



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

RE: 22-0558-A1 - LINCOLN MODEL III

MiTek USA, Inc.

16023 Swingley Ridge Rd  
Chesterfield, MO 63017

**Site Information:**

Customer Info: SG BUILD COMPANY Project Name: - Model: NA  
Lot/Block: NA Subdivision: NA  
Address: LOT 18 NW SAVANNAH CIR, -  
City: LAKE CITY State: FL

**Name Address and License # of Structural Engineer of Record, If there is one, for the building.**

Name: License #:  
Address:  
City: State:

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

Design Code: FBC2020/TPI2014 Design Program: MiTek 20/20 8.6  
Wind Code: ASCE 7-16 Wind Speed: 150 mph  
Roof Load: 37.0 psf Floor Load: N/A psf

This package includes 45 individual, Truss Design Drawings and 0 Additional Drawings.

With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	T29090842	T-1	10/31/22	23	T29090864	T-24	10/31/22
2	T29090843	T-2	10/31/22	24	T29090865	T-25	10/31/22
3	T29090844	T-3	10/31/22	25	T29090866	T-26	10/31/22
4	T29090845	T-4	10/31/22	26	T29090867	T-27	10/31/22
5	T29090846	T-5	10/31/22	27	T29090868	T-28	10/31/22
6	T29090847	T-6	10/31/22	28	T29090869	T-29	10/31/22
7	T29090848	T-7	10/31/22	29	T29090870	T-30	10/31/22
8	T29090849	T-8	10/31/22	30	T29090871	J10	10/31/22
9	T29090850	T-9	10/31/22	31	T29090872	J7	10/31/22
10	T29090851	T-10	10/31/22	32	T29090873	J7A	10/31/22
11	T29090852	T-11	10/31/22	33	T29090874	J7B	10/31/22
12	T29090853	T-12	10/31/22	34	T29090875	J7T	10/31/22
13	T29090854	T-14	10/31/22	35	T29090876	J5-7	10/31/22
14	T29090855	T-15	10/31/22	36	T29090877	J5-7T	10/31/22
15	T29090856	T-16	10/31/22	37	T29090878	CJ9	10/31/22
16	T29090857	T-17	10/31/22	38	T29090879	CJ7	10/31/22
17	T29090858	T-18	10/31/22	39	T29090880	CJ5	10/31/22
18	T29090859	T-19	10/31/22	40	T29090881	CJ3	10/31/22
19	T29090860	T-20	10/31/22	41	T29090882	CJ1	10/31/22
20	T29090861	T-21	10/31/22	42	T29090883	HJ14-1	10/31/22
21	T29090862	T-22	10/31/22	43	T29090884	HJ-1	10/31/22
22	T29090863	T-23	10/31/22	44	T29090885	HJ2-3	10/31/22

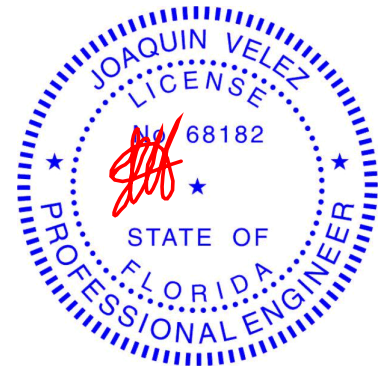


The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Arnold Truss Mfg. LLC.

Truss Design Engineer's Name: Velez, Joaquin

My license renewal date for the state of Florida is February 28, 2023.

**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.



Joaquin Velez PE No. 68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022



RE: 22-0558-A1 - LINCOLN MODEL III

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

**Site Information:**

Customer Info: SG BUILD COMPANY Project Name: - Model: NA  
Lot/Block: NA Subdivision: NA  
Address: LOT 18 NW SAVANNAH CIR, -  
City: LAKE CITY State: FL

No.	Seal#	Truss Name	Date
45	T29090886	HJ2-4	10/31/22

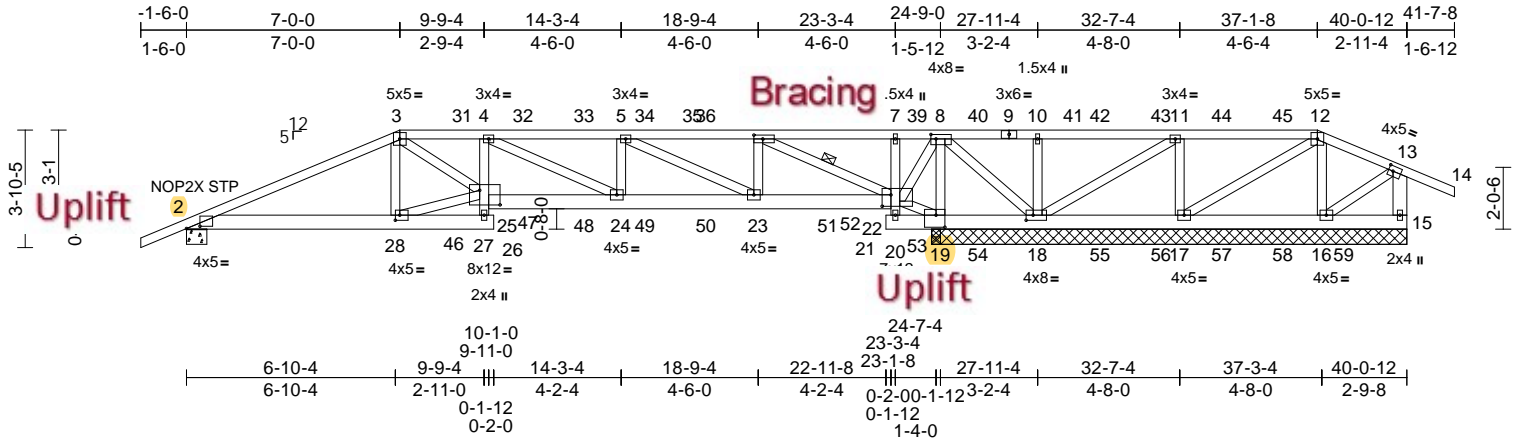
Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090842
22-0558-A1	T-1	Hip Girder	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Scale = 1:75.6

Plate Offsets (X, Y): [2:0-5-5,0-0-14], [6:0-3-8,0-1-8], [8:0-2-0,0-1-12], [13:0-1-12,0-2-0], [18:0-2-12,0-2-0], [19:0-3-8,0-4-12], [22:0-3-8,0-4-8], [25:0-8-0,0-5-12], [28:0-1-12,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.73	Vert(LL)	-0.21	26	>999	360	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.63	Vert(CT)	-0.39	26	>771	240	
BCLL	0.0*	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.11	19	n/a	n/a	
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS		Wind(LL)	0.29	26	>999	240	Weight: 254 lb FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1 \*Except\* 9-12:2x4 SP M 31  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2 \*Except\* 15-13:2x6 SP No.1

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-10-4 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 4-2-6 oc bracing.

WEBS 1 Row at midpt 6-22

**REACTIONS** All bearings 15-7-4. except 2=0-8-0  
(lb) - Max Horiz 2=171 (LC 7)  
Max Uplift All uplift 100 (lb) or less at joint(s) except 2=788 (LC 8), 15=209 (LC 17), 16=258 (LC 8), 17=233 (LC 5), 18=220 (LC 13), 19=2017 (LC 8)  
Max Grav All reactions 250 (lb) or less at joint (s) 15, 18 except 2=1499 (LC 17), 16=633 (LC 1), 17=529 (LC 18), 19=4136 (LC 17)

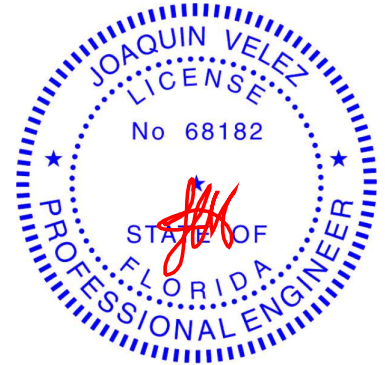
**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-3169/1485, 3-31=-4424/2194, 4-31=-4424/2194, 4-32=-3326/1724, 32-33=-3326/1724, 5-33=-3326/1724, 5-34=-1197/690, 34-35=-1197/690, 35-36=-1197/690, 6-36=-1197/690, 6-37=-1114/2427, 37-38=-1114/2427, 7-38=-1114/2427, 7-39=-1083/2385, 8-39=-1083/2385, 8-40=-798/1667, 9-40=-798/1667, 9-10=-798/1667, 10-41=-798/1667, 41-42=-798/1667, 42-43=-798/1667, 11-43=-798/1667, 11-44=-312/714, 44-45=-312/714, 12-45=-312/714, 12-13=-135/336, 13-15=-61/266

**BOT CHORD** 2-28=-1226/2866, 25-47=-2035/4512, 47-48=-2035/4505, 24-48=-2035/4500, 24-49=-1525/3326, 49-50=-1525/3326, 23-50=-1525/3326, 23-51=-573/1197, 51-52=-573/1197, 22-52=-573/1197, 19-54=-3100/1650, 18-54=-3100/1650, 18-55=-714/464, 55-56=-714/464, 17-56=-714/464, 17-57=-291/227, 57-58=-291/227, 16-58=-291/227  
**WEBS** 4-25=0/297, 7-22=-461/379, 3-28=-318/354, 25-28=-1232/2863, 3-25=-965/1929, 13-16=-305/170, 4-24=-1305/563, 5-24=-85/582, 5-23=-2383/1152, 6-23=-490/1340, 6-22=-4054/2023, 10-18=-444/400, 11-18=-1126/611, 12-17=-523/280, 8-19=-2406/1234, 19-22=-3258/1728, 8-22=-641/1208, 8-18=-898/1933

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 788 lb uplift at joint 2, 208 lb uplift at joint 15, 258 lb uplift at joint 16, 219 lb uplift at joint 18, 232 lb uplift at joint 17 and 2017 lb uplift at joint 19.



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022

Continued on page 2

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

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

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090842
22-0558-A1	T-1	Hip Girder	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 210 lb down and 209 lb up at 7-0-0, 114 lb down and 125 lb up at 9-0-12, 106 lb down and 108 lb up at 11-0-12, 106 lb down and 108 lb up at 13-0-12, 106 lb down and 108 lb up at 15-0-12, 106 lb down and 108 lb up at 17-0-12, 106 lb down and 108 lb up at 19-0-12, 106 lb down and 108 lb up at 21-0-12, 106 lb down and 108 lb up at 22-0-0, 114 lb down and 125 lb up at 24-0-0, 114 lb down and 125 lb up at 26-0-0, 114 lb down and 125 lb up at 28-0-0, 114 lb down and 125 lb up at 30-0-0, 114 lb down and 125 lb up at 32-0-0, and 114 lb down and 125 lb up at 34-0-0, and 114 lb down and 125 lb up at 36-0-0 on top chord, and 355 lb down and 58 lb up at 7-0-0, 81 lb down at 9-0-12, 77 lb down and 15 lb up at 11-0-12, 77 lb down and 15 lb up at 13-0-12, 77 lb down and 15 lb up at 15-0-12, 77 lb down and 15 lb up at 17-0-12, 77 lb down and 15 lb up at 19-0-12, 77 lb down and 15 lb up at 21-0-12, 77 lb down and 15 lb up at 22-0-0, 81 lb down at 24-0-0, 81 lb down at 26-0-0, 81 lb down at 28-0-0, 81 lb down at 30-0-0, 81 lb down at 32-0-0, 81 lb down at 34-0-0, and 81 lb down at 36-0-0, and 242 lb down and 145 lb up at 38-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

- 10) 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 + Roof Live (balanced): Lumber Increase=1.25,  
Plate Increase=1.25  
Uniform Loads (lb/ft)  
Vert: 1-3=-54, 3-12=-54, 12-13=-54, 13-14=-54,  
2-26=-20, 22-25=-20, 15-21=-20  
Concentrated Loads (lb)  
Vert: 28=-346 (B), 3=-163 (B), 23=-70 (B), 6=-106 (B), 18=-60 (B), 10=-114 (B), 31=-114 (B), 32=-106 (B), 33=-106 (B), 34=-106 (B), 36=-106 (B), 37=-106 (B), 38=-106 (B), 39=-114 (B), 40=-114 (B), 42=-114 (B), 43=-114 (B), 44=-114 (B), 45=-114 (B), 46=-60 (B), 47=-70 (B), 48=-70 (B), 49=-70 (B), 50=-70 (B), 51=-70 (B), 52=-70 (B), 53=-60 (B), 54=-60 (B), 55=-60 (B), 56=-60 (B), 57=-60 (B), 58=-60 (B), 59=-242 (B)

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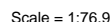
**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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Chesterfield, MO 63017

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<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.60	Vert(LL)	-0.72	17	>670	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.89	Vert(CT)	-1.34	17	>360	240	MT20HS	187/143
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.29	12	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.98	17	>494	240	Weight: 222 lb	FT = 20%

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Chesterfield, MO 63017

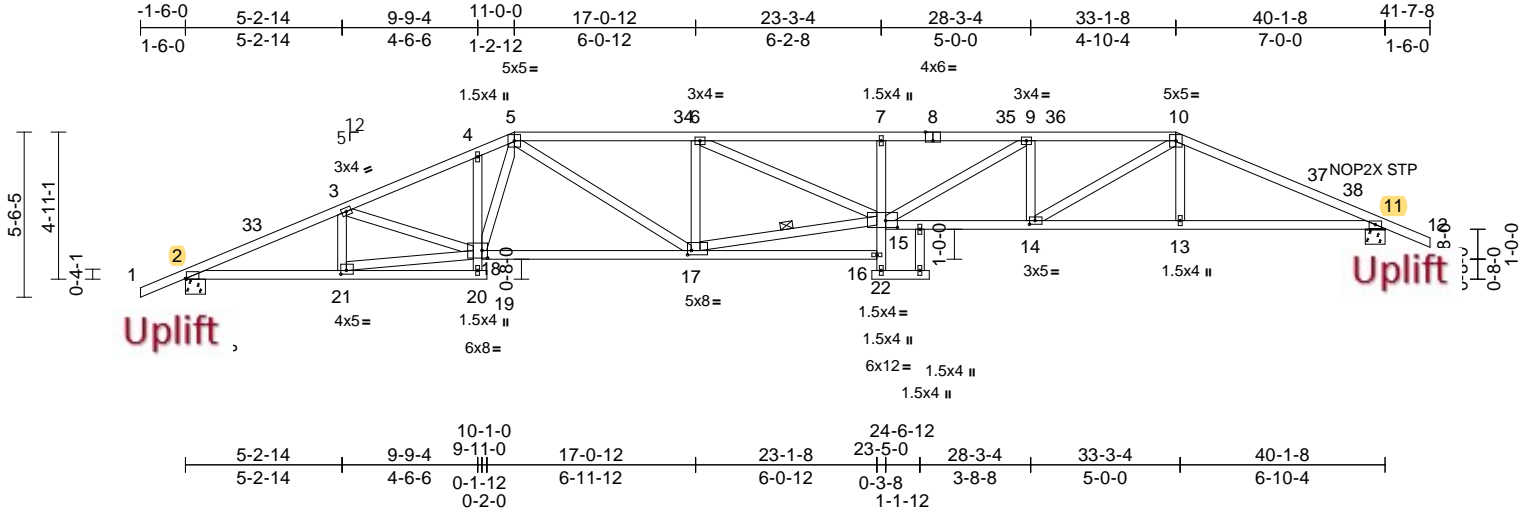


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090844
22-0558-A1	T-3	Hip	1	1	Job Reference (optional)	

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Page: 1



Scale = 1:77.1

Plate Offsets (X, Y): [2:0-0-6,Edge], [8:0-3-0,Edge], [14:0-2-4,0-1-8], [15:0-4-12,0-2-12], [17:0-1-8,0-1-12], [18:0-2-4,0-3-0], [21:0-2-4,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.50	Vert(LL)	-0.45	15	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.64	Vert(CT)	-0.84	16-17	>571	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.22	11	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.61	15	>786	240	Weight: 224 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 15-17

#### REACTIONS

(size) 2=0-8-0, 11=0-8-0  
Max Horiz 2=141 (LC 11)  
Max Uplift 2=796 (LC 12), 11=797 (LC 12)  
Max Grav 2=1567 (LC 1), 11=1565 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3362/1700, 3-4=-3445/1793,  
4-5=-3427/1879, 5-6=-3714/1960,  
6-7=-4839/2514, 7-9=-4889/2532,  
9-10=-4189/2195, 10-11=-3254/1627,  
11-12=0/31

BOT CHORD 2-21=-1535/3062, 20-21=-91/199, 19-20=0/0,  
17-18=-1421/2991, 16-17=-89/197,  
14-15=-1954/4189, 13-14=-1366/2937,  
11-13=-1364/2944

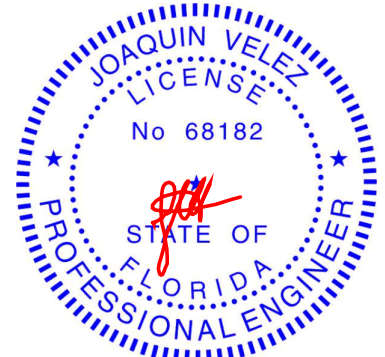
WEBS 18-20=0/121, 4-18=-146/195, 16-22=0/0,  
15-16=0/115, 7-15=-293/254, 5-18=-374/655,  
5-17=-392/977, 6-17=-877/580,  
15-17=-1698/3590, 10-13=0/247,  
3-21=-314/274, 18-21=-1459/2892,  
3-18=-75/234, 6-15=-597/1227,  
9-15=-429/852, 9-14=-717/459,  
10-14=-739/1563

#### NOTES

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

- 2) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to  
2-6-2, Interior (1) 2-6-2 to 11-0-0, Exterior(2R) 11-0-0 to  
16-8-2, Interior (1) 16-8-2 to 33-1-8, Exterior(2R) 33-1-8  
to 38-9-10, Interior (1) 38-9-10 to 41-7-8 zone; cantilever  
left and right exposed; end vertical left and right  
exposed;C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- 3) Building Designer / Project engineer responsible for  
verifying applied roof live load shown covers rain loading  
requirements specific to the use of this truss component.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) All plates are 1.5x4 MT20 unless otherwise indicated.
- 7) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- 9) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 796 lb uplift at  
joint 2 and 797 lb uplift at joint 11.
- 10) This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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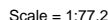
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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Chesterfield, MO 63017

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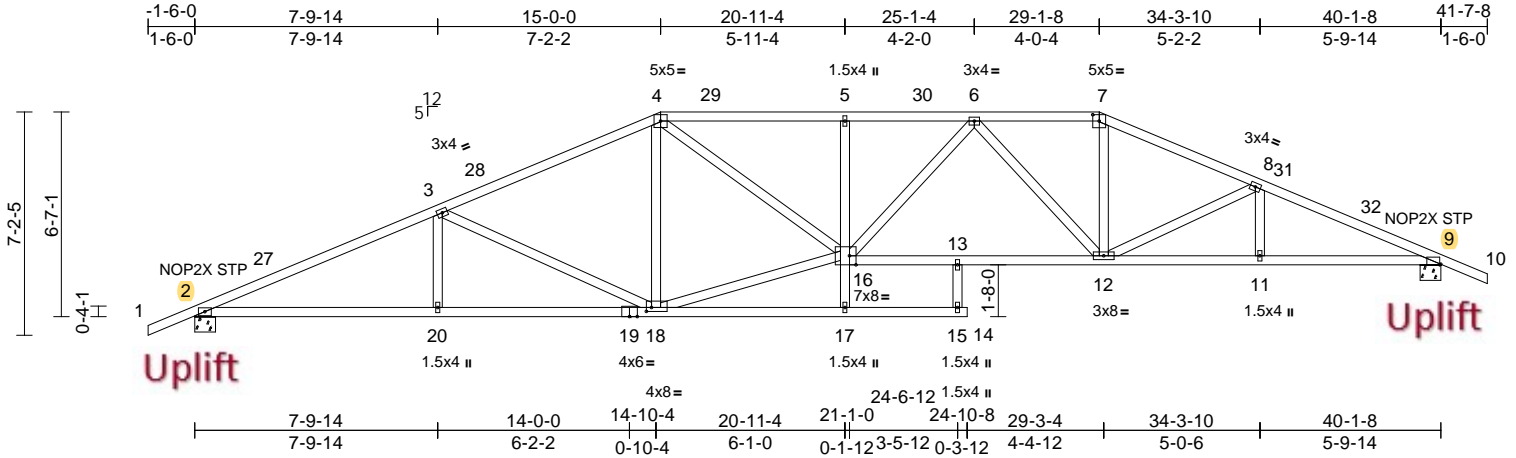
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Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090846
22-0558-A1	T-5	Hip	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:16  
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Page: 1



Scale = 1:74.2

Plate Offsets (X, Y): [7:0-2-8,0-2-7], [9:0-0-6,Edge], [16:0-2-8,Edge], [18:0-2-0,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.44	Vert(LL)	-0.27	16	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.64	Vert(CT)	-0.58	14	>825	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.18	9	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.37	16	>999	240	Weight: 223 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-8-0, 9=0-8-0  
Max Horiz 2=193 (LC 11)  
Max Uplift 2=795 (LC 12), 9=794 (LC 12)  
Max Grav 2=1568 (LC 1), 9=1569 (LC 1)

#### FORCES

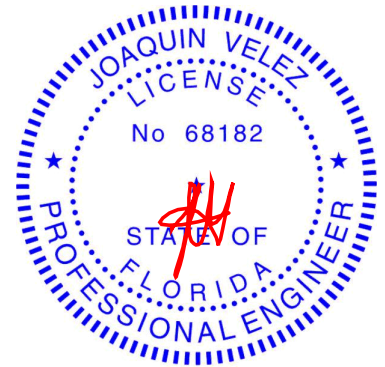
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3229/1649, 3-4=-2523/1371,  
4-5=-3237/1782, 5-6=-3240/1778,  
6-7=-2579/1449, 7-8=-2881/1518,  
8-9=-3333/1724, 9-10=0/31  
BOT CHORD 2-20=-1461/2936, 18-20=-1461/2936,  
17-18=-8/44, 15-17=0/0, 14-15=0/0,  
13-16=-1380/3003, 12-13=-1380/3003,  
11-12=-1487/3032, 9-11=-1487/3032  
WEBS 16-17=0/249, 5-16=-301/281, 3-20=0/311,  
3-18=-775/494, 4-18=-206/156,  
16-18=-1046/2293, 4-16=-577/1239,  
6-16=-143/436, 6-12=-728/402,  
7-12=-345/841, 8-12=-496/369, 8-11=0/171,  
13-15=0/40

#### NOTES

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

- 2) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to  
2-6-2, Interior (1) 2-6-2 to 15-0-0, Exterior(2R) 15-0-0 to  
20-11-4, Interior (1) 20-11-4 to 29-1-8, Exterior(2R)  
29-1-8 to 34-9-10, Interior (1) 34-9-10 to 41-7-8 zone;  
cantilever left and right exposed ; end vertical left and  
right exposed;C-C for members and forces & MWFRS  
for reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- 3) Building Designer / Project engineer responsible for  
verifying applied roof live load shown covers rain loading  
requirements specific to the use of this truss component.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- 8) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 794 lb uplift at  
joint 9 and 795 lb uplift at joint 2.
- 9) This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



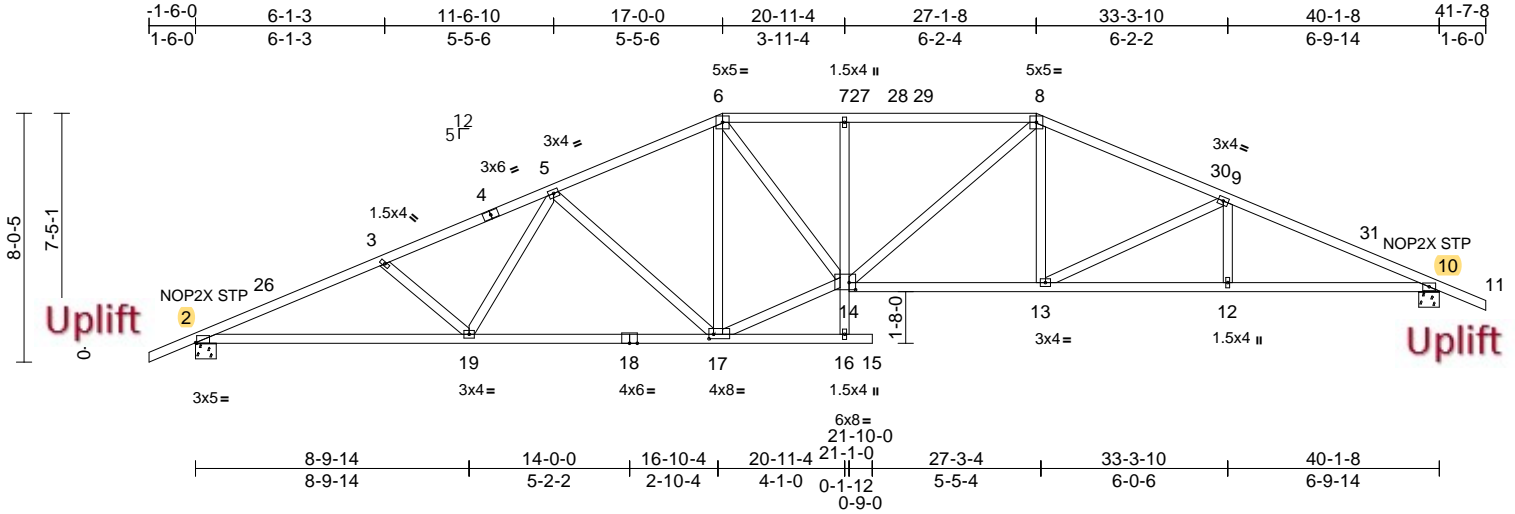
Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090847
22-0558-A1	T-6	Hip	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:16

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Scale = 1:74.3

Plate Offsets (X, Y): [2:0-0-6,Edge], [14:0-2-8,0-2-12], [17:0-1-12,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.37	Vert(LL)	-0.24	15	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.65	Vert(CT)	-0.47	13-14	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.16	10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.32	15	>999	240	Weight: 221 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-8-0, 10=0-8-0  
Max Horiz 2=218 (LC 11)  
Max Uplift 2=-793 (LC 12), 10=-792 (LC 12)  
Max Grav 2=1573 (LC 1), 10=1574 (LC 1)

#### FORCES

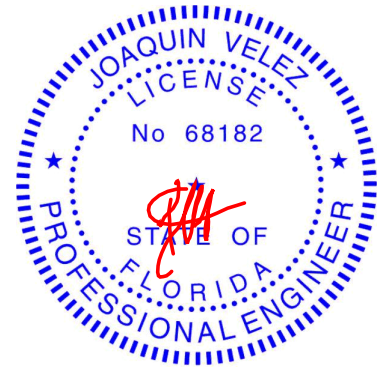
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3293/1684, 3-5=-3052/1572, 5-6=-2317/1309, 6-7=-2756/1571, 7-8=-2754/1567, 8-9=-2715/1453, 9-10=-3304/1693, 10-11=0/31  
BOT CHORD 2-19=-1507/3007, 17-19=-1228/2545, 16-17=-7/23, 15-16=0/0, 13-14=-1059/2432, 12-13=-1447/2998, 10-12=-1447/2998, 14-16=0/85, 7-14=-299/275, 3-19=-335/299, 5-19=-112/494, 5-17=-642/456, 6-17=-314/151, 14-17=-955/2216, 6-14=-539/1120, 8-14=-243/571, 8-13=-101/466, 9-13=-639/427, 9-12=0/248

#### NOTES

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

- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 2-6-2, Interior (1) 2-6-2 to 17-0-0, Exterior(2R) 17-0-0 to 22-8-2, Interior (1) 22-8-2 to 27-1-8, Exterior(2R) 27-1-8 to 32-9-10, Interior (1) 32-9-10 to 41-7-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 792 lb uplift at joint 10 and 793 lb uplift at joint 2.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

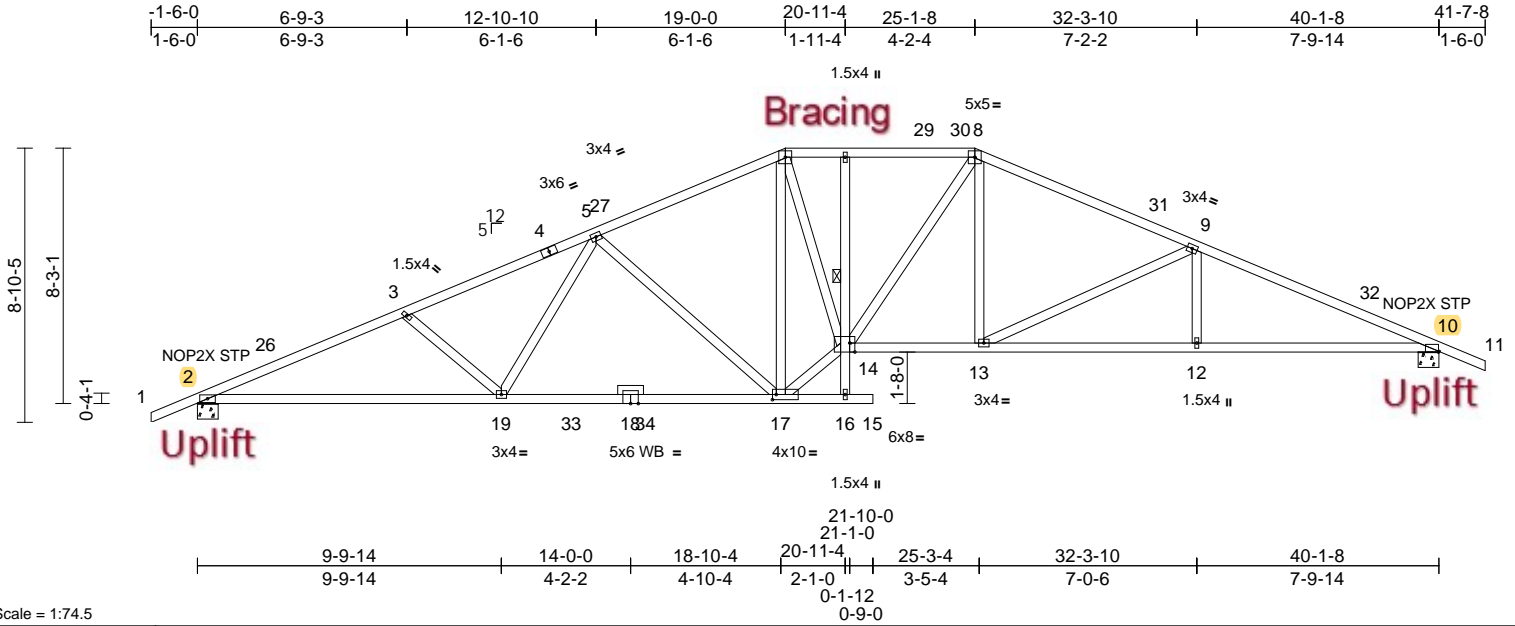
Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090848
22-0558-A1	T-7	Hip	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:17

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Scale = 1:74.5									
Plate Offsets (X, Y): [10:0-0-2,Edge], [14:0-2-0,Edge], [17:0-1-8,0-2-0]									
<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in (loc)	l/defl	L/d
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.48	Vert(LL)	-0.34 17-19	>999	360
TCDL	7.0	Lumber DOL	1.25	BC	0.86	Vert(CT)	-0.60 17-19	>801	240
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.19 10	n/a	n/a
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.31 15	>999	240
					Weight: 228 lb FT = 20%				

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2  
OTHERS 2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 7-16

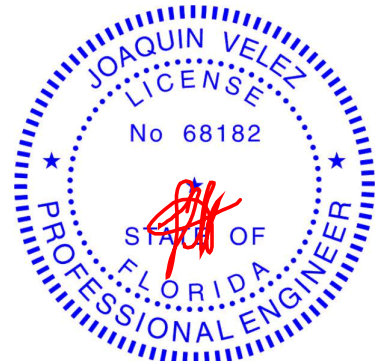
**REACTIONS** (size) 2=0-8-0, 10=0-8-0  
Max Horiz 2=244 (LC 11)  
Max Uplift 2=793 (LC 12), 10=792 (LC 12)  
Max Grav 2=1775 (LC 17), 10=1721 (LC 18)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3664/1674, 3-5=-3397/1544, 5-6=-2363/1246, 6-7=-2623/1407, 7-8=-2627/1407, 8-9=-2778/1389, 9-10=-3550/1669, 10-11=0/31  
BOT CHORD 2-19=-1492/3522, 17-19=-1169/2860, 16-17=-9/20, 15-16=0/0, 13-14=-963/2506, 12-13=-1416/3246, 10-12=-1416/3246  
WEBS 14-16=-36/0, 7-14=-126/96, 3-19=-401/344, 5-19=-132/733, 5-17=-857/503, 6-17=-796/368, 14-17=-991/2770, 6-14=-640/1520, 8-14=-138/381, 8-13=-134/607, 9-13=-934/496, 9-12=0/311

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

- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 2-6-2, Interior (1) 2-6-2 to 19-0-0, Exterior(2R) 19-0-0 to 24-8-2, Interior (1) 24-8-2 to 25-1-8, Exterior(2R) 25-1-8 to 30-9-10, Interior (1) 30-9-10 to 41-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 792 lb uplift at joint 10 and 793 lb uplift at joint 2.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

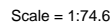


Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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**MiTek**  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

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

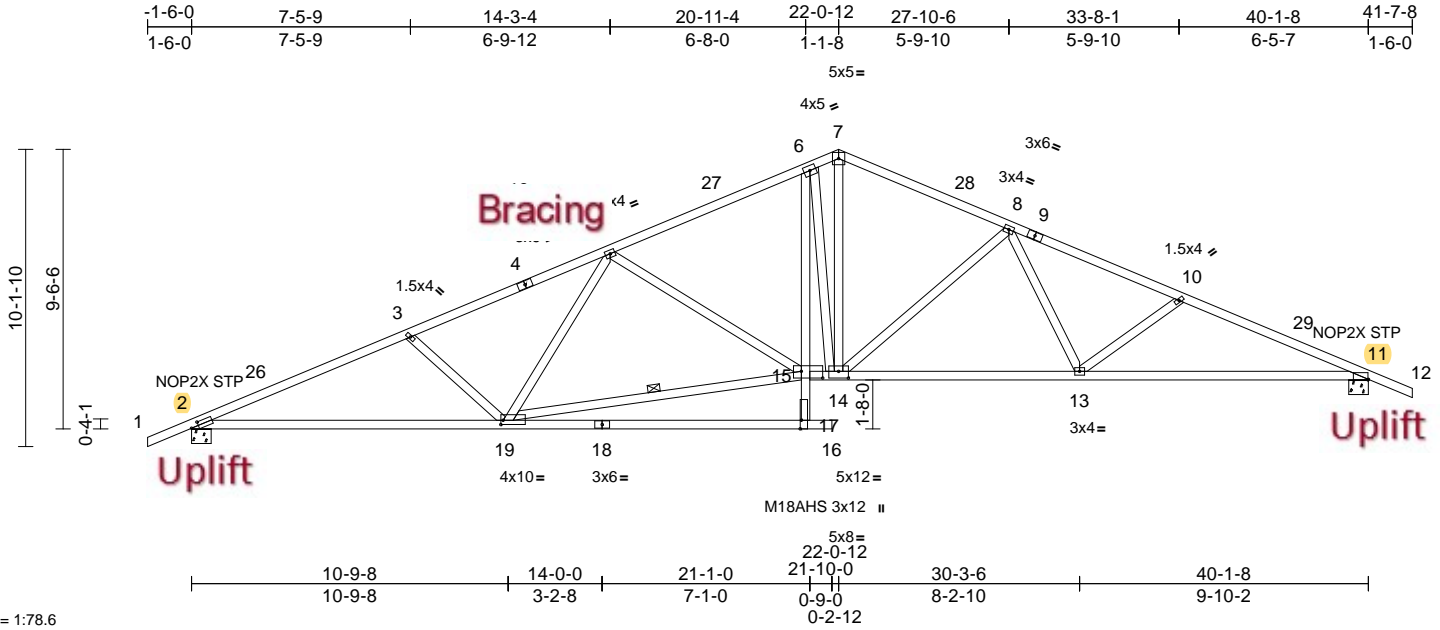
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090850
22-0558-A1	T-9	Roof Special	2	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Scale = 1:78.6

Plate Offsets (X, Y): [2:0-3-0,0-1-8], [11:0-0-2,Edge], [14:0-4-0,0-2-12], [15:0-8-12,0-2-12], [17:0-3-8,Edge], [19:0-0-15,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.45	Vert(LL)	-0.25	16	>999	360	MT20 244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.87	Vert(CT)	-0.55	17-19	>875	240	M18AHS 186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.16	11	n/a	n/a	
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.35	16	>999	240	Weight: 233 lb FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1 \*Except\* 17-6:2x4 SP No.2  
WEBS 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied. Except:  
10-0-0 oc bracing: 15-17  
WEBS 1 Row at midpt 15-19

#### REACTIONS

(size) 2=0-8-0, 11=0-8-0  
Max Horiz 2=284 (LC 11)  
Max Uplift 2=-792 (LC 12), 11=-791 (LC 12)  
Max Grav 2=1574 (LC 1), 11=1575 (LC 1)

#### FORCES

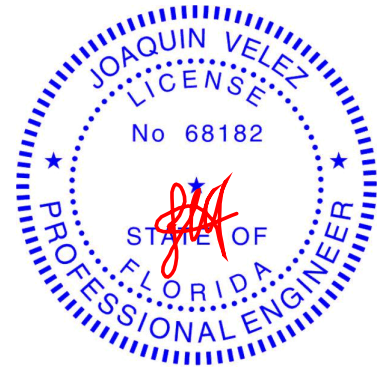
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3213/1596, 3-5=-2913/1458, 5-6=-2352/1303, 6-7=-2145/1304, 7-8=-2226/1254, 8-10=-2975/1492, 10-11=-3271/1643, 11-12=0/31  
BOT CHORD 2-19=-1421/2929, 17-19=-11/298, 16-17=0/0, 15-17=0/233, 6-15=-303/518, 14-15=-802/2080, 13-14=-1090/2494, 11-13=-1400/2988  
WEBS 5-15=-587/416, 7-14=-834/1406, 8-14=-681/465, 8-13=-101/512, 10-13=-390/337, 5-19=0/333, 3-19=-432/389, 15-19=-1171/2337, 6-14=-658/564

#### NOTES

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

- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 2-6-2, Interior (1) 2-6-2 to 22-0-12, Exterior(2R) 22-0-12 to 26-0-14, Interior (1) 26-0-14 to 41-7-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 791 lb uplift at joint 11 and 792 lb uplift at joint 2.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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



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Chesterfield, MO 63017

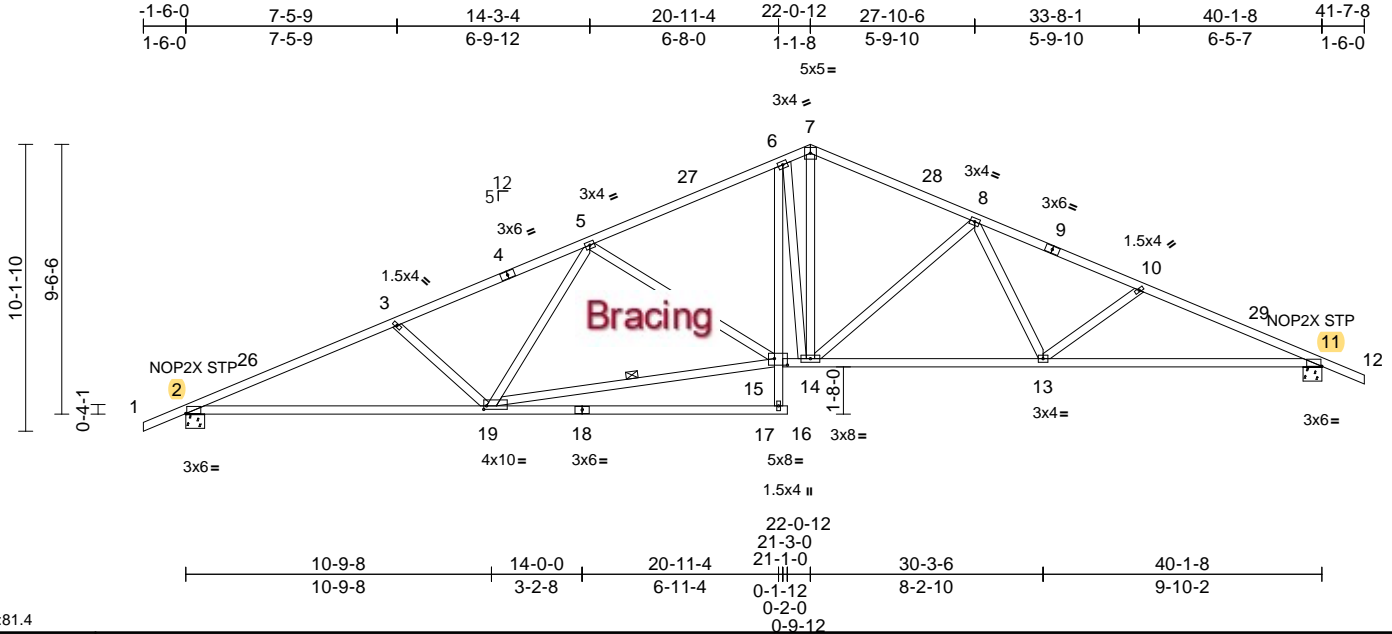


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090851
22-0558-A1	T-10	Roof Special	3	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Scale = 1:81.4

Plate Offsets (X, Y): [2:0-0-6,Edge], [11:0-0-6,Edge], [15:0-5-8,0-2-12], [19:0-1-3,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.44	Vert(LL)	-0.39	17-19	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.97	Vert(CT)	-0.86	17-19	>559	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.17	11	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.33	16	>999	240	Weight: 232 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 15-19

#### REACTIONS

(size) 2=0-8-0, 11=0-8-0  
Max Horiz 2=284 (LC 11)  
Max Uplift 2=795 (LC 12), 11=795 (LC 12)  
Max Grav 2=1569 (LC 1), 11=1569 (LC 1)

#### FORCES

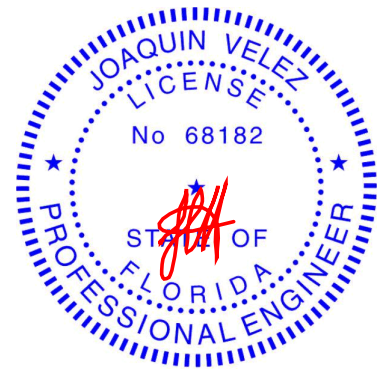
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3207/1601, 3-5=-2910/1463, 5-6=-2361/1321, 6-7=-2140/1326, 7-8=-2208/1264, 8-10=-2959/1502, 10-11=-3255/1652, 11-12=0/31  
BOT CHORD 2-19=-1426/2923, 17-19=-13/28, 16-17=0/0, 14-15=-831/2104, 13-14=-1099/2479, 11-13=-1409/2974  
WEBS 15-17=0/172, 6-15=-401/743, 5-15=-584/411, 7-14=-876/1423, 8-14=-681/465, 8-13=-102/514, 10-13=-390/337, 5-19=0/331, 3-19=-427/390, 15-19=-1180/2557, 6-14=-897/698

#### NOTES

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

- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 2-6-2, Interior (1) 2-6-2 to 22-0-12, Exterior(2R) 22-0-12 to 26-0-14, Interior (1) 26-0-14 to 41-7-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 795 lb uplift at joint 11 and 795 lb uplift at joint 2.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

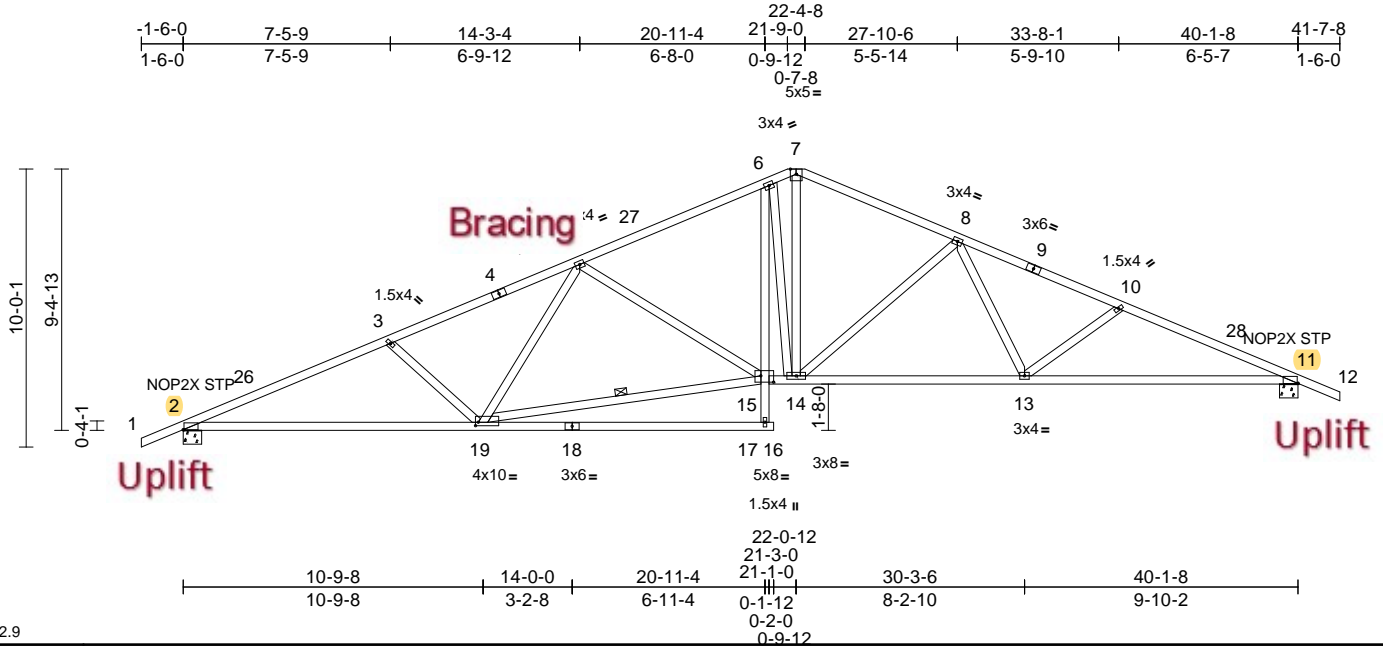


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090852
22-0558-A1	T-11	Hip	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:19  
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Page: 1



Scale = 1:82.9

Plate Offsets (X, Y): [2:0-0-6,Edge], [11:0-0-6,Edge], [15:0-5-8,0-2-12], [19:0-1-3,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.43	Vert(LL)	-0.39	17-19	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.97	Vert(CT)	-0.86	17-19	>561	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.17	11	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.33	16	>999	240	Weight: 231 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 15-19

#### REACTIONS

(size) 2=0-8-0, 11=0-8-0  
Max Horiz 2=282 (LC 11)  
Max Uplift 2=795 (LC 12), 11=795 (LC 12)  
Max Grav 2=1569 (LC 1), 11=1569 (LC 1)

#### FORCES

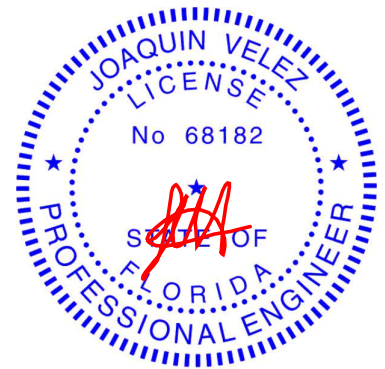
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3208/1576, 3-5=-2910/1436, 5-6=-2361/1280, 6-7=-2117/1264, 7-8=-2217/1223, 8-10=-2959/1472, 10-11=-3255/1624, 11-12=0/31  
BOT CHORD 2-19=-1393/2923, 17-19=-13/28, 16-17=0/0, 14-15=-801/2105, 13-14=-1071/2479, 11-13=-1385/2973  
WEBS 15-17=0/172, 6-15=-401/743, 5-15=-583/421, 8-14=-663/454, 8-13=-104/514, 10-13=-390/338, 5-19=0/331, 3-19=-427/390, 15-19=-1143/2557, 7-14=-770/1300, 6-14=-806/599

#### NOTES

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

- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 2-6-2, Interior (1) 2-6-2 to 22-0-12, Exterior(2R) 22-0-12 to 27-10-6, Interior (1) 27-10-6 to 41-7-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 795 lb uplift at joint 2 and 795 lb uplift at joint 11.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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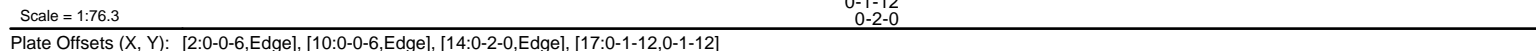
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Arnold Truss Mfg. LLC, Ocala, FL - 34475, Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:20 Page: 1  
ID:nOwO3UsSPw4HxC20SWUqb4yxvKQ-RfC?PsB70Hg3NSaPanL8w3uLTxbGKWrcDoi7J4zJC?f



<b>LUMBER</b>		2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 2-6-2, Interior (1) 2-6-2 to 19-9-0, Exterior(2E) 19-9-0 to 24-4-8, Exterior(2R) 24-4-8 to 30-0-10, Interior (1) 30-0-10 to 41-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
TOP CHORD	2x4 SP No.1	
BOT CHORD	2x4 SP No.1	
WEBS	2x4 SP No.2	
<b>BRACING</b>		3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
TOP CHORD	Structural wood sheathing directly applied.	4) Provide adequate drainage to prevent water ponding.
BOT CHORD	Rigid ceiling directly applied.	5) All plates are MT20 plates unless otherwise indicated.
WEBS	1 Row at midpt 7-16, 5-17, 6-17, 9-13	6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
<b>REACTIONS</b> (size) 2=0-8-0, 10=0-8-0		7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
	Max Horiz 2=254 (LC 11)	8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 795 lb uplift at joint 10 and 796 lb uplift at joint 2.
	Max Uplift 2=796 (LC 12), 10=795 (LC 12)	9) This truss design requires that a minimum of 7/16"
	Max Grav 2=1766 (LC 17), 10=1709 (LC 18)	structural wood sheathing be applied directly to the top chord and 1/2" onsum sheetrock be applied directly to
<b>FORCES</b> (lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-2=0/31, 2-3=-3619/1662, 3-5=-3338/1524, 5-6=-2276/1214, 6-7=-2459/1346, 7-8=-2470/1352, 8-9=-2684/1355, 9-10=-3505/1651, 10-11=0/31	
BOT CHORD	2-19=-1477/3488, 17-19=-1138/2794, 16-17=-18/27, 15-16=0/0, 13-14=-918/2424, 12-13=-1395/3203, 10-12=-1395/3203	
WEBS	14-16=-194/0, 7-14=-74/113, 3-19=-422/360, 5-19=-139/764, 5-17=-886/518, 6-17=-1408/625, 14-17=-1126/3222, 6-14=-796/1946, 8-14=-117/309, 8-13=-143/626, 9-13=-993/522, 9-12=0/331	

October 31, 2022



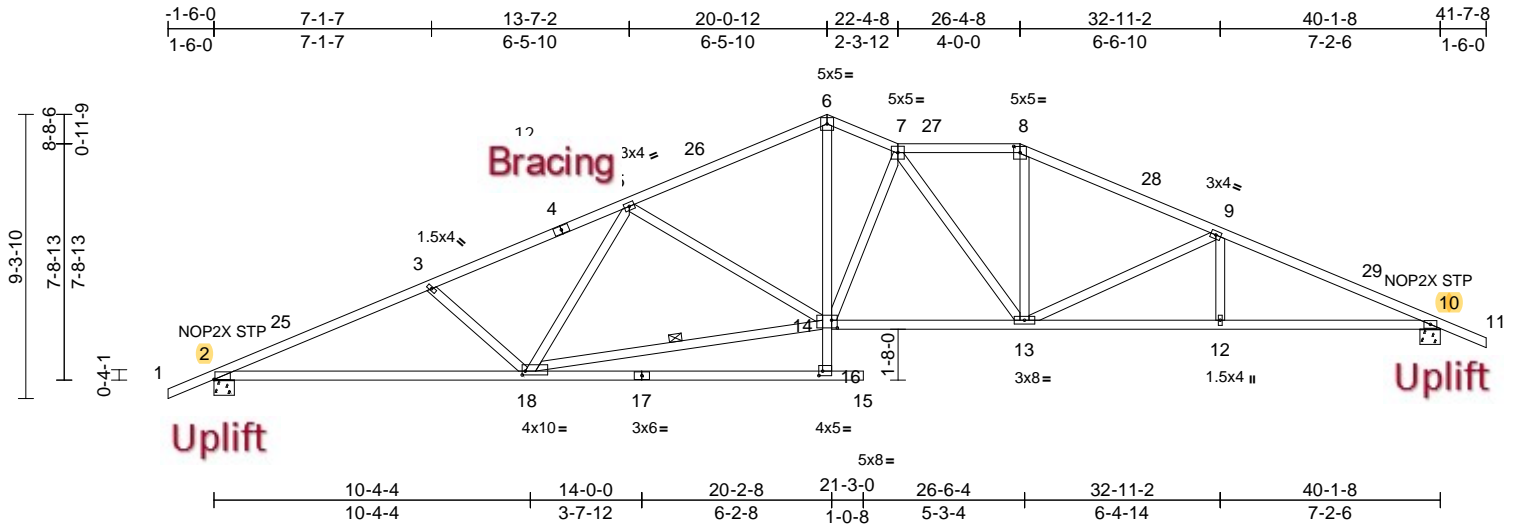
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090854
22-0558-A1	T-14	Roof Special	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:20  
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Page: 1



Scale = 1:75.4

Plate Offsets (X, Y): [2:0-0-6,Edge], [8:0-2-8,0-2-7], [14:0-2-4,0-3-0], [16:0-1-8,0-1-12], [18:0-1-3,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.44	Vert(LL)	-0.26	15	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.81	Vert(CT)	-0.53	16-18	>902	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.17	10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.36	15	>999	240	Weight: 225 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1 \*Except\* 16-6:2x4 SP No.2  
WEBS 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied. Except:  
10-0-0 oc bracing: 14-16  
WEBS 1 Row at midpt 14-18

#### REACTIONS

(size) 2=0-8-0, 10=0-8-0  
Max Horiz 2=258 (LC 11)  
Max Uplift 2=-790 (LC 12), 10=-789 (LC 12)  
Max Grav 2=1577 (LC 1), 10=1578 (LC 1)

#### FORCES

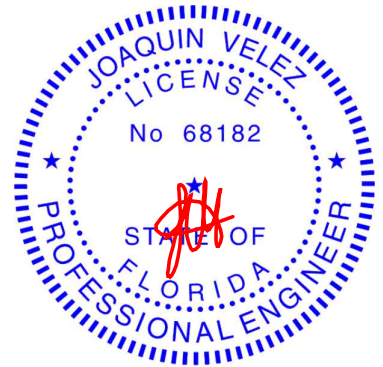
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3243/1698, 3-5=-2955/1565,  
5-6=-2506/1452, 6-7=-2442/1492,  
7-8=-2368/1442, 8-9=-2660/1506,  
9-10=-3298/1721, 10-11=0/31  
BOT CHORD 2-18=-1520/2958, 16-18=-4/169, 15-16=0/0,  
14-16=0/236, 6-14=-820/1575,  
13-14=-1177/2555, 12-13=-1420/2990,  
10-12=-1420/2990  
WEBS 5-14=-532/388, 7-14=-798/539,  
7-13=-384/220, 8-13=-273/694,  
9-13=-693/457, 9-12=0/269, 5-18=0/254,  
3-18=-410/367, 14-18=-1324/2532

#### NOTES

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

- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to  
2-6-2, Interior (1) 2-6-2 to 20-0-12, Exterior(2E) 20-0-12  
to 22-4-8, Interior (1) 22-4-8 to 26-4-8, Exterior(2R)  
26-4-8 to 30-4-10, Interior (1) 30-4-10 to 41-7-8 zone;  
cantilever left and right exposed; end vertical left and  
right exposed; C-C for members and forces & MWFRS  
for reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- Building Designer / Project engineer responsible for  
verifying applied roof live load shown covers rain loading  
requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 790 lb uplift at  
joint 2 and 789 lb uplift at joint 10.
- This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022

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

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



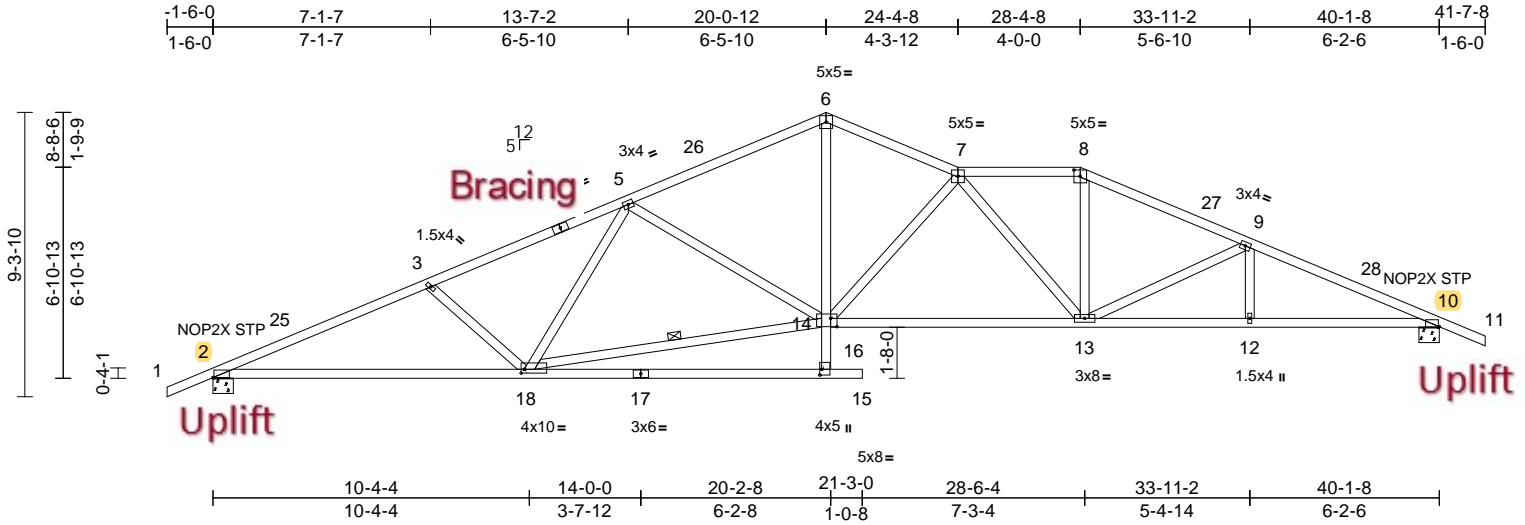
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090855
22-0558-A1	T-15	Roof Special	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Scale = 1:75.4

Plate Offsets (X, Y): [2:0-0-6,Edge], [8:0-2-8,0-2-7], [10:0-0-6,Edge], [14:0-2-8,0-3-4], [16:0-2-4,0-0-12], [18:0-1-3,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.44	Vert(LL)	-0.27	15	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.82	Vert(CT)	-0.58	13-14	>824	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.18	10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.37	15	>999	240	Weight: 221 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1 \*Except\* 16-6:2x4 SP No.2  
WEBS 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied. Except:  
10-0-0 oc bracing: 14-16  
WEBS 1 Row at midpt 14-18

#### REACTIONS

(size) 2=0-8-0, 10=0-8-0  
Max Horiz 2=258 (LC 11)  
Max Uplift 2=-790 (LC 12), 10=-789 (LC 12)  
Max Grav 2=1577 (LC 1), 10=1578 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/31, 2-3=-3243/1686, 3-5=-2955/1553,  
5-6=-2512/1435, 6-7=-2487/1467,  
7-8=-2539/1497, 8-9=-2840/1577,  
9-10=-3339/1751, 10-11=0/31

BOT CHORD 2-18=-1510/2958, 16-18=-17/124, 15-16=0/0,  
14-16=0/235, 6-14=-789/1572,  
13-14=-1382/2885, 12-13=-1490/3035,  
10-12=-1490/3035

WEBS 5-14=-531/391, 7-14=-941/652,  
7-13=-537/363, 8-13=-334/806,  
9-13=-549/397, 9-12=0/192, 5-18=0/244,  
3-18=-410/367, 14-18=-1301/2559

#### NOTES

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

2) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to  
2-6-2, Interior (1) 2-6-2 to 20-0-12, Exterior(2E) 20-0-12  
to 24-4-8, Interior (1) 24-4-8 to 28-4-8, Exterior(2R)  
28-4-8 to 32-4-10, Interior (1) 32-4-10 to 41-7-8 zone;  
cantilever left and right exposed ; end vertical left and  
right exposed;C-C for members and forces & MWFRS  
for reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60

3) Building Designer / Project engineer responsible for  
verifying applied roof live load shown covers rain loading  
requirements specific to the use of this truss component.

4) Provide adequate drainage to prevent water ponding.

5) All plates are MT20 plates unless otherwise indicated.

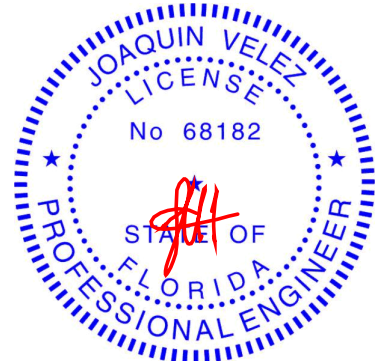
6) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.

7) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.

8) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 790 lb uplift at  
joint 2 and 789 lb uplift at joint 10.

9) This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

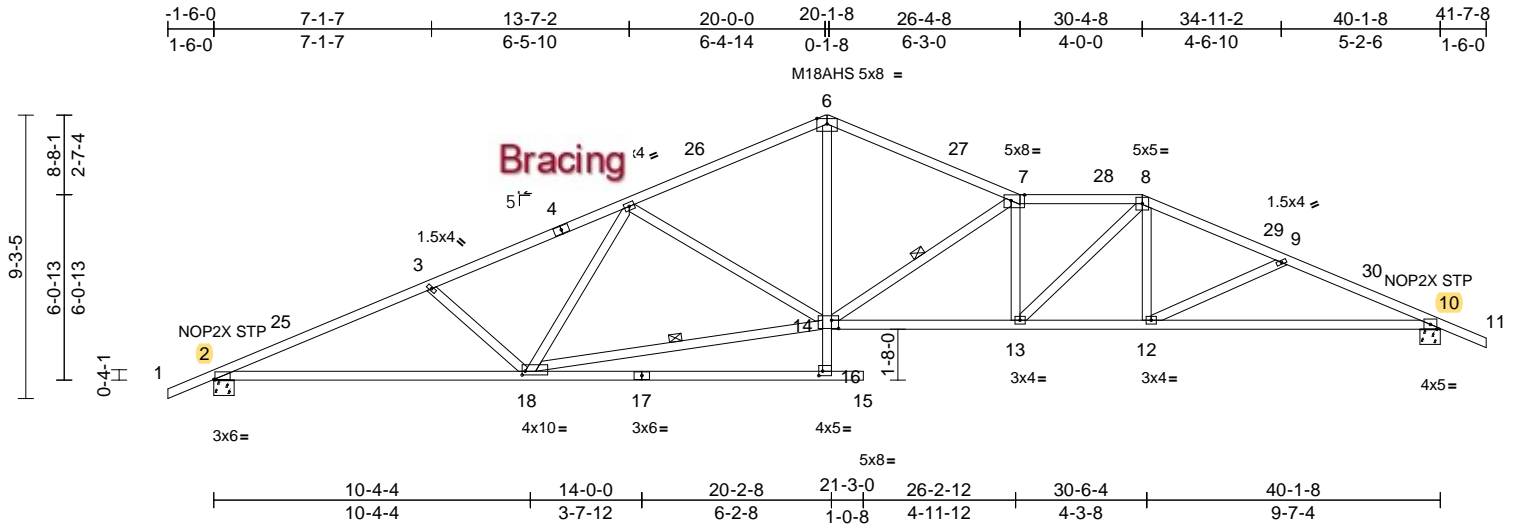


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090856
22-0558-A1	T-16	Roof Special	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:22  
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Page: 1



Scale = 1:75.4

Plate Offsets (X, Y): [2:0-0-6,Edge], [7:0-5-4,0-2-4], [14:0-2-12,0-3-4], [16:0-1-8,0-1-12], [18:0-1-3,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.43	Vert(LL)	-0.29	15	>999	360	MT20 244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.81	Vert(CT)	-0.56	16-18	>867	240	M18AHS 186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.18	10	n/a	n/a	
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.39	15	>999	240	Weight: 221 lb FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1 \*Except\* 16-6:2x4 SP No.2  
WEBS 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied. Except:  
10-0-0 oc bracing: 14-16  
WEBS 1 Row at midpt 7-14, 14-18

#### REACTIONS

(size) 2=0-8-0, 10=0-8-0  
Max Horiz 2=258 (LC 11)  
Max Uplift 2=-790 (LC 12), 10=-789 (LC 12)  
Max Grav 2=1577 (LC 1), 10=1578 (LC 1)

#### FORCES

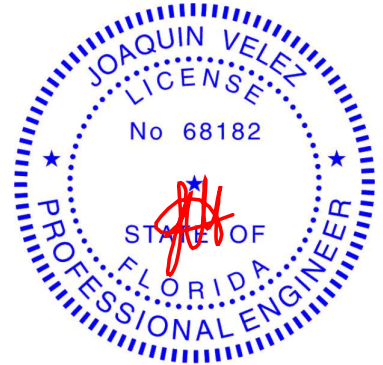
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-3243/1676, 3-5=-2955/1542, 5-6=-2509/1425, 6-7=-2514/1446, 7-8=-3338/1919, 8-9=-3012/1641, 9-10=-3335/1854, 10-11=0/31  
BOT CHORD 2-18=-1500/2959, 16-18=-14/161, 15-16=0/0, 14-16=0/236, 6-14=-733/1524, 13-14=-1601/3320, 12-13=-1271/2720, 10-12=-1610/3055  
WEBS 5-14=-534/386, 7-14=-1256/785, 7-13=-521/404, 8-13=-503/871, 8-12=-67/374, 9-12=-379/371, 5-18=0/252, 3-18=-410/369, 14-18=-1296/2533

#### NOTES

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

- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 2-6-2, Interior (1) 2-6-2 to 20-0-12, Exterior(2R) 20-0-12 to 24-0-14, Interior (1) 24-0-14 to 30-4-8, Exterior(2R) 30-4-8 to 34-4-10, Interior (1) 34-4-10 to 41-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 789 lb uplift at joint 10 and 790 lb uplift at joint 2.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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



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Chesterfield, MO 63017

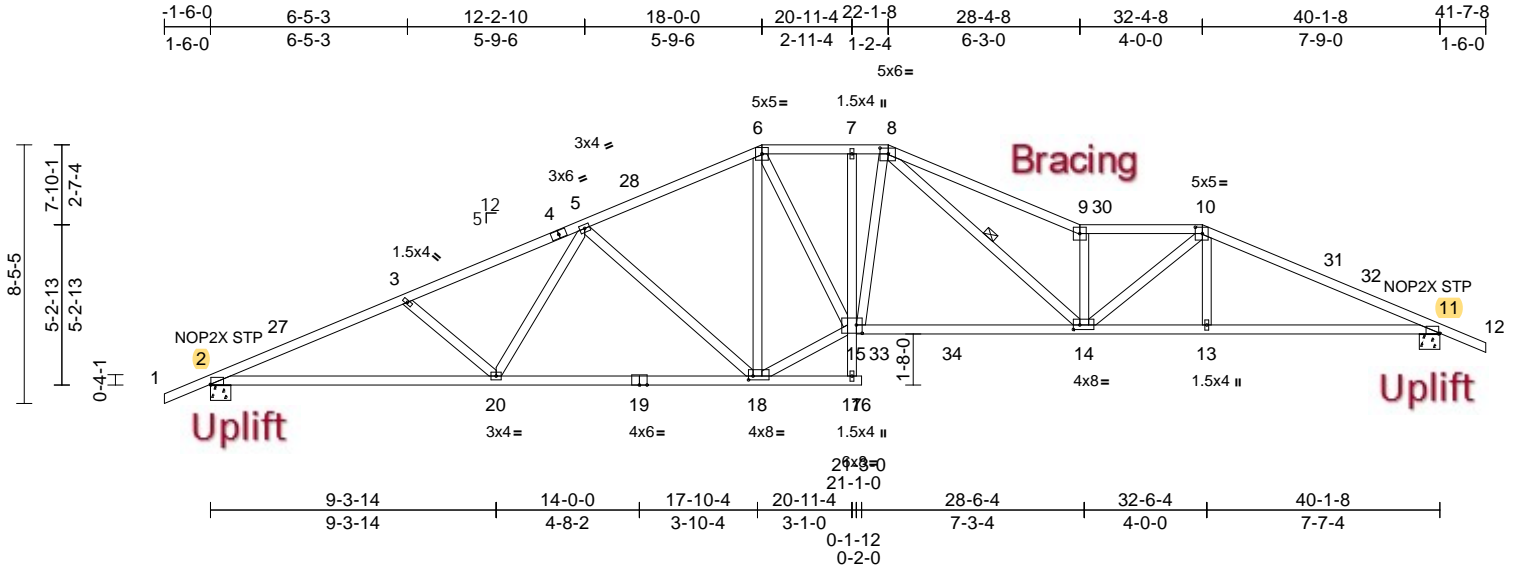


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090857
22-0558-A1	T-17	Roof Special	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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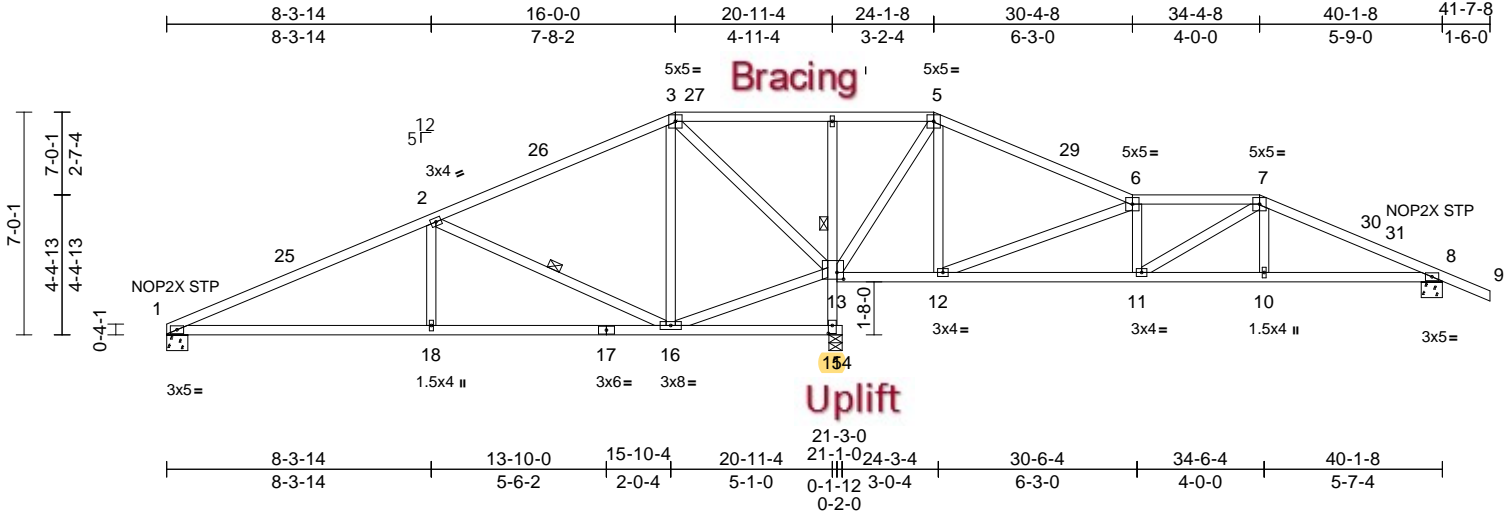


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090858
22-0558-A1	T-18	Roof Special	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Scale = 1:72.5

Plate Offsets (X, Y): [1:0-1-6,0-0-2], [13:0-2-8,0-2-8], [15:0-3-0,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.44	Vert(LL)	-0.10	18-21	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.44	Vert(CT)	-0.22	18-21	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.02	15	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.15	18-21	>999	240	Weight: 217 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 4-15, 2-16

#### REACTIONS

(size) 1=0-8-0, 8=0-8-0, 15=0-5-0  
Max Horiz 1=-194 (LC 10)  
Max Uplift 1=-256 (LC 12), 8=-332 (LC 12),  
15=-892 (LC 12)  
Max Grav 1=621 (LC 21), 8=588 (LC 22),  
15=1962 (LC 1)

#### FORCES

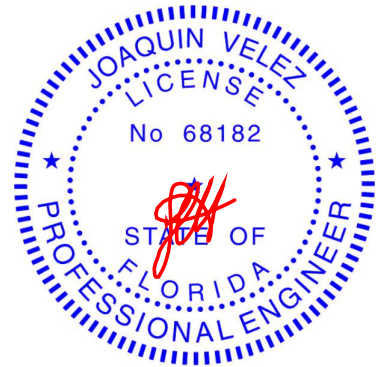
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1009/421, 2-3=-206/203, 3-4=-333/898,  
4-5=-340/906, 5-6=-140/470, 6-7=-623/361,  
7-8=-830/444, 8-9=0/31  
BOT CHORD 1-18=-330/890, 16-18=-330/890,  
15-16=-173/103, 14-15=0/0, 12-13=-393/407,  
11-12=-165/614, 10-11=-287/723,  
8-10=-287/730  
WEBS 13-15=-1925/1145, 4-13=-232/198,  
2-18=0/343, 2-16=-883/561, 3-16=-174/509,  
13-16=-101/242, 5-13=-1005/593,  
5-12=-158/465, 6-12=-915/598,  
7-11=-198/144, 7-10=0/190, 3-13=-1151/711,  
6-11=0/281

#### NOTES

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

- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) 0-0-0 to  
4-0-2, Interior (1) 4-0-2 to 16-0-0, Exterior(2R) 16-0-0 to  
20-0-2, Interior (1) 20-0-2 to 24-1-8, Exterior(2R) 24-1-8  
to 28-1-10, Interior (1) 28-1-10 to 34-4-8, Exterior(2R)  
34-4-8 to 38-4-10, Interior (1) 38-4-10 to 41-7-8 zone;  
cantilever left and right exposed; end vertical left and  
right exposed; C-C for members and forces & MWFRS  
for reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- Building Designer / Project engineer responsible for  
verifying applied roof live load shown covers rain loading  
requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 256 lb uplift at  
joint 1, 892 lb uplift at joint 15 and 332 lb uplift at joint 8.
- This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022

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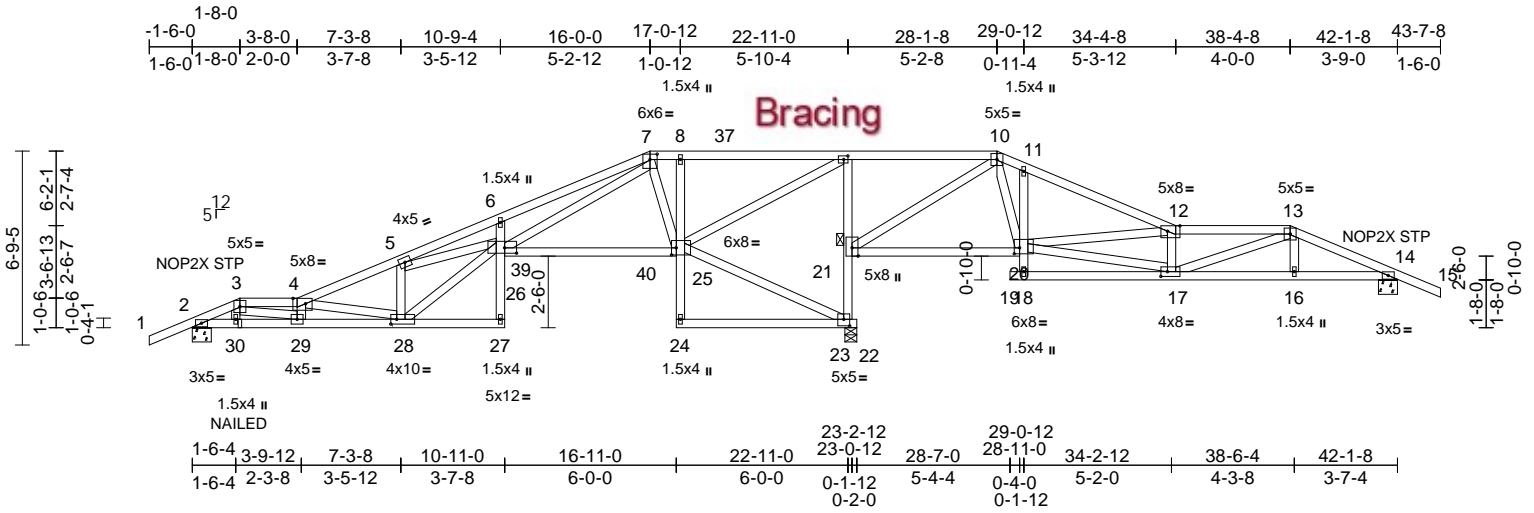
Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090859
22-0558-A1	T-19	Roof Special Girder	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:24

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Scale = 1:80.5

[4:0-5-4,0-2-4], [7:0-3-0,0-2-4], [9:0-1-12,0-1-8], [12:0-5-4,0-2-4], [17:0-2-12,0-2-0], [20:0-2-4,0-2-8], [23:0-2-8,0-2-12], [25:0-2-0,0-3-0], [26:0-5-0,0-2-4],

Plate Offsets (X, Y): [28:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.91	Vert(LL)	-0.32	26	>855	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.77	Vert(CT)	-0.69	25-26	>400	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.30	23	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS		Wind(LL)	0.46	26	>597	240	Weight: 256 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied or 5-10-11 oc bracing.

WEBS 1 Row at midpt 9-23

#### REACTIONS

(size) 2=0-8-0, 14=0-8-0, 23=0-5-0  
Max Horiz 2=182 (LC 7)  
Max Uplift 2=-454 (LC 8), 14=-457 (LC 30),  
23=-563 (LC 8)  
Max Grav 2=1032 (LC 13), 14=756 (LC 25),  
23=1784 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-2141/637, 3-4=-3469/1186,  
4-5=-2203/729, 5-6=-4378/1259,  
6-7=-4460/1362, 7-8=-1116/442,  
8-9=-1114/447, 9-10=0/296, 10-11=-946/685,  
11-12=-939/577, 12-13=-1858/998,  
13-14=-1382/672, 14-15=0/31  
BOT CHORD 2-30=-592/2087, 29-30=-595/2049,  
28-29=-1132/3474, 27-28=-14/57,  
25-26=-208/1256, 23-24=0/13, 22-23=0/0,  
20-21=-224/629, 18-19=0/0, 17-18=-33/89,  
16-17=-513/1238, 14-16=-510/1245

#### WEBS

26-27=0/47, 6-26=-195/246, 24-25=0/117,  
8-25=-186/213, 21-23=-1658/582,  
9-21=-1081/424, 18-20=0/124,  
11-20=-317/293, 3-30=-38/232,  
3-29=-673/1791, 4-29=-660/301,  
4-28=-1414/505, 5-28=-969/351,  
7-26=-986/3503, 7-25=-514/173,  
23-25=-159/52, 9-25=-247/1430,  
10-21=-949/358, 17-20=-856/1813,  
12-20=-1069/551, 12-17=-427/347,  
13-17=-376/670, 13-16=0/137,  
10-20=-444/858, 26-28=-724/2382,  
5-26=-437/2100

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=42ft; eave=5ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional); cantilever left and right exposed;  
end vertical left and right exposed; Lumber DOL=1.60  
plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 200.0lb AC unit load placed on the bottom chord, 13-11-0 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

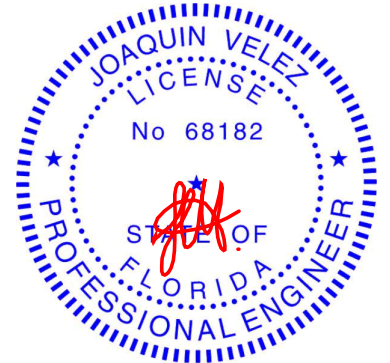
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 454 lb uplift at joint 2, 563 lb uplift at joint 23 and 457 lb uplift at joint 14.

11) "NAILED" indicates Girder: 3-10d (0.148" x 3") 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

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (lb/ft)  
Vert: 1-3=-54, 3-4=-54, 4-7=-54, 7-10=-54,  
10-12=-54, 12-13=-54, 13-15=-54, 27-31=-20,  
25-26=-20, 22-24=-20, 20-21=-20, 19-34=-20  
Concentrated Loads (lb)  
Vert: 30=15 (B), 39=-100, 40=-100



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
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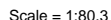
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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Chesterfield, MO 63017

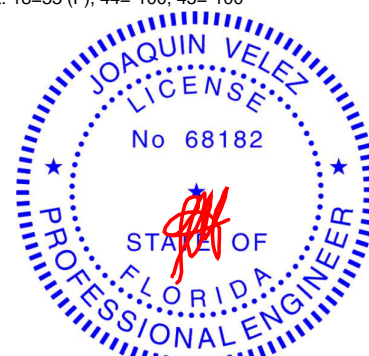
Arnold Truss Mfg. LLC, Ocala, FL - 34475, Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:25 Page: 1  
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[5:0-2-12.0-1-12], [6:0-2-0.0-2-0], [7:0-2-8.0-2-7], [9:0-2-8.0-2-0], [21:0-6-0.0-2-4], [24:0-2-8.0-2-8], [27:0-2-8.0-2-12], [29:0-5-8.0-4-0], [30:0-2-8.0-2-0]

Plate Offsets (X, Y): [31:0-9-8.0-4-12], [33:0-1-8.0-1-12]

<b>LUMBER</b>			WEBS	31-32=0/39, 6-31=-547/2528, 28-29=0/117, 8-29=-494/247, 25-27=-1643/597, 9-25=-1584/632, 22-24=0/83, 10-24=-200/209, 3-35=0/108, 3-34=-239/805, 4-34=-500/186, 6-30=-3486/939, 7-30=-77/591, 8-30=-77/536, 27-29=-190/62, 9-29=-322/1828, 9-24=-498/1248, 21-24=-354/890, 11-24=-93/50, 13-20=-326/241, 15-18=-72/125, 5-31=-652/3251, 5-33=-1505/420, 31-33=-715/2588, 4-33=-650/275, 12-21=-228/213, 13-21=-1720/865, 15-19=-652/1193, 14-19=-384/263, 14-20=-480/799, 11-21=-408/785
TOP CHORD	2x4 SP No.1			
BOT CHORD	2x4 SP No.1			
WEBS	2x4 SP No.2			
<b>BRACING</b>				
TOP CHORD	Structural wood sheathing directly applied or 2-3-0 oc purlins.			
BOT CHORD	Rigid ceiling directly applied or 5-1-12 oc bracing.			
WEBS	1 Row at midpt	9-27		
<b>REACTIONS</b>				
	(size)	2=0-8-0, 16=0-8-0, 27=0-5-0		
	Max Horiz	2=156 (LC 7)		
	Max Uplift	2=-431 (LC 30), 16=-464 (LC 8), 27=-584 (LC 8)		
	Max Grav	2=966 (LC 24), 16=803 (LC 14), 27=1788 (LC 1)		
<b>FORCES</b>				
	(lb) - Maximum Compression/Maximum Tension			
TOP CHORD	1-2=0/31, 2-3=-1891/597, 3-4=-2321/761, 4-5=-1970/619, 5-6=-5541/1397, 6-7=-2163/561, 7-8=-1960/548, 8-9=-1560/487, 9-10=-894/587, 10-11=-894/594, 11-12=-1564/904, 12-13=-1551/824, 13-14=-3023/1531, 14-15=-2383/1165, 15-16=-1530/642, 16-17=0/31			
BOT CHORD	2-35=-531/1713, 34-35=-534/1707, 33-34=-734/2367, 32-33=-16/66, 30-31=-1203/5268, 29-30=-261/1587, 27-28=-4/15, 26-27=0/0, 24-25=-313/103, 22-23=0/0, 21-22=-9/42, 20-21=-1480/3068, 19-20=-1073/2374, 18-19=-514/1390, 16-18=-505/1395			



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MH-7473 (REV. 3/19/2020) BEFORE USE.**

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090861
22-0558-A1	T-21	Roof Special Girder	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:27  
ID:QjLve?AkHoRtnj?W7\_I3IEyxqSr-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1

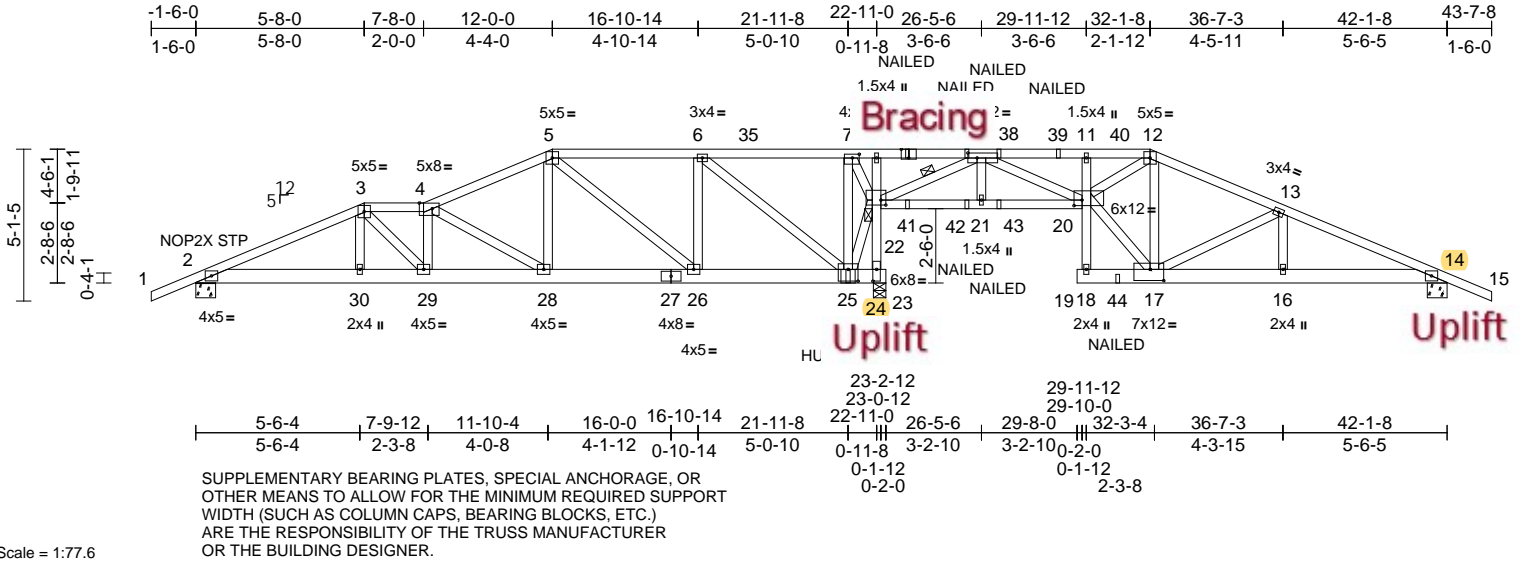


Plate Offsets (X, Y): [4:0-5-4,0-2-4], [7:0-2-12,0-1-8], [9:0-3-0,Edge], [10:0-3-12,0-2-0], [17:0-5-8,0-4-8], [20:0-3-4,0-2-4], [22:0-2-0,0-2-0], [24:0-4-12,0-1-8], [25:0-4-0,0-4-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.72	Vert(LL)	-0.15	20	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.48	Vert(CT)	-0.28	20	>838	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.06	14	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS		Wind(LL)	0.22	20	>999	240	Weight: 268 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1 \*Except\* 22-20:2x4 SP No.1  
WEBS 2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-10-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**WEBS** 1 Row at midpt 8-24, 10-22  
**REACTIONS** (size) 2=0-8-0, 14=0-8-0, 24=0-5-0, (req. 0-8-1)  
Max Horiz 2=152 (LC 7)  
Max Uplift 2=522 (LC 23), 14=798 (LC 8), 24=2610 (LC 8)  
Max Grav 2=815 (LC 17), 14=1358 (LC 18), 24=5139 (LC 1)

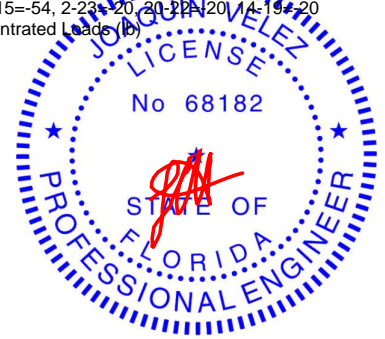
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-1468/828, 3-4=-1464/949, 4-5=-976/715, 5-6=-481/601, 6-7=-141/545, 7-8=-1152/2488, 8-10=-1204/2577, 10-11=-3915/2179, 11-12=-3882/2170, 12-13=-2452/1422, 13-14=-2882/1555, 14-15=0/31  
BOT CHORD 2-30=-626/1309, 29-30=-625/1297, 28-29=-754/1452, 26-28=-420/847, 25-26=-321/481, 24-25=-339/173, 23-24=0/0, 21-22=-622/1273, 20-21=-622/1273, 18-19=0/0, 17-18=-22/45, 16-17=-1307/2632, 14-16=-1307/2632

**WEBS** 22-24=-4889/2459, 8-22=-311/203, 18-20=-91/202, 11-20=-188/178, 3-30=-14/224, 3-29=-211/246, 4-29=-186/228, 4-28=-675/376, 5-28=-148/426, 12-17=-498/234, 13-17=-489/295, 13-16=0/209, 7-25=-1547/2954, 22-25=-551/469, 5-26=-507/209, 6-26=-111/504, 6-25=-1237/557, 10-20=-1530/2983, 10-21=-16/274, 10-22=-4212/2261, 7-22=-3603/1962, 17-20=-1487/3078, 12-20=-1032/2061

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=42ft; eave=5ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - WARNING: Required bearing size at joint(s) 24 greater than input bearing size.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2610 lb uplift at joint 24, 798 lb uplift at joint 14 and 522 lb uplift at joint 2.

- Use MiTek HUS26 (With 14-16d nails into Girder & 6-16d nails into Truss) or equivalent at 21-11-8 from the left end to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1180 lb down and 642 lb up at 32-1-8 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 + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (lb/ft)  
Vert: 1-3=-54, 3-4=-54, 4-5=-54, 5-12=-54, 12-15=-54, 2-23=-20, 20-22=20, 14-19=20  
Concentrated Loads (lb)



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

Continued on page 2

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

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

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090861
22-0558-A1	T-21	Roof Special Girder	1	1	Job Reference (optional)	

Vert: 9=-69 (F), 17=-1180 (F), 25=-1993 (F), 37=-69 (F), 38=-69 (F), 39=-84 (F), 41=-61 (F), 42=-61 (F), 43=-61 (F), 44=-356 (F)

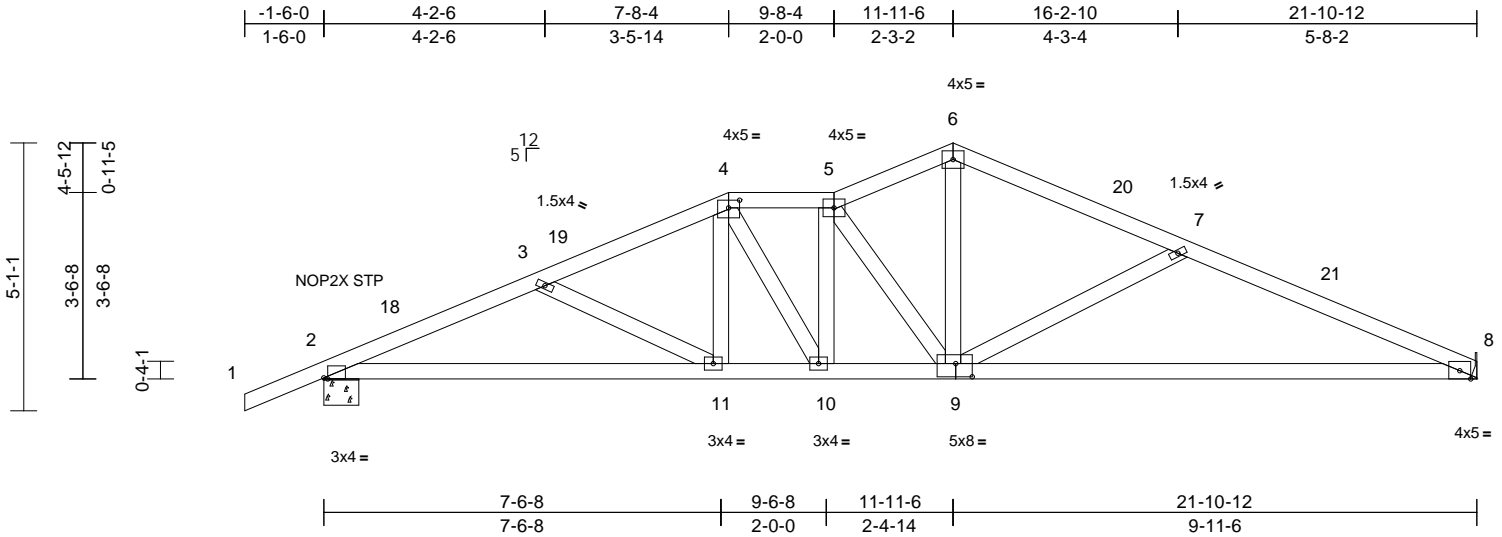


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090862
22-0558-A1	T-22	Roof Special	1	1	Job Reference (optional)	

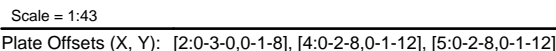
Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Arnold Truss Mfg. LLC, Ocala, FL - 34475, Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:28 Page: 1  
ID:QOAmPmM9iqWVfiuK KploSvv6UK-RfC?PsB70Hg3NSqPqnL8w3ulTXbGKWkRCDoi7J4zJC?f



**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2

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

**REACTIONS** (size) 2=0-8-0, 7= Mechanical  
Max Horiz 2=116 (LC 11)  
Max Uplift 2=490 (LC 12), 7=370 (LC 12)  
Max Grav 2=894 (LC 1), 7=807 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-1603/966, 3-4=-1260/735, 4-5=-1100/736, 5-6=-1263/737, 6-7=-1619/962  
BOT CHORD 2-10=-830/1463, 8-10=-479/1102, 7-8=-821/1482  
WEBS 3-10=-391/366, 4-10=-93/319, 5-10=-123/120, 5-8=-98/323, 6-8=-409/379

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 370 lb uplift at joint 7 and 490 lb uplift at joint 2.
- 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

## NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
 Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 1-6-0 to 1-6-0, Interior (1) 1-6-0 to 9-8-4, Exterior(2E) 9-8-4 to 12-2-8, Exterior(2R) 12-2-8 to 16-5-7, Interior (1) 16-5-7 to 21-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.

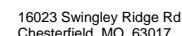


October 31, 2022

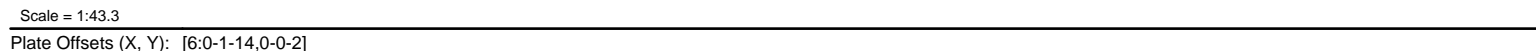


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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Arnold Truss Mfg. LLC, Ocala, FL - 34475, Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:29 Page: 1  
ID: yN16Va8YxiztQivKxPt6hUyv6V8-RfC?PsB70Hq3NSaPanL8w3ulTXbGKWRCDoi7J4zJC?f



**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2

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

**REACTIONS** (size) 2=0-8-0, 6=0-8-0  
Max Horiz 2=128 (LC 11)  
Max Uplift 2=-490 (LC 12), 6=-370 (LC 12)  
Max Grav 2=-894 (LC 1), 6=807 (LC 1)

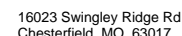
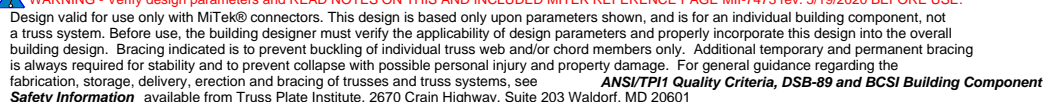
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-1597/1016, 3-4=-1427/943,  
4-5=-1439/961, 5-6=-1611/1033  
BOT CHORD 2-9=-861/1446, 7-9=-486/969, 6-7=-864/1462  
WEBS 4-7=-280/521, 5-7=-326/371, 4-9=-261/504,  
3-9=-316/363

LOAD CASE(S) Standard

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
 Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
 MWFRS (directional) and C-C Exterior(2E) -1-6-0 to  
 1-6-0, Interior (1) 1-6-0 to 10-11-6, Exterior(2R) 10-11-6  
 to 13-11-6, Interior (1) 13-11-6 to 21-10-12 zone;  
 cantilever left and right exposed ; end vertical left and  
 right exposed; C-C for members and forces & MWFRS  
 for reactions shown; Lumber DOL=1.60 plate grip  
 DOL=1.60
- 3) Building Designer / Project engineer responsible for  
 verifying applied roof live load shown covers rain loading  
 requirements specific to the use of this truss component.
- 4) All plates are MT20 plates unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.



October 31, 2022

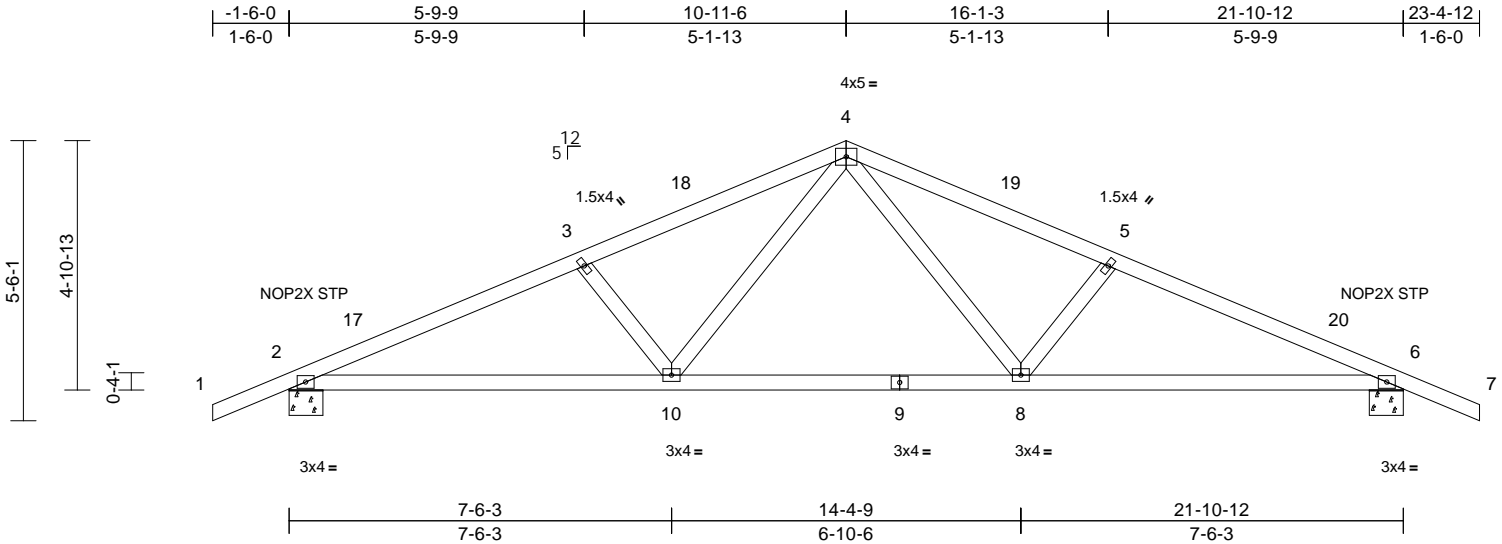


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090865
22-0558-A1	T-25	Common	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:29  
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Page: 1



Scale = 1:45.3											
Plate Offsets (X, Y): [2:0-1-14,0-0-2]											
<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.26	Vert(LL)	-0.07	10-13	>999	360	<b>GRIP</b>
TCDL	7.0	Lumber DOL	1.25	BC	0.39	Vert(CT)	-0.15	10-13	>999	240	MT20
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.04	6	n/a	n/a	
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.08	10	>999	240	Weight: 98 lb FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2

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

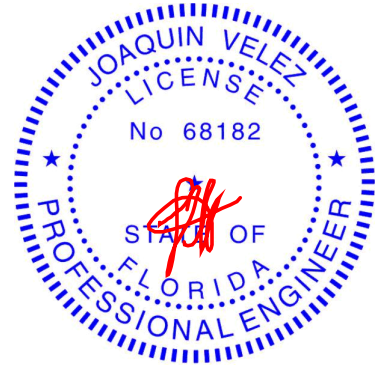
**REACTIONS** (size) 2=0-8-0, 6=0-8-0  
Max Horiz 2=126 (LC 11)  
Max Uplift 2=-485 (LC 12), 6=-485 (LC 12)  
Max Grav 2=891 (LC 1), 6=891 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-1590/998, 3-4=-1420/925,  
4-5=-1420/925, 5-6=-1590/998, 6-7=0/31  
BOT CHORD 2-10=-777/1440, 8-10=-426/963,  
6-8=-802/1440  
WEBS 4-8=-265/505, 5-8=-316/362, 4-10=-265/505,  
3-10=-316/362

- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 485 lb uplift at joint 2 and 485 lb uplift at joint 6.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 10-11-6, Exterior(2R) 10-11-6 to 13-11-6, Interior (1) 13-11-6 to 23-4-12 zone;  
cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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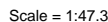
**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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



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Chesterfield, MO 63017



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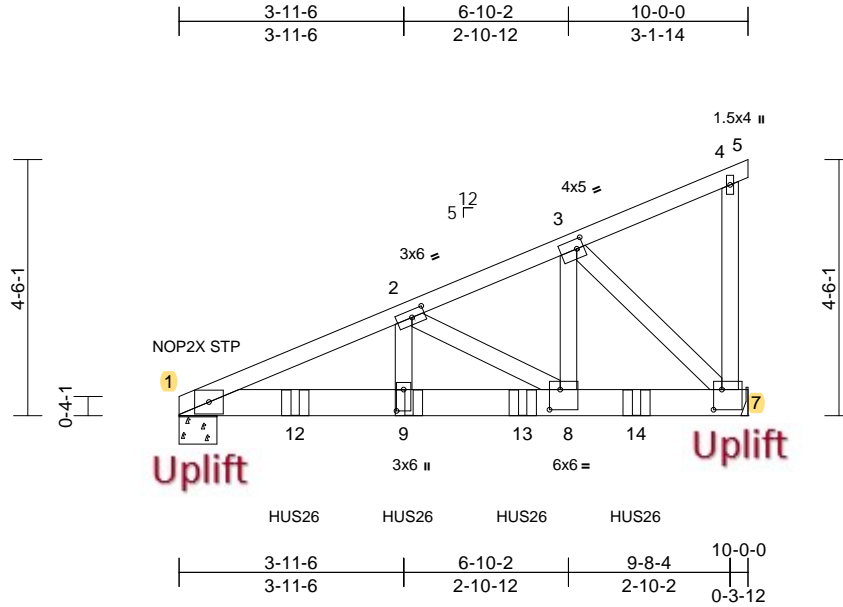
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090867
22-0558-A1	T-27	Jack-Closed Girder	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:30  
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Page: 1



Scale = 1:40.5

Plate Offsets (X, Y): [1:0-3-5,0-0-2], [2:0-2-12,0-1-8], [3:0-1-8,0-2-0], [7:0-1-12,0-4-4], [8:0-2-4,0-4-4], [9:0-4-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.53	Vert(LL)	-0.07	9-11	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	1.00	Vert(CT)	-0.12	9-11	>956	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS		Wind(LL)	0.09	9-11	>999	240	Weight: 60 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-7-13 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 5-9-1 oc bracing.

#### REACTIONS

(size) 1=0-8-0, 7= Mechanical  
Max Horiz 1=274 (LC 5)  
Max Uplift 1=-887 (LC 8), 7=-990 (LC 8)  
Max Grav 1=1876 (LC 1), 7=2013 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-3761/1763, 2-3=-1852/895,  
3-4=-123/68, 4-5=-6/0, 4-7=-85/82  
BOT CHORD 1-9=-1637/3424, 8-9=-1637/3424,  
7-8=-830/1683, 6-7=0/0  
WEBS 3-7=-2339/1175, 2-9=-657/1479,  
2-8=-1987/1001, 3-8=-1022/2176

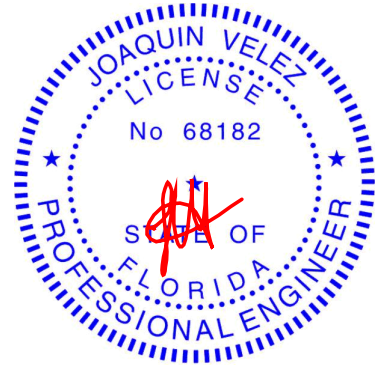
#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional); cantilever left and right exposed ;  
end vertical left and right exposed; Lumber DOL=1.60  
plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for  
verifying applied roof live load shown covers rain loading  
requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.

- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 887 lb uplift at  
joint 1 and 990 lb uplift at joint 7.
- 8) Use MiTek HUS26 (With 14-16d nails into Girder &  
4-16d nails into Truss) or equivalent spaced at 2-0-0 oc  
max. starting at 2-0-8 from the left end to 8-0-8 to  
connect truss(es) to back face of bottom chord.
- 9) Fill all nail holes where hanger is in contact with lumber.
- 10) 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 + Roof Live (balanced): Lumber Increase=1.25,  
Plate Increase=1.25  
Uniform Loads (lb/ft)  
Vert: 1-4=-54, 4-5=-54, 1-6=-20  
Concentrated Loads (lb)  
Vert: 9=-787 (B), 12=-787 (B), 13=-787 (B), 14=-787  
(B)



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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



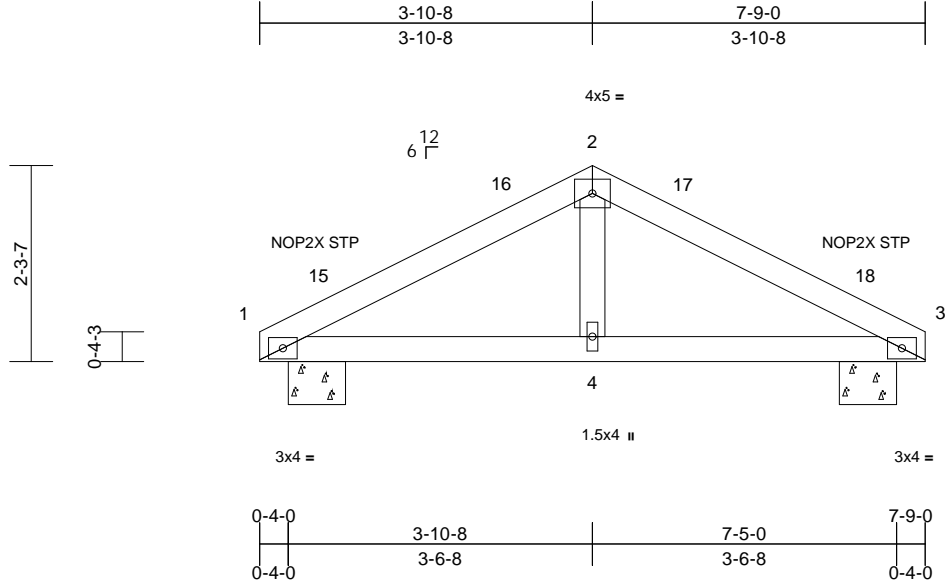
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090868
22-0558-A1	T-28	Common	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:31  
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Page: 1



Scale = 1:26.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.23	Vert(LL)	0.00	4-9	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.16	Vert(CT)	-0.01	4-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.01	4-9	>999	240	Weight: 27 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 1=0-8-0, 3=0-8-0  
Max Horiz 1=61 (LC 11)  
Max Uplift 1=-132 (LC 12), 3=-132 (LC 12)  
Max Grav 1=287 (LC 1), 3=287 (LC 1)

#### FORCES

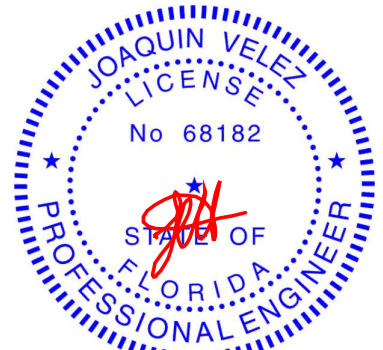
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-325/410, 2-3=-325/410  
BOT CHORD 1-4=-246/250, 3-4=-231/250  
WEBS 2-4=-48/147

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-10-8, Exterior(2R) 3-10-8 to 6-10-8, Interior (1) 6-10-8 to 7-9-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 4) All plates are MT20 plates unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 132 lb uplift at joint 1 and 132 lb uplift at joint 3.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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



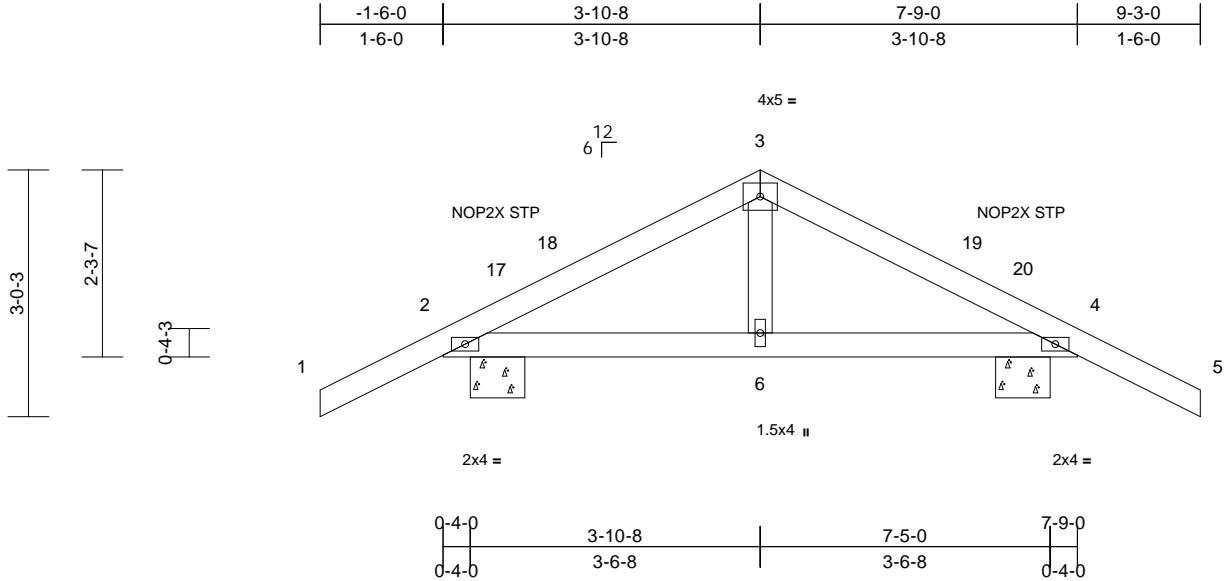
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090869
22-0558-A1	T-29	Common	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Scale = 1:28.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.21	Vert(LL)	0.00	6-16	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.17	Vert(CT)	-0.01	6-16	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.01	6-11	>999	240	Weight: 32 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-8-0, 4=0-8-0  
Max Horiz 2=-84 (LC 10)  
Max Uplift 2=-243 (LC 12), 4=-243 (LC 12)  
Max Grav 2=368 (LC 1), 4=368 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

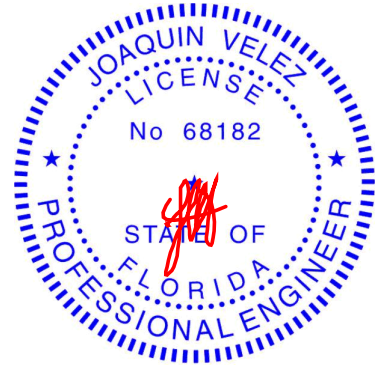
TOP CHORD 1-2=0/36, 2-3=-503/274, 3-4=-503/274, 4-5=0/36  
BOT CHORD 2-6=-237/700, 4-6=-236/700  
WEBS 3-6=0/137

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 3-10-8, Exterior(2R) 3-10-8 to 6-10-8, Interior (1) 6-10-8 to 9-3-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 4) All plates are MT20 plates unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 243 lb uplift at joint 2 and 243 lb uplift at joint 4.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022

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

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

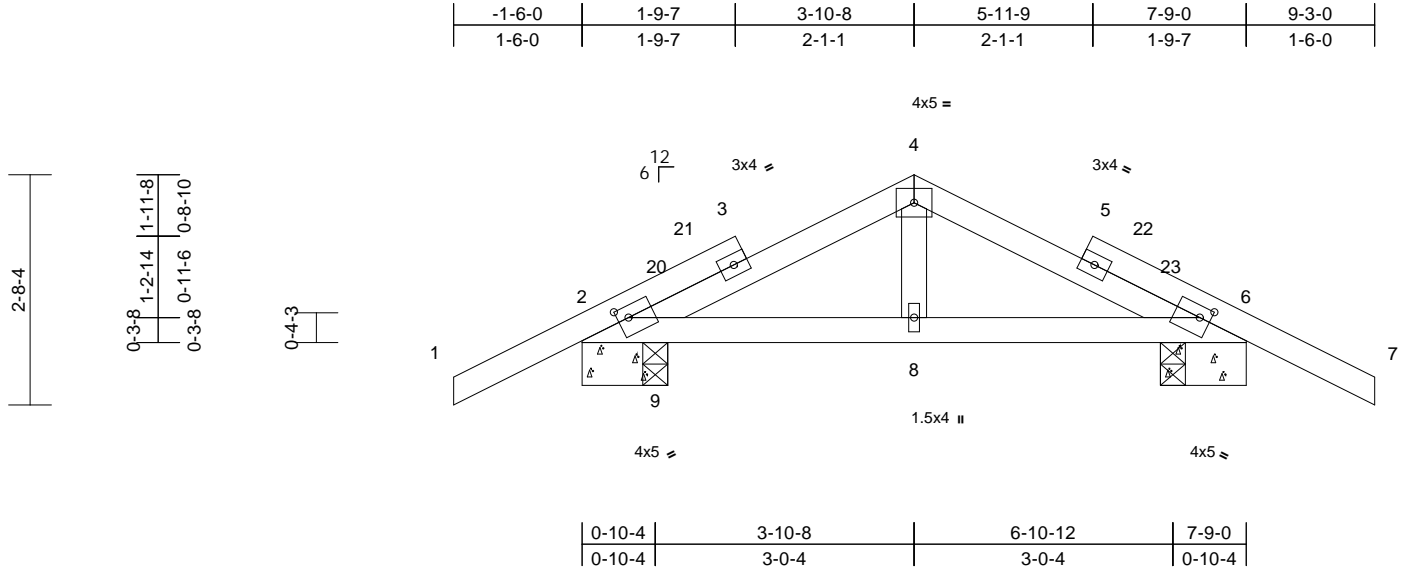


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090870
22-0558-A1	T-30	Common Structural Gable	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Scale = 1:26.9

Plate Offsets (X, Y): [2:0-1-8,0-1-9], [6:0-1-8,0-1-9]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.21	Vert(LL)	0.00	8-19	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.22	Vert(CT)	-0.01	8-19	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.01	8-19	>999	240	Weight: 36 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=1-0-0, 6=1-0-0, 9=0-3-8  
Max Horiz 2=74 (LC 10)  
Max Uplift 2=310 (LC 12), 6=247 (LC 12),  
9=49 (LC 9)  
Max Grav 2=291 (LC 1), 6=364 (LC 1), 9=129  
(LC 17)

#### FORCES

(lb) - Maximum Compression/Maximum  
Tension

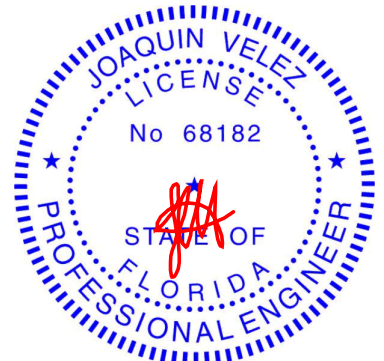
TOP CHORD 1-2=0/36, 2-4=290/266, 4-6=277/232,  
6-7=0/36  
BOT CHORD 2-9=238/220, 8-9=21/238, 6-8=21/256  
WEBS 4-8=0/130

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to  
1-6-0, Interior (1) 1-6-0 to 3-10-8, Exterior(2R) 3-10-8 to  
6-10-8, Interior (1) 6-10-8 to 9-3-0 zone; cantilever left  
and right exposed; end vertical left and right  
exposed; C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- Building Designer / Project engineer responsible for  
verifying applied roof live load shown covers rain loading  
requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3'-06'-00" tall by 2'-00'-00" wide will fit between the bottom  
chord and any other members.
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 310 lb uplift at  
joint 2, 247 lb uplift at joint 6 and 49 lb uplift at joint 9.
- This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022

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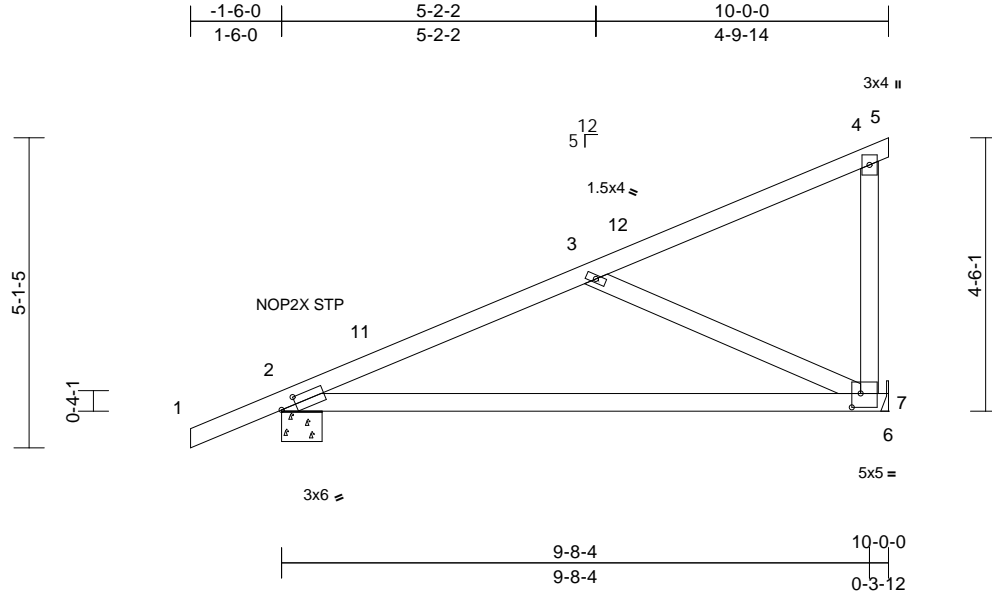
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090871
22-0558-A1	J10	Jack-Closed	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Scale = 1:38

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.56	Vert(LL)	-0.18	7-10	>664	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.62	Vert(CT)	-0.36	7-10	>327	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	-0.01	7	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	-0.05	7-10	>999	240	Weight: 47 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 2=0-8-0, 7= Mechanical  
Max Horiz 2=294 (LC 9)  
Max Uplift 2=-272 (LC 12), 7=-190 (LC 12)  
Max Grav 2=445 (LC 1), 7=376 (LC 1)

#### FORCES

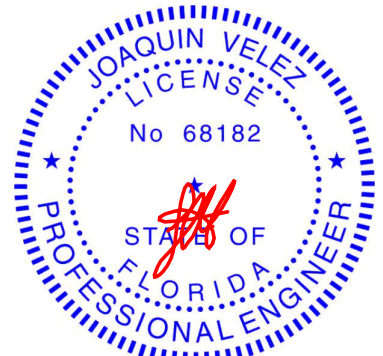
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-493/350, 3-4=-193/102, 4-5=-6/0, 4-7=-141/284  
BOT CHORD 2-7=-589/544, 6-7=0/0  
WEBS 3-7=-450/546

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 10-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 272 lb uplift at joint 2 and 190 lb uplift at joint 7.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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



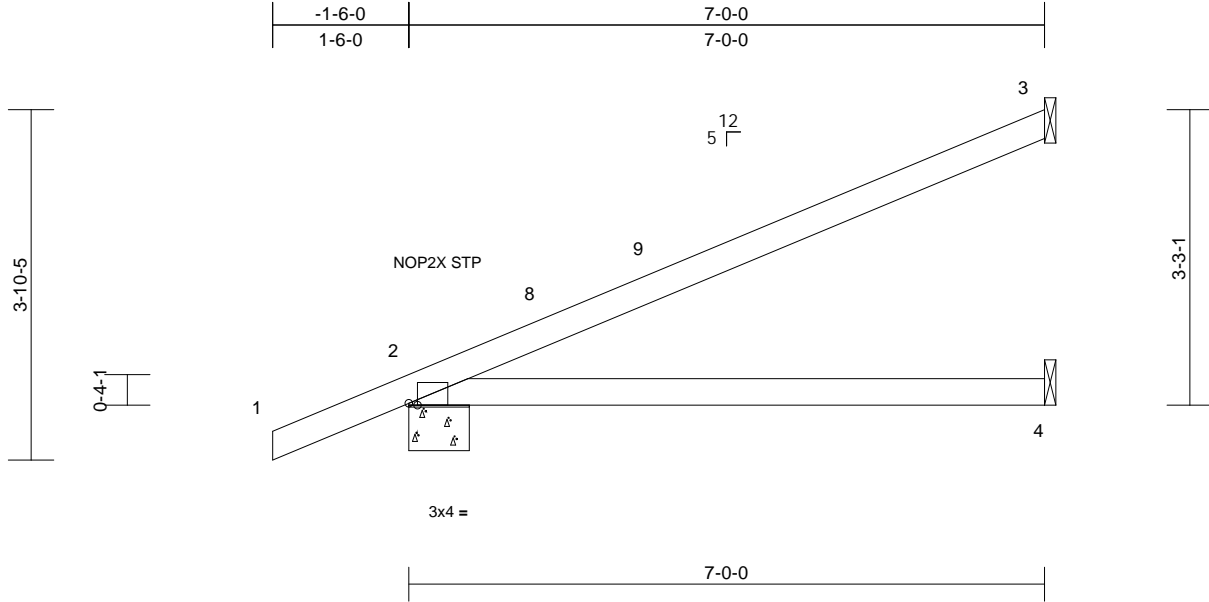
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090872
22-0558-A1	J7	Jack-Open	9	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:09  
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Page: 1



Scale = 1:25.4

Plate Offsets (X, Y): [2:0-1-2,Edge]												
<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.86	Vert(LL)	-0.08	4-7	>992	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.67	Vert(CT)	-0.19	4-7	>428	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.18	4-7	>472	240	Weight: 24 lb	FT = 20%

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

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

**REACTIONS** (size) 2=0-8-0, 3= Mechanical, 4= Mechanical  
Max Horiz 2=209 (LC 12)  
Max Uplift 2=-210 (LC 12), 3=-151 (LC 12)  
Max Grav 2=346 (LC 1), 3=168 (LC 1), 4=121 (LC 3)

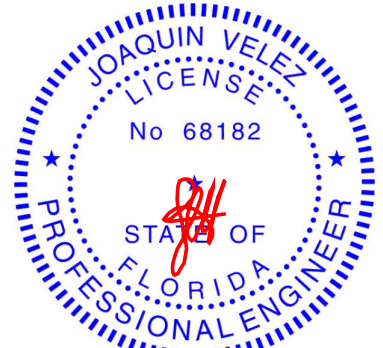
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-189/77  
BOT CHORD 2-4=-86/188

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joint 3 and 210 lb uplift at joint 2.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 6-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022

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

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



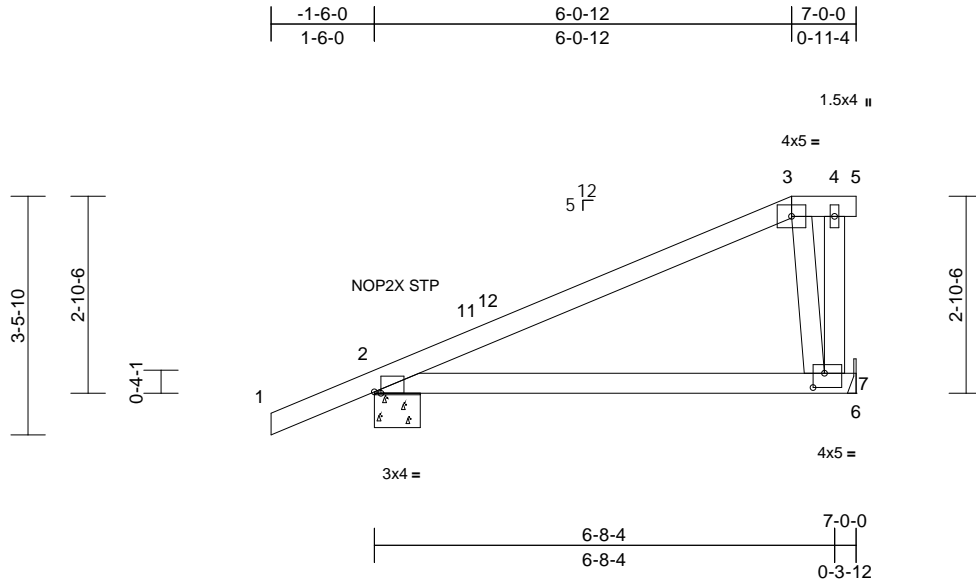
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090873
22-0558-A1	J7A	Half Hip	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:09  
ID: uvelkpVXldwDug3esLQ66Kyy8ns-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWwCDoi7J4zJC?f

Page: 1



Scale = 1:33.5											
Plate Offsets (X, Y): [2:0-1-2,Edge], [7:0-2-0,0-2-8]											
<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.60	Vert(LL)	-0.07	7-10	>999	360	<b>GRIP</b>
TCDL	7.0	Lumber DOL	1.25	BC	0.52	Vert(CT)	-0.16	7-10	>508	240	MT20
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a	244/190
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.13	7-10	>640	240	Weight: 31 lb FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2

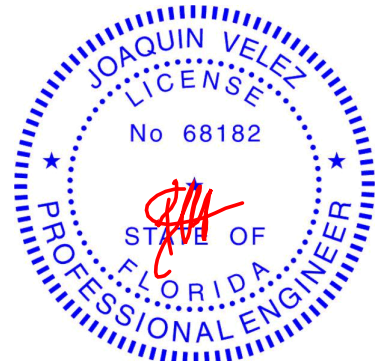
**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 2=0-8-0, 7= Mechanical  
Max Horiz 2=187 (LC 11)  
Max Uplift 2=-234 (LC 12), 7=-133 (LC 9)  
Max Grav 2=337 (LC 21), 7=262 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-173/81, 3-4=-82/89, 4-5=0/0, 4-7=-38/82  
BOT CHORD 2-7=-132/134, 6-7=0/0  
WEBS 3-7=-211/323

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 6-0-12, Exterior(2E) 6-0-12 to 7-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
  - 4) Provide adequate drainage to prevent water ponding.
  - 5) All plates are MT20 plates unless otherwise indicated.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 133 lb uplift at joint 7 and 234 lb uplift at joint 2.
  - 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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**MiTek**  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

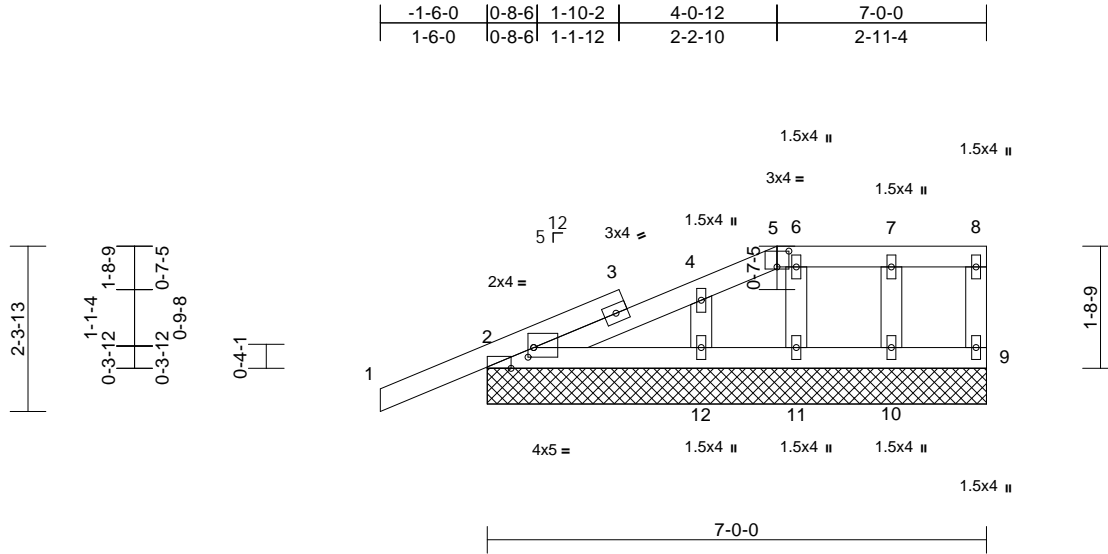


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090874
22-0558-A1	J7B	Half Hip Supported Gable	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:10  
ID:JZR8e5M3aRt8va?IWlBmVlyy8ml-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:32.3

Plate Offsets (X, Y): [2:0-0-15,0-1-10], [2:0-3-13,Edge], [5:0-2-0,0-2-11]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.36	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.07	Vert(CT)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	9	n/a	n/a	
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							
										Weight: 32 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

#### REACTIONS

(size)	2=7-0-0, 9=7-0-0, 10=7-0-0, 11=7-0-0, 12=7-0-0, 13=7-0-0
Max Horiz	2=111 (LC 11), 13=111 (LC 11)
Max Uplift	2=-188 (LC 12), 9=-24 (LC 9), 10=-74 (LC 8), 11=-61 (LC 9), 12=-51 (LC 12), 13=-188 (LC 12)
Max Grav	2=200 (LC 1), 9=33 (LC 1), 10=113 (LC 22), 11=68 (LC 1), 12=176 (LC 1), 13=200 (LC 1)

#### FORCES

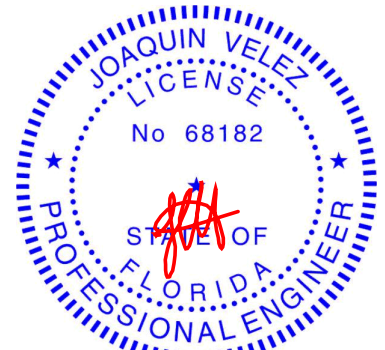
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/31, 2-4=-155/98, 4-5=-55/54, 5-6=-45/59, 6-7=-45/59, 7-8=-45/59, 8-9=-27/68
BOT CHORD	2-12=-45/95, 11-12=-45/59, 10-11=-45/59, 9-10=-45/59
WEBS	7-10=-93/212, 6-11=-89/196, 4-12=-164/248

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner(3E) -1-6-0 to 1-4-14, Exterior(2N) 1-4-14 to 4-0-12, Corner(3E) 4-0-12 to 6-10-4 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

- 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.
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 2, 24 lb uplift at joint 9, 74 lb uplift at joint 10, 61 lb uplift at joint 11, 51 lb uplift at joint 12 and 188 lb uplift at joint 2.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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



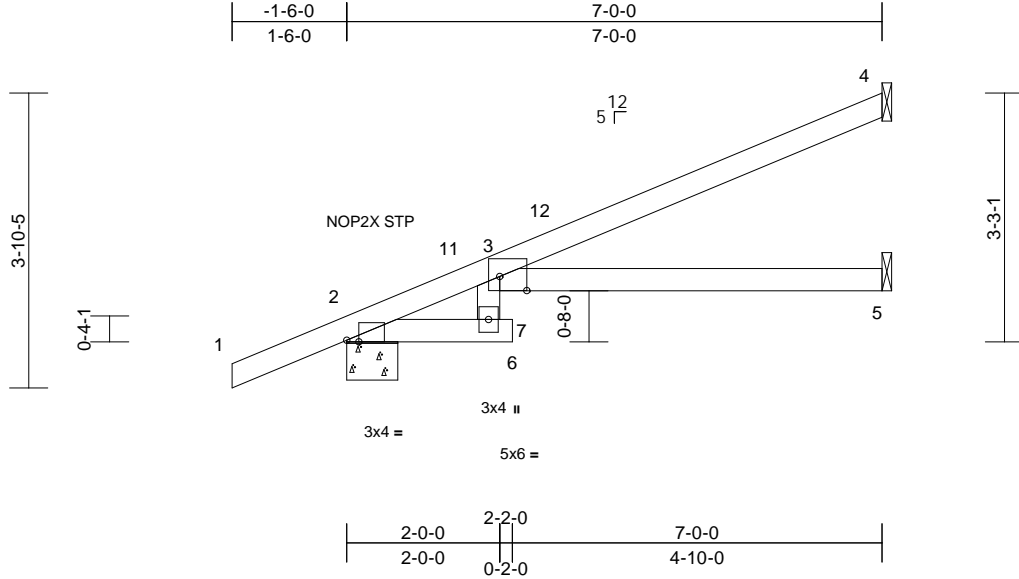
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090875
22-0558-A1	J7T	Jack-Open	7	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:10  
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Page: 1



Scale = 1:30.1

Plate Offsets (X, Y): [2:0-1-14,Edge], [3:0-4-4,0-2-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.68	Vert(LL)	-0.11	3-5	>729	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.75	Vert(CT)	-0.23	3-5	>360	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.09	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.25	3-5	>335	240	Weight: 25 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-8-0, 4= Mechanical, 5= Mechanical  
Max Horiz 2=209 (LC 12)  
Max Uplift 2=-207 (LC 12), 4=-134 (LC 12), 5=-3 (LC 12)  
Max Grav 2=351 (LC 1), 4=160 (LC 1), 5=117 (LC 3)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

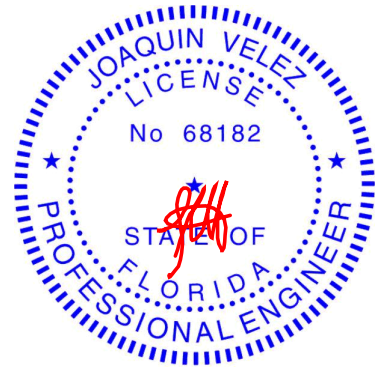
TOP CHORD 1-2=0/31, 2-3=-205/0, 3-4=-134/74  
BOT CHORD 2-7=-97/211, 6-7=0/0, 3-7=-174/274, 3-5=-3/3

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 6-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 4, 207 lb uplift at joint 2 and 3 lb uplift at joint 5.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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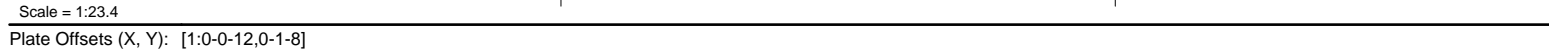
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Arnold Truss Mfg. LLC, Ocala, FL - 34475, Run: 8.62 E Aug 31 2022 Print: 8.620 E Aug 31 2022 MiTek Industries, Inc. Mon Oct 31 08:44:08 Page: 1  
ID:6DIs1bJqGtR6WC68mUxkayy6Qh-WEKa0PpKxd7x?9qIKPfiJv\_BT32lQQT97uFMudyNypb



- 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 1.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 1 and 132 lb uplift at joint 2.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

October 31, 2022

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

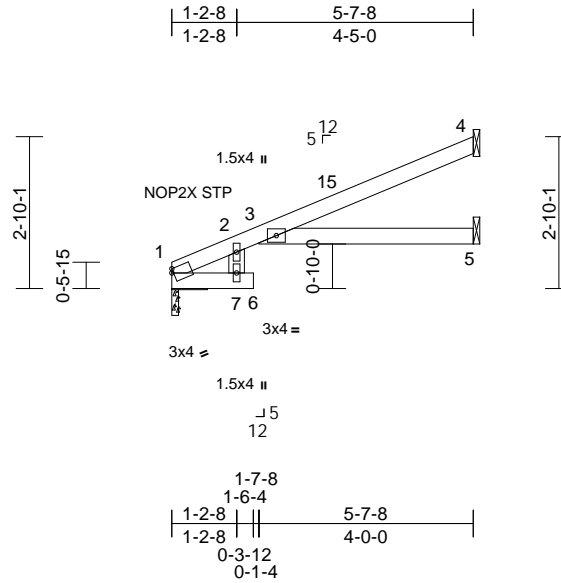
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Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090877
22-0558-A1	J5-7T	Jack-Open	3	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 E Aug 31 2022 Print: 8.620 E Aug 31 2022 MiTek Industries, Inc. Mon Oct 31 08:44:29  
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Page: 1



Scale = 1:43

Plate Offsets (X, Y): [1:Edge,0-0-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.57	Vert(LL)	-0.05	5-14	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.58	Vert(CT)	-0.10	5-14	>662	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	-0.07	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.14	5-14	>485	240	Weight: 18 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(lb/size) 1=203/0-1-8, 4=123/ Mechanical,  
5=80/ Mechanical  
Max Horiz 1=125 (LC 12)  
Max Uplift 1=63 (LC 12), 4=105 (LC 12),  
5=20 (LC 12)  
Max Grav 1=203 (LC 1), 4=123 (LC 1), 5=90  
(LC 3)

#### FORCES

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

TOP CHORD 3-15=-375/449

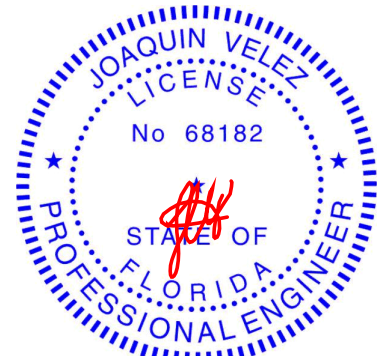
BOT CHORD 3-5=-587/432

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) 1-2-15 to  
4-2-15, Interior (1) 4-2-15 to 6-8-15 zone; cantilever left  
and right exposed; end vertical left and right  
exposed; C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- 2) Building Designer / Project engineer responsible for  
verifying applied roof live load shown covers rain loading  
requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.

- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to  
bearing plate at joint(s) 1.
- 8) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 63 lb uplift at joint  
1, 105 lb uplift at joint 4 and 20 lb uplift at joint 5.
- 9) This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

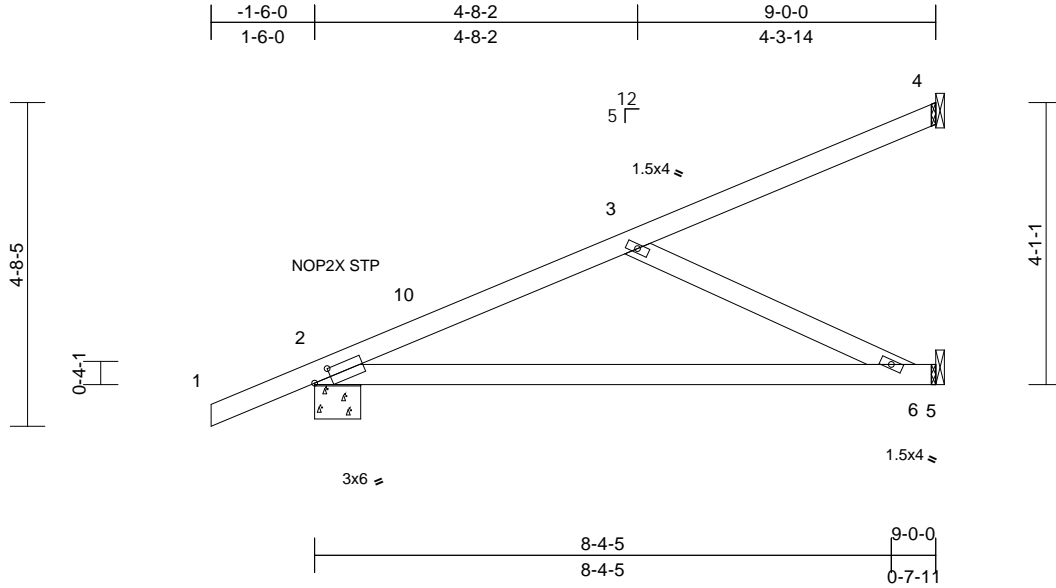


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090878
22-0558-A1	CJ9	Jack-Partial	2	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:07  
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Page: 1



Scale = 1:33.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.62	Vert(LL)	-0.19	6-9	>559	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.73	Vert(CT)	-0.39	6-9	>272	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horz(CT)	-0.01	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.05	6-9	>999	240	Weight: 37 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-8-0, 4= Mechanical, 5= Mechanical  
Max Horiz 2=255 (LC 12)  
Max Uplift 2=-231 (LC 12), 4=-104 (LC 12), 5=-81 (LC 12)  
Max Grav 2=418 (LC 1), 4=88 (LC 1), 5=236 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

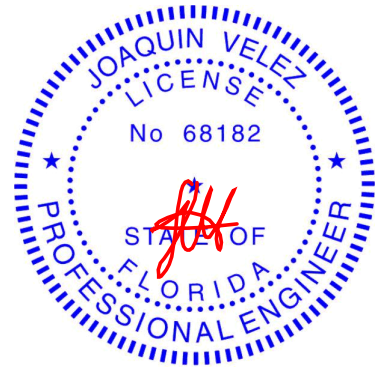
TOP CHORD 1-2=0/31, 2-3=-413/304, 3-4=-94/35  
BOT CHORD 2-6=-533/440, 5-6=0/0  
WEBS 3-6=-484/586

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 8-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 104 lb uplift at joint 4, 231 lb uplift at joint 2 and 81 lb uplift at joint 5.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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



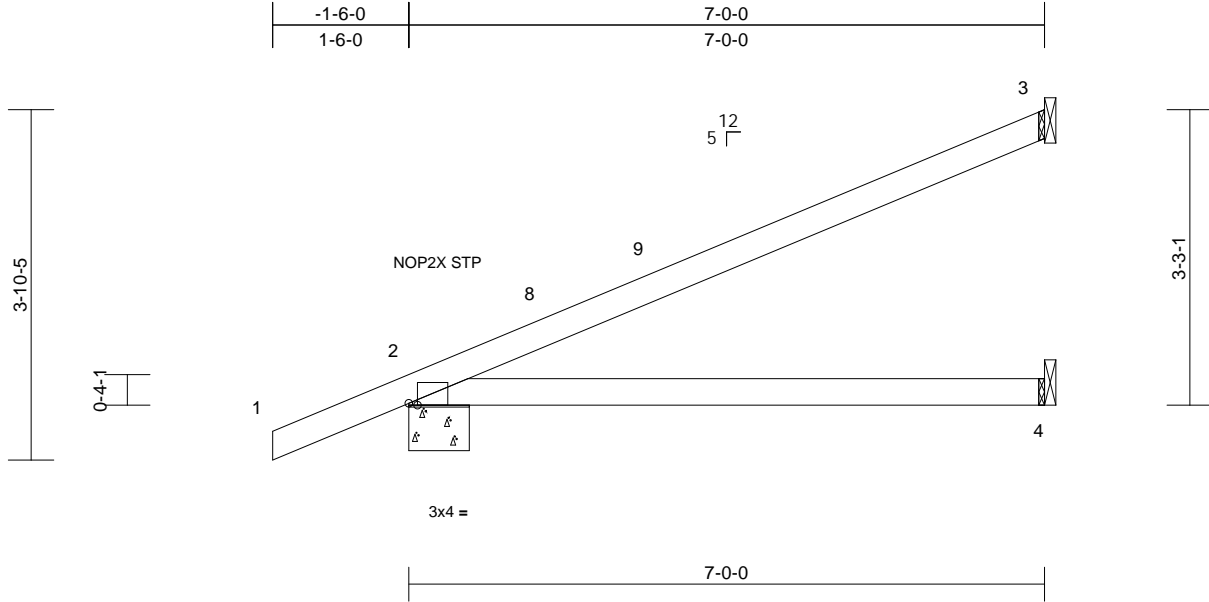
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090879
22-0558-A1	CJ7	Corner Jack	2	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:06  
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Page: 1



Scale = 1:25.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.86	Vert(LL)	-0.08	4-7	>992	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.67	Vert(CT)	-0.19	4-7	>428	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.18	4-7	>472	240	Weight: 24 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-8-0, 3= Mechanical, 4= Mechanical  
Max Horiz 2=209 (LC 12)  
Max Uplift 2=-210 (LC 12), 3=-151 (LC 12)  
Max Grav 2=346 (LC 1), 3=168 (LC 1), 4=121 (LC 3)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

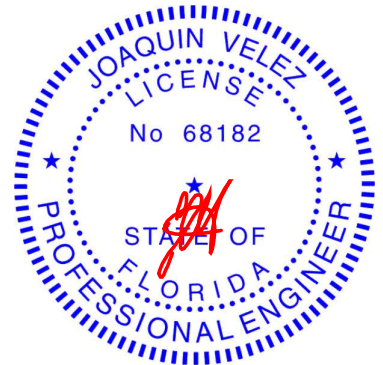
TOP CHORD 1-2=0/31, 2-3=-189/77  
BOT CHORD 2-4=-86/188

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 6-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joint 3 and 210 lb uplift at joint 2.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31, 2022

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

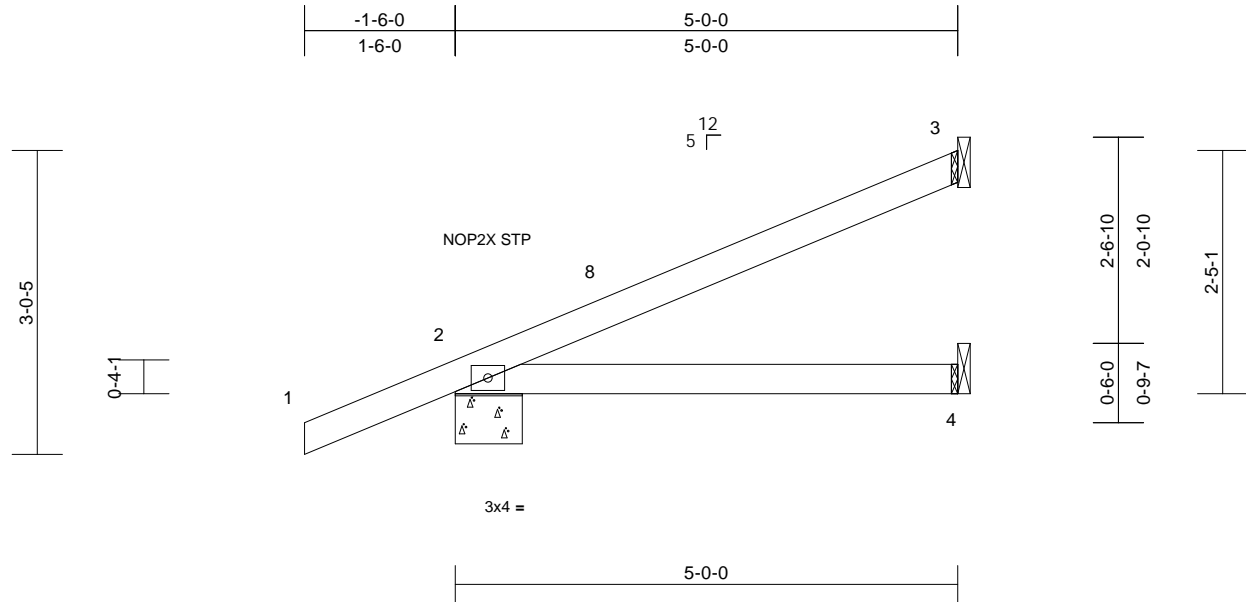
Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090880
22-0558-A1	CJ5	Corner Jack	4	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:06

Page: 1

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Scale = 1:22.9

Plate Offsets (X, Y): [2:0-1-14,0-0-2]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.44	Vert(LL)	-0.02	4-7	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.38	Vert(CT)	-0.05	4-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.06	4-7	>999	240	Weight: 18 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied.

BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 2=0-8-0, 3= Mechanical, 4= Mechanical

Max Horiz 2=164 (LC 12)

Max Uplift 2=-191 (LC 12), 3=-100 (LC 12)

Max Grav 2=276 (LC 1), 3=114 (LC 1), 4=86 (LC 3)

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

TOP CHORD 1-2=0/31, 2-3=-175/59

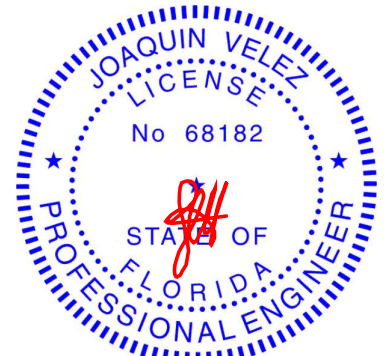
BOT CHORD 2-4=-51/155

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 4-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint 3 and 191 lb uplift at joint 2.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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



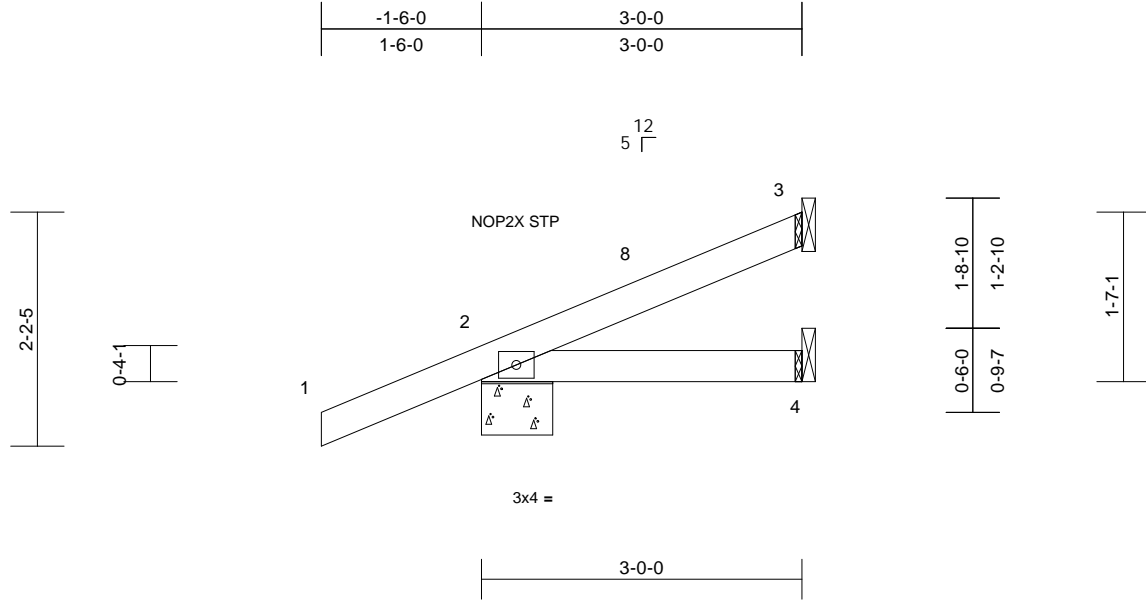
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090881
22-0558-A1	CJ3	Corner Jack	4	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:06  
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Page: 1



Scale = 1:21.6

Plate Offsets (X, Y): [2:0-1-14,0-0-2]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.27	Vert(LL)	0.00	4-7	>999	360	MT20
TCDL	7.0	Lumber DOL	1.25	BC	0.11	Vert(CT)	-0.01	4-7	>999	240	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a	
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP		Wind(LL)	-0.01	4-7	>999	240	Weight: 12 lb FT = 20%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 2=0-8-0, 3= Mechanical, 4= Mechanical  
Max Horiz 2=118 (LC 12)  
Max Uplift 2=-180 (LC 12), 3=-46 (LC 12)  
Max Grav 2=210 (LC 1), 3=59 (LC 1), 4=49 (LC 3)

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

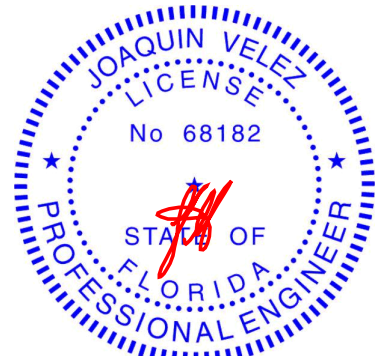
TOP CHORD 1-2=0/31, 2-3=-162/36  
BOT CHORD 2-4=-26/114

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 2-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 3 and 180 lb uplift at joint 2.

**LOAD CASE(S)** Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

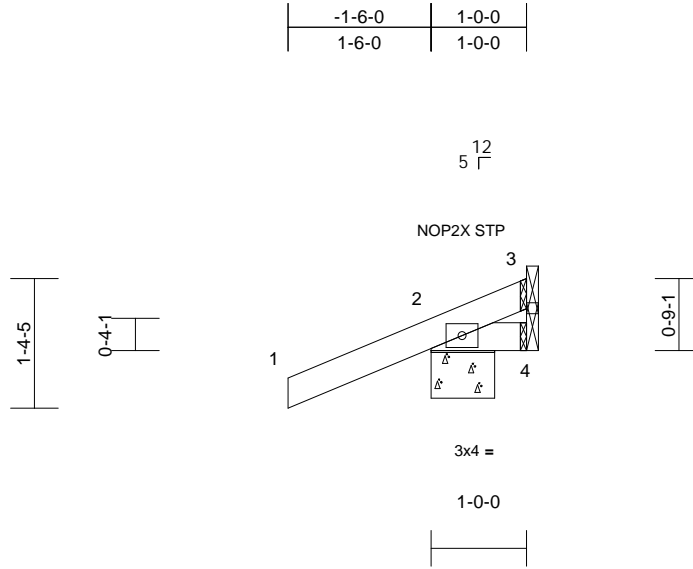


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090882
22-0558-A1	CJ1	Corner Jack	8	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:03  
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Page: 1



Scale = 1:24.2

Plate Offsets (X, Y): [2:0-1-14,0-0-2]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.27	Vert(LL)	0.00	5	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.04	Vert(CT)	0.00	5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP		Wind(LL)	0.00	7	>999	240	Weight: 6 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 1-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-8-0, 3= Mechanical, 4= Mechanical  
Max Horiz 2=74 (LC 12)  
Max Uplift 2=-221 (LC 12), 3=-5 (LC 1), 4=-20 (LC 1)  
Max Grav 2=179 (LC 1), 3=25 (LC 12), 4=51 (LC 12)

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

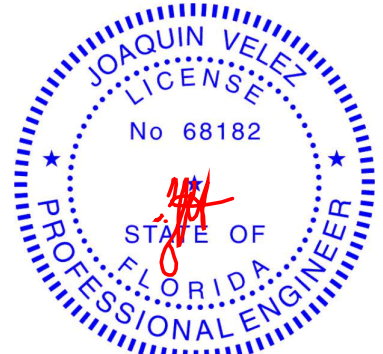
TOP CHORD 1-2=0/31, 2-3=-116/41  
BOT CHORD 2-4=-43/124

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional) and C-C Exterior(2E) zone;  
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 221 lb uplift at joint 2, 20 lb uplift at joint 4 and 5 lb uplift at joint 3.

**LOAD CASE(S)** Standard



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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

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

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

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



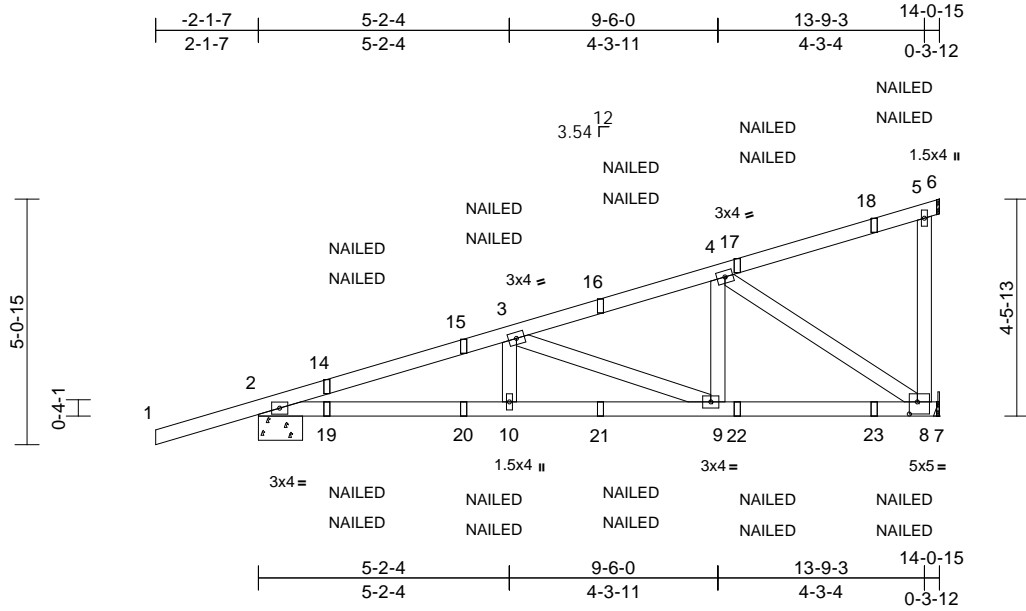
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 22-0558-A1	Truss HJ14-1	Truss Type Diagonal Hip Girder	Qty 1	Ply 1	LINCOLN MODEL III Job Reference (optional)	T29090883
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Arnold Truss Mfg. LLC, Ocala, FL - 34475,

Run: 8.62 S Aug 22 2022 Print: 8.620 S Aug 22 2022 MiTek Industries, Inc. Fri Oct 28 12:42:08  
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Page: 1



Scale = 1:47.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.38	Vert(LL)	-0.05	8-9	>999	360	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.81	Vert(CT)	-0.11	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.59	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS		Wind(LL)	0.07	8-9	>999	240	Weight: 71 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-4-3 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 7-7-7 oc bracing.

**REACTIONS** (size) 2=0-10-15, 8= Mechanical  
Max Horiz 2=280 (LC 22)  
Max Uplift 2=-326 (LC 8), 8=-625 (LC 8)  
Max Grav 2=803 (LC 13), 8=1209 (LC 1)

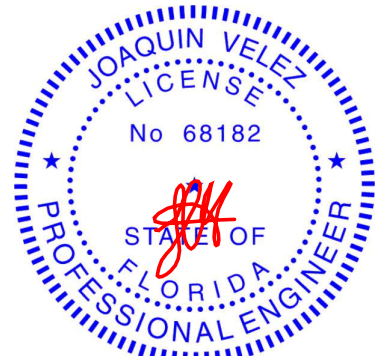
#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/32, 2-3=-1725/530, 3-4=-1199/466, 4-5=-97/44, 5-6=-5/0  
BOT CHORD 2-10=-649/1628, 9-10=-649/1628, 8-9=-533/1113, 7-8=0/0  
WEBS 5-8=-135/163, 4-8=-1336/640, 3-10=0/162, 3-9=-598/126, 4-9=-19/630

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional); cantilever left and right exposed ;  
end vertical left and right exposed; Lumber DOL=1.60  
plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 326 lb uplift at joint 2 and 625 lb uplift at joint 8.
  - 7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
  - 8) 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 + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (lb/ft)  
Vert: 1-6=-54, 7-11=-20  
Concentrated Loads (lb)  
Vert: 16=-75 (F=-37, B=-37), 17=-183 (F=-91, B=-91), 18=-31 (F=-15, B=-15), 19=57 (F=29, B=29), 20=-8 (F=-4, B=-4), 21=-57 (F=-28, B=-28), 22=-104 (F=-52, B=-52), 23=-417 (F=-209, B=-209)



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

October 31,2022

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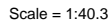
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

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Chesterfield, MO 63017

Page: 1

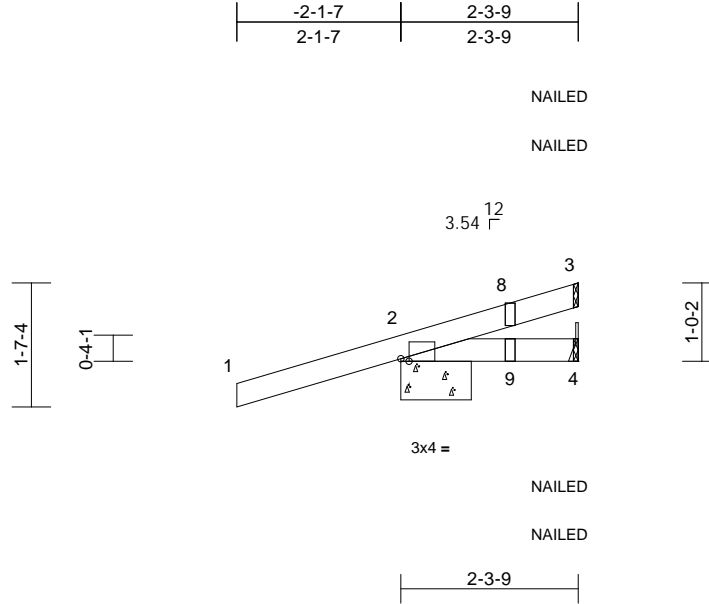
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090885
22-0558-A1	HJ2-3	Diagonal Hip Girder	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Scale = 1:29.8

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.34	Vert(LL)	-0.02	4-7	>999	240	MT20
TCDL	7.0	Lumber DOL	1.25	BC	0.39	Vert(CT)	-0.02	4-7	>999	180	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	2	n/a	n/a	
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							
										Weight: 10 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-3-9 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-10-15, 4= Mechanical  
Max Horiz 2=100 (LC 8)  
Max Uplift 2=225 (LC 4), 4=88 (LC 17)  
Max Grav 2=235 (LC 1), 4=207 (LC 20)

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

TOP CHORD 1-2=0/32, 2-3=-242/136  
BOT CHORD 2-4=-142/244

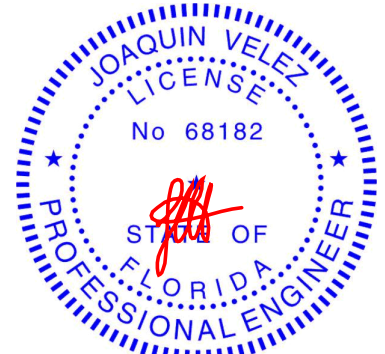
#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional); cantilever left and right exposed;  
end vertical left and right exposed; Lumber DOL=1.60  
plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 225 lb uplift at joint 2 and 88 lb uplift at joint 4.
- 7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

- 8) 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 + Roof Live (balanced): Lumber Increase=1.25,  
Plate Increase=1.25  
Uniform Loads (lb/ft)  
Vert: 1-3=-54, 4-5=-20  
Concentrated Loads (lb)  
Vert: 9=45 (F=23, B=23)



Joaquin Velez PE No.68182  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
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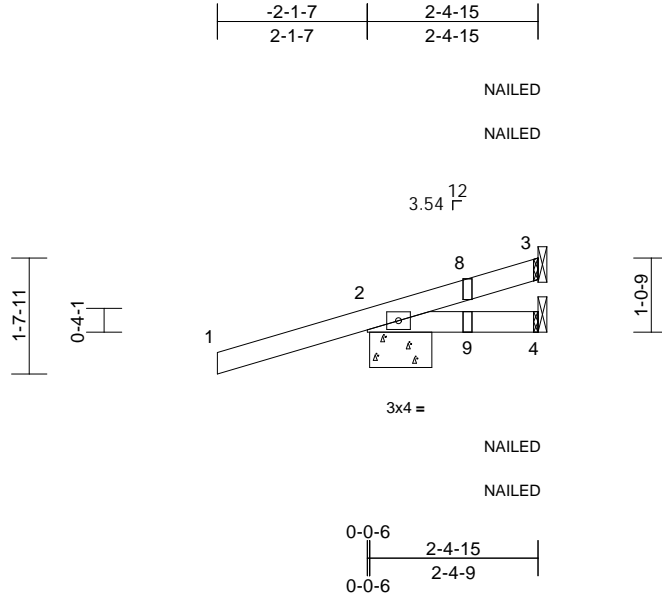


Job	Truss	Truss Type	Qty	Ply	LINCOLN MODEL III	T29090886
22-0558-A1	HJ2-4	Diagonal Hip Girder	1	1	Job Reference (optional)	

Arnold Truss Mfg. LLC, Ocala, FL - 34475,

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Page: 1



Scale = 1:32.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.34	Vert(LL)	-0.01	4-7	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.18	Vert(CT)	0.01	4-7	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							Weight: 11 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-4-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-10-9, 3= Mechanical, 4= Mechanical  
Max Horiz 2=89 (LC 22)  
Max Uplift 2=221 (LC 8), 3=31 (LC 17), 4=50 (LC 17)  
Max Grav 2=234 (LC 1), 3=88 (LC 22), 4=108 (LC 22)

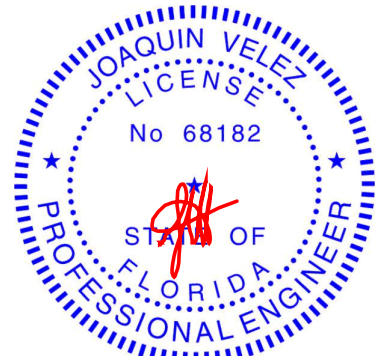
**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/32, 2-3=-261/145  
BOT CHORD 2-4=-146/251

#### NOTES

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=116mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed;  
MWFRS (directional); cantilever left and right exposed;  
end vertical left and right exposed; Lumber DOL=1.60  
plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 3, 221 lb uplift at joint 2 and 50 lb uplift at joint 4.

- 7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
  - 8) 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 + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (lb/ft)  
Vert: 1-3=-54, 4-5=-20  
Concentrated Loads (lb)  
Vert: 9=48 (F=24, B=24)



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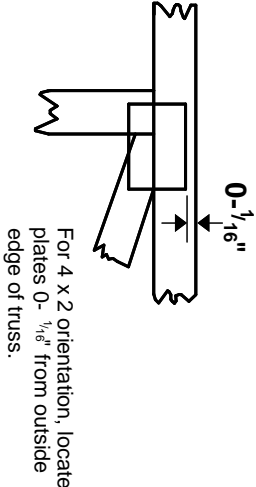
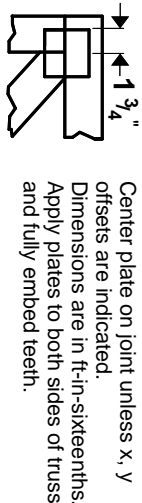
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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

# Symbols

## PLATE LOCATION AND ORIENTATION



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

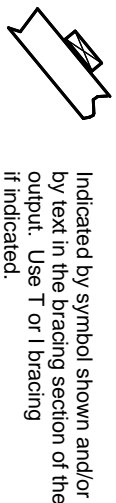
For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

## PLATE SIZE

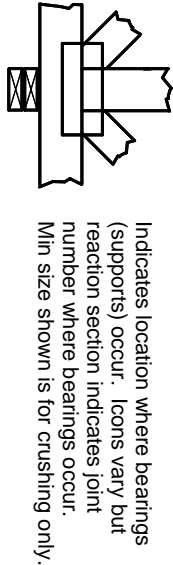
4 X 4

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

## LATERAL BRACING LOCATION

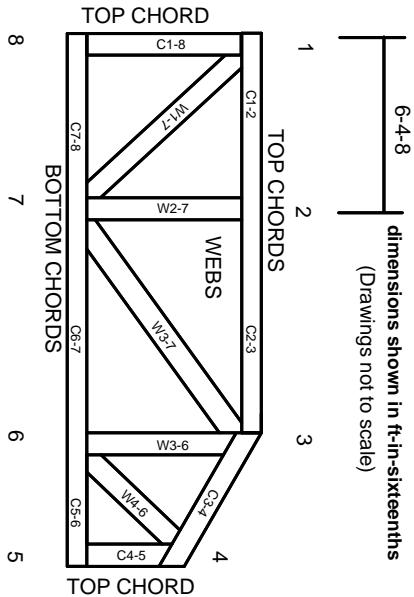


## BEARING



**Industry Standards:**  
ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:  
ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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

# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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