

RE: 21050189-A  
 Kristie with bonus side load

Trenco  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Customer: Lamco Custom Builders LLC Project Name: 21050189-A  
 Lot/Block: Model:  
 Address: Subdivision:  
 City: Sanford State: NC

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.5  
 Wind Code: ASCE 7-10 Wind Speed: 130 mph  
 Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 22 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I58301391	A	5/11/2023	21	I58301411	VI	5/11/2023
2	I58301392	AA	5/11/2023	22	I58301412	VJ	5/11/2023
3	I58301393	AB	5/11/2023				
4	I58301394	AD1	5/11/2023				
5	I58301395	AD2	5/11/2023				
6	I58301396	ADE	5/11/2023				
7	I58301397	AE	5/11/2023				
8	I58301398	B	5/11/2023				
9	I58301399	B1	5/11/2023				
10	I58301400	BE	5/11/2023				
11	I58301401	BG2	5/11/2023				
12	I58301402	V	5/11/2023				
13	I58301403	VAE	5/11/2023				
14	I58301404	VB	5/11/2023				
15	I58301405	VC	5/11/2023				
16	I58301406	VD	5/11/2023				
17	I58301407	VE	5/11/2023				
18	I58301408	VF	5/11/2023				
19	I58301409	VG	5/11/2023				
20	I58301410	VH	5/11/2023				

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).  
 Truss Design Engineer's Name: Gilbert, Eric  
 My license renewal date for the state of North Carolina is December 31, 2023.  
 North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

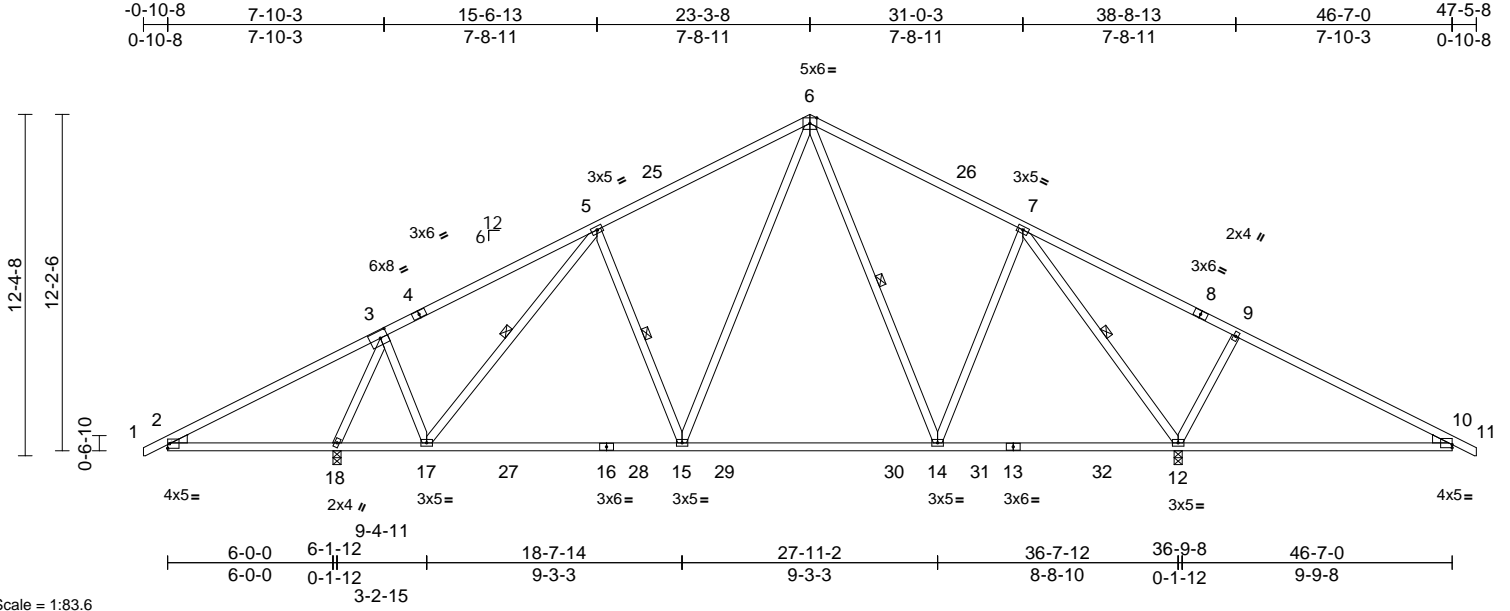


Job 21050189-A	Truss A	Truss Type Common	Qty 3	Ply 1	Kristie with bonus side load Job Reference (optional)	158301391
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:13  
ID:yymmA5a8h9dWADfRH9jsTlmz04Se-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCdoi7J4zJC?f

Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.19	14-15	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.34	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.03	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH		Wind(LL)	0.50	12-24	>237	120		
BCDL	10.0										Weight: 261 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 15-6,14-6:2x4 SP No.2  
WEDGE Left: 2x4 SP No.3  
Right: 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-3-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
WEBS 1 Row at midpt 5-17, 5-15, 6-14, 7-12

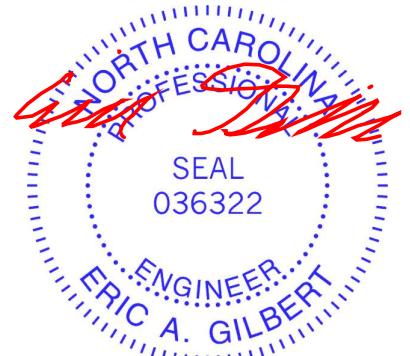
**REACTIONS** (size) 12=0-3-8, 18=0-3-8  
Max Horiz 18=130 (LC 13)  
Max Uplift 18=3 (LC 15)  
Max Grav 12=2219 (LC 2), 18=1722 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/29, 2-3=-381/703, 3-5=-657/89,  
5-6=-1015/265, 6-7=-761/167,  
7-9=-464/1038, 9-10=-499/812, 10-11=0/29  
BOT CHORD 2-18=-519/426, 17-18=-61/320, 15-17=0/950,  
14-15=0/698, 12-14=0/425, 10-12=-607/521  
WEBS 3-18=-1708/447, 3-17=0/747, 5-17=-638/175,  
5-15=-199/226, 6-15=-116/554,  
6-14=-292/161, 7-14=-6/562,  
7-12=-1895/593, 9-12=-498/335

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

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18 and 12. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 11, 2023

**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



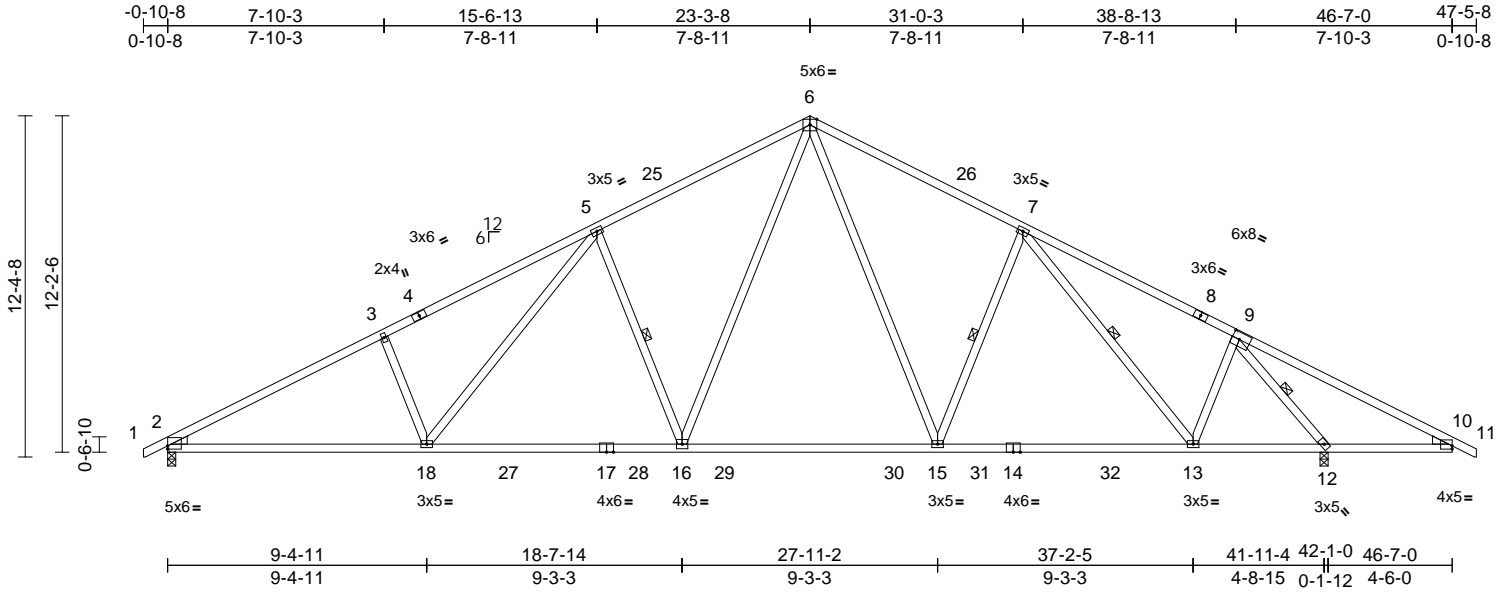
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss AA	Truss Type Common	Qty 6	Ply 1	Kristie with bonus side load Job Reference (optional)	158301392
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:16  
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Page: 1



Scale = 1:83.6  
Plate Offsets (X, Y): [2:Edge,0-1-6], [9:0-3-4,0-3-1], [10:Edge,0-1-6]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.32	16-18	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.56	16-18	>909	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.12	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 263 lb	FT = 20%	

**LUMBER**  
TOP CHORD 2x4 SP 2400F 2.0E \*Except\* 1-4,8-11:2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.3 \*Except\* 12-9,16-6,15-6:2x4 SP No.2  
WEDGE Left: 2x4 SP No.3  
Right: 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 9-12, 5-16, 7-15, 7-13

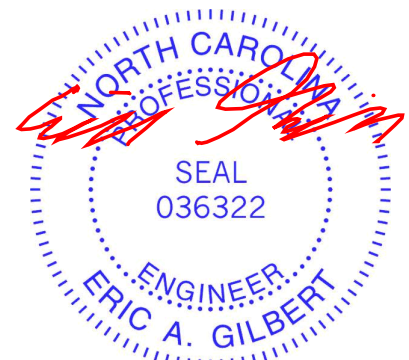
**REACTIONS** (size) 2=0-3-8, 12=0-3-8  
Max Horiz 2=-130 (LC 13)  
Max Grav 2=1759 (LC 2), 12=2183 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/29, 2-3=-3157/662, 3-5=-3008/734, 5-6=-2308/660, 6-7=-2076/602, 7-9=-1709/407, 9-10=-332/625, 10-11=0/29  
BOT CHORD 2-18=-470/2806, 16-18=-268/2274, 15-16=-41/1612, 13-15=-164/1811, 12-13=-83/1179, 10-12=-456/382  
WEBS 9-12=-2558/688, 3-18=-405/270, 5-18=-176/695, 5-16=-782/373, 6-16=-256/1120, 6-15=-111/585, 7-15=-279/230, 7-13=-602/158, 9-13=-5/728

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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.
- All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 12. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

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



May 11, 2023

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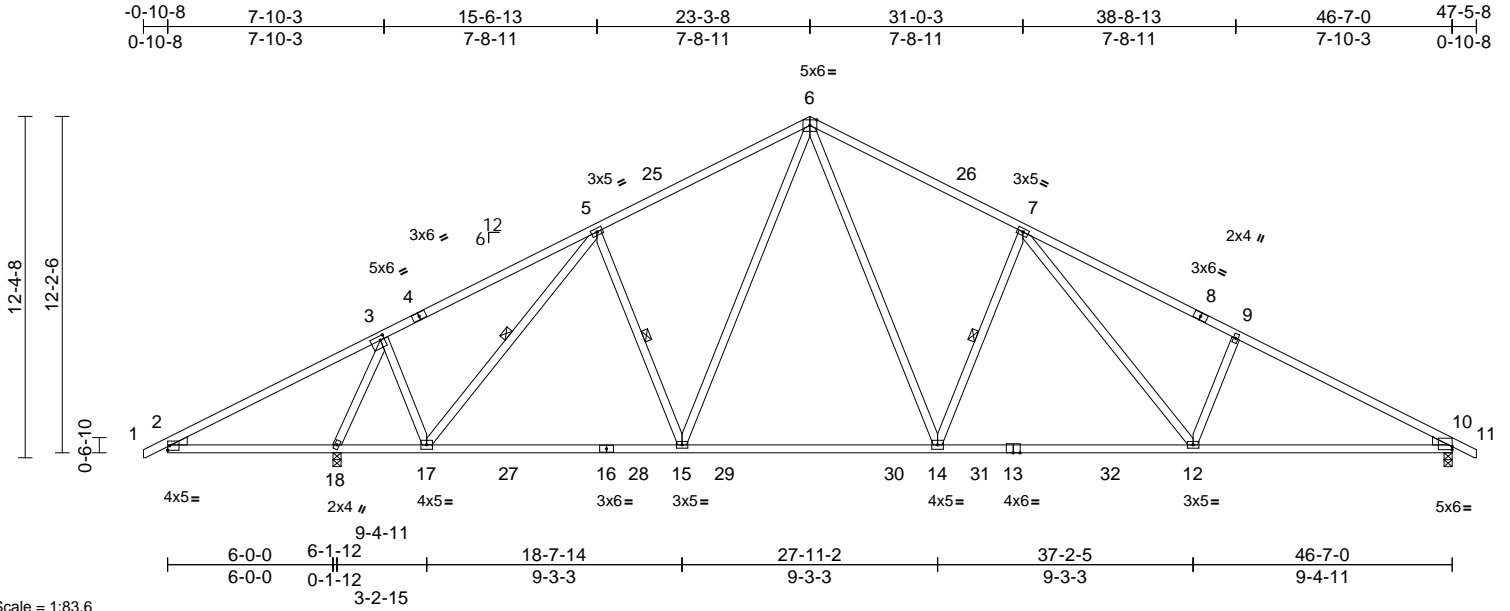
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss AB	Truss Type Common	Qty 5	Ply 1	Kristie with bonus side load Job Reference (optional)	I58301393
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:17  
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Page: 1



Scale = 1:83.6

Plate Offsets (X, Y): [3:0-1-12,0-1-12], [10:Edge,0-1-6]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.32	12-14	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.55	12-14	>883	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.11	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 262 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1 \*Except\* 1-4,8-11:2x4 SP No.2  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.3 \*Except\* 15-6,14-6:2x4 SP No.2  
WEDGE Left: 2x4 SP No.3  
Right: 2x4 SP No.3

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

WEBS 1 Row at midpt 5-17, 5-15, 7-14

**REACTIONS** (size) 10=0-3-8, 18=0-3-8  
Max Horiz 18=130 (LC 13)  
Max Grav 10=1675 (LC 2), 18=2267 (LC 2)

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

TOP CHORD 1-2=0/29, 2-3=-381/695, 3-5=-1041/197,  
5-6=-1802/519, 6-7=-2125/605,  
7-9=-2834/682, 9-10=-2983/609, 10-11=0/29

BOT CHORD 2-18=-515/424, 17-18=-45/525,  
15-17=-54/1558, 14-15=0/1446,  
12-14=-211/2058, 10-12=-419/2578

WEBS 3-18=-2278/616, 3-17=-112/1130,  
5-17=-1095/314, 5-15=-84/213,  
6-15=-57/384, 6-14=-256/1123,  
7-14=-783/374, 7-12=-179/701,  
9-12=-409/272

**NOTES**

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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, with BCDL = 10.0psf.
- 7) All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18 and 10. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 11, 2023

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



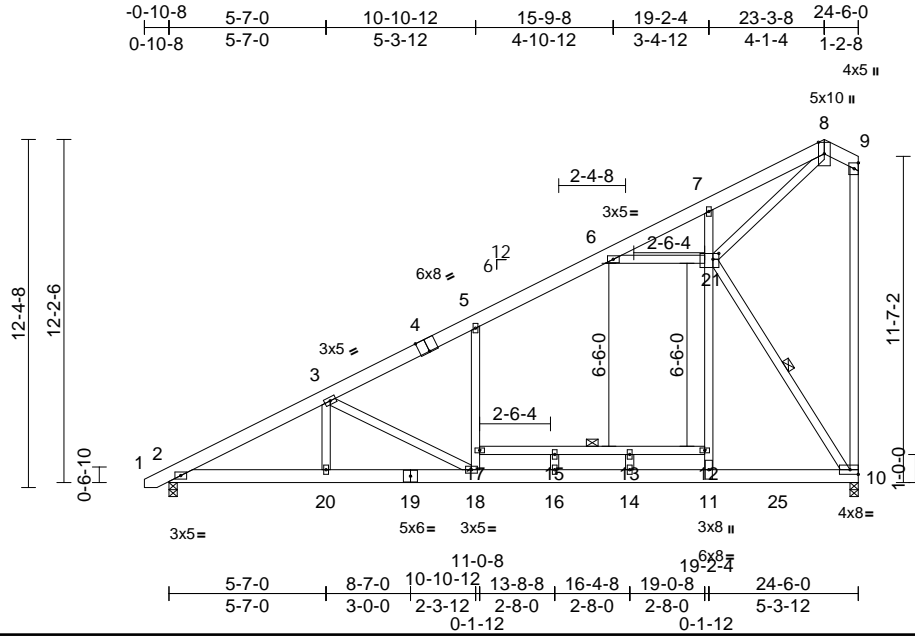
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss AD1	Truss Type Attic	Qty 6	Ply 1	Kristie with bonus side load Job Reference (optional)	158301394
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:81.9

Plate Offsets (X, Y): [4:0-4-0,Edge], [21:0-2-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.36	16-18	>821	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.70	16-18	>416	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.03	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH		Attic	-0.17	11-18	>592	360		
BCDL	10.0											
											Weight: 214 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP 2400F 2.0E \*Except\* 8-9:2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 17-12:2x4 SP No.3, 19-10:2x6 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 6-21,10-9:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 12-17, 10-21

**REACTIONS** (size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=358 (LC 14)  
Max Grav 2=1227 (LC 30), 10=1463 (LC 30)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/23, 2-3=-2371/193, 3-5=-1619/56, 5-6=-1225/147, 6-7=-513/1076, 7-8=-417/1243, 8-9=-105/202, 9-10=-33/277  
BOT CHORD 2-20=-524/2180, 18-20=-524/2180, 16-18=-283/1304, 14-16=-283/1304, 11-14=-283/1304, 10-11=-277/1248  
WEBS 3-20=-4/278, 3-18=-1040/286, 17-18=0/527, 5-17=0/630, 11-12=-11/941, 12-21=0/1017, 7-21=0/278, 15-17=-47/9, 13-15=-47/9, 12-13=-47/9, 6-21=-2258/422, 10-21=-2229/316, 15-16=-32/83, 13-14=-93/2, 8-21=-1429/371

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

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- \* 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.
- Ceiling dead load (5.0 psf) on member(s). 5-6, 15-17, 13-15, 12-13, 6-21; Wall dead load (5.0psf) on member (s).5-17, 12-21
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 16-18, 14-16, 11-14
- Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 10 SP 2400F 2.0E crushing capacity of 805 psi.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

13) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard



May 11, 2023

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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



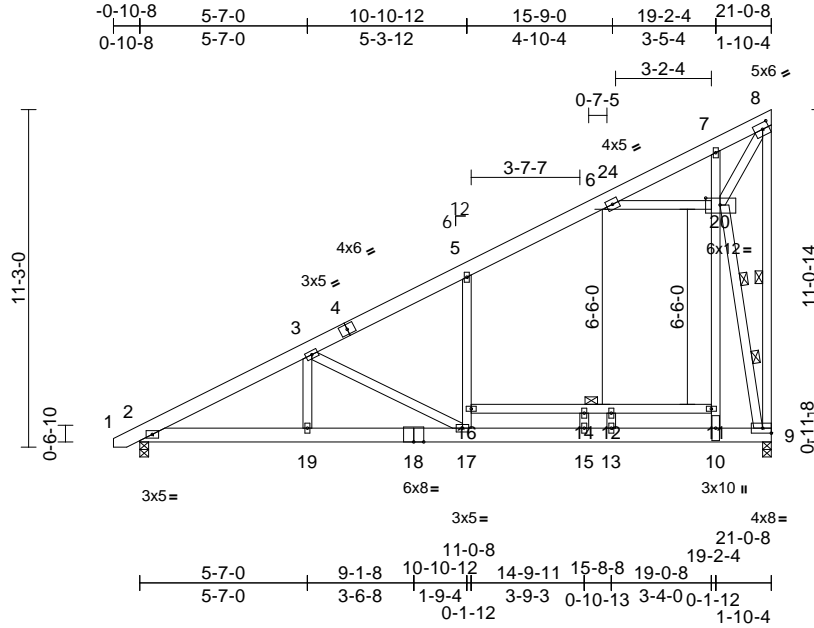
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss AD2	Truss Type Roof Special	Qty 5	Ply 1	Kristie with bonus side load Job Reference (optional)	158301395
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:18  
ID:NNRjJn3thHa1vopWCD2Yz04K3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?

Page: 1



Scale = 1:76.8

Plate Offsets (X, Y): [8:0-2-11,0-2-8], [20:0-5-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.40	15-17	>635	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.79	17	>318	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.02	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH		Attic	-0.19	10-17	>538	360		
BCDL	10.0											
											Weight: 189 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP 2400F 2.0E \*Except\* 1-4:2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 16-11:2x4 SP No.2, 18-9:2x6 SP 2400F 2.0E  
WEBS 2x4 SP No.2 \*Except\* 3-19,17-3,14-15,12-13,8-20:2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-11-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 8-9, 11-16  
WEBS 2 Rows at 1/3 pts 9-20

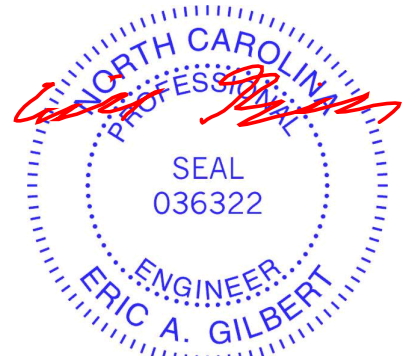
**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=331 (LC 14)  
Max Grav 2=1008 (LC 30), 9=1361 (LC 30)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/23, 2-3=-1921/178, 3-5=-1131/44, 5-6=-772/132, 6-7=-493/1345, 7-8=-380/1383, 8-9=-371/1498  
BOT CHORD 2-19=-465/1745, 17-19=-465/1745, 15-17=-210/819, 13-15=-210/819, 10-13=-210/819, 9-10=-207/760  
WEBS 3-19=-8/332, 3-17=-1077/293, 16-17=0/460, 5-16=0/557, 10-11=-117/1449, 11-20=-95/1525, 7-20=-117/219, 9-20=-3707/539, 14-16=-26/4, 12-14=-26/4, 11-12=-26/4, 6-20=-2011/391, 14-15=-45/218, 12-13=-238/19, 8-20=-2462/565

**NOTES**

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- \* 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.
- Ceiling dead load (5.0 psf) on member(s). 5-6, 14-16, 12-14, 11-12, 6-20; Wall dead load (5.0psf) on member (s).5-16, 11-20
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 15-17, 13-15, 10-13
- Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 9 SP 2400F 2.0E crushing capacity of 805 psi.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

12) Attic room checked for L/360 deflection.  
**LOAD CASE(S)** Standard



May 11, 2023

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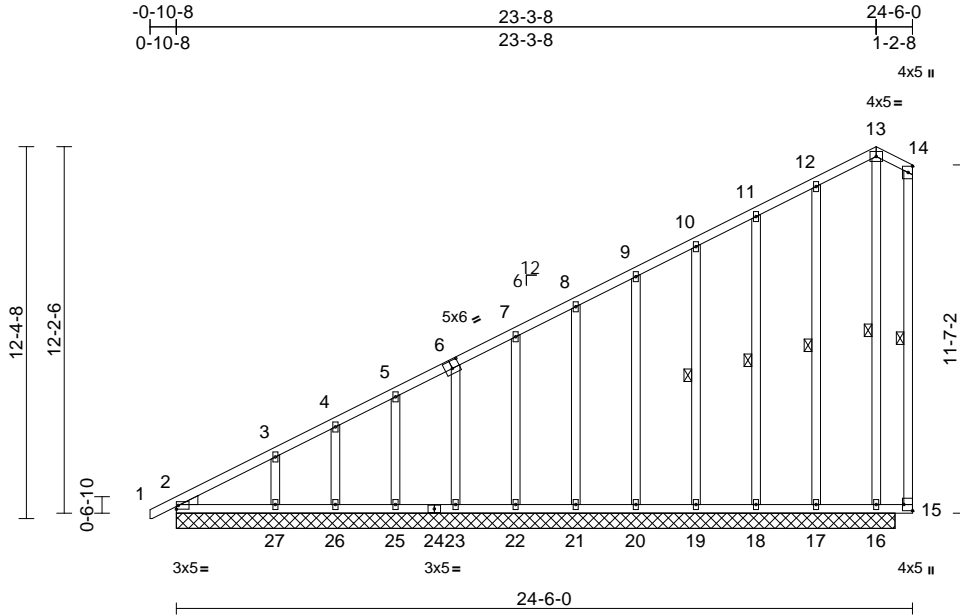
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss ADE	Truss Type Common Supported Gable	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301396
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:18  
ID:7VtUCUFL7Xf5?\_mZVQeQfN\_z\_Ih8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:76.7

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

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.00	16	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 205 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.3 \*Except\* 16-13,17-12:2x4 SP No.2  
WEDGE Left: 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 14-15, 13-16, 12-17, 11-18, 10-19

**REACTIONS** (size)  
2=23-11-0, 16=23-11-0, 17=23-11-0, 18=23-11-0, 19=23-11-0, 20=23-11-0, 21=23-11-0, 22=23-11-0, 23=23-11-0, 25=23-11-0, 26=23-11-0, 27=23-11-0, 28=23-11-0  
Max Horiz 2=352 (LC 14), 28=352 (LC 14)  
Max Uplift 16=-2 (LC 16), 17=-26 (LC 12), 18=-25 (LC 15), 19=-14 (LC 25), 20=-16 (LC 15), 21=-16 (LC 15), 22=-18 (LC 15), 23=-16 (LC 15), 25=-16 (LC 15), 27=-57 (LC 15)  
Max Grav 2=224 (LC 30), 16=175 (LC 23), 17=162 (LC 33), 18=163 (LC 2), 19=159 (LC 33), 20=160 (LC 2), 21=158 (LC 33), 22=167 (LC 2), 23=157 (LC 33), 25=160 (LC 2), 26=126 (LC 33), 27=254 (LC 2), 28=224 (LC 30)

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

**TOP CHORD** 1-2=0/28, 2-3=-601/316, 3-4=-519/273, 4-5=-484/266, 5-7=-438/249, 7-8=-346/220, 8-9=-300/204, 9-10=-254/188, 10-11=-208/171, 11-12=-176/161, 12-13=-181/199, 13-14=-251/283, 14-15=-241/268  
**BOT CHORD** 2-27=-523/308, 26-27=-161/178, 25-26=-161/178, 23-25=-161/178, 22-23=-164/181, 21-22=-164/181, 20-21=-164/181, 19-20=-164/181, 18-19=-164/181, 17-18=-164/181, 16-17=-164/181, 15-16=-164/181  
**WEBS** 13-16=-284/234, 12-17=-128/93, 11-18=-120/86, 10-19=-121/78, 9-20=-121/78, 8-21=-119/77, 7-22=-128/81, 6-23=-119/78, 5-25=-117/76, 4-26=-102/61, 3-27=-180/148

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33  
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.  
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- \* 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- N/A
- N/A
- Non Standard bearing condition! Review required.



May 11, 2023

Continued on page 2

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Kristie with bonus side load	I58301396
21050189-A	ADE	Common Supported Gable	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:18  
 ID:7VtCUFL7Xf5?\_mZVQeQfN\_z\_Ih8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

14) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

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818 Soundside Road  
 Edenton, NC 27932

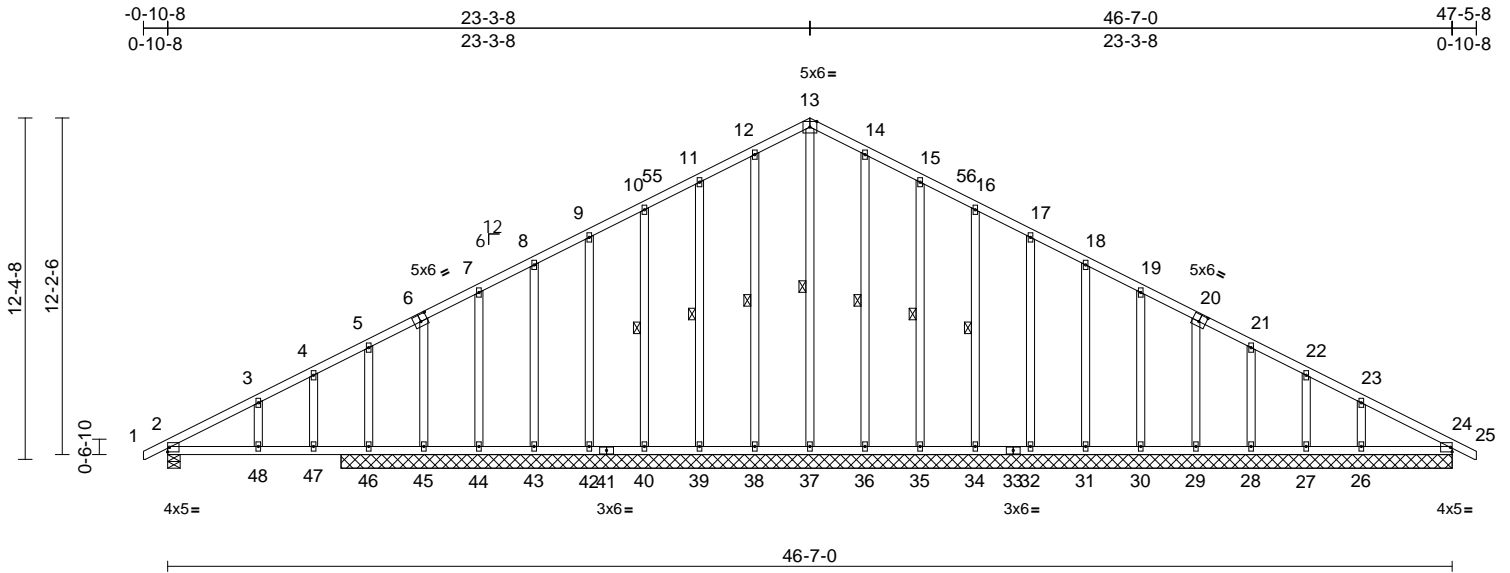


Job 21050189-A	Truss AE	Truss Type Common Supported Gable	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301397
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:19  
ID:HO7E3ivC1at3hdWz08ZszTz04Wp-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwRcDoi7J4zJC?f

Page: 1



Scale = 1:83.6

Plate Offsets (X, Y): [6:0-3-0,0-3-0], [20:0-3-0,0-3-0]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	0.09	48	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.17	48	>503	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 350 lb	FT = 20%

LUMBER	TOP CHORD	BOT CHORD	OTHERS	BRACING	TOP CHORD	BOT CHORD	WEBS	REACTIONS	FORCES	TOP CHORD	BOT CHORD
Max Grav	2=349 (LC 2), 24=238 (LC 2), 26=245 (LC 34), 27=133 (LC 2), 28=159 (LC 34), 29=156 (LC 34), 30=168 (LC 2), 31=158 (LC 34), 32=160 (LC 2), 34=160 (LC 34), 35=198 (LC 23), 36=207 (LC 23), 37=170 (LC 16), 38=206 (LC 22), 39=199 (LC 22), 40=158 (LC 2), 42=164 (LC 33), 43=141 (LC 2), 44=235 (LC 33), 45=26 (LC 15), 46=663 (LC 33), 52=238 (LC 2)	2=0-5-8, 24=40-3-8, 26=40-3-8, 27=40-3-8, 28=40-3-8, 29=40-3-8, 30=40-3-8, 31=40-3-8, 32=40-3-8, 34=40-3-8, 35=40-3-8, 36=40-3-8, 37=40-3-8, 38=40-3-8, 39=40-3-8, 40=40-3-8, 42=40-3-8, 43=40-3-8, 44=40-3-8, 45=40-3-8, 46=40-3-8, 52=40-3-8	2=0-5-8, 24=40-3-8, 26=40-3-8, 27=40-3-8, 28=40-3-8, 29=40-3-8, 30=40-3-8, 31=40-3-8, 32=40-3-8, 34=40-3-8, 35=40-3-8, 36=40-3-8, 37=40-3-8, 38=40-3-8, 39=40-3-8, 40=40-3-8, 42=40-3-8, 43=40-3-8, 44=40-3-8, 45=40-3-8, 46=40-3-8, 52=40-3-8	1 Row at midpt	Structural wood sheathing directly applied or 6-0-0 oc purlins.	Rigid ceiling directly applied or 10-0-0 oc bracing.	1 Row at midpt	2=0-5-8, 24=40-3-8, 26=40-3-8, 27=40-3-8, 28=40-3-8, 29=40-3-8, 30=40-3-8, 31=40-3-8, 32=40-3-8, 34=40-3-8, 35=40-3-8, 36=40-3-8, 37=40-3-8, 38=40-3-8, 39=40-3-8, 40=40-3-8, 42=40-3-8, 43=40-3-8, 44=40-3-8, 45=40-3-8, 46=40-3-8, 52=40-3-8	(lb) - Maximum Compression/Maximum Tension	1-2=0/28, 2-3=226/28, 3-4=166/43, 4-5=137/59, 5-7=211/120, 7-8=161/172, 8-9=163/217, 9-10=180/264, 10-11=196/309, 11-12=213/358, 12-13=226/398, 13-14=226/398, 14-15=213/358, 15-16=196/309, 16-17=180/264, 17-18=164/217, 18-19=157/172, 19-21=158/123, 21-22=162/35, 22-23=174/14, 23-24=194/28, 24-25=0/28	2-48=98/154, 47-48=0/154, 46-47=0/154, 45-46=0/154, 44-45=0/155, 43-44=0/155, 42-43=0/155, 40-42=0/155, 39-40=0/155, 38-39=0/155, 37-38=0/155, 36-37=0/155, 35-36=0/155, 34-35=0/155, 32-34=0/155, 31-32=0/155, 30-31=0/155, 29-30=0/155, 28-29=0/158, 27-28=0/158, 26-27=0/158, 24-26=-17/158

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33



May 11, 2023

Continued on page 2

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818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss AE	Truss Type Common Supported Gable	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional) I58301397
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:19  
ID:HO7E3IvC1at3hdWz08ZszTz04Wp-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?#

Page: 2

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable studs spaced at 2-0-0 oc.
- 9) \* 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 11) N/A
  
- 12) N/A
  
- 13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

**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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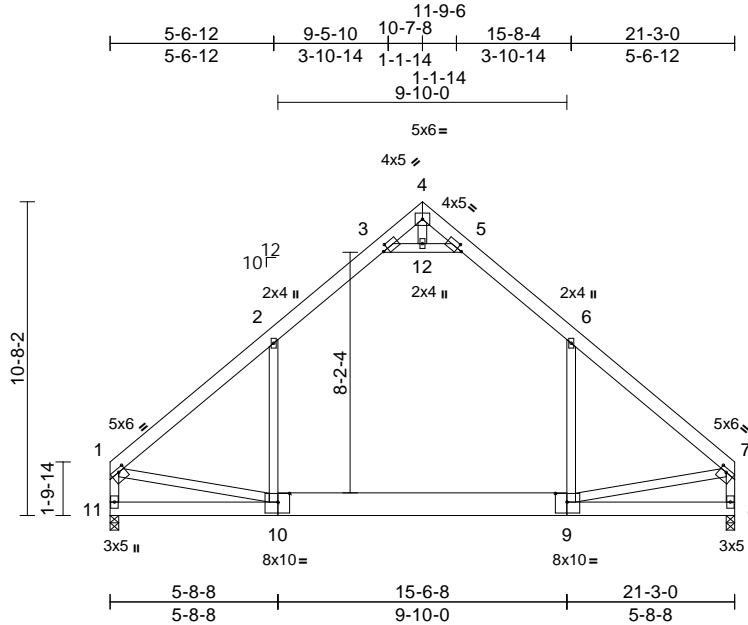
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss B	Truss Type Attic	Qty 8	Ply 1	Kristie with bonus side load Job Reference (optional)	I58301398
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:20  
ID: \_B7u7EAgmNONTZNOh8vWHYz\_ly8-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:78.4

Plate Offsets (X, Y): [1:0-2-12,0-1-8], [3:0-2-1,0-2-0], [5:0-2-1,0-2-0], [7:0-2-12,0-1-8], [9:0-4-12,0-3-8], [10:0-4-12,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.18	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.29	9-10	>859	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH		Attic	-0.08	9-10	>999	360		
BCDL	10.0										Weight: 172 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x6 SP No.2 \*Except\* 10-9:2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 3-5:2x4 SP No.2

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

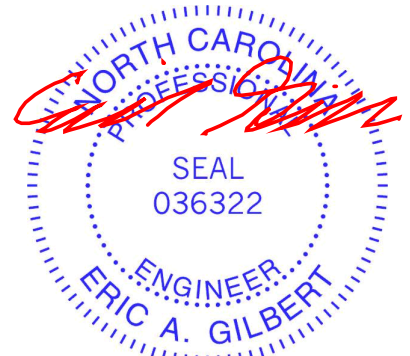
**REACTIONS** (size) 8=0-3-8, 11=0-3-8  
Max Horiz 11=-214 (LC 9)  
Max Grav 8=1198 (LC 26), 11=1198 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1290/28, 2-3=-892/157, 3-4=-118/577, 4-5=-118/577, 5-6=-892/157, 6-7=-1290/28, 1-11=-1162/54, 7-8=-1163/54  
BOT CHORD 8-11=-219/886  
WEBS 6-9=0/459, 2-10=0/459, 3-12=-1627/378, 5-12=-1627/378, 4-12=-14/191, 1-10=0/780, 7-9=0/783

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- \* 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.
- Ceiling dead load (10.0 psf) on member(s). 2-3, 5-6, 3-12, 5-12
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 9-10
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11 and 8. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33



May 11, 2023

**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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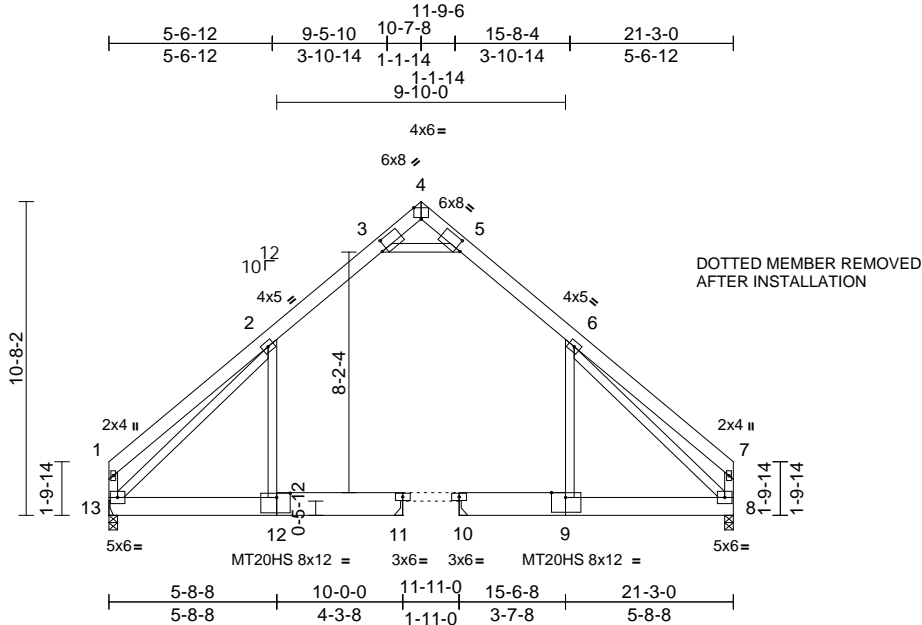
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss B1	Truss Type Attic	Qty 2	Ply 1	Kristie with bonus side load Job Reference (optional)	I58301399
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:20  
ID: \_B7u7EAgmNONTZN0h8vWHYz\_ly8-RfC?PsB70Hq3NSgPqnL8w3uITxBkGKwCDoi7J4zJC?f

Page: 1



Scale = 1:78.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.10	12-13	>999	240
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.21	12-13	>543	180
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.82	10	n/a	n/a
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH		Attic	-0.10	11-12	>995	360
BCDL	10.0									
										Weight: 180 lb FT = 20%

LUMBER	
TOP CHORD	2x6 SP No.2
BOT CHORD	2x8 SP 2400F 2.0E *Except* 11-12,10-9:2x10 SP 2400F 2.0E, 11-10:2x4 SP No.2
WEBS	
WEBS	2x4 SP No.3 *Except* 3-5,8-7:2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 9-6-0 oc bracing.
REACTIONS	
(size)	8=0-3-8, 10= Mechanical, 11= Mechanical, 13=0-3-8
Max Horiz	13=211 (LC 9)
Max Uplift	8=-36 (LC 14), 13=-26 (LC 14)
Max Grav	8=509 (LC 26), 10=633 (LC 25), 11=729 (LC 25), 13=556 (LC 26)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-251/217, 2-3=-368/257, 3-4=-570/0, 4-5=-617/8, 5-6=-373/256, 6-7=-257/243, 1-13=-248/211, 7-8=-258/240
BOT CHORD	8-13=-8/51
WEBS	2-12=-730/116, 6-9=-654/63, 3-5=-183/793, 2-13=-273/314, 6-8=-79/113

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- All plates are MT20 plates unless otherwise indicated.
- \* 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.
- Ceiling dead load (10.0 psf) on member(s). 2-3, 5-6, 3-5
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 11-12, 9-10
- Bearings are assumed to be: Joint 13 SP 2400F 2.0E crushing capacity of 805 psi, Joint 8 SP 2400F 2.0E crushing capacity of 805 psi.
- Refer to girder(s) for truss to truss connections.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13 and 8. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33



May 11, 2023

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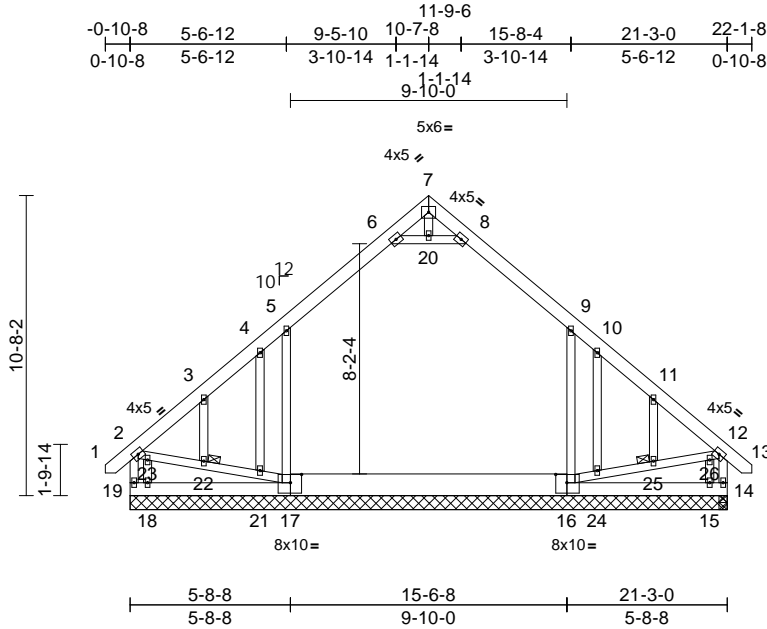
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss BE	Truss Type Attic Structural Gable	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301400
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:21  
ID:a:Q11CelnS73ZDy20VEmnEgz\_ixO-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1

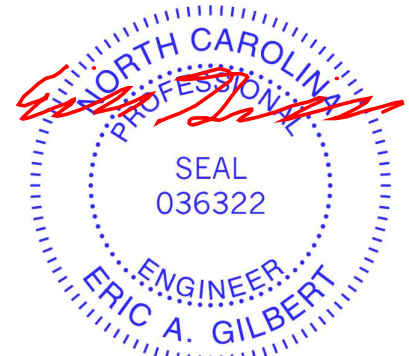


Scale = 1:82  
Plate Offsets (X, Y): [16:0-4-12,0-3-8], [17:0-4-12,0-3-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	-0.03	16-17	>999	240
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.04	16-17	>999	180
TCDL	10.0	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.00	14	n/a	n/a
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH						
BCDL	10.0									
										Weight: 199 lb FT = 20%

LUMBER	WEBS
TOP CHORD 2x6 SP No.2	9-16=-332/179, 5-17=-335/178,
BOT CHORD 2x6 SP No.2 *Except* 17-16:2x10 SP 2400F 2.0E	6-20=-191/161, 8-20=-191/161, 7-20=-14/16,
WEBS 2x4 SP No.3 *Except* 6-8:2x4 SP No.2	2-23=-142/234, 22-23=-80/186,
OTHERS 2x4 SP No.3	21-22=-92/193, 17-21=-96/206,
	16-24=-99/207, 24-25=-94/194,
	25-26=-83/190, 12-26=-144/235, 4-21=-4/53,
	3-22=-76/47, 18-23=-179/148, 10-24=-5/55,
	11-25=-77/47, 15-26=-179/148
BRACING	NOTES
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.	1) Unbalanced roof live loads have been considered for this design.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.	2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
JOINTS 1 Brace at Jt(s): 22, 25	3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
REACTIONS	LOAD CASE(S)
(size) 14=21-3-0, 15=21-3-0, 16=21-3-0, 17=21-3-0, 18=21-3-0, 19=21-3-0	Standard
Max Horiz 19=220 (LC 11)	
Max Uplift 14=43 (LC 10), 15=50 (LC 14), 16=96 (LC 14), 17=97 (LC 13), 18=53 (LC 13), 19=54 (LC 9)	
Max Grav 14=395 (LC 26), 15=166 (LC 12), 16=643 (LC 27), 17=644 (LC 26), 18=177 (LC 11), 19=404 (LC 27)	
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD 1-2=0/39, 2-3=-337/33, 3-4=-282/42, 4-5=-192/50, 5-6=-329/127, 6-7=-104/19, 7-8=-105/19, 8-9=-329/127, 9-10=-190/47, 10-11=-281/40, 11-12=-335/31, 12-13=0/39, 2-19=-297/23, 12-14=-295/22	
BOT CHORD 18-19=-191/218, 15-18=-191/224, 14-15=-31/71	

- 9) \* 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.
- 10) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 11) N/A
- 12) N/A
- 13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 14) Attic room checked for L/360 deflection.



May 11, 2023

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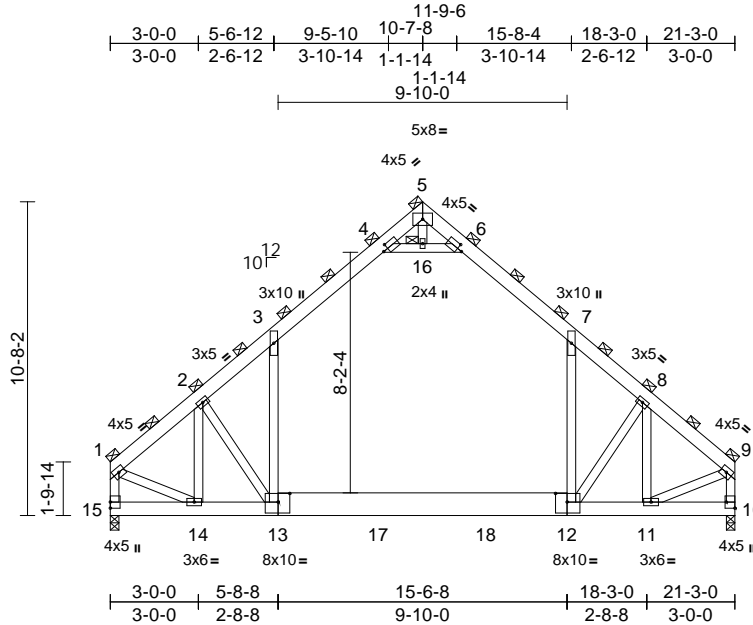
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss BG2	Truss Type Attic Girder	Qty 1	Ply 3	Kristie with bonus side load Job Reference (optional)	158301401
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:21  
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Page: 1



Scale = 1:78.4

Plate Offsets (X, Y): [4:0-2-1,0-2-0], [6:0-2-1,0-2-0], [10:Edge,0-3-8], [12:0-4-12,0-3-8], [13:0-4-12,0-3-8]

Loading	(psf)	Spacing	6-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.34	12-13	>744	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.52	12-13	>485	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.01	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH		Attic	-0.16	12-13	>752	360		
BCDL	10.0											
											Weight: 560 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP 2400F 2.0E  
BOT CHORD 2x6 SP No.2 \*Except\* 13-12:2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 4-6:2x4 SP No.2

**BRACING**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals (Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**JOINTS**  
1 Brace at Jt(s): 5, 16, 1, 9

**REACTIONS** (size) 10=0-3-8, 15=0-3-8  
Max Horiz 15=641 (LC 5)  
Max Grav 10=5824 (LC 21), 15=5698 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-5388/0, 2-3=-6879/0, 3-4=-3960/121, 4-5=-111/3044, 5-6=-112/2987, 6-7=-4002/121, 7-8=-7117/0, 8-9=-5482/0, 1-15=-5434/0, 9-10=-5516/0  
BOT CHORD 14-15=-567/641, 11-14=-38/4592, 10-11=-17/151  
WEBS 7-12=0/4620, 8-12=-747/531, 8-11=-2936/135, 3-13=0/4380, 2-13=-600/532, 2-14=-3034/87, 4-16=-8519/197, 6-16=-8519/197, 5-16=0/924, 1-14=0/4488, 9-11=0/4649

- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 2 rows staggered at 0-4-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- \* 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.
- Ceiling dead load (10.0 psf) on member(s). 3-4, 6-7, 4-16, 6-16
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 12-13
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.

- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15 and 10. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2173 lb down and 43 lb up at 9-1-8, and 2173 lb down and 43 lb up at 12-9-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)



May 11, 2023

Continued on page 2

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818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss BG2	Truss Type Attic Girder	Qty 1	Ply <b>3</b>	Kristie with bonus side load I58301401 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:21  
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Page: 2

Vert: 1-3=-143, 3-4=-203, 4-5=-143, 5-6=-143,  
6-7=-203, 7-9=-143, 13-15=-60, 12-13=-90,  
10-12=-60, 4-16=-60, 6-16=-60

Concentrated Loads (lb)

Vert: 17=-1000 (F), 18=-1000 (F)

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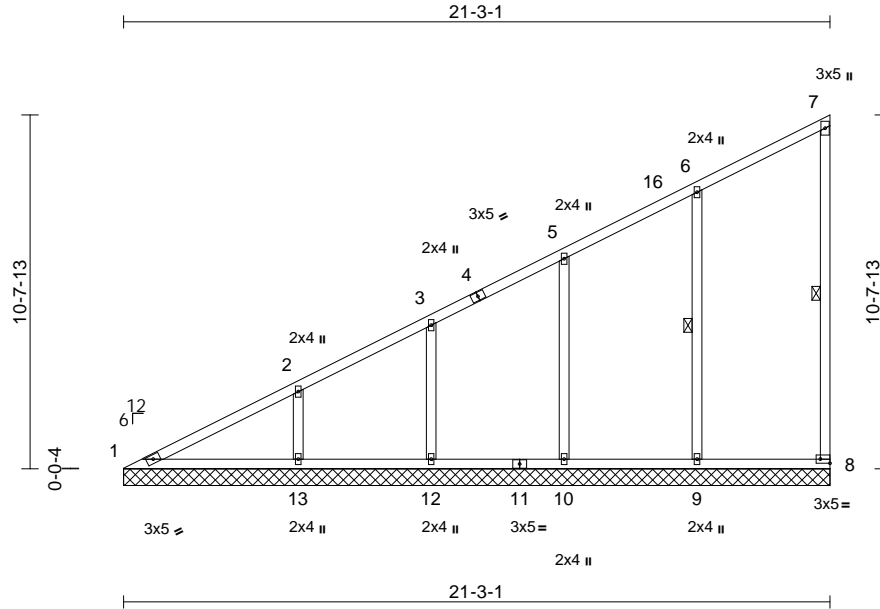
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss V	Truss Type Valley	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301402
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:22  
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Page: 1



Scale = 1:69.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 111 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.3

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 7-8, 6-9

**REACTIONS**

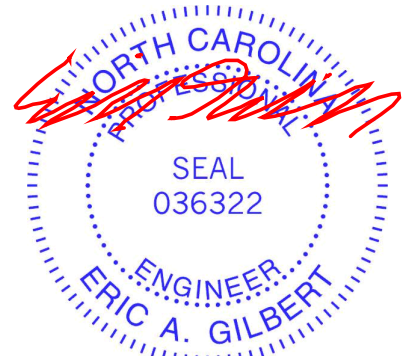
(size)	1=21-3-1, 8=21-3-1, 9=21-3-1, 10=21-3-1, 12=21-3-1, 13=21-3-1
Max Horiz	1=323 (LC 12)
Max Uplift	8=-32 (LC 12), 9=-42 (LC 15), 10=-38 (LC 15), 12=-39 (LC 15), 13=-39 (LC 15)
Max Grav	1=209 (LC 29), 8=182 (LC 5), 9=463 (LC 5), 10=419 (LC 28), 12=315 (LC 28), 13=441 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-548/303, 2-3=-447/253, 3-5=-352/224, 5-6=-262/195, 6-7=-161/140, 7-8=-126/86
BOT CHORD	1-13=-231/315, 12-13=-154/170, 10-12=-154/170, 9-10=-154/170, 8-9=-154/170
WEBS	6-9=-305/213, 5-10=-240/178, 3-12=-222/165, 2-13=-298/179

**NOTES**

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 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, with BCDL = 10.0psf.
- 9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

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818 Soundside Road  
Edenton, NC 27932

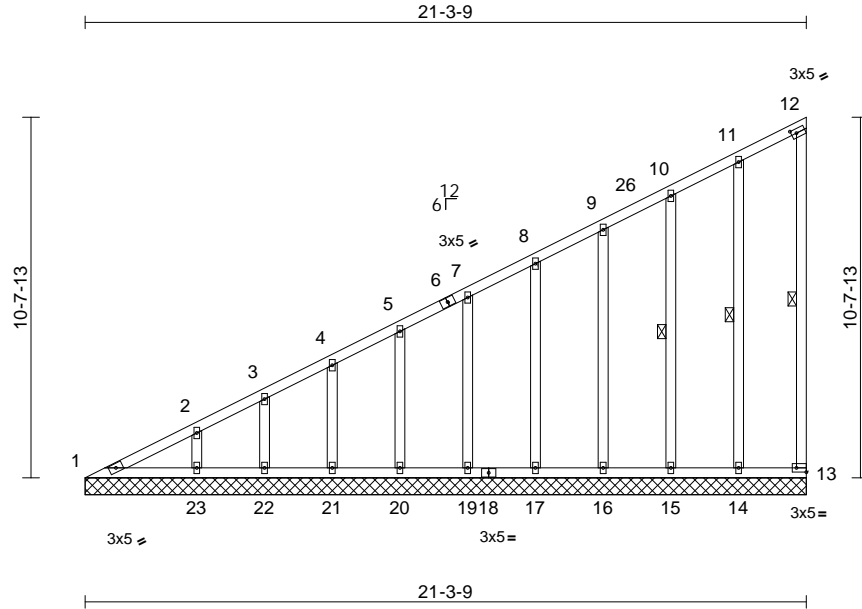


Job 21050189-A	Truss VAE	Truss Type Valley	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301403
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:22  
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Page: 1



Scale = 1:68

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	13	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 149 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.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 12-13, 11-14, 10-15
REACTIONS (size)	
	1=21-3-9, 13=21-3-9, 14=21-3-9, 15=21-3-9, 16=21-3-9, 17=21-3-9, 19=21-3-9, 20=21-3-9, 21=21-3-9, 22=21-3-9, 23=21-3-9
Max Horiz	1=323 (LC 12)
Max Uplift	13=41 (LC 14), 14=23 (LC 15), 15=11 (LC 15), 16=19 (LC 15), 17=16 (LC 15), 19=17 (LC 15), 20=17 (LC 15), 21=15 (LC 15), 22=23 (LC 15), 23=2 (LC 15)
Max Grav	1=159 (LC 29), 13=76 (LC 21), 14=211 (LC 21), 15=194 (LC 21), 16=165 (LC 2), 17=165 (LC 2), 19=165 (LC 2), 20=162 (LC 2), 21=175 (LC 2), 22=125 (LC 2), 23=274 (LC 2)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-563/302, 2-3=-516/272, 3-4=-468/260, 4-5=-420/242, 5-7=-373/226, 7-8=-325/209, 8-9=-277/193, 9-10=-229/175, 10-11=-187/165, 11-12=-133/127, 12-13=-61/55

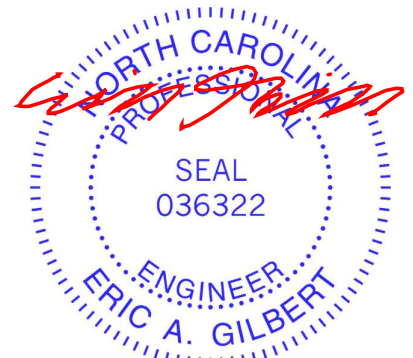
BOT CHORD	1-23=-197/237, 22-23=-154/170, 21-22=-154/170, 20-21=-154/170, 19-20=-154/170, 17-19=-154/170, 16-17=-154/170, 15-16=-154/170, 14-15=-154/170, 13-14=-154/170	10) N/A
WEBS	11-14=-169/155, 10-15=-155/102, 9-16=-125/81, 8-17=-125/80, 7-19=-125/80, 5-20=-124/80, 4-21=-129/80, 3-22=-106/81, 2-23=-176/79	

11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

**NOTES**

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

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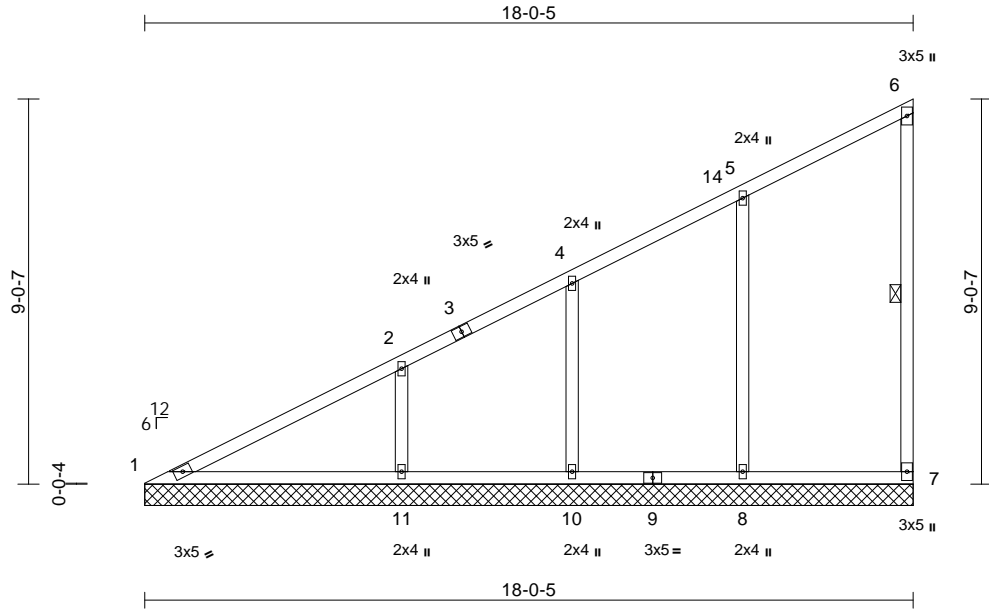
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss VB	Truss Type Valley	Qty 2	Ply 1	Kristie with bonus side load Job Reference (optional)	158301404
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:23  
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Page: 1



Scale = 1:54

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.37	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horiz(TL)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 88 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-7

#### REACTIONS

(size)	1=18-0-5, 7=18-0-5, 8=18-0-5, 10=18-0-5, 11=18-0-5
Max Horiz	1=272 (LC 12)
Max Uplift	7=27 (LC 12), 8=43 (LC 15), 10=34 (LC 15), 11=49 (LC 15)
Max Grav	1=218 (LC 29), 7=174 (LC 5), 8=469 (LC 5), 10=283 (LC 28), 11=497 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-451/262, 2-4=-335/199, 4-5=-249/180, 5-6=-144/121, 6-7=-120/87
BOT CHORD	1-11=-227/331, 10-11=-132/146, 8-10=-132/146, 7-8=-132/146
WEBS	5-8=-288/207, 4-10=-202/161, 2-11=-334/203

#### NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C  
Exterior (2) 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=1.33
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber  
DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground  
snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15  
Plate DOL=1.15); Category II; Exp B; Fully Exp.;  
Ct=1.10
- 4) Unbalanced snow loads have been considered for this  
design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 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.
- 8) All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.



May 11, 2023

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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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

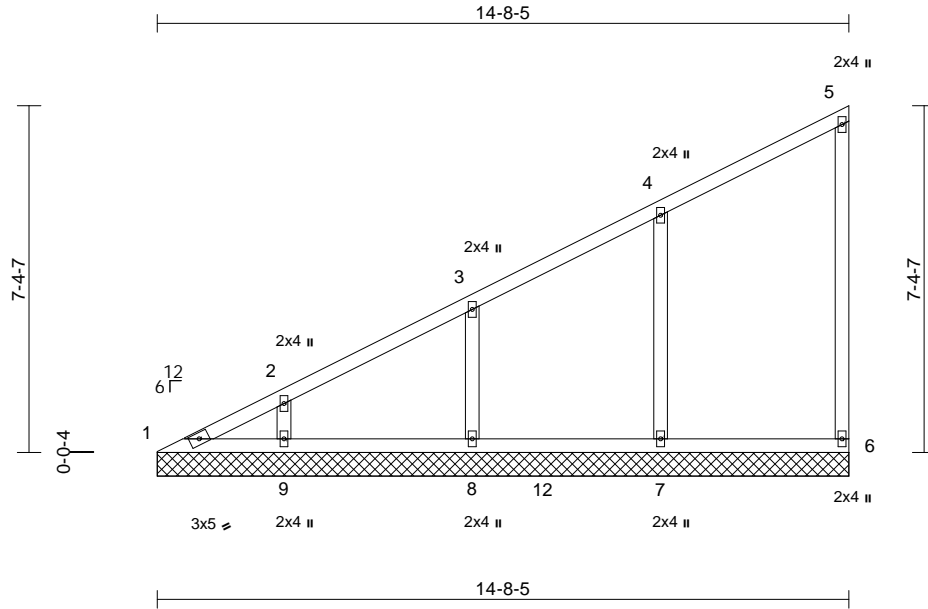
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss VC	Truss Type Valley	Qty 2	Ply 1	Kristie with bonus side load Job Reference (optional)	158301405
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:23  
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Page: 1



Scale = 1:48.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 68 lb	FT = 20%

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

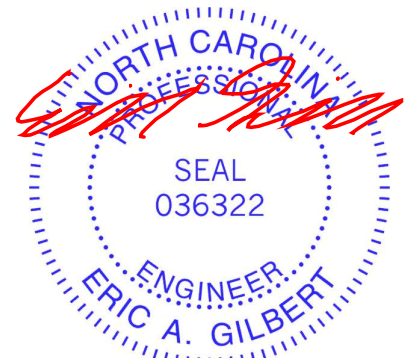
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size)  
1=14-8-5, 6=14-8-5, 7=14-8-5, 8=14-8-5, 9=14-8-5  
Max Horiz 1=220 (LC 12)  
Max Uplift 6=-22 (LC 12), 7=-41 (LC 15), 8=-41 (LC 15), 9=22 (LC 15)  
Max Grav 1=109 (LC 29), 6=174 (LC 5), 7=439 (LC 28), 8=320 (LC 2), 9=298 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-412/223, 2-3=-338/195, 3-4=-238/161, 4-5=-125/108, 5-6=-114/93  
BOT CHORD 1-9=-149/157, 8-9=-109/121, 7-8=-109/121, 6-7=-109/121  
WEBS 4-7=-258/205, 3-8=-241/186, 2-9=-218/148

- NOTES**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 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, with BCDL = 10.0psf.
- 9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

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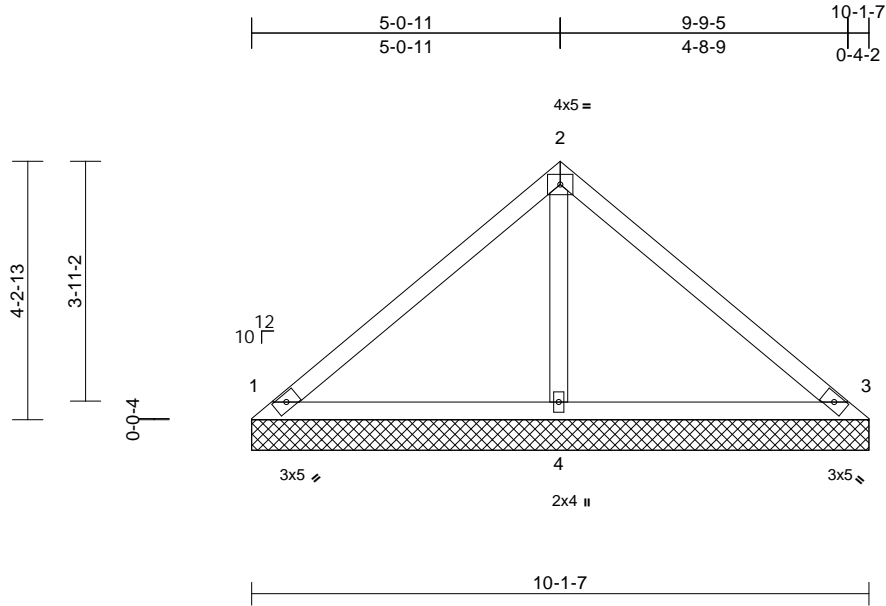
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss VD	Truss Type Valley	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301406
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:37.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH								
BCDL	10.0											
										Weight: 39 lb	FT = 20%	

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(size) 1=10-1-7, 3=10-1-7, 4=10-1-7  
Max Horiz 1=-77 (LC 9)  
Max Uplift 3=-2 (LC 14)  
Max Grav 1=207 (LC 2), 3=209 (LC 2), 4=389 (LC 2)

**FORCES**

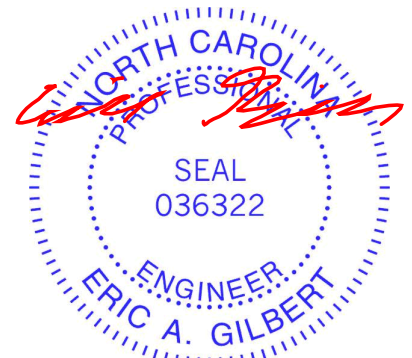
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-168/69, 2-3=-168/70  
BOT CHORD 1-4=-10/66, 3-4=-10/67  
WEBS 2-4=-224/47

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10

- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

**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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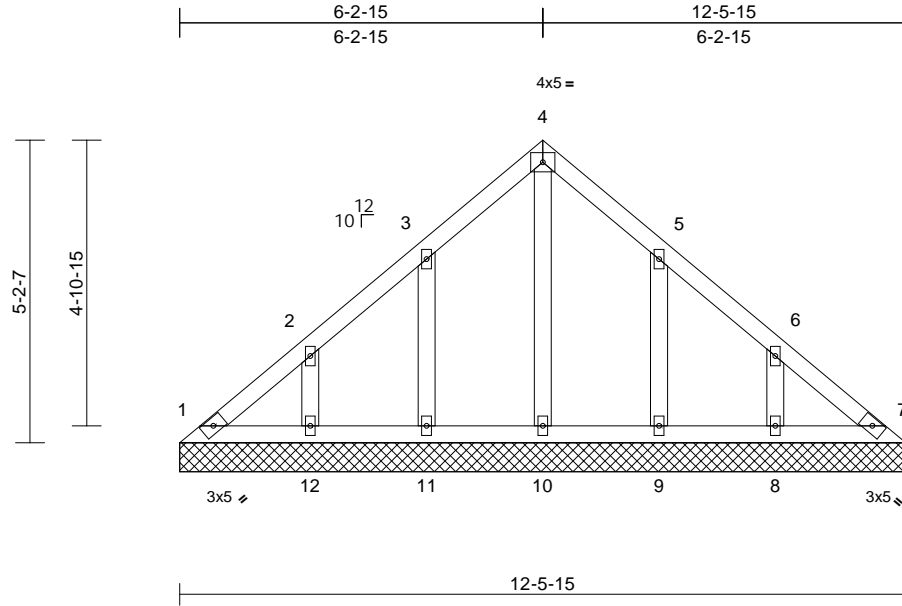
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss VE	Truss Type Valley	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301407
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:24  
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Page: 1



Scale = 1:39.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH								
BCDL	10.0											
											Weight: 61 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(size) 1=12-5-15, 7=12-5-15, 8=12-5-15, 9=12-5-15, 10=12-5-15, 11=12-5-15, 12=12-5-15  
Max Horiz 1=-96 (LC 9)  
Max Uplift 1=-9 (LC 9), 8=-39 (LC 14), 9=-37 (LC 14), 11=-37 (LC 13), 12=-39 (LC 13)  
Max Grav 1=96 (LC 25), 7=82 (LC 24), 8=195 (LC 25), 9=188 (LC 25), 10=133 (LC 27), 11=189 (LC 24), 12=195 (LC 24)

**FORCES**

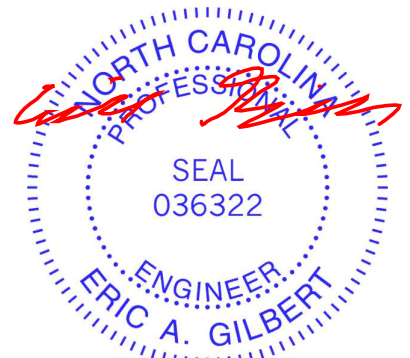
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-99/79, 2-3=-94/55, 3-4=-112/105, 4-5=-112/105, 5-6=-73/27, 6-7=-80/61  
BOT CHORD 1-12=-55/82, 11-12=-55/82, 10-11=-55/82, 9-10=-55/82, 8-9=-55/82, 7-8=-55/82  
WEBS 4-10=-92/13, 3-11=-162/100, 2-12=-161/98, 5-9=-162/100, 6-8=-161/98

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

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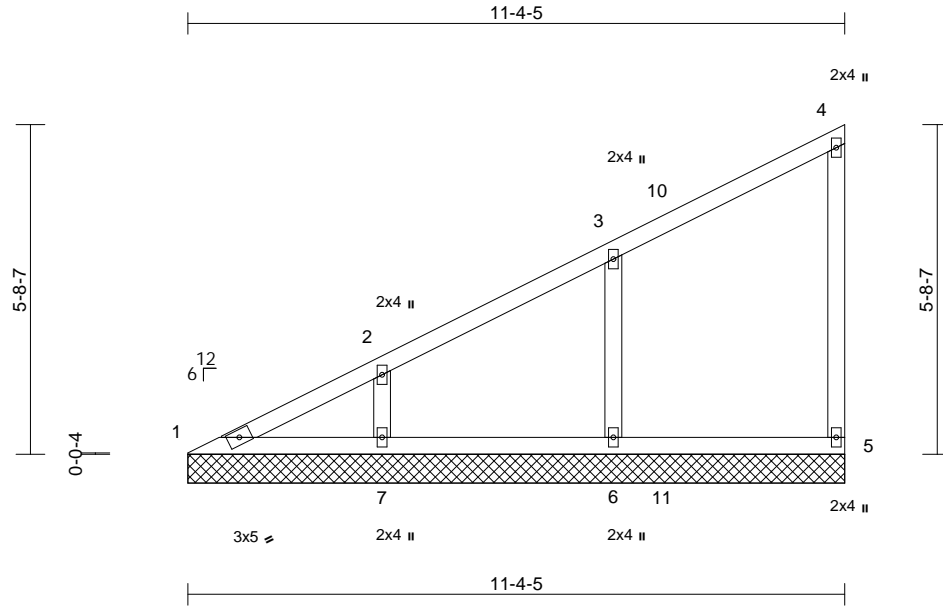
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss VF	Truss Type Valley	Qty 2	Ply 1	Kristie with bonus side load Job Reference (optional)	158301408
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:24  
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Page: 1



Scale = 1:39.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 49 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=11-4-5, 5=11-4-5, 6=11-4-5, 7=11-4-5

Max Horiz	1=168 (LC 12)
Max Uplift	5=-14 (LC 12), 6=-37 (LC 15), 7=-24 (LC 15)
Max Grav	1=125 (LC 29), 5=175 (LC 28), 6=366 (LC 28), 7=331 (LC 2)

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

TOP CHORD	1-2=-318/180, 2-3=-236/149, 3-4=-115/93, 4-5=-107/95
BOT CHORD	1-7=-147/182, 6-7=-84/94, 5-6=-84/94
WEBS	3-6=-271/217, 2-7=-233/165

**NOTES**

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 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.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

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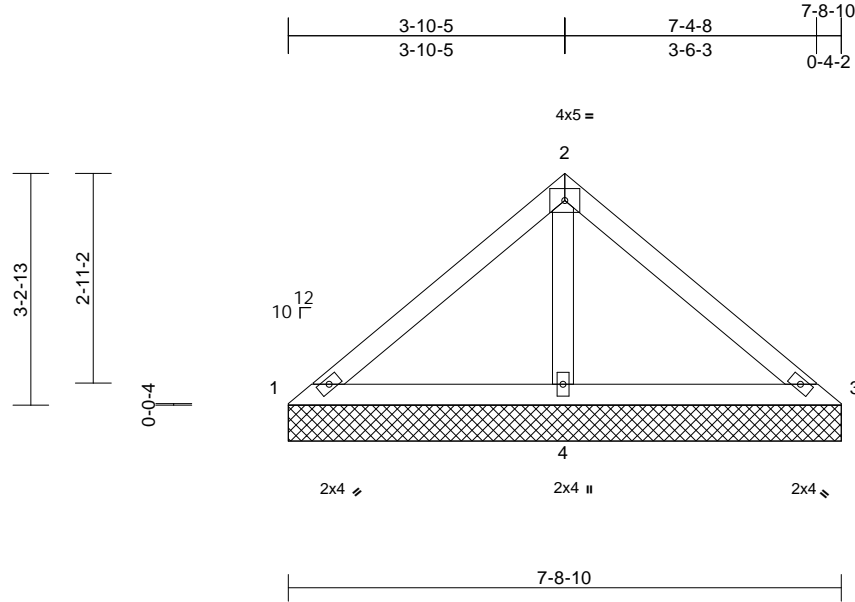
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss VG	Truss Type Valley	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301409
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:24  
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Page: 1



Scale = 1:32.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 29 lb	FT = 20%	

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 7-8-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

#### REACTIONS

(size) 1=7-8-10, 3=7-8-10, 4=7-8-10  
Max Horiz 1=60 (LC 10)  
Max Uplift 1=-11 (LC 29), 3=-9 (LC 28)  
Max Grav 1=66 (LC 28), 3=69 (LC 29), 4=585 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-74/235, 2-3=-72/230  
BOT CHORD 1-4=-208/123, 3-4=-205/122  
WEBS 2-4=-424/138

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10

- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

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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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

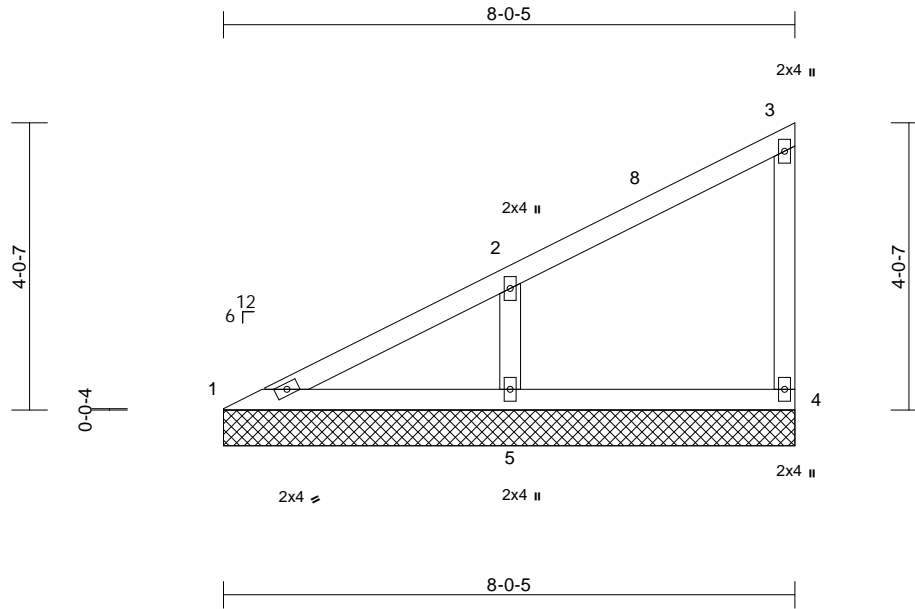
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Kristie with bonus side load	158301410
21050189-A	VH	Valley	2	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 11 12:25:25  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 32 lb	FT = 20%

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

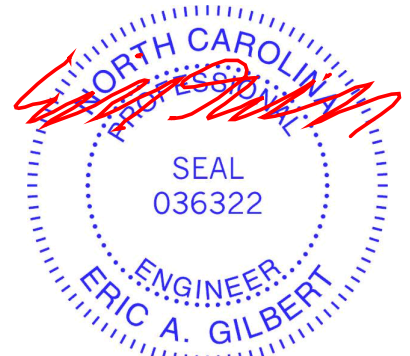
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6'-0" oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.

**REACTIONS** (size) 1=8'-0-5, 4=8'-0-5, 5=8'-0-5  
Max Horiz 1=117 (LC 12)  
Max Uplift 4=-10 (LC 12), 5=-35 (LC 15)  
Max Grav 1=126 (LC 2), 4=118 (LC 2), 5=404 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-224/141, 2-3=-107/81, 3-4=-93/102  
BOT CHORD 1-5=-145/190, 4-5=-63/69  
WEBS 2-5=-287/227

- NOTES**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4'-0" oc.
- 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

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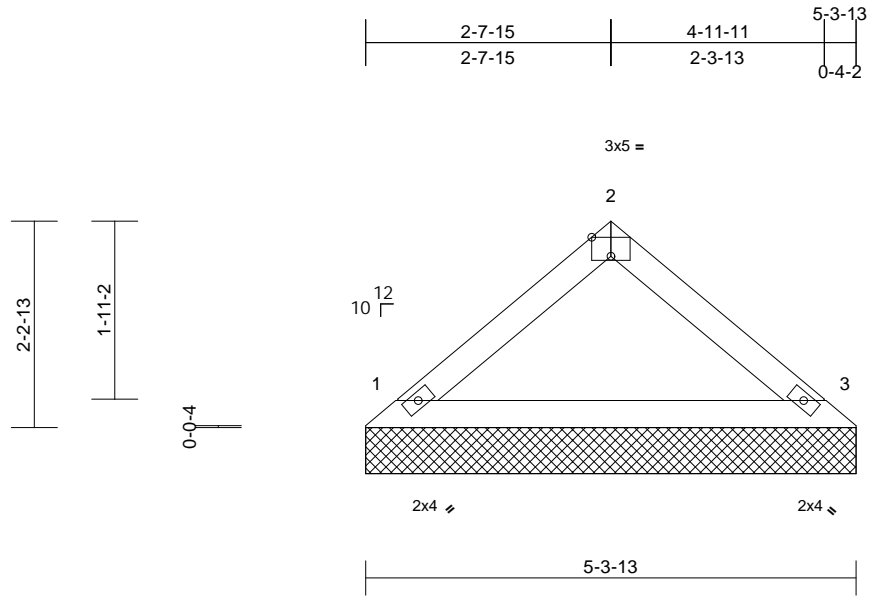


Job 21050189-A	Truss VI	Truss Type Valley	Qty 1	Ply 1	Kristie with bonus side load Job Reference (optional)	158301411
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:25

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
										Weight: 17 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 5-4-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=5-3-13, 3=5-3-13  
Max Horiz 1=-38 (LC 9)  
Max Grav 1=196 (LC 2), 3=196 (LC 2)

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

TOP CHORD 1-2=-156/57, 2-3=-156/57  
BOT CHORD 1-3=-1/91

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.

- \* 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



May 11, 2023

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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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

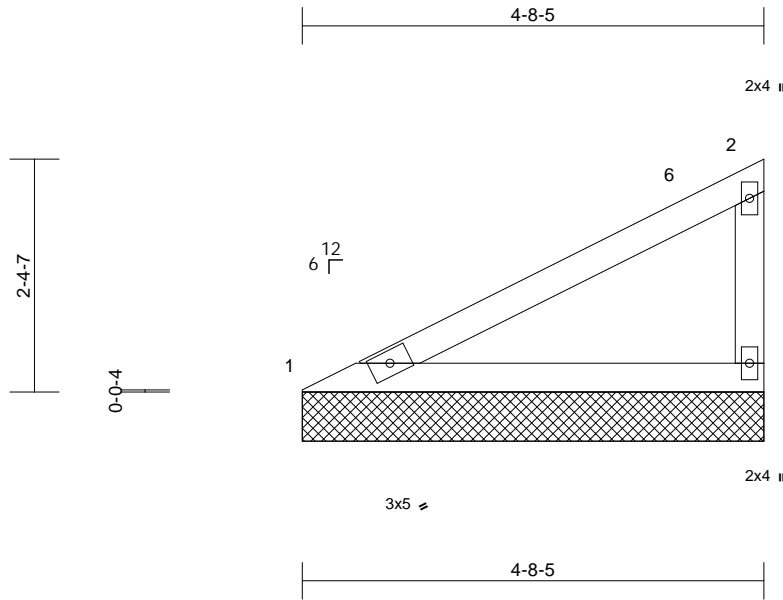
818 Soundside Road  
Edenton, NC 27932

Job 21050189-A	Truss VJ	Truss Type Valley	Qty 2	Ply 1	Kristie with bonus side load Job Reference (optional)	158301412
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:23.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.30	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 16 lb	FT = 20%	

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-8-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS (size)

1=4-8-5, 3=4-8-5  
Max Horiz 1=65 (LC 12)  
Max Uplift 3=-10 (LC 15)  
Max Grav 1=186 (LC 2), 3=187 (LC 2)

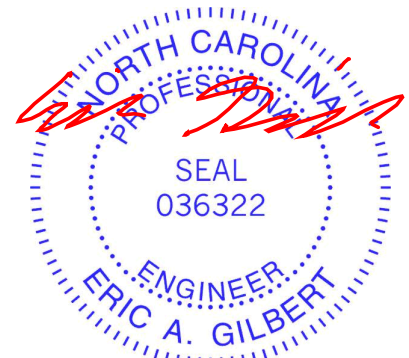
#### FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-315/102, 2-3=-119/109  
BOT CHORD 1-3=-191/276

#### NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C  
Exterior (2) 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=1.33
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber  
DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground  
snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15  
Plate DOL=1.15); Category II; Exp B; Fully Exp.;  
Ct=1.10
- 4) Unbalanced snow loads have been considered for this  
design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 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) All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.



May 11, 2023

#### 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

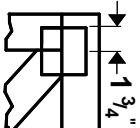
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



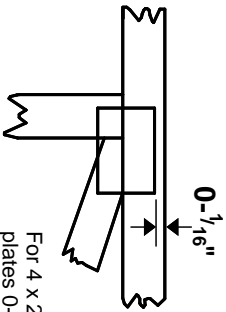
818 Soundside Road  
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

**4 X 4**

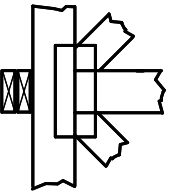
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



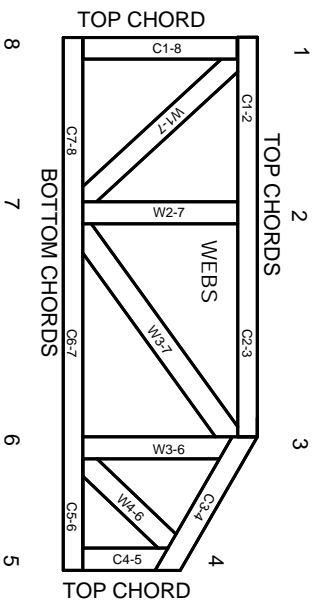
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

6-4-8  
dimensions shown in ft-in-sixteenths  
(Drawings not to scale)



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



# General Safety Notes

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

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