

RE: 21070084-01  
 206 Crossing at ACC-Havenbrooke C-Roof

Trenco  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Customer: Capitol City Homes Project Name: 21070084-01  
 Lot/Block: 206 Model:  
 Address: 144 Kensington Drive Subdivision: Crossings at Anderson Creek  
 City: Spring Lake 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 8.4  
 Wind Code: ASCE 7-10 Wind Speed: 130 mph  
 Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 28 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I45130692	M1	7/14/2021	21	I45130712	T5A	7/14/2021
2	I45130693	M1GE	7/14/2021	22	I45130713	T5SE	7/14/2021
3	I45130694	M2	7/14/2021	23	I45130714	V1	7/14/2021
4	I45130695	M2GE	7/14/2021	24	I45130715	V2	7/14/2021
5	I45130696	M3	7/14/2021	25	I45130716	V3	7/14/2021
6	I45130697	M4	7/14/2021	26	I45130717	V4	7/14/2021
7	I45130698	M4A	7/14/2021	27	I45130718	V5	7/14/2021
8	I45130699	M4GE	7/14/2021	28	I45130719	V6	7/14/2021
9	I45130700	M4SE	7/14/2021				
10	I45130701	T1	7/14/2021				
11	I45130702	T1A	7/14/2021				
12	I45130703	T1GE	7/14/2021				
13	I45130704	T2	7/14/2021				
14	I45130705	T2SE	7/14/2021				
15	I45130706	T3	7/14/2021				
16	I45130707	T3A	7/14/2021				
17	I45130708	T3GE	7/14/2021				
18	I45130709	T4	7/14/2021				
19	I45130710	T4GE	7/14/2021				
20	I45130711	T5	7/14/2021				

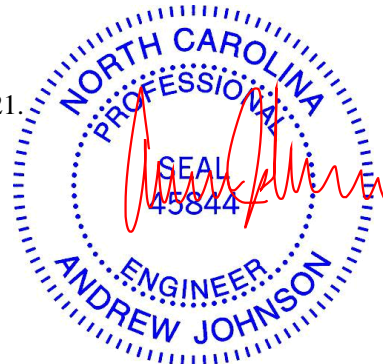
The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Truss Design Engineer's Name: Johnson, Andrew

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

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.



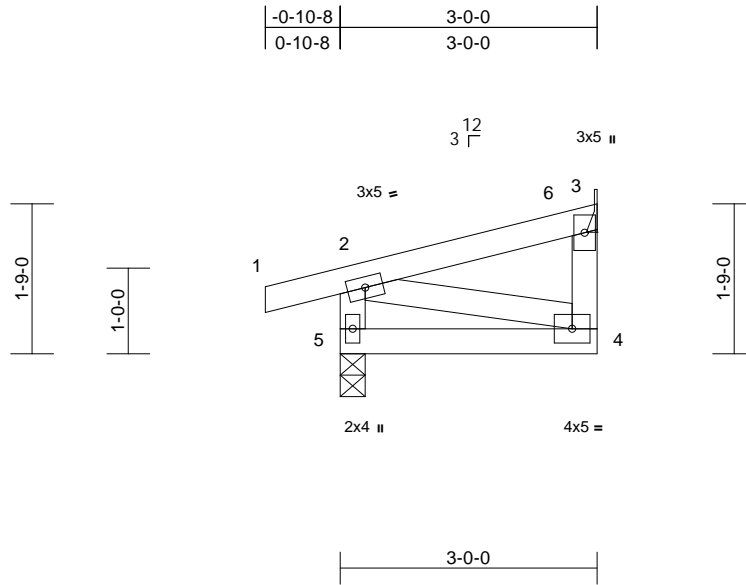
July 14, 2021

Job 21070084-01	Truss M1	Truss Type Monopitch	Qty 7	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	I45130692
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	0.00	5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.06	0.00	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 17 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 3-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 3= Mechanical, 5=0-3-8  
Max Horiz 5=46 (LC 12)  
Max Uplift 3=-5 (LC 12), 5=-36 (LC 11)  
Max Grav 3=97 (LC 2), 5=181 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/19, 2-6=-41/27, 3-6=-34/32, 3-4=-7/41, 2-5=-154/128  
BOT CHORD 4-5=-103/72  
WEBS 2-4=-54/89

**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) 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
- 3) Unbalanced snow loads have been considered for this design.
- 4) 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.

- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 3.
- 8) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
- 9) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

**LOAD CASE(S)** Standard



March 10, 2021

**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



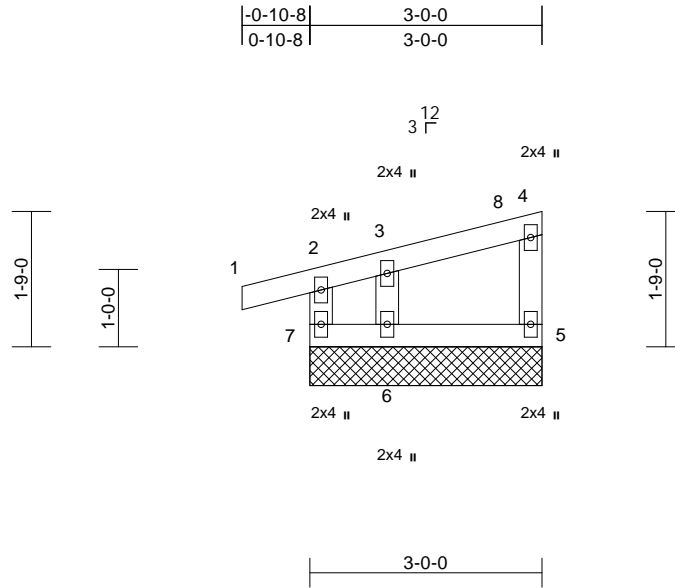
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss M1GE	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130693
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Carter Components (Sanford), Sanford, NC - 27332,

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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	0.09	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(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-R								
BCDL	10.0											
											Weight: 14 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 3-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 5=3-0-0, 6=3-0-0, 7=3-0-0  
Max Horiz 7=46 (LC 14)  
Max Uplift 5=-2 (LC 15), 6=-16 (LC 12), 7=-38 (LC 11)  
Max Grav 5=66 (LC 2), 6=98 (LC 33), 7=131 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-7=-122/87, 1-2=0/19, 2-3=-51/30, 3-8=-28/19, 4-8=-21/21, 4-5=-50/45  
BOT CHORD 6-7=-28/28, 5-6=-28/28  
WEBS 3-6=-75/99

**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.

- 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.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- \* 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.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7, 5, and 6. This connection is for uplift only and does not consider lateral forces.

**LOAD CASE(S)** Standard



March 10, 2021

**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



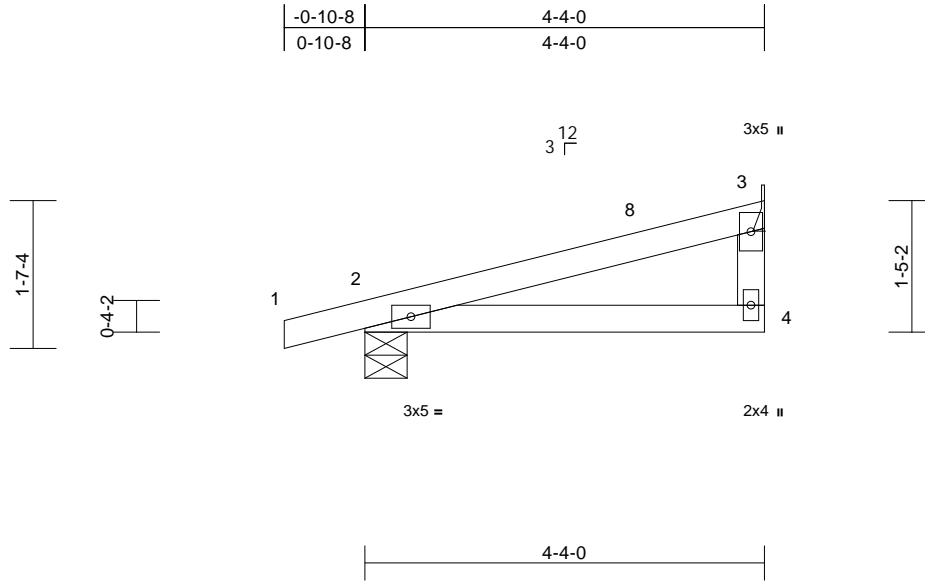
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss M2	Truss Type Monopitch	Qty 2	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	I45130694
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	0.02	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	-0.03	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	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 4-4-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-5-8, 3= Mechanical  
Max Horiz 2=36 (LC 14)  
Max Uplift 2=-32 (LC 11), 3=-7 (LC 15)  
Max Grav 2=225 (LC 2), 3=162 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/16, 2-8=-96/26, 3-8=-36/33, 3-4=-1/57  
BOT CHORD 2-4=-50/83

#### 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) 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
- 3) Unbalanced snow loads have been considered for this  
design.
- 4) 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.

- 5) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 7 lb uplift at joint  
3.
- 8) One RT16A USP connectors recommended to connect  
truss to bearing walls due to UPLIFT at jt(s) 2. This  
connection is for uplift only and does not consider lateral  
forces.
- 9) Gap between inside of top chord bearing and first  
diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard



March 10, 2021

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

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

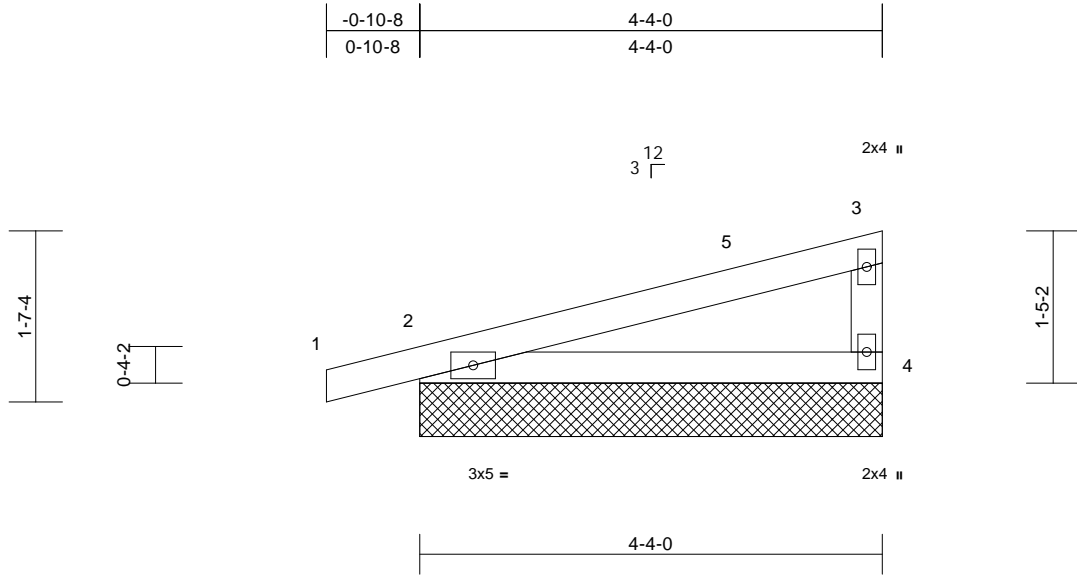
Job 21070084-01	Truss M2GE	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130695
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Carter Components (Sanford), Sanford, NC - 27332,

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.15	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P							
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 4-4-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=4-4-0, 4=4-4-0  
Max Horiz 2=36 (LC 12)  
Max Uplift 2=-32 (LC 11), 4=-7 (LC 15)  
Max Grav 2=225 (LC 2), 4=162 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/13, 2-5=-51/27, 3-5=-44/36, 3-4=-120/105  
BOT CHORD 2-4=-20/22

- 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) 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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 2. This connection is for uplift only and does not consider lateral forces.
- 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.



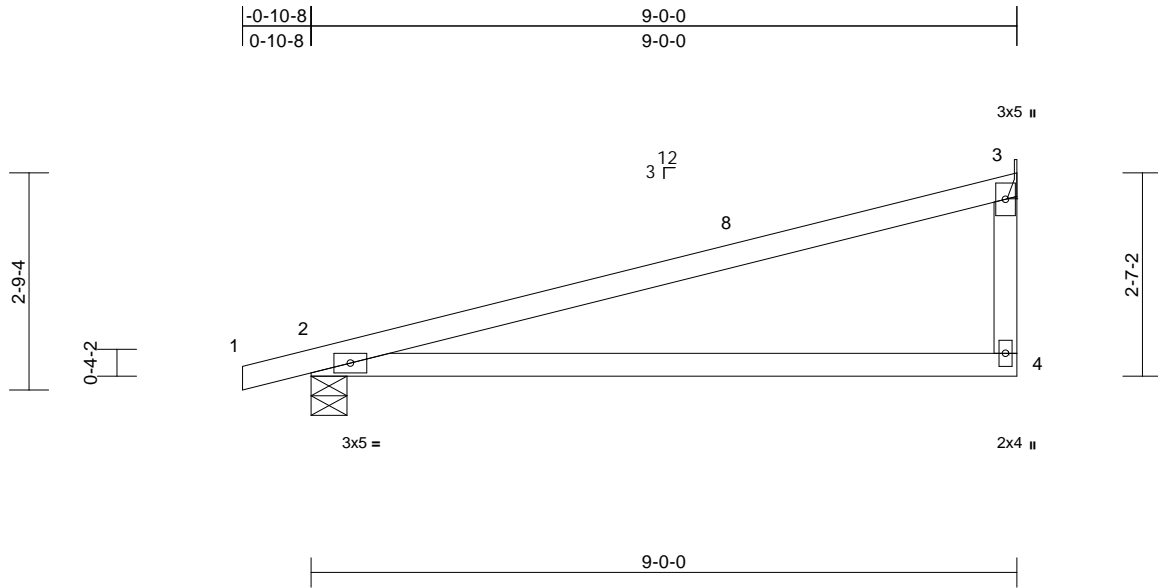
March 10, 2021

Job 21070084-01	Truss M3	Truss Type Monopitch	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130696
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Carter Components (Sanford), Sanford, NC - 27332,

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.25	4-7	>433	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.56	4-7	>189	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 32 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 1-11-14 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-5-8, 3= Mechanical  
Max Horiz 2=72 (LC 14)  
Max Uplift 2=-36 (LC 11), 3=-16 (LC 15)  
Max Grav 2=409 (LC 2), 3=352 (LC 2)

**FORCES**

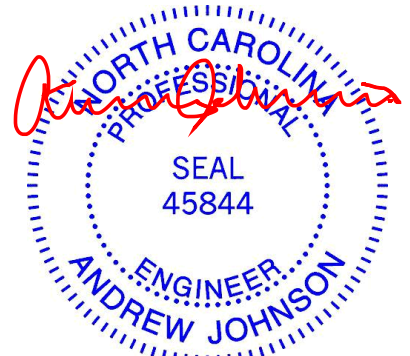
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-8=-250/49, 3-8=-73/65,  
3-4=0/117  
BOT CHORD 2-4=-119/242

**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) 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
- 3) Unbalanced snow loads have been considered for this  
design.
- 4) 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.

- 5) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 16 lb uplift at joint  
3.
- 8) One RT16A USP connectors recommended to connect  
truss to bearing walls due to UPLIFT at jt(s) 2. This  
connection is for uplift only and does not consider lateral  
forces.
- 9) Gap between inside of top chord bearing and first  
diagonal or vertical web shall not exceed 0.500in.

**LOAD CASE(S)** Standard



March 10, 2021

**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



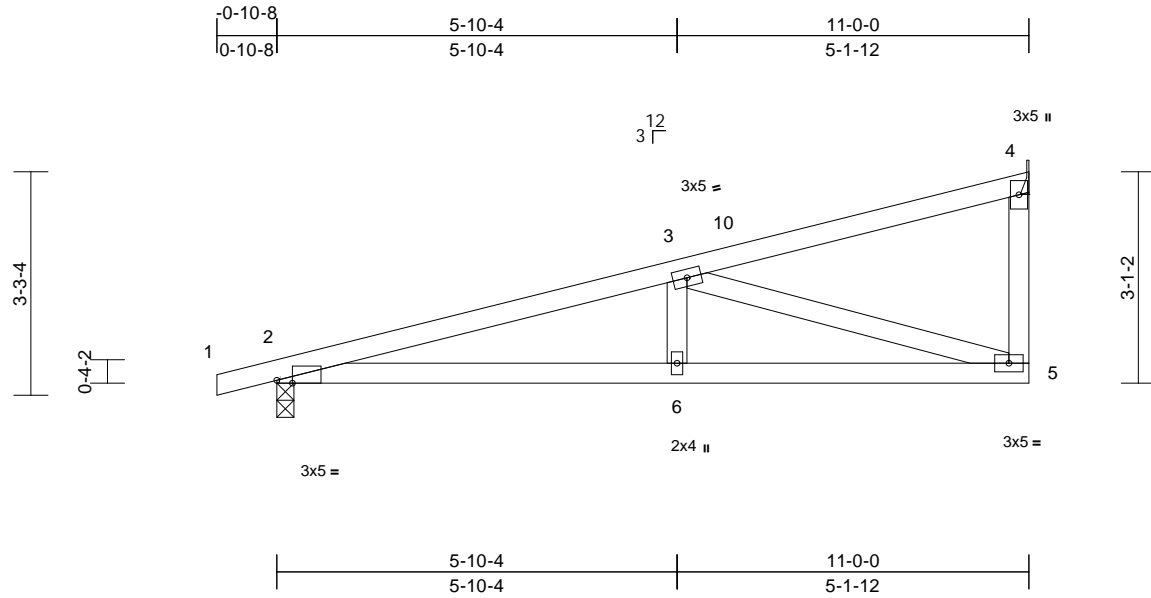
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss M4	Truss Type Monopitch	Qty 3	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130697
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:20  
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Page: 1



Scale = 1:33.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.04	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.09	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	-0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 47 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 5-6-11 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 9-9-13 oc bracing.

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

Max Horiz 2=88 (LC 14)  
Max Uplift 2=-38 (LC 11), 4=-20 (LC 15)  
Max Grav 2=489 (LC 2), 4=432 (LC 2)

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

TOP CHORD 1-2=0/16, 2-3=-961/286, 3-10=-81/26, 4-10=-54/39, 4-5=-69/311  
BOT CHORD 2-6=-350/914, 5-6=-350/914  
WEBS 3-6=0/137, 3-5=-931/325

**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) 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
- 3) Unbalanced snow loads have been considered for this design.

- 4) 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.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 4.
- 8) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 9) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

**LOAD CASE(S)** Standard



March 10, 2021

**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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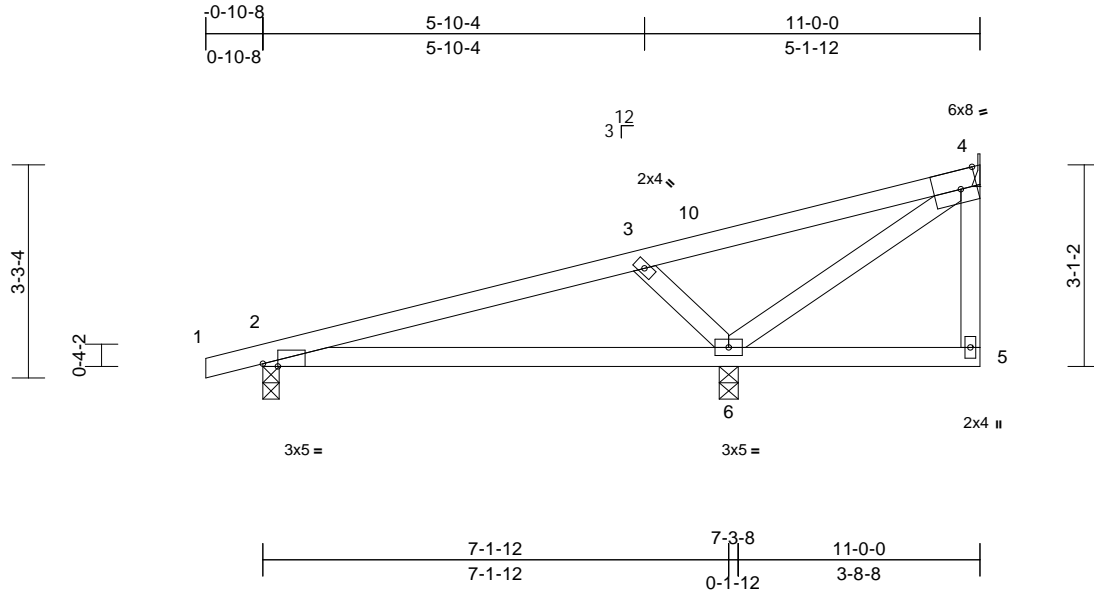
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss M4A	Truss Type Monopitch	Qty 3	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	I45130698
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:20  
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Page: 1



Scale = 1:35.3

Plate Offsets (X, Y): [2:0-2-12,Edge], [4:0-3-0,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	0.43	Vert(LL)	-0.03	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.09	6-9	>920	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 48 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 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-3-0, 4= Mechanical, 6=0-3-8  
Max Horiz 2=88 (LC 14)  
Max Uplift 2=-30 (LC 11), 4=-7 (LC 12), 6=-22 (LC 15)  
Max Grav 2=304 (LC 2), 4=88 (LC 22), 6=542 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

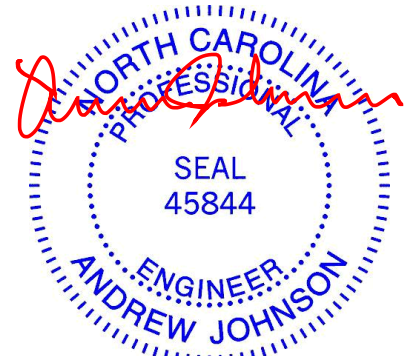
TOP CHORD 1-2=0/16, 2-3=-223/84, 3-10=-108/75, 4-10=-100/127, 4-5=0/19  
BOT CHORD 2-6=-168/203, 5-6=-41/42  
WEBS 3-6=-430/257, 4-6=-133/80

**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) 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
- 3) Unbalanced snow loads have been considered for this design.

- 4) 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.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 6 and 7 lb uplift at joint 4.
- 8) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 9) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

**LOAD CASE(S)** Standard



March 10, 2021

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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

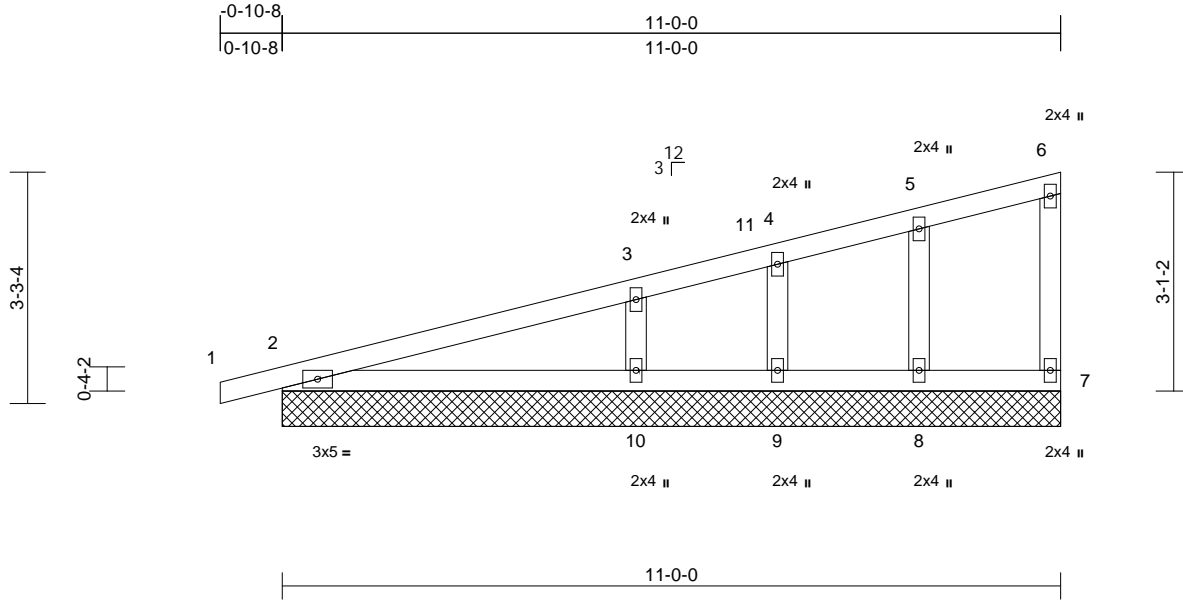


Job 21070084-01	Truss M4GE	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130699
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:20  
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Page: 1



Scale = 1:32.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	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(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 45 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)	2=11-0-0, 7=11-0-0, 8=11-0-0, 9=11-0-0, 10=11-0-0
Max Horiz	2=87 (LC 12)
Max Uplift	2=-24 (LC 11), 7=-2 (LC 12), 8=-10 (LC 15), 9=-5 (LC 11), 10=-23 (LC 15)
Max Grav	2=221 (LC 2), 7=57 (LC 22), 8=199 (LC 2), 9=47 (LC 22), 10=410 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-3=-144/87, 3-11=-85/42, 4-11=-80/50, 4-5=-71/55, 5-6=-49/44, 6-7=-43/32
BOT CHORD	2-10=-44/49, 9-10=-44/49, 8-9=-44/49, 7-8=-44/49
WEBS	5-8=-145/99, 4-9=-48/38, 3-10=-285/177

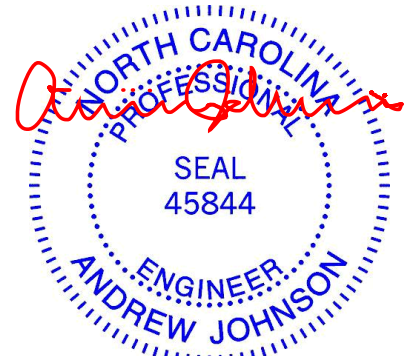
#### NOTES

- 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) 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) All plates are 2x4 MT20 unless otherwise indicated.
- 7) Gable requires continuous bottom chord bearing.
- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 2.
- 11) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7, 8, 9, and 10. This connection is for uplift only and does not consider lateral forces.

#### LOAD CASE(S)

Standard



March 10, 2021

**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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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

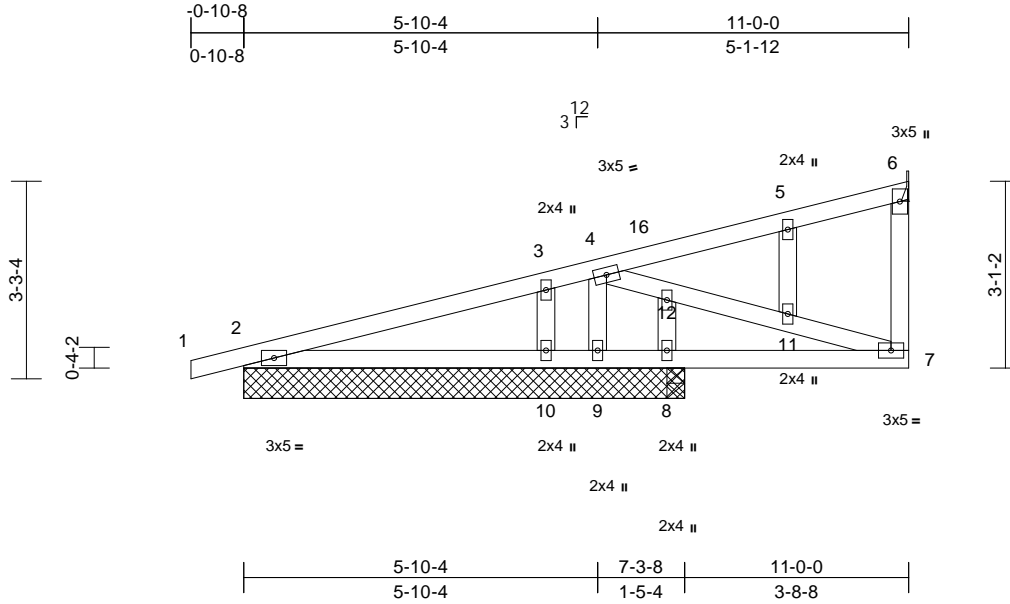
Job 21070084-01	Truss M4SE	Truss Type Monopitch Structural Gable	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130700
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:21

Page: 1

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Scale = 1:38.1

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)	-0.01	10-15	>999	240	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.03	10-15	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.00	6	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH							
BCDL	10.0										
										Weight: 53 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.

<b>REACTIONS</b> (size)	2=7-3-8, 6= Mechanical, 8=0-3-8, 9=7-3-8, 10=7-3-8, 13=7-3-8
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Max Horiz	2=88 (LC 14), 13=88 (LC 14)
Max Uplift	2=-31 (LC 11), 6=-14 (LC 15), 9=-122 (LC 2), 13=-31 (LC 11)
Max Grav	2=231 (LC 2), 6=157 (LC 22), 8=215 (LC 2), 9=-38 (LC 15), 10=441 (LC 2), 13=231 (LC 2)

<b>FORCES</b> (lb) - Maximum Compression/Maximum Tension	
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TOP CHORD	1-2=0/16, 2-3=-103/49, 3-4=-89/49, 4-16=-71/32, 5-16=-65/44, 5-6=-52/44, 6-7=-22/85
BOT CHORD	2-10=-77/98, 9-10=-77/71, 8-9=-77/71, 7-8=-77/71
WEBS	4-9=-41/30, 4-12=-56/68, 11-12=-33/48, 7-11=-53/66, 5-11=-104/72, 8-12=-115/80, 3-10=-226/116

#### 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) 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) Gable studs spaced at 2-0-0 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) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 6, 31 lb uplift at joint 2 and 31 lb uplift at joint 2.
- 10) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.
- 11) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

**LOAD CASE(S)** Standard



March 10, 2021

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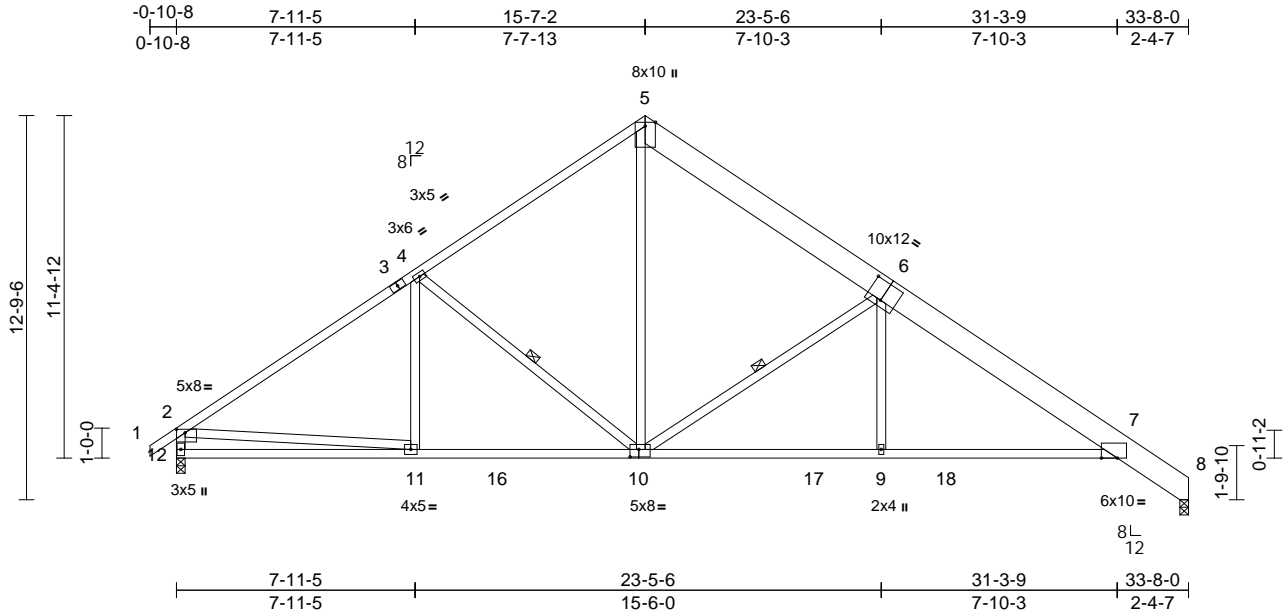
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss T1	Truss Type Roof Special	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130701
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 3 2021 Print: 8.430 S Feb 3 2021 MiTek Industries, Inc. Wed Mar 10 10:21:15  
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Page: 1



Scale = 1:76.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.15	9-15	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.34	9-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.18	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 235 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2 \*Except\* 5-6,6-8:2x10 SP 2400F 2.0E

BOT CHORD 2x4 SP No.2

WEBS 2x4 SP No.2 \*Except\* 12-2:2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 4-10, 6-10

**REACTIONS** (lb/size) 8=1138/0-3-8, 12=1180/0-3-8  
Max Horiz 12=241 (LC 9)  
Max Grav 8=1361 (LC 26), 12=1397 (LC 2)

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

TOP CHORD 2-3=-1811/316, 3-4=-1570/320, 4-5=-1377/359, 5-6=-1412/355, 6-7=-2171/366, 7-8=-746/146, 2-12=-1323/294

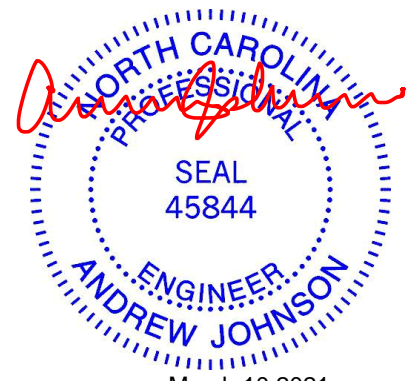
BOT CHORD 11-12=-230/566, 11-16=-84/1542, 10-16=-84/1542, 10-17=-167/1881, 9-17=-167/1881, 9-18=-170/1871, 7-18=-170/1871

WEBS 4-10=-570/215, 5-10=-210/1071, 6-10=-1179/305, 6-9=0/331, 2-11=0/1097

- 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 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.
- Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 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**
- 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



March 10, 2021

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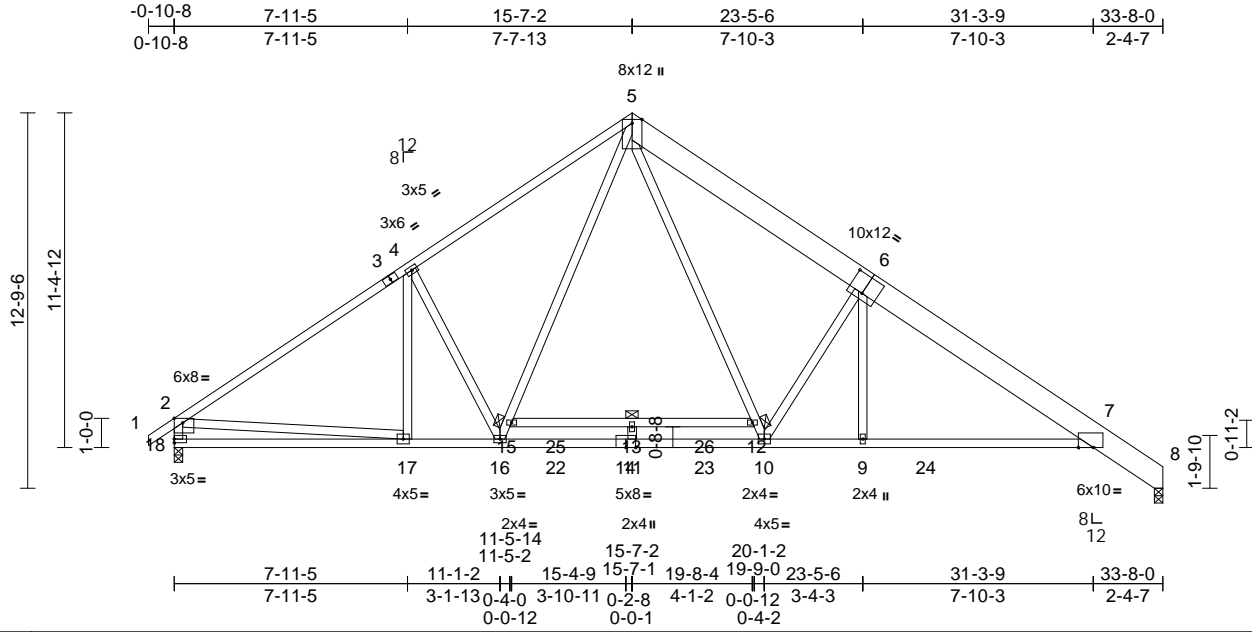


Job 21070084-01	Truss T1A	Truss Type Roof Special	Qty 2	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130702
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:21  
ID:zc3wsXIY2O46z80P4opZTTzB1hp-Mock Me

Page: 1



Scale = 1:78.5

Plate Offsets (X, Y): [2:0-3-8,Edge], [6:0-6-0,0-7-8], [7:0-6-2,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.34	13	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.63	12-13	>635	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.18	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 257 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 5-6,6-8:2x10 SP 2400F 2.0E  
BOT CHORD 2x4 SP No.1 \*Except\* 15-12:2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 18-2,11-13:2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
6-0-0 oc bracing: 12-15

**REACTIONS** (size) 8=0-3-8, 18=0-3-8  
Max Horiz 18=241 (LC 9)  
Max Grav 8=1513 (LC 26), 18=1550 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/43, 2-3=-2037/234, 3-4=-1821/238,  
4-5=-1917/339, 5-6=-2239/358,  
6-7=-2477/277, 7-8=-830/119,  
2-18=-1463/243  
BOT CHORD 17-18=-220/614, 16-17=-15/1750,  
16-22=0/1355, 14-22=0/1355, 11-14=0/1355,  
11-23=0/1354, 10-23=0/1354, 9-10=-88/2151,  
9-24=-89/2147, 7-24=-89/2147, 15-25=-81/0,  
13-25=-81/0, 13-26=-79/0, 12-26=-79/0  
WEBS 4-17=-123/47, 6-9=0/106, 2-17=0/1259,  
4-16=-434/248, 15-16=-125/692,  
5-15=-89/824, 5-12=-128/1355,  
10-12=-164/1223, 6-10=-990/317,  
11-13=-120/0

- 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
- 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.
- Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

**LOAD CASE(S)** Standard

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



March 10, 2021

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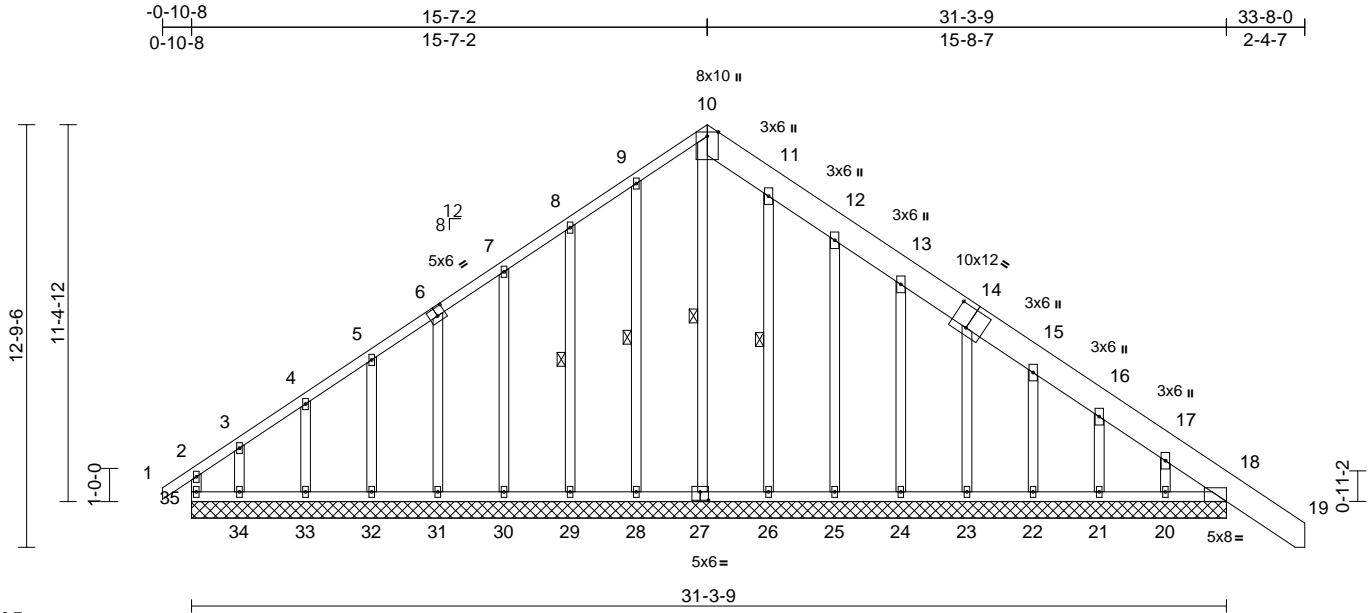


Job 21070084-01	Truss T1GE	Truss Type Common Supported Gable	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130703
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:22  
ID:FMp59DAAMBic?FXPbf5MGizB0kb-Mock Me

Page: 1



Scale = 1:69.7

Plate Offsets (X, Y): [6:0-3-0,0-3-0], [14:0-6-0,0-7-8], [27:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	18	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH								
BCDL	10.0											
											Weight: 289 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 10-14,14-19:2x10 SP 2400F 2.0E  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.2 \*Except\* 32-5,33-4,34-3,22-15,21-16,20-17:2x4 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 10-27, 9-28, 8-29, 11-26

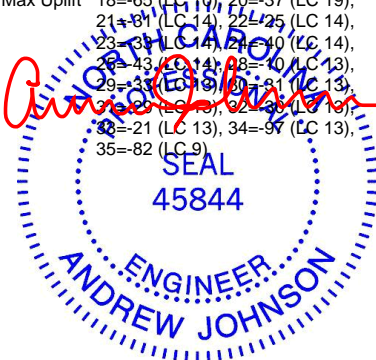
**REACTIONS** (size)  
18=31-3-9, 20=31-3-9, 21=31-3-9, 22=31-3-9, 23=31-3-9, 24=31-3-9, 25=31-3-9, 26=31-3-9, 27=31-3-9, 28=31-3-9, 29=31-3-9, 30=31-3-9, 31=31-3-9, 32=31-3-9, 33=31-3-9, 34=31-3-9, 35=31-3-9

Max Horiz 35=245 (LC 11)  
Max Uplift 18=65 (LC 19), 20=37 (LC 19), 21=81 (LC 14), 22=25 (LC 14), 23=31 (LC 14), 24=40 (LC 14), 25=43 (LC 14), 26=40 (LC 13), 27=33 (LC 19), 28=51 (LC 13), 29=39 (LC 19), 30=40 (LC 13), 31=21 (LC 13), 34=97 (LC 13), 35=82 (LC 9)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-35=146/65, 1-2=0/43, 2-3=138/126, 3-4=92/93, 4-5=88/85, 5-6=93/121, 6-7=141/179, 7-8=190/238, 8-9=240/300, 9-10=275/338, 10-11=258/318, 11-12=246/307, 12-13=191/236, 13-14=137/170, 14-15=109/120, 15-16=121/120, 16-17=136/125, 17-18=183/135, 18-19=0/78  
BOT CHORD 34-35=134/163, 33-34=134/163, 32-33=134/163, 31-32=134/163, 30-31=135/163, 29-30=135/163, 28-29=135/163, 27-28=135/163, 26-27=134/164, 25-26=133/164, 24-25=133/164, 23-24=132/163, 22-23=129/162, 21-22=128/162, 20-21=126/161, 18-20=124/159  
WEBS 10-27=256/144, 9-28=134/49, 8-29=130/87, 7-30=131/83, 6-31=127/82, 5-32=122/78, 4-33=130/82, 3-34=136/97, 11-26=119/9, 12-25=145/103, 13-24=143/99, 14-23=131/86, 15-22=120/76, 16-21=128/83, 17-20=157/68

**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
- 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
- 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 requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.



March 10, 2021

Continued on page 2

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

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	206 Crossing at ACC-Havenbrooke C-Roof
21070084-01	T1GE	Common Supported Gable	1	1	I45130703 Job Reference (optional)

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

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Page: 2

- 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) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 35, 28, 29, 30, 31, 32, 33, 34, 25, 24, 23, 22, 21, 20, and 18. This connection is for uplift only and does not consider lateral forces.

**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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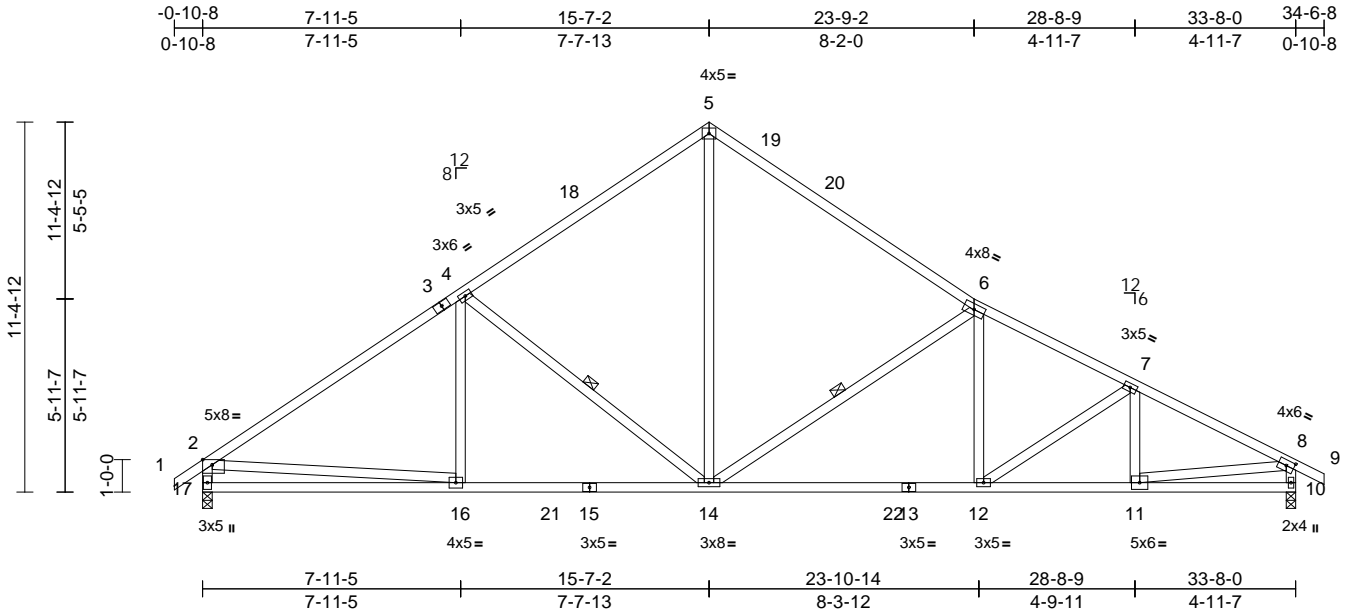
Job 21070084-01	Truss T2	Truss Type Roof Special	Qty 3	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	I45130704
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:23

Page: 1

ID:v\_BhHCmpa?KqCS9nBD1YuzB1hn-Mock Me



Scale = 1:71

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.10	14-16	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.27	12-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.06	10	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 \*Except\* 5-6:2x4 SP 2400F 2.0E  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2 \*Except\* 17-2,10-8,11-7,11-8:2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 4-14, 6-14

**REACTIONS**

(size) 10=0-3-8, 17=0-3-8  
 Max Horiz 17=240 (LC 13)  
 Max Uplift 10=5 (LC 16)  
 Max Grav 10=1396 (LC 2), 17=1396 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/43, 2-3=-1808/334, 3-4=-1549/338, 4-18=-1369/350, 5-18=-1232/376, 5-19=-1142/362, 19-20=-1208/339, 6-20=-1364/334, 6-7=-1931/415, 7-8=-2029/406, 8-9=0/34, 2-17=-1321/307, 8-10=-1338/340  
 BOT CHORD 16-17=-177/565, 16-21=-116/1521, 15-21=-116/1521, 14-15=-116/1521, 14-22=-184/1668, 13-22=-184/1668, 12-13=-184/1668, 11-12=-273/1753, 10-11=-50/211  
 WEBS 4-16=0/188, 4-14=-573/210, 5-14=-193/935, 6-14=-823/285, 6-12=0/288, 2-16=0/1052, 7-12=-192/112, 7-11=-176/90, 8-11=-228/1561

**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) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10. This connection is for uplift only and does not consider lateral forces.

**LOAD CASE(S)** Standard



March 10, 2021

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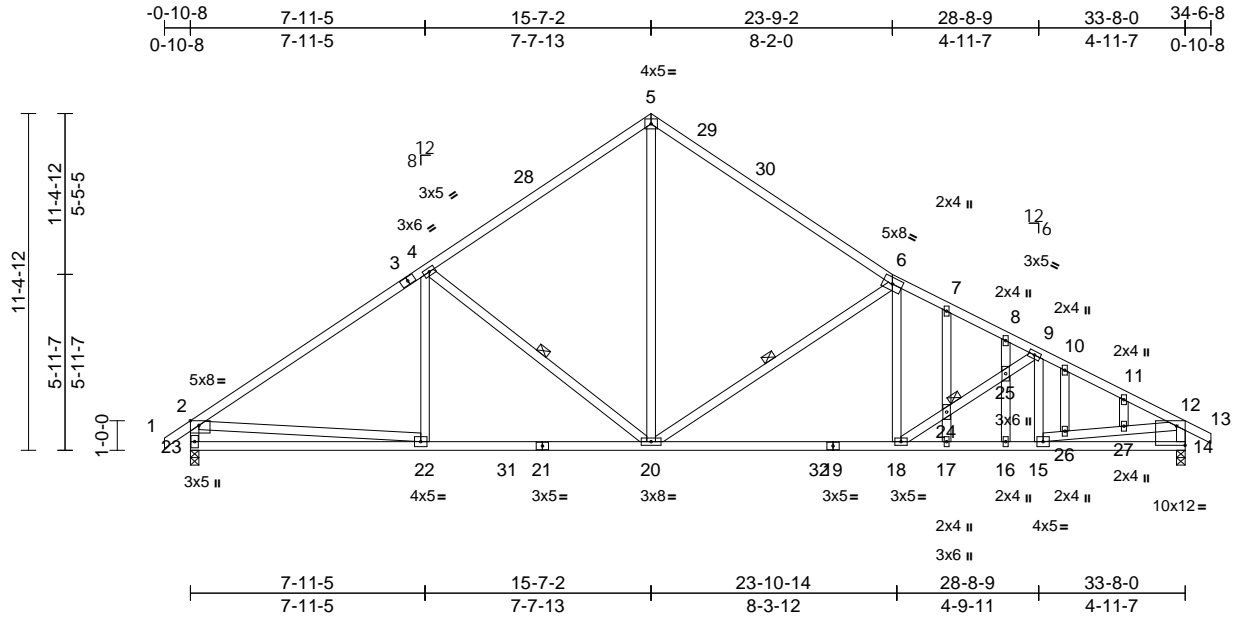
Job 21070084-01	Truss T2SE	Truss Type Roof Special Structural Gable	Qty 2	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130705
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:23

Page: 1

Id:KZtpvEphwtiP3vuMtLOkAXzB1hk-Mock Me



Scale = 1:78

Plate Offsets (X, Y): [2:0-3-8,Edge], [14:Edge,0-7-13]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.10	20-22	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.26	18-20	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.06	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 221 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP 2400F 2.0E \*Except\* 6-13:2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 23-2,14-12,15-9:2x4 SP No.3  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-6-6 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 4-20, 6-20  
JOINTS 1 Brace at Jt(s): 24

**REACTIONS** (size) 14=0-3-8, 23=0-3-8  
Max Horiz 23=240 (LC 13)  
Max Uplift 14=5 (LC 16)  
Max Grav 14=1396 (LC 2), 23=1396 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/43, 2-3=-1808/334, 3-4=-1548/337, 4-28=-1369/351, 5-28=-1233/376, 5-29=-1144/363, 29-30=-1209/340, 6-30=-1366/336, 6-7=-1854/414, 7-8=-1898/407, 8-9=-1945/391, 9-10=-1858/396, 10-11=-2005/404, 11-12=-2058/383, 12-13=0/34, 2-23=-1321/307, 12-14=-1331/338  
BOT CHORD 22-23=-168/554, 22-31=-116/1521, 21-31=-116/1521, 20-21=-116/1521, 20-32=-186/1671, 19-32=-186/1671, 18-19=-186/1671, 17-18=-270/1763, 16-17=-270/1763, 15-16=-270/1763, 14-15=-59/320

**WEBS** 4-22=0/189, 4-20=-574/209, 5-20=-195/935, 6-20=-826/288, 6-18=0/330, 2-22=-7/1052, 18-24=-202/109, 24-25=-194/104, 9-25=-192/102, 9-15=-373/106, 15-26=-215/1491, 26-27=-212/1454, 12-27=-214/1457, 7-24=-66/42, 17-24=-67/12, 8-25=0/34, 16-25=0/49, 10-26=-32/221, 11-27=-20/24

- 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
  - 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.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.

- \* 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.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14. This connection is for uplift only and does not consider lateral forces.

**LOAD CASE(S)** Standard



March 10, 2021

**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



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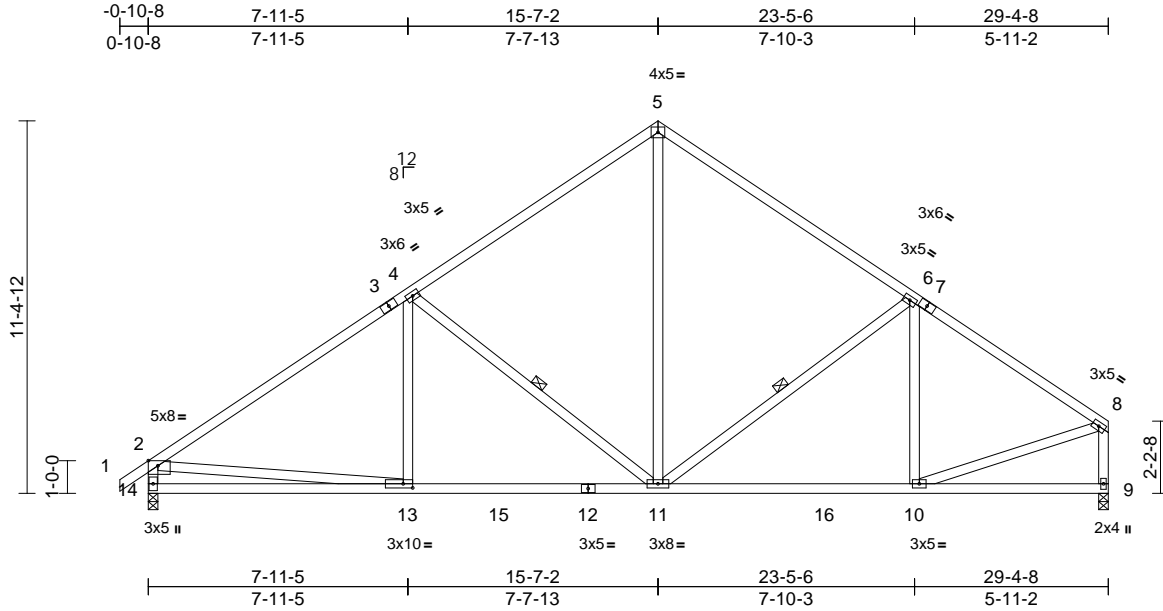
Job 21070084-01	Truss T3	Truss Type Common	Qty 5	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130706
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:24

Page: 1

ID:R39kehzrpwLZ7vOs7a7nCGzB1hX-Mock Me



Scale = 1:70.5  
Plate Offsets (X, Y): [2:0-3-8,Edge], [13:0-3-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.08	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.17	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 182 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 14-2,9-8;2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 4-11, 6-11

**REACTIONS** (size) 9=0-3-8, 14=0-3-8  
Max Horiz 14=248 (LC 12)  
Max Grav 9=1162 (LC 2), 14=1226 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/43, 2-3=-1542/272, 3-4=-1302/276,  
4-5=-1081/312, 5-6=-1083/308,  
6-7=-1089/248, 7-8=-1259/245,  
2-14=-1152/268, 8-9=-1114/211  
BOT CHORD 13-14=-259/543, 13-15=-194/1310,  
12-15=-194/1310, 11-12=-194/1310,  
11-16=-156/988, 10-16=-156/988,  
9-10=-28/59  
WEBS 4-13=0/202, 4-11=-598/217, 5-11=-145/696,  
6-11=-355/177, 6-10=-183/135, 2-13=0/868,  
8-10=-135/1010

**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

- 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 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.

**LOAD CASE(S)** Standard



March 10, 2021

**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



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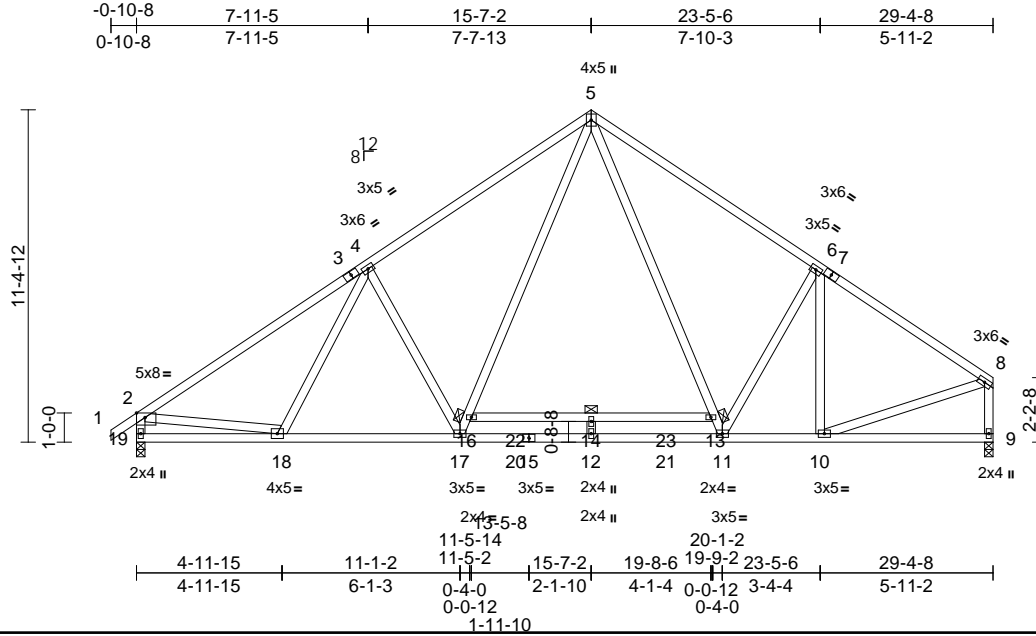
Job 21070084-01	Truss T3A	Truss Type Common	Qty 5	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130707
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:25

Page: 1

ID:oIRB7aqJeEqGh3TZQ3wzizkB1hj-Mock Me



Scale = 1:79

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.34	12-17	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.57	12-17	>610	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 202 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\* 15-9:2x4 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 19-2-9-8,18-2,12-14:2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 2-2-0 oc bracing: 12-17.  
 6-0-0 oc bracing: 13-16

**REACTIONS**

(size) 9=0-3-8, 19=0-3-8  
 Max Horiz 19=248 (LC 10)  
 Max Grav 9=1311 (LC 26), 19=1353 (LC 25)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/43, 2-3=-1670/190, 3-4=-1454/194,  
 4-5=-1590/306, 5-6=-1481/286,  
 6-7=-1258/191, 7-8=-1419/189,  
 2-19=-1289/205, 8-9=-1241/164  
 BOT CHORD 18-19=-284/535, 17-18=-143/1485,  
 17-20=0/1057, 15-20=0/1057, 12-15=0/1057,  
 12-21=0/1057, 11-21=0/1057,  
 10-11=-109/1129, 9-10=-24/67, 16-22=-71/0,  
 14-22=-71/0, 14-23=-71/0, 13-23=-71/0  
 WEBS 4-18=-130/39, 2-18=0/1010, 4-17=-428/266,  
 16-17=-127/704, 5-16=-90/836,  
 5-13=-53/604, 11-13=-90/472, 6-11=-211/227,  
 6-10=-400/63, 8-10=-90/1142, 12-14=-114/0

**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
- 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.

**LOAD CASE(S)** Standard



March 10, 2021

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

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



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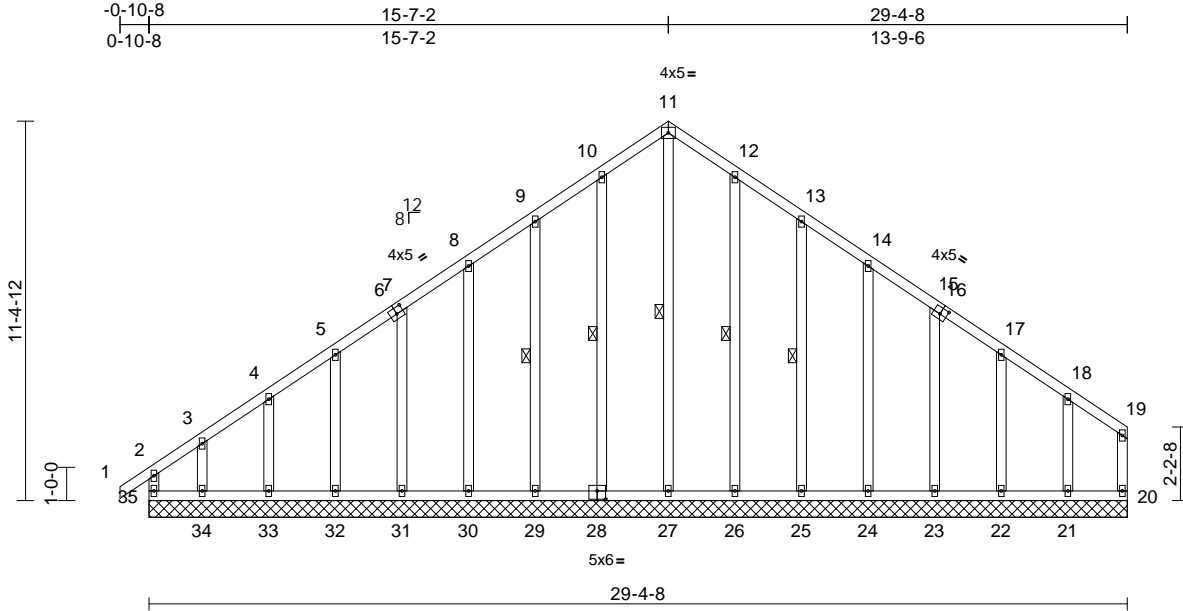
Job 21070084-01	Truss T3GE	Truss Type Common Supported Gable	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130708
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:25

Page: 1

ID:Gy\_aKwqxOYz7ID2L\_mRCFyzB1hi-Mock Me



Scale = 1:69.2

Plate Offsets (X, Y): [6:0-2-8,0-2-4], [16:0-2-8,0-2-4], [28:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.00	20	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-R								
BCDL	10.0											
											Weight: 230 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.2 \*Except\*  
32-5,33-4,34-3,22-17,21-18:2x4 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 11-27, 10-28, 9-29, 12-26, 13-25

**REACTIONS** (size)  
20=29-4-8, 21=29-4-8, 22=29-4-8, 23=29-4-8, 24=29-4-8, 25=29-4-8, 26=29-4-8, 27=29-4-8, 28=29-4-8, 29=29-4-8, 30=29-4-8, 31=29-4-8, 32=29-4-8, 33=29-4-8, 34=29-4-8, 35=29-4-8  
Max Horiz 35=248 (LC 10)  
Max Uplift 20=20 (LC 10), 21=63 (LC 14), 22=23 (LC 14), 23=32 (LC 14), 24=28 (LC 14), 25=36 (LC 14), 26=18 (LC 14), 27=50 (LC 12), 28=21 (LC 13), 29=36 (LC 13), 30=29 (LC 13), 31=29 (LC 13), 32=33 (LC 13), 33=16 (LC 13), 34=161 (LC 10), 35=210 (LC 9)  
Max Grav 20=78 (LC 25), 21=197 (LC 26), 22=161 (LC 2), 23=168 (LC 26), 24=165 (LC 26), 25=168 (LC 26), 26=168 (LC 26), 27=262 (LC 14), 28=177 (LC 25), 29=162 (LC 25), 30=167 (LC 25), 31=165 (LC 25), 32=169 (LC 25), 33=167 (LC 2), 34=239 (LC 11), 35=280 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-35=-222/166, 1-2=0/43, 2-3=-269/249, 3-4=-215/204, 4-5=-210/208, 5-6=-196/193, 6-7=-176/205, 7-8=-187/214, 8-9=-235/272, 9-10=-287/334, 10-11=-330/384, 11-12=-330/384, 12-13=-289/335, 13-14=-237/273, 14-15=-189/216, 15-16=-120/157, 16-17=-140/150, 17-18=-92/99, 18-19=-48/36, 19-20=-50/24  
BOT CHORD 34-35=-48/51, 33-34=-48/51, 32-33=-48/51, 31-32=-48/51, 30-31=-48/51, 29-30=-48/51, 28-29=-48/51, 27-28=-47/50, 26-27=-47/50, 25-26=-47/50, 24-25=-47/50, 23-24=-47/50, 22-23=-47/50, 21-22=-47/50, 20-21=-47/50  
WEBS 11-27=-353/244, 10-28=-137/65, 9-29=-135/91, 8-30=-126/80, 7-31=-128/82, 5-32=-127/82, 4-33=-129/83, 3-34=-154/110, 12-26=-128/65, 13-25=-135/91, 14-24=-126/80, 15-23=-128/82, 17-22=-127/80, 18-21=-137/93

**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.

- 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 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 requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 28.



March 10, 2021

Continued on page 2

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

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Job	Truss	Truss Type	Qty	Ply	206 Crossing at ACC-Havenbrooke C-Roof
21070084-01	T3GE	Common Supported Gable	1	1	I45130708 Job Reference (optional)

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

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:25  
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Page: 2

- 12) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 35, 20, 27, 29, 30, 31, 32, 33, 34, 26, 25, 24, 23, 22, and 21. This connection is for uplift only and does not consider lateral forces.

**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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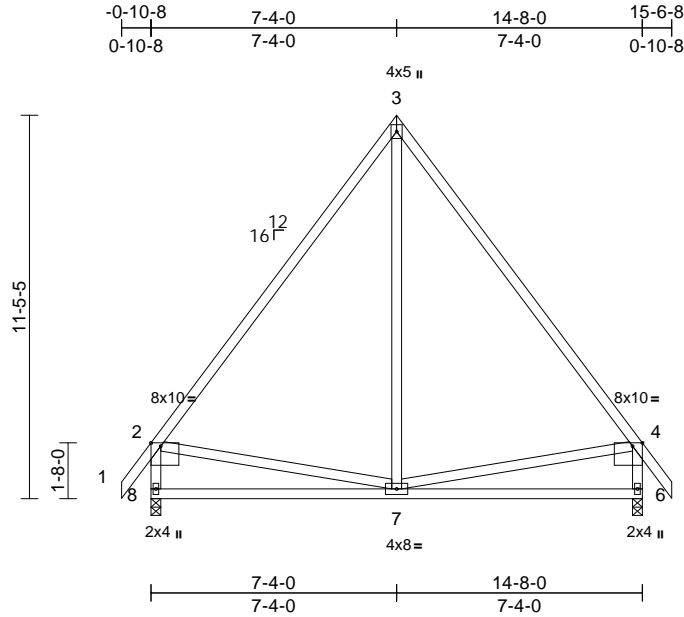
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Job 21070084-01	Truss T4	Truss Type Common	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130709
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:26  
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Page: 1



Scale = 1:68.8

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	0.01	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.06	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 104 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-8-6 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 9-9-11 oc bracing.

**REACTIONS** (size) 6=0-3-8, 8=0-3-8

Max Horiz 8=-277 (LC 11)  
Max Uplift 6=-7 (LC 13), 8=-7 (LC 14)  
Max Grav 6=636 (LC 2), 8=636 (LC 2)

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

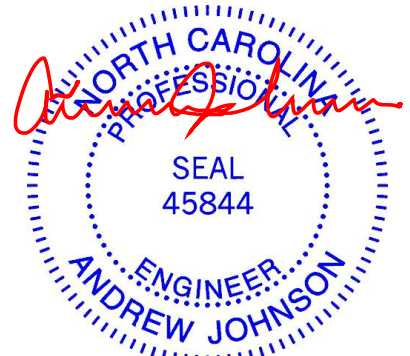
TOP CHORD 1-2=0/62, 2-3=-530/189, 3-4=-530/189, 4-5=0/62, 2-8=-572/194, 4-6=-572/194  
BOT CHORD 7-8=-353/467, 6-7=-251/386  
WEBS 3-7=-67/271, 2-7=-320/444, 4-7=-322/445

**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
- 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 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.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.

**LOAD CASE(S)** Standard



March 10, 2021

**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



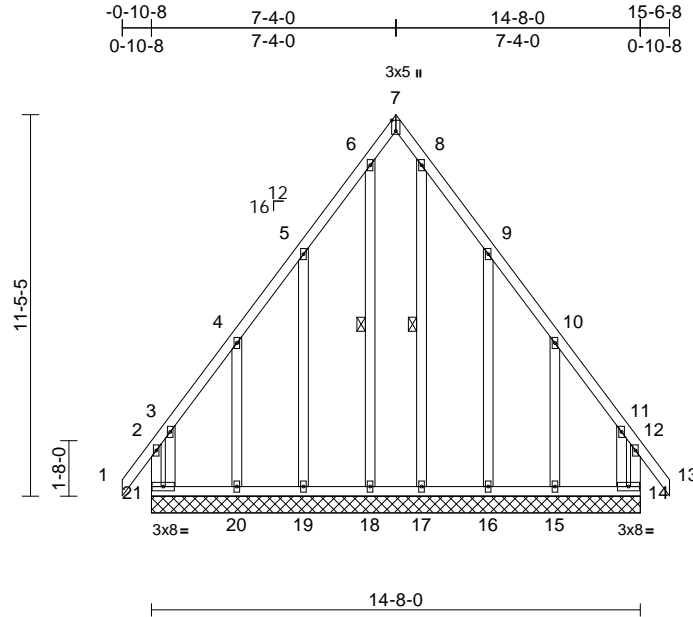
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss T4GE	Truss Type Common Supported Gable	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130710
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:26  
ID:CK6KlcsCw9DrYXC86BTgKNzB1hg-Mock Me

Page: 1



Scale = 1:69.1

Plate Offsets (X, Y): [7: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	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-R								
BCDL	10.0											
											Weight: 137 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.2 \*Except\*  
20-4,21-3,15-10,14-11:2x4 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 6-18, 8-17

**REACTIONS** (size)  
14=14-8-0, 15=14-8-0, 16=14-8-0,  
17=14-8-0, 18=14-8-0, 19=14-8-0,  
20=14-8-0, 21=14-8-0  
Max Horiz 21=277 (LC 11)  
Max Uplift 14=184 (LC 10), 15=227 (LC 9),  
16=115 (LC 14), 17=15 (LC 11),  
18=22 (LC 12), 19=114 (LC 13),  
20=232 (LC 10), 21=193 (LC 9)  
Max Grav 14=292 (LC 25), 15=329 (LC 12),  
16=175 (LC 26), 17=237 (LC 13),  
18=239 (LC 14), 19=173 (LC 25),  
20=335 (LC 11), 21=299 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-21=241/242, 1-2=0/62, 2-3=130/154,  
3-4=224/218, 4-5=184/234, 5-6=368/458,  
6-7=168/198, 7-8=168/199, 8-9=367/457,  
9-10=187/235, 10-11=214/208,  
11-12=129/154, 12-13=0/62,  
12-14=238/243  
BOT CHORD 20-21=147/152, 19-20=147/152,  
18-19=147/152, 17-18=147/152,  
16-17=147/152, 15-16=147/152,  
14-15=147/152

**WEBS** 6-18=337/210, 8-17=335/208,  
5-19=272/263, 4-20=286/272,  
3-21=366/320, 9-16=271/262,  
10-15=284/271, 11-14=353/307

- 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
  - 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 requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 193 lb uplift at joint 21 and 184 lb uplift at joint 14.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18, 17, 19, 20, 16, and 15. This connection is for uplift only and does not consider lateral forces.

**LOAD CASE(S)** Standard



March 10, 2021

**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



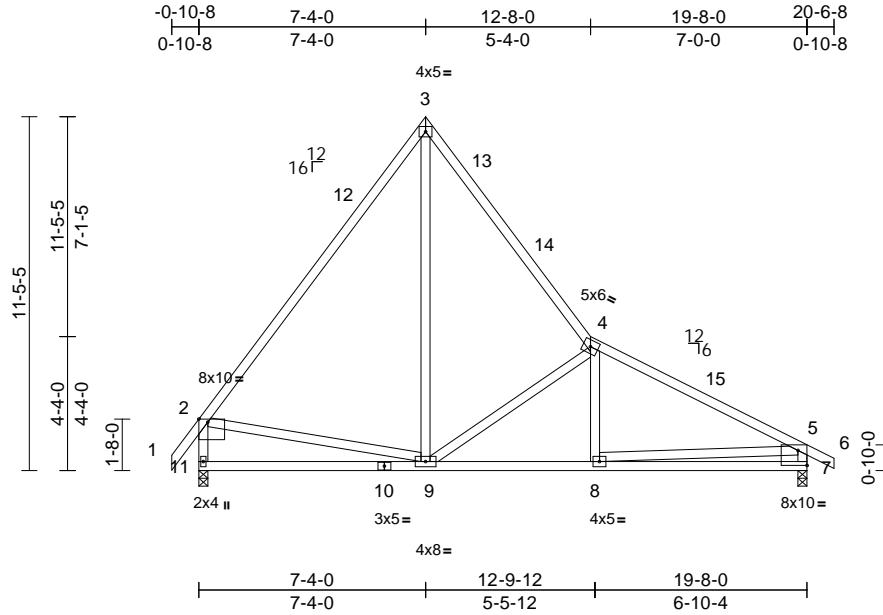
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss T5	Truss Type Roof Special	Qty 3	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130711
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:27  
ID:8jE4AHtSSmTznqLWdcV8PozB1he-Mock Me

Page: 1



Scale = 1:74.5

Plate Offsets (X, Y): [2:Edge,0-1-3], [7:Edge,0-5-13]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.03	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.09	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 130 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2 \*Except\* 8-4,7-5:2x4 SP No.3

**BRACING**

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

**REACTIONS** (size) 7=0-3-8, 11=0-3-8

Max Horiz 11=270 (LC 13)  
 Max Grav 7=836 (LC 2), 11=836 (LC 2)

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

TOP CHORD 1-2=0/62, 2-12=-742/187, 3-12=-519/218, 3-13=-538/253, 13-14=-576/226, 4-14=-683/222, 4-15=-989/223, 5-15=-1092/203, 5-6=0/34, 2-11=-765/217, 5-7=-770/252  
 BOT CHORD 10-11=-300/465, 9-10=-300/465, 8-9=-86/882, 7-8=-178/476  
 WEBS 3-9=-179/581, 4-9=-688/305, 4-8=0/105, 2-9=-226/393, 5-8=0/463

**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

- 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.

**LOAD CASE(S)** Standard



March 10, 2021

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



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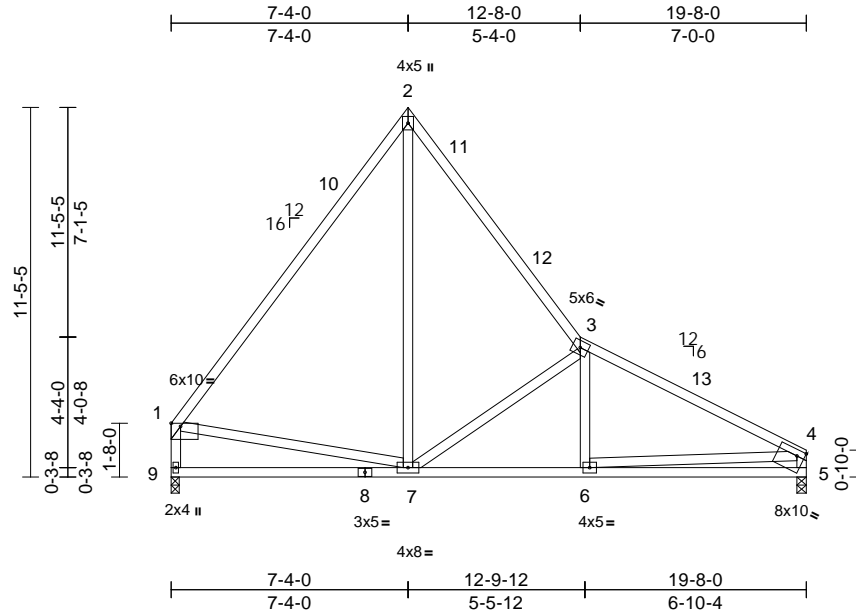
Job 21070084-01	Truss T5A	Truss Type Roof Special	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130712
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:27

Page: 1

ID:dvoTNDu4D4bQP\_winK0Ny?zB1hd-Mock Me



Scale = 1:71.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.03	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.09	7-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 127 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2 \*Except\* 1-2:2x4 SP 2400F 2.0E  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2 \*Except\* 6-3,9-1,5-4:2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 5=0-3-8, 9=0-3-0  
 Max Horiz 9=-252 (LC 11)  
 Max Uplift 9=-1 (LC 16)  
 Max Grav 5=775 (LC 2), 9=775 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-10=-734/164, 2-10=-496/199, 2-11=-539/253, 11-12=-577/226, 3-12=-690/218, 3-13=-1000/220, 4-13=-1095/201, 1-9=-705/175, 4-5=-708/193  
 BOT CHORD 8-9=-245/378, 7-8=-245/378, 6-7=-123/892, 5-6=-123/355  
 WEBS 2-7=-153/552, 3-7=-696/304, 3-6=0/102, 1-7=-88/276, 4-6=0/561

**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 a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.

**LOAD CASE(S)** Standard



March 10, 2021

**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



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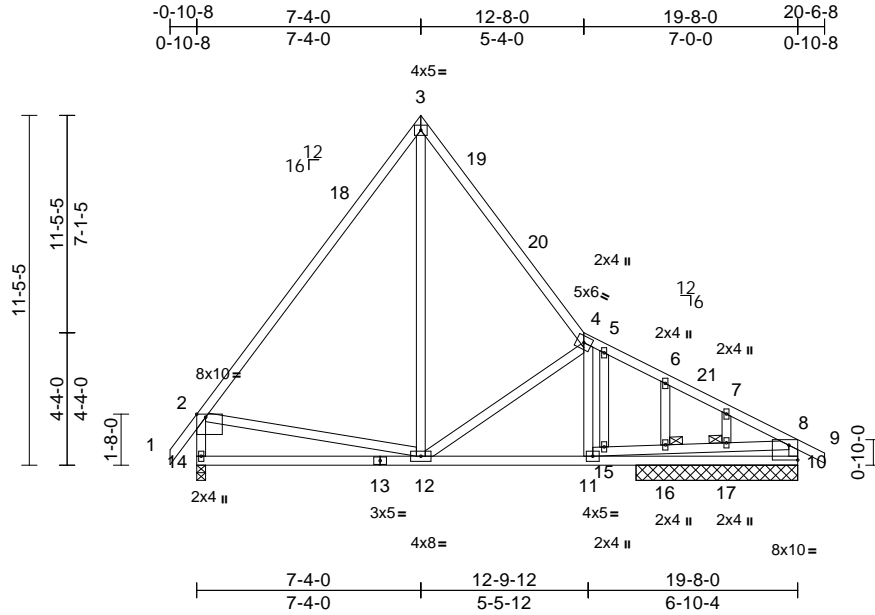
Job 21070084-01	Truss T5SE	Truss Type Roof Special Structural Gable	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130713
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:28

Page: 1

ID:1UTb?fxzW?z\_GSfHSSa4aezB1ha-Mock Me



Scale = 1:75.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.04	11-12	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.10	12-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 140 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 11-4,10-8:2x4 SP No.3  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
JOINTS 1 Brace at Jt(s): 16, 17

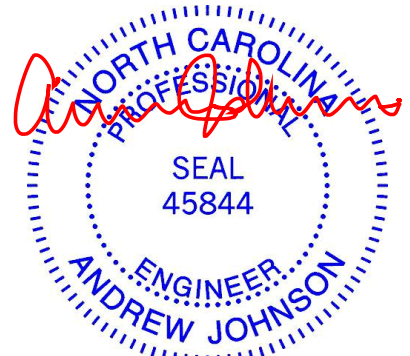
**REACTIONS** (size) 10=5-3-8, 14=0-3-8  
Max Horiz 14=270 (LC 13)  
Max Grav 10=836 (LC 2), 14=836 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/62, 2-18=-742/187, 3-18=-519/218, 3-19=-543/256, 19-20=-579/229, 4-20=-684/224, 4-5=-913/218, 5-6=-992/236, 6-21=-987/200, 7-21=-1013/195, 7-8=-1085/190, 8-9=0/34, 2-14=-766/217, 8-10=-764/251  
BOT CHORD 13-14=-300/465, 12-13=-300/465, 11-12=-89/881, 10-11=-130/520  
WEBS 3-12=-182/588, 4-12=-687/309, 4-11=-32/143, 2-12=-227/394, 11-15=0/398, 15-16=0/393, 16-17=0/395, 8-17=0/395, 5-15=-49/152, 6-16=-80/53, 7-17=-4/29

**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) 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 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.

**LOAD CASE(S)** Standard



March 10, 2021

**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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

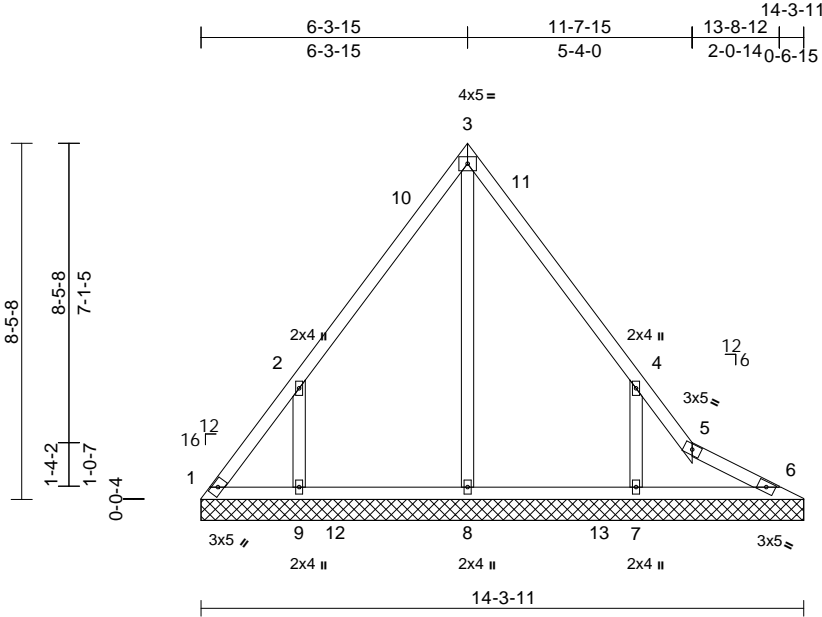
Job 21070084-01	Truss V1	Truss Type Valley	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130714
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:28

Page: 1

ID:1UTb?fxzW?z\_GSfHSSa4aezB1ha-Mock Me



Scale = 1:54.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	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	0.26	Horiz(TL)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH								
BCDL	10.0											
										Weight: 73 lb	FT = 20%	

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3 *Except* 8-3:2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
REACTIONS (size)	
	1=14-3-11, 6=14-3-11, 7=14-3-11, 8=14-3-11, 9=14-3-11
Max Horiz	1=-174 (LC 13)
Max Uplift	1=-145 (LC 13), 7=-150 (LC 16), 9=-196 (LC 15)
Max Grav	1=193 (LC 12), 6=101 (LC 2), 7=424 (LC 29), 8=446 (LC 31), 9=415 (LC 28)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-238/238, 2-10=-194/179, 3-10=-147/197, 3-11=-141/194, 4-11=-192/176, 4-5=-115/118, 5-6=-115/76
BOT CHORD	1-9=-64/118, 9-12=-64/118, 8-12=-64/118, 8-13=-64/118, 7-13=-64/118, 6-7=-64/118
WEBS	3-8=-238/57, 2-9=405/364, 4-7=-380/327
NOTES	

- 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
- Unbalanced snow loads have been considered for this design.
- 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, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 145 lb uplift at joint 1, 196 lb uplift at joint 9 and 150 lb uplift at joint 7.

LOAD CASE(S) Standard



March 10, 2021

**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  
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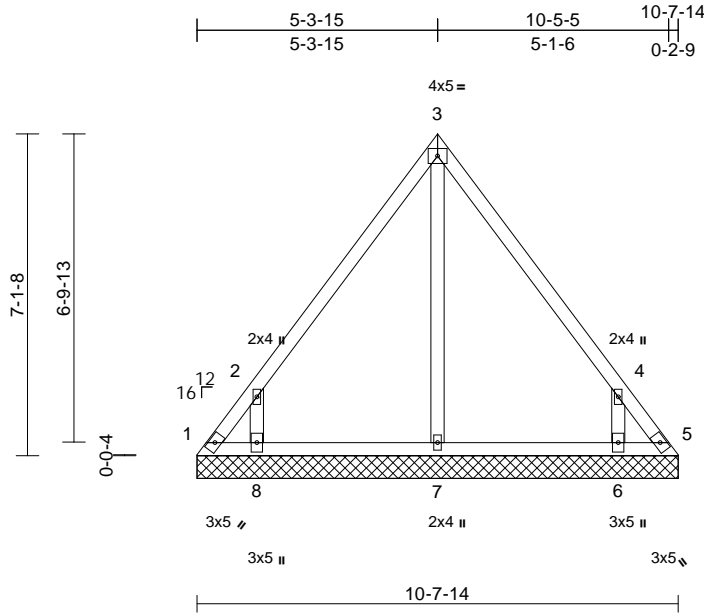
Job 21070084-01	Truss V2	Truss Type Valley	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130715
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:29

Page: 1

ID:Vh1zD?xbHJ5rtcEU095J6rzB1hZ-Mock Me



Scale = 1:51

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	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH								
BCDL	10.0											
										Weight: 54 lb	FT = 20%	

**LUMBER**

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- OTHERS 2x4 SP No.3 \*Except\* 7-3:2x4 SP No.2

**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=10-7-14, 5=10-7-14, 6=10-7-14, 7=10-7-14, 8=10-7-14
- Max Horiz 1=-144 (LC 9)
- Max Uplift 1=-158 (LC 11), 5=-139 (LC 12), 6=-208 (LC 14), 8=-208 (LC 13)
- Max Grav 1=179 (LC 13), 5=170 (LC 14), 6=387 (LC 25), 7=201 (LC 2), 8=387 (LC 24)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

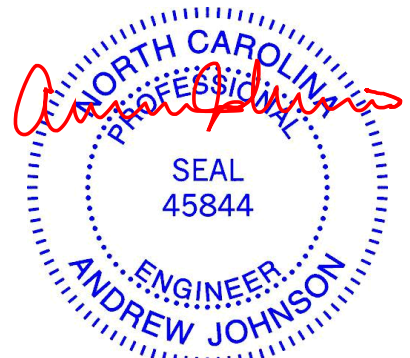
- TOP CHORD 1-2=-286/228, 2-3=-186/115, 3-4=-171/115, 4-5=-286/228
- BOT CHORD 1-8=-76/122, 7-8=-76/122, 6-7=-76/122, 5-6=-76/122
- WEBS 3-7=-114/0, 2-8=-464/441, 4-6=-464/441

**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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 158 lb uplift at joint 1, 139 lb uplift at joint 5, 208 lb uplift at joint 8 and 208 lb uplift at joint 6.

**LOAD CASE(S)** Standard



March 10, 2021

**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



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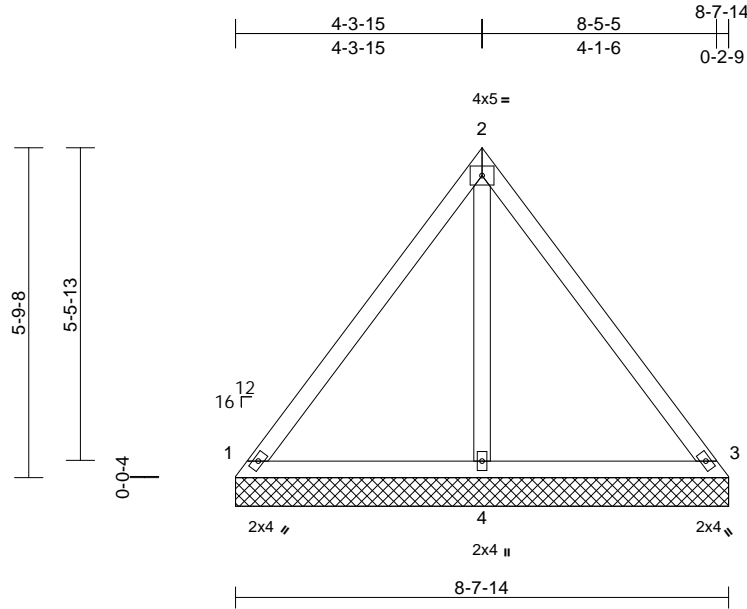
Job 21070084-01	Truss V3	Truss Type Valley	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130716
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:30

Page: 1

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Scale = 1:40.4

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	0.46	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.12	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-P								
BCDL	10.0											
										Weight: 41 lb	FT = 20%	

#### LUMBER

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

#### 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=8-7-14, 3=8-7-14, 4=8-7-14  
Max Horiz 1=-116 (LC 9)  
Max Uplift 1=-30 (LC 14), 3=-23 (LC 13)  
Max Grav 1=207 (LC 2), 3=207 (LC 2), 4=233 (LC 2)

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

TOP CHORD 1-2=-170/73, 2-3=-156/73  
BOT CHORD 1-4=-46/86, 3-4=-46/86  
WEBS 2-4=-132/41

#### 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 1 and 23 lb uplift at joint 3.

**LOAD CASE(S)** Standard



March 10, 2021

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

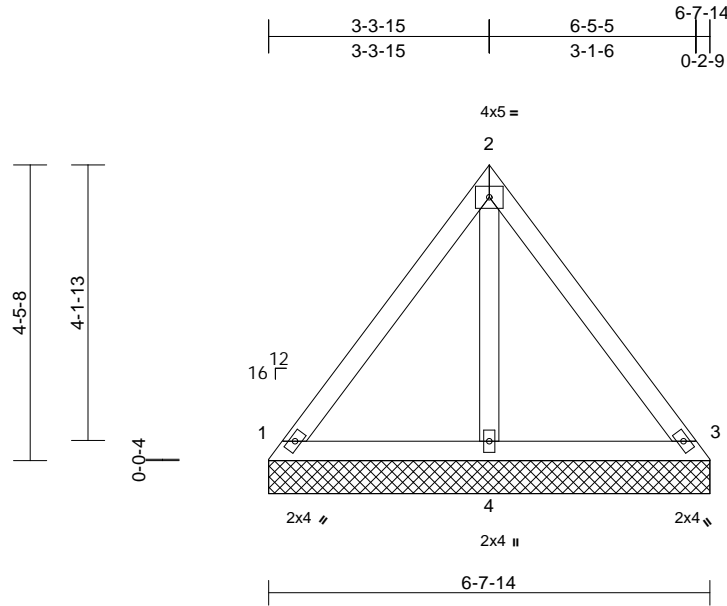
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss V4	Truss Type Valley	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	I45130717
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Carter Components (Sanford), Sanford, NC - 27332,

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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	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 31 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=6-7-14, 3=6-7-14, 4=6-7-14  
Max Horiz 1=-87 (LC 9)  
Max Uplift 1=-23 (LC 14), 3=-18 (LC 13)  
Max Grav 1=158 (LC 2), 3=158 (LC 2), 4=172 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-129/58, 2-3=-119/58  
BOT CHORD 1-4=-35/68, 3-4=-35/68  
WEBS 2-4=-96/32

**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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1 and 18 lb uplift at joint 3.

**LOAD CASE(S)** Standard



March 10, 2021

**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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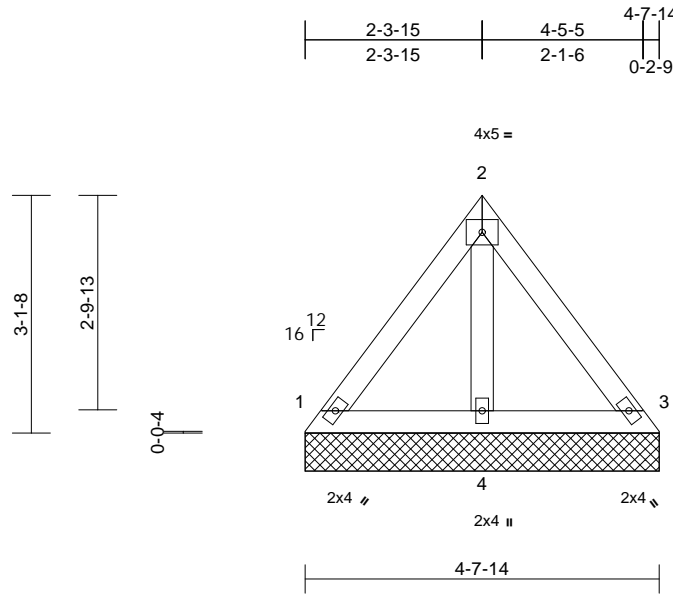
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss V5	Truss Type Valley	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	I45130718
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:31  
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Page: 1



Scale = 1:30.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	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	0.01	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
										Weight: 21 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 4-8-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 1=4-7-14, 3=4-7-14, 4=4-7-14  
Max Horiz 1=-59 (LC 9)  
Max Uplift 1=-15 (LC 14), 3=-12 (LC 13)  
Max Grav 1=106 (LC 2), 3=106 (LC 2), 4=116 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-87/41, 2-3=-80/41  
BOT CHORD 1-4=-25/47, 3-4=-25/47  
WEBS 2-4=-65/23

**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 2-0-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 1 and 12 lb uplift at joint 3.

**LOAD CASE(S)** Standard



March 10, 2021

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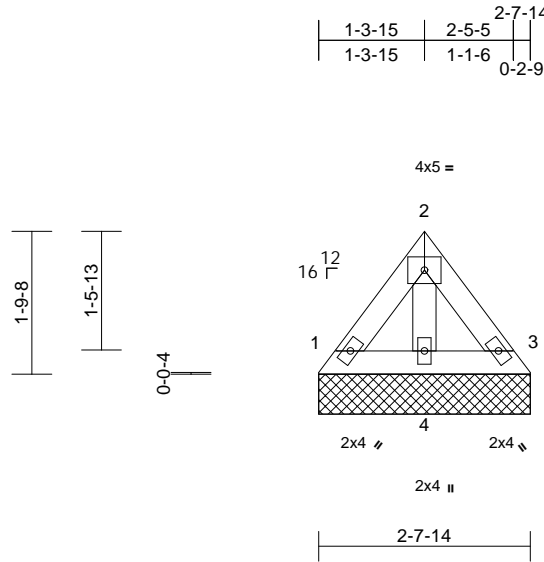
818 Soundside Road  
Edenton, NC 27932

Job 21070084-01	Truss V6	Truss Type Valley	Qty 1	Ply 1	206 Crossing at ACC-Havenbrooke C-Roof Job Reference (optional)	145130719
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 09:52:31  
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Page: 1



Scale = 1:28.9

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	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.01	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 11 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 2-8-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 1=2-7-14, 3=2-7-14, 4=2-7-14  
Max Horiz 1=-30 (LC 9)  
Max Uplift 1=-8 (LC 14), 3=-6 (LC 13)  
Max Grav 1=54 (LC 2), 3=54 (LC 2), 4=59 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-45/21, 2-3=-41/21  
BOT CHORD 1-4=-13/24, 3-4=-13/24  
WEBS 2-4=-33/12

**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 2-0-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 6 lb uplift at joint 3.

**LOAD CASE(S)** Standard



March 10, 2021

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

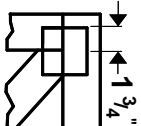
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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



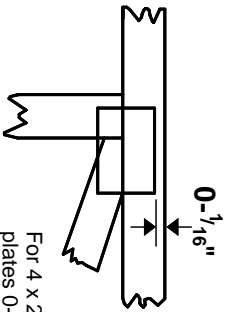
818 Soundside Road  
Edenton, NC 27932

# 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



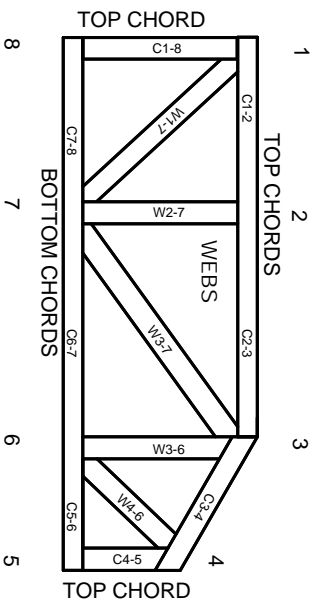
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TFP 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  
BCSI: 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/TFP 1 section 6.3 These truss designs rely on lumber values established by others.

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



# General Safety Notes

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

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 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/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.