

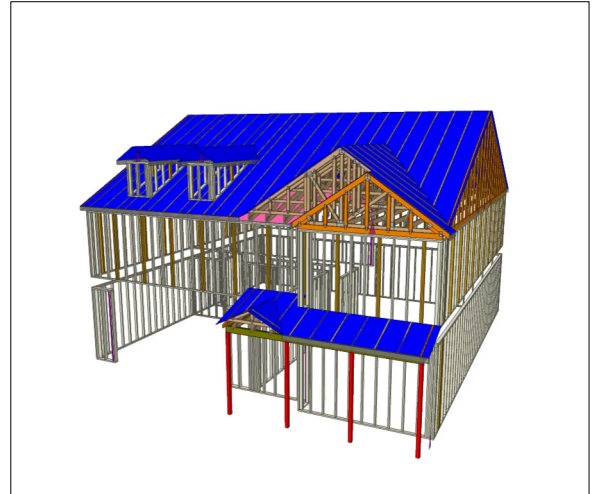


Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450

Builder: DR Horton Inc

**Model: 42 Mason Ridge
Columbia B**



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.

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

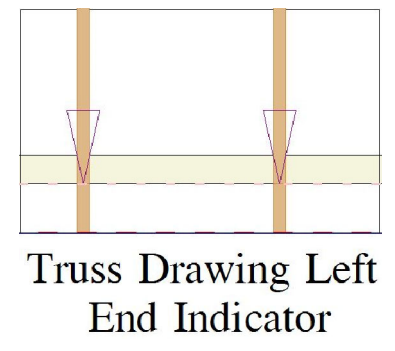
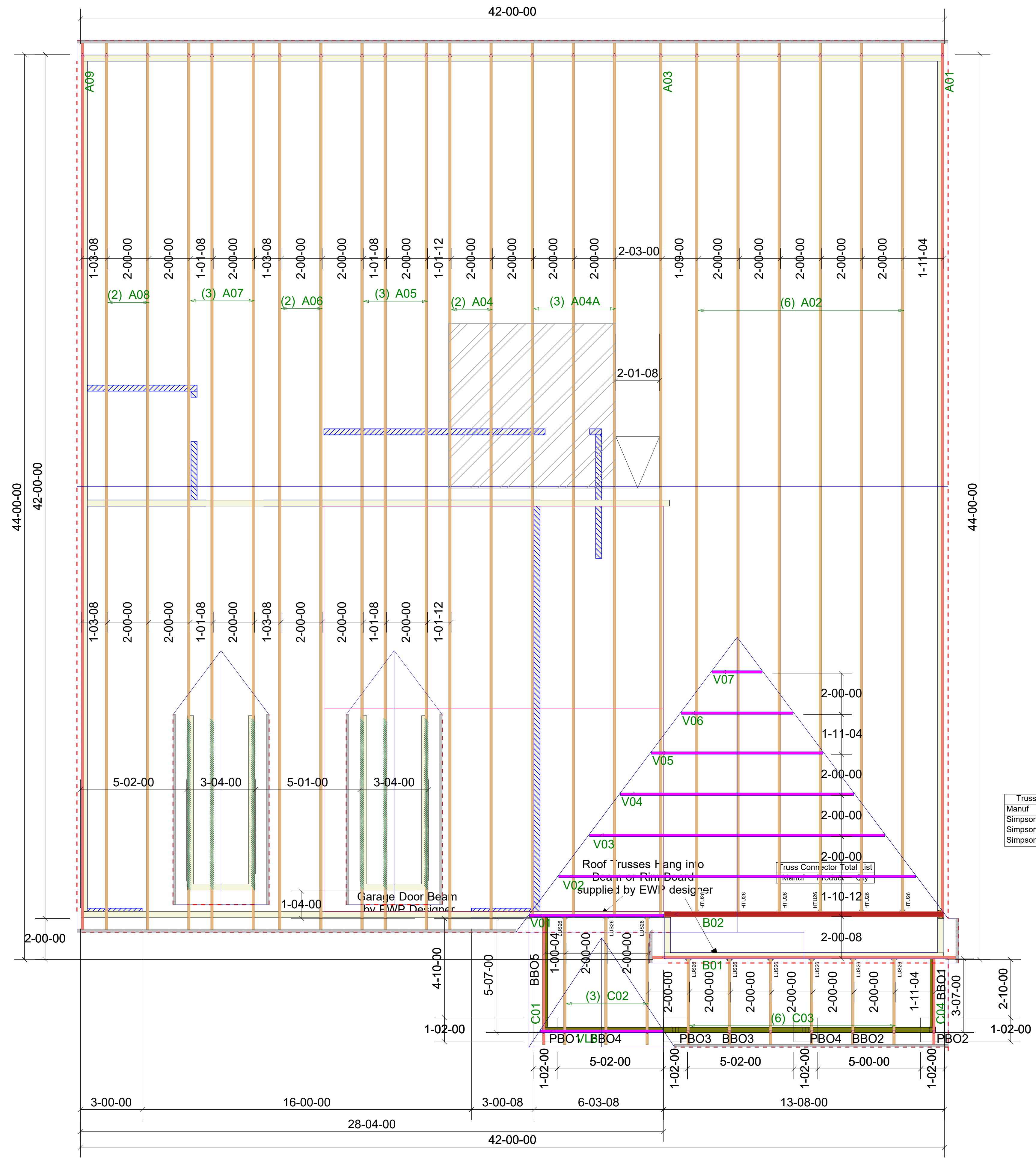
THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible 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
42 Mason Ridge
Columbia B
PLACEMENT PLAN

Scale: NTS
Date: 2/13/2025
Designer: Nate Donaldson
Project Number: TM240460-A
Sheet Number:

1/1



** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT. ** TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE. ** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS. ** 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.

** 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.

** 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.

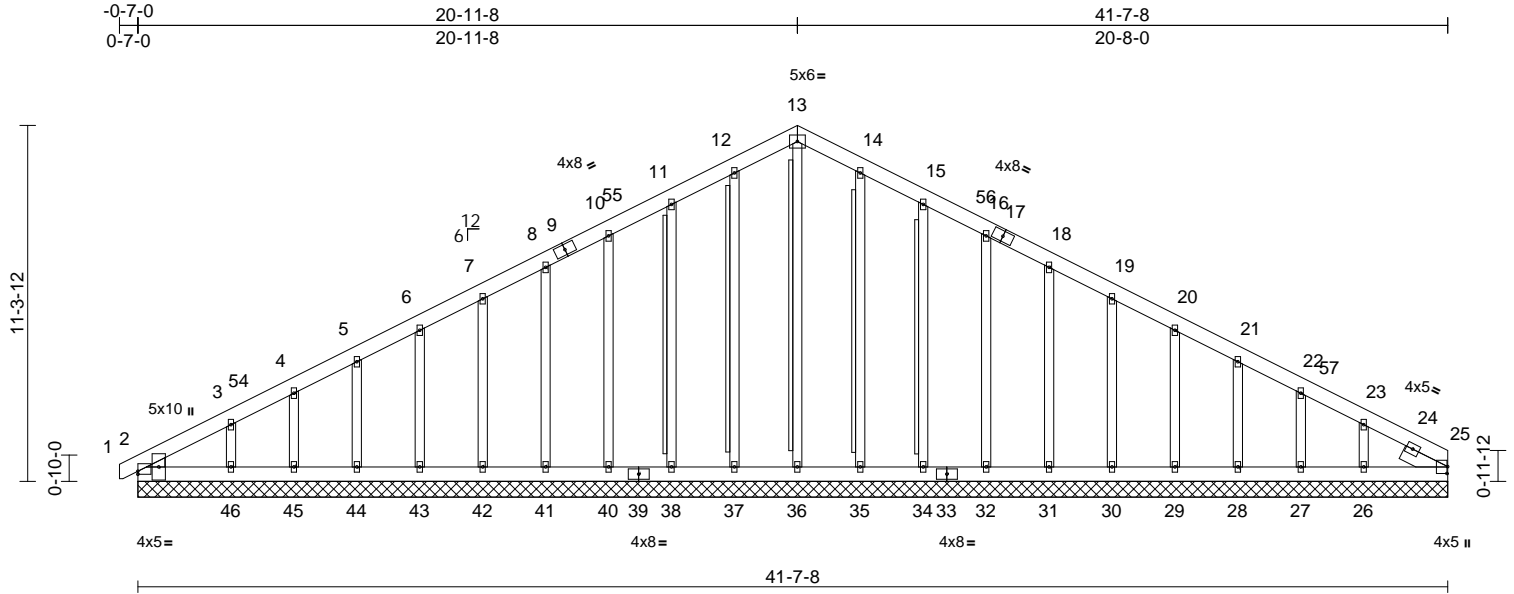
** REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885140
42 Mason Ridge	A01	Common Supported Gable	1	1	Job Reference (optional)	

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

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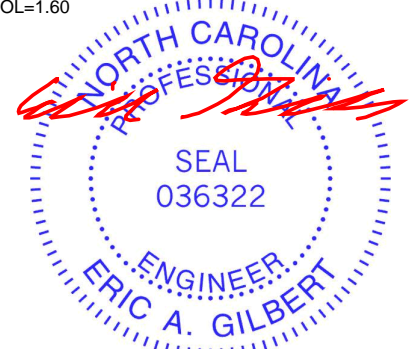


Scale = 1:73.2
 Plate Offsets (X, Y): [2:Edge,0-1-3], [25:0-2-10,0-0-5]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	25	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 373 lb	FT = 20%

LUMBER	Max Grav	WEBS
TOP CHORD	2=164 (LC 27), 25=120 (LC 28), 26=210 (LC 37), 27=138 (LC 22), 28=159 (LC 37), 29=154 (LC 22), 30=155 (LC 37), 31=155 (LC 1), 32=180 (LC 22), 34=229 (LC 22), 35=230 (LC 22), 36=178 (LC 28), 37=228 (LC 21), 38=226 (LC 21), 40=176 (LC 21), 41=155 (LC 1), 42=155 (LC 36), 43=154 (LC 21), 44=160 (LC 36), 45=133 (LC 1), 46=225 (LC 36), 47=164 (LC 27), 50=120 (LC 28)	13-36=166/36, 12-37=189/46, 11-38=187/86, 10-40=137/76, 8-41=122/74, 7-42=122/75, 6-43=122/75, 5-44=124/76, 4-45=112/66, 3-46=159/144, 14-35=191/38, 15-34=191/86, 16-32=142/76, 18-31=122/74, 19-30=122/75, 20-29=122/75, 21-28=123/74, 22-27=116/78, 23-26=146/148
BOT CHORD	2=41-7-8, 25=41-7-8, 26=41-7-8, 27=41-7-8, 28=41-7-8, 29=41-7-8, 30=41-7-8, 31=41-7-8, 32=41-7-8, 34=41-7-8, 35=41-7-8, 36=41-7-8, 37=41-7-8, 38=41-7-8, 40=41-7-8, 41=41-7-8, 42=41-7-8, 43=41-7-8, 44=41-7-8, 45=41-7-8, 46=41-7-8, 47=41-7-8, 50=41-7-8	
OTHERS	2x4 SP No.3 *Except* 36-13,0-0,0-0,0-0,0-0,0-0:2x4 SP No.2	
WEDGE	Left: 2x4 SP No.3	
SLIDER	Right 2x6 SP No.2 -- 1-6-0	
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.	
WEBS	T-Brace: 2x4 SP No.2 - 13-36, 12-37, 11-38, 14-35, 15-34	
FORCES	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/14, 2-3=-210/74, 3-4=-158/76, 4-5=-124/89, 5-6=-101/107, 6-7=-80/130, 7-8=-73/152, 8-10=-84/176, 10-11=-95/221, 11-12=-112/268, 12-13=-122/297, 13-14=-122/297, 14-15=-112/268, 15-16=-95/221, 16-18=-84/176, 18-19=-73/133, 19-20=-61/89, 20-21=-52/45, 21-22=-72/22, 22-23=-94/22, 23-25=-145/48	
BOT CHORD	2-46=-64/150, 45-46=-46/150, 44-45=-46/150, 43-44=-46/150, 42-43=-46/150, 41-42=-46/150, 40-41=-46/150, 38-40=-46/150, 37-38=-46/150, 36-37=-46/150, 35-36=-46/150, 34-35=-46/150, 32-34=-46/150, 31-32=-46/150, 30-31=-46/150, 29-30=-46/150, 28-29=-46/150, 27-28=-46/150, 26-27=-46/150, 25-26=-46/150	
REACTIONS	(size)	
Max Horiz	2=172 (LC 14), 47=172 (LC 14)	
Max Uplift	2=-11 (LC 15), 26=-103 (LC 15), 27=-24 (LC 15), 28=-46 (LC 15), 29=-41 (LC 15), 30=-43 (LC 15), 31=-42 (LC 15), 32=-43 (LC 15), 34=-52 (LC 15), 35=-14 (LC 15), 37=-22 (LC 14), 38=-49 (LC 14), 40=-43 (LC 14), 41=-42 (LC 14), 42=-43 (LC 14), 43=-41 (LC 14), 44=-47 (LC 14), 45=-22 (LC 14), 46=-106 (LC 14), 47=-11 (LC 15)	

- 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 Corner(3E) -0-6-6 to 3-7-10, Exterior(2N) 3-7-10 to 16-9-9, Corner(3R) 16-9-9 to 24-11-8, Exterior (2N) 24-11-8 to 37-5-9, Corner(3E) 37-5-9 to 41-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



Continued on page 2

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

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/TPH 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)



818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	I69885140
42 Mason Ridge	A01	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:28
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Page: 2

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; 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) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * 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.
- 12) N/A

- 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 25.
- 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.
- 15) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

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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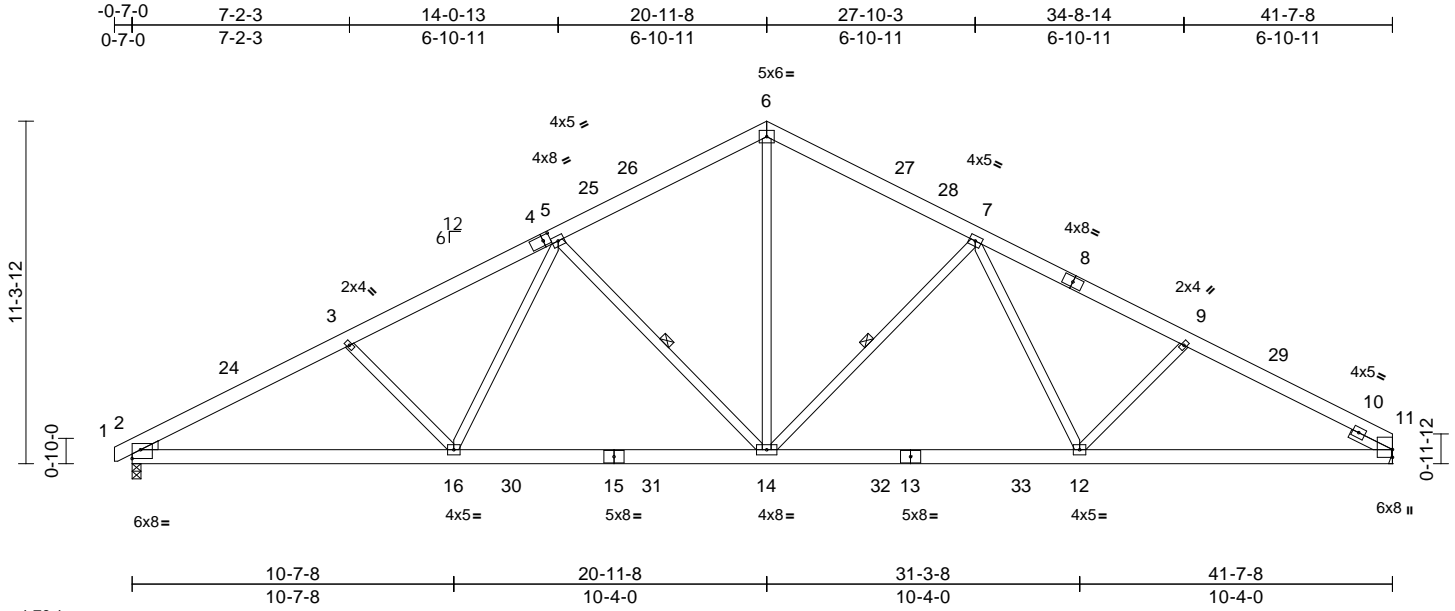
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885141
42 Mason Ridge	A02	Common	6	1	Job Reference (optional)	

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

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.23	12-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.39	12-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.11	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 293 lb	FT = 20%	

LUMBER
 TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 14-6:2x4 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 3-3-1 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 7-14, 5-14

REACTIONS (size) 2=0-3-8, 11= Mechanical
 Max Horiz 2=177 (LC 14)
 Max Uplift 2=-171 (LC 14), 11=-158 (LC 15)
 Max Grav 2=1865 (LC 3), 11=1839 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/14, 2-3=-3594/341, 3-5=-3363/340, 5-6=-2435/350, 6-7=-2436/350, 7-9=-3266/336, 9-11=-3480/337
 BOT CHORD 2-16=-359/3118, 14-16=-208/2613, 12-14=-141/2585, 11-12=-220/2997
 WEBS 6-14=-125/1727, 7-14=-843/256, 7-12=-20/573, 9-12=-276/197, 5-14=-884/259, 5-16=-27/664, 3-16=-332/204

- 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 16-9-9, Exterior(2R) 16-9-9 to 25-1-7, Interior (1) 25-1-7 to 37-5-9, Exterior(2E) 37-5-9 to 41-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 158 lb uplift at joint 11.
- 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.

LOAD CASE(S) Standard



December 2, 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/TPI 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)



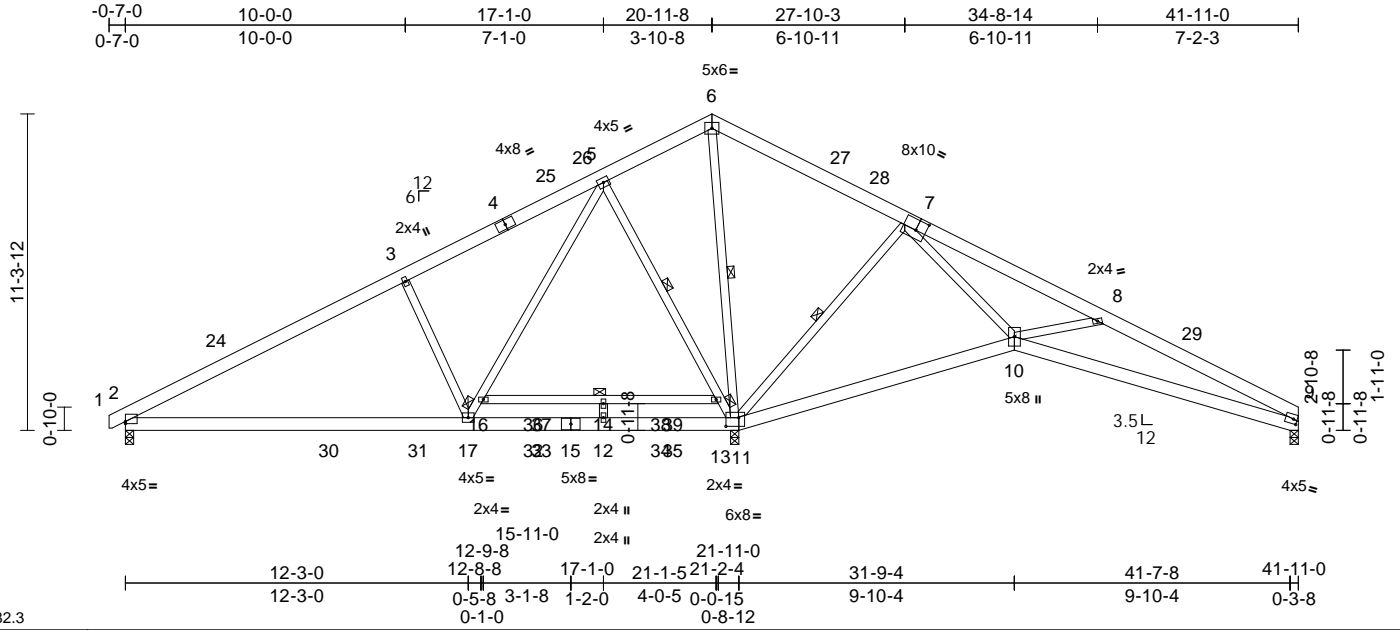
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885142
42 Mason Ridge	A03	Roof Special	1	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:82.3

Plate Offsets (X, Y): [2:Edge,0-0-15], [7:0-4-4,0-4-8], [9:0-1-9,0-2-0], [11:0-5-8,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.13	14-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.27	14-16	>989	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 304 lb	FT = 20%

LUMBER
 TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2 *Except* 15-11:2x6 SP 2400F
 2.0E, 16-13:2x4 SP No.2
 WEBS 2x4 SP No.3 *Except* 11-6:2x4 SP No.2

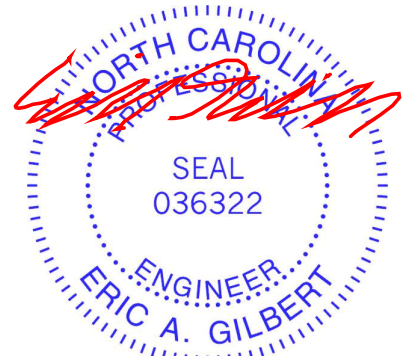
BRACING
 TOP CHORD Structural wood sheathing directly applied or
 6-0-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc
 bracing, Except:
 10-0-0 oc bracing: 2-17,9-10.
 WEBS 1 Row at midpt 5-13, 6-11, 7-11

REACTIONS (size) 2=0-3-8, 9=0-3-8, 11=0-3-8
 Max Horiz 2=174 (LC 18)
 Max Uplift 2=-59 (LC 14), 9=-91 (LC 15)
 Max Grav 2=897 (LC 38), 9=497 (LC 6),
 11=3001 (LC 3)

FORCES (lb) - Maximum Compression/Maximum
 Tension
 TOP CHORD 1-2=0/14, 2-3=-1134/40, 3-5=-939/92,
 5-6=0/754, 6-8=-410/892, 8-9=-932/253
 BOT CHORD 2-17=-256/929, 12-17=-222/332,
 11-12=-222/332, 10-11=-363/125,
 9-10=-165/856, 14-16=-243/0, 13-14=-243/0
 WEBS 3-17=-559/290, 16-17=-7/1355, 5-16=0/1546,
 5-13=-1136/134, 11-13=-1340/97,
 6-11=-1033/40, 7-11=-802/234, 7-10=0/796,
 8-10=-596/275, 12-14=-215/0

- 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 16-9-3, Exterior(2R) 16-9-3 to 25-1-13, Interior (1)
 25-1-13 to 37-8-11, Exterior(2E) 37-8-11 to 41-11-0
 zone; cantilever left and right exposed; end vertical left
 and right exposed; C-C for members and forces &
 MWFRS for reactions shown; Lumber DOL=1.60 plate
 grip DOL=1.60
- 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, 17-1-0
 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, with BCDL = 10.0psf.
- Bearing at joint(s) 9 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) 2 and 9. 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



December 2, 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/TPI 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)



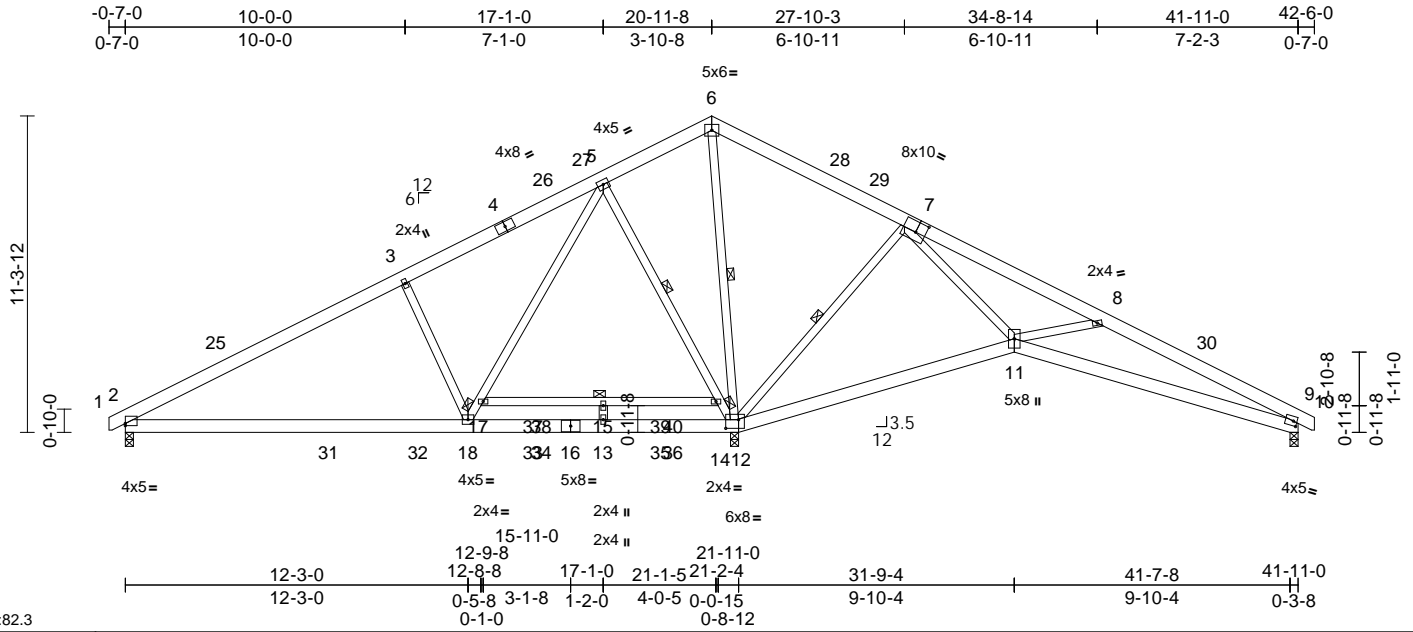
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885143
42 Mason Ridge	A04	Roof Special	2	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:30
 ID:_Ns3qehLDrcyLE9sL6mxKlzz0xj-RfC?PsB70Hq3NSgPqnL8w3uITxBGKwRCoD0i7J4zJC7f

Page: 1



Scale = 1:82.3

Plate Offsets (X, Y): [2:Edge,0-0-15], [7:0-4-4,0-4-8], [9:0-1-9,0-2-0], [12:0-5-8,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.13	15-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.27	15-17	>989	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 306 lb	FT = 20%

LUMBER
 TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2 *Except* 16-12:2x6 SP 2400F
 2.0E, 0-0,17-14:2x4 SP No.2
 WEBS 2x4 SP No.3 *Except* 12-6:2x4 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, Except:
 10-0-0 oc bracing: 2-18,9-11.
 WEBS 1 Row at midpt 5-14, 6-12, 7-12

REACTIONS (size) 2=0-3-8, 9=0-3-8, 12=0-3-8
 Max Horiz 2=170 (LC 18)
 Max Uplift 2=60 (LC 14), 9=104 (LC 15)
 Max Grav 2=897 (LC 38), 9=523 (LC 6), 12=3001 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/14, 2-3=-1134/42, 3-5=-939/94,
 5-6=0/755, 6-8=-407/893, 8-9=-929/254,
 9-10=0/14
 BOT CHORD 2-18=-253/929, 13-18=-223/336,
 12-13=-223/336, 11-12=-363/129,
 9-11=-158/855, 15-17=-243/0, 14-15=-243/0
 WEBS 5-14=-1136/133, 12-14=-1340/97,
 6-12=-1034/31, 7-12=-801/233, 7-11=0/794,
 8-11=-595/275, 17-18=-7/1355, 5-17=0/1546,
 3-18=-559/290, 13-15=-215/0

- 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 16-9-3, Exterior(2R) 16-9-3 to 25-1-13, Interior (1) 25-1-13 to 38-3-1, Exterior(2E) 38-3-1 to 42-5-6 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, 17-1-0 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, with BCDL = 10.0psf.
- Bearing at joint(s) 9 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) 2 and 9. 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



December 2, 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/TPI 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)



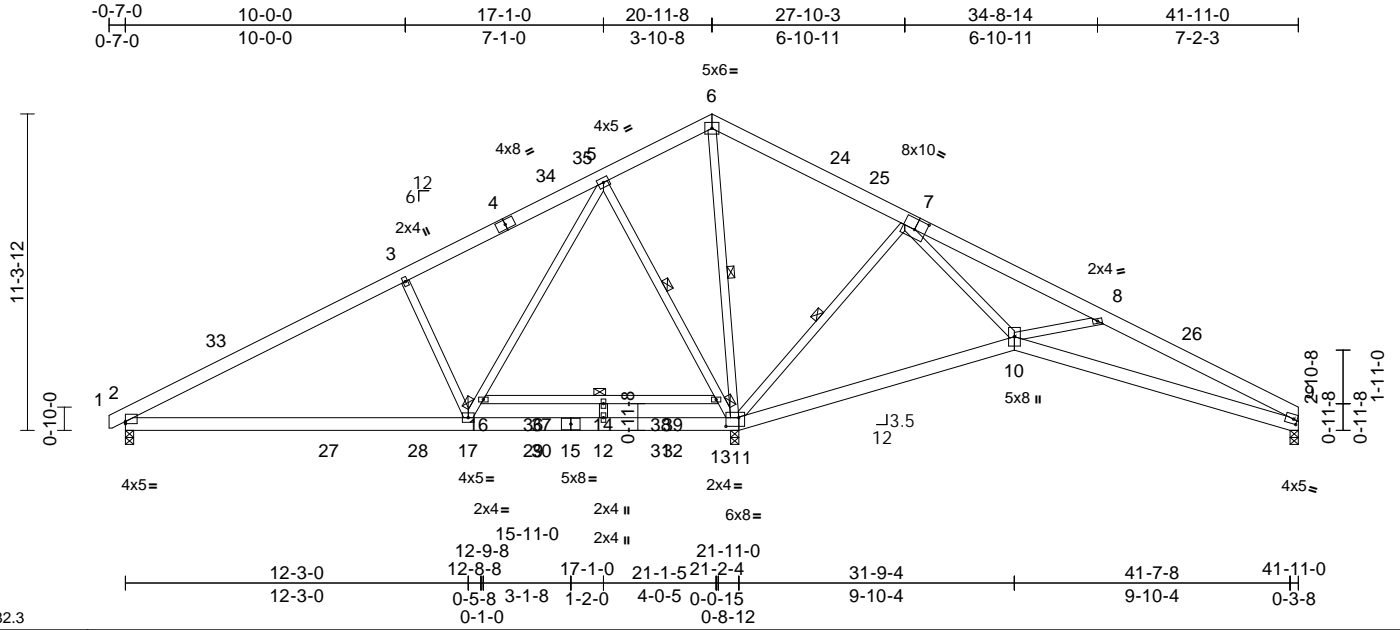
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885144
42 Mason Ridge	A04A	Roof Special	3	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:30
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Page: 1



Scale = 1:82.3

Plate Offsets (X, Y): [2:Edge,0-0-15], [7:0-4-12,0-4-8], [9:0-1-9,0-2-0], [11:0-5-8,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.13	14-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.27	14-16	>989	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 304 lb	FT = 20%

LUMBER
 TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2 *Except* 15-11:2x6 SP 2400F 2.0E, 16-13:2x4 SP No.2
 WEBS 2x4 SP No.3 *Except* 11-6:2x4 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, Except: 10-0-0 oc bracing: 2-17,9-10.
 WEBS 1 Row at midpt 5-13, 6-11, 7-11

REACTIONS (size) 2=0-3-8, 9=0-3-8, 11=0-3-8
 Max Horiz 2=174 (LC 14)
 Max Uplift 2=-59 (LC 14), 9=-91 (LC 15)
 Max Grav 2=897 (LC 38), 9=496 (LC 6), 11=3002 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 6-8=-408/892, 8-9=-932/253, 1-2=0/14, 2-3=-1134/40, 3-5=-939/92, 5-6=0/755
 BOT CHORD 2-17=-256/929, 12-17=-223/333, 11-12=-223/333, 10-11=-369/126, 9-10=-165/856, 14-16=-243/0, 13-14=-243/0
 WEBS 3-17=-559/290, 16-17=-7/1355, 5-16=0/1546, 5-13=-1136/134, 11-13=-1340/97, 6-11=-1032/39, 7-11=-799/234, 7-10=0/796, 8-10=-599/276, 12-14=-215/0

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 16-9-3, Exterior(2R) 16-9-3 to 25-1-13, Interior (1) 25-1-13 to 37-8-11, Exterior(2E) 37-8-11 to 41-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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, 17-1-0 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, with BCDL = 10.0psf.
- Bearing at joint(s) 9 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) 2 and 9. 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



December 2, 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/TPI 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)



818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885145
42 Mason Ridge	A05	Roof Special	3	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:30
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Page: 1

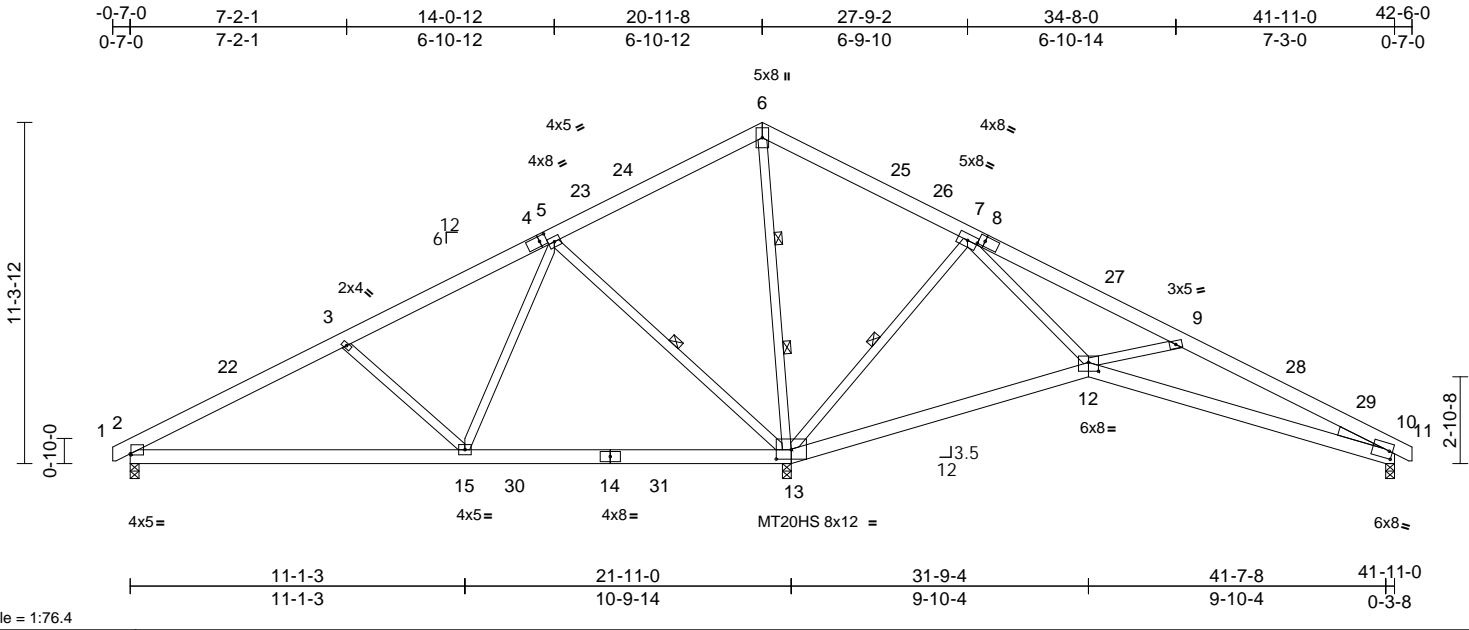


Plate Offsets (X, Y): [2:0-0-4,0-0-7], [4:0-2-12,0-2-0], [8:0-2-7,0-2-0], [10:0-1-4,0-3-0], [12:0-4-0,0-3-8], [13:0-6-0,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.12	13-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.23	12-21	>999	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.80	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 293 lb	FT = 20%

LUMBER
 TOP CHORD 2x6 SP No.2 *Except* 1-4,8-11:2x6 SP 2400F 2.0E
 BOT CHORD 2x6 SP No.2 *Except* 14-13:2x6 SP 2400F 2.0E
 WEBS 2x4 SP No.3 *Except* 13-5,13-6:2x4 SP No.2
 WEDGE Right: 2x4 SP No.3

BRACING
 TOP CHORD Structural wood sheathing directly applied or 4-11-7 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 10-12.
 WEBS 1 Row at midpt 5-13, 7-13
 WEBS 2 Rows at 1/3 pts 6-13

REACTIONS (size) 2=0-3-8, 10=0-3-8, 13=0-3-8
 Max Horiz 2=170 (LC 18)
 Max Uplift 2=-326 (LC 35), 10=-129 (LC 15), 13=-305 (LC 15)
 Max Grav 2=332 (LC 36), 10=1573 (LC 22), 13=3944 (LC 1)

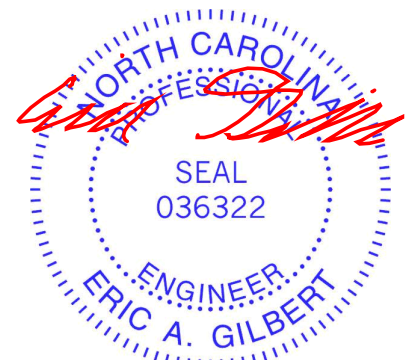
FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/14, 2-3=-205/1006, 3-5=-123/1147, 5-6=-67/1778, 6-7=-86/1999, 7-9=-828/0, 9-10=-3492/341, 10-11=0/14
 BOT CHORD 2-15=-841/309, 13-15=-1169/346, 12-13=-1035/254, 10-12=-251/2933
 WEBS 3-15=-477/223, 5-15=-16/824, 5-13=-992/256, 6-13=-1988/220, 7-13=-1303/255, 7-12=-17/1963, 9-12=-2516/453

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 16-9-3, Exterior(2R) 16-9-3 to 25-1-13, Interior (1) 25-1-13 to 38-3-1, Exterior(2E) 38-3-1 to 42-5-6 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.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 10 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) 2, 13, and 10. 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.

12) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 1-6=-60, 6-27=-60, 11-29=-60, 13-16=-20, 12-13=-20, 12-19=-20
 Trapezoidal Loads (lb/ft)
 Vert: 27=-300-to-9=-314, 9=-314-to-28=-330, 28=-330-to-29=-342



December 2, 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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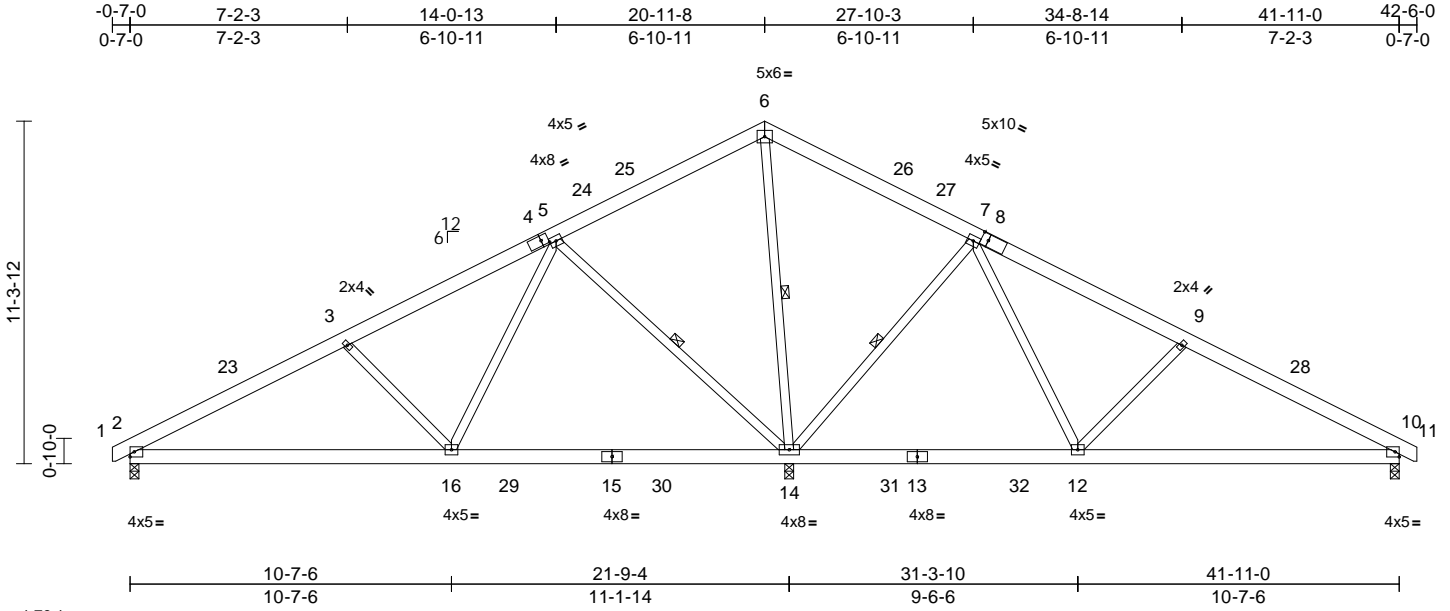
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885146
42 Mason Ridge	A06	Common	2	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:31
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Page: 1



Scale = 1:76.1

Plate Offsets (X, Y): [4:0-2-13,0-2-0], [8:0-2-13,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	-0.12	14-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.19	14-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.01	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 293 lb	FT = 20%

LUMBER
 TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 14-5,14-6:2x4 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: 12-14.
 WEBS 1 Row at midpt 5-14, 6-14, 7-14

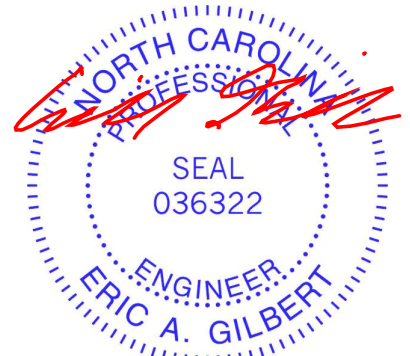
REACTIONS (size) 2=0-3-8, 10=0-3-8, 14=0-3-8
 Max Horiz 2=170 (LC 18)
 Max Uplift 2=-85 (LC 14), 10=-104 (LC 15), 14=-180 (LC 14)
 Max Grav 2=789 (LC 5), 10=694 (LC 6), 14=2378 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/14, 2-3=-1037/133, 3-5=-794/109, 5-6=-3/538, 6-7=0/587, 7-9=-580/154, 9-10=-849/177, 10-11=0/14
 BOT CHORD 2-16=-240/867, 14-16=-38/348, 12-14=-99/195, 10-12=-102/687
 WEBS 5-16=-29/774, 3-16=-402/218, 5-14=-930/262, 6-14=-781/101, 7-14=-862/263, 7-12=-43/724, 9-12=-413/215

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 16-9-3, Exterior(2R) 16-9-3 to 25-1-13, Interior (1) 25-1-13 to 38-3-1, Exterior(2E) 38-3-1 to 42-5-6 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 10, and 14. 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



December 2, 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/TPI 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)



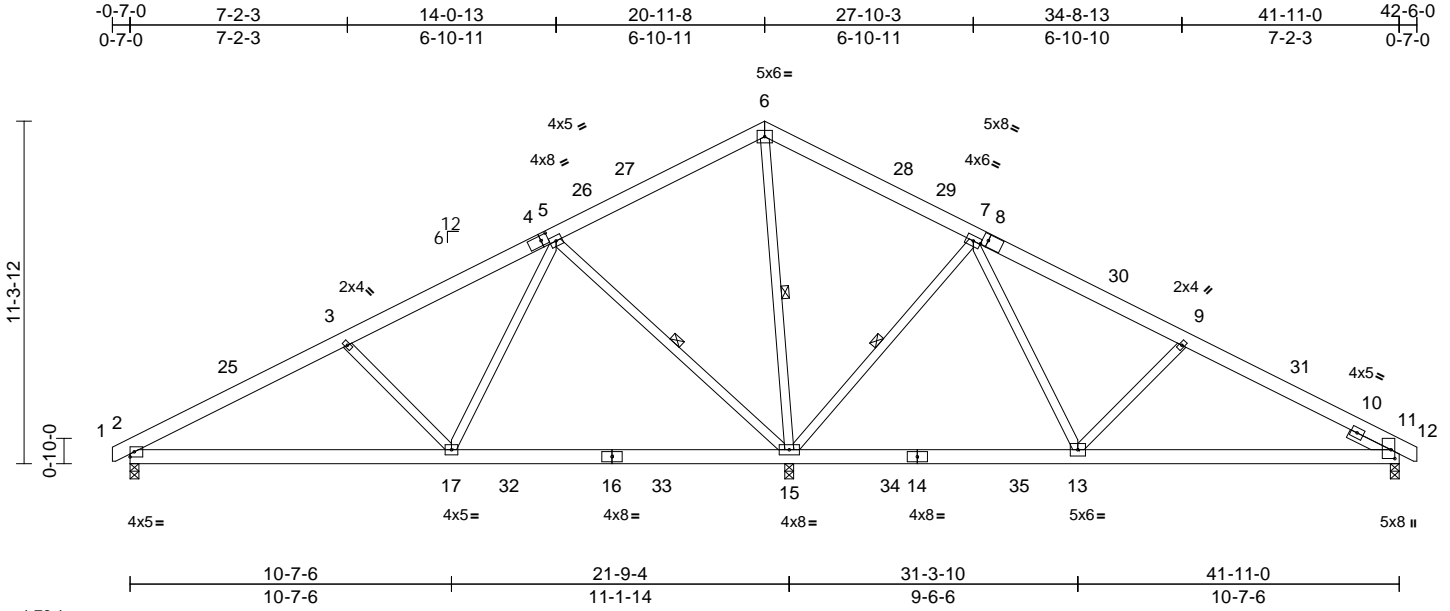
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	I69885147
42 Mason Ridge	A07	Common	3	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:31
 ID:K05EiUr7yQ_YgaWLBbrSVzxx0lu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?#

Page: 1



Scale = 1:76.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.10	15-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.20	13-23	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.01	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 295 lb	FT = 20%

LUMBER
 TOP CHORD 2x6 SP No.2 *Except* 1-4,8-12:2x6 SP 2400F 2.0E
 BOT CHORD 2x6 SP No.2 *Except* 16-14:2x6 SP 2400F 2.0E
 WEBS 2x4 SP No.3 *Except* 15-5,6-15:2x4 SP No.2
 SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING
 TOP CHORD Structural wood sheathing directly applied or 5-3-3 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 15-17.
 WEBS 1 Row at midpt 5-15, 6-15, 7-15

REACTIONS (size) 2=0-3-8, 11=0-3-8, 15=0-3-8
 Max Horiz 2=-171 (LC 19)
 Max Uplift 2=-67 (LC 14), 11=-181 (LC 15), 15=-267 (LC 14)
 Max Grav 2=686 (LC 5), 11=2156 (LC 22), 15=3089 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/14, 2-3=-809/98, 3-5=-577/104, 5-6=-42/772, 6-7=-26/844, 7-9=-1629/200, 9-11=-2967/302, 11-12=0/18
 BOT CHORD 2-17=-234/681, 15-17=-231/261, 13-15=0/420, 11-13=-184/2332
 WEBS 5-17=-33/778, 3-17=-417/220, 5-15=-931/264, 6-15=-1016/142, 7-15=-1600/331, 7-13=-131/1772, 9-13=-1793/317

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 16-9-3, Exterior(2R) 16-9-3 to 25-1-13, Interior (1) 25-1-13 to 38-3-1, Exterior(2E) 38-3-1 to 42-5-6 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 15, and 11. 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) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard
 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (lb/ft)
 Vert: 1-6=-60, 6-30=-60, 10-12=-60, 18-21=-20
 Trapezoidal Loads (lb/ft)
 Vert: 30=-300-to-9=-313, 9=-313-to-31=-330, 31=-330-to-10=-342



December 2, 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/TPI 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)



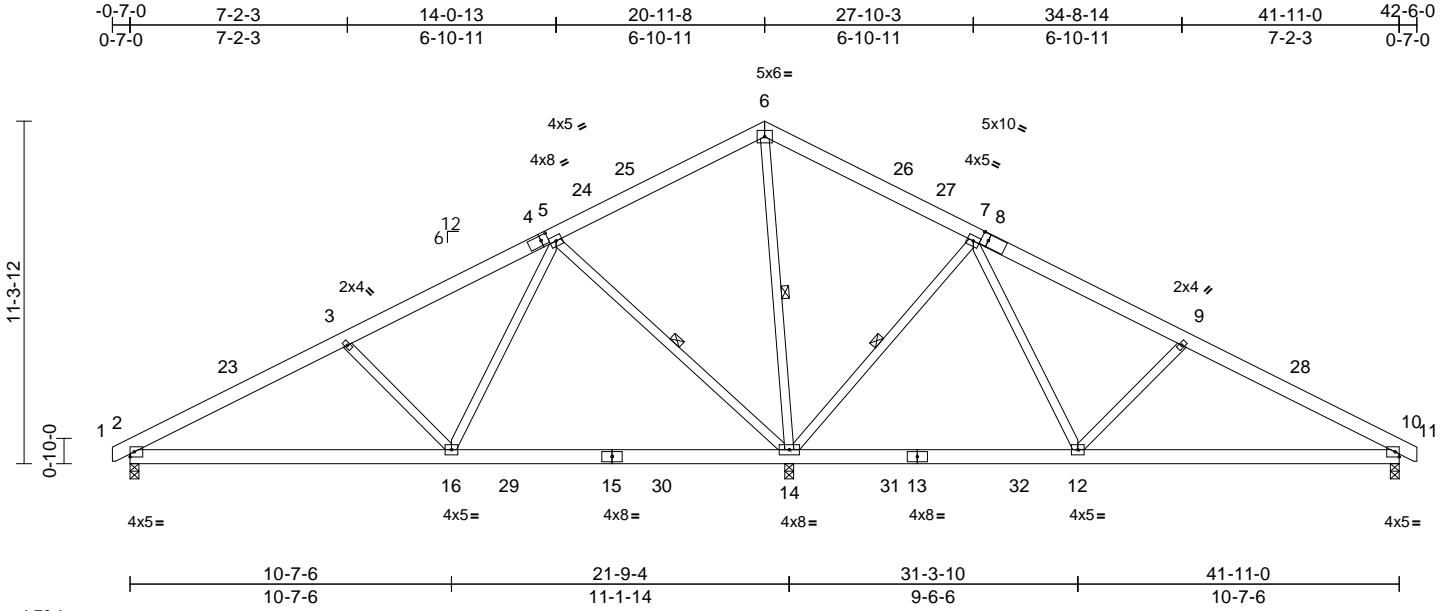
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885148
42 Mason Ridge	A08	Common	2	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:31
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Page: 1



Scale = 1:76.1

Plate Offsets (X, Y): [4:0-2-13,0-2-0], [8:0-2-13,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	-0.12	14-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.19	14-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.01	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 293 lb	FT = 20%

LUMBER
 TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 14-5,6-14:2x4 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: 12-14.
 WEBS 1 Row at midpt 5-14, 6-14, 7-14

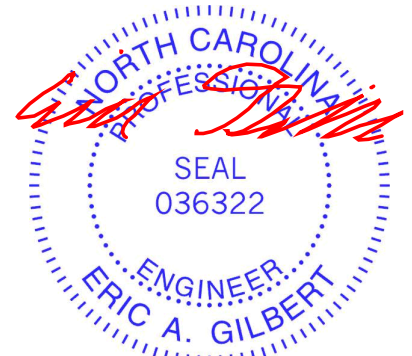
REACTIONS (size) 2=0-3-8, 10=0-3-8, 14=0-3-8
 Max Horiz 2=170 (LC 18)
 Max Uplift 2=-85 (LC 14), 10=-104 (LC 15), 14=-180 (LC 14)
 Max Grav 2=789 (LC 5), 10=694 (LC 6), 14=2378 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/14, 2-3=-1037/133, 3-5=-794/109, 5-6=-3/538, 6-7=0/587, 7-9=-580/154, 9-10=-849/177, 10-11=0/14
 BOT CHORD 2-16=-240/867, 14-16=-38/348, 12-14=-99/195, 10-12=-102/687
 WEBS 5-16=-29/774, 3-16=-402/218, 5-14=-930/262, 7-12=-43/724, 9-12=-413/215, 6-14=-781/101, 7-14=-862/263

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 16-9-3, Exterior(2R) 16-9-3 to 25-1-13, Interior (1) 25-1-13 to 38-3-1, Exterior(2E) 38-3-1 to 42-5-6 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 14, and 10. 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



December 2, 2024

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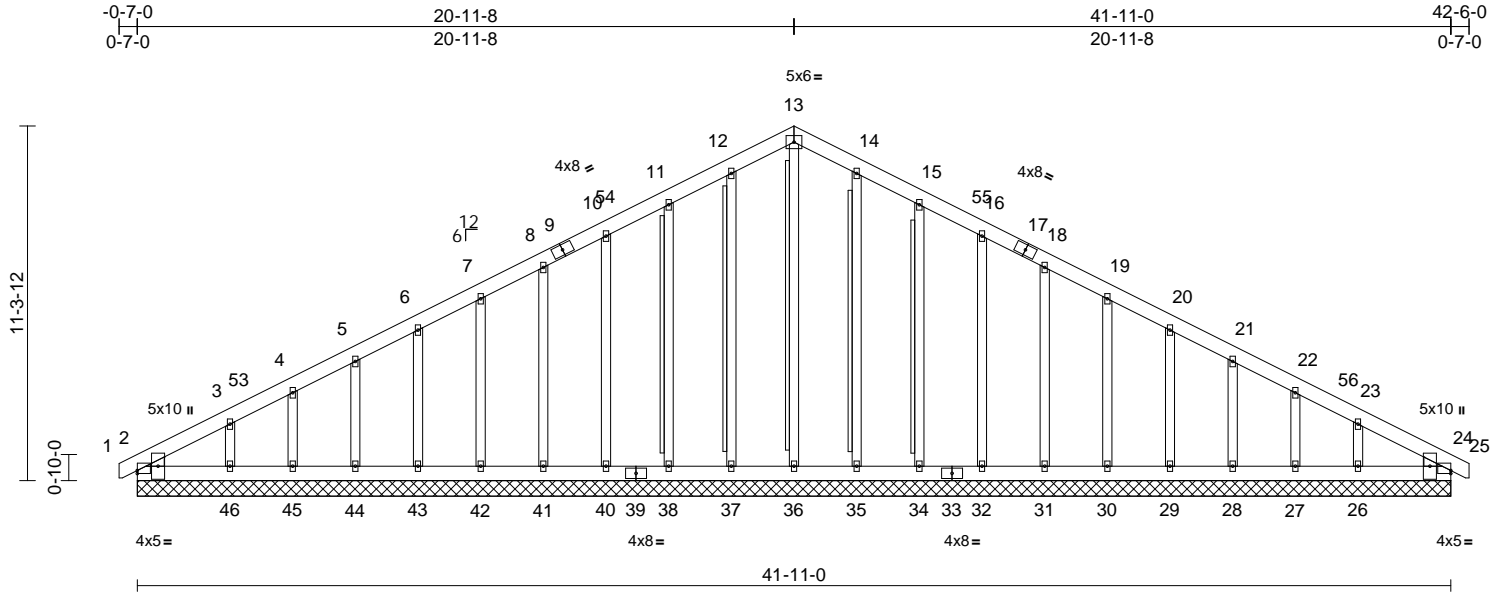
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885149
42 Mason Ridge	A09	Common Supported Gable	1	1	Job Reference (optional)	

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

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Page: 1



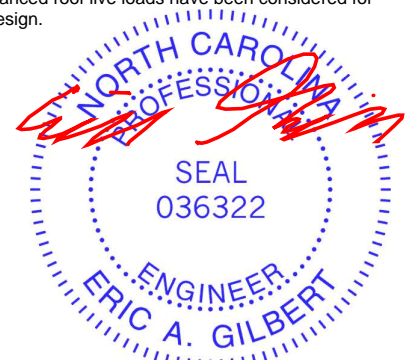
Scale = 1:73.5

Plate Offsets (X, Y): [2:Edge,0-1-3], [24:Edge,0-1-3]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	24	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 373 lb	FT = 20%

LUMBER		Max Uplift	2=-11 (LC 15), 26=-96 (LC 15), 27=-27 (LC 15), 28=-47 (LC 15), 29=-43 (LC 15), 30=-44 (LC 15), 31=-43 (LC 15), 32=-44 (LC 15), 34=-53 (LC 15), 35=-15 (LC 15), 37=-23 (LC 14), 38=-51 (LC 14), 40=-44 (LC 14), 41=-43 (LC 14), 42=-44 (LC 14), 43=-43 (LC 14), 44=-48 (LC 14), 45=-22 (LC 14), 46=-109 (LC 14), 47=-11 (LC 15)	BOT CHORD	2-46=-62/174, 45-46=-48/174, 44-45=-48/174, 43-44=-48/174, 42-43=-48/174, 41-42=-48/174, 40-41=-48/174, 38-40=-48/174, 37-38=-48/174, 36-37=-48/174, 35-36=-48/174, 34-35=-48/174, 32-34=-48/174, 31-32=-48/174, 30-31=-48/174, 29-30=-48/174, 28-29=-48/174, 27-28=-48/174, 26-27=-48/174, 24-26=-48/174
TOP CHORD	2x6 SP No.2				
BOT CHORD	2x6 SP No.2				
OTHERS	2x4 SP No.3 *Except*				
	36-13,0-0,0-0,0-0,0-0,0-0,0-0:2x4 SP No.2				
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3				
BRACING					
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.				
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.				
WEBS	T-Brace: 2x4 SP No.2 - 13-36, 12-37, 11-38, 14-35, 15-34 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance. Brace must cover 90% of web length.	Max Grav	2=169 (LC 30), 24=148 (LC 22), 26=233 (LC 35), 27=137 (LC 22), 28=165 (LC 35), 29=159 (LC 22), 30=160 (LC 35), 31=160 (LC 1), 32=186 (LC 22), 34=237 (LC 22), 35=237 (LC 22), 36=184 (LC 27), 37=237 (LC 21), 38=237 (LC 21), 40=186 (LC 21), 41=160 (LC 1), 42=160 (LC 34), 43=159 (LC 21), 44=165 (LC 34), 45=137 (LC 21), 46=233 (LC 34), 47=169 (LC 30), 50=148 (LC 22)	WEBS	13-36=-172/36, 12-37=-197/47, 11-38=-197/89, 10-40=-146/78, 8-41=-120/77, 7-42=-120/77, 6-43=-120/77, 5-44=-121/78, 4-45=-111/68, 3-46=-153/149, 14-35=-197/39, 15-34=-197/89, 16-32=-146/78, 18-31=-120/77, 19-30=-120/77, 20-29=-120/77, 21-28=-121/78, 22-27=-111/68, 23-26=-153/149
REACTIONS (size)	2=41-11-0, 24=41-11-0, 26=41-11-0, 27=41-11-0, 28=41-11-0, 29=41-11-0, 30=41-11-0, 31=41-11-0, 32=41-11-0, 34=41-11-0, 35=41-11-0, 36=41-11-0, 37=41-11-0, 38=41-11-0, 40=41-11-0, 41=41-11-0, 42=41-11-0, 43=41-11-0, 44=41-11-0, 45=41-11-0, 46=41-11-0, 47=41-11-0, 50=41-11-0				
	Max Horiz	2=-170 (LC 15), 47=-170 (LC 15)			
FORCES	(lb) - Maximum Compression/Maximum Tension				
TOP CHORD	1-2=0/14, 2-3=-216/76, 3-4=-162/79, 4-5=-127/92, 5-6=-103/110, 6-7=-81/133, 7-8=-71/157, 8-10=-74/183, 10-11=-93/229, 11-12=-113/278, 12-13=-124/308, 13-14=-124/308, 14-15=-113/278, 15-16=-93/229, 16-18=-74/183, 18-19=-58/138, 19-20=-53/93, 20-21=-54/48, 21-22=-74/25, 22-23=-97/25, 23-24=-147/54, 24-25=0/14				

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



December 2, 2024

Continued on page 2

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818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	I69885149
42 Mason Ridge	A09	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:31

Page: 2

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- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-6-6 to 3-7-15, Exterior(2N) 3-7-15 to 16-9-3, Corner(3R) 16-9-3 to 24-11-8, Exterior (2N) 24-11-8 to 38-3-1, Corner(3E) 38-3-1 to 42-5-6 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) 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) T CLL: 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) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * 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.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 2, 23 lb uplift at joint 37, 51 lb uplift at joint 38, 44 lb uplift at joint 40, 43 lb uplift at joint 41, 44 lb uplift at joint 42, 43 lb uplift at joint 43, 48 lb uplift at joint 44, 22 lb uplift at joint 45, 109 lb uplift at joint 46, 15 lb uplift at joint 35, 53 lb uplift at joint 34, 44 lb uplift at joint 32, 43 lb uplift at joint 31, 44 lb uplift at joint 30, 43 lb uplift at joint 29, 47 lb uplift at joint 28, 27 lb uplift at joint 27, 96 lb uplift at joint 26 and 11 lb uplift at joint 2.
- 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 24, 50.
- 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.
- 15) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

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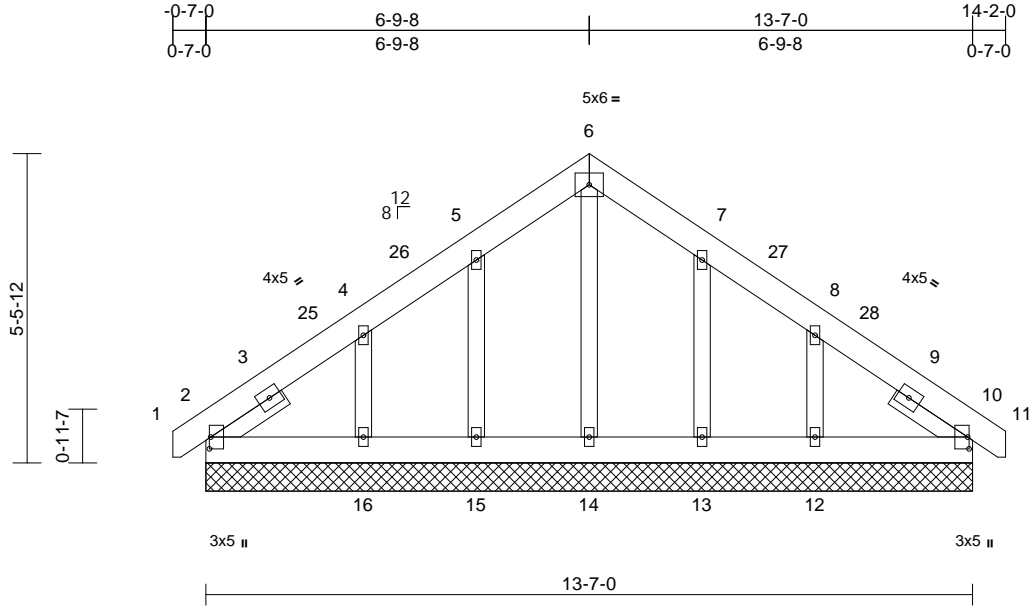
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885150
42 Mason Ridge	B01	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:31
 ID: MtHo35f47Jedm6D_CnrV0zYnTT-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:40.8

Plate Offsets (X, Y): [2:0-2-8,0-0-5], [10:0-2-8,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 101 lb	FT = 20%

LUMBER
 TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 OTHERS 2x4 SP No.3
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

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

REACTIONS (size)
 2=13-7-0, 10=13-7-0, 12=13-7-0, 13=13-7-0, 14=13-7-0, 15=13-7-0, 16=13-7-0, 17=13-7-0, 21=13-7-0
 Max Horiz 2=-114 (LC 12), 17=-114 (LC 12)
 Max Uplift 2=-15 (LC 15), 12=-105 (LC 15), 13=38 (LC 15), 15=38 (LC 14), 16=109 (LC 14), 17=-15 (LC 15)
 Max Grav 2=161 (LC 25), 10=160 (LC 1), 12=281 (LC 22), 13=234 (LC 22), 14=125 (LC 31), 15=234 (LC 21), 16=281 (LC 21), 17=161 (LC 25), 21=160 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/17, 2-4=-92/68, 4-5=-105/80, 5-6=-107/120, 6-7=-107/120, 7-8=-105/68, 8-10=-69/36, 10-11=0/17
 BOT CHORD 2-16=-28/75, 15-16=-28/75, 14-15=-28/75, 13-14=-28/75, 12-13=-28/75, 10-12=-28/75
 WEBS 6-14=-81/13, 5-15=-206/71, 4-16=-210/112, 7-13=-206/71, 8-12=-210/110

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) -0-6-3 to 2-5-13, Interior (1) 2-5-13 to 3-9-8, Exterior(2R) 3-9-8 to 9-9-8, Interior (1) 9-9-8 to 11-1-2, Exterior(2E) 11-1-2 to 14-1-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 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 15 lb uplift at joint 2, 38 lb uplift at joint 15, 109 lb uplift at joint 16, 38 lb uplift at joint 13, 105 lb uplift at joint 12 and 15 lb uplift at joint 2.

13) 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



December 2, 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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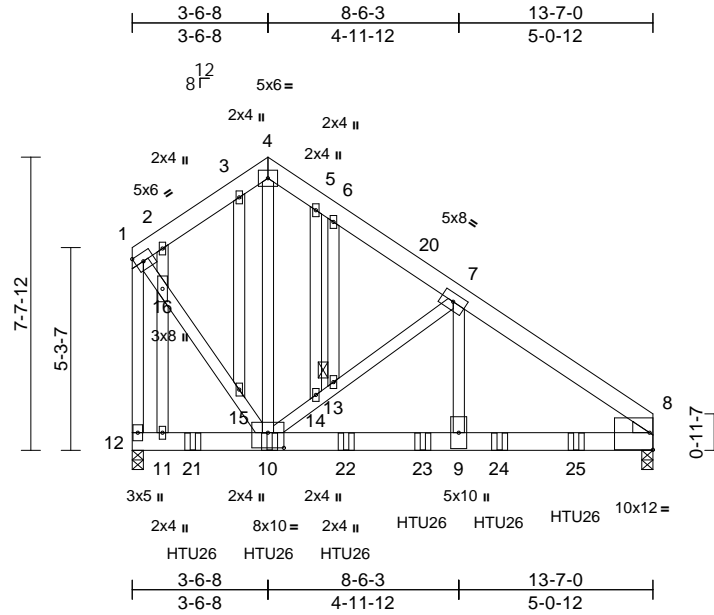
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	I69885151
42 Mason Ridge	B02	Common Girder	1	2	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:31
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Page: 1



Scale = 1:60.1

Plate Offsets (X, Y): [8:Edge,0-5-6], [10:0-5-0,0-4-12]

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	Vert(LL)	-0.07	9-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.13	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 279 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP 2400F 2.0E
 WEBS 2x4 SP No.3 *Except* 10-1:2x4 SP No.2
 OTHERS 2x4 SP No.3
 WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-9-15 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

JOINTS
 1 Brace at Jt(s): 13

REACTIONS (size) 8=0-3-8, 12=0-3-8
 Max Horiz 12=223 (LC 10)
 Max Uplift 8=-534 (LC 13), 12=-603 (LC 13)
 Max Grav 8=5723 (LC 6), 12=6175 (LC 5)

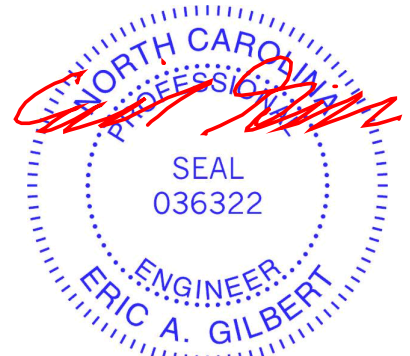
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD
 1-2=-2987/353, 2-3=-3202/381,
 3-4=-2998/367, 4-5=-3084/354,
 5-6=-3176/351, 6-7=-3138/327,
 7-8=-7033/671, 1-12=-5097/536

BOT CHORD
 11-12=-125/190, 10-11=-125/190,
 9-10=-481/5761, 8-9=-481/5761
 WEBS
 4-10=-302/3074, 10-14=-4032/506,
 13-14=-4108/512, 7-13=-3949/491,
 7-9=-361/4414, 1-16=-413/4439,
 15-16=-415/4469, 10-15=-443/4725,
 6-13=-270/36, 5-14=-19/135, 3-15=-34/310,
 2-16=-487/104, 11-16=-524/105

- 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, 2x4 - 1 row 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
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 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.
- LGT2 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12. This connection is for uplift only and does not consider lateral forces.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.



December 2, 2024

Continued on page 2

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818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	I69885151
42 Mason Ridge	B02	Common Girder	1	2	Job Reference (optional)	

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

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Page: 2

- 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.
- 15) Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-7-0 from the left end to 11-7-0 to connect truss(es) to back face of bottom chord.
- 16) Fill all nail holes where hanger is in contact with lumber.
- 17) LGT2 Hurricane ties must have two studs in line below the truss.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 1-4=-60, 4-8=-60, 12-17=-20
 Concentrated Loads (lb)
 Vert: 10=-1645 (B), 21=-1645 (B), 22=-1645 (B),
 23=-1645 (B), 24=-1645 (B), 25=-1645 (B)

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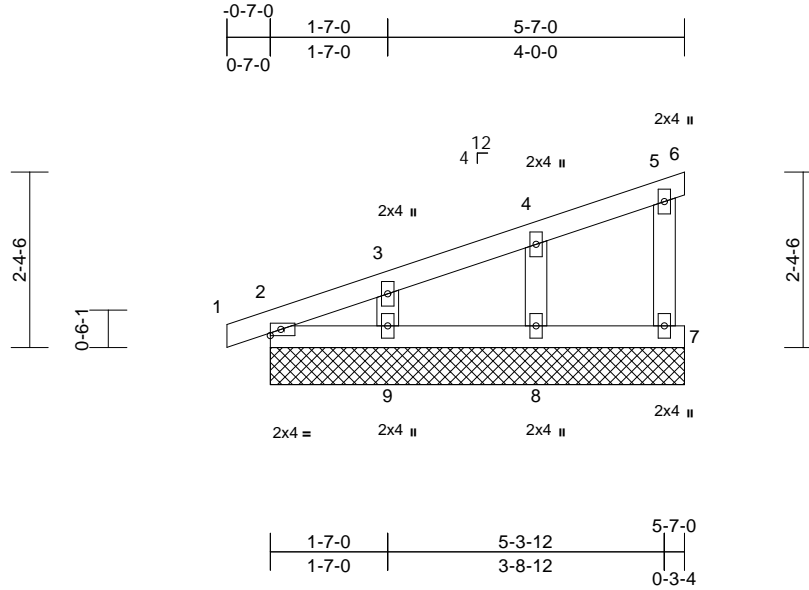
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885152
42 Mason Ridge	C01	Monopitch Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:32
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	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 5-7-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=5-7-0, 7=5-7-0, 8=5-7-0, 9=5-7-0, 10=5-7-0
Max Horiz 2=77 (LC 10), 10=77 (LC 10)
Max Uplift 2=-2 (LC 10), 7=-18 (LC 14), 8=-32 (LC 10), 9=-44 (LC 14), 10=-2 (LC 10)
Max Grav 2=128 (LC 21), 7=98 (LC 21), 8=227 (LC 21), 9=202 (LC 21), 10=128 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-151/48, 3-4=-92/35, 4-5=-29/14, 5-6=-8/0, 5-7=-85/56
BOT CHORD 2-9=-75/28, 8-9=0/0, 7-8=0/0
WEBS 4-8=-185/187, 3-9=-161/172

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCCL=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.

- 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.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 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 2 lb uplift at joint 2, 18 lb uplift at joint 7, 32 lb uplift at joint 8, 44 lb uplift at joint 9 and 2 lb uplift at joint 2.
 - 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



December 2, 2024

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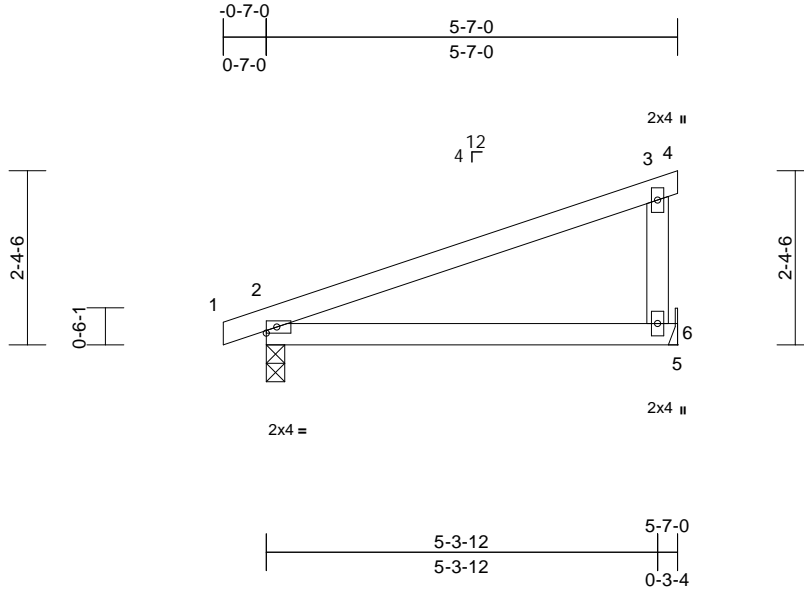
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885153
42 Mason Ridge	C02	Monopitch	3	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:31.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	0.16	6-9	>411	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	0.13	6-9	>503	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 5-7-0 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=-96 (LC 10)
 Max Grav 2=344 (LC 21), 6=317 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/16, 2-3=-82/80, 3-4=-8/0, 3-6=-233/202
 BOT CHORD 2-6=-148/122, 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 96 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



December 2, 2024

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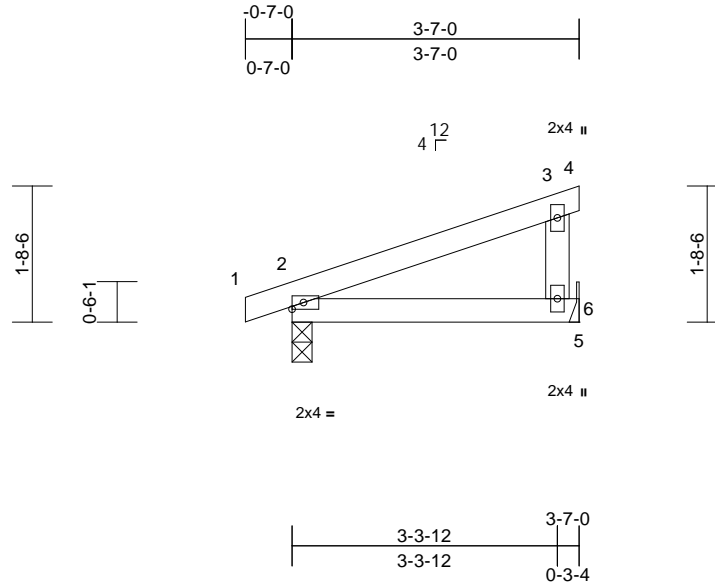
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885154
42 Mason Ridge	C03	Monopitch	6	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:28.8

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	0.21	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: 14 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 3-7-0 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=53 (LC 10)
Max Uplift 2=-63 (LC 10), 6=-61 (LC 10)
Max Grav 2=231 (LC 21), 6=202 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-51/32, 3-4=-7/0, 3-6=-148/127
BOT CHORD 2-6=-88/51, 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 61 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



December 2, 2024

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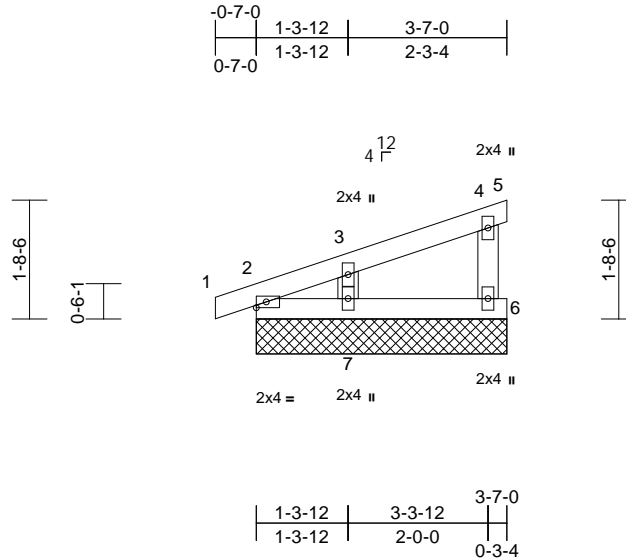
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885155
42 Mason Ridge	C04	Monopitch Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:32
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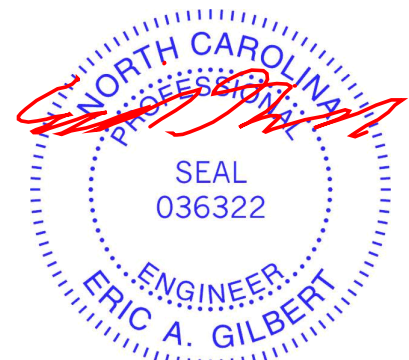
Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 14 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 3-7-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS (size)	
Max Horiz	2=51 (LC 10), 8=51 (LC 10)
Max Uplift	2=-10 (LC 10), 6=-19 (LC 10), 7=40 (LC 14), 8=-10 (LC 10)
Max Grav	2=100 (LC 21), 6=110 (LC 21), 7=204 (LC 21), 8=100 (LC 21)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/15, 2-3=-93/32, 3-4=-31/17, 4-5=-7/0, 4-6=-94/69
BOT CHORD	2-7=-37/16, 6-7=0/0
WEBS	3-7=-167/189

- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 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 10 lb uplift at joint 2, 19 lb uplift at joint 6, 40 lb uplift at joint 7 and 10 lb uplift at joint 2.
- 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**
- 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
 - 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



December 2, 2024

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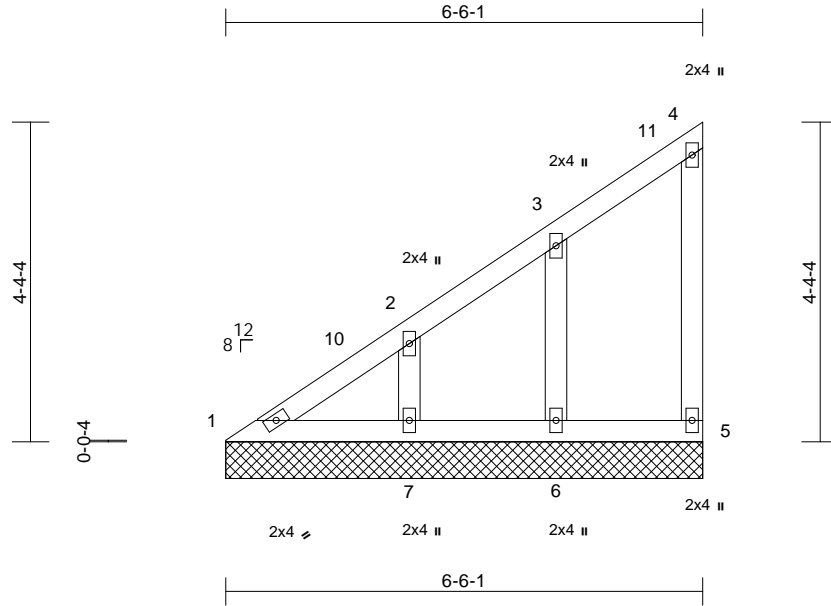


Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885156
42 Mason Ridge	V01	Valley	1	1	Job Reference (optional)	

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

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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	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 31 lb	FT = 20%	

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

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

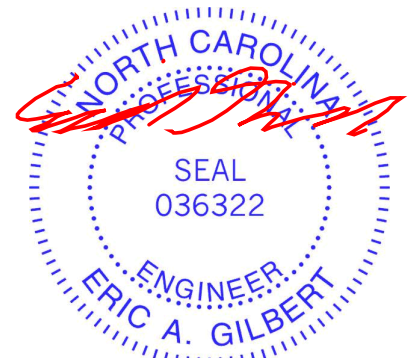
REACTIONS (size) 1=6-6-1, 5=6-6-1, 6=6-6-1, 7=6-6-1
 Max Horiz 1=140 (LC 11)
 Max Uplift 1=-3 (LC 10), 5=-23 (LC 11), 6=-58 (LC 14), 7=-59 (LC 14)
 Max Grav 1=101 (LC 25), 5=88 (LC 20), 6=240 (LC 20), 7=269 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-139/164, 2-3=-93/123, 3-4=-78/81, 4-5=-79/32
 BOT CHORD 1-7=-49/134, 6-7=-49/72, 5-6=-49/72
 WEBS 3-6=-207/118, 2-7=-198/106

- 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 and right 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) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 5, 3 lb uplift at joint 1, 58 lb uplift at joint 6 and 59 lb uplift at joint 7.
- 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



December 2, 2024

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TRENCO
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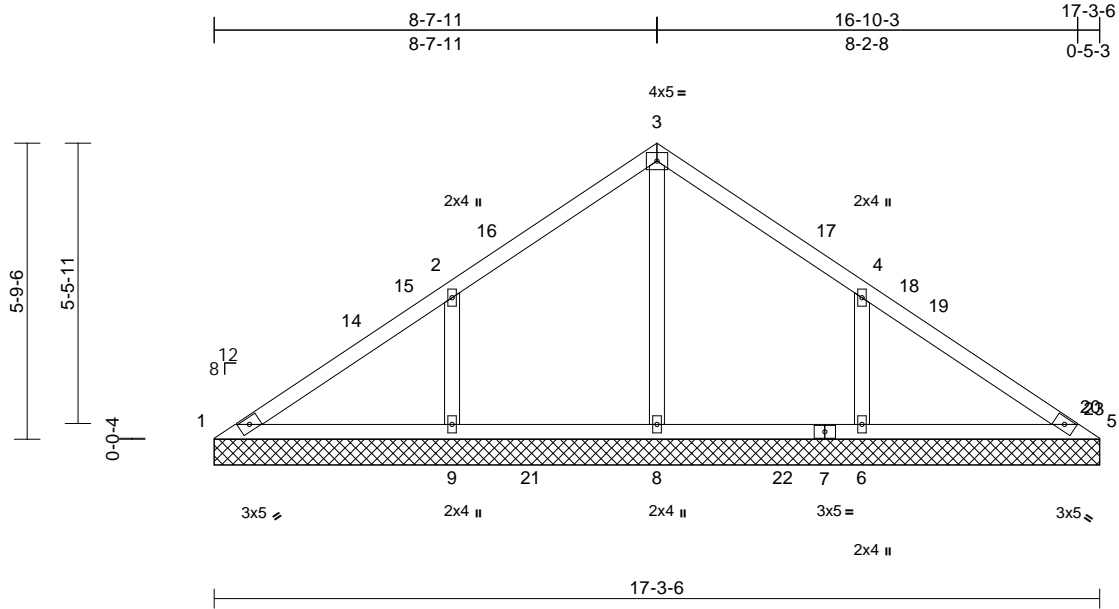
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885157
42 Mason Ridge	V02	Valley	1	1	Job Reference (optional)	

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

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Scale = 1:45

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	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 70 lb	FT = 20%	

LUMBER

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

BRACING

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

REACTIONS

- (size) 1=17-3-6, 5=17-3-6, 6=17-3-6, 8=17-3-6, 9=17-3-6
- Max Horiz 1=131 (LC 11)
- Max Uplift 1=-4 (LC 10), 6=-144 (LC 15), 9=-147 (LC 14)
- Max Grav 1=103 (LC 25), 5=78 (LC 36), 6=528 (LC 21), 8=502 (LC 24), 9=530 (LC 20)

FORCES

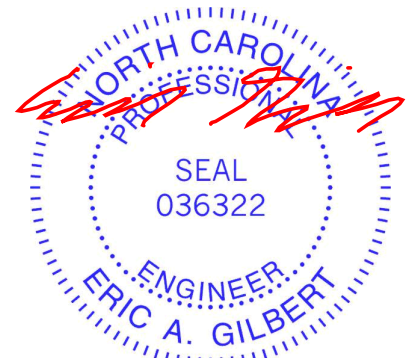
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=-130/262, 2-3=-48/203, 3-4=-49/189, 4-5=-103/235
- BOT CHORD 1-9=-156/131, 8-9=-156/96, 6-8=-156/96, 5-6=-156/96
- WEBS 3-8=-341/10, 2-9=-414/183, 4-6=-413/181

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, Interior (1) 3-0-6 to 5-8-1, Exterior(2R) 5-8-1 to 11-8-1, Interior (1) 11-8-1 to 13-10-6, Exterior(2E) 13-10-6 to 16-10-6 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

- 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, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 1, 147 lb uplift at joint 9 and 144 lb uplift at joint 6.
- 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



December 2, 2024

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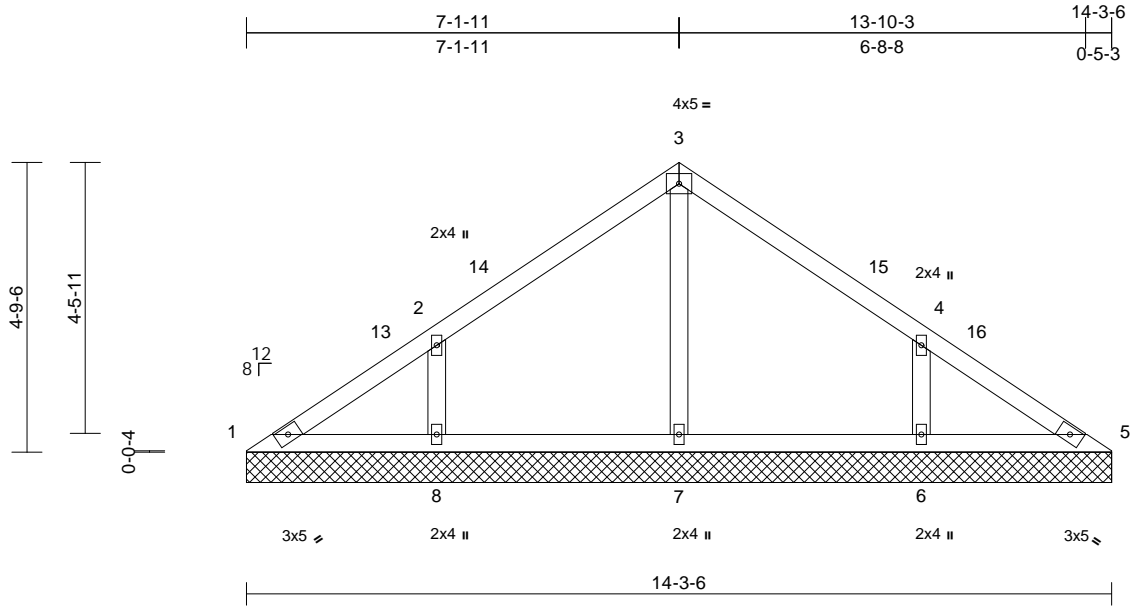
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885158
42 Mason Ridge	V03	Valley	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:32
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Page: 1



Scale = 1:38

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 56 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=14-3-6, 5=14-3-6, 6=14-3-6, 7=14-3-6, 8=14-3-6
Max Horiz 1=-108 (LC 10)
Max Uplift 1=-12 (LC 15), 6=-119 (LC 15), 8=-121 (LC 14)
Max Grav 1=98 (LC 25), 5=88 (LC 1), 6=463 (LC 21), 7=314 (LC 20), 8=463 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

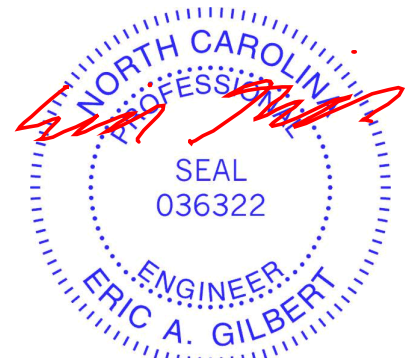
TOP CHORD 1-2=-132/117, 2-3=-137/103, 3-4=-137/92, 4-5=-106/85
BOT CHORD 1-8=-47/114, 7-8=-47/68, 6-7=-47/68, 5-6=-47/83
WEBS 3-7=-233/9, 2-8=-385/160, 4-6=-385/159

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) 0-0-6 to 3-2-1, Interior (1) 3-2-1 to 4-2-1, Exterior(2R) 4-2-1 to 10-2-1, Interior (1) 10-2-1 to 11-2-1, Exterior(2E) 11-2-1 to 14-3-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) 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) 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 12 lb uplift at joint 1, 121 lb uplift at joint 8 and 119 lb uplift at joint 6.
- 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



December 2, 2024

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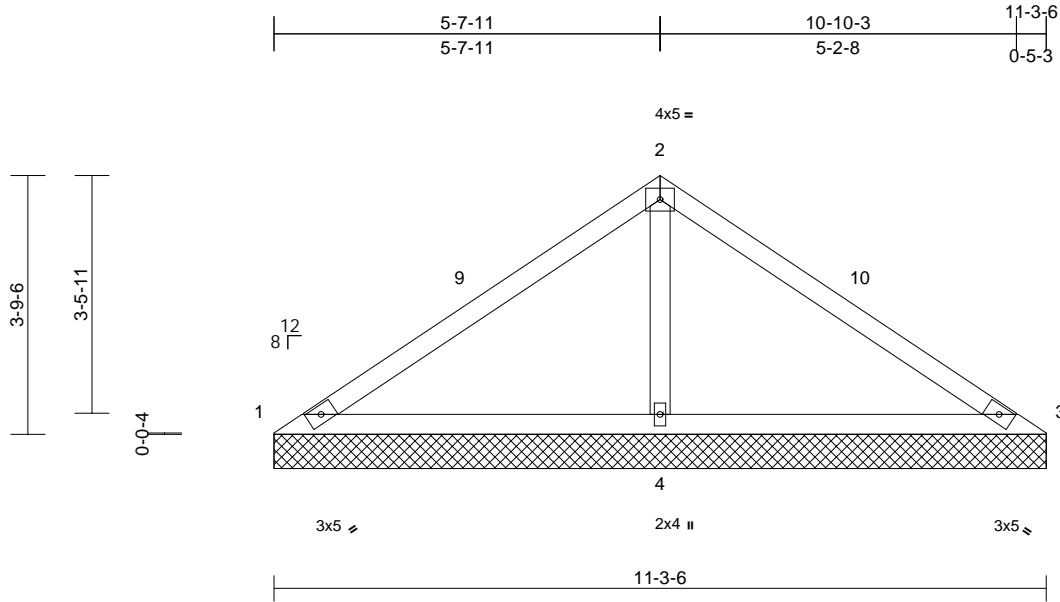
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885159
42 Mason Ridge	V04	Valley	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:32
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Page: 1



Scale = 1:33.7

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	0.61	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.53	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 40 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=11-3-6, 3=11-3-6, 4=11-3-6
 Max Horiz 1=-85 (LC 10)
 Max Uplift 1=-80 (LC 21), 3=-80 (LC 20), 4=-107 (LC 14)
 Max Grav 1=80 (LC 20), 3=80 (LC 21), 4=938 (LC 21)

FORCES

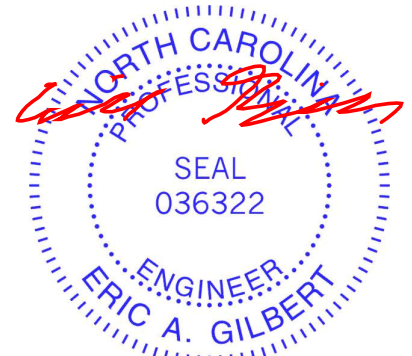
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-123/501, 2-3=-123/501
 BOT CHORD 1-4=-368/171, 3-4=-368/171
 WEBS 2-4=-789/255

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) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 8-3-12, Exterior(2E) 8-3-12 to 11-3-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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) 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 80 lb uplift at joint 1, 80 lb uplift at joint 3 and 107 lb uplift at joint 4.
- 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



December 2, 2024

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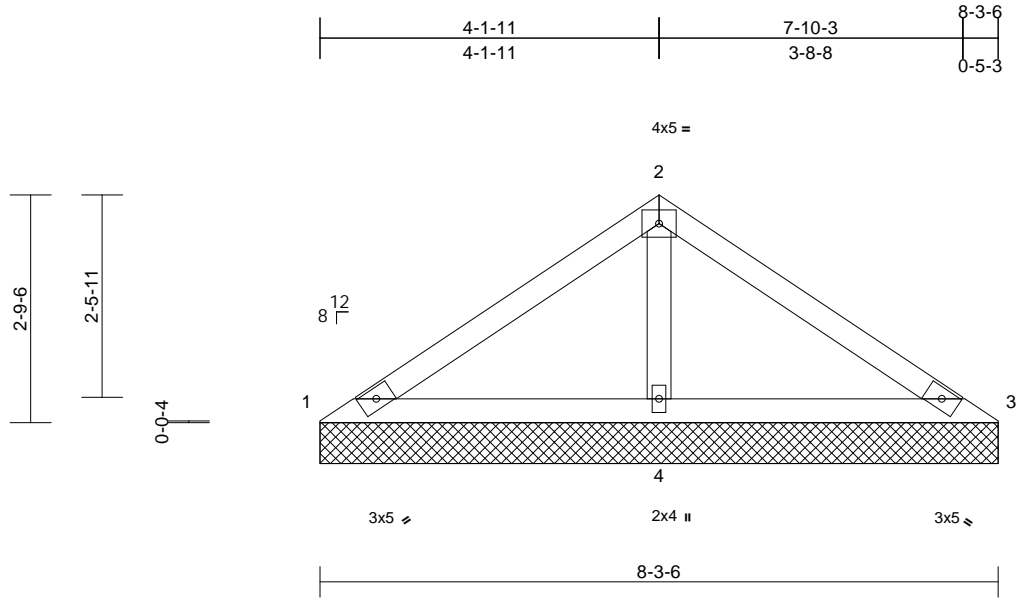
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885160
42 Mason Ridge	V05	Valley	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:32
ID:Xfq7dJpqLnHLa2Di2s3LYzV7Pm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:28.1

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	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.32	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 29 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 8-3-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=8-3-6, 3=8-3-6, 4=8-3-6
Max Horiz 1=-59 (LC 10)
Max Uplift 1=-30 (LC 21), 3=-30 (LC 20),
4=-67 (LC 14)
Max Grav 1=101 (LC 20), 3=101 (LC 21),
4=609 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension

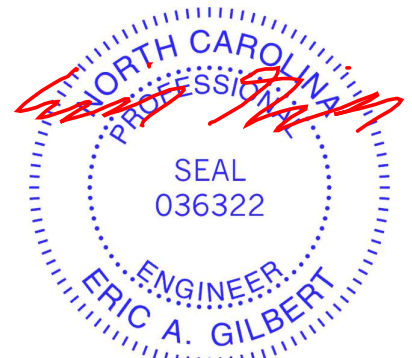
TOP CHORD 1-2=-97/296, 2-3=-97/296
BOT CHORD 1-4=-245/148, 3-4=-245/148
WEBS 2-4=-487/191

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 5-3-12, Exterior(2E) 5-3-12 to 8-3-12 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 30 lb uplift at joint 1, 30 lb uplift at joint 3 and 67 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



December 2, 2024

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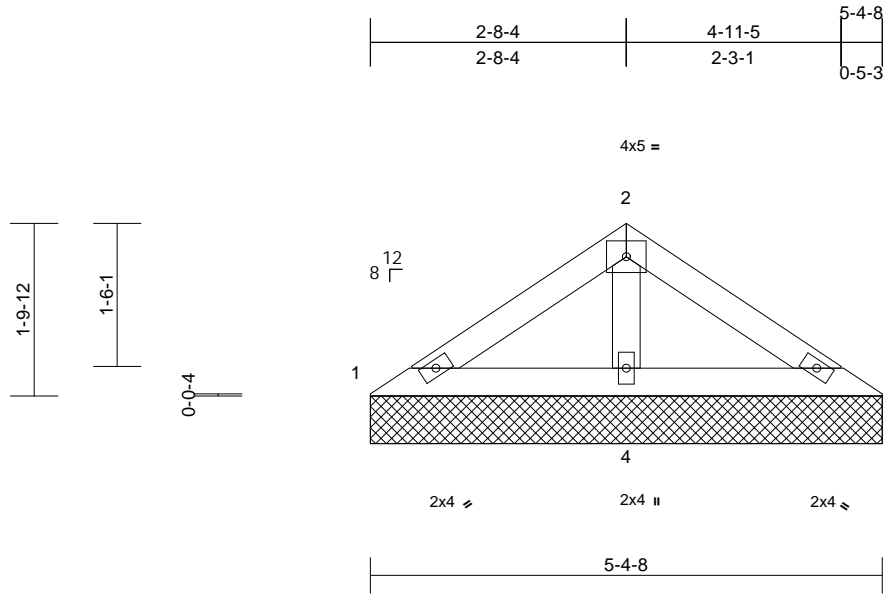
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885161
42 Mason Ridge	V06	Valley	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:33
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 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 5-4-8 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=5-4-8, 3=5-4-8, 4=5-4-8
 Max Horiz 1=-38 (LC 10)
 Max Uplift 1=-5 (LC 14), 3=-11 (LC 15), 4=-30 (LC 14)
 Max Grav 1=92 (LC 20), 3=92 (LC 21), 4=331 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-90/129, 2-3=-90/129
 BOT CHORD 1-4=-111/88, 3-4=-111/88
 WEBS 2-4=-243/107

- 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 30 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

- 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



December 2, 2024

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818 Soundside Road
 Edenton, NC 27932

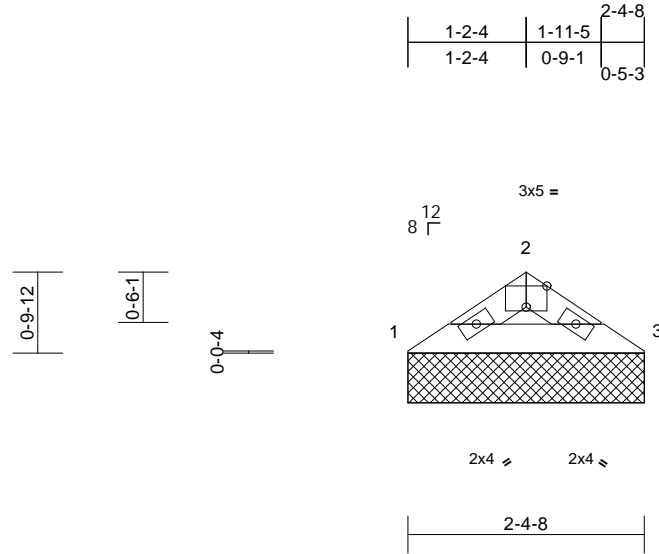
Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	169885162
42 Mason Ridge	V07	Valley	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:33

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Scale = 1:23.2

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 6 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-4-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=2-4-8, 3=2-4-8
Max Horiz 1=15 (LC 11)
Max Uplift 1=-9 (LC 14), 3=-9 (LC 15)
Max Grav 1=105 (LC 20), 3=105 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension

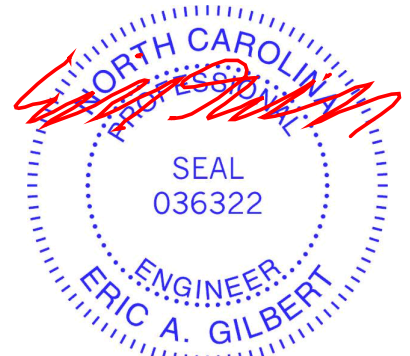
TOP CHORD 1-2=-146/52, 2-3=-146/52
BOT CHORD 1-3=-31/113

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 9 lb uplift at joint 1 and 9 lb uplift at joint 3.
- 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



December 2, 2024

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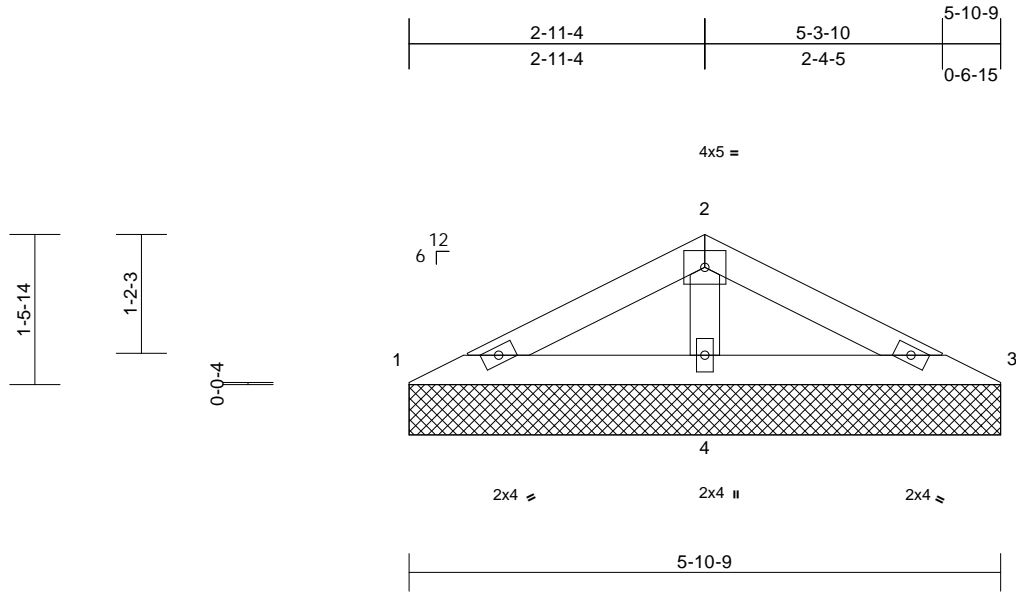
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	42 Mason Ridge - Columbia B - Roof	I69885163
42 Mason Ridge	VL6	Valley	1	1	Job Reference (optional)	

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

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Wed Nov 27 11:10:33
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Page: 1



Scale = 1:22.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 18 lb	FT = 20%

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

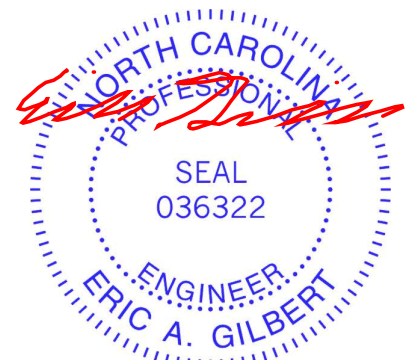
BRACING
 TOP CHORD Structural wood sheathing directly applied or 5-10-9 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=5-10-9, 3=5-10-9, 4=5-10-9
 Max Horiz 1=21 (LC 14)
 Max Uplift 1=-10 (LC 14), 3=-15 (LC 15), 4=-26 (LC 14)
 Max Grav 1=99 (LC 20), 3=99 (LC 21), 4=353 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-109/154, 2-3=-109/154
 BOT CHORD 1-4=-136/99, 3-4=-136/99
 WEBS 2-4=-244/126

- 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 10 lb uplift at joint 1, 15 lb uplift at joint 3 and 26 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

- 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



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 818 Soundside Road
 Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

* Plate location details available in MITek 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.

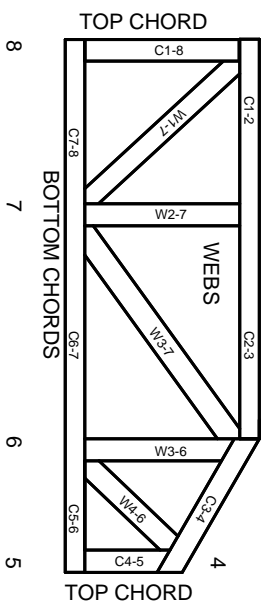
Industry Standards:

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

Numbering System



1 TOP CHORDS
2 JOINT ID TYP.



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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ENGINEERING BY
TRENGO
A MITek Affiliate

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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