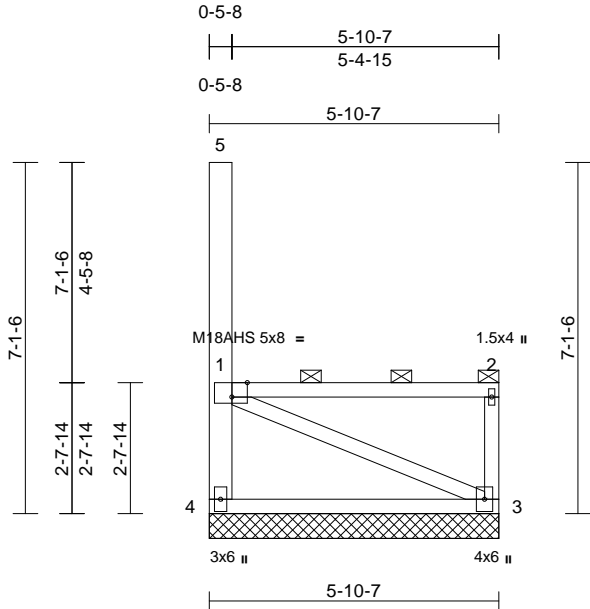


**WARNING – verify design parameters and noted notes on this and included MiTek Reference Tag M-7473 Rev. 1/2/2023 before use.** Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, 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/TP1 Quality Criteria, and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

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Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M37	Flat Supported Gable	2	1	Job Reference (optional)
					I73884383

Lumber Specialties, Dyersville, IA - 52040,
Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:48
ID:Qk99f3fpjumJW4U?bFZDHSzGci2-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f
Page: 1



Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.68	Horiz(TL)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

- LUMBER**  
TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E
- BRACING**  
TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 7-7-12 oc bracing.
- REACTIONS** (size) 3=5-10-7, 4=5-10-7  
Max Horiz 4=-317 (LC 9)  
Max Uplift 3=-265 (LC 10), 4=-265 (LC 9)  
Max Grav 3=485 (LC 18), 4=550 (LC 19)
- FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-46/61, 2-3=-253/218, 1-4=-495/715, 1-5=0/0  
BOT CHORD 3-4=-925/1117  
WEBS 1-3=-1165/972
- NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0  
5) Provide adequate drainage to prevent water ponding.  
6) All plates are MT20 plates unless otherwise indicated.  
7) Plates checked for a plus or minus 5 degree rotation about its center.  
8) Gable requires continuous bottom chord bearing.  
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).  
10) Gable studs spaced at 8-0-0 oc.  
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 265 lb uplift at joint 4 and 265 lb uplift at joint 3.  
12) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.  
13) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.  
14) 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  
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Concentrated Loads (lb)  
Vert: 1=-44  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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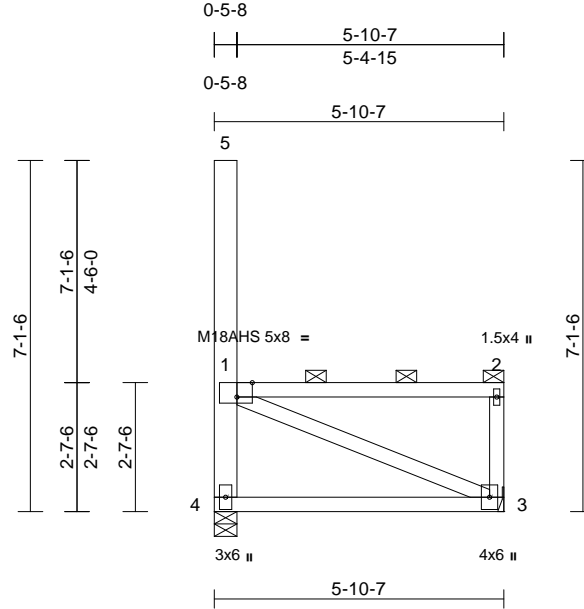
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M38	Flat	1	1	Job Reference (optional)
					I73884384

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:49

Page: 1

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Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
 BOT CHORD 2x4 SP 1650F 1.6E  
 WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 7-11-9 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
 Max Horiz 4=-318 (LC 9)  
 Max Uplift 3=-265 (LC 10), 4=-265 (LC 9)  
 Max Grav 3=486 (LC 18), 4=517 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-45/49, 2-3=-252/216, 1-4=-462/711, 1-5=0/0  
 BOT CHORD 3-4=-853/1114  
 WEBS 1-3=-1171/892

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 265 lb uplift at joint 4 and 265 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 3-4=-20  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-150-to-2=-105



June 3,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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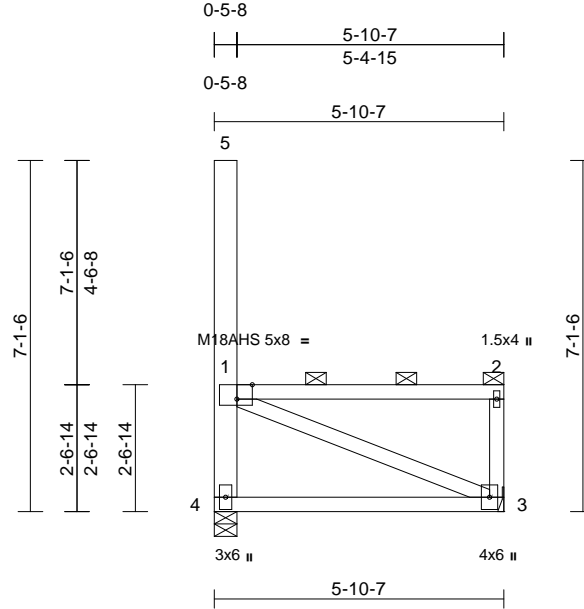
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M39	Flat	1	1	Job Reference (optional)
					I73884385

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:49

Page: 1

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Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
 BOT CHORD 2x4 SP 1650F 1.6E  
 WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 7-10-12 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
 Max Horiz 4=-318 (LC 9)  
 Max Uplift 3=-265 (LC 10), 4=-265 (LC 9)  
 Max Grav 3=486 (LC 18), 4=517 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-44/48, 2-3=-252/216, 1-4=-462/712, 1-5=0/0  
 BOT CHORD 3-4=-867/1134  
 WEBS 1-3=-1191/906

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 265 lb uplift at joint 4 and 265 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 3-4=-20  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-150-to-2=-105



June 3,2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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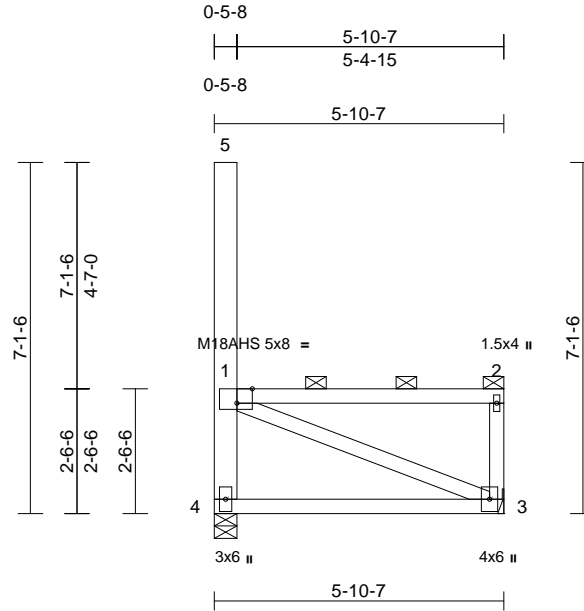
16023 Swingley Ridge Rd.  
 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M40	Flat	1	1	Job Reference (optional)
					I73884386

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:49  
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Page: 1



Scale = 1:46.7

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

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	0.72	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.70	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
BOT CHORD 2x4 SP 1650F 1.6E  
WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 7-9-15 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
Max Horiz 4=319 (LC 10)  
Max Uplift 3=-265 (LC 10), 4=-265 (LC 9)  
Max Grav 3=486 (LC 18), 4=517 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-43/47, 2-3=-252/216, 1-4=-462/712, 1-5=0/0  
BOT CHORD 3-4=-882/1155  
WEBS 1-3=-1211/920

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 265 lb uplift at joint 4 and 265 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

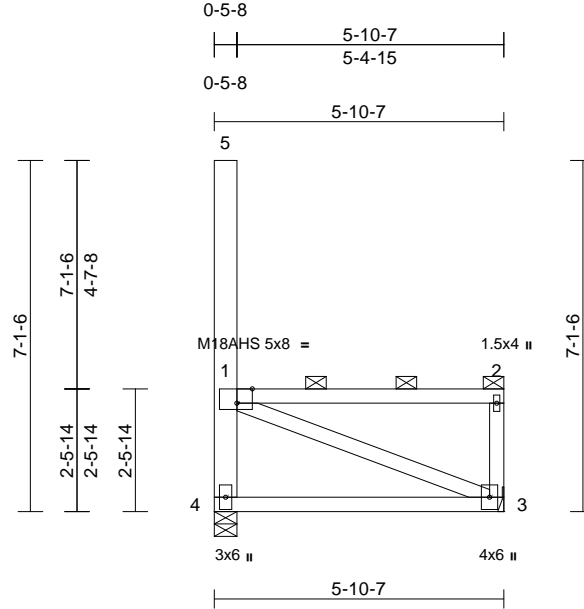
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M41	Flat	1	1	Job Reference (optional)
					I73884387

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:49

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Scale = 1:46.7

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

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)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.71	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.6E  
 BOT CHORD 2x4 SP 1650F 1.6E  
 WEBS 2x4 SP No.2 \*Except\* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, 1-5, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 7-9-2 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4=0-5-8  
 Max Horiz 4=-320 (LC 11)  
 Max Uplift 3=-266 (LC 10), 4=-266 (LC 9)  
 Max Grav 3=488 (LC 18), 4=519 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-42/46, 2-3=-254/216, 1-4=-464/713, 1-5=0/0  
 BOT CHORD 3-4=-897/1177  
 WEBS 1-3=-1232/935

#### 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;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
 MWFRS (directional) and C-C Corner (3) zone;  
 cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 266 lb uplift at joint 4 and 266 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 3-4=-20  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-151-to-2=-105



June 3, 2025

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**MiTek®**

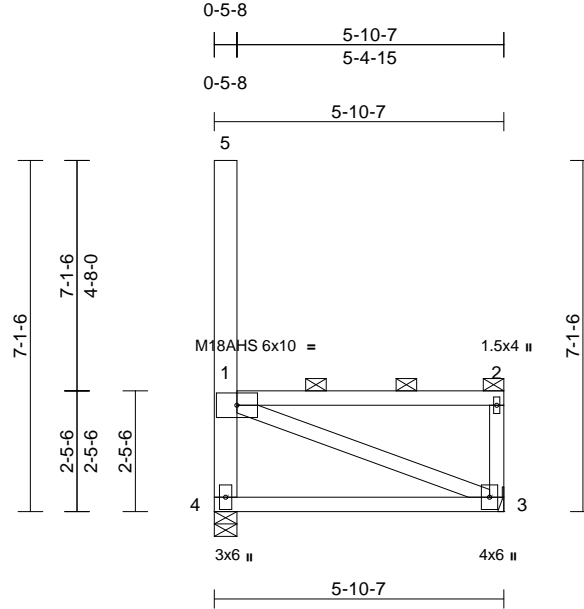
16023 Swingley Ridge Rd.  
 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M42	Flat	1	1	173884388
					Job Reference (optional)

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:49  
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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	0.72	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.72	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-8-6 oc bracing.

REACTIONS	(size) 3= Mechanical, 4=0-5-8
	Max Horiz 4=320 (LC 10)
	Max Uplift 3=-266 (LC 10), 4=-266 (LC 9)
	Max Grav 3=486 (LC 18), 4=517 (LC 19)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-42/45, 2-3=-252/216, 1-4=-462/714, 1-5=0/0
BOT CHORD	3-4=-913/1200
WEBS	1-3=-1254/950

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 266 lb uplift at joint 4 and 266 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

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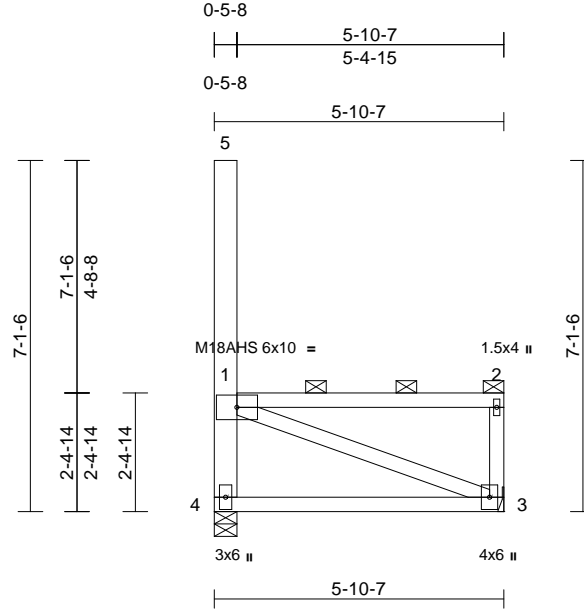
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M43	Flat	1	1	Job Reference (optional)
					I73884389

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:50  
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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	0.72	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.73	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 44 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-7-9 oc bracing.

#### REACTIONS

(size)	3= Mechanical, 4=0-5-8
Max Horiz	4=321 (LC 12)
Max Uplift	3=-266 (LC 10), 4=-266 (LC 9)
Max Grav	3=487 (LC 18), 4=517 (LC 19)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-41/44, 2-3=-252/217, 1-4=-463/714, 1-5=0/0
BOT CHORD	3-4=-930/1223
WEBS	1-3=-1277/966

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 266 lb uplift at joint 4 and 266 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

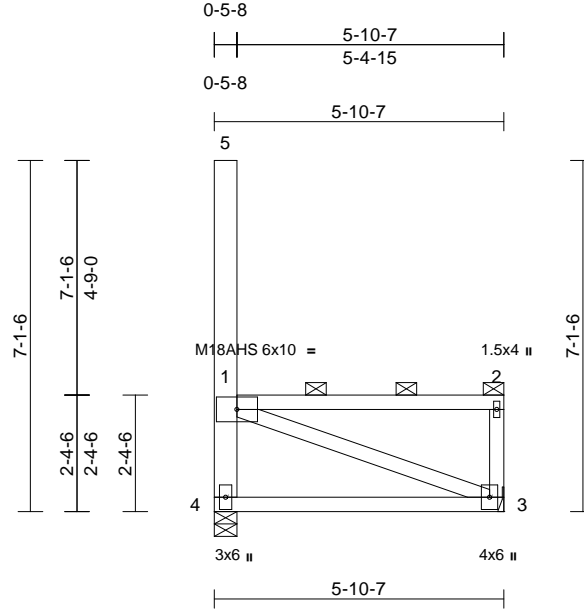


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M44	Flat	1	1	Job Reference (optional)
					I73884390

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:50  
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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)	n/a	-	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.74	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 43 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-6-11 oc bracing.

#### REACTIONS

(size)	3= Mechanical, 4=0-5-8
Max Horiz	4=321 (LC 10)
Max Uplift	3=-266 (LC 10), 4=-266 (LC 9)
Max Grav	3=487 (LC 18), 4=518 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-40/43, 2-3=-252/217, 1-4=-463/715, 1-5=0/0
BOT CHORD	3-4=-947/1248
WEBS	1-3=-1300/983

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 266 lb uplift at joint 3 and 266 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

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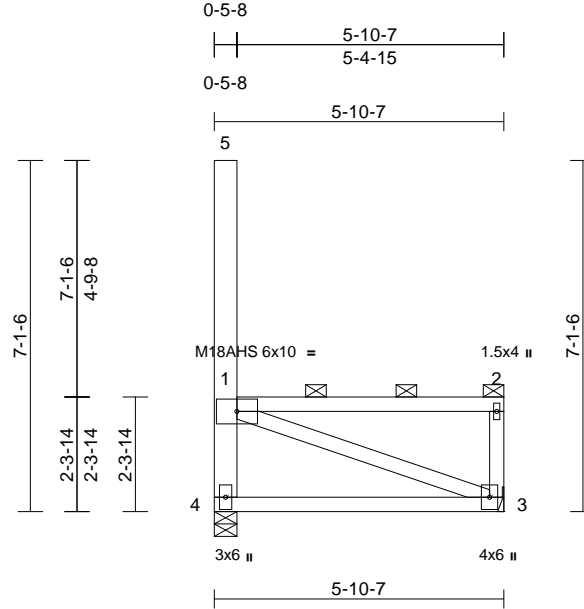
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M45	Flat	1	1	173884391
					Job Reference (optional)

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:50  
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Page: 1



Scale = 1:46.7

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	0.72	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.75	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 43 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-5-13 oc bracing.

REACTIONS	(size) 3= Mechanical, 4=0-5-8
	Max Horiz 4=-322 (LC 9)
	Max Uplift 3=-266 (LC 10), 4=-266 (LC 9)
	Max Grav 3=486 (LC 18), 4=515 (LC 19)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-39/42, 2-3=-252/217, 1-4=-460/715, 1-5=0/0
BOT CHORD	3-4=-966/1273
WEBS	1-3=-1325/1000

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 266 lb uplift at joint 4 and 266 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Concentrated Loads (lb)  
Vert: 2=-1  
Trapezoidal Loads (lb/ft)  
Vert: 1=-148-to-2=-105



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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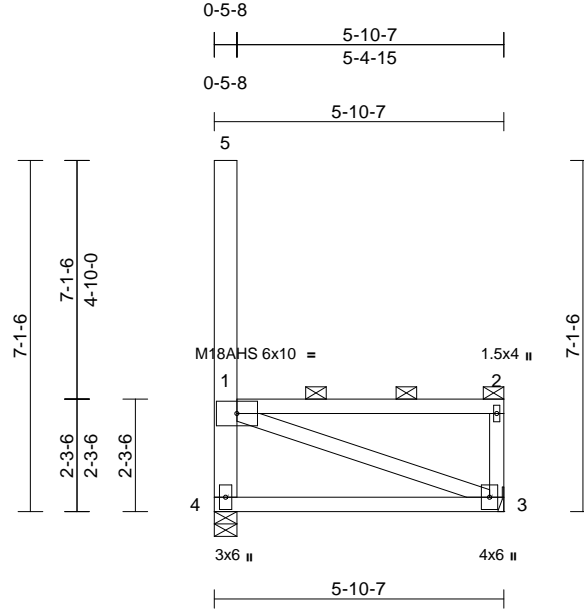
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M46	Flat	1	1	173884392
					Job Reference (optional)

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:50  
ID:VWFpnuHtA3elbgklROzejzGcfy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?i

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Scale = 1:46.7

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)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.76	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 43 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-5-0 oc bracing.

#### REACTIONS

(size)	3= Mechanical, 4=0-5-8
Max Horiz	4=323 (LC 10)
Max Uplift	3=-267 (LC 10), 4=-267 (LC 9)
Max Grav	3=489 (LC 18), 4=520 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-38/42, 2-3=-254/217, 1-4=-465/716, 1-5=0/0
BOT CHORD	3-4=-985/1300
WEBS	1-3=-1351/1019

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 267 lb uplift at joint 4 and 267 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Concentrated Loads (lb)  
Vert: 2=-1  
Trapezoidal Loads (lb/ft)  
Vert: 1=-151-to-2=-105



June 3, 2025

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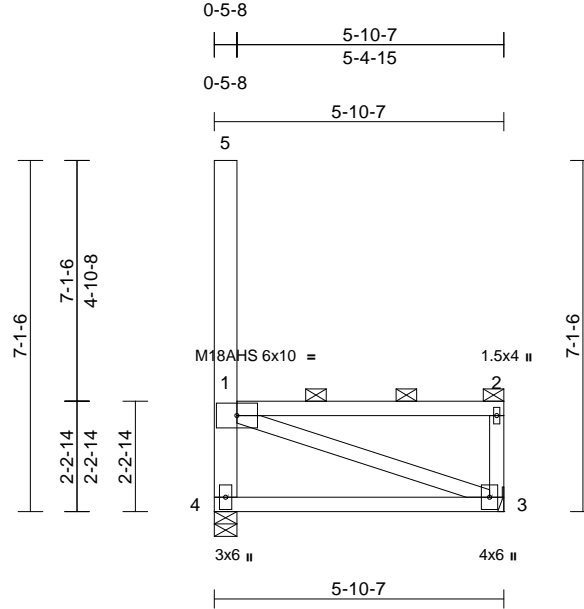
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M47	Flat	1	1	Job Reference (optional)
					I73884393

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:50  
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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)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.77	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 43 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-4-1 oc bracing.

REACTIONS	(size) 3= Mechanical, 4=0-5-8
	Max Horiz 4=-323 (LC 9)
	Max Uplift 3=-267 (LC 10), 4=-267 (LC 9)
	Max Grav 3=488 (LC 18), 4=521 (LC 19)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-37/41, 2-3=-253/217, 1-4=-466/716, 1-5=0/0
BOT CHORD	3-4=-1004/1328
WEBS	1-3=-1378/1038

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 267 lb uplift at joint 4 and 267 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-152-to-2=-105



June 3, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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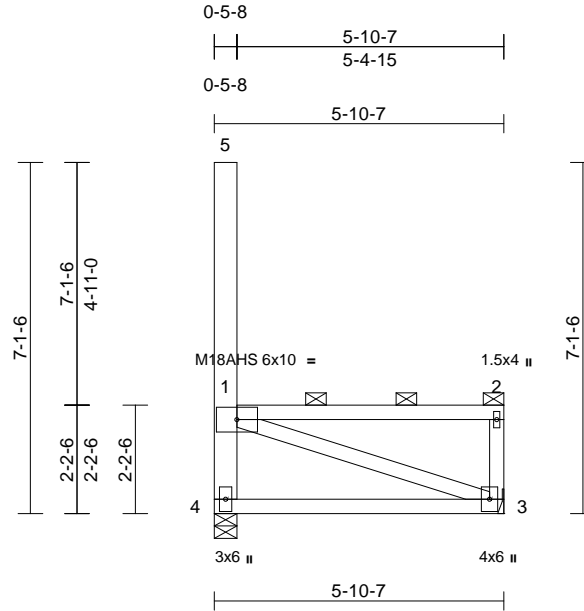
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M48	Flat	1	1	Job Reference (optional)
					I73884394

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:51  
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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)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	3-4	>999	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.78	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 43 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-3-3 oc bracing.

REACTIONS	(size) 3= Mechanical, 4=0-5-8
	Max Horiz 4=-324 (LC 11)
	Max Uplift 3=-267 (LC 10), 4=-267 (LC 9)
	Max Grav 3=487 (LC 18), 4=518 (LC 19)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-37/40, 2-3=-252/217, 1-4=-463/717, 1-5=0/0
BOT CHORD	3-4=-1025/1357
WEBS	1-3=-1406/1058

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 267 lb uplift at joint 4 and 267 lb uplift at joint 3.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-150-to-2=-105



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

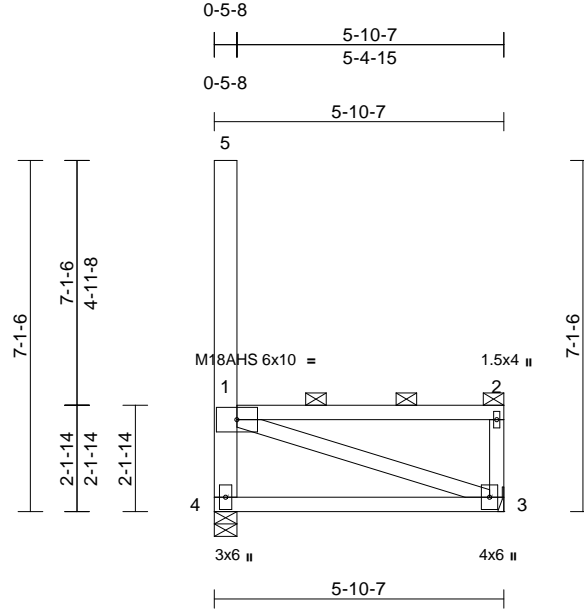


Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M49	Flat	2	1	Job Reference (optional)
					I73884395

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:51  
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Page: 1



Scale = 1:46.7

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	0.72	n/a	-	n/a	999	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.26	Vert(LL)	-0.05	3-4	>999	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.79	Horz(CT)	0.01	3	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 43 lb	FT = 12%

#### LUMBER

TOP CHORD	2x4 SP 1650F 1.6E
BOT CHORD	2x4 SP 1650F 1.6E
WEBS	2x4 SP No.2 *Except* 5-4:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins: 1-2, 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-2-5 oc bracing.

REACTIONS	(size) 3= Mechanical, 4=0-5-8
	Max Horiz 4=-324 (LC 9)
	Max Uplift 3=-267 (LC 10), 4=-267 (LC 9)
	Max Grav 3=487 (LC 18), 4=516 (LC 19)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-36/39, 2-3=-252/217, 1-4=-461/718, 1-5=0/0
BOT CHORD	3-4=-1046/1387
WEBS	1-3=-1435/1079

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 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 267 lb uplift at joint 3 and 267 lb uplift at joint 4.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 3-4=-20  
Concentrated Loads (lb)  
Vert: 1=0  
Trapezoidal Loads (lb/ft)  
Vert: 1=-147-to-2=-106



June 3, 2025

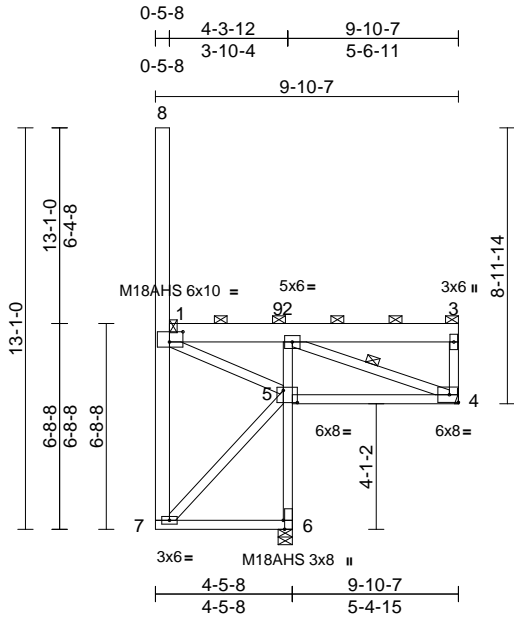
#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M60	Roof Special	1	1	Job Reference (optional)
					I73884396



Scale = 1:75.1

Plate Offsets (X, Y): [1:0-5-4,0-4-0], [5:0-5-8,0-4-12], [6:0-3-8,Edge]

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	0.86	Vert(LL)	-0.03	2	>999	240	M18AHS 186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.03	2	>999	180	MT20 244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.21	4	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 107 lb FT = 12%											

**LUMBER**  
TOP CHORD 2x8 SP M 23  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-7:2x6 SP 2400F 2.0E

**BRACING**  
TOP CHORD 2-0-0 oc purlins (5-2-13 max.): 1-3, 1-8, except end verticals. Except:  
5-10-0 oc bracing: 1-8  
9-0-0 oc bracing: 1-7  
BOT CHORD Rigid ceiling directly applied or 4-5-1 oc bracing.  
WEBS 1 Row at midpt 2-4, 1-8

**REACTIONS** (size) 4= Mechanical, 6=0-5-8, (req. 0-5-12)  
Max Horiz 6=-536 (LC 11)  
Max Uplift 4=-886 (LC 19), 6=-983 (LC 9)  
Max Grav 4=821 (LC 11), 6=3659 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3596/2748, 2-3=-38/42, 3-4=-203/247, 1-7=-1018/733, 1-8=0/0  
BOT CHORD 6-7=-906/706, 5-6=-3618/2000, 2-5=-2717/1847, 4-5=-2777/3656  
WEBS 2-4=-3823/2930, 5-7=-1013/1383, 1-5=-2688/3037

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) WARNING: Required bearing size at joint(s) 6 greater than input bearing size.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 886 lb uplift at joint 4 and 983 lb uplift at joint 6.
- 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 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 12) 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  
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-9=-553, 2-9=-272, 6-7=-20, 4-5=-20  
Concentrated Loads (lb)  
Vert: 9=-84

Trapezoidal Loads (lb/ft)  
Vert: 2=-151-to-3=-105



June 3,2025

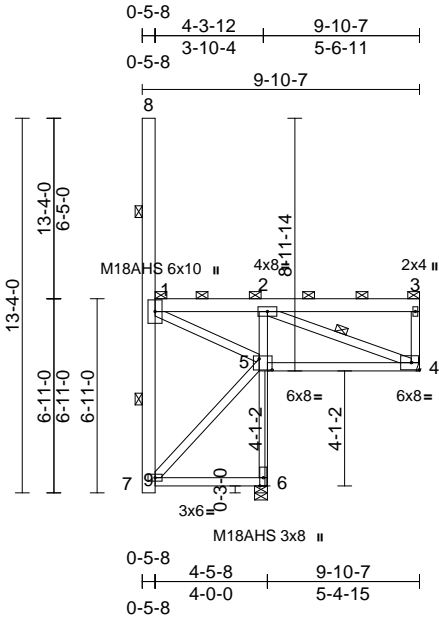
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M61	Roof Special	1	1	Job Reference (optional)

I73884397

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:51  
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Page: 1



Scale = 1:82

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

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	0.85	Vert(LL)	-0.03	2	>999	240	M18AHS 186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.03	4-5	>999	180	MT20 244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.22	4	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 101 lb FT = 12%											

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

BRACING

TOP CHORD 2-0-0 oc purlins (5-0-3 max.): 1-3, 7-9, 1-8, except end verticals. Except:  
6-0-0 oc bracing: 1-8  
8-2-0 oc bracing: 1-9  
BOT CHORD Rigid ceiling directly applied or 4-6-1 oc bracing.  
WEBS 1 Row at midpt 2-4, 1-9, 1-8

REACTIONS

(size) 4= Mechanical, 6=0-5-8  
Max Horiz 6=-548 (LC 11)  
Max Uplift 4=-797 (LC 19), 6=-984 (LC 9)  
Max Grav 4=821 (LC 11), 6=3229 (LC 26)

FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3704/2644, 2-3=-35/41, 3-4=-173/214, 7-9=0/0, 1-7=-1065/763, 1-8=0/0  
BOT CHORD 6-7=-919/721, 5-6=-3191/1988, 2-5=-2349/1845, 4-5=-2679/3754  
WEBS 2-4=-3952/2845, 5-7=-1062/1459, 1-5=-2564/3111

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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 797 lb uplift at joint 4 and 984 lb uplift at joint 6.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-476, 6-7=-20, 4-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 2=-151-to-3=-105



June 3,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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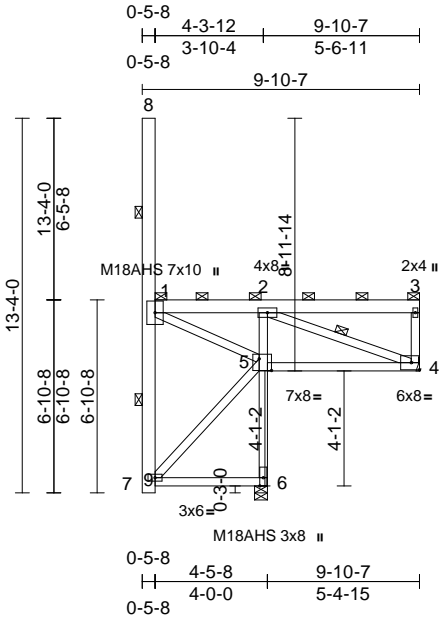
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M62	Roof Special	1	1	Job Reference (optional)

I73884398

Lumber Specialties, Dyersville, IA - 52040,

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Page: 1



Scale = 1:82  
Plate Offsets (X, Y): [5:0-5-4,0-5-0]

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	0.86	Vert(LL)	-0.03	2	>999	240	M18AHS 186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.03	4-5	>999	180	MT20 244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.23	4	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 101 lb FT = 12%											

**LUMBER**  
TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

**BRACING**  
TOP CHORD 2-0-0 oc purlins (4-11-8 max.): 1-3, 7-9, 1-8, except end verticals. Except: 5-10-0 oc bracing: 1-8 8-2-0 oc bracing: 1-9  
BOT CHORD Rigid ceiling directly applied or 4-5-6 oc bracing.  
WEBS 1 Row at midpt 2-4, 1-9, 1-8

**REACTIONS** (size) 4= Mechanical, 6=0-5-8  
Max Horiz 6=-549 (LC 11)  
Max Uplift 4=-803 (LC 19), 6=-985 (LC 9)  
Max Grav 4=822 (LC 11), 6=3248 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3781/2709, 2-3=-38/41, 3-4=-170/216, 7-9=0/0, 1-7=-1071/766, 1-8=0/0  
BOT CHORD 6-7=-919/721, 5-6=-3210/1989, 2-5=-2364/1851, 4-5=-2742/3828  
WEBS 2-4=-4018/2904, 5-7=-1067/1467, 1-5=-2622/3175

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0  
4) Provide adequate drainage to prevent water ponding.  
5) All plates are MT20 plates unless otherwise indicated.  
6) Plates checked for a plus or minus 5 degree rotation about its center.  
7) Refer to girder(s) for truss to truss connections.  
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 803 lb uplift at joint 4 and 985 lb uplift at joint 6.  
9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.  
10) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.  
11) 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  
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 6-7=-20, 4-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-482-to-2=-477, 2=-151-to-3=-104



June 3,2025

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Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M63	Roof Special	1	1	Job Reference (optional)

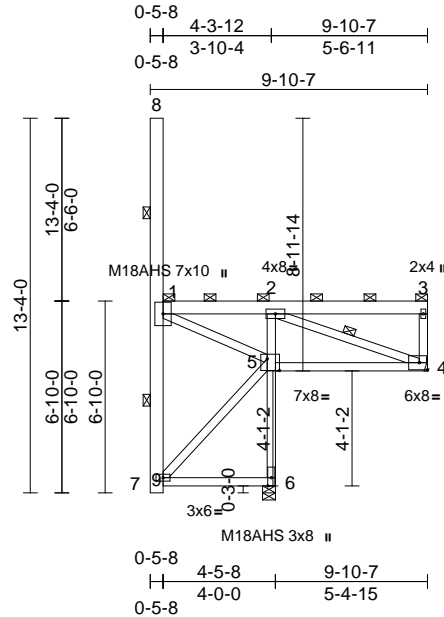
I73884399

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:52

Page: 1

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Scale = 1:82

Plate Offsets (X, Y): [5:0-5-4,0-5-0]

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	0.87	Vert(LL)	-0.03	2	>999	240	M18AHS 186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.03	4-5	>999	180	MT20 244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.23	4	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 101 lb FT = 12%											

#### LUMBER

TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins (4-10-13 max.): 1-3, 7-9, 1-8, except end verticals. Except:  
5-8-0 oc bracing: 1-8  
8-1-0 oc bracing: 1-9  
BOT CHORD Rigid ceiling directly applied or 4-4-12 oc bracing.  
WEBS 1 Row at midpt 2-4, 1-9, 1-8

#### REACTIONS

(size) 4= Mechanical, 6=0-5-8  
Max Horiz 6=-549 (LC 11)  
Max Uplift 4=-803 (LC 19), 6=-986 (LC 9)  
Max Grav 4=823 (LC 11), 6=3268 (LC 26)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3862/2769, 2-3=-42/42, 3-4=-170/218, 7-9=0/0, 1-7=-1077/770, 1-8=0/0  
BOT CHORD 6-7=-920/720, 5-6=-3230/1991, 2-5=-2384/1856, 4-5=-2801/3904  
WEBS 2-4=-4086/2957, 5-7=-1072/1476, 1-5=-2674/3243

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 803 lb uplift at joint 4 and 986 lb uplift at joint 6.
- 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 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-483, 6-7=-20, 4-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 2=-152-to-3=-105



June 3, 2025

#### WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

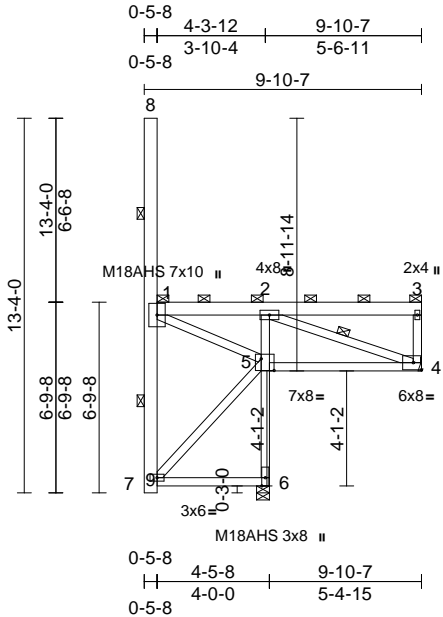
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

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Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M64	Roof Special	1	1	Job Reference (optional)
					I73884400



Scale = 1:82

Plate Offsets (X, Y): [5:0-5-8,0-5-0]

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	0.88	Vert(LL)	-0.03	2	>999	240	M18AHS 186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.03	4-5	>999	180	MT20 244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.24	4	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 101 lb FT = 12%											

**LUMBER**  
TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

**BRACING**  
TOP CHORD 2-0-0 oc purlins (4-10-2 max.): 1-3, 7-9, 1-8, except end verticals. Except:  
5-6-0 oc bracing: 1-8  
8-0-0 oc bracing: 1-9  
BOT CHORD Rigid ceiling directly applied or 4-4-8 oc bracing.  
WEBS 1 Row at midpt 2-4, 1-9, 1-8

**REACTIONS** (size) 4= Mechanical, 6=0-5-8  
Max Horiz 6=550 (LC 11)  
Max Uplift 4=793 (LC 19), 6=986 (LC 9)  
Max Grav 4=824 (LC 11), 6=3210 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3945/2797, 2-3=-47/42, 3-4=-172/221, 7-9=0/0, 1-7=-1083/773, 1-8=0/0  
BOT CHORD 6-7=-921/720, 5-6=-3172/1992, 2-5=-2347/1862, 4-5=-2826/3983  
WEBS 2-4=-4157/2975, 5-7=-1077/1485, 1-5=-2691/3313

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 793 lb uplift at joint 4 and 986 lb uplift at joint 6.
- 9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 10) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 11) 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  
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 6-7=-20, 4-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-471-to-2=-476, 2=-151-to-3=-105



June 3,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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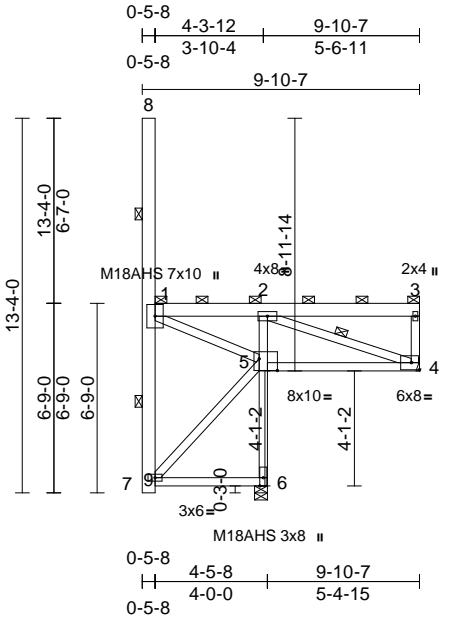
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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M65	Roof Special	1	1	Job Reference (optional)
					I73884401

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:52

Page: 1



Scale = 1:82

Plate Offsets (X, Y): [5:0-7-12,0-5-0]

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	0.89	Vert(LL)	-0.03	2	>999	240	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.03	4-5	>999	180	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.25	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 100 lb	FT = 12%

**LUMBER**  
TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

**BRACING**  
TOP CHORD 2-0-0 oc purlins (4-9-6 max.): 1-3, 7-9, 1-8, except end verticals. Except:  
5-3-0 oc bracing: 1-8  
8-0-0 oc bracing: 1-9  
BOT CHORD Rigid ceiling directly applied or 4-3-13 oc bracing.  
WEBS 1 Row at midpt 2-4, 1-9, 1-8

**REACTIONS** (size) 4= Mechanical, 6=0-5-8  
Max Horiz 6=550 (LC 11)  
Max Uplift 4=799 (LC 19), 6=987 (LC 9)  
Max Grav 4=824 (LC 11), 6=3229 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=4032/2868, 2-3=52/43, 3-4=171/223, 7-9=0/0, 1-7=1089/776, 1-8=0/0  
BOT CHORD 6-7=921/719, 5-6=3191/1993, 2-5=2363/1869, 4-5=2896/4064  
WEBS 2-4=4229/3039, 5-7=1082/1494, 1-5=2755/3385

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 799 lb uplift at joint 4 and 987 lb uplift at joint 6.
- 9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 10) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 11) 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  
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-476, 6-7=-20, 4-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 2=-151-to-3=-105

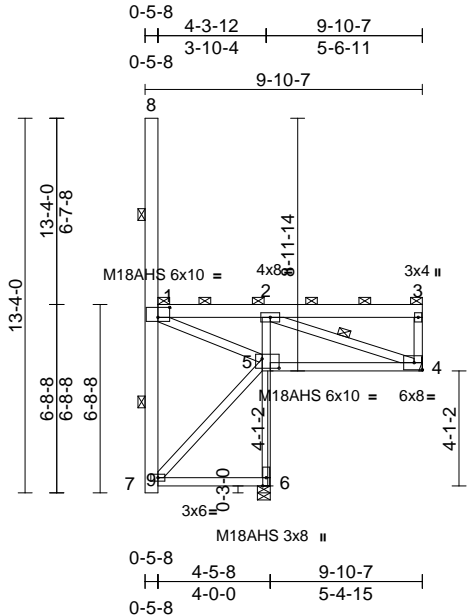


June 3,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
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Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M66	Roof Special	1	1	Job Reference (optional)
					I73884402



Scale = 1:82

0-3-0

Plate Offsets (X, Y): [1:0-5-0,0-4-4], [5:0-7-4,0-4-0]

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	0.91	Vert(LL)	-0.03	2	>999	240	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.03	4-5	>999	180	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.26	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 100 lb	FT = 12%

**LUMBER**

TOP CHORD 2x6 SP 2400F 2.0E

BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2

WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

**BRACING**

TOP CHORD 2-0-0 oc purlins (4-8-10 max.): 1-3, 7-9, 1-8, except end verticals. Except: 5-1-0 oc bracing: 1-8 7-11-0 oc bracing: 1-9

BOT CHORD Rigid ceiling directly applied or 4-3-3 oc bracing.

WEBS 1 Row at midpt 2-4, 1-9, 1-8

**REACTIONS** (size) 4= Mechanical, 6=0-5-8 Max Horiz 6=551 (LC 11) Max Uplift 4=799 (LC 19), 6=988 (LC 9) Max Grav 4=825 (LC 11), 6=3229 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-4122/2930, 2-3=-58/44, 3-4=-171/226, 7-9=0/0, 1-7=-1095/780, 1-8=0/0

BOT CHORD 6-7=-922/719, 5-6=-3191/1994, 2-5=-2367/1876, 4-5=-2955/4149

WEBS 2-4=-4305/3092, 5-7=-1087/1504, 1-5=-2807/3461

- 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - Plates checked for a plus or minus 5 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 799 lb uplift at joint 4 and 988 lb uplift at joint 6.
  - 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 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (lb/ft) Vert: 1-2=-476, 6-7=-20, 4-5=-20 Trapezoidal Loads (lb/ft) Vert: 2=-151-to-3=-105



June 3,2025

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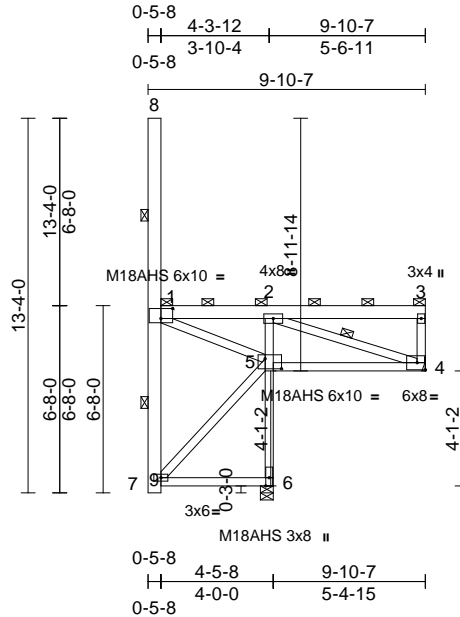
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M67	Roof Special	1	1	Job Reference (optional)

I73884403

Lumber Specialties, Dyersville, IA - 52040,

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Page: 1



Scale = 1:82

Plate Offsets (X, Y): [1:0-5-0,0-4-4], [5:0-7-0,0-4-4]

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	0.92	Vert(LL)	-0.03	2	>999	240	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.03	4-5	>999	180	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.27	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 100 lb	FT = 12%

#### LUMBER

TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins (4-7-15 max.): 1-3, 7-9, 1-8, except end verticals. Except:  
4-10-0 oc bracing: 1-8  
7-10-0 oc bracing: 1-9  
BOT CHORD Rigid ceiling directly applied or 4-2-15 oc bracing.  
WEBS 1 Row at midpt 2-4, 1-9, 1-8

#### REACTIONS

(size) 4= Mechanical, 6=0-5-8  
Max Horiz 6=-552 (LC 11)  
Max Uplift 4=-788 (LC 19), 6=-989 (LC 9)  
Max Grav 4=826 (LC 11), 6=3171 (LC 26)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-4215/2962, 2-3=-64/45, 3-4=-173/229, 7-9=0/0, 1-7=-1101/783, 1-8=0/0  
BOT CHORD 6-7=-922/718, 5-6=-3133/1995, 2-5=-2330/1883, 4-5=-2984/4236  
WEBS 2-4=-4383/3113, 5-7=-1093/1513, 1-5=-2827/3540

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 788 lb uplift at joint 4 and 989 lb uplift at joint 6.
- 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 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 6-7=-20, 4-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 1=-464-to-2=-469, 2=-150-to-3=-105



June 3, 2025

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Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M68	Roof Special	1	1	Job Reference (optional)

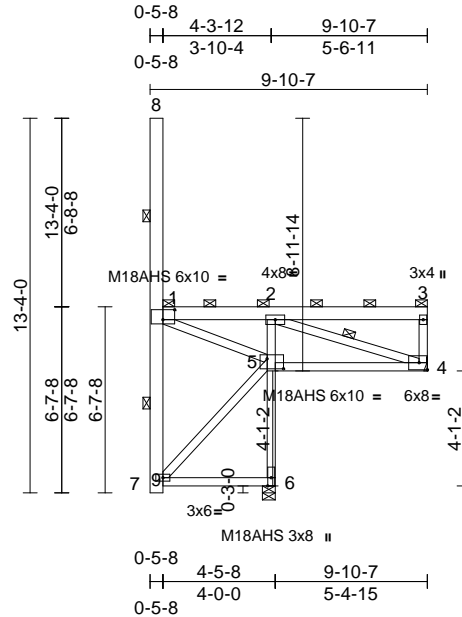
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Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:53

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Scale = 1:82

Plate Offsets (X, Y): [1:0-5-0,0-4-4], [5:0-7-0,0-4-4]

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)	-0.03	2	>999	240	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.03	4-5	>999	180	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.92	Horz(CT)	0.28	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 100 lb	FT = 12%

#### LUMBER

TOP CHORD	2x6 SP 2400F 2.0E
BOT CHORD	2x4 SP 1650F 1.6E *Except* 6-2:2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 8-9:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD	2-0-0 oc purlins (4-7-3 max.): 1-3, 7-9, 1-8, except end verticals. Except: 4-7-0 oc bracing: 1-8 7-10-0 oc bracing: 1-9
BOT CHORD	Rigid ceiling directly applied or 4-1-14 oc bracing.
WEBS	1 Row at midpt 2-4, 1-9, 1-8

#### REACTIONS

(size)	4= Mechanical, 6=0-5-8
Max Horiz	6=-552 (LC 11)
Max Uplift	4=-806 (LC 19), 6=-989 (LC 9)
Max Grav	4=826 (LC 11), 6=3268 (LC 26)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-4312/3078, 2-3=-71/46, 3-4=-178/232, 7-9=0/0, 1-7=-1108/787, 1-8=0/0
BOT CHORD	6-7=-923/718, 5-6=-3230/1996, 2-5=-2404/1890, 4-5=-3099/4327
WEBS	2-4=-4463/3223, 5-7=-1098/1523, 1-5=-2939/3622

#### 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 806 lb uplift at joint 4 and 989 lb uplift at joint 6.
- 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 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-483, 6-7=-20, 4-5=-20  
Trapezoidal Loads (lb/ft)  
Vert: 2=-152-to-3=-105



June 3, 2025

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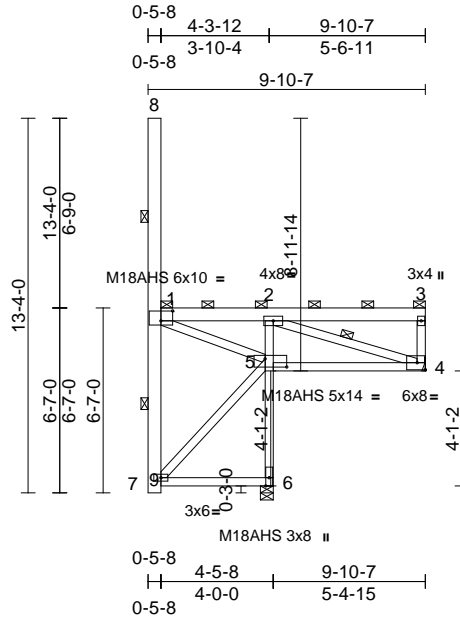
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M69	Roof Special	1	1	Job Reference (optional)

I73884405

Lumber Specialties, Dyersville, IA - 52040,

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Page: 1



Scale = 1:82

Plate Offsets (X, Y): [1:0-5-0,0-4-4], [5:0-9-4,0-3-8]

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	0.94	Vert(LL)	-0.03	2	>999	240	M18AHS	186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.03	4-5	>999	180	MT20	244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.92	Horz(CT)	0.29	4	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 100 lb	FT = 12%

#### LUMBER

TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins (4-6-7 max.): 1-3, 7-9, 1-8, except end verticals. Except:  
4-5-0 oc bracing: 1-8  
7-9-0 oc bracing: 1-9  
BOT CHORD Rigid ceiling directly applied or 4-1-8 oc bracing.

WEBS 1 Row at midpt 2-4, 1-9, 1-8

**REACTIONS** (size) 4= Mechanical, 6=0-5-8  
Max Horiz 6=553 (LC 11)  
Max Uplift 4=801 (LC 19), 6=990 (LC 9)  
Max Grav 4=827 (LC 11), 6=3229 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=4412/3127, 2-3=78/48, 3-4=184/236,  
7-9=0/0, 1-7=1114/790, 1-8=0/0  
BOT CHORD 6-7=923/717, 5-6=3190/1997,  
2-5=2380/1899, 4-5=3146/4422  
WEBS 2-4=4546/3261, 5-7=1104/1532,  
1-5=2977/3708

#### 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;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Corner (3) zone;  
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 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 801 lb uplift at joint 4 and 990 lb uplift at joint 6.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 6-7=20, 4-5=20  
Trapezoidal Loads (lb/ft)  
Vert: 1=476-to-2=476, 2=151-to-3=105



June 3, 2025

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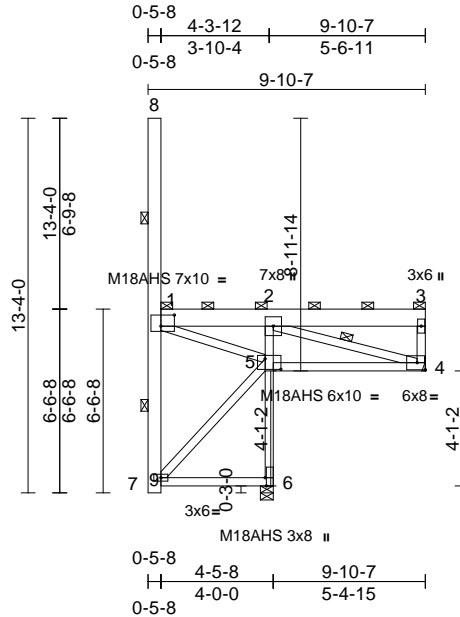
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M70	Roof Special	1	1	Job Reference (optional)
					I73884406

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:54

Page: 1

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Scale = 1:82

Plate Offsets (X, Y): [1:0-5-12,0-4-12], [5:0-6-12,0-4-8], [6:0-3-8,Edge]

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	0.98	Vert(LL)	-0.03	2	>999	240	M18AHS 186/179
Snow (Pf/Pg)	19.0/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.04	2	>999	180	MT20 244/190
TCDL	15.0	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.29	4	n/a	n/a	
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 106 lb FT = 12%											

#### LUMBER

TOP CHORD 2x4 SP M 23  
BOT CHORD 2x4 SP 1650F 1.6E \*Except\* 6-2:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 8-9:2x6 SP 2400F 2.0E

#### BRACING

TOP CHORD 2-0-0 oc purlins (4-7-14 max.): 1-3, 7-9, 1-8, except end verticals. Except:  
3-6-0 oc bracing: 1-8  
8-6-0 oc bracing: 1-9  
BOT CHORD Rigid ceiling directly applied or 3-11-5 oc bracing.  
WEBS 1 Row at midpt 2-4, 1-9, 1-8

#### REACTIONS

(size) 4= Mechanical, 6=0-5-8, (req. 0-6-3)  
Max Horiz 6=-555 (LC 11)  
Max Uplift 4=-923 (LC 19), 6=-992 (LC 9)  
Max Grav 4=829 (LC 11), 6=3963 (LC 26)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-4385/3398, 2-3=-107/71, 3-4=-279/295, 7-9=0/0, 1-7=-1069/760, 1-8=0/0  
BOT CHORD 6-7=-925/716, 5-6=-3922/2008, 2-5=-3054/1945, 4-5=-3405/4393  
WEBS 2-4=-4448/3473, 5-7=-1057/1461, 1-5=-3249/3690

#### NOTES

1) 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; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=19.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- WARNING: Required bearing size at joint(s) 6 greater than input bearing size.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 923 lb uplift at joint 4 and 992 lb uplift at joint 6.
- 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 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 6-7=-20, 4-5=-20  
Concentrated Loads (lb)  
Vert: 2=-91

Trapezoidal Loads (lb/ft)

Vert: 1=-552-to-2=-637, 2=-151-to-3=-105



June 3, 2025

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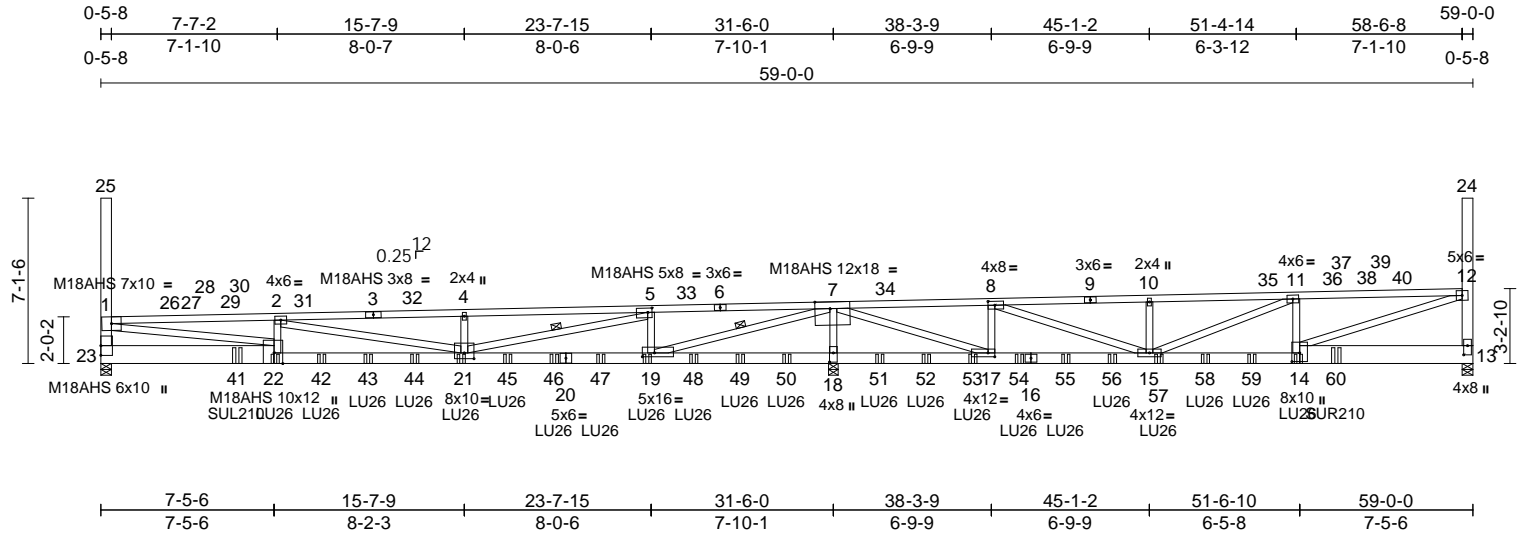
Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital	I73884407
2503400-A	M202G	Roof Special Girder	1	2	Job Reference (optional)	

Lumber Specialties, Dyersville, IA - 52040,

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Scale = 1:99.1

[5:0-2-4,0-2-4], [7:0-7-12,Edge], [8:0-3-8,0-2-0], [13:0-4-12,0-2-0], [14:0-4-8,0-4-0], [17:0-3-8,0-2-0], [18:0-4-12,0-2-0], [19:0-6-4,0-2-0], [21:0-5-0,0-3-0],

Plate Offsets (X, Y): [22:0-5-8,Edge]

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	0.81	Vert(LL)	0.80	21-22	>472	240	MT20	244/190
Snow (Pf/Pg)	14.0/20.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-1.01	21-22	>370	180	M18AHS	186/179
TCDL	15.0	Rep Stress Incr	NO	WB	0.95	Horz(CT)	-0.04	13	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 767 lb	FT = 12%

<b>LUMBER</b>	
TOP CHORD	2x4 SP 1650F 1.6E *Except* 3-1,3-6:2x4 SP 2400F 2.0E
BOT CHORD	2x6 SP 2400F 2.0E *Except* 14-13,22-23:2x10 SP M 23
WEBS	2x4 SP No.2 *Except* 24-13,23-25:2x6 SP 2400F 2.0E, 12-14,5-21,21-2,1-22,7-17:2x4 SP 1650F 1.6E, 7-19:2x4 SP 2400F 2.0E

<b>WEBS</b>	
2-22=674/635, 5-19=3017/1782, 8-17=3020/1739, 7-18=9764/5357, 10-15=509/258, 8-15=4212/7478, 11-14=447/613, 11-15=998/781, 12-14=3824/6292, 7-19=9657/17450, 4-21=644/322, 5-21=6293/10883, 2-21=1176/970, 1-22=7387/11731, 7-17=7678/14020	

- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1493 lb uplift at joint 13, 1937 lb uplift at joint 23 and 5577 lb uplift at joint 18.
- 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 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- Use Simpson Strong-Tie SUL210 (10-10d Girder, 10-10dx1 1/2 Truss) or equivalent at 5-10-7 from the left end to connect truss(es) to front face of bottom chord, skewed 45.0 deg.to the left, sloping 0.0 deg. down.

<b>BRACING</b>	
TOP CHORD	Structural wood sheathing directly applied or 4-4-3 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 5-2-13 oc bracing.
WEBS	1 Row at midpt 7-19, 5-21
<b>REACTIONS</b>	(size) 13=0-5-8, 18=0-5-0, 23=0-5-8 Max Horiz 23=479 (LC 10) Max Uplift 13=1493 (LC 10), 18=5577 (LC 13), 23=1937 (LC 9) Max Grav 13=2888 (LC 20), 18=11609 (LC 18), 23=3750 (LC 19)
<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-12840/7770, 2-4=-12187/6836, 4-5=-12187/6844, 5-7=-1653/762, 7-8=-1442/1897, 8-10=-5430/3285, 10-11=-5429/3292, 11-12=-6336/4019, 12-13=-2483/1495, 12-24=0/0, 1-23=-3166/1930, 1-25=0/0
BOT CHORD	21-23=-8327/12969, 19-21=-1296/1772, 18-19=-15120/8329, 17-18=-15120/8329, 15-17=-1828/1133, 13-15=-3635/6125

- NOTES**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=59ft; eave=7ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner (3) 0-2-12 to 5-2-12, Exterior (2) 5-2-12 to 53-9-4, Corner (3) 53-9-4 to 58-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=14.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00



June 3,2025

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	Discovery Animal Hospital
2503400-A	M202G	Roof Special Girder	1	2	Job Reference (optional)
					I73884407

Lumber Specialties, Dyersville, IA - 52040,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon Jun 02 08:53:55

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- 13) Use Simpson Strong-Tie LU26 (6-10d Girder, 4-10dx1 1/2 Truss) or equivalent spaced at 4-0-0 oc max. starting at 7-6-0 from the left end to 51-6-0 to connect truss(es) to front face of bottom chord.
- 14) Use Simpson Strong-Tie SUR210 (10-10d Girder, 10-10dx1 1/2 Truss) or equivalent at 53-1-9 from the left end to connect truss(es) to front face of bottom chord, skewed 45.0 deg.to the right, sloping 0.0 deg. down.
- 15) Fill all nail holes where hanger is in contact with lumber.

#### LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 2-30=-79, 2-3=-70, 4-11=-70, 11-36=-79, 13-23=-20  
Concentrated Loads (lb)  
Vert: 14=-372 (F), 22=-369 (F), 19=-372 (F), 21=-369 (F), 27=-10, 38=-10, 41=-793 (F), 42=-369 (F), 43=-371 (F), 44=-372 (F), 45=-369 (F), 46=-369 (F), 47=-369 (F), 48=-369 (F), 49=-369 (F), 50=-369 (F), 51=-369 (F), 52=-369 (F), 53=-369 (F), 54=-369 (F), 55=-369 (F), 56=-369 (F), 57=-369 (F), 58=-369 (F), 59=-369 (F), 60=-789 (F)  
Trapezoidal Loads (lb/ft)  
Vert: 1=-111-to-26=-92, 26=-92-to-27=-88, 27=-70-to-28=-68, 28=-81-to-29=-74, 29=-73-to-30=-70, 3=-70-to-32=-70, 32=-71-to-4=-70, 36=-70-to-37=-73, 37=-74-to-38=-81, 38=-68-to-39=-70, 39=-88-to-40=-92, 40=-92-to-12=-111



June 3, 2025

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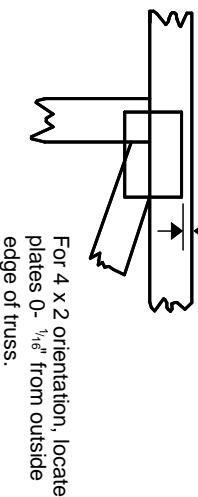
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## Symbols

### PLATE LOCATION AND ORIENTATION



\* Plate location details available in MITek software or upon request.

### PLATE SIZE

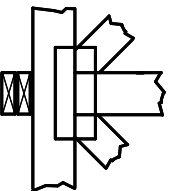
4 X 4

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

### LATERAL BRACING LOCATION



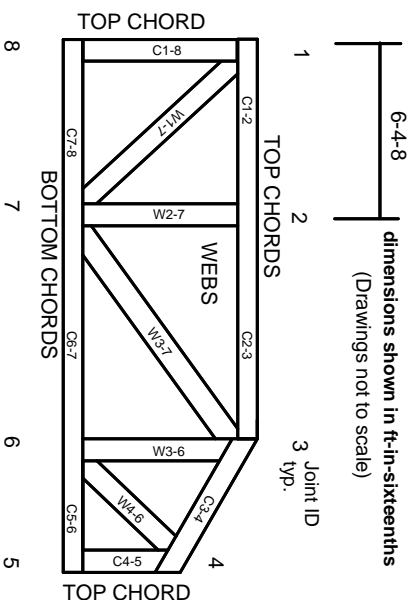
### BEARING



### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & 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-1988, ESR-2362, ESR-2685, ESR-3282  
ESR-4722, ESL-1388

## Design General Notes

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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# MITek®

MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023

## General Safety Notes

**Failure to Follow Could Cause Property Damage or Personal Injury**

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.