



Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450

Builder: DR Horton Inc

**Model: 39 Mason Ridge
Columbia C**



THE PLACEMENT PLAN NOTES:

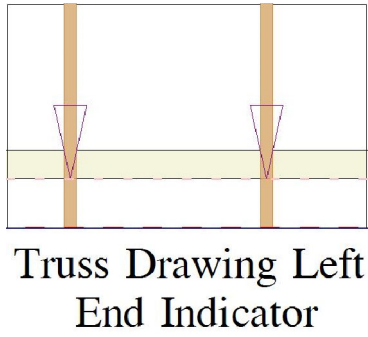
1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.
9. All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the building designer and or contractor.

Approved By: _____

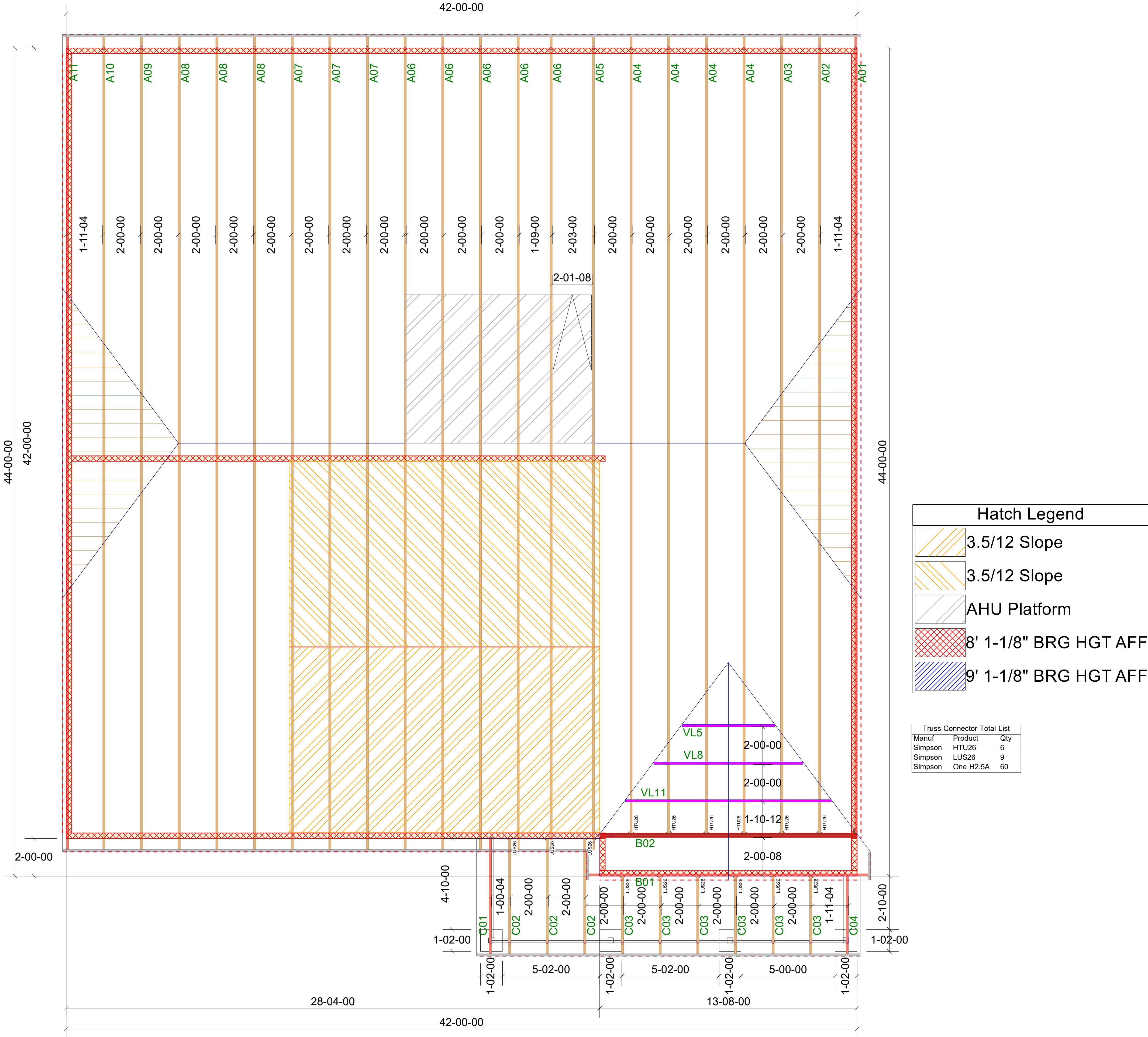
Date: _____

General Notes: ** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION. ** ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS. ** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT. ** TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE. ** GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS. ** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH. ** ALL uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the bldg designer and or contractor.



Truss Drawing Left End Indicator



** TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS. ** PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES. ** REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding the bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53179



DR Horton Inc

39 Mason Ridge
Columbia C

ROOF PLACEMENT PLAN

Scale: NTS

Date: 2/13/2025

Designer: Nate Donaldson

Project Number: TM240424-A

Sheet Number:

1/1

RE: 39 Mason Ridge
39 Mason Ridge - Columbia C - Roof

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: DR Horton Inc Project Name: 39 Mason Ridge
Lot/Block: 39 Model: Columbia C
Address: Subdivision: Mason Ridge
City: State: NC

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 20 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I68893488	A01	10/16/2024
2	I68893489	A02	10/16/2024
3	I68893490	A03	10/16/2024
4	I68893491	A04	10/16/2024
5	I68893492	A05	10/16/2024
6	I68893493	A06	10/16/2024
7	I68893494	A07	10/16/2024
8	I68893495	A08	10/16/2024
9	I68893496	A09	10/16/2024
10	I68893497	A10	10/16/2024
11	I68893498	A11	10/16/2024
12	I68893499	B01	10/16/2024
13	I68893500	B02	10/16/2024
14	I68893501	C01	10/16/2024
15	I68893502	C02	10/16/2024
16	I68893503	C03	10/16/2024
17	I68893504	C04	10/16/2024
18	I68893505	VL5	10/16/2024
19	I68893506	VL8	10/16/2024
20	I68893507	VL11	10/16/2024

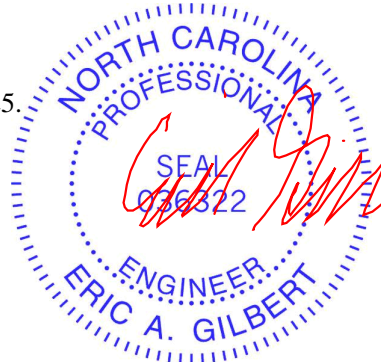
The truss drawing(s) referenced above have been prepared by
Truss Engineering Co. under my direct supervision
based on the parameters provided by Carter Components (Sanford, NC)).

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2025.

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.



October 16, 2024

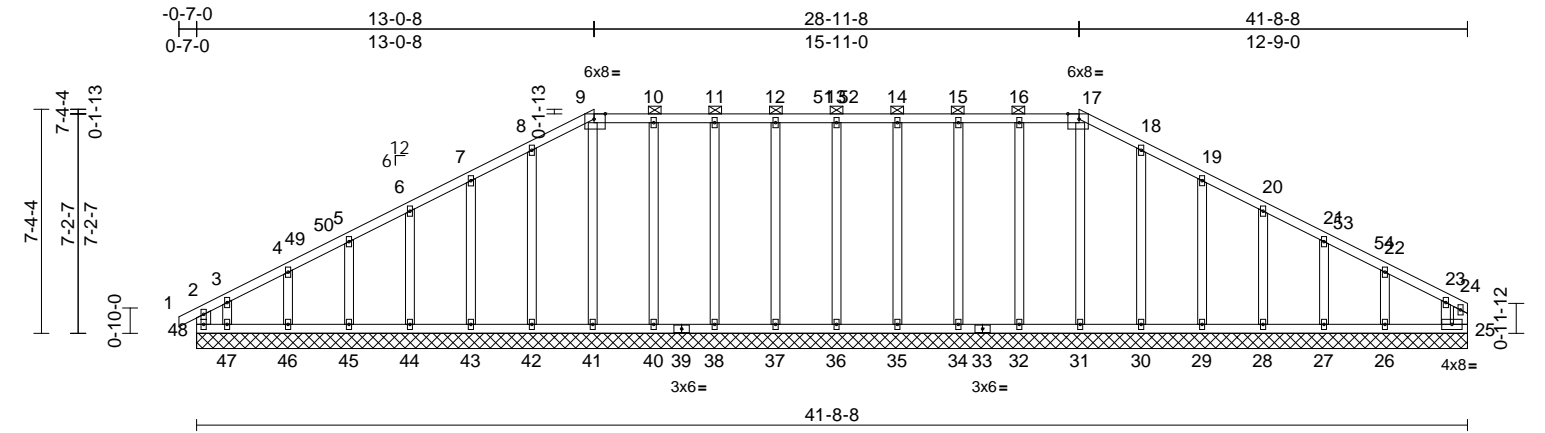
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893488
39 Mason Ridge	A01	Hip Supported Gable	1	1	Job Reference (optional)	

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

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Page: 1

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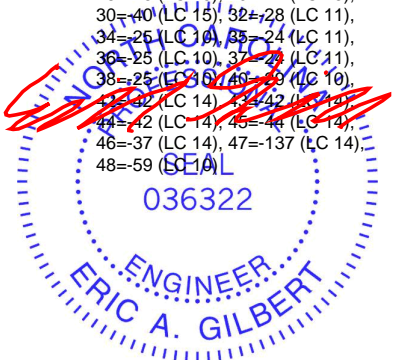


Scale = 1:75.6

Plate Offsets (X, Y): [9:0-4-6,Edge], [17:0-4-6,Edge]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.00	25	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
Weight: 280 lb FT = 20%											

LUMBER		Max Grav	25=96 (LC 39), 26=214 (LC 43), 27=209 (LC 43), 28=220 (LC 43), 29=214 (LC 43), 30=232 (LC 43), 31=141 (LC 43), 32=220 (LC 38), 34=209 (LC 38), 35=210 (LC 38), 36=210 (LC 38), 37=210 (LC 38), 38=209 (LC 38), 40=220 (LC 38), 41=144 (LC 41), 42=230 (LC 41), 43=213 (LC 41), 44=217 (LC 41), 45=215 (LC 41), 46=177 (LC 41), 47=114 (LC 28), 48=161 (LC 51)	WEBS	13-36=-171/55, 14-35=-171/55, 15-34=-170/57, 16-32=-181/59, 17-31=-103/0, 18-30=-193/68, 19-29=-176/75, 20-28=-180/76, 21-27=-175/74, 22-26=-160/170, 23-25=-79/11, 12-37=-171/55, 11-38=-170/57, 10-40=-181/59, 9-41=-105/8, 8-42=-192/68, 7-43=-175/76, 6-44=-178/75, 5-45=-177/74, 4-46=-136/110, 3-47=-77/110
BRACING		REACTIONS (size)	25=41-8-8, 26=41-8-8, 27=41-8-8, 28=41-8-8, 29=41-8-8, 30=41-8-8, 31=41-8-8, 32=41-8-8, 34=41-8-8, 35=41-8-8, 36=41-8-8, 37=41-8-8, 38=41-8-8, 40=41-8-8, 41=41-8-8, 42=41-8-8, 43=41-8-8, 44=41-8-8, 45=41-8-8, 46=41-8-8, 47=41-8-8, 48=41-8-8	NOTES	1) Unbalanced roof live loads have been considered for this design. 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-7-0 to 3-6-15, Exterior(2N) 3-6-15 to 8-10-9, Corner(3R) 8-10-9 to 17-0-0, Exterior (2N) 17-0-0 to 24-9-9, Corner(3R) 24-9-9 to 33-0-0, Exterior(2N) 33-0-0 to 37-3-13, Corner(3E) 37-3-13 to 41-5-12 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
TOP CHORD		FORCES	(lb) - Maximum Compression/Maximum Tension		
BOT CHORD		TOP CHORD	2-48=-120/45, 1-2=0/21, 2-3=-143/60, 3-4=-98/56, 4-5=-79/78, 5-6=-77/115, 6-7=-68/159, 7-8=-68/203, 8-9=-85/242, 9-10=-79/232, 10-11=-78/231, 11-12=-78/231, 12-13=-78/231, 13-14=-78/231, 14-15=-78/231, 15-16=-78/231, 16-17=-79/232, 17-18=-85/243, 18-19=-68/203, 19-20=-60/159, 20-21=-59/114, 21-22=-56/71, 22-23=-70/26, 23-24=-21/23, 24-25=-41/83		
REACTIONS		BOT CHORD	47-48=-16/80, 46-47=-16/80, 45-46=-16/80, 44-45=-16/80, 43-44=-16/80, 42-43=-16/80, 41-42=-16/80, 40-41=-16/81, 38-40=-16/81, 37-38=-16/81, 36-37=-16/81, 35-36=-16/81, 34-35=-16/81, 32-34=-16/81, 31-32=-16/81, 30-31=-16/80, 29-30=-16/80, 28-29=-16/80, 27-28=-16/80, 26-27=-16/80, 25-26=-16/80		



Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof
39 Mason Ridge	A01	Hip Supported Gable	1	1	I68893488
					Job Reference (optional)

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) * 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.
- 14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 48, 36, 35, 34, 32, 30, 29, 28, 27, 26, 37, 38, 40, 42, 43, 44, 45, 46, and 47. This connection is for uplift only and does not consider lateral forces.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

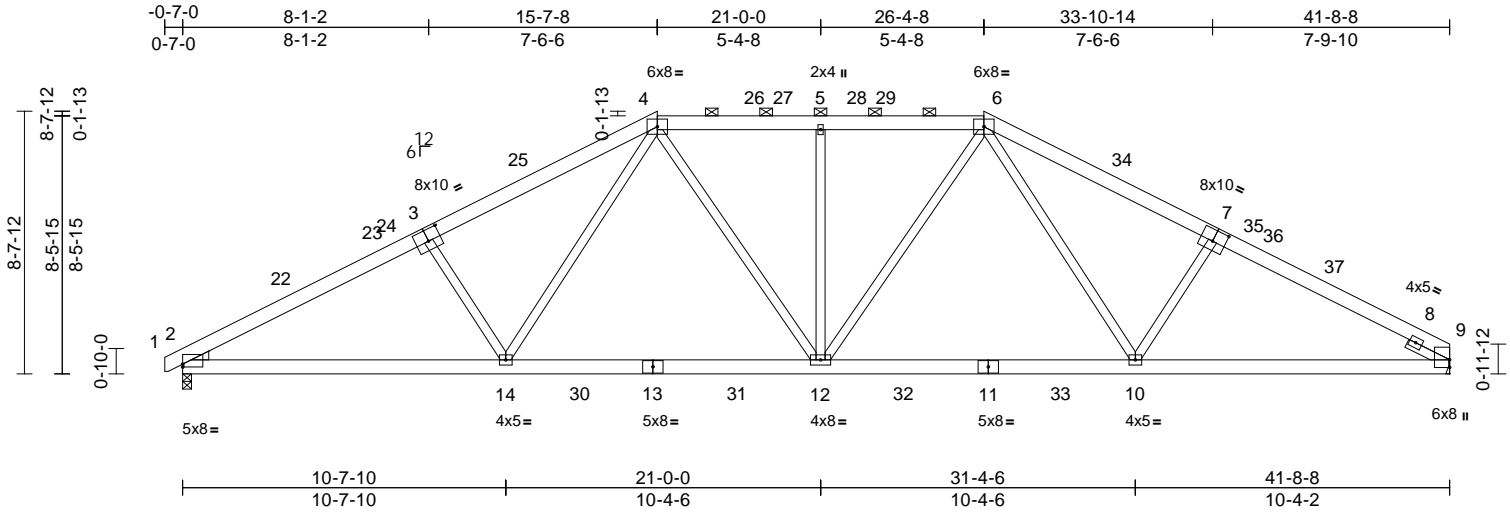
LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893489
39 Mason Ridge	A02	Hip	1	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:75.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.25	10-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.41	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.12	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 289 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-0-9 oc purlins, except 2-0-0 oc purlins (4-5-5 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS

(size) 2=0-3-8, 9= Mechanical
Max Horiz 2=134 (LC 14)
Max Uplift 2=133 (LC 14), 9=120 (LC 15)
Max Grav 2=1944 (LC 45), 9=1919 (LC 45)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-4=-3384/468, 4-5=-2534/455, 5-6=-2534/455, 6-9=-3278/463
BOT CHORD 2-14=-313/2937, 12-14=-200/2309, 10-12=-199/2290, 9-10=-304/2843
WEBS 4-14=-108/842, 3-14=-535/254, 4-12=-70/571, 5-12=-545/150, 6-12=-69/597, 6-10=-103/763, 7-10=-492/245

NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-6 to 3-7-10, Interior (1) 3-7-10 to 11-5-9, Exterior(2R) 11-5-9 to 19-9-7, Interior (1) 19-9-7 to 22-2-9, Exterior(2R) 22-2-9 to 30-6-8, Interior (1) 30-6-8 to 37-6-9, Exterior(2E) 37-6-9 to 41-8-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 120 lb uplift at joint 9.
- One H2.5A Simpson Strong-Tie 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.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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

LOAD CASE(S) Standard



October 16, 2024

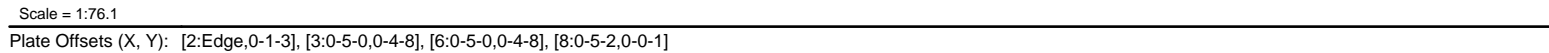
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

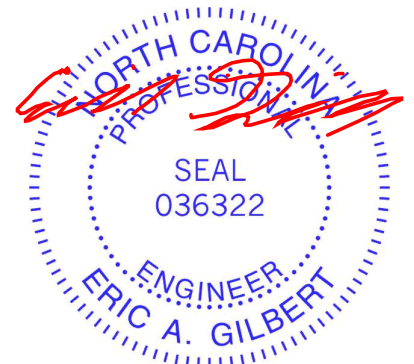
ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:32 Page: 1
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NUMBER		3) Wind: ASCE 7-16; Vult=130mph (5-second gust) Vasd=103mph; TCDDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-6 to 3-7-10, Interior (1) 3-7-10 to 14-1-9, Exterior(2R) 14-1-9 to 27-10-8, Interior (1) 27-10-8 to 37-6-9, Exterior(2E) 37-6-9 to 41-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
TOP CHORD	2x6 SP No.2	
BOT CHORD	2x6 SP 2400F 2.0E *Except* 12-10:2x6 SP No.2	6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
WEBS	2x4 SP No.3 *Except* 13-4,9-5:2x4 SP No.2	LOAD CASE(S) Standard
WEDGE	Left: 2x4 SP No.3	
SLIDER	Right 2x4 SP No.3 -- 1-6-0	
BRACING		
TOP CHORD	Structural wood sheathing directly applied, except 2-0-0 oc purlins (4-7-0 max.): 4-5.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	
WEBS	1 Row at midpt 4-11, 5-11	
REACTIONS	(size) 2=0-3-8, 8= Mechanical Max Horiz 2=155 (LC 14) Max Uplift 2=154 (LC 14), 8=141 (LC 15) Max Grav 2=2041 (LC 45), 8=2020 (LC 45)	7) TOLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
FORCES	(lb) - Maximum Compression/Maximum Tension	8) Unbalanced snow loads have been considered for this design.
TOP CHORD	1-2=0/14, 2-4=-3538/478, 4-5=-2350/412, 5-8=-3445/474	9) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
BOT CHORD	2-13=-290/3074, 11-13=-135/2283, 9-11=-135/2275, 8-9=-263/2996	10) Provide adequate drainage to prevent water ponding.
WEBS	3-13=-608/301, 4-13=-198/1057, 4-11=-119/407, 5-11=-101/430, 5-9=-192/973, 6-9=-577/292	11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
NOTES		12) * 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.
1) Unbalanced roof live loads have been considered for this design.		13) Refer to girder(s) for truss to truss connections.
		14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 8.
		15) One H2.5A Simpson Strong-Tie 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.
		16) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



October 16, 2024

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbccomponents.com)

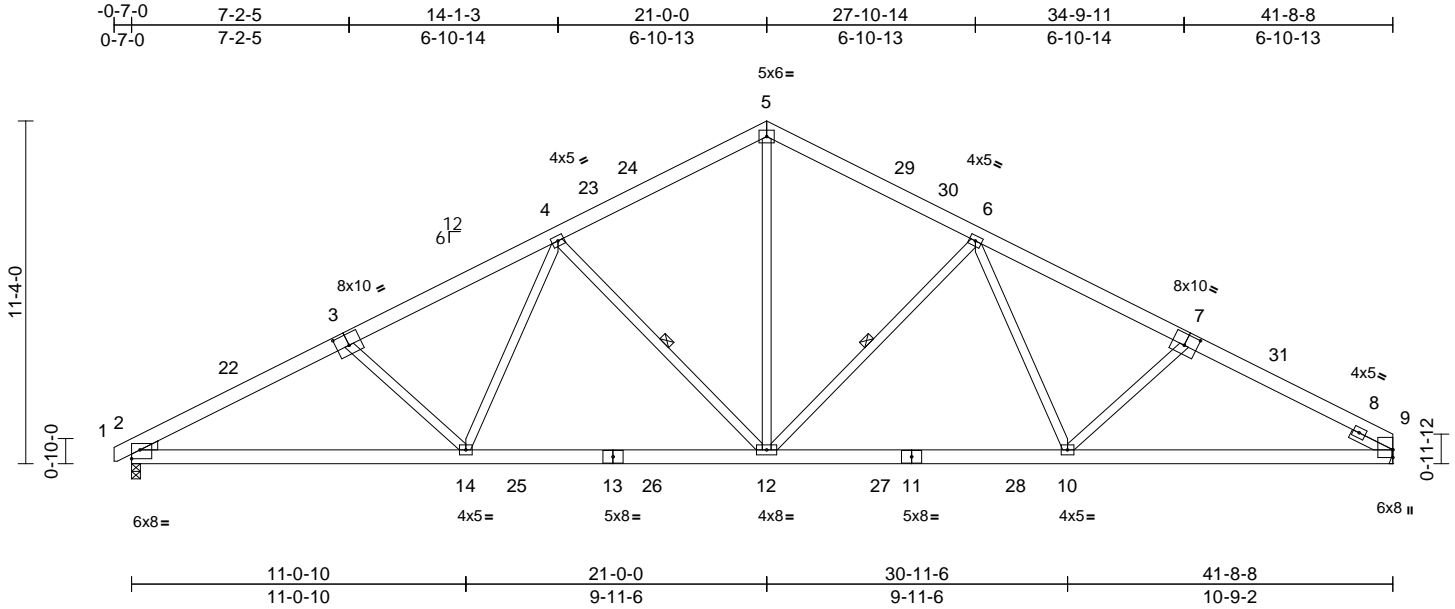
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893491
39 Mason Ridge	A04	Common	4	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:32
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Page: 1



Scale = 1:76.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.21	10-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.37	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.11	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 294 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 12-5:2x4 SP No.2
WEDGE Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-3-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-12, 4-12

REACTIONS

(size) 2=0-3-8, 9= Mechanical
Max Horiz 2=178 (LC 14)
Max Uplift 2=-171 (LC 14), 9=-158 (LC 15)
Max Grav 2=1866 (LC 3), 9=1840 (LC 3)

FORCES

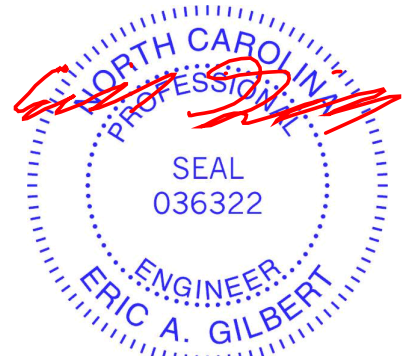
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-4=-3197/345, 4-5=-2145/352, 5-6=-2146/352, 6-9=-3096/340
BOT CHORD 2-14=-360/2784, 12-14=-206/2367, 10-12=-139/2343, 9-10=-222/2679
WEBS 5-12=-126/1530, 6-12=-806/252, 6-10=-14/547, 7-10=-284/198, 4-12=-837/255, 4-14=-20/618, 3-14=-341/205

NOTES

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

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-6 to 3-7-10, Interior (1) 3-7-10 to 16-10-1, Exterior(2R) 16-10-1 to 25-1-15, Interior (1) 25-1-15 to 37-6-9, Exterior(2E) 37-6-9 to 41-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 158 lb uplift at joint 9.
- 10) One H2.5A Simpson Strong-Tie 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.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16,2024

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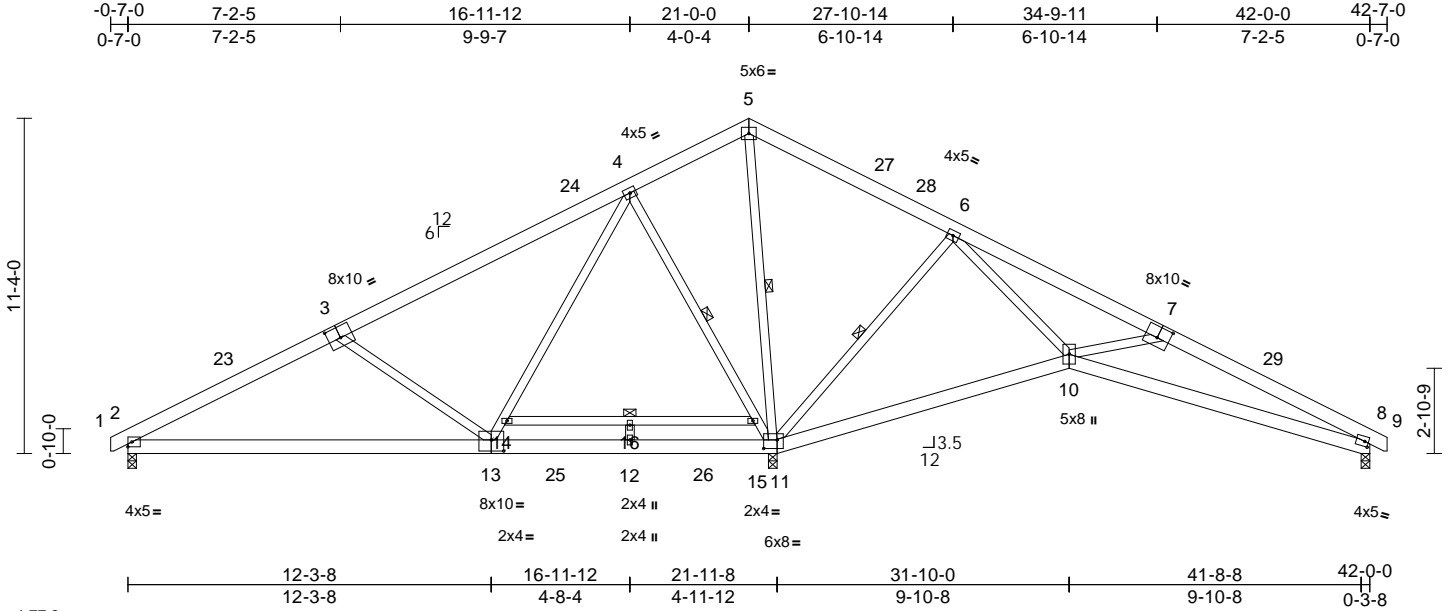
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893492
39 Mason Ridge	A05	Roof Special	1	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:33

Page: 1

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Scale = 1:77.9

Plate Offsets (X, Y): [3:0-5-0,0-4-8], [7:0-5-0,0-4-8], [8:0-1-9,0-2-0], [11:0-5-8,0-3-8], [13:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.12	13-19	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.21	13-19	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 308 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 11-5:2x4 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.

WEBS 1 Row at midpt 4-11, 5-11, 6-11, 14-15

REACTIONS

(size) 2=0-3-8, 8=0-3-8, 11=0-3-8
Max Horiz 2=-171 (LC 15)
Max Uplift 2=-64 (LC 14), 8=-94 (LC 15)
Max Grav 2=757 (LC 34), 8=496 (LC 35), 11=2555 (LC 1)

FORCES

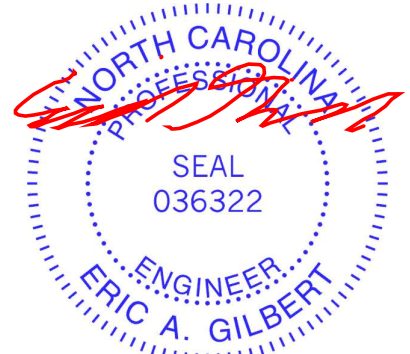
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-4=-1054/147, 4-5=0/734, 5-6=0/902, 6-8=-897/211, 8-9=0/14
BOT CHORD 2-12=-280/881, 11-12=-280/312, 10-11=-359/168, 8-10=-117/786
WEBS 3-13=-568/306, 13-14=0/769, 4-14=0/829, 4-15=-1020/207, 11-15=-1104/200, 5-11=-992/22, 6-11=-771/220, 6-10=0/710, 7-10=-551/285, 14-16=-139/7, 15-16=-139/7, 12-16=0/30

NOTES

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

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-6 to 3-7-15, Interior (1) 3-7-15 to 16-9-11, Exterior(2R) 16-9-11 to 25-2-5, Interior (1) 25-2-5 to 38-4-1, Exterior(2E) 38-4-1 to 42-6-6 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) 200.0lb AC unit load placed on the bottom chord, 16-11-12 from left end, supported at two points, 5-0-0 apart.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) 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.
- 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16,2024

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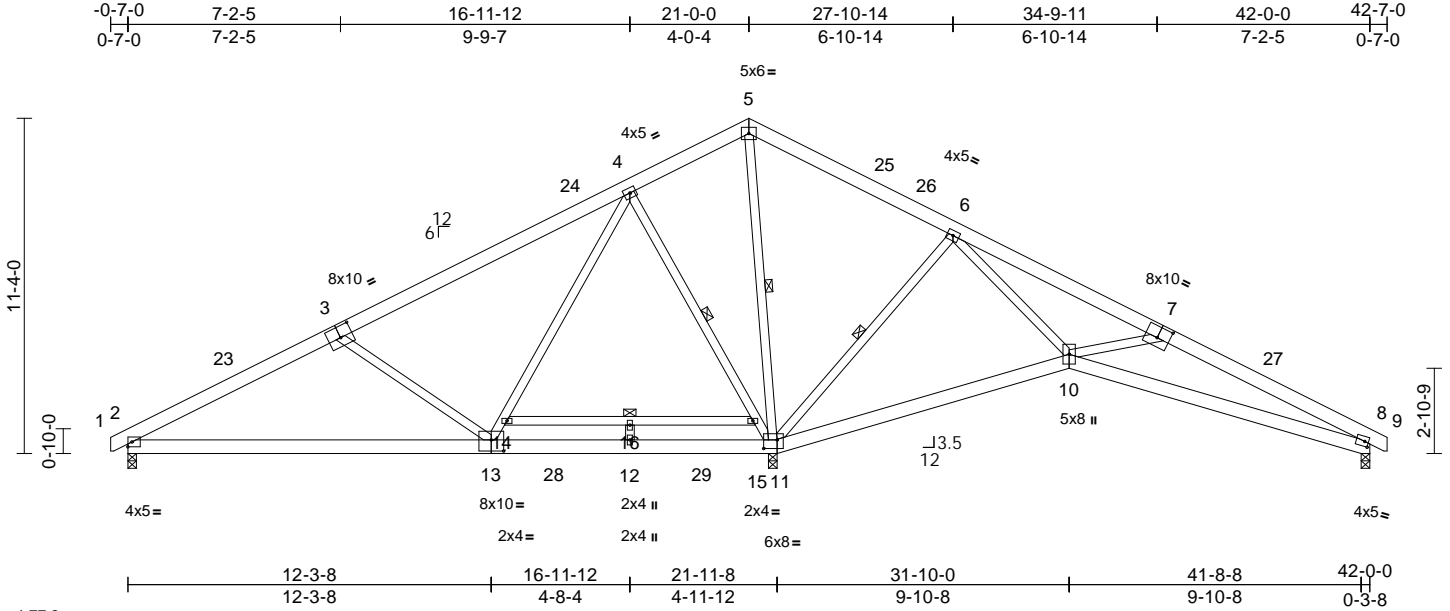
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893493
39 Mason Ridge	A06	Roof Special	5	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:33

Page: 1

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Scale = 1:77.9

Plate Offsets (X, Y): [3:0-5-0,0-4-8], [7:0-5-0,0-4-8], [8:0-1-9,0-2-0], [11:0-5-8,0-3-8], [13:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.12	13-22	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.21	13-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 308 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 11-5:2x4 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.

WEBS 1 Row at midpt 5-11, 4-11, 6-11, 14-15

REACTIONS

(size) 2=0-3-8, 8=0-3-8, 11=0-3-8
Max Horiz 2=171 (LC 14)
Max Uplift 2=63 (LC 14), 8=94 (LC 15)
Max Grav 2=757 (LC 34), 8=495 (LC 35), 11=2555 (LC 1)

FORCES

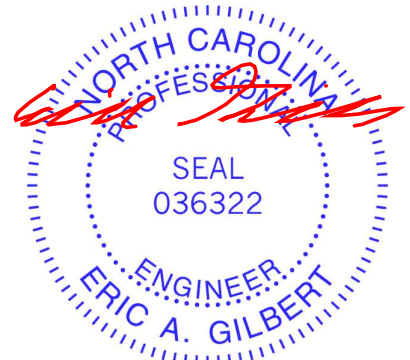
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-4=-1055/146, 4-5=0/735, 5-6=0/902, 6-8=-897/211, 8-9=0/14
BOT CHORD 2-12=-279/882, 11-12=-279/313, 10-11=-359/168, 8-10=-117/786
WEBS 3-13=-568/306, 5-11=-992/22, 6-10=0/710, 13-14=0/770, 4-14=0/830, 4-15=-1021/207, 11-15=-1105/199, 7-10=-551/285, 6-11=-771/221, 14-16=-139/7, 15-16=-139/7, 12-16=0/30

NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-6 to 3-7-15, Interior (1) 3-7-15 to 16-9-11, Exterior(2R) 16-9-11 to 25-2-5, Interior (1) 25-2-5 to 38-4-1, Exterior(2E) 38-4-1 to 42-6-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 16-11-0 from left end, supported at two points, 5-0-0 apart.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16, 2024

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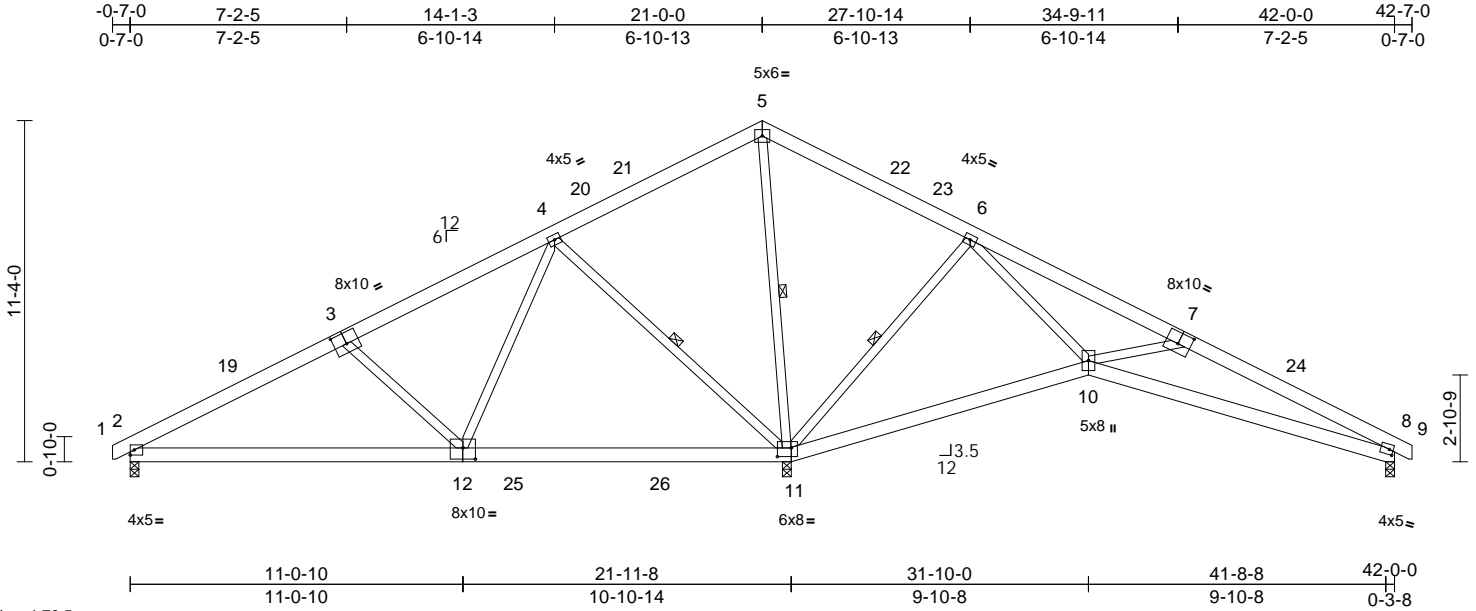
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	I68893494
39 Mason Ridge	A07	Roof Special	3	1	Job Reference (optional)	

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

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Page: 1

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Scale = 1:76.5

Plate Offsets (X, Y): [3:0-5-0,0-4-8], [7:0-5-0,0-4-8], [8:0-1-9,0-2-0], [11:0-5-8,0-3-8], [12:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.15	11-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.22	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 291 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 11-4,11-5:2x4 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.
WEBS 1 Row at midpt 4-11, 5-11, 6-11

REACTIONS

(size) 2=0-3-8, 8=0-3-8, 11=0-3-8
Max Horiz 2=-171 (LC 19)
Max Uplift 2=-109 (LC 14), 8=-89 (LC 15), 11=-157 (LC 15)
Max Grav 2=752 (LC 36), 8=531 (LC 6), 11=2546 (LC 3)

FORCES

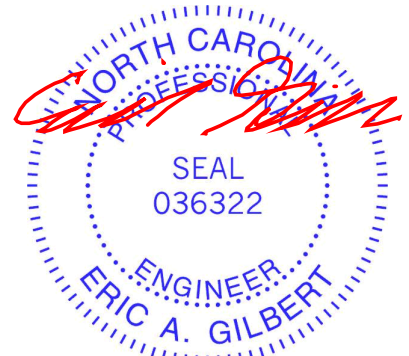
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-4=-965/183, 4-5=0/756, 5-6=0/882, 6-8=-937/191, 8-9=0/14
BOT CHORD 2-11=-265/797, 10-11=-358/179, 8-10=-99/843
WEBS 3-12=-421/218, 4-12=-14/794, 4-11=-969/253, 5-11=-1040/89, 6-11=-781/211, 6-10=0/843, 7-10=-547/289

NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-6 to 3-7-15, Interior (1) 3-7-15 to 16-9-11, Exterior(2R) 16-9-11 to 25-2-5, Interior (1) 25-2-5 to 38-4-1, Exterior(2E) 38-4-1 to 42-6-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11, 8, and 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16,2024

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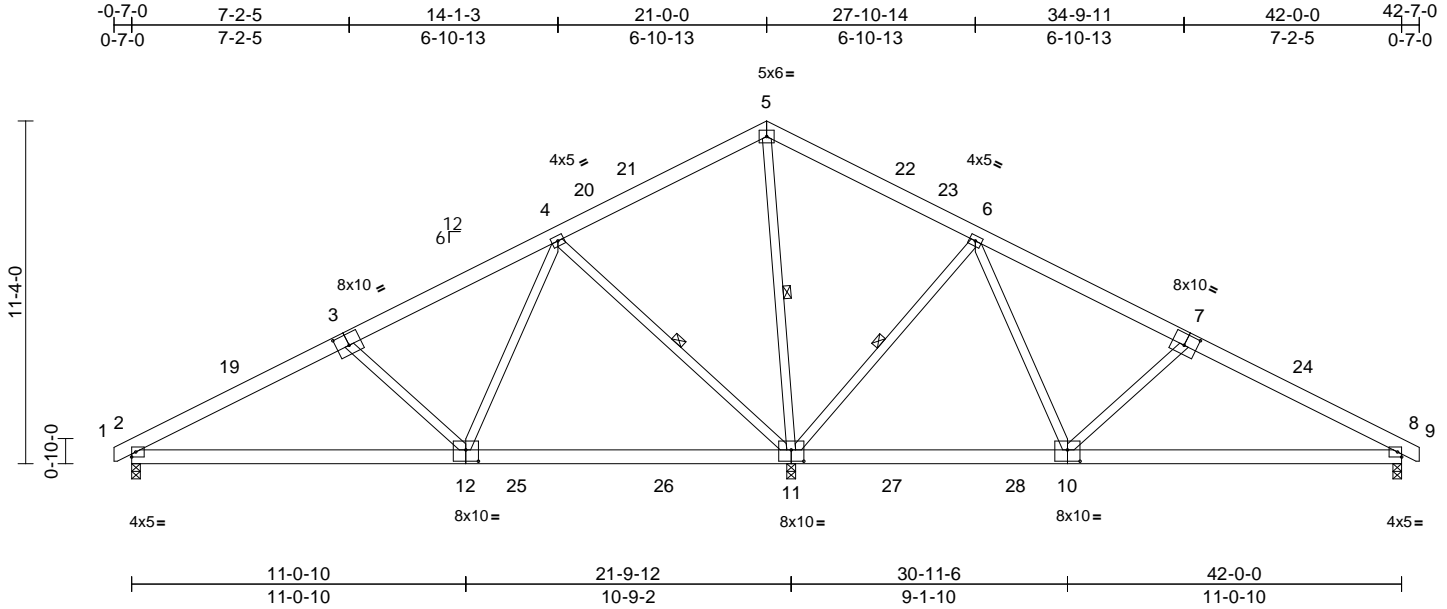
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893495
39 Mason Ridge	A08	Common	3	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:33
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Page: 1



Scale = 1:76.2

Plate Offsets (X, Y): [3:0-5-0,0-4-8], [7:0-5-0,0-4-8], [10:0-5-0,0-4-8], [11:0-5-0,0-4-8], [12:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	-0.10	11-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.17	10-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.01	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 294 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 11-4,11-5:2x4 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, Except:
6-0-0 oc bracing: 10-11.

WEBS 1 Row at midpt 4-11, 5-11, 6-11

REACTIONS

(size) 2=0-3-8, 8=0-3-8, 11=0-3-8
Max Horiz 2=-171 (LC 15)
Max Uplift 2=-82 (LC 14), 8=-102 (LC 15),
11=-185 (LC 14)
Max Grav 2=802 (LC 5), 8=710 (LC 6),
11=2350 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/14, 2-4=-1031/131, 4-5=-7/515,
5-6=0/561, 6-8=-862/174, 8-9=0/14
BOT CHORD 2-8=-246/876

WEBS

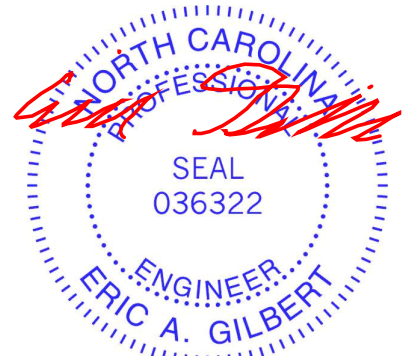
3-12=-412/220, 4-12=-23/757,
4-11=-943/258, 5-11=-769/104,
6-11=-877/258, 6-10=-35/711, 7-10=-423/216

NOTES

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

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-6 to 3-7-15, Interior (1) 3-7-15 to 16-9-11, Exterior(2R) 16-9-11 to 25-2-5, Interior (1) 25-2-5 to 38-4-1, Exterior(2E) 38-4-1 to 42-6-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8, 11, and 2. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16,2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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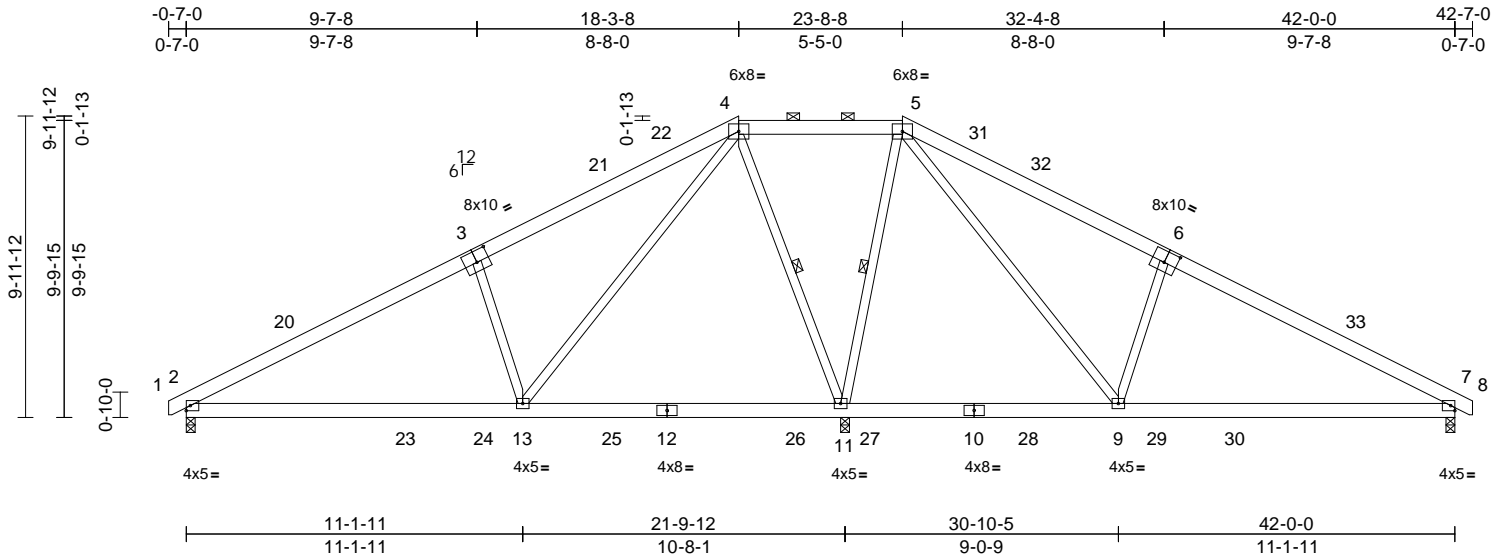
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893496
39 Mason Ridge	A09	Hip	1	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:33
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Page: 1



Scale = 1:76.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	-0.11	9-19	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.22	9-19	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.02	2	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
Weight: 287 lb FT = 20%											

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 13-4,5-9:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 4-11, 5-11

REACTIONS

(size) 2=0-3-8, 7=0-3-8, 11=0-3-8
Max Horiz 2=148 (LC 15)
Max Uplift 2=113 (LC 14), 7=135 (LC 15), 11=85 (LC 14)
Max Grav 2=902 (LC 35), 7=819 (LC 37), 11=2499 (LC 45)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-4=-1191/264, 4-5=0/455, 5-7=-997/313, 7-8=0/14
BOT CHORD 2-13=-261/991, 11-13=-79/187, 9-11=-197/146, 7-9=-143/827
WEBS 4-11=-1073/193, 5-11=-1094/192, 6-9=-694/305, 3-13=-686/307, 4-13=-210/1283, 5-9=-222/1233

NOTES

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

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-6 to 3-7-15, Interior (1) 3-7-15 to 14-1-3, Exterior(2R) 14-1-3 to 27-10-13, Interior (1) 27-10-13 to 38-4-1, Exterior(2E) 38-4-1 to 42-6-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 11, and 7. This connection is for uplift only and does not consider lateral forces.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 16,2024

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818 Soundside Road
Edenton, NC 27932

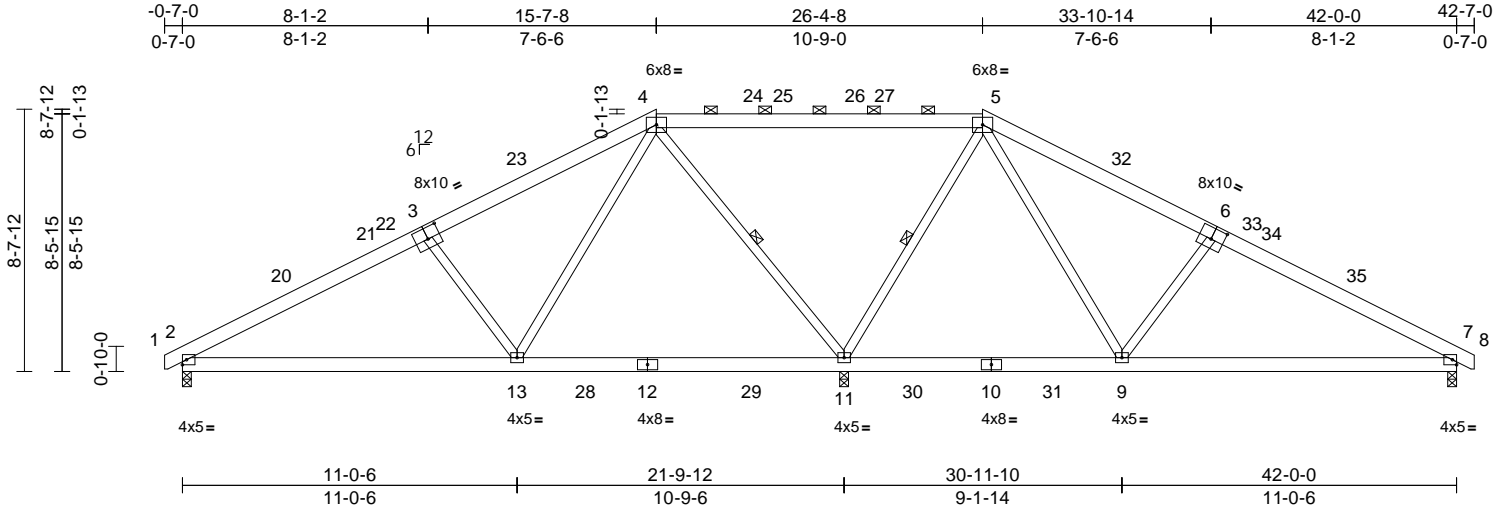
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893497
39 Mason Ridge	A10	Hip	1	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:33

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Scale = 1:75.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.11	11-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.18	9-19	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.01	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 278 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 4-5:2x6 SP 2400F
2.0E
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or
6-0-0 oc purlins, except
2-0-0 oc purlins (10-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing, Except:
6-0-0 oc bracing: 9-11.
WEBS 1 Row at midpt 4-11, 5-11

REACTIONS

(size) 2=0-3-8, 7=0-3-8, 11=0-3-8
Max Horiz 2=-127 (LC 15)
Max Uplift 2=-102 (LC 14), 7=-119 (LC 15),
11=-65 (LC 14)
Max Grav 2=892 (LC 35), 7=804 (LC 37),
11=2341 (LC 45)

FORCES

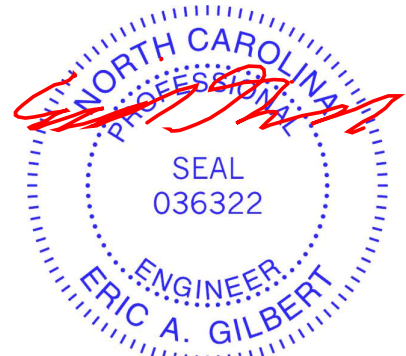
(lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=0/14, 2-4=-1224/180, 4-5=0/587,
5-7=-1060/207, 7-8=0/14
BOT CHORD 2-13=-220/1030, 11-13=-30/368,
9-11=-85/183, 7-9=-119/871
WEBS 4-11=-1176/236, 5-11=-1143/242,
6-9=-620/252, 5-9=-102/931, 4-13=-89/982,
3-13=-611/255

NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp B; Enclosed; MWFRS (envelope) exterior zone
and C-C Exterior(2E) -0-6-6 to 3-7-15, Interior (1) 3-7-15
to 11-5-3, Exterior(2R) 11-5-3 to 19-9-13, Interior (1)
19-9-13 to 22-2-3, Exterior(2R) 22-2-3 to 30-6-13,
Interior (1) 30-6-13 to 38-4-1, Exterior(2E) 38-4-1 to
42-6-6 zone; cantilever left and right exposed; end
vertical left and right exposed; C-C for members and
forces & MWFRS for reactions shown; Lumber
DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate
DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9;
Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on
overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors
recommended to connect truss to bearing walls due to
UPLIFT at jt(s) 2, 11, and 7. This connection is for uplift
only and does not consider lateral forces.
- This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.

LOAD CASE(S) Standard



October 16, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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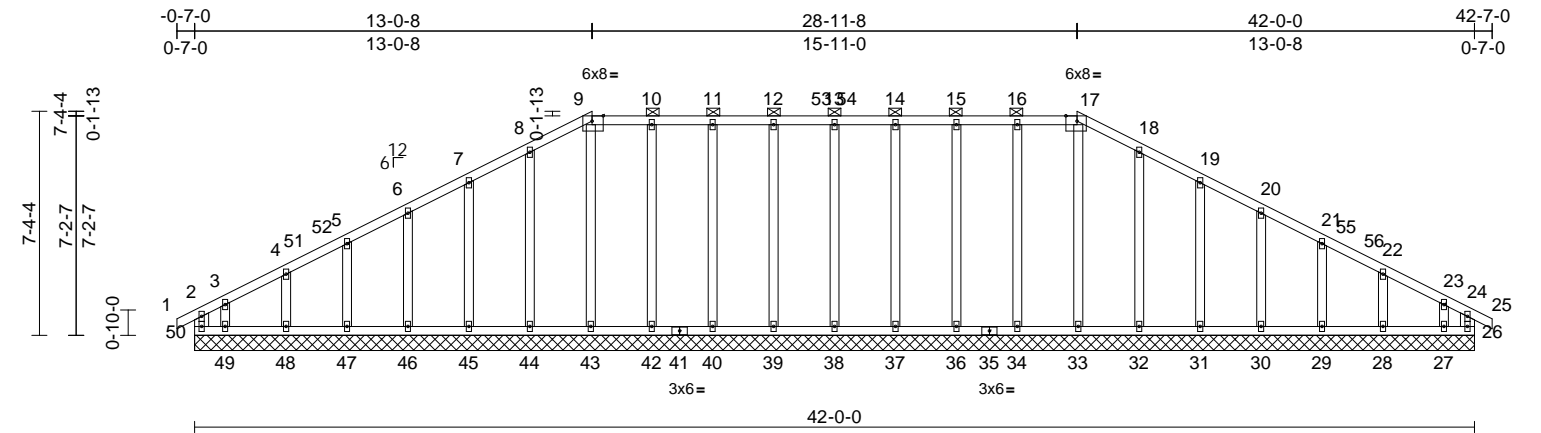
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	I68893498
39 Mason Ridge	A11	Hip Supported Gable	1	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:34
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Page: 1



Scale = 1:75.6

Plate Offsets (X, Y): [9:0-4-6,Edge], [17:0-4-6,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	0.07	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	26	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
Weight: 281 lb FT = 20%											

LUMBER		Max Grav	26=113 (LC 53), 27=101 (LC 25), 28=182 (LC 43), 29=223 (LC 43), 30=226 (LC 43), 31=222 (LC 43), 32=240 (LC 43), 33=154 (LC 43), 34=227 (LC 38), 36=215 (LC 38), 37=217 (LC 38), 38=217 (LC 38), 39=217 (LC 38), 40=215 (LC 38), 42=227 (LC 38), 43=154 (LC 41), 44=240 (LC 41), 45=222 (LC 41), 46=226 (LC 41), 47=223 (LC 41), 48=182 (LC 41), 49=121 (LC 24), 50=152 (LC 51)	WEBS		13-38=-177/57, 12-39=-177/57, 11-40=-175/59, 10-42=-187/61, 9-43=-114/5, 8-44=-200/72, 7-45=-182/78, 6-46=-185/77, 5-47=-184/76, 4-48=-140/113, 3-49=-82/136, 14-37=-177/57, 15-36=-175/59, 16-34=-187/61, 17-33=-114/0, 18-32=-200/72, 19-31=-182/78, 20-30=-185/77, 21-29=-184/76, 22-28=-140/113, 23-27=-77/136
TOP CHORD		2x4 SP No.2				
BOT CHORD		2x4 SP No.2				
WEBS		2x6 SP No.2				
OTHERS		2x4 SP No.3				
BRACING						
TOP CHORD		Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 9-17.				
BOT CHORD		Rigid ceiling directly applied or 6-0-0 oc bracing.				
REACTIONS (size)		26=42-0-0, 27=42-0-0, 28=42-0-0, 29=42-0-0, 30=42-0-0, 31=42-0-0, 32=42-0-0, 33=42-0-0, 34=42-0-0, 36=42-0-0, 37=42-0-0, 38=42-0-0, 39=42-0-0, 40=42-0-0, 42=42-0-0, 43=42-0-0, 44=42-0-0, 45=42-0-0, 46=42-0-0, 47=42-0-0, 48=42-0-0, 49=42-0-0, 50=42-0-0				
Max Horiz		50=-107 (LC 15)				
Max Uplift		26=-5 (LC 11), 27=-116 (LC 15), 28=-40 (LC 15), 29=-45 (LC 15), 30=-43 (LC 15), 31=-44 (LC 15), 32=-41 (LC 15), 34=-29 (LC 11), 36=-26 (LC 10), 37=-25 (LC 11), 38=-25 (LC 10), 39=-25 (LC 11), 40=-26 (LC 10), 42=-29 (LC 10), 44=-43 (LC 14), 45=-44 (LC 14), 46=-43 (LC 14), 47=-45 (LC 14), 48=-38 (LC 14), 49=-152 (LC 14), 50=-43 (LC 19)				

Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof
39 Mason Ridge	A11	Hip Supported Gable	1	1	I68893498
					Job Reference (optional)

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) * 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.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 50, 5 lb uplift at joint 26, 25 lb uplift at joint 38, 25 lb uplift at joint 39, 26 lb uplift at joint 40, 29 lb uplift at joint 42, 43 lb uplift at joint 44, 44 lb uplift at joint 45, 43 lb uplift at joint 46, 45 lb uplift at joint 47, 38 lb uplift at joint 48, 152 lb uplift at joint 49, 25 lb uplift at joint 37, 26 lb uplift at joint 36, 29 lb uplift at joint 34, 41 lb uplift at joint 32, 44 lb uplift at joint 31, 43 lb uplift at joint 30, 45 lb uplift at joint 29, 40 lb uplift at joint 28 and 116 lb uplift at joint 27.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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818 Soundside Road
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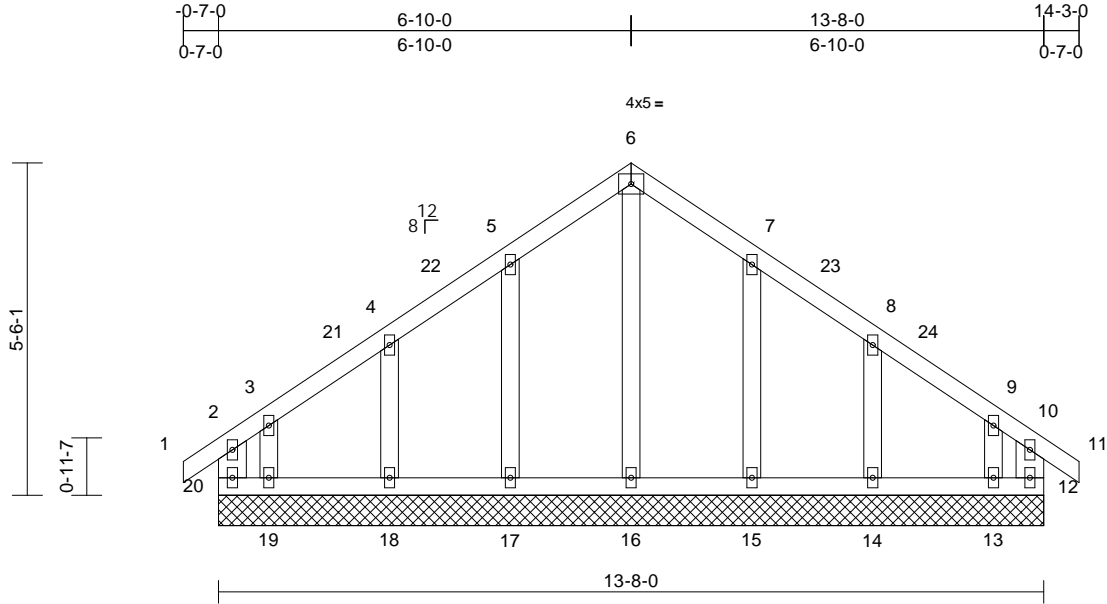
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	168893499
39 Mason Ridge	B01	Common Supported Gable	1	1	Job Reference (optional)	

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

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Page: 1

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Scale = 1:38.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	12	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
										Weight: 78 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x6 SP No.2
OTHERS 2x4 SP No.3

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

REACTIONS (size)
12=13-8-0, 13=13-8-0, 14=13-8-0,
15=13-8-0, 16=13-8-0, 17=13-8-0,
18=13-8-0, 19=13-8-0, 20=13-8-0
Max Horiz 20=116 (LC 13)
Max Uplift 12=71 (LC 11), 13=127 (LC 15),
14=58 (LC 15), 15=60 (LC 15),
17=61 (LC 14), 18=57 (LC 14),
19=145 (LC 14), 20=107 (LC 10)
Max Grav 12=118 (LC 24), 13=157 (LC 25),
14=228 (LC 22), 15=259 (LC 22),
16=164 (LC 27), 17=259 (LC 21),
18=228 (LC 21), 19=178 (LC 12),
20=148 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-20=-109/70, 1-2=0/27, 2-3=-109/103,
3-4=-71/72, 4-5=-60/90, 5-6=-88/138,
6-7=-88/138, 7-8=-59/78, 8-9=-54/55,
9-10=-84/73, 10-11=0/27, 10-12=-89/47
BOT CHORD 19-20=-48/68, 18-19=-48/68, 17-18=-48/68,
16-17=-48/68, 15-16=-48/68, 14-15=-48/68,
13-14=-48/68, 12-13=-48/68
WEBS 6-16=-124/7, 5-17=-220/85, 4-18=-186/84,
3-19=-118/113, 7-15=-220/85, 8-14=-186/85,
9-13=-108/104

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

2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-0 to 2-5-0, Interior (1) 2-5-0 to 3-10-0, Exterior(2R) 3-10-0 to 9-10-0, Interior (1) 9-10-0 to 11-3-0, Exterior(2E) 11-3-0 to 14-3-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.

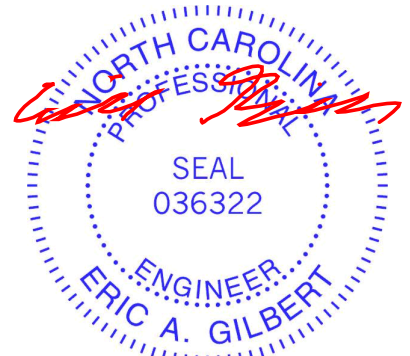
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.

11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * 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.

13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 107 lb uplift at joint 20, 71 lb uplift at joint 12, 61 lb uplift at joint 17, 57 lb uplift at joint 18, 145 lb uplift at joint 19, 60 lb uplift at joint 15, 58 lb uplift at joint 14 and 127 lb uplift at joint 13.

14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16,2024

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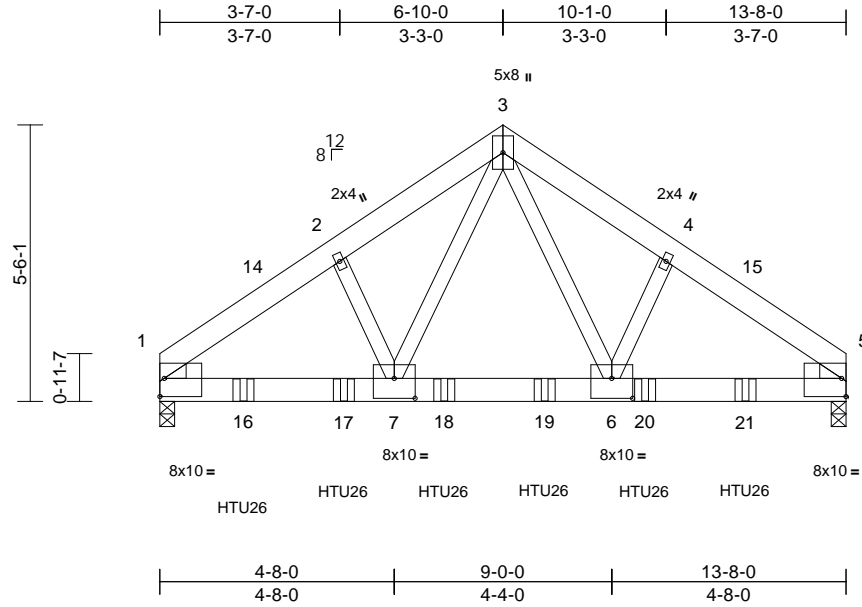
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	I68893500
39 Mason Ridge	B02	Common Girder	1	2	Job Reference (optional)	

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

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Page: 1

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Scale = 1:45.9

Plate Offsets (X, Y): [1:Edge,0-4-6], [5:Edge,0-4-6], [6:0-5-0,0-4-12], [7:0-5-0,0-4-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.07	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.12	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 191 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING

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

REACTIONS

(size) 1=0-3-8, 5=0-3-8
Max Horiz 1=-107 (LC 8)
Max Uplift 1=-558 (LC 12), 5=-499 (LC 13)
Max Grav 1=6196 (LC 5), 5=6058 (LC 6)

FORCES

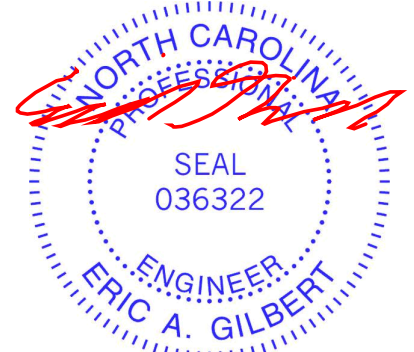
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-7484/684, 2-3=-7349/725,
3-4=-7414/698, 4-5=-7554/658
BOT CHORD 1-7=-580/6072, 6-7=-368/4493,
5-6=-493/6118
WEBS 3-6=-388/4284, 4-6=-86/357, 3-7=-443/4140,
2-7=-78/321

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 3 rows staggered at 0-8-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.

- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- Use Simpson Strong-Tie HTU26 (20-10d Girder, 14-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-8-0 from the left end to 11-8-0 to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-5=-60, 8-11=-20
Concentrated Loads (lb)
Vert: 16=-1648 (B), 17=-1648 (B), 18=-1648 (B), 19=-1648 (B), 20=-1815 (B), 21=-1740 (B)



October 16, 2024

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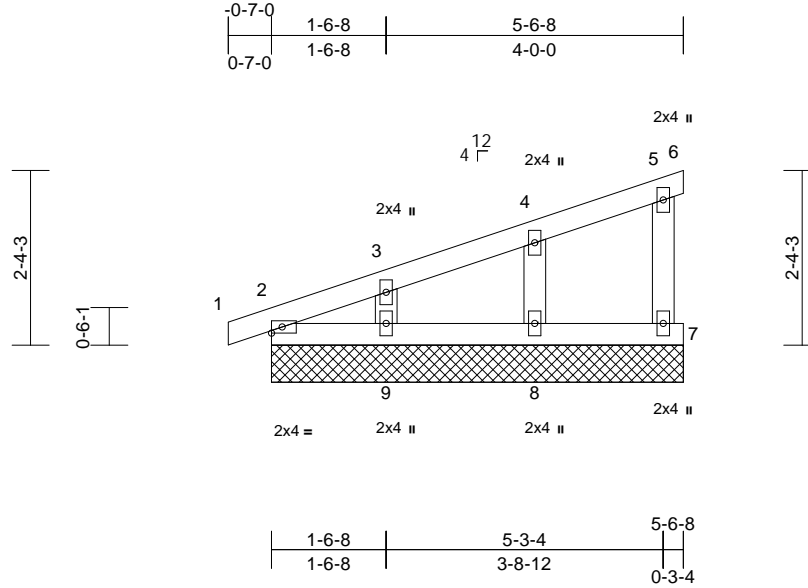
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof
39 Mason Ridge	C01	Monopitch Supported Gable	1	1	168893501
Job Reference (optional)					

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:34

Page: 1

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Scale = 1:31

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
Weight: 23 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 5-6-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(size)	2=5-6-8, 7=5-6-8, 8=5-6-8, 9=5-6-8, 10=5-6-8
	Max Horiz	2=77 (LC 10), 10=77 (LC 10)
	Max Uplift	2=-2 (LC 10), 7=-18 (LC 14), 8=-33 (LC 10), 9=-43 (LC 14), 10=-2 (LC 10)
	Max Grav	2=126 (LC 21), 7=98 (LC 21), 8=227 (LC 21), 9=199 (LC 21), 10=126 (LC 21)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/16, 2-3=-150/48, 3-4=-92/31, 4-5=-29/14, 5-6=-8/0, 5-7=-85/56
BOT CHORD	2-9=-73/28, 8-9=0/0, 7-8=0/0
WEBS	4-8=-186/188, 3-9=-159/170

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 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 2 lb uplift at joint 2, 18 lb uplift at joint 7, 33 lb uplift at joint 8, 43 lb uplift at joint 9 and 2 lb uplift at joint 2.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16,2024

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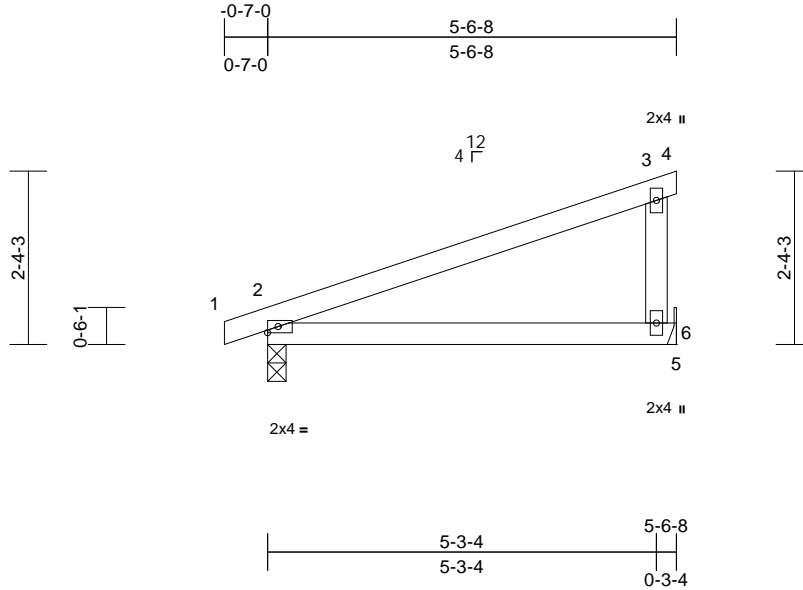
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	I68893502
39 Mason Ridge	C02	Monopitch	3	1	Job Reference (optional)	

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Page: 1

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Scale = 1:31.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	0.15	6-9	>420	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	0.12	6-9	>515	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 21 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 5-6-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 6= Mechanical
Max Horiz 2=77 (LC 10)
Max Uplift 2=-88 (LC 10), 6=-95 (LC 10)
Max Grav 2=341 (LC 21), 6=315 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

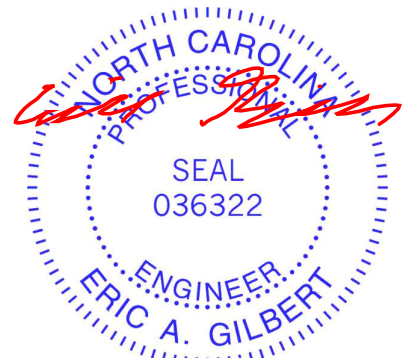
TOP CHORD 1-2=0/16, 2-3=-82/78, 3-4=-8/0, 3-6=-231/201
BOT CHORD 2-6=-147/120, 5-6=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 6.
- 9) One H2.5A Simpson Strong-Tie 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.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16, 2024

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof
39 Mason Ridge	C03	Monopitch	6	1	Job Reference (optional)

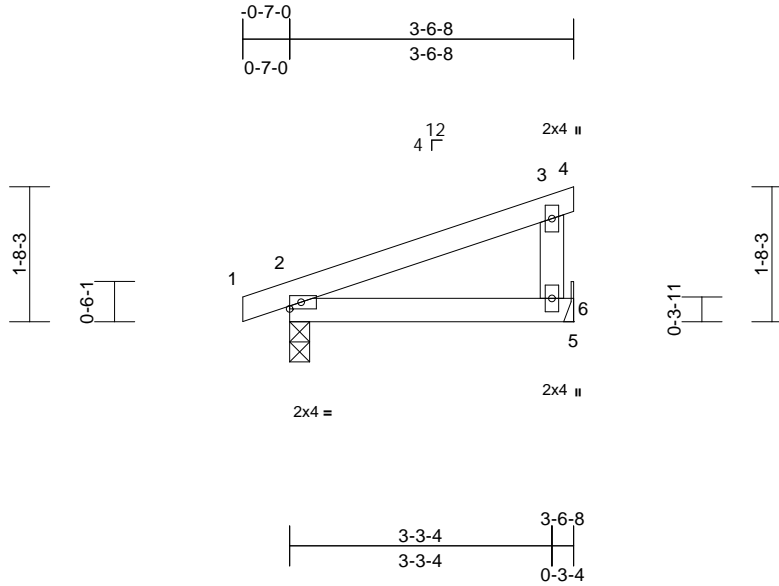
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Page: 1

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Scale = 1:28.7

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	0.20	Vert(LL)	0.02	6-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	0.02	6-9	>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	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
Weight: 13 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 3-6-8 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 6= Mechanical
 Max Horiz 2=52 (LC 10)
 Max Uplift 2=-62 (LC 10), 6=-60 (LC 10)
 Max Grav 2=228 (LC 21), 6=200 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/16, 2-3=-51/31, 3-4=-7/0, 3-6=-147/125
 BOT CHORD 2-6=-86/50, 5-6=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - 7) Refer to girder(s) for truss to truss connections.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 6.
 - 9) One H2.5A Simpson Strong-Tie 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.
 - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



October 16, 2024

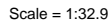
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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 Edenton, NC 27932

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:34 Page: 1
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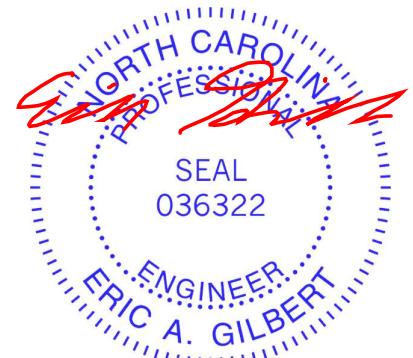


LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 3-6-8 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS (size)	
	2=3-6-8, 6=3-6-8, 7=3-6-8, 8=3-6-8, 9=3-6-8
Max Horiz	2=51 (LC 10), 9=51 (LC 10)
Max Uplift	2=-9 (LC 10), 6=-51 (LC 7), 8=-43 (LC 14), 9=-9 (LC 10)
Max Grav	2=101 (LC 21), 6=-16 (LC 17), 7=141 (LC 21), 8=199 (LC 21), 9=101 (LC 21)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/15, 2-3=-93/32, 3-4=-31/17, 4-5=-6/0
BOT CHORD	2-8=-37/15, 7-8=0/0, 6-7=0/0
WEBS	4-7=-89/69, 3-8=-169/189

- 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2'-0" oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 2'-0" 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 9 lb uplift at joint 2, 51 lb uplift at joint 6, 43 lb uplift at joint 8 and 9 lb uplift at joint 2.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

- ## NOTES
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) zone; cantilever left and right exposed ; and vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10



October 16, 2024



WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEL REFERENCE PAGE MIT-TR-17-0169, 1/12/2023 BEFORE USE.

Design valid for use only with MiTeTe® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Components Association (www.sbcacomponents.com)



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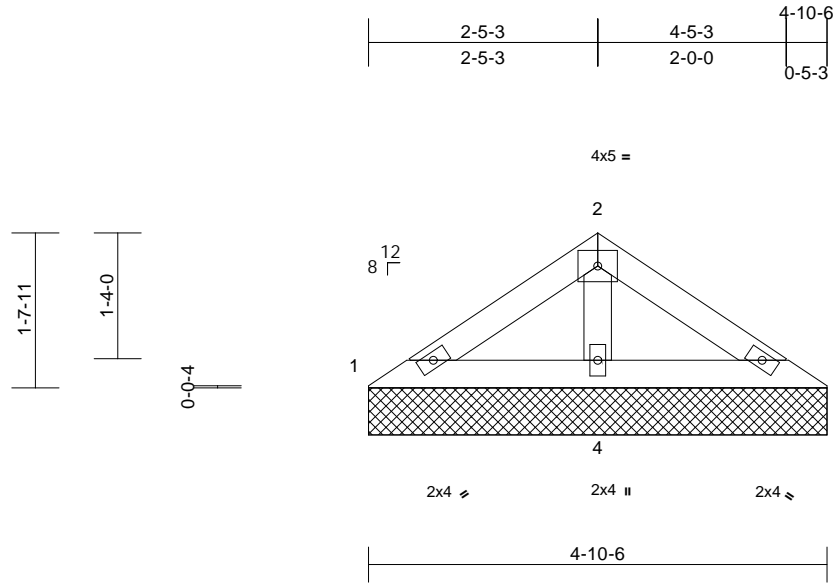
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	I68893505
39 Mason Ridge	VL5	Valley	1	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:35

Page: 1

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Scale = 1:24.4

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	0.08	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.10	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	4	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 16 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 4-10-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=4-10-6, 3=4-10-6, 4=4-10-6
Max Horiz 1=34 (LC 13)
Max Uplift 1=-5 (LC 14), 3=-11 (LC 15), 4=-25 (LC 14)
Max Grav 1=86 (LC 20), 3=86 (LC 21), 4=288 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension

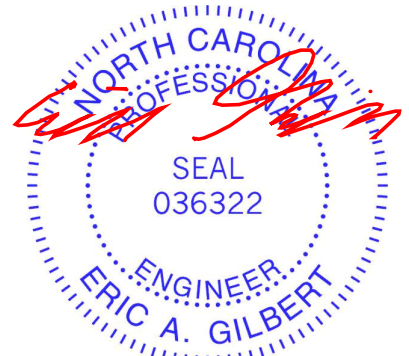
TOP CHORD 1-2=-84/106, 2-3=-84/106
BOT CHORD 1-4=-81/75, 3-4=-81/75
WEBS 2-4=-175/88

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 1, 11 lb uplift at joint 3 and 25 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16, 2024

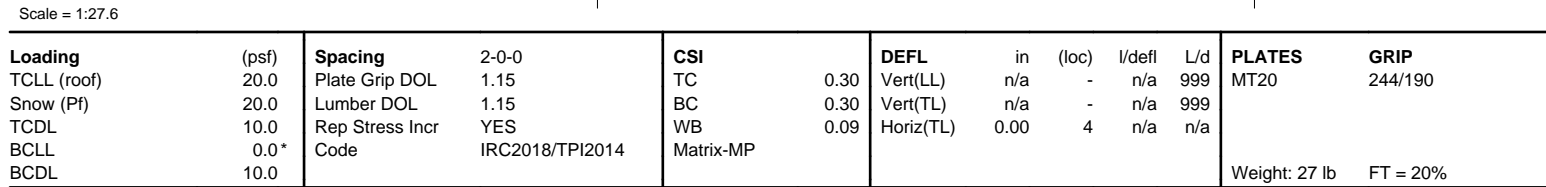
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 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 22 lb uplift at joint 1, 22 lb uplift at joint 3 and 62 lb uplift at joint 4.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

October 16, 2024

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

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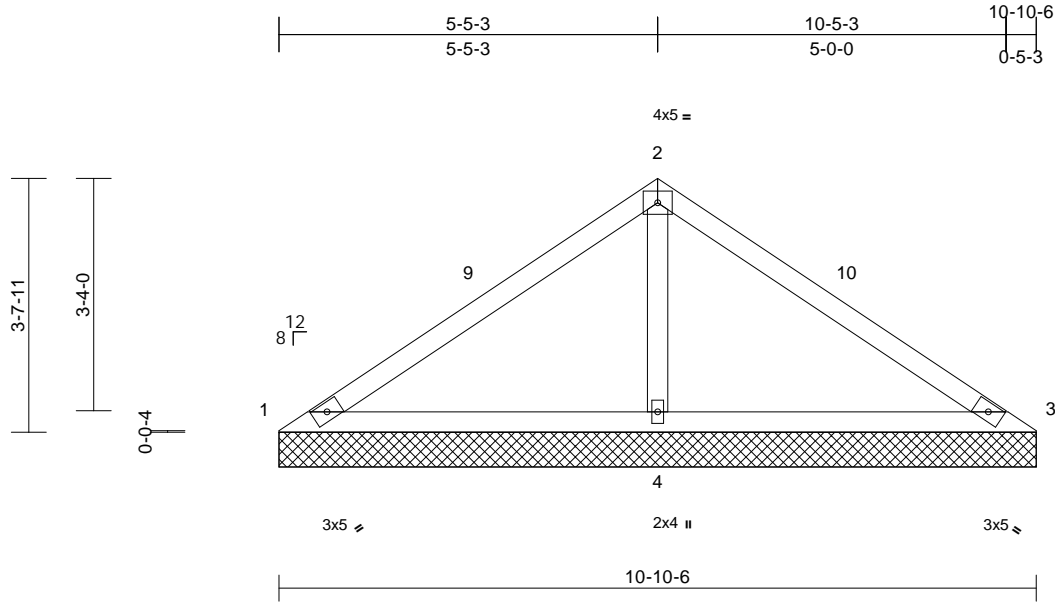
Job	Truss	Truss Type	Qty	Ply	39 Mason Ridge - Columbia C - Roof	I68893507
39 Mason Ridge	VL11	Valley	1	1	Job Reference (optional)	

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

Run: 9.06 S 8.73 Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Mon Oct 14 14:38:35

Page: 1

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Scale = 1:33.1

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	0.56	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.50	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 38 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 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=10-10-6, 3=10-10-6, 4=10-10-6
Max Horiz 1=-81 (LC 10)
Max Uplift 1=-69 (LC 20), 3=-69 (LC 20), 4=-99 (LC 14)
Max Grav 1=83 (LC 20), 3=83 (LC 21), 4=887 (LC 20)

FORCES

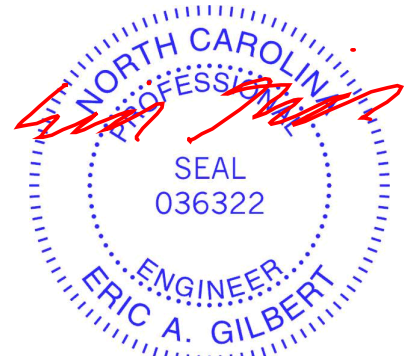
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-116/467, 2-3=-116/467
BOT CHORD 1-4=-280/164, 3-4=-280/164
WEBS 2-4=-697/245

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 7-10-12, Exterior(2E) 7-10-12 to 10-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 1, 69 lb uplift at joint 3 and 99 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 16, 2024

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

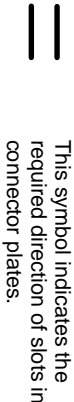
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 X 4

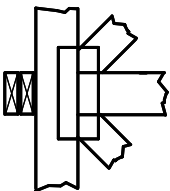
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

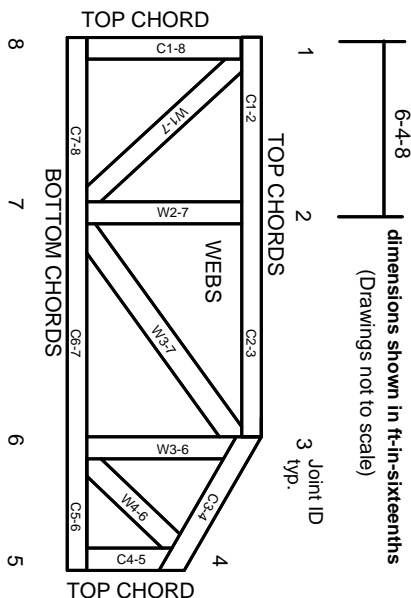


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

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

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

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