

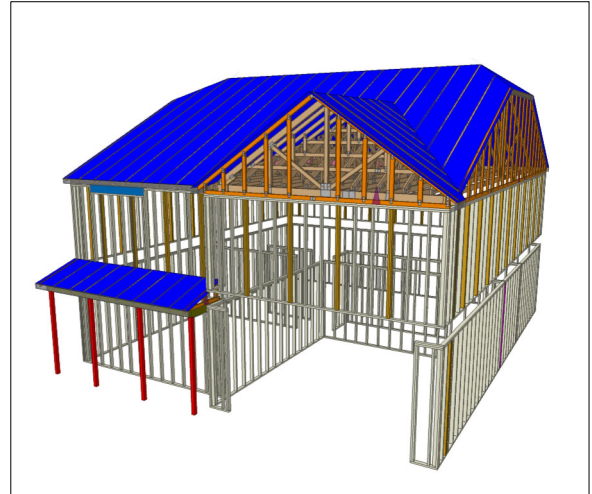


Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450

Builder: DR Horton Inc

**Model: 17 Mason Ridge
Wilmington A**



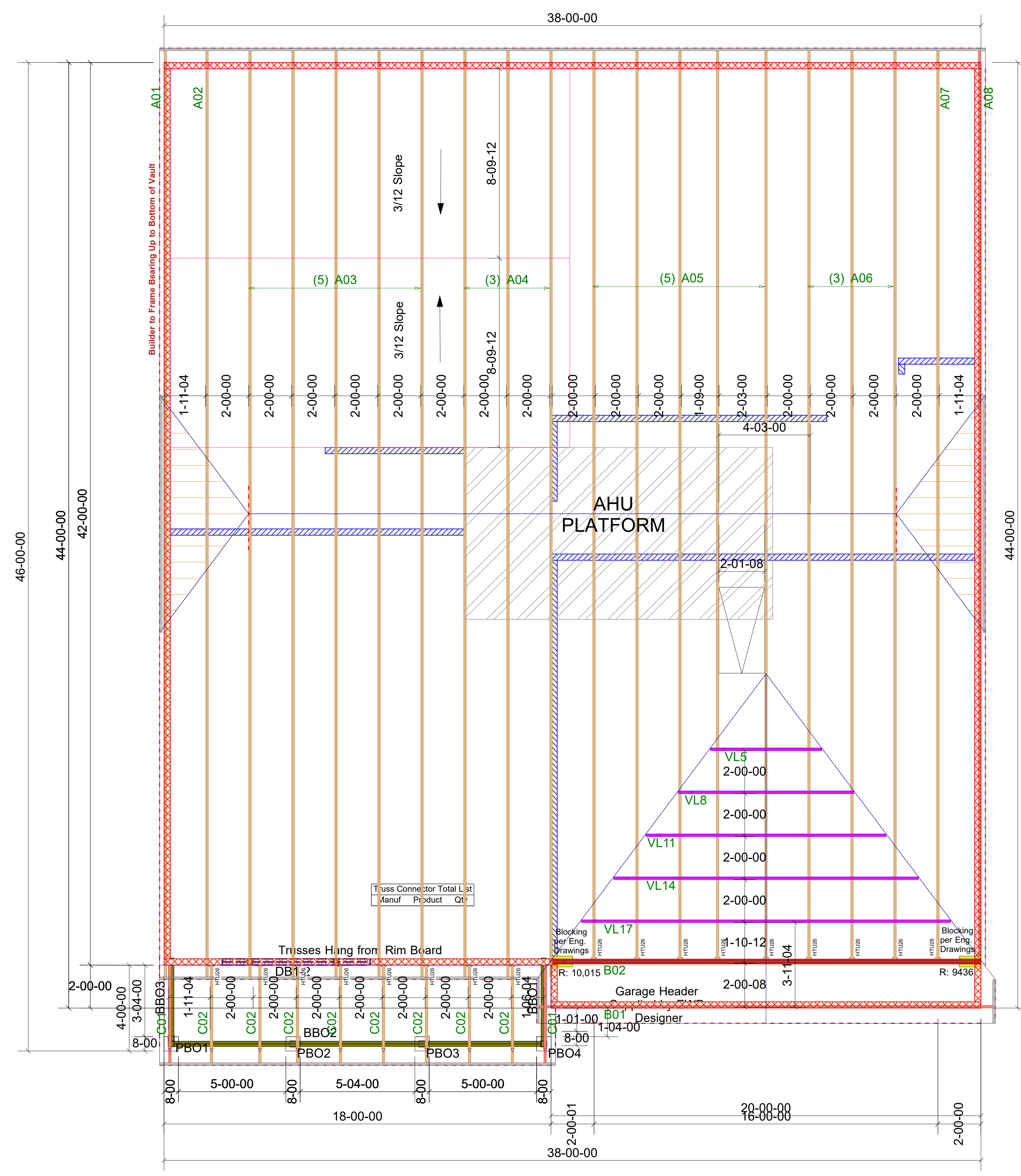
THE PLACEMENT PLAN NOTES:

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: _____

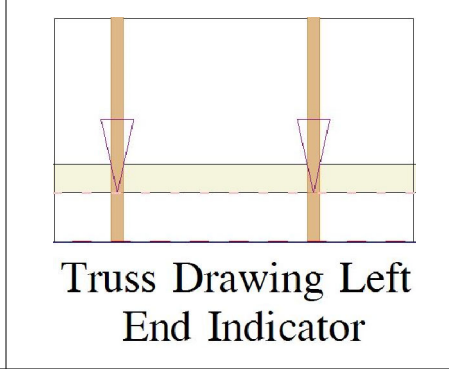
** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS. ** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT. ** TRUSS TO TRUSS CONNECTIONS ARE TOE-MAILED, UNLESS NOTED OTHERWISE. ** GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS. ** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH. ** ALL UPLIFT CONNECTORS SHOWN WITHIN THESE DOCUMENTS ARE RECOMMENDATIONS ONLY. PER ANSIT/TP1 1, ALL UPLIFT CONNECTORS ARE THE RESPONSIBILITY OF THE BLDG DESIGNER AND/OR CONTRACTOR.



Truss Connector Total List		
Manuf	Product	Qty
Simpson	HTU26	17
Simpson	One H2.5A*	50

Hatch Legend	
	8' 1-1/8" BRG HGT
	AHU PLATFORM
	9' 1-1/8" BRG HGT

Truss Connector Total List				
Manuf	Product	Qty	Products	
Simpson	HTU26	17	Piles	Net Qty
Simpson	One H2.5A*	50	2	2
			Fab Type	FF



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
**17 Mason Ridge
 Wilmington A**
ROOF PLACEMENT PLAN

Scale:	NTS
Date:	11/5/2024
Designer:	Nate Donaldson
Project Number:	TM240466-A
Sheet Number:	1/1

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 24110023-A
Wilmington-A-FLEX+VMB-All Levels-Roof-Mason Ridge-17

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

Pages or sheets covered by this seal: I69410550 thru I69410566

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844



November 6, 2024

Johnson, Andrew

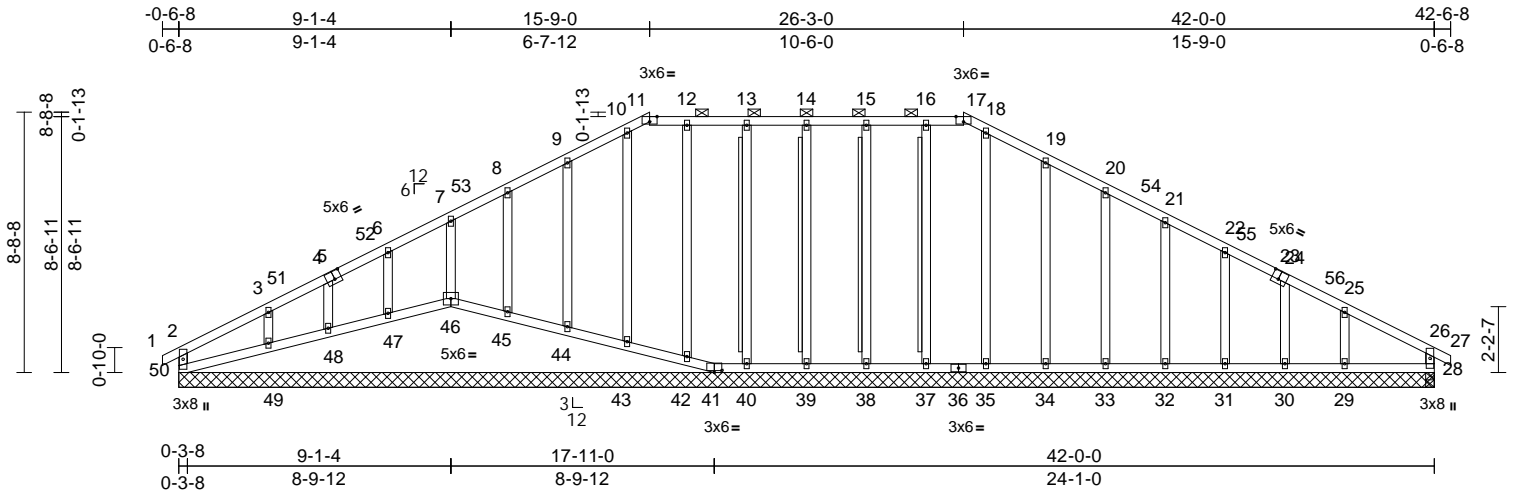
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job 24110023-A	Truss A01	Truss Type Hip	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410550 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:39
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Page: 1



Scale = 1:77.1

Plate Offsets (X, Y): [5:0-2-12,0-3-4], [11:0-3-0,Edge], [17:0-3-0,Edge], [23:0-2-12,0-3-4], [41:0-3-0,0-0-12]

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	0.10	Vert(LL)	0.00	49-50	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	49-50	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.01	28	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 280 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 *Except* 0-0,0-0,0-0,0-0:2x4 SP No.2(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-17.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS
T-Brace: 2x4 SP No.2 - 14-39, 13-40, 15-38, 16-37
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.

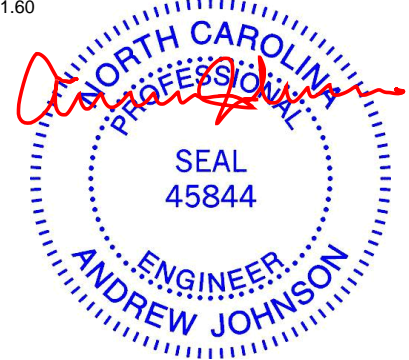
REACTIONS (size)
28=42-0-0, 29=42-0-0, 30=42-0-0, 31=42-0-0, 32=42-0-0, 33=42-0-0, 34=42-0-0, 35=42-0-0, 37=42-0-0, 38=42-0-0, 39=42-0-0, 40=42-0-0, 41=42-0-0, 42=42-0-0, 43=42-0-0, 44=42-0-0, 45=42-0-0, 46=42-0-0, 47=42-0-0, 48=42-0-0, 49=42-0-0, 50=42-0-0
Max Horiz 50=-115 (LC 12)
Max Uplift 28=-11 (LC 14), 29=-97 (LC 15), 30=-25 (LC 15), 31=-48 (LC 15), 32=-43 (LC 15), 33=-43 (LC 15), 34=-54 (LC 15), 37=-8 (LC 11), 38=-37 (LC 15), 39=-23 (LC 11), 40=-39 (LC 14), 41=-17 (LC 15), 42=-13 (LC 11), 44=-54 (LC 14), 45=-39 (LC 14), 46=-43 (LC 14), 47=-49 (LC 14), 48=-20 (LC 14), 49=-108 (LC 14), 50=-52 (LC 15)

Max Grav 28=162 (LC 1), 29=219 (LC 43), 30=141 (LC 1), 31=206 (LC 43), 32=223 (LC 43), 33=220 (LC 43), 34=226 (LC 43), 35=190 (LC 43), 37=209 (LC 38), 38=219 (LC 38), 39=217 (LC 38), 40=213 (LC 38), 41=16 (LC 13), 42=203 (LC 38), 43=191 (LC 41), 44=227 (LC 41), 45=213 (LC 41), 46=231 (LC 41), 47=218 (LC 41), 48=139 (LC 1), 49=219 (LC 41), 50=157 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-127/67, 3-4=-85/88, 4-6=-73/111, 6-7=-73/135, 7-8=-79/158, 8-9=-96/180, 9-10=-118/220, 10-11=-114/212, 11-12=-111/215, 12-13=-110/214, 13-14=-110/214, 14-15=-110/214, 15-16=-110/214, 16-17=-111/215, 17-18=-114/212, 18-19=-117/219, 19-20=-97/177, 20-21=-79/139, 21-22=-69/109, 22-24=-57/85, 24-25=-67/64, 25-26=-107/40, 26-27=0/18, 2-50=-138/53, 26-28=-138/51
BOT CHORD 49-50=-36/99, 48-49=-33/96, 47-48=-32/98, 46-47=-33/97, 45-46=-32/96, 44-45=-32/97, 43-44=-32/97, 42-43=-32/97, 41-42=-28/97, 40-41=-27/91, 39-40=-27/91, 38-39=-27/91, 37-38=-27/91, 35-37=-27/91, 34-35=-27/91, 33-34=-27/91, 32-33=-27/91, 31-32=-27/91, 30-31=-27/91, 29-30=-27/91, 28-29=-27/91

WEBS 7-46=-184/67, 14-39=-176/48, 13-40=-179/59, 12-42=-169/33, 10-43=-150/0, 9-44=-188/78, 8-45=-172/64, 6-47=-172/75, 4-48=-106/49, 3-49=-160/119, 15-38=-179/61, 16-37=-169/32, 18-35=-150/0, 19-34=-186/78, 20-33=-180/67, 21-32=-183/67, 22-31=-164/71, 24-30=-108/53, 25-29=-160/112

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-6-8 to 3-7-14, Interior (1) 3-7-14 to 9-9-12, Exterior(2R) 9-9-12 to 32-2-5, Interior (1) 32-2-5 to 38-4-2, Exterior(2E) 38-4-2 to 42-6-8 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



November 6, 2024

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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

Job	Truss	Truss Type	Qty	Ply	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason I69410550
24110023-A	A01	Hip	1	1	Job Reference (optional)

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

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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) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 50, 43 lb uplift at joint 46, 17 lb uplift at joint 41, 11 lb uplift at joint 28, 23 lb uplift at joint 39, 39 lb uplift at joint 40, 13 lb uplift at joint 42, 54 lb uplift at joint 44, 39 lb uplift at joint 45, 49 lb uplift at joint 47, 20 lb uplift at joint 48, 108 lb uplift at joint 49, 37 lb uplift at joint 38, 8 lb uplift at joint 37, 54 lb uplift at joint 34, 43 lb uplift at joint 33, 43 lb uplift at joint 32, 48 lb uplift at joint 31, 25 lb uplift at joint 30 and 97 lb uplift at joint 29.
- 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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 16) 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.

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



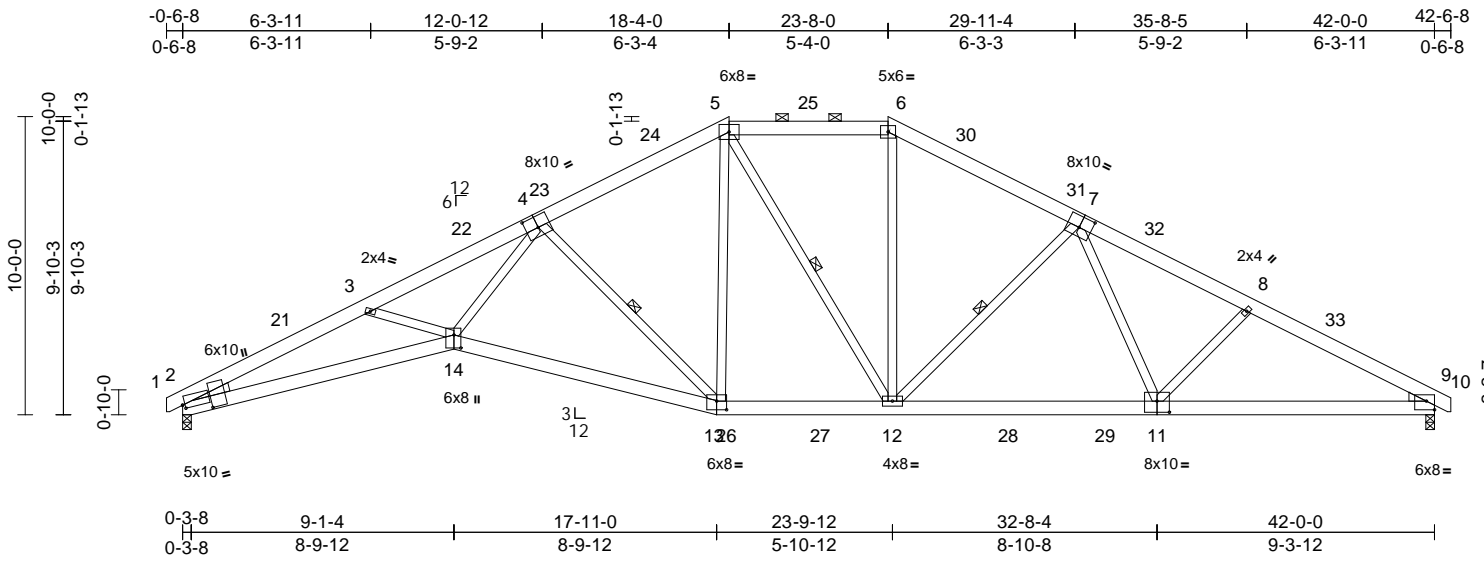
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss A02	Truss Type Hip	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410551 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:77.3
Plate Offsets (X, Y): [2:0-1-0,0-1-9], [2:0-3-13,0-11-10], [4:0-5-0,0-4-8], [7:0-5-0,0-4-8], [9:Edge,0-3-8], [11:0-5-0,0-4-8], [13:0-4-0,0-3-8], [14:0-5-4,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.38	13-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.67	13-14	>750	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.28	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 309 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 2-14:2x6 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 14-4,12-5:2x4 SP No.2
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (4-10-12 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 13-14.
WEBS 1 Row at midpt 4-13, 5-12, 7-12

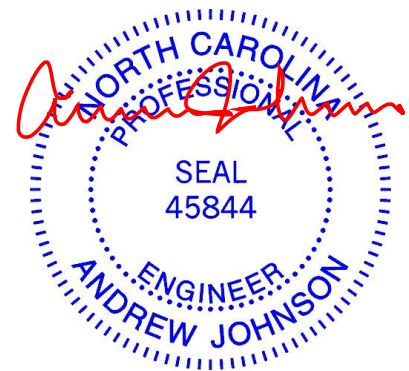
REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=148 (LC 14)
Max Uplift 2=-176 (LC 14), 9=-176 (LC 15)
Max Grav 2=1975 (LC 45), 9=1991 (LC 45)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-5842/607, 3-5=-5796/522, 5-6=-2230/352, 6-8=-3309/351, 8-9=-3477/339, 9-10=0/13
BOT CHORD 2-14=-624/5251, 13-14=-339/3744, 12-13=-80/2211, 9-12=-213/3024
WEBS 3-14=-76/197, 4-14=-216/2817, 4-13=-1952/334, 5-13=-79/793, 5-12=-227/251, 6-12=-36/808, 7-12=-762/218, 7-11=-7/473, 8-11=-224/161

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) -0-5-14 to 3-8-9, Interior (1) 3-8-9 to 12-4-12, Exterior(2R) 12-4-12 to 29-7-5, Interior (1) 29-7-5 to 38-3-7, Exterior(2E) 38-3-7 to 42-5-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 2 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.

12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
LOAD CASE(S) Standard



Job 24110023-A	Truss A03	Truss Type Roof Special	Qty 5	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410552 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1

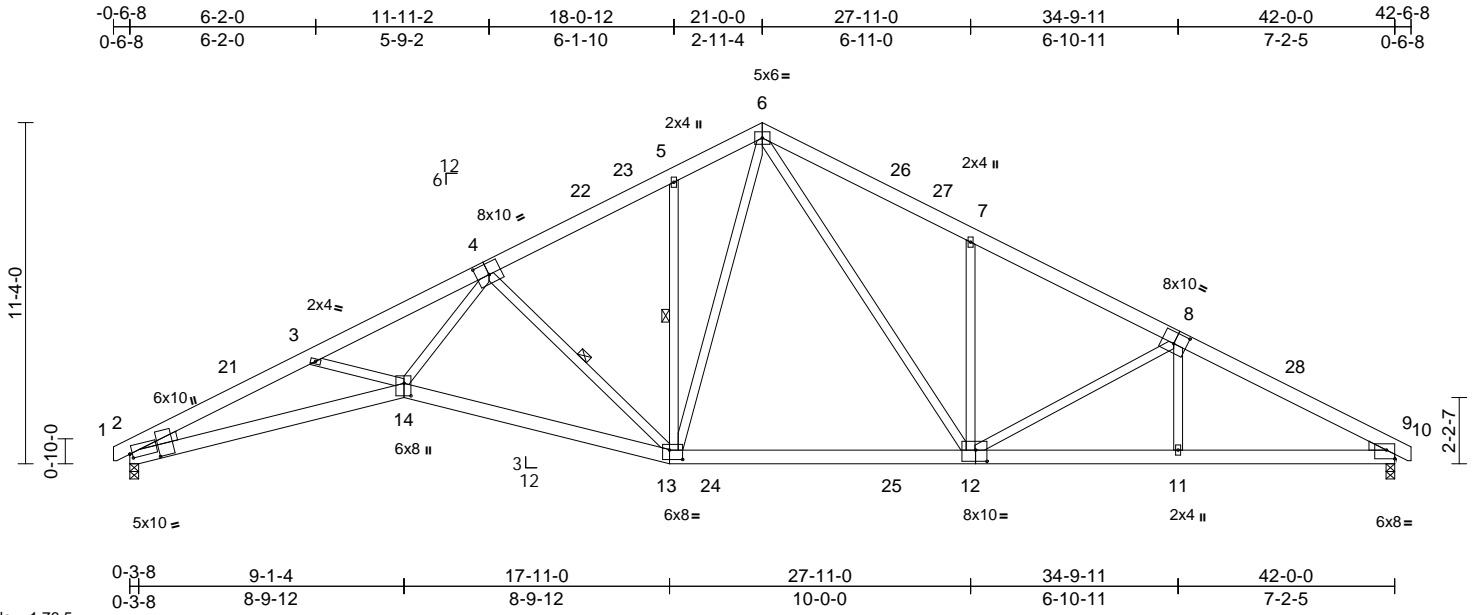


Plate Offsets (X, Y): [2:0-1-0,0-1-13], [2:0-3-13,0-11-10], [4:0-5-0,0-4-8], [8:0-5-0,0-4-8], [9:Edge,0-3-8], [12:0-4-8,0-4-8], [13:0-5-4,0-3-12], [14:0-5-0,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.33	12-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.61	13-14	>828	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.25	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 315 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 2-14:2x6 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 14-4,13-6,12-6:2x4 SP No.2
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-13, 5-13

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=170 (LC 14)
Max Uplift 2=-170 (LC 14), 9=-170 (LC 15)
Max Grav 2=1852 (LC 3), 9=1857 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-5412/613, 3-5=-5343/520, 5-6=-2348/432, 6-7=-2795/462, 7-9=-3202/337, 9-10=0/13
BOT CHORD 2-14=-654/4867, 13-14=-354/3426, 11-13=-194/2785, 9-11=-194/2786
WEBS 3-14=-91/175, 4-14=-228/2627, 4-13=-1754/338, 5-13=-401/158, 6-13=-217/1188, 6-12=-263/1258, 7-12=-554/248, 8-12=-457/180, 8-11=0/183

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) -0-5-14 to 3-8-7, Interior (1) 3-8-7 to 16-9-11, Exterior(2R) 16-9-11 to 25-2-5, Interior (1) 25-2-5 to 38-3-9, Exterior(2E) 38-3-9 to 42-5-14 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 2 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



November 6, 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)

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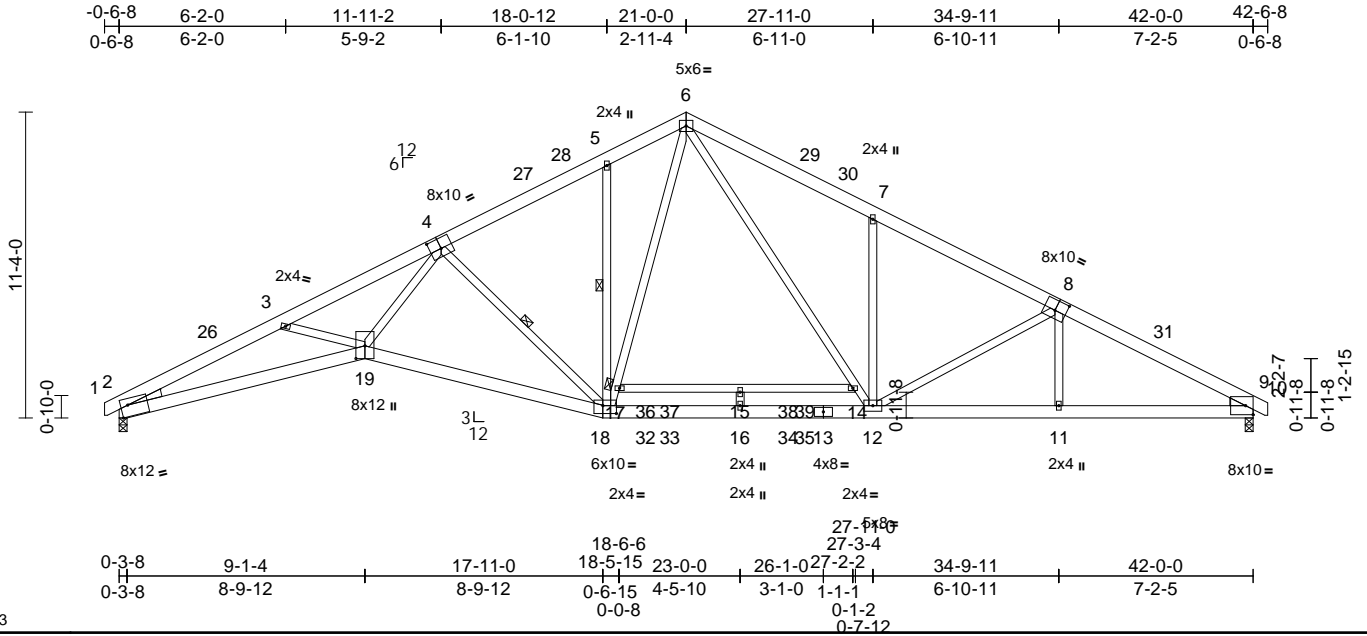
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss A04	Truss Type Roof Special	Qty 3	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410553 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:41
ID:PUyzCTN0PJWoBWHKfMm3nzvUVQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f

Page: 1



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Plate Offsets (X, Y): [2:0-3-3,Edge], [4:0-5-0,0-4-8], [8:0-5-0,0-4-8], [18:0-6-0,0-3-8], [19:0-5-11,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.38	16-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.76	16-18	>660	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.28	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 328 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 19-18:2x6 SP No.2, 17-14:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 18-6,19-4,12-6:2x4 SP No.2
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-1-8 oc purlins.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-18, 4-18

REACTIONS
(size) 2=0-3-8, 9=0-3-8
Max Horiz 2=-170 (LC 15)
Max Uplift 2=-30 (LC 14), 9=-3 (LC 15)
Max Grav 2=2118 (LC 3), 9=2173 (LC 3)

FORCES
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-6313/139, 3-5=-6307/44, 5-6=-2908/125, 6-7=-3512/78, 7-9=-3804/3, 9-10=0/13
BOT CHORD 2-19=-230/5671, 18-19=0/4113, 16-18=0/2147, 12-16=0/2147, 11-12=0/3323, 9-11=0/3323, 15-17=-27/131, 14-15=-27/131
WEBS 5-18=-353/163, 17-18=-116/1352, 6-17=-73/1423, 3-19=-32/243, 4-18=-1970/232, 7-12=-545/251, 4-19=-42/2982, 8-11=-32/74, 8-12=-376/248, 6-14=-65/1609, 12-14=-93/1577, 15-16=-227/0

- 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) -0-5-14 to 3-8-7, Interior (1) 3-8-7 to 16-9-11, Exterior(2R) 16-9-11 to 25-2-5, Interior (1) 25-2-5 to 38-3-9, Exterior(2E) 38-3-9 to 42-5-14 zone; 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, 22-11-0 from left end, supported at two points, 5-0-0 apart.
- All plates are 2x4 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 2 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) 9 and 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

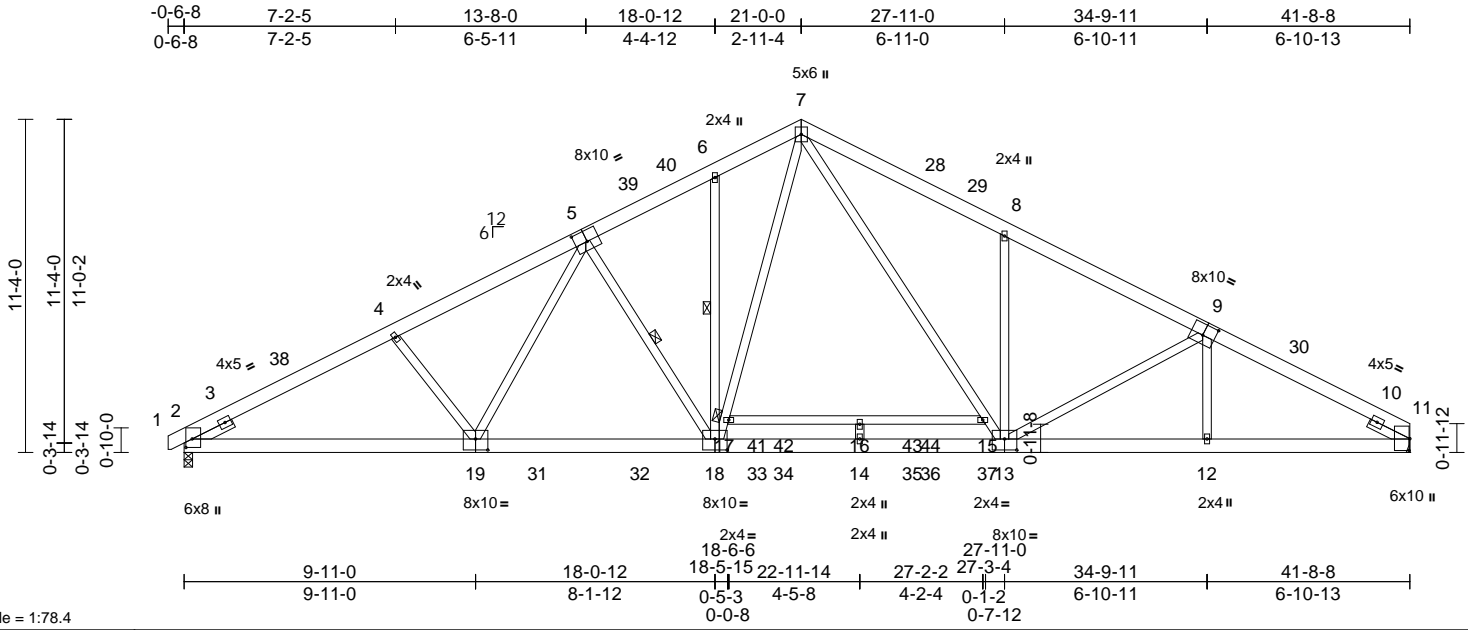
November 6, 2024

Job 24110023-A	Truss A05	Truss Type Common	Qty 5	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410554 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:41
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Page: 1



Scale = 1:78.4

Plate Offsets (X, Y): [2:0-3-8,0-2-9], [5:0-5-0,0-4-8], [9:0-5-0,0-4-8], [11:0-4-14,0-0-5], [13:0-5-0,0-4-8], [18:0-5-0,0-4-8], [19:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.25	16-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.51	16-17	>975	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.10	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 331 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 2-19:2x6 SP No.2, 17-15:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 13-7,18-7:2x4 SP No.2
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 3-0-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 2-19.
WEBS 1 Row at midpt 6-18, 5-18

REACTIONS (size) 2=0-3-8, 11= Mechanical
Max Horiz 2=177 (LC 14)
Max Uplift 2=-33 (LC 14)
Max Grav 2=2141 (LC 3), 11=2148 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 7-8=-3464/83, 8-11=-3654/5, 1-2=0/17, 2-4=-3661/64, 4-6=-3488/73, 6-7=-2917/100
BOT CHORD 2-14=-113/3184, 12-14=0/3179, 11-12=-19/3179, 16-17=-16/45, 15-16=-16/45
WEBS 8-13=-561/250, 4-19=-269/209, 5-19=-112/408, 6-18=-242/109, 7-15=-85/1512, 13-15=-115/1454, 17-18=-66/1384, 7-17=-29/1474, 5-18=-589/244, 9-12=-87/16, 9-13=-285/241, 14-16=-246/0

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) -0-5-14 to 3-8-2, Interior (1) 3-8-2 to 16-10-1, Exterior(2R) 16-10-1 to 25-1-15, Interior (1) 25-1-15 to 37-6-9, Exterior(2E) 37-6-9 to 41-8-8 zone; end vertical left 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, 22-11-0 from left end, supported at two points, 5-0-0 apart.
- All plates are 2x4 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 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



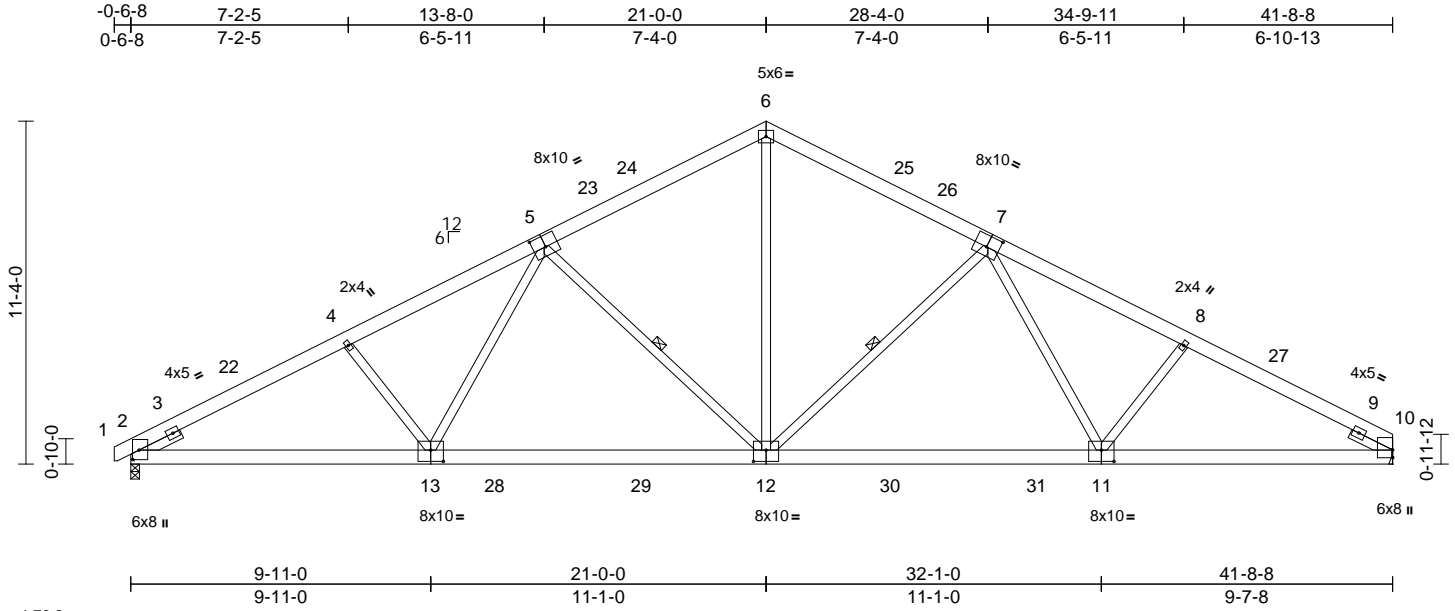
November 6, 2024

Job 24110023-A	Truss A06	Truss Type Common	Qty 3	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410555 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:76.2

Plate Offsets (X, Y): [2:0-3-12,0-2-9], [5:0-5-0,0-4-8], [7:0-5-0,0-4-8], [11:0-5-0,0-4-8], [12:0-5-0,0-4-8], [13:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.25	11-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.44	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.11	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 294 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 12-6:2x4 SP No.2
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 3-1-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 7-12, 5-12

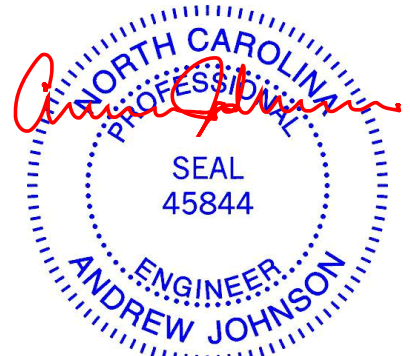
REACTIONS (size) 2=0-3-8, 10= Mechanical
Max Horiz 2=177 (LC 14)
Max Uplift 2=172 (LC 14), 10=158 (LC 15)
Max Grav 2=1871 (LC 3), 10=1839 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-4=-3159/326, 4-6=-2986/344, 6-8=-2946/344, 8-10=-3114/326
BOT CHORD 2-10=-343/2738
WEBS 6-12=-104/1509, 7-12=-788/264, 7-11=-26/547, 8-11=-240/183, 5-12=-803/265, 5-13=-30/586, 4-13=-261/186

- 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 10.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 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) -0-5-14 to 3-8-2, Interior (1) 3-8-2 to 16-10-1, Exterior(2R) 16-10-1 to 25-1-15, Interior (1) 25-1-15 to 37-6-9, Exterior(2E) 37-6-9 to 41-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



November 6, 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)

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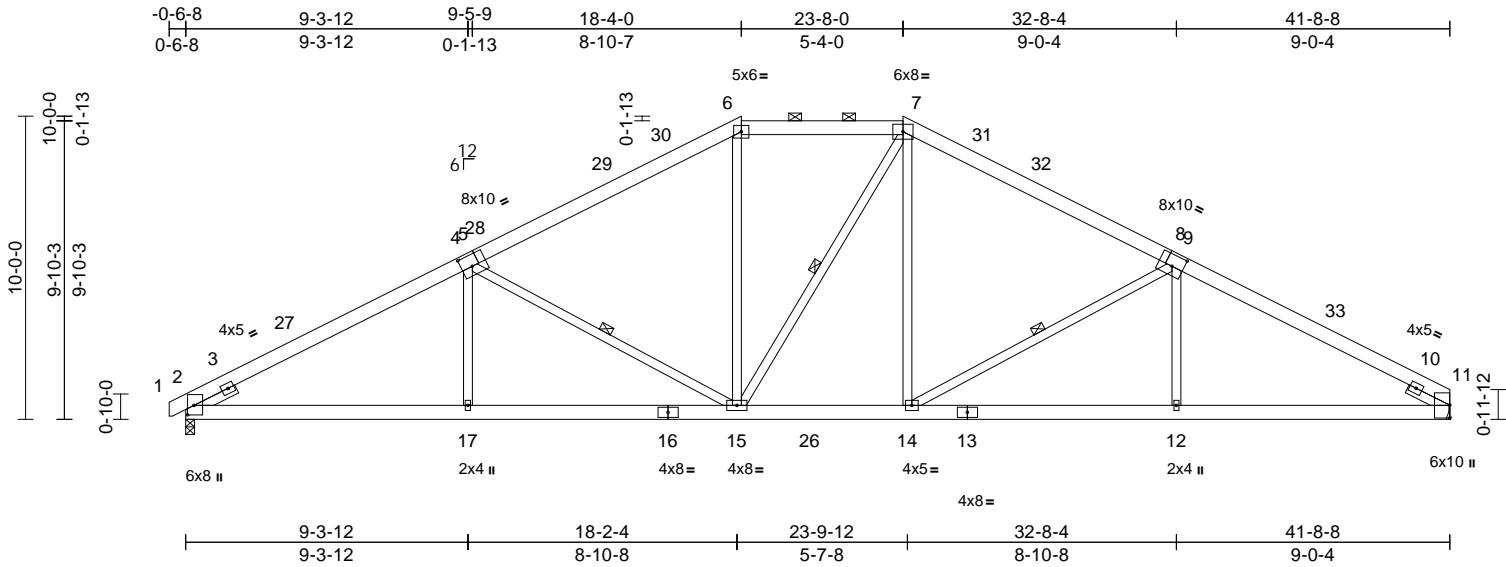
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss A07	Truss Type Hip	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410556 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:41
ID:WTFSTUfJr6Wkhhv681?78szvUlg-RfC?PsB70Hq3NSgPqnL8w3tUXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:76

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

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	0.92	Vert(LL)	-0.21	12-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.37	12-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.13	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 297 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 15-7:2x4 SP No.2
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 2-2-0 oc purlins, except 2-0-0 oc purlins (4-9-5 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 11-12.
WEBS 1 Row at midpt 7-15, 4-15, 9-14

REACTIONS (size) 2=0-3-8, 11= Mechanical
Max Horiz 2=154 (LC 14)
Max Uplift 2=-155 (LC 14), 11=-141 (LC 15)
Max Grav 2=1944 (LC 45), 11=1921 (LC 45)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 6-7=-2158/417, 1-2=0/17, 2-4=-3306/388, 4-6=-2561/403, 7-9=-2566/403, 9-11=-3280/387
BOT CHORD 2-17=-262/2875, 15-17=-262/2875, 14-15=-124/2160, 12-14=-249/2846, 11-12=-249/2846
WEBS 6-15=-18/701, 7-15=-253/260, 7-14=-36/696, 4-17=0/332, 4-15=-837/253, 9-12=0/317, 9-14=-813/249

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) -0-5-14 to 3-8-2, Interior (1) 3-8-2 to 14-2-1, Exterior(2R) 14-2-1 to 27-9-15, Interior (1) 27-9-15 to 37-6-9, Exterior(2E) 37-6-9 to 41-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 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.

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

LOAD CASE(S) Standard



November 6, 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)



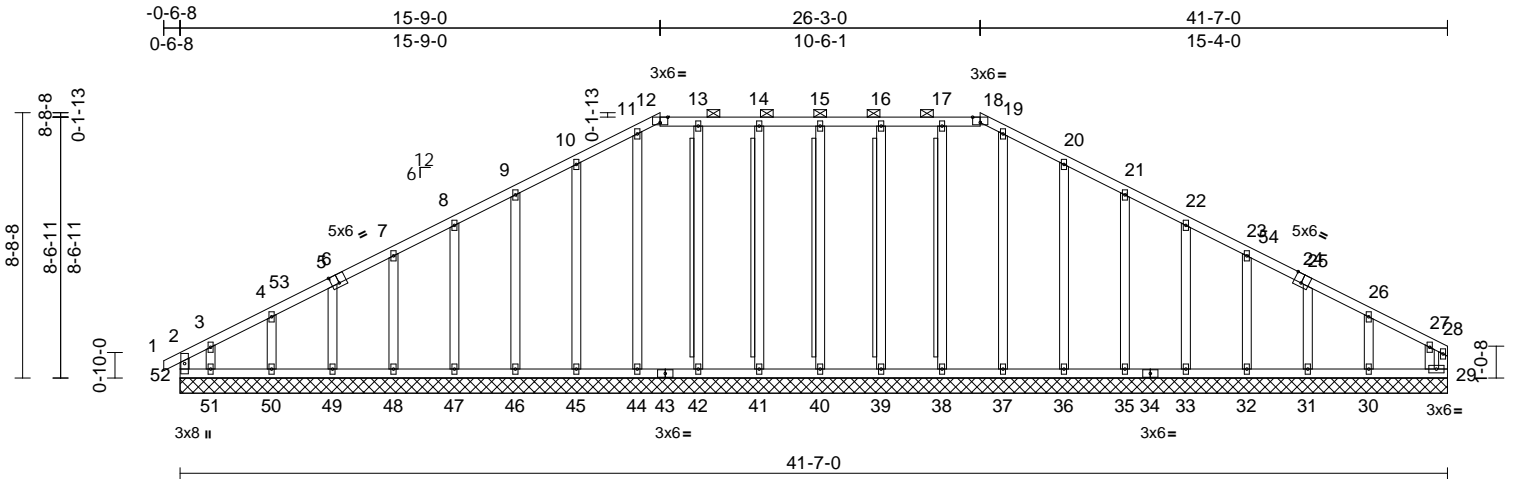
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss A08	Truss Type Hip Supported Gable	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410557 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:42
ID:3_zLxHlk2pmSZKbX0XIUUzVUG1-RFC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:75.6

Plate Offsets (X, Y): [6:0-3-0,Edge], [12:0-3-0,Edge], [18:0-3-0,Edge], [24:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.01	29	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 293 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 *Except* 0-0,0-0,0-0,0-0,0-0,0-0,2x4 SP No.2(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 12-18.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS
T-Brace: 2x4 SP No.2 - 15-40, 14-41, 13-42, 16-39, 17-38
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.

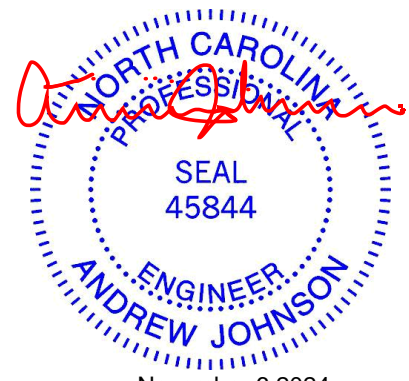
REACTIONS (size)
29=41-7-0, 30=41-7-0, 31=41-7-0, 32=41-7-0, 33=41-7-0, 35=41-7-0, 36=41-7-0, 37=41-7-0, 38=41-7-0, 39=41-7-0, 40=41-7-0, 41=41-7-0, 42=41-7-0, 44=41-7-0, 45=41-7-0, 46=41-7-0, 47=41-7-0, 48=41-7-0, 49=41-7-0, 50=41-7-0, 51=41-7-0, 52=41-7-0
Max Horiz 52=121 (LC 13)
Max Uplift 30=-102 (LC 15), 31=-26 (LC 15), 32=-48 (LC 15), 33=-43 (LC 15), 35=-42 (LC 15), 36=-55 (LC 15), 38=-11 (LC 11), 39=-32 (LC 10), 40=-24 (LC 11), 41=-32 (LC 10), 42=-12 (LC 11), 45=-53 (LC 14), 46=-42 (LC 14), 47=-44 (LC 14), 48=-43 (LC 14), 49=-46 (LC 14), 50=-36 (LC 14), 51=-149 (LC 14), 52=-57 (LC 10)

Max Grav 29=107 (LC 27), 30=197 (LC 43), 31=150 (LC 22), 32=204 (LC 43), 33=223 (LC 43), 35=220 (LC 43), 36=226 (LC 43), 37=191 (LC 43), 38=210 (LC 38), 39=219 (LC 38), 40=216 (LC 38), 41=219 (LC 38), 42=210 (LC 38), 44=192 (LC 41), 45=224 (LC 41), 46=218 (LC 41), 47=222 (LC 41), 48=190 (LC 41), 49=158 (LC 54), 50=169 (LC 39), 51=126 (LC 47), 52=171 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD
2-52=-126/45, 1-2=0/18, 2-3=-174/69, 3-4=-120/64, 4-5=-99/83, 5-7=-80/106, 7-8=-79/148, 8-9=-70/193, 9-10=-83/238, 10-11=-103/289, 11-12=-102/277, 12-13=-98/279, 13-14=-98/279, 14-15=-98/279, 15-16=-98/279, 16-17=-98/279, 17-18=-98/279, 18-19=-102/277, 19-20=-103/289, 20-21=-83/238, 21-22=-65/193, 22-23=-63/148, 23-25=-52/102, 25-26=-62/55, 26-27=-89/31, 27-28=-20/26, 28-29=-39/100
BOT CHORD
51-52=-23/99, 50-51=-23/99, 49-50=-23/99, 48-49=-23/99, 47-48=-23/99, 46-47=-23/99, 45-46=-23/99, 44-45=-23/99, 42-44=-23/99, 41-42=-23/99, 40-41=-23/99, 39-40=-23/99, 38-39=-23/99, 37-38=-23/99, 36-37=-23/99, 35-36=-23/99, 33-35=-23/99, 32-33=-23/99, 31-32=-23/99, 30-31=-23/99, 29-30=-23/99

WEBS 15-40=-176/53, 14-41=-179/71, 13-42=-170/36, 11-44=-152/3, 10-45=-184/92, 9-46=-178/76, 8-47=-183/77, 7-48=-150/77, 5-49=-119/76, 4-50=-126/114, 3-51=-83/120, 16-39=-179/71, 17-38=-170/35, 19-37=-151/0, 20-36=-186/92, 21-35=-180/76, 22-33=-184/77, 23-32=-163/79, 25-31=-114/81, 26-30=-142/184, 27-29=-112/21

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



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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

Job	Truss	Truss Type	Qty	Ply	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason I69410557
24110023-A	A08	Hip Supported Gable	1	1	Job Reference (optional)

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

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:42
ID:3_zLxHlk22pmSZKbX0XIUUzvUG1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 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) -0-6-8 to 3-7-6, Exterior(2N) 3-7-6 to 11-7-1, Corner(3R) 11-7-1 to 19-10-14, Exterior(2N) 19-10-14 to 22-1-2, Corner(3R) 22-1-2 to 30-4-15, Exterior(2N) 30-4-15 to 37-0-0, Corner(3E) 37-0-0 to 41-5-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 52, 24 lb uplift at joint 40, 32 lb uplift at joint 41, 12 lb uplift at joint 42, 53 lb uplift at joint 45, 42 lb uplift at joint 46, 44 lb uplift at joint 47, 43 lb uplift at joint 48, 46 lb uplift at joint 49, 36 lb uplift at joint 50, 149 lb uplift at joint 51, 32 lb uplift at joint 39, 11 lb uplift at joint 38, 55 lb uplift at joint 36, 42 lb uplift at joint 35, 43 lb uplift at joint 33, 48 lb uplift at joint 32, 26 lb uplift at joint 31 and 102 lb uplift at joint 30.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 17) 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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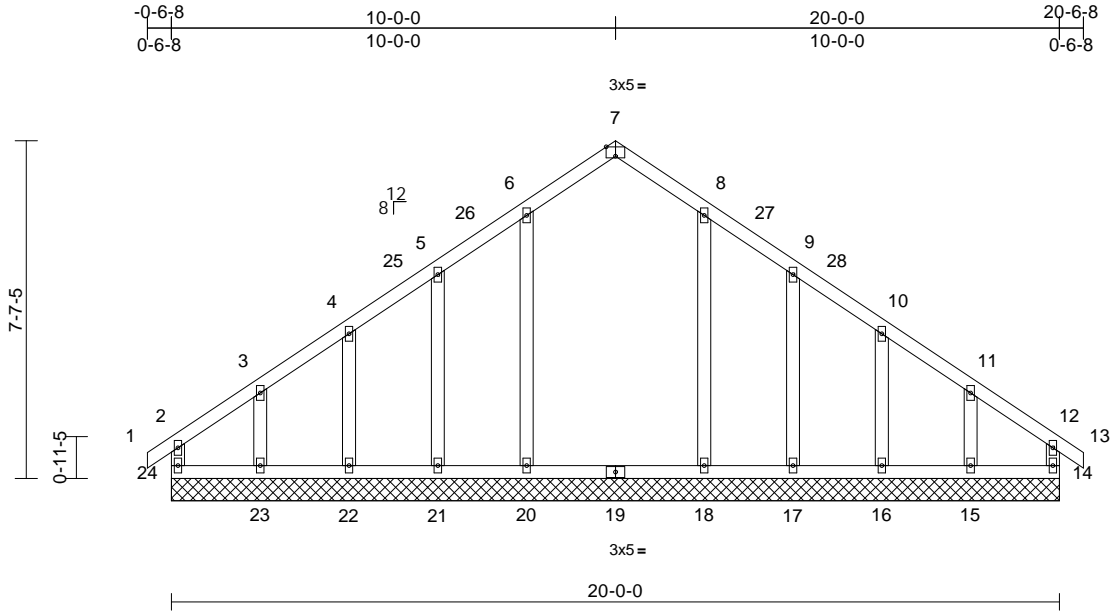
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss B01	Truss Type Common Supported Gable	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410558 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:51.9

Plate Offsets (X, Y): [7:0-2.8,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	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 114 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)

Max Horiz	24=165 (LC 12)
Max Uplift	14=14 (LC 11), 15=157 (LC 15), 16=29 (LC 15), 17=93 (LC 15), 21=91 (LC 14), 22=28 (LC 14), 23=160 (LC 14), 24=23 (LC 10)
Max Grav	14=216 (LC 28), 15=208 (LC 26), 16=207 (LC 26), 17=195 (LC 22), 18=360 (LC 6), 20=360 (LC 5), 21=195 (LC 21), 22=207 (LC 25), 23=211 (LC 25), 24=220 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

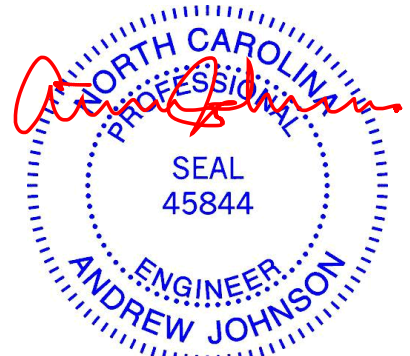
TOP CHORD	1-2=0/23, 2-3=-195/92, 3-4=-132/58, 4-5=-127/44, 5-6=-125/74, 6-7=-150/83, 7-8=-150/83, 8-9=-125/66, 9-10=-120/36, 10-11=-127/49, 11-12=-187/81, 12-13=0/23, 2-24=-163/23, 12-14=-159/16
BOT CHORD	23-24=-62/166, 22-23=-62/166, 21-22=-62/166, 20-21=-62/166, 18-20=-62/166, 17-18=-62/166, 16-17=-62/166, 15-16=-62/166, 14-15=-62/166

WEBS

6-20	=-248/41, 5-21=-168/104, 4-22=-143/66, 3-23=-145/138, 8-18=-248/36, 9-17=-168/107, 10-16=-143/65, 11-15=-145/136
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- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-8 to 2-5-8, Interior (1) 2-5-8 to 7-0-0, Exterior(2R) 7-0-0 to 13-0-0, Interior (1) 13-0-0 to 17-6-8, Exterior(2E) 17-6-8 to 20-6-8 zone;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.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 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 23 lb uplift at joint 24, 14 lb uplift at joint 14, 91 lb uplift at joint 21, 28 lb uplift at joint 22, 160 lb uplift at joint 23, 93 lb uplift at joint 17, 29 lb uplift at joint 16 and 157 lb uplift at joint 15.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



November 6, 2024

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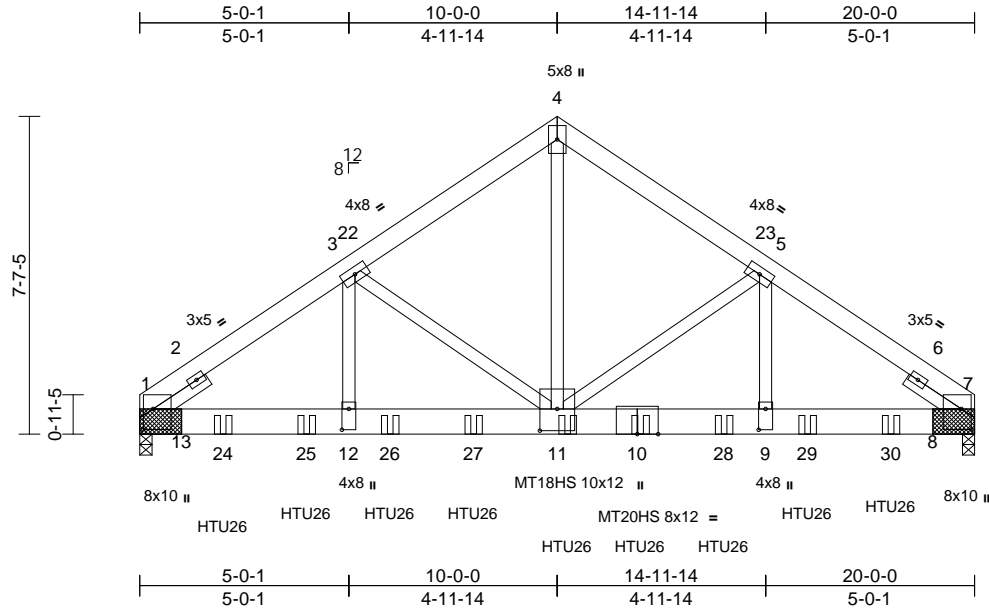
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss B02	Truss Type Common Girder	Qty 1	Ply 2	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410559 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:42
ID:PTv5C6iKkROx2GY0tKS8s4zvUAi-RfC?PsB70Hq3NSgPqnL8w3uITxBGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:55.2

Plate Offsets (X, Y): [1:0-5-15,0-2-13], [7:0-5-15,0-2-13], [9:0-6-0,0-2-0], [11:0-6-4,0-5-0], [12:0-6-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.13	11-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.25	11-12	>935	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.06	7	n/a	n/a	MT18HS	244/190
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 344 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 11-4:2x4 SP No.1
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 3-6-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=(0-3-8 + bearing block), (req. 0-4-2), 7=(0-3-8 + bearing block), (req. 0-3-15)
Max Horiz 1=-154 (LC 10)
Max Grav 1=10015 (LC 5), 7=9436 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-12954/0, 3-4=-9427/0, 4-5=-9430/0, 5-7=-12280/0
BOT CHORD 1-12=0/10599, 11-12=0/10599, 9-11=0/10043, 7-9=0/10043
WEBS 4-11=0/9866, 5-11=-2746/769, 5-9=604/3281, 3-11=-3439/0, 3-12=0/4093

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-5-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 4-11 2x4 - 1 row at 0-7-0 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.
- 2x8 SP 2400F 2.0E bearing block 12" long at jt. 1 attached to each face with 4 rows of 10d (0.131"x3") nails spaced 3" o.c. 16 Total fasteners per block. Bearing is assumed to be SP 2400F 2.0E.
- 2x8 SP 2400F 2.0E bearing block 12" long at jt. 7 attached to each face with 4 rows of 10d (0.131"x3") nails spaced 3" o.c. 16 Total fasteners per block. Bearing is assumed to be SP 2400F 2.0E.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.
- The Fabrication Tolerance at joint 11 = 12%
- 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.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- Use Simpson Strong-Tie HTU26 (20-10d Girder, 14-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 7-9-0 oc max. starting at 1-11-15 from the left end to 17-11-15 to connect truss(es) to back face of bottom chord.
 - Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 11-11-15 from the left end to 15-11-15 to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-7=-60, 14-18=-20
Concentrated Loads (lb)
Vert: 10=-1642 (B), 11=-1850 (B), 24=-1850 (B), 25=-1850 (B), 26=-1850 (B), 27=-1850 (B), 28=-1642 (B), 29=-1642 (B), 30=-1814 (B)



November 6, 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)



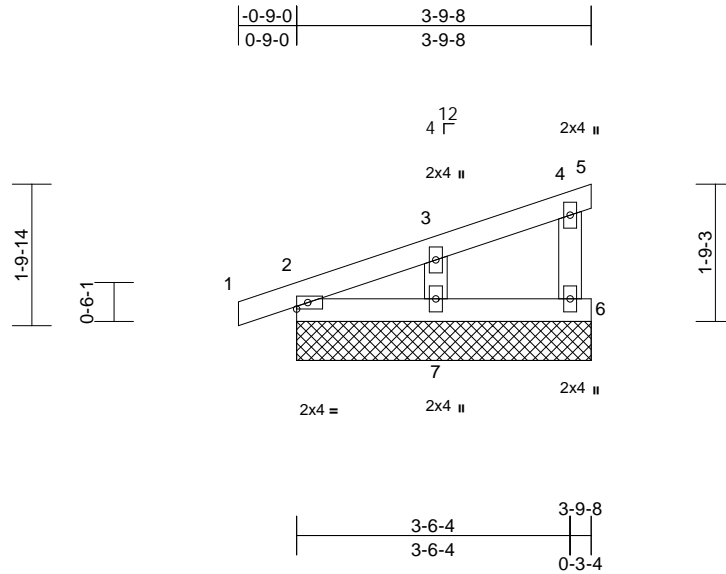
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss C01	Truss Type Monopitch Supported Gable	Qty 2	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410560 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:42
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Page: 1



Scale = 1:29.7

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	0.06	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	0.05	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 15 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-9-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size)

2=3-9-8, 5=3-9-8, 6=3-9-8, 7=3-9-8, 8=3-9-8	
Max Horiz	2=59 (LC 10), 8=59 (LC 10)
Max Uplift	2=-24 (LC 10), 5=-28 (LC 21), 6=-30 (LC 10), 7=-38 (LC 14), 8=-24 (LC 10)
Max Grav	2=158 (LC 21), 5=9 (LC 10), 6=133 (LC 21), 7=207 (LC 21), 8=158 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/21, 2-3=-98/41, 3-4=-38/22, 4-5=-17/9, 4-6=-120/123
BOT CHORD	2-7=-46/25, 6-7=0/0
WEBS	3-7=-162/173

- 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) -0-9-0 to 2-3-0, Exterior(2N) 2-3-0 to 3-9-8 zone; 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.
- 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 24 lb uplift at joint 2, 28 lb uplift at joint 5, 30 lb uplift at joint 6, 38 lb uplift at joint 7 and 24 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



November 6, 2024

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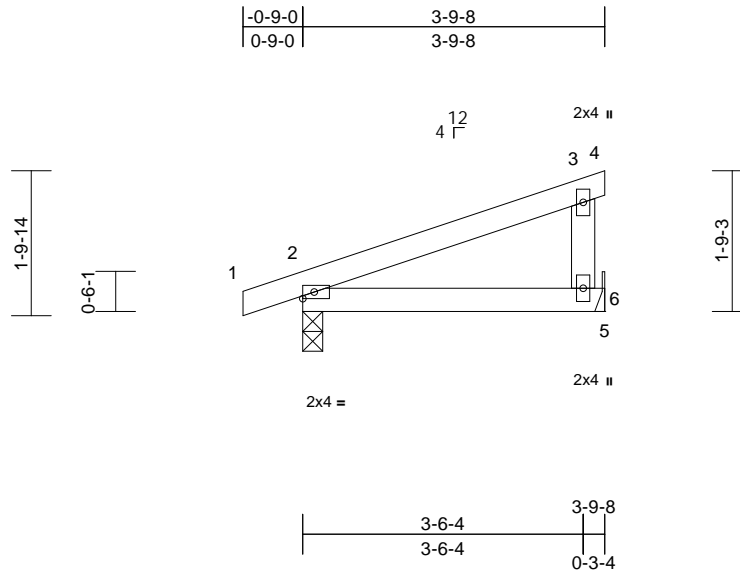
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss C02	Truss Type Monopitch	Qty 8	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410561 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Loading (psf)		Spacing		CSI		DEFL		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	0.03	6-9	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	0.02	6-9	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	2	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										Weight: 15 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 3-9-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 6= Mechanical
Max Horiz 2=58 (LC 10)
Max Uplift 2=-72 (LC 10), 6=-63 (LC 10)
Max Grav 2=262 (LC 21), 6=213 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-54/54, 3-4=-8/0, 3-6=-157/134
BOT CHORD 2-6=-83/56, 5-6=0/0

- 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 63 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

- 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; 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.



November 6, 2024

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ENGINEERING BY
TRENCO
A MiTek Affiliate

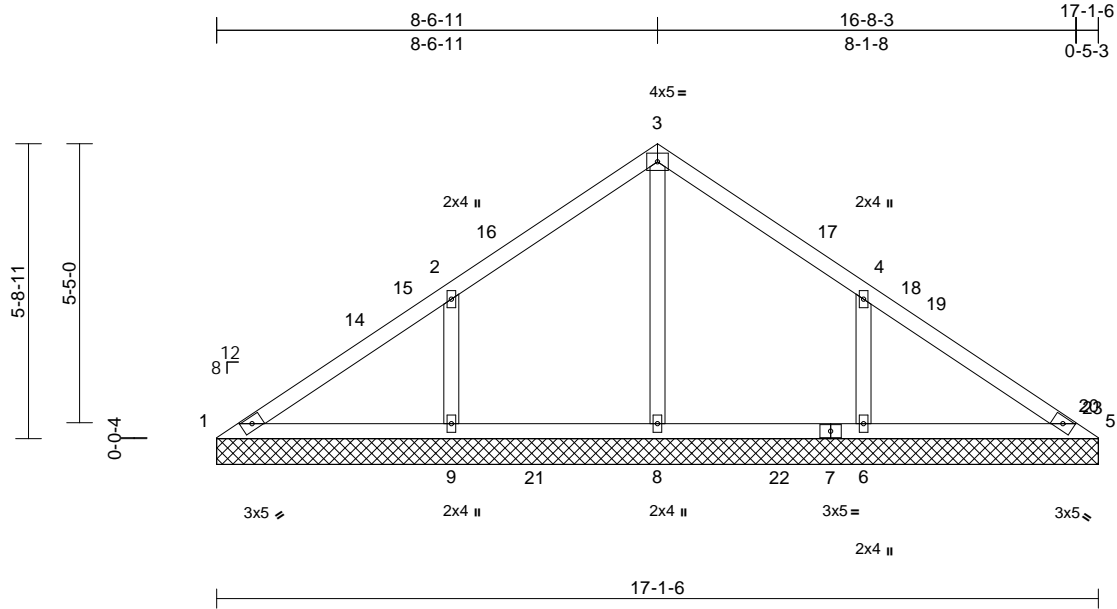
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss VL17	Truss Type Valley	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410562 Job Reference (optional)
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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	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	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=17-1-6, 5=17-1-6, 6=17-1-6, 8=17-1-6, 9=17-1-6
Max Horiz 1=130 (LC 11)
Max Uplift 1=-4 (LC 10), 6=-142 (LC 15), 9=-145 (LC 14)
Max Grav 1=104 (LC 24), 5=78 (LC 34), 6=524 (LC 21), 8=495 (LC 23), 9=526 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-132/252, 2-3=-54/197, 3-4=-55/182, 4-5=-104/214
BOT CHORD 1-9=-132/132, 8-9=-132/94, 6-8=-132/94, 5-6=-132/94
WEBS 3-8=-324/9, 2-9=-411/181, 4-6=-410/180

- 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, 145 lb uplift at joint 9 and 142 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

- 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 5-7-1, Exterior(2R) 5-7-1 to 11-7-1, Interior (1) 11-7-1 to 13-8-5, Exterior(2E) 13-8-5 to 16-8-5 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



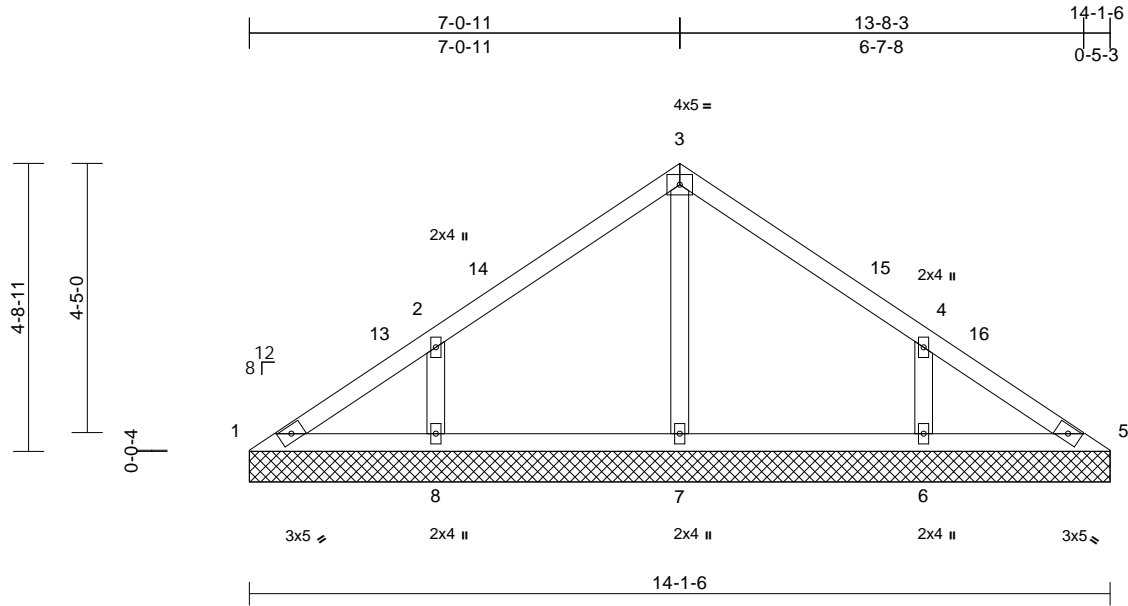
November 6, 2024

Job 24110023-A	Truss VL14	Truss Type Valley	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410563 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:37.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.29	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	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 55 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=14-1-6, 5=14-1-6, 6=14-1-6,
7=14-1-6, 8=14-1-6
Max Horiz 1=107 (LC 11)
Max Uplift 1=-12 (LC 15), 6=-118 (LC 15),
8=-119 (LC 14)
Max Grav 1=97 (LC 24), 5=86 (LC 1), 6=460
(LC 21), 7=310 (LC 20), 8=460 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

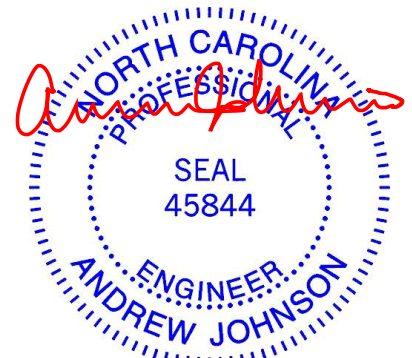
TOP CHORD 1-2=-131/112, 2-3=-141/100, 3-4=-141/92,
4-5=-104/80
BOT CHORD 1-8=-44/112, 7-8=-44/67, 6-7=-44/67,
5-6=-44/82
WEBS 3-7=-229/9, 2-8=-385/159, 4-6=-385/158

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 3-1-1, Interior (1) 3-1-1 to 4-1-1, Exterior(2R) 4-1-1 to 10-1-1, Interior (1) 10-1-1 to 11-1-1, Exterior(2E) 11-1-1 to 14-1-12 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, 119 lb uplift at joint 8 and 118 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



November 6, 2024

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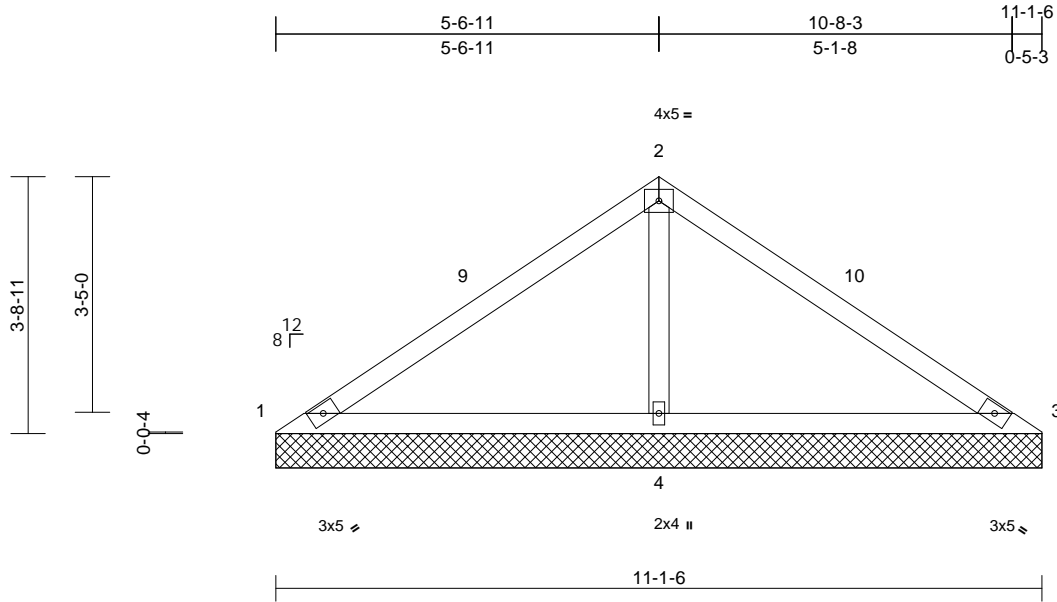
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason
24110023-A	VL11	Valley	1	1	169410564
Job Reference (optional)					

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

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Nov 05 16:40:43
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Page: 1



Scale = 1:33.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.52	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 39 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=11-1-6, 3=11-1-6, 4=11-1-6
Max Horiz 1=-83 (LC 10)
Max Uplift 1=-76 (LC 21), 3=-76 (LC 20), 4=-104 (LC 14)
Max Grav 1=81 (LC 20), 3=81 (LC 21), 4=917 (LC 20)

FORCES

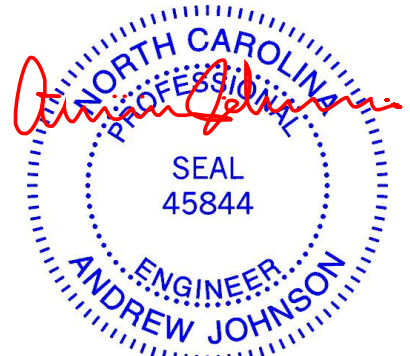
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-120/487, 2-3=-120/487
BOT CHORD 1-4=-294/168, 3-4=-294/168
WEBS 2-4=-723/251

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 8-1-12, Exterior(2E) 8-1-12 to 11-1-12 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 76 lb uplift at joint 1, 76 lb uplift at joint 3 and 104 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



November 6, 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)

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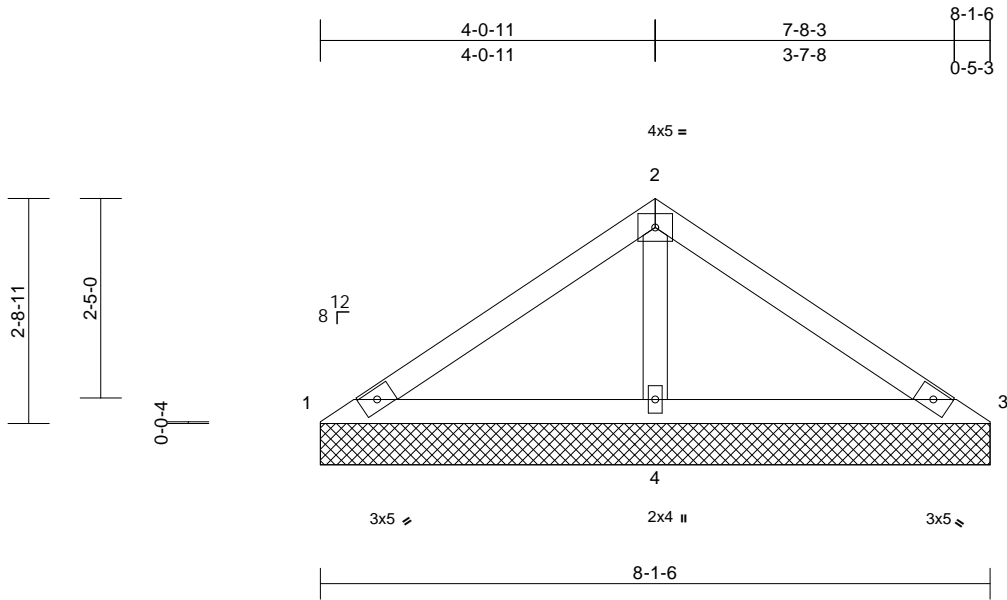
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss VL8	Truss Type Valley	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410565 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:27.9

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	0.32	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: 28 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 8-1-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=8-1-6, 3=8-1-6, 4=8-1-6
Max Horiz 1=60 (LC 11)
Max Uplift 1=-28 (LC 21), 3=-28 (LC 20),
4=-66 (LC 14)
Max Grav 1=105 (LC 20), 3=105 (LC 21),
4=609 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension

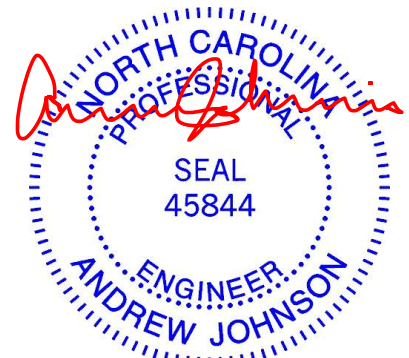
TOP CHORD 1-2=-96/293, 2-3=-96/293
BOT CHORD 1-4=-202/149, 3-4=-202/149
WEBS 2-4=-443/193

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 5-1-12, Exterior(2E) 5-1-12 to 8-1-12 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 28 lb uplift at joint 1, 28 lb uplift at joint 3 and 66 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



November 6, 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)

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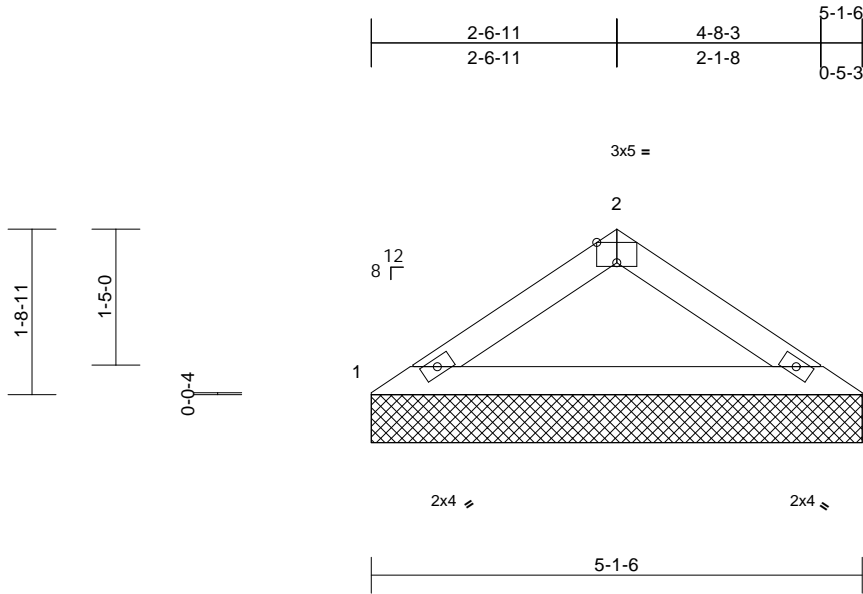
818 Soundside Road
Edenton, NC 27932

Job 24110023-A	Truss VL5	Truss Type Valley	Qty 1	Ply 1	Wilmington-A-FLEX+VMB-All Levels-Roof-Mason 169410566 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:24

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	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 15 lb	FT = 20%	

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-1-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-1-6, 3=5-1-6
Max Horiz 1=-36 (LC 10)
Max Uplift 1=-19 (LC 14), 3=-19 (LC 15)
Max Grav 1=243 (LC 20), 3=243 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-367/129, 2-3=-367/129
BOT CHORD 1-3=-94/293

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) 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 19 lb uplift at joint 1 and 19 lb uplift at joint 3.
- 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



November 6, 2024

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

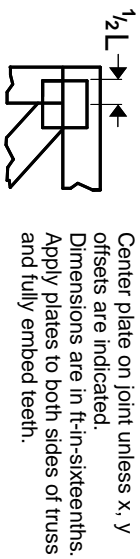
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

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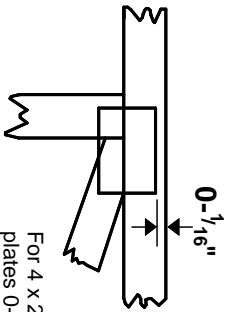
818 Soundside Road
Edenton, NC 27932

Symbols

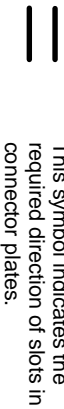
PLATE LOCATION AND ORIENTATION



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.



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

PLATE SIZE

4 X 4

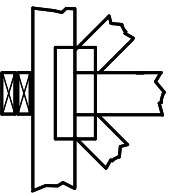
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

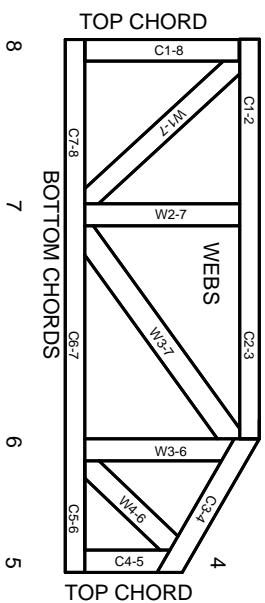
Industry Standards:

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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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.