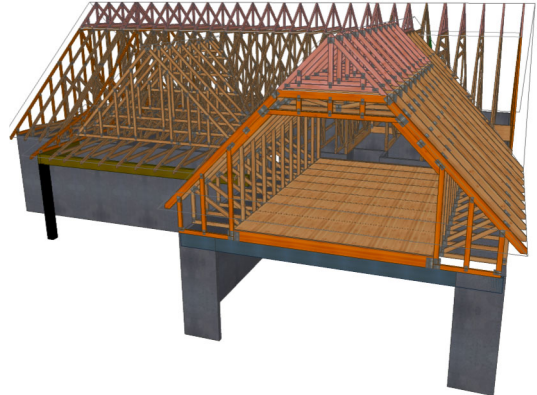




Carter Sanford Component Plant  
298 Harvey Faulk Rd  
Sanford, NC 27332

Phone #:919-775-1450



**Builder: Wellco Const.**  
**Model: Plan 1 BNS GRH**

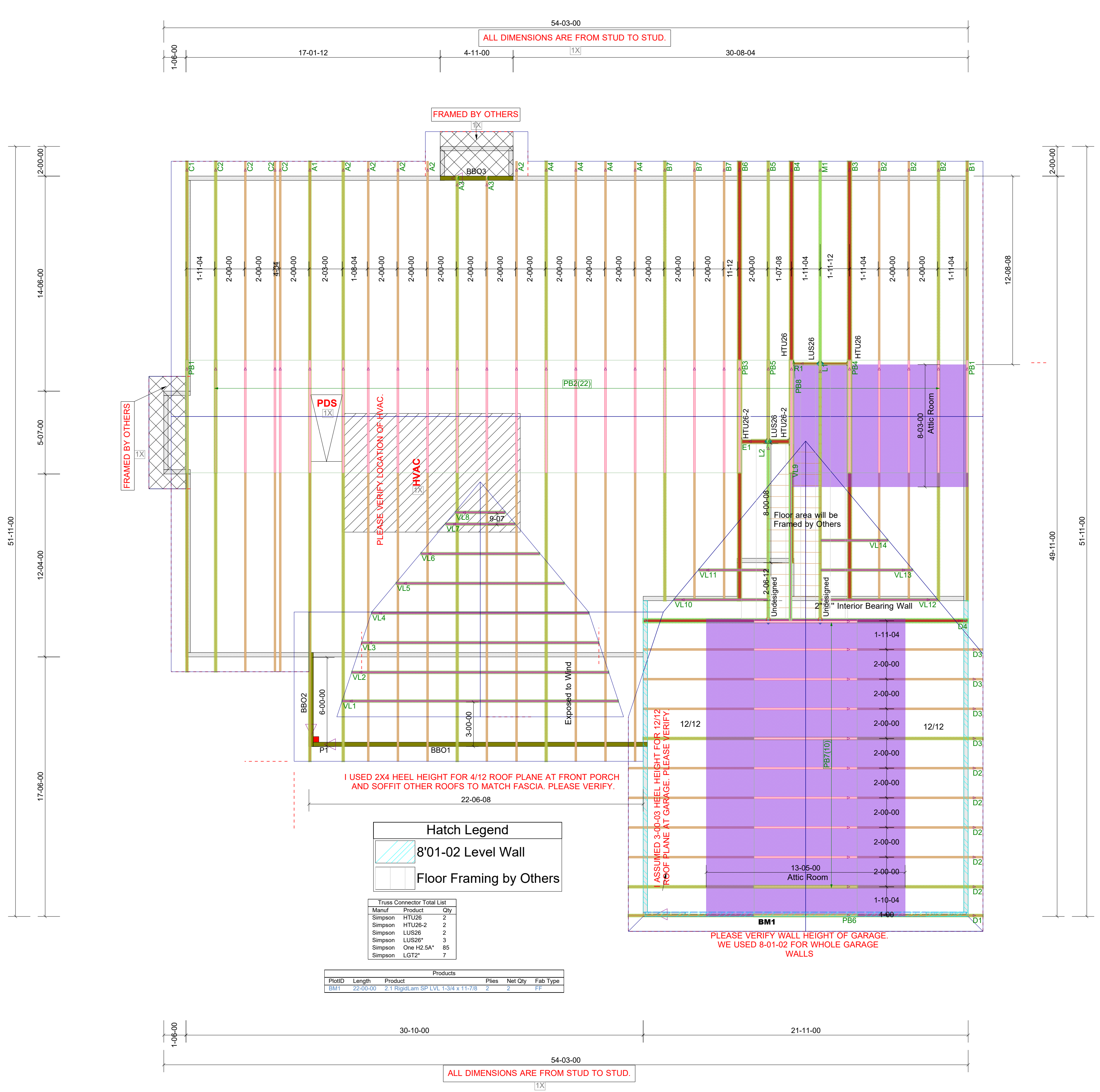
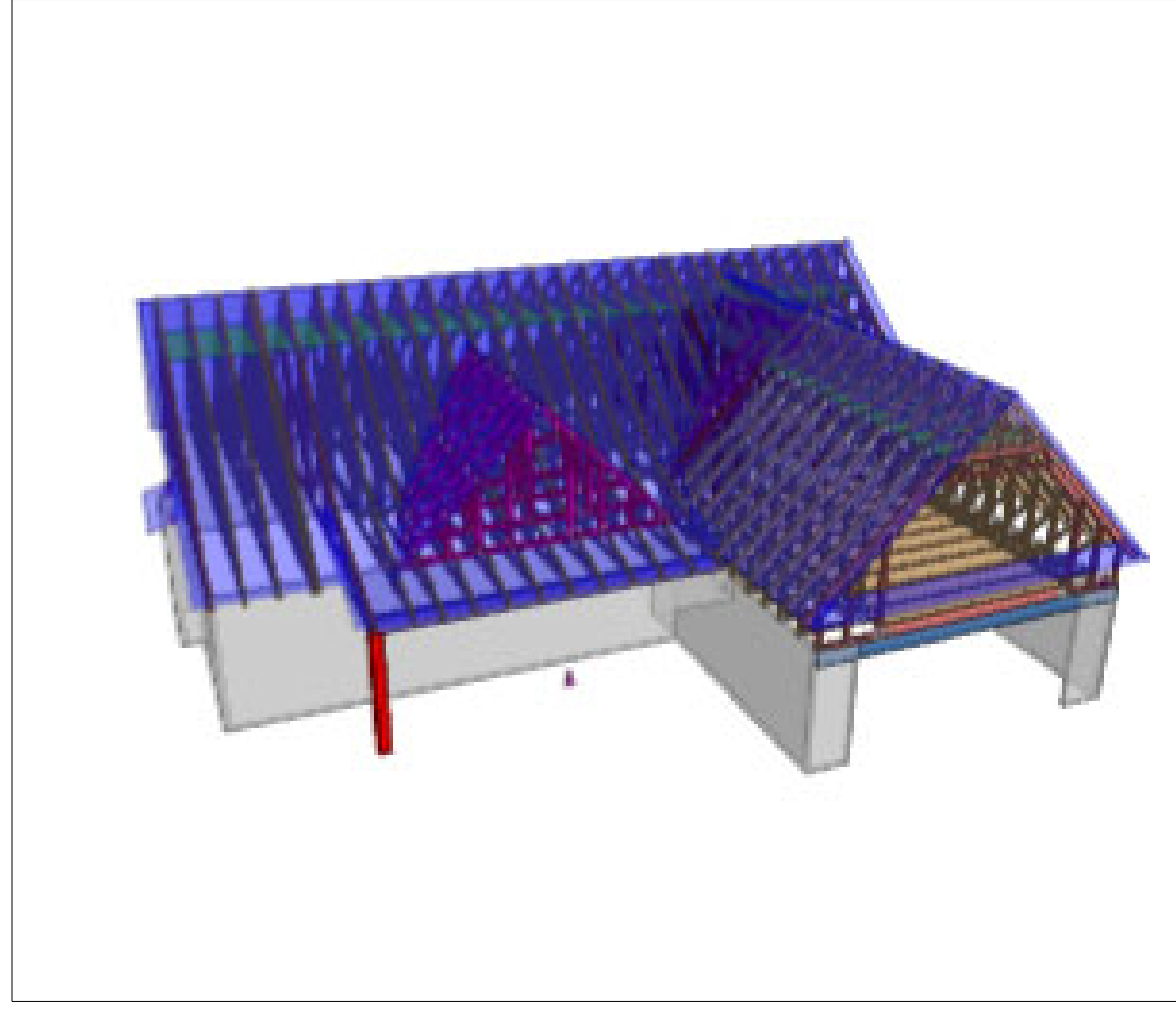
**THE PLACEMENT PLAN NOTES:**

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.

**Approved by:** \_\_\_\_\_

**Date:** \_\_\_\_\_

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



**Hatch Legend**

- 8'01-02 Level Wall
- Floor Framing by Others

**Truss Connector Total List**

Manufacturer	Product	Qty
Simpson	HTU26	2
Simpson	HTU26-2	2
Simpson	LUS26	2
Simpson	LUS26*	3
Simpson	One H2.5A*	85
Simpson	LGT2*	7

**Products**

PlotID	Length	Product	Files	Net Qty	Fab Type
DM1	22-00-00	2"1 Rigol,um SP LVL 1.34 x 11.78	2	2	FF

**Revisions**

Date	Name
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 Truss" available from the Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53179.

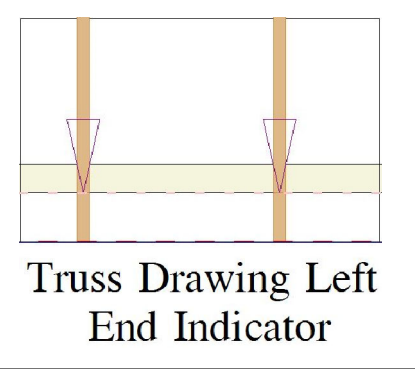


Wellco Contractor  
 14 Overhills Creek-Roof-1 BNS GRH  
**COMPONENT PLAN**

Scale: **NTS**  
 Date: **10/15/2024**  
 Designer:  
 Project Number: **24100066-01**  
 Sheet Number:  
**1/1**

\*\* DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT.

\*\* FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.



\*\* TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

\*\* PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

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

\*\* DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH. \*\* TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE. \*\* GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.



Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 24100066-01  
14 Overhills Creek-Roof-1 BNS GRH

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: I68913518 thru I68913561

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

North Carolina COA: C-0844



October 15, 2024

Gilbert, Eric

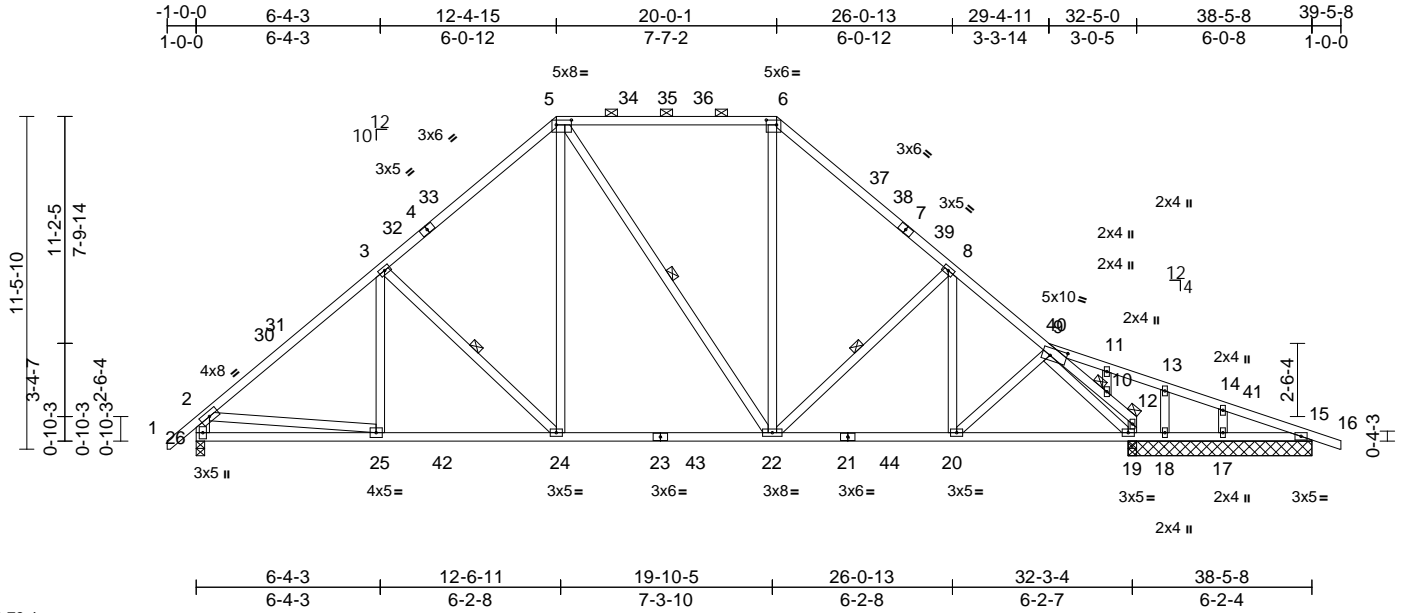
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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 24100066-01	Truss A1	Truss Type Piggyback Base Structural Gable	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913518
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:79.4

Plate Offsets (X, Y): [5:0-6-4,0-2-0], [6:0-4-4,0-2-0], [9:0-6-12,0-3-0]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.13	22-24	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.21	22-24	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.05	19	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 253 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2 \*Except\* 5-6,6-7,7-12:2x4 SP 2400F 2.0E

BOT CHORD 2x4 SP No.2

WEBS 2x4 SP No.3 \*Except\* 26-2:2x6 SP No.2, 24-5,22-5,22-6,9-19:2x4 SP No.2

OTHERS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-6-12 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6, 9-12.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 5-22, 3-24, 8-22

JOINTS 1 Brace at Jt(s): 12, 10

**REACTIONS** (size)

15=6-4-0, 17=6-4-0, 18=6-4-0, 19=6-4-0, 26=0-3-8, 27=6-4-0

Max Horiz 26=-218 (LC 13)

Max Uplift 15=-129 (LC 62), 17=-4 (LC 16), 18=-59 (LC 12), 27=-129 (LC 62)

Max Grav 15=69 (LC 52), 17=288 (LC 44), 18=100 (LC 52), 19=1834 (LC 54), 26=1517 (LC 60), 27=69 (LC 52)

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

TOP CHORD 1-2=-0/55, 2-3=-2010/288, 3-5=-1658/358, 5-6=-1146/343, 6-8=-1610/351, 8-9=-1749/286, 9-10=-11/35, 10-12=-60/19, 9-11=-33/652, 11-13=-53/674, 13-14=-80/690, 14-15=-106/702, 15-16=0/23, 2-26=-1575/300

BOT CHORD 25-26=-146/470, 24-25=-97/1447, 22-24=0/1071, 20-22=-68/1289, 19-20=-74/917, 18-19=-657/134, 17-18=-657/134, 15-17=-657/134

**WEBS**

2-25=0/1119, 5-24=-53/653, 5-22=-153/88, 6-22=-43/566, 12-19=-94/29, 3-25=0/187, 3-24=-529/193, 8-20=-148/68, 8-22=-358/173, 9-20=0/479, 9-19=-2303/305, 10-11=-149/44, 13-18=-171/62, 14-17=-175/59

- 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; BCCL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-6 to 2-10-13, Interior (1) 2-10-13 to 12-4-15, Exterior(2R) 12-4-15 to 16-3-2, Interior (1) 16-3-2 to 20-0-1, Exterior(2R) 20-0-1 to 23-10-3, Interior (1) 23-10-3 to 39-5-3 zone; cantilever left and right exposed ; end vertical left and right exposed; porch right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1. Plate DOL=1.15; Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - Gable studs spaced at 2-0-0 oc.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCCL = 10.0psf.
  - All bearings are assumed to be SP No.2 .
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 15, 59 lb uplift at joint 18, 4 lb uplift at joint 17 and 129 lb uplift at joint 15.
  - 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

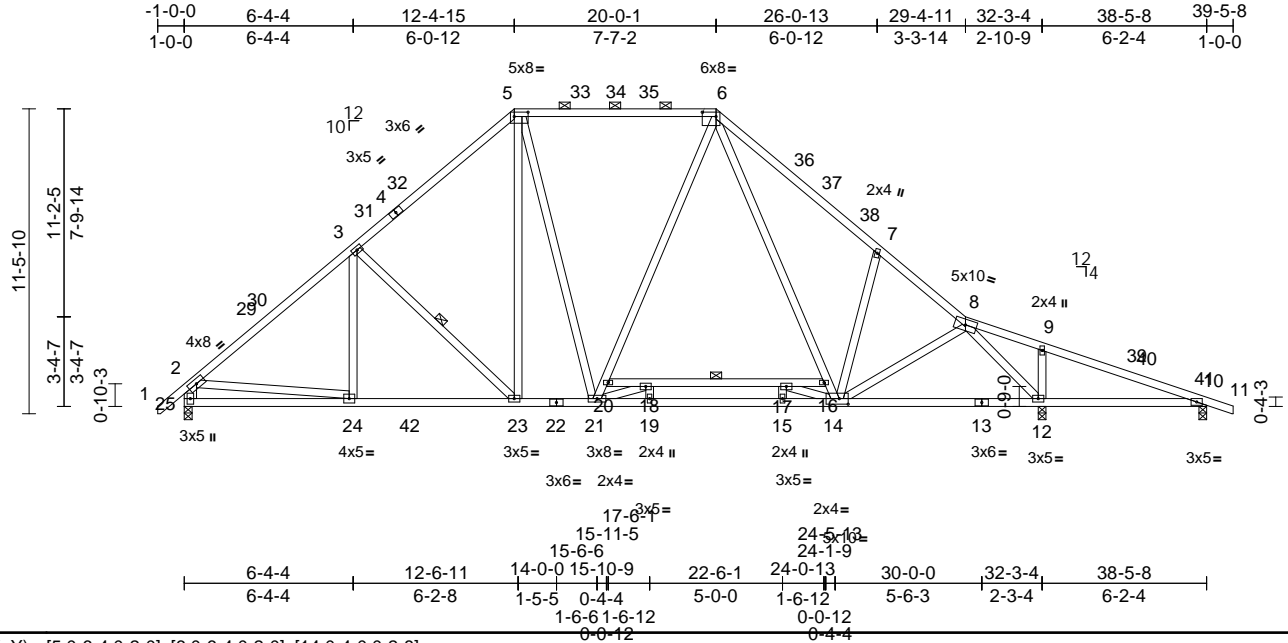


Job 24100066-01	Truss A2	Truss Type Piggyback Base	Qty 5	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913519
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:86.7

Plate Offsets (X, Y): [5:0-6-4,0-2-0], [6:0-6-4,0-2-0], [14:0-4-0,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	0.05	12-28	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.21	15-19	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.06	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 270 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP 2400F 2.0E  
BOT CHORD 2x4 SP No.2 \*Except\* 20-16,13-22:2x4 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 23-5,6-21,6-14,5-21:2x4 SP No.2, 25-2:2x6 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-2-2 oc purlins, except end verticals, and 2-0-0 oc purlins (5-3-13 max.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 10-12,17-18,16-17.  
WEBS 1 Row at midpt 3-23

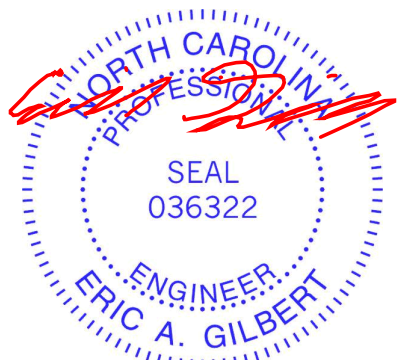
**REACTIONS** (size) 10=0-3-8, 12=0-3-8, 25=0-3-8  
Max Horiz 25=226 (LC 13)  
Max Uplift 10=160 (LC 62)  
Max Grav 10=168 (LC 52), 12=2384 (LC 54), 25=1758 (LC 60)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/57, 2-3=-2343/144, 3-5=-1978/210, 5-6=-1497/192, 6-7=-2348/192, 7-8=-2296/54, 8-9=0/771, 9-10=-8/826, 10-11=0/23, 2-25=-1822/199  
BOT CHORD 24-25=-138/495, 23-24=0/1700, 21-23=0/1308, 19-21=0/2299, 15-19=0/2299, 14-15=0/2299, 12-14=0/1180, 10-12=-763/4, 18-20=0/30, 17-18=-1194/0, 16-17=-86/8  
WEBS 3-24=-1/199, 3-23=-548/206, 5-23=-91/523, 2-24=0/1345, 20-21=0/353, 6-20=0/358, 6-16=-12/816, 14-16=-9/784, 7-14=-493/252, 9-12=-457/175, 8-12=-2837/0, 8-14=0/639, 15-17=0/213, 14-17=-1222/0, 18-19=0/256, 18-21=-1304/0, 5-21=0/361

**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) and C-C Exterior(2E) -0-11-6 to 2-10-13, Interior (1) 2-10-13 to 12-4-15, Exterior(2R) 12-4-15 to 16-3-2, Interior (1) 16-3-2 to 20-0-1, Exterior(2R) 20-0-1 to 23-10-3, Interior (1) 23-10-3 to 39-5-3 zone; cantilever left and right exposed; end vertical left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof live load of 13.9 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 20-0-1 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 160 lb uplift at joint 10.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



October 15, 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/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

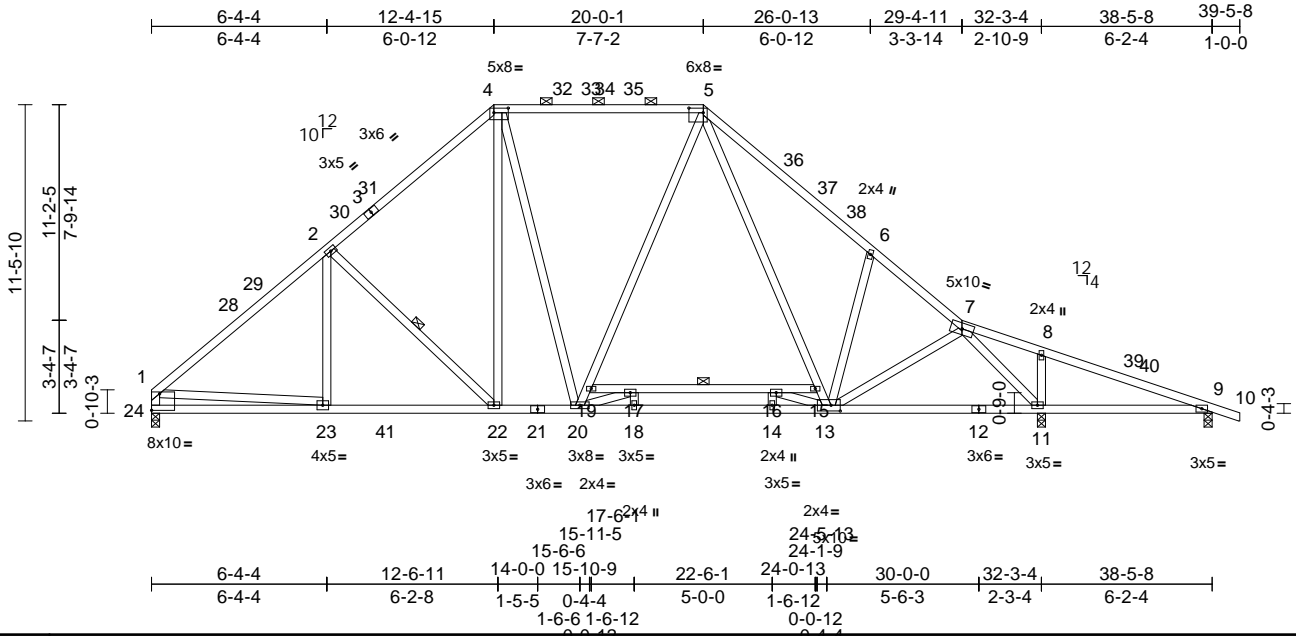
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss A3	Truss Type Piggyback Base	Qty 2	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913520
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:83.5  
Plate Offsets (X, Y): [4:0-6-4,0-2-0], [5:0-6-4,0-2-0], [13:0-4-0,0-2-8], [24:Edge,0-7-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	0.05	11-27	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.21	14-18	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.06	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 267 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP 2400F 2.0E  
BOT CHORD 2x4 SP No.2 \*Except\* 12-21,19-15:2x4 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 22-4,5-20,5-13,4-20:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-2-1 oc purlins, except end verticals, and 2-0-0 oc purlins (5-3-4 max.): 4-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 9-11,16-17,15-16.  
WEBS 1 Row at midpt 2-22

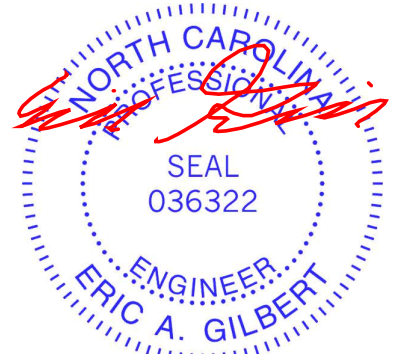
**REACTIONS** (size) 9=0-3-8, 11=0-3-8, 24=0-3-8  
Max Horiz 24=-219 (LC 13)  
Max Uplift 9=-163 (LC 62)  
Max Grav 9=154 (LC 52), 11=2392 (LC 54), 24=1706 (LC 60)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-2369/150, 2-4=-1993/220, 4-5=-1505/195, 5-6=-2353/195, 6-7=-2301/57, 7-8=0/779, 8-9=0/836, 9-10=0/23, 1-24=-1765/144  
BOT CHORD 23-24=-101/446, 22-23=0/1729, 20-22=0/1317, 18-20=0/2304, 14-18=0/2304, 13-14=0/2304, 11-13=0/1179, 9-11=-773/0, 17-19=0/30, 16-17=-1193/0, 15-16=-85/8, 2-23=0/210, 4-22=97/541, 1-23=0/1433, 19-20=0/358, 5-19=0/363, 5-15=-13/813, 13-15=-9/781, 8-11=-452/175, 7-11=-2850/0, 6-13=-493/255, 2-22=-575/213, 7-13=0/644, 14-16=0/213, 13-16=-1222/0, 17-18=0/255, 17-20=-1303/0, 4-20=0/357

**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) and C-C Exterior(2E) 0-1-12 to 4-2-5, Interior (1) 4-2-5 to 12-4-15, Exterior(2R) 12-4-15 to 16-5-8, Interior (1) 16-5-8 to 20-0-1, Exterior(2R) 20-0-1 to 24-0-10, Interior (1) 24-0-10 to 39-5-3 zone; cantilever left and right exposed; end vertical left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 20-0-1 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 9.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



October 15, 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/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road  
Edenton, NC 27932

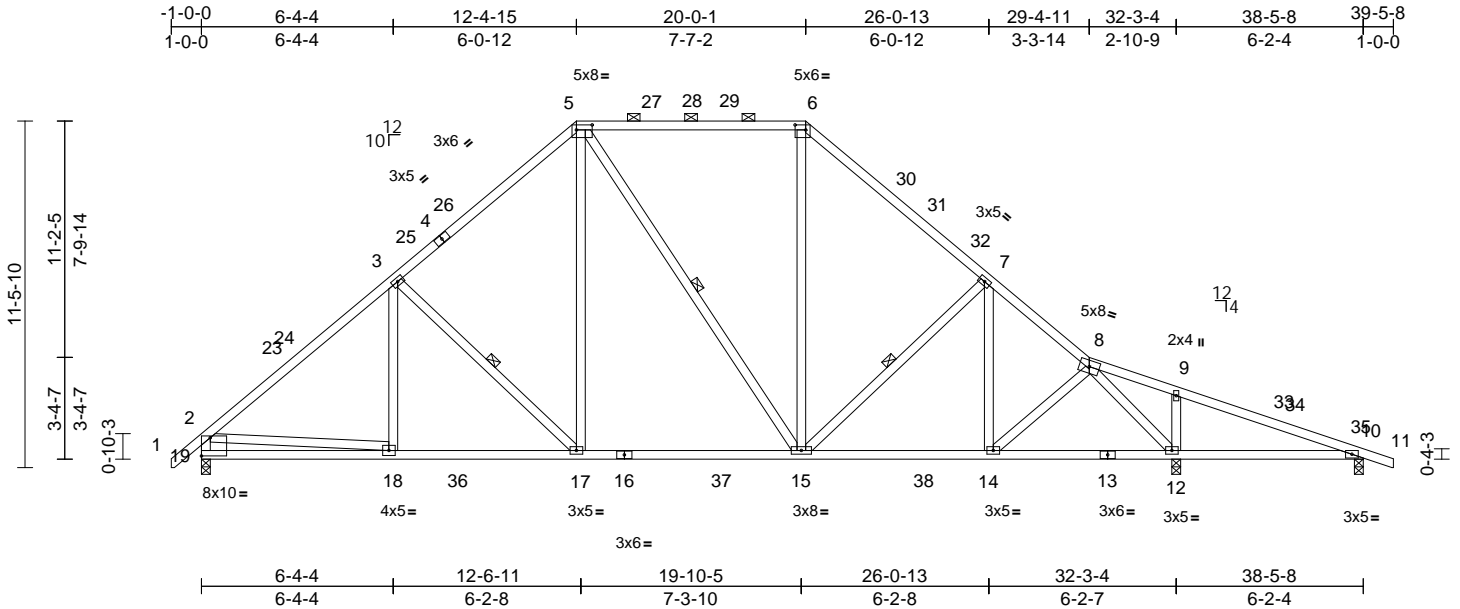


Job 24100066-01	Truss A4	Truss Type Piggyback Base	Qty 4	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913521
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:53  
ID:Fvn5llFq04XKwxDPmMjx9pyV7BT-RfC?PsB70Hq3NSgPqnL8w3uITxBGKwRcDoi7J4zJC?f

Page: 1



Scale = 1:76.3  
Plate Offsets (X, Y): [5:0-6-4,0-2-0], [6:0-4-4,0-2-0], [19:Edge,0-7-4]

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	0.73	Vert(LL)	0.05	12-22	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.21	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.05	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 245 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP 2400F 2.0E  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 17-5,15-5,15-6:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-7-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
6-0-0 oc bracing: 10-12.  
WEBS 1 Row at midpt 3-17, 5-15, 7-15

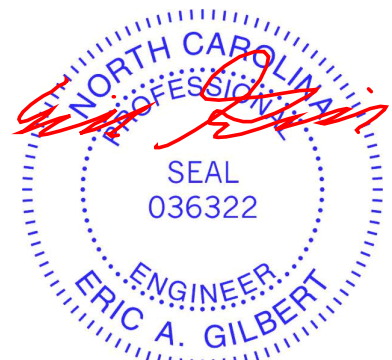
**REACTIONS**  
(size) 10=0-3-8, 12=0-3-8, 19=0-3-8  
Max Horiz 19=-224 (LC 13)  
Max Uplift 10=-115 (LC 12)  
Max Grav 10=205 (LC 52), 12=1978 (LC 54), 19=1566 (LC 60)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-3=-2102/297, 3-5=-1722/369, 5-6=-1188/353, 6-7=-1668/361, 7-8=-1793/284, 8-9=0/607, 9-10=-47/666, 10-11=0/23, 2-19=-1624/305  
BOT CHORD 18-19=-144/511, 17-18=-103/1515, 15-17=0/1114, 14-15=-62/1334, 12-14=-66/980, 10-12=-612/82  
WEBS 3-18=0/207, 3-17=-564/203, 5-17=-56/686, 5-15=-162/84, 6-15=-43/587, 2-18=0/1140, 7-14=-167/84, 8-14=0/483, 9-12=-454/177, 8-12=-2323/216, 7-15=-369/170

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) and C-C Exterior(2E) -0-11-6 to 2-10-13, Interior (1) 2-10-13 to 12-4-15, Exterior(2R) 12-4-15 to 16-3-2, Interior (1) 16-3-2 to 20-0-1, Exterior(2R) 20-0-1 to 23-10-3, Interior (1) 23-10-3 to 39-5-3 zone; cantilever left and right exposed; end vertical left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0  
4) Unbalanced snow loads have been considered for this design.  
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.  
6) Provide adequate drainage to prevent water ponding.  
7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.  
8) All bearings are assumed to be SP No.2 .  
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 115 lb uplift at joint 10.  
10) 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

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



October 15, 2024

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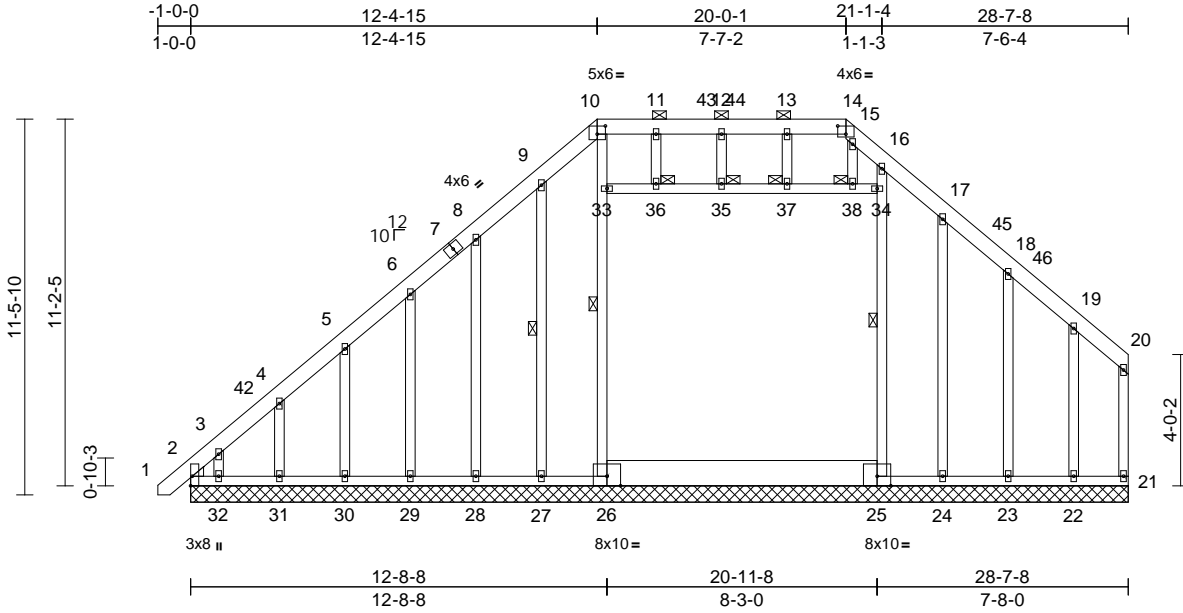
**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss B1	Truss Type Attic Supported Gable	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913522
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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 Oct 15 11:28:53  
ID:euN5eeBIQvCsLeF\_LY?3RyV??x-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:70.3

Plate Offsets (X, Y): [2:Edge,0-0-9], [10:0-3-0,0-3-0], [14:0-3-0,0-3-0]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	21	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 276 lb	FT = 20%

LUMBER	
TOP CHORD	2x6 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 26-25:2x10 SP 2400F 2.0E
WEBS	2x4 SP No.2 *Except* 16-25,21:20:2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 10-14.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 26-33, 25-34, 9-27
JOINTS	1 Brace at Jt(s): 35, 36, 37, 38

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/38, 2-3=-293/242, 3-4=-246/209, 4-5=-235/206, 5-6=-219/204, 6-8=-205/228, 8-9=-187/287, 9-10=-154/322, 10-11=-159/269, 11-12=-159/269, 12-13=-159/269, 13-14=-159/269, 14-15=-242/197, 15-16=-341/230, 16-17=-135/311, 17-18=-170/209, 18-19=-140/148, 19-20=-121/107, 20-21=-116/76
BOT CHORD	2-32=-137/109, 31-32=-54/74, 30-31=-54/74, 29-30=-54/74, 28-29=-54/74, 27-28=-54/74, 24-27=-58/74, 23-24=-55/73, 22-23=-55/72, 21-22=-55/72
WEBS	26-33=-487/46, 10-33=-444/52, 25-34=-589/0, 16-34=-620/0, 33-36=-7/2, 35-36=-7/2, 35-37=-7/2, 37-38=-7/2, 34-38=-8/2, 12-35=-6/32, 11-36=-4/37, 13-37=-11/29, 15-38=-19/131, 17-24=-38/155, 18-23=-129/72, 19-22=-119/78, 9-27=-36/82, 8-28=-118/91, 6-29=-138/59, 5-30=-132/60, 4-31=-131/60, 3-32=-100/78

- 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); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Ceiling dead load (10.0 psf) on member(s). 33-36, 35-36, 35-37, 37-38, 34-38
- All bearings are assumed to be SP No. 2.

REACTIONS	(size)
Max Horiz	2=239 (LC 12), 39=239 (LC 12)
Max Uplift	2=-202 (LC 9), 21=-11 (LC 9), 22=-51 (LC 14), 23=-41 (LC 14), 24=-136 (LC 36), 27=-61 (LC 37), 28=-47 (LC 13), 29=-37 (LC 13), 30=-37 (LC 13), 31=-35 (LC 13), 32=-115 (LC 10), 39=-202 (LC 9)
Max Grav	2=272 (LC 12), 21=112 (LC 31), 22=160 (LC 31), 23=205 (LC 31), 24=60 (LC 12), 25=783 (LC 39), 26=711 (LC 33), 27=57 (LC 11), 28=189 (LC 30), 29=194 (LC 30), 30=195 (LC 30), 31=189 (LC 30), 32=187 (LC 30), 39=272 (LC 12)

- 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) and C-C Exterior(2E) -0-9-13 to 2-2-3, Interior (1) 2-2-3 to 12-4-15, Exterior(2R) 12-4-15 to 16-7-14, Interior (1) 16-7-14 to 20-0-1, Exterior(2R) 20-0-1 to 24-2-15, Interior (1) 24-2-15 to 28-5-12 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=1.33



October 15, 2024

Continued on page 2

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818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	14 Overhills Creek-Roof-1 BNS GRH	I68913522
24100066-01	B1	Attic 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 Oct 15 11:28:53  
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Page: 2

- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 2, 11 lb uplift at joint 21, 136 lb uplift at joint 24, 41 lb uplift at joint 23, 51 lb uplift at joint 22, 61 lb uplift at joint 27, 47 lb uplift at joint 28, 37 lb uplift at joint 29, 37 lb uplift at joint 30, 35 lb uplift at joint 31, 115 lb uplift at joint 32 and 202 lb uplift at joint 2.
- 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 15) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

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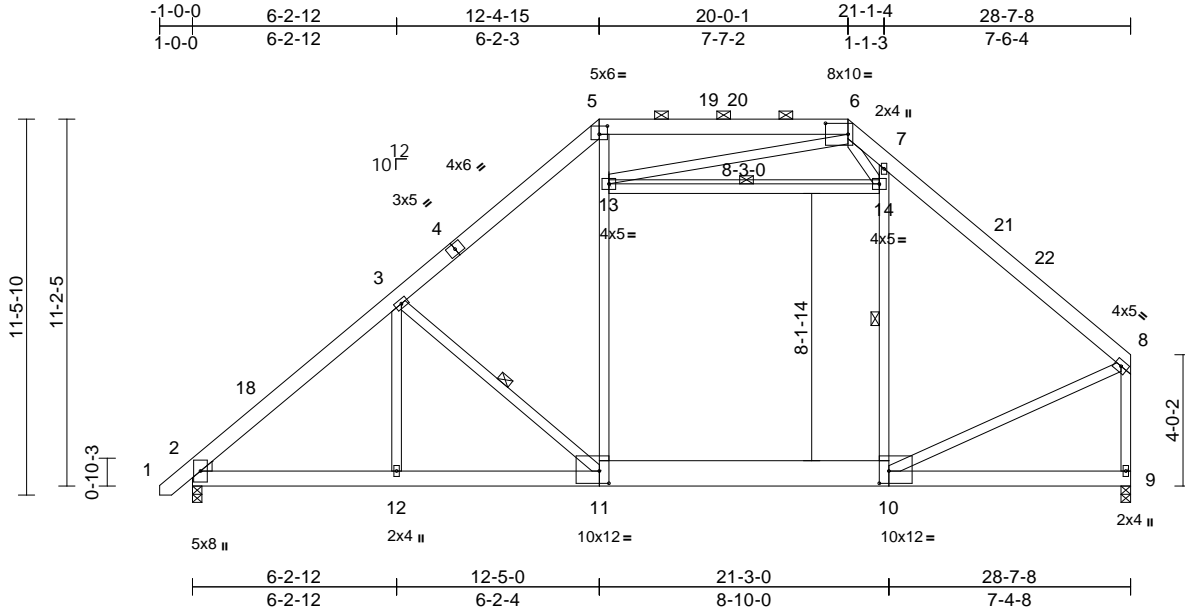
818 Soundside Road  
 Edenton, NC 27932

Job 24100066-01	Truss B2	Truss Type Attic	Qty 3	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913523
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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 Oct 15 11:28:53  
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Page: 1



Scale = 1:70.3

Plate Offsets (X, Y): [5:0-3-0,0-3-0], [6:0-8-4,0-4-0], [10:0-3-8,0-4-8], [11:0-3-8,0-4-8]

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	0.45	Vert(LL)	-0.18	11-12	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.28	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.02	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.14	10-11	>773	360		
BCDL	10.0											
											Weight: 257 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 11-10:2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 13-14:2x4 SP No.2  
WEDGE Left: 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-2-12 oc purlins, except end verticals, and 2-0-0 oc purlins (5-11-4 max.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 9-10.  
WEBS 1 Row at midpt 10-14, 13-14, 3-11

**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=245 (LC 12)  
Max Grav 2=1375 (LC 30), 9=1461 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/39, 2-3=-1944/14, 3-5=-1621/107, 5-6=-1303/99, 6-7=-1627/224, 7-8=-1526/26, 8-9=-1609/19  
BOT CHORD 2-12=-152/1495, 9-12=-114/1495  
WEBS 3-12=0/212, 11-13=0/674, 5-13=0/604, 10-14=-118/256, 7-14=-614/265, 13-14=-520/67, 6-13=-52/687, 6-14=-126/886, 8-10=0/1206, 3-11=-475/138

**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) and C-C Exterior(2E) -0-9-13 to 2-2-3, Interior (1) 2-2-3 to 12-4-15, Exterior(2R) 12-4-15 to 16-7-14, Interior (1) 16-7-14 to 20-0-1, Exterior(2R) 20-0-1 to 24-2-15, Interior (1) 24-2-15 to 28-5-12 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (10.0 psf) on member(s). 13-14
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 10-11
- All bearings are assumed to be SP No.2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard



October 15, 2024

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

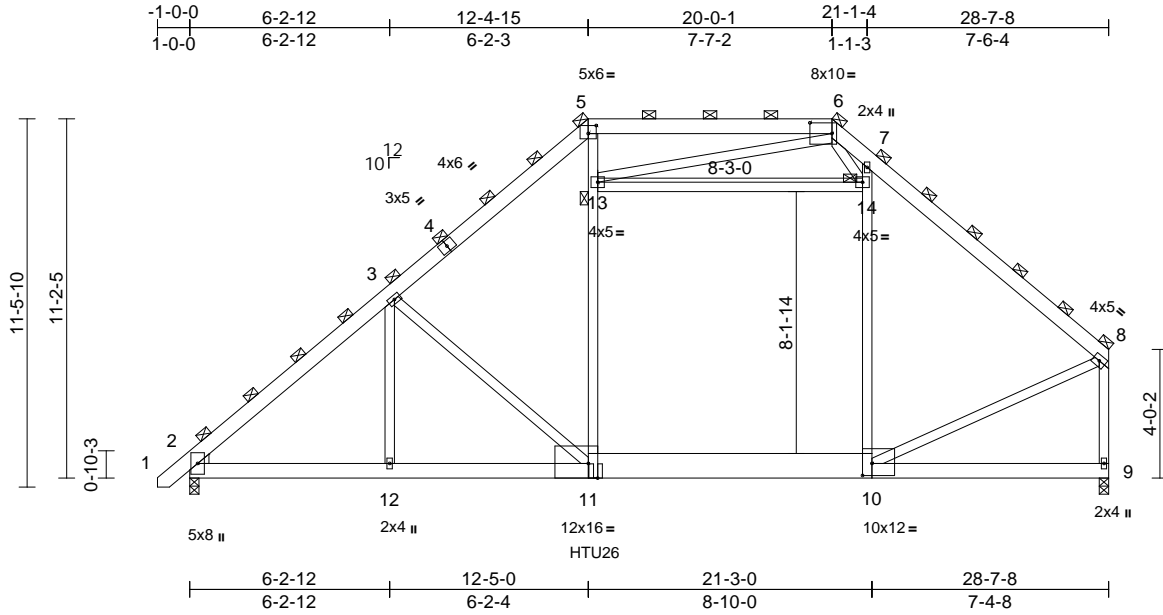
Job 24100066-01	Truss B3	Truss Type Attic Girder	Qty 1	Ply 2	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913524
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:53

Page: 1

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Scale = 1:71.8

Plate Offsets (X, Y): [5:0-3-0,0-3-0], [6:0-8-4,0-4-0], [10:0-3-8,0-4-8], [11:0-3-8,Edge]

Loading	(psf)	Spacing	3-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.22	11-12	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.38	11-12	>895	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.17	10-11	>642	360		
BCDL	10.0											
											Weight: 515 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 11-10:2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 13-14:2x4 SP No.2  
WEDGE Left: 2x4 SP No.3

**BRACING**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals  
(Switched from sheeted: Spacing > 2-8-0).  
Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
6-0-0 oc bracing: 9-10.  
JOINTS 1 Brace at Jt(s): 5, 6, 13, 14, 8

**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=367 (LC 8)  
Max Grav 2=2719 (LC 22), 9=2653 (LC 23)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/59, 2-3=-3667/69, 3-5=-2976/109, 5-6=-2493/156, 6-7=-2906/262, 7-8=-2699/51, 8-9=-2847/0  
BOT CHORD 2-12=-288/2892, 9-12=-203/2892  
WEBS 10-14=-57/458, 7-14=-1175/428, 13-14=-1255/171, 3-12=-59/551, 11-13=-114/1752, 5-13=-5/1513, 6-13=-203/1758, 6-14=-251/1861, 3-11=-926/260, 8-10=-39/2376

**NOTES**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 2 rows staggered at 0-7-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (10.0 psf) on member(s). 13-14
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 10-11
- All bearings are assumed to be SP 2400F 2.0E .

- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent at 12-7-12 from the left end to connect truss(es) to front face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-5=-72, 5-6=-87, 6-8=-72, 11-15=-30, 10-11=-45, 9-10=-30, 13-14=-30  
Concentrated Loads (lb)  
Vert: 11=-923 (F)



October 15, 2024

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

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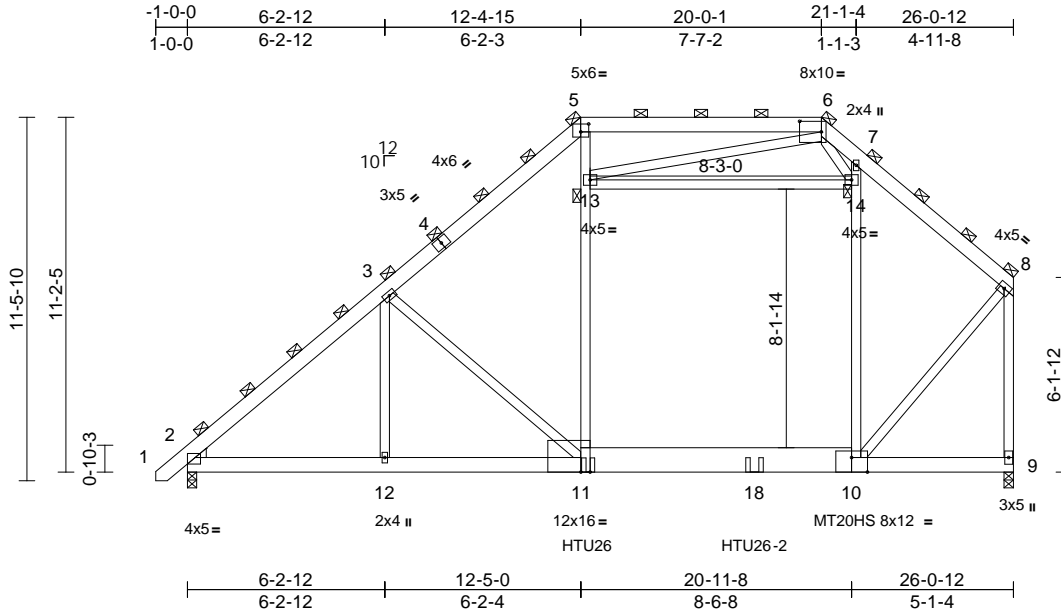


Job 24100066-01	Truss B4	Truss Type Attic Girder	Qty 1	Ply 2	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913525
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:53  
ID:vKimCrL13q3DRsqf\_RGzpbYV\_z8-RfC?PsB70Hq3NSgPqnL8w3uITxBGKWrCdoi7J4zJC7f

Page: 1



Scale = 1:72.7

Plate Offsets (X, Y): [2:Edge,0-0-0], [5:0-3-0,0-3-0], [6:0-8-4,0-4-0], [10:0-6-0,Edge], [11:0-3-8,Edge]

Loading	(psf)	Spacing	2-10-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.23	11-12	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.45	11-12	>691	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.95	Horz(CT)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.15	10-11	>676	360		
BCDL	10.0											
											Weight: 491 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 11-10:2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 13-14:2x4 SP No.2  
WEDGE Left: 2x4 SP No.3

**BRACING**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals  
(Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
6-0-0 oc bracing: 9-10.

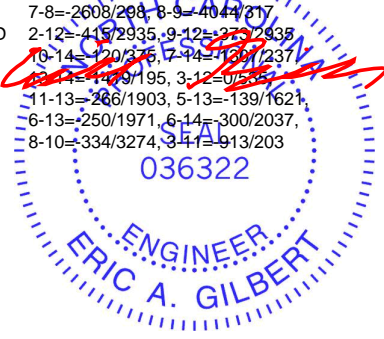
**JOINTS**  
1 Brace at Jt(s): 5, 6, 13, 14, 8

**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=378 (LC 8)  
Max Uplift 2=-142 (LC 9), 9=-191 (LC 9)  
Max Grav 2=2746 (LC 22), 9=3385 (LC 22)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/56, 2-3=-3749/260, 3-5=-3053/328,  
5-6=-2591/848, 6-7=-2985/418,  
7-8=-2608/298, 8-9=-4044/317  
BOT CHORD 2-12=-415/2935, 9-12=-273/2835  
WEBS 10-14=-120/375, 7-14=-160/237,  
12-14=-146/195, 3-12=0/535,  
11-13=-266/1903, 5-13=-139/1621,  
6-13=-250/1971, 6-14=-300/2037,  
8-10=-334/3274, 3-11=-913/203

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (10.0 psf) on member(s). 13-14
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 10-11
- All bearings are assumed to be SP 2400F 2.0E .

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 142 lb uplift at joint 2 and 191 lb uplift at joint 9.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Use Simpson Strong-Tie HTU26-2 (20-10d Girder, 14-10d Truss) or equivalent at 17-10-12 from the left end to connect truss(es) to front face of bottom chord.
  - Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent at 12-7-12 from the left end to connect truss(es) to back face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-5=-68, 5-6=-82, 6-8=-68, 11-15=-28,  
10-11=-42, 9-10=-28, 13-14=-28  
Concentrated Loads (lb)



October 15, 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.**  
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Job 24100066-01	Truss B4	Truss Type Attic Girder	Qty 1	Ply <b>2</b>	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	I68913525
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 2

Vert: 11=-945 (B), 18=-998 (F)

**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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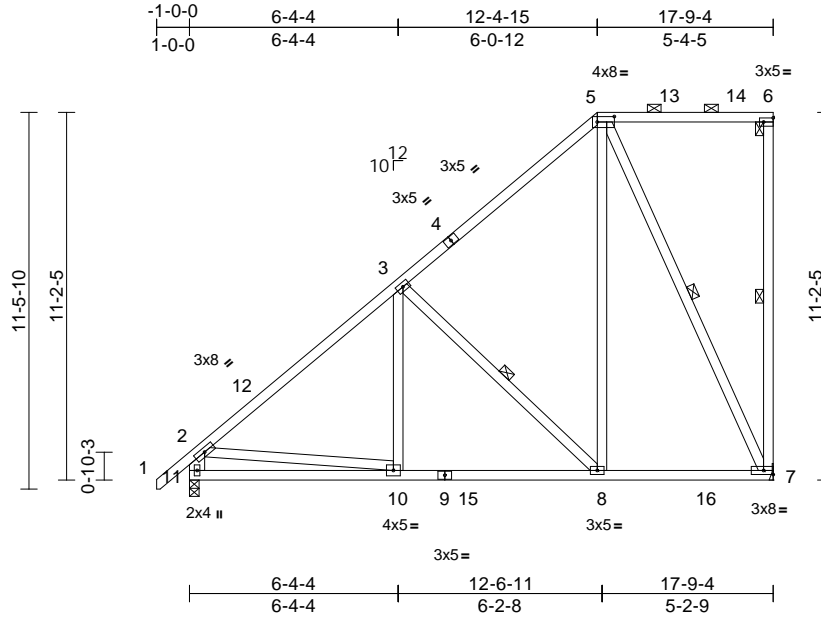
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss B5	Truss Type Piggyback Base	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913526
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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 Oct 15 11:28:54  
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Page: 1



Scale = 1:70.2

Plate Offsets (X, Y): [5:0-6-4,0-2-0], [6:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	0.04	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.07	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 140 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2 \*Except\* 3-10,8-3,10-2:2x4 SP No.3, 11-2:2x6 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-7-15 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.  
 BOT CHORD Rigid ceiling directly applied or 7-7-1 oc bracing.  
 WEBS 1 Row at midpt 6-7, 3-8, 5-7

**REACTIONS**

(size) 7= Mechanical, 11=0-3-8  
 Max Horiz 11=328 (LC 10)  
 Max Uplift 7=80 (LC 10)  
 Max Grav 7=819 (LC 29), 11=850 (LC 29)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/57, 2-3=-1011/117, 3-5=-623/199, 5-6=-174/188, 6-7=-168/81, 2-11=-875/139  
 BOT CHORD 10-11=-604/601, 8-10=-350/836, 7-8=-222/461  
 WEBS 3-10=0/264, 3-8=-524/177, 5-8=-66/633, 5-7=-828/247, 2-10=-39/404

**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) and C-C Exterior(2E) -0-11-6 to 2-0-10, Interior (1) 2-0-10 to 12-4-15, Exterior(2R) 12-4-15 to 16-7-14, Interior (1) 16-7-14 to 17-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Bearings are assumed to be: Joint 11 SP No.2 .
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 7.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



October 15, 2024

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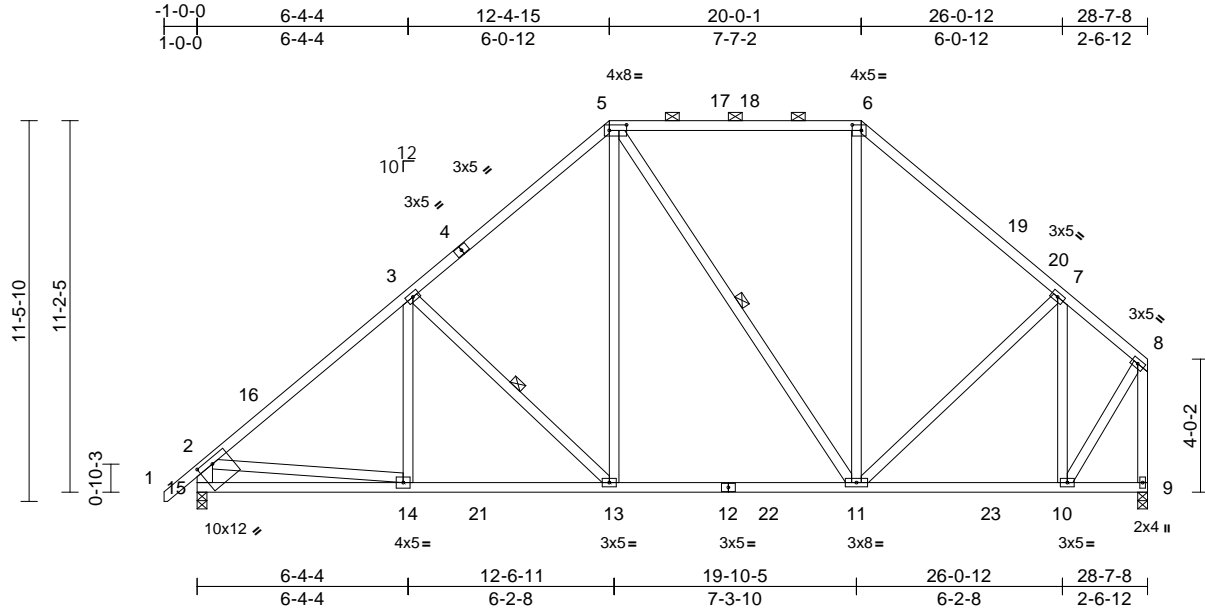


Job 24100066-01	Truss B7	Truss Type Piggyback Base	Qty 3	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913528
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:54  
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Page: 1



Scale = 1:69.4

Plate Offsets (X, Y): [5:0-6-4,0-2-0], [6:0-3-4,0-2-0], [15:0-5-8,0-2-0]

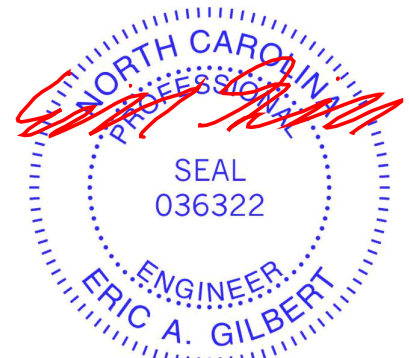
Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.12	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.19	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 210 lb	FT = 20%

- LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 13-5,11-5,11-6:2x4 SP No.2, 15-2:2x6 SP No.2
- BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-3-7 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 3-13, 5-11
- REACTIONS** (size) 9=0-3-8, 15=0-3-8  
Max Horiz 15=255 (LC 12)  
Max Grav 9=1272 (LC 3), 15=1336 (LC 29)
- FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/57, 2-3=-1708/109, 3-5=-1370/188, 5-6=-876/195, 6-7=-1202/172, 7-8=-807/105, 2-15=-1381/130, 8-9=-1409/77  
BOT CHORD 14-15=-259/471, 13-14=-183/1310, 11-13=-92/994, 10-11=-92/636, 9-10=-66/75  
WEBS 3-14=0/205, 3-13=-443/124, 5-13=-3/603, 5-11=-278/76, 6-11=0/317, 7-11=-48/306, 2-14=0/866, 7-10=-755/139, 8-10=-86/1110

**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) and C-C Exterior(2E) -0-11-6 to 2-0-10, Interior (1) 2-0-10 to 12-4-15, Exterior(2R) 12-4-15 to 16-7-14, Interior (1) 16-7-14 to 20-0-1, Exterior(2R) 20-0-1 to 24-2-15, Interior (1) 24-2-15 to 28-5-12 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



October 15, 2024

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

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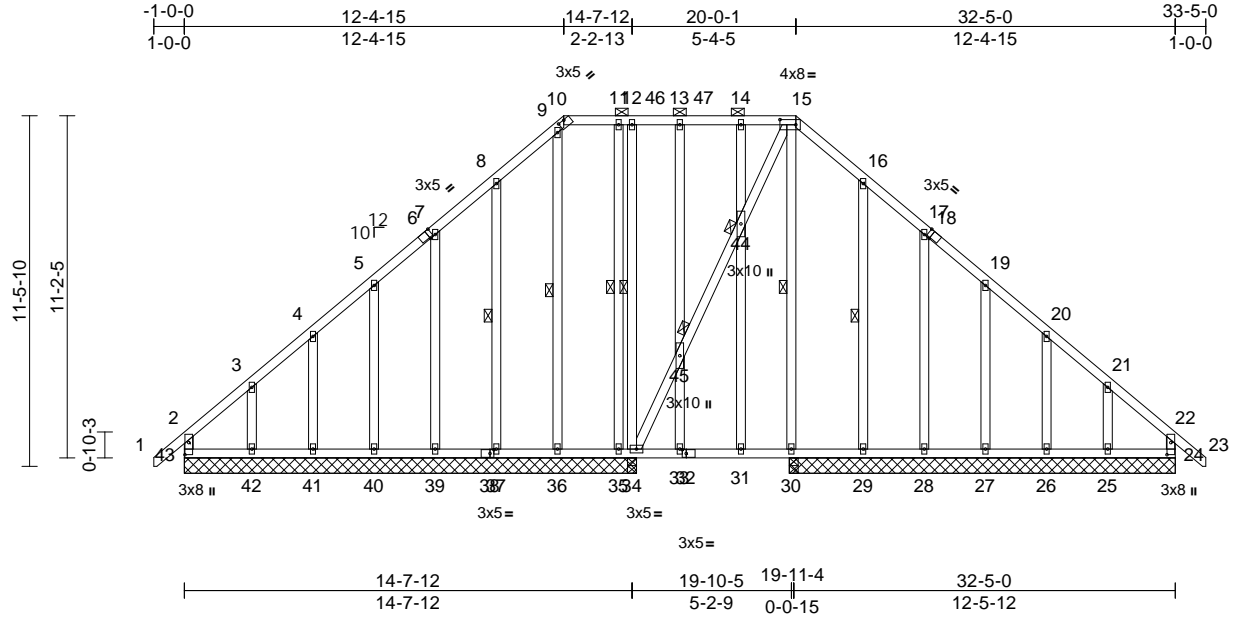
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss C1	Truss Type Piggyback Base Structural Gable	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913529
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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 Oct 15 11:28:54  
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Page: 1



Scale = 1:75.4

Plate Offsets (X, Y): [6:0-1-9,Edge], [10:0-2-8,0-0-3], [15:0-6-4,0-2-0], [18:0-1-9,Edge], [24:0-4-12,0-1-8], [32:0-1-8,0-1-8], [38:0-1-8,0-1-8], [43:0-4-12,0-1-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.02	31-33	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.03	31-33	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	24	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 306 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2 \*Except\* 43-2,24-22:2x4 SP No.3  
 OTHERS 2x4 SP No.3 \*Except\* 35-11,36-9:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 10-15.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 15-30, 12-34, 11-35, 9-36, 8-37, 16-29  
 JOINTS 1 Brace at Jt(s): 44, 45

**REACTIONS** (size)

24=12-7-8, 25=12-7-8, 26=12-7-8, 27=12-7-8, 28=12-7-8, 29=12-7-8, 30=0-3-8, 34=14-9-8, 35=14-9-8, 36=14-9-8, 37=14-9-8, 39=14-9-8, 40=14-9-8, 41=14-9-8, 42=14-9-8, 43=14-9-8  
 Max Horiz 43=-220 (LC 11)  
 Max Uplift 24=-31 (LC 10), 25=-83 (LC 14), 26=-25 (LC 14), 27=-40 (LC 14), 28=-36 (LC 14), 29=-48 (LC 14), 30=-21 (LC 10), 34=-74 (LC 9), 35=207 (LC 37), 37=46 (LC 13), 39=36 (LC 13), 40=40 (LC 13), 41=25 (LC 13), 42=-85 (LC 13), 43=-73 (LC 9)

Max Grav 24=198 (LC 29), 25=215 (LC 30), 26=188 (LC 30), 27=192 (LC 30), 28=201 (LC 30), 29=179 (LC 30), 30=312 (LC 32), 34=637 (LC 3), 35=26 (LC 10), 36=199 (LC 32), 37=198 (LC 29), 39=192 (LC 29), 40=196 (LC 29), 41=179 (LC 29), 42=244 (LC 29), 43=188 (LC 30)

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

TOP CHORD 1-2=0/51, 2-3=-150/148, 3-4=-98/113, 4-5=-89/103, 5-7=-77/145, 7-8=-111/196, 8-9=-150/249, 9-10=-106/171, 10-11=-122/207, 11-12=-122/207, 12-13=-122/207, 13-14=-122/207, 14-15=-122/207, 15-16=-159/240, 16-17=-139/180, 17-19=-114/128, 19-20=-92/78, 20-21=-95/58, 21-22=-121/85, 22-23=0/51, 2-43=-146/69, 22-24=-157/33

BOT CHORD 42-43=-117/131, 41-42=-117/131, 40-41=-117/131, 39-40=-117/131, 37-39=-117/131, 36-37=-117/131, 35-36=-117/131, 34-35=-117/131, 33-34=-76/106, 31-33=-76/106, 30-31=-76/106, 29-30=-77/108, 28-29=-77/108, 27-28=-77/108, 26-27=-77/108, 25-26=-77/108, 24-25=-77/108

WEBS 15-30=-113/59, 12-34=-179/32, 34-45=-135/68, 44-45=-134/70, 15-44=-112/63, 14-44=-71/29, 31-44=-48/30, 13-45=-55/39, 33-45=-54/38, 11-35=-42/8, 9-36=-121/36, 8-37=-140/104, 7-39=-131/76, 5-40=-132/62, 4-41=-130/54, 3-42=-148/88, 16-29=-125/100, 17-28=-135/78, 19-27=-131/62, 20-26=-132/54, 21-25=-135/87

- 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) and C-C Exterior(2E) -0-11-6 to 2-2-8, Interior (1) 2-2-8 to 12-4-15, Exterior(2R) 12-4-15 to 16-11-15, Interior (1) 16-11-15 to 20-0-1, Exterior(2R) 20-0-1 to 24-7-1, Interior (1) 24-7-1 to 33-4-6 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0



October 15, 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/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)

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



Job	Truss	Truss Type	Qty	Ply	14 Overhills Creek-Roof-1 BNS GRH	I68913529
24100066-01	C1	Piggyback Base Structural 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 Oct 15 11:28:54  
 ID:0OCi97cLqcHQTdc9i48UwsyV?Wy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?#

Page: 2

- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 9) Gable studs spaced at 2-0-0 oc.
- 10) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 11) All bearings are assumed to be SP No.2 .
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 73 lb uplift at joint 43, 31 lb uplift at joint 24, 74 lb uplift at joint 34, 207 lb uplift at joint 35, 46 lb uplift at joint 37, 36 lb uplift at joint 39, 40 lb uplift at joint 40, 25 lb uplift at joint 41, 85 lb uplift at joint 42, 48 lb uplift at joint 29, 36 lb uplift at joint 28, 40 lb uplift at joint 27, 25 lb uplift at joint 26, 83 lb uplift at joint 25 and 21 lb uplift at joint 30.
- 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

**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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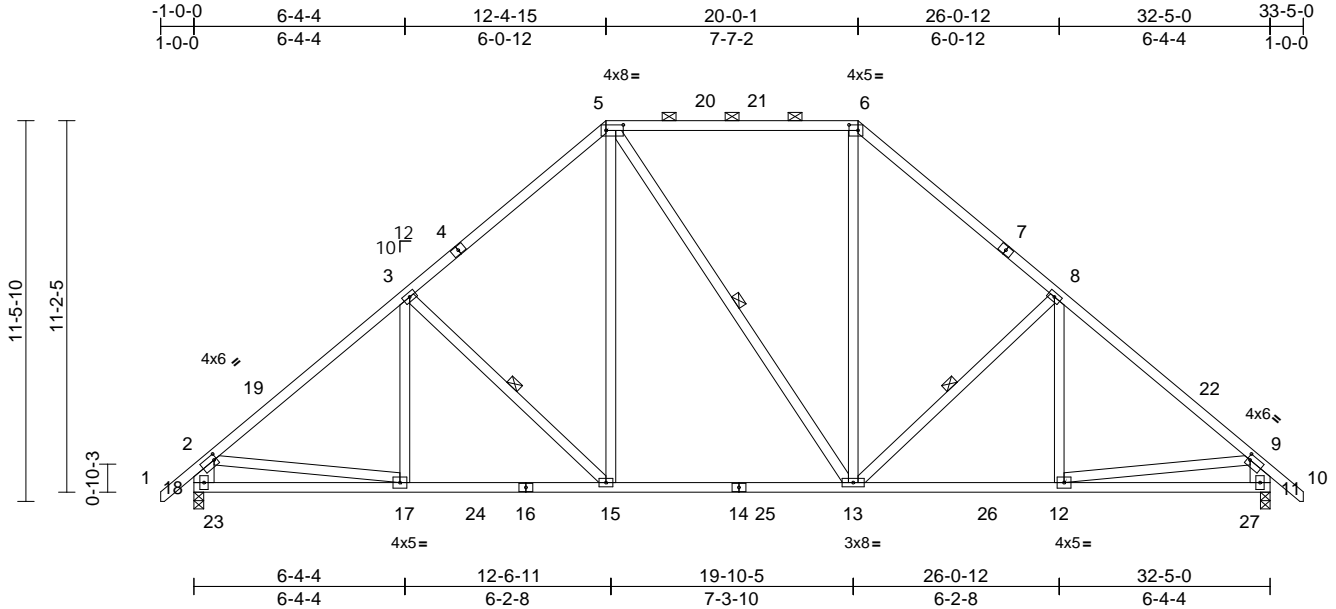
818 Soundside Road  
 Edenton, NC 27932

Job 24100066-01	Truss C2	Truss Type Piggyback Base	Qty 4	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913530
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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 Oct 15 11:28:54  
ID: aNnJQnjUZgeZifgAaJLvbyyV?ZO-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:69.4

Plate Offsets (X, Y): [2:0-1-0,0-2-0], [5:0-6-4,0-2-0], [6:0-3-4,0-2-0], [9:0-1-0,0-2-0]

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	0.79	Vert(LL)	-0.13	13-15	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.22	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.04	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 224 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 5-6:2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 15-5,13-6.5-13:2x4 SP No.2, 18-2,11-9:2x8 SP 2400F 2.0E

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-0-3 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-4 max.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 3-15, 8-13, 5-13

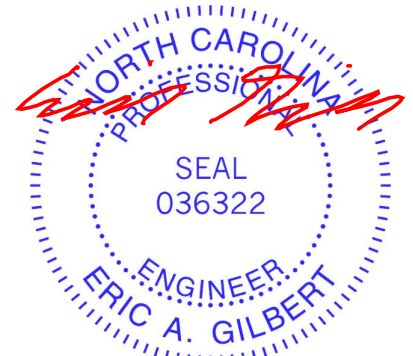
**REACTIONS** (size) 11=0-3-8, 18=0-3-8  
Max Horiz 18=231 (LC 11)  
Max Grav 11=1483 (LC 30), 18=1489 (LC 29)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/60, 2-3=-1929/115, 3-5=-1620/194, 5-6=-1189/202, 6-8=-1611/194, 8-9=-1922/114, 9-10=0/60, 2-18=-1560/138, 9-11=-1554/138  
BOT CHORD 17-18=-217/455, 15-17=-21/1390, 13-15=0/1098, 12-13=0/1381, 11-12=-52/329  
WEBS 3-17=0/178, 3-15=-414/122, 5-15=-1/585, 6-13=-1/566, 8-13=-415/122, 8-12=0/181, 2-17=0/1069, 9-12=0/1064, 5-13=-116/117

- 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) and C-C Exterior(2E) -0-11-6 to 2-3-9, Interior (1) 2-3-9 to 12-4-15, Exterior(2R) 12-4-15 to 16-11-15, Interior (1) 16-11-15 to 20-0-1, Exterior(2R) 20-0-1 to 24-7-1, Interior (1) 24-7-1 to 33-4-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x5 MT20 unless otherwise indicated.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- 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

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



October 15, 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/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



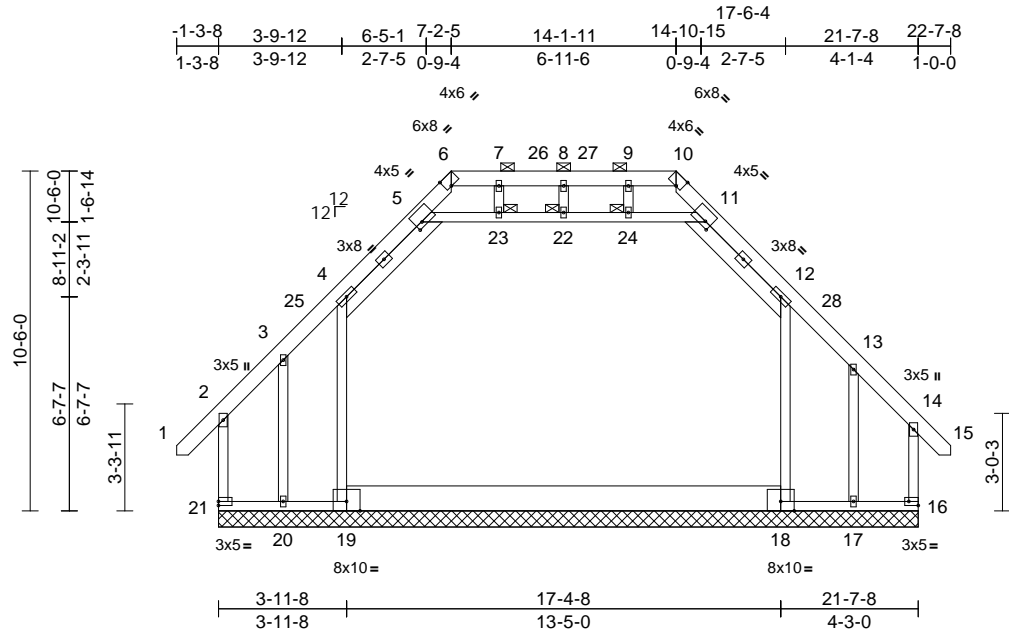
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss D1	Truss Type Attic Supported Gable	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913531
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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 Oct 15 11:28:55  
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Page: 1



Scale = 1:71.2

Plate Offsets (X, Y): [5:0-2-10,0-1-11], [6:0-2-2,Edge], [10:0-2-2,Edge], [11:0-2-7,0-2-0], [16:Edge,0-1-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.00	16	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 214 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP No.2 \*Except\* 19-18:2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 5-11:2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**

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

**JOINTS**  
1 Brace at Jt(s): 22, 23, 24

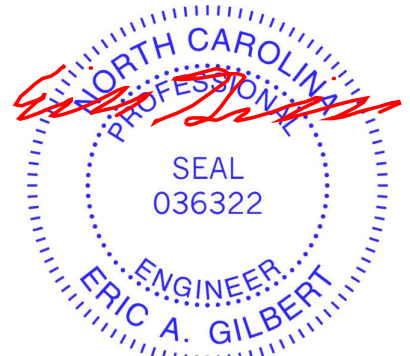
**REACTIONS** (size) 16=21-7-8, 17=21-7-8, 18=21-7-8, 19=21-7-8, 20=21-7-8, 21=21-7-8  
Max Horiz 21=229 (LC 11)  
Max Uplift 16=-186 (LC 10), 17=-369 (LC 30), 20=-431 (LC 31), 21=-148 (LC 9)  
Max Grav 16=441 (LC 30), 17=106 (LC 12), 18=1162 (LC 32), 19=1208 (LC 33), 20=68 (LC 9), 21=429 (LC 31)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-21=-279/158, 1-2=0/65, 2-3=-221/131, 3-4=-53/229, 4-5=-431/171, 5-6=-853/0, 6-7=-914/0, 7-8=-914/0, 8-9=-914/0, 9-10=-914/0, 10-11=-853/0, 11-12=-430/180, 12-13=-98/238, 13-14=-253/165, 14-15=0/50, 14-16=-294/142  
BOT CHORD 20-21=-119/134, 17-20=-123/134, 16-17=-113/128  
WEBS 4-19=-783/0, 12-18=-764/0, 5-23=0/885, 22-23=0/885, 22-24=0/885, 11-24=0/885, 8-22=-40/33, 7-23=-6/83, 9-24=-7/82, 3-20=-9/238, 13-17=-31/215

- 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) and C-C Exterior(2E) -0-9-14 to 2-3-5, Interior (1) 2-3-5 to 7-5-13, Exterior(2R) 7-5-13 to 11-8-12, Interior (1) 11-8-12 to 14-5-3, Exterior(2R) 14-5-3 to 18-8-2, Interior (1) 18-8-2 to 22-8-14 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Ceiling dead load (10.0 psf) on member(s). 4-5, 11-12, 5-23, 22-23, 22-24, 11-24
- All bearings are assumed to be SP No.2.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 148 lb uplift at joint 21, 186 lb uplift at joint 16, 431 lb uplift at joint 20 and 369 lb uplift at joint 17.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard



October 15, 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/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)



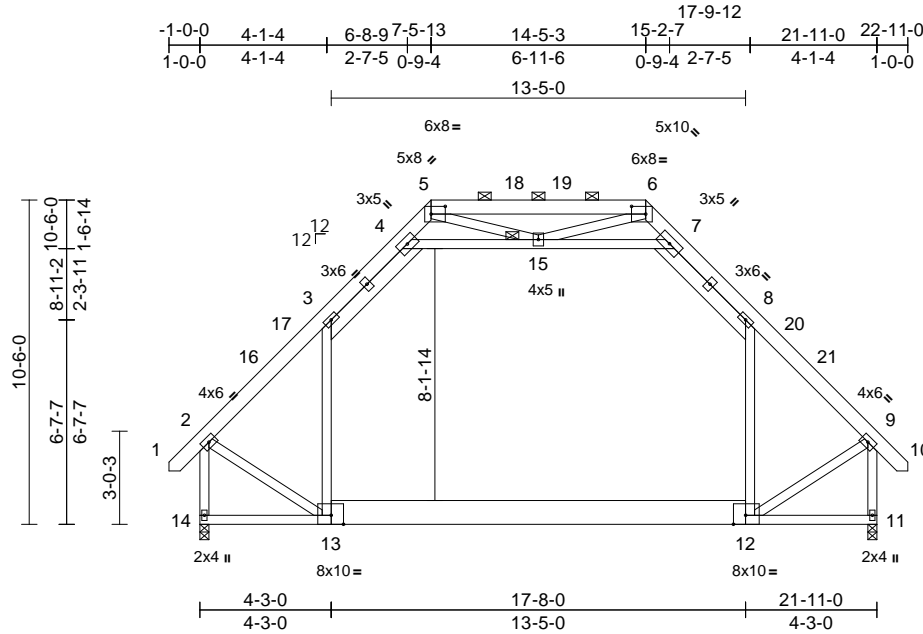
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss D2	Truss Type Attic	Qty 5	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913532
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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 Oct 15 11:28:55  
ID:9G4J\_K9UV6T\_hsfz?ntqzyV?2L-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?#

Page: 1



Scale = 1:74.6

Plate Offsets (X, Y): [5:0-5-8,0-3-0], [6:0-5-8,0-3-0], [12:0-4-12,Edge], [13:0-4-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.31	12-13	>840	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.42	12-13	>611	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.00	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.26	12-13	>615	360		
BCDL	10.0											
											Weight: 221 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\* 13-12:2x10 SP 2400F 2.0E  
 WEBS 2x4 SP No.3 \*Except\* 4-7:2x4 SP No.2

**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.): 5-6.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 JOINTS 1 Brace at Jt(s): 15

**REACTIONS**

(size) 11=0-3-8, 14=0-3-8  
 Max Horiz 14=231 (LC 12)  
 Max Grav 11=1412 (LC 3), 14=1412 (LC 3)

**FORCES**

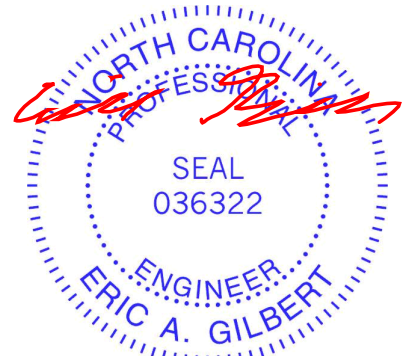
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/52, 2-3=-1257/11, 3-4=-970/123, 4-5=-466/144, 5-6=-427/158, 6-7=-466/144, 7-8=-970/123, 8-9=-1257/11, 9-10=0/52, 2-14=-1554/14, 9-11=-1554/14  
 BOT CHORD 11-14=-237/820  
 WEBS 3-13=-92/434, 8-12=-92/434, 4-15=-1019/176, 7-15=-1019/176, 2-13=0/925, 9-12=0/926, 5-15=-53/348, 6-15=-53/348

**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) and C-C Exterior(2E) -0-9-14 to 2-2-2, Interior (1) 2-2-2 to 7-5-13, Exterior(2R) 7-5-13 to 11-8-12, Interior (1) 11-8-12 to 14-5-3, Exterior(2R) 14-5-3 to 18-8-2, Interior (1) 18-8-2 to 22-8-14 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (10.0 psf) on member(s). 3-4, 7-8, 4-15, 7-15
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 12-13
- All bearings are assumed to be SP No.2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



October 15, 2024

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

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818 Soundside Road  
 Edenton, NC 27932



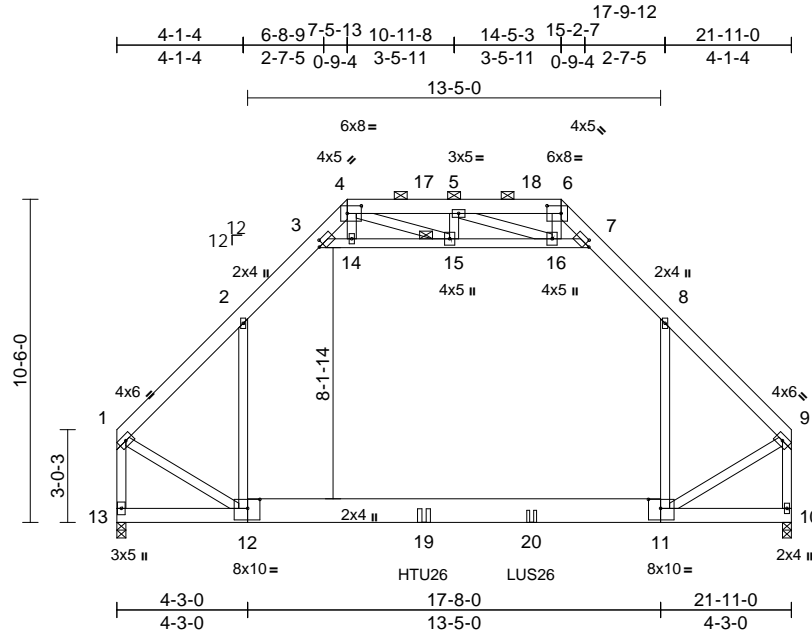


Job 24100066-01	Truss D4	Truss Type Attic Girder	Qty 1	Ply 2	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913534
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:55  
ID:OXA8Lhr7MjWmWelfw\_X3z31yV71g-RfC?PsB70Hq3NSgPqnL8w3uTxbGKWrCdoi7J4zJC?F

Page: 1



Scale = 1:74.9

Plate Offsets (X, Y): [3:0-1-13,0-2-0], [4:0-5-8,0-3-0], [6:0-5-8,0-3-0], [7:0-1-13,0-2-0], [11:0-4-12,0-3-8], [12:0-4-12,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.20	11-12	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.34	11-12	>770	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.52	Horz(CT)	0.01	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.18	11-12	>914	360		
BCDL	10.0											
											Weight: 408 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 12-11:2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 3-7:2x4 SP No.2

**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.): 4-6  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**JOINTS**  
1 Brace at Jt(s): 15

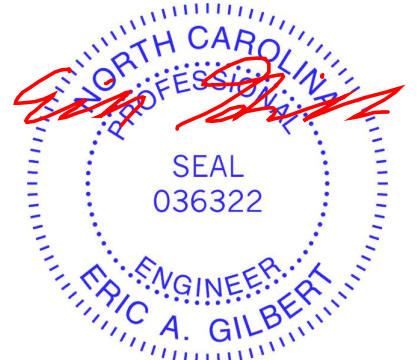
**REACTIONS**  
(size) 10=0-3-8, 13=0-3-8  
Max Horiz 13=211 (LC 8)  
Max Grav 10=3285 (LC 17), 13=3120 (LC 17)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-2941/0, 2-3=-2610/2, 3-4=-2089/192, 4-5=-3808/261, 5-6=-1862/333, 6-7=-2489/204, 7-8=-2767/3, 8-9=-3022/0, 1-13=-3444/0, 9-10=-3525/0  
BOT CHORD 10-13=-220/2086  
WEBS 3-14=-1018/91, 14-15=-986/94, 15-16=-486/1914, 7-16=-651/88, 2-12=-2/393, 8-11=-32/350, 1-12=0/2426, 9-11=0/2462, 4-14=0/229, 4-15=-112/2674, 5-15=-917/81, 5-16=-2171/103, 6-16=-3/898

**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 0-6-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.

- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-14, 14-15, 15-16, 7-16
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 11-12
- All bearings are assumed to be SP No.2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent at 9-11-12 from the left end to connect truss(es) to front face of bottom chord.
- Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 13-5-12 from the left end to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1617 lb down and 17 lb up at 9-11-12, and 1139 lb down and 12 lb up at 13-5-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-48, 2-3=-68, 3-4=-48, 4-6=-58, 6-7=-48, 7-8=-68, 8-9=-48, 12-13=-20, 11-12=-30, 10-11=-20, 3-14=-20, 14-15=-20, 15-16=-20, 7-16=-20  
Concentrated Loads (lb)  
Vert: 17=-859 (B), 18=-605 (B), 19=-839 (F), 20=-585 (F)



October 15, 2024

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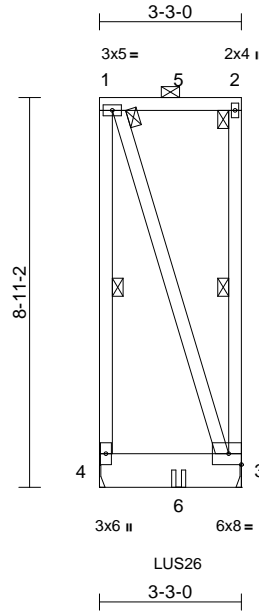
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss E1	Truss Type Flat Girder	Qty 1	Ply 2	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913535
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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 Oct 15 11:28:55  
ID:xSpDQlqRxEc1fPDKLmaxhYyV?fj-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRcDoi7J4zJC?f

Page: 1



Scale = 1:52.8

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	0.79	Vert(LL)	0.00	3-4	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	3-4	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.10	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 107 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 1-4, 2-3

**REACTIONS** (size) 3= Mechanical, 4= Mechanical  
Max Horiz 4=-229 (LC 7)  
Max Uplift 3=-392 (LC 6), 4=-378 (LC 5)  
Max Grav 3=1322 (LC 20), 4=1062 (LC 21)

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

TOP CHORD 1-4=-688/355, 1-2=-91/68, 2-3=-652/33  
BOT CHORD 3-4=-206/182  
WEBS 1-3=-345/345

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 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); cantilever left and right exposed; end vertical left and right exposed;  
Lumber DOL=1.60 plate grip DOL=1.33

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- Provide adequate drainage to prevent water ponding.
- \* 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 378 lb uplift at joint 4 and 392 lb uplift at joint 3.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 1-9-12 from the left end to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1000 lb down and 23 lb up at 1-9-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-58, 3-4=-20  
Concentrated Loads (lb)  
Vert: 5=-987, 6=-611 (B)



October 15, 2024

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

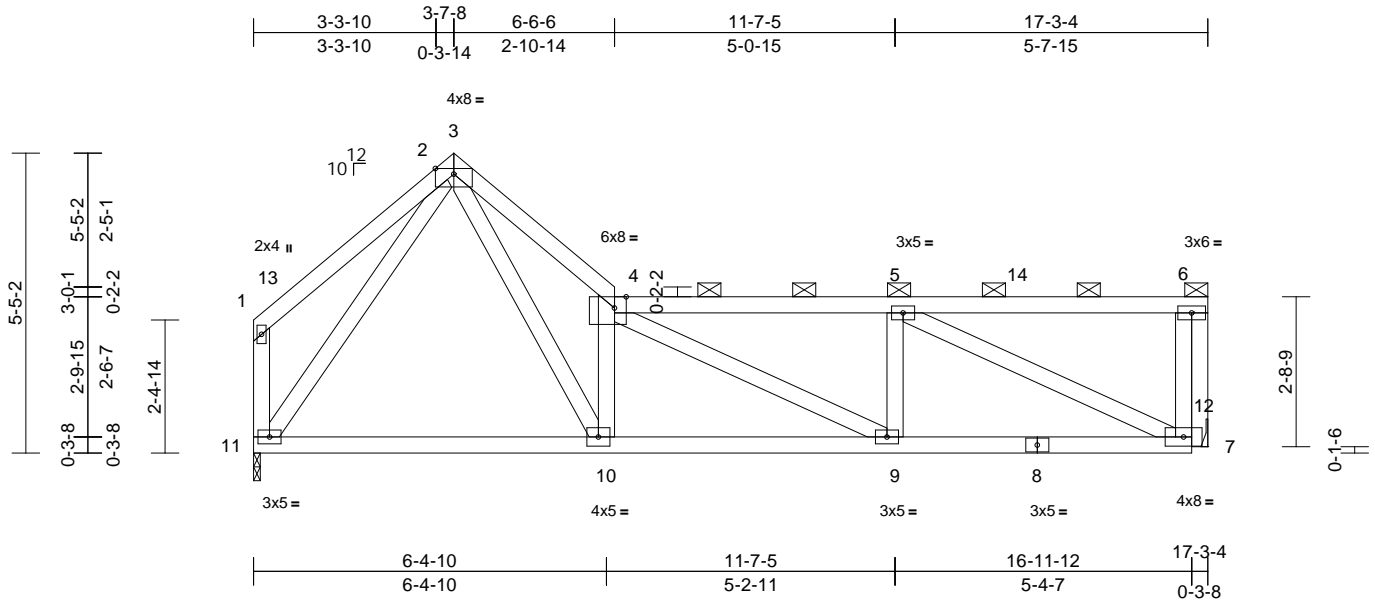
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss L1	Truss Type Roof Special	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913536
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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 Oct 15 11:28:55  
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Page: 1



Scale = 1:41.7

Plate Offsets (X, Y): [4:0-2-9,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	0.59	Vert(LL)	-0.07	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.13	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.03	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 104 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-7-11 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-9 max.): 4-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 11=0-1-8, 12= Mechanical  
Max Horiz 11=-100 (LC 13)  
Max Uplift 12=-7 (LC 16)  
Max Grav 11=682 (LC 2), 12=859 (LC 43)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-153/127, 2-3=-643/99, 3-4=-1630/187, 4-5=-1397/99, 5-6=-177/10, 6-7=-15/644, 1-11=-166/108  
BOT CHORD 10-11=-49/395, 9-10=-109/1270, 7-9=-99/1394  
WEBS 2-11=-660/51, 4-10=-1357/166, 3-10=-104/1674, 5-9=0/170, 4-9=-130/195, 5-7=-1359/98, 6-12=-870/54

**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) and C-C Exterior(2E) 2-0-3 to 8-4-14, Interior (1) 8-4-14 to 18-8-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) Provide adequate drainage to prevent water ponding.
- 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) Bearings are assumed to be: Joint 11 SP No.2 .
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 11.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 12.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



October 15, 2024

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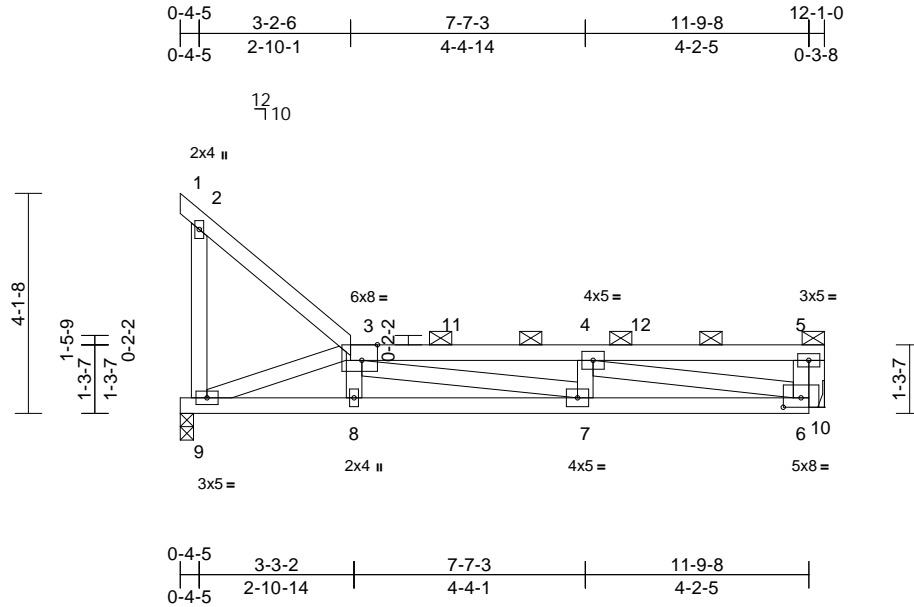


Job 24100066-01	Truss L2	Truss Type Roof Special	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913537
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:56  
ID: ?IU67ftx2TK67SKEiNEVUSyTVp8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRcDoi7J4zJC7f

Page: 1



Scale = 1:43.2

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.09	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.14	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.03	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 62 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (3-7-9 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 9=0-3-0, 10= Mechanical  
Max Horiz 9=-70 (LC 16)  
Max Uplift 9=-26 (LC 16)  
Max Grav 9=521 (LC 22), 10=605 (LC 39)

**FORCES**

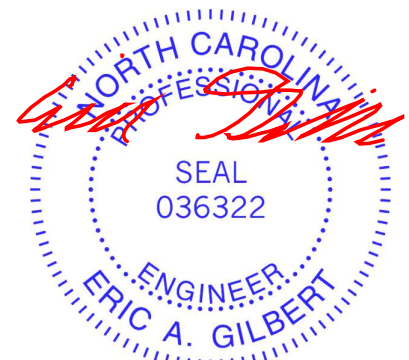
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-22/0, 2-3=-98/74, 3-4=-1838/99, 4-5=-293/28  
BOT CHORD 8-9=0/1242, 7-8=0/1248, 6-7=-98/1835  
WEBS 2-9=-163/91, 3-8=0/87, 3-9=-1323/82, 5-6=0/424, 4-7=-56/92, 3-7=-138/603, 4-6=-1591/72, 5-10=-669/48

**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) and C-C Exterior(2E) 0-0-0 to 3-2-6, Interior (1) 3-2-6 to 11-7-12 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=1.33
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0

- 4) Unbalanced snow loads have been considered for this design.
- 5) Provide adequate drainage to prevent water ponding.
- 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) Bearings are assumed to be: Joint 9 SP No.2 .
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 9.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



October 15, 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/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)



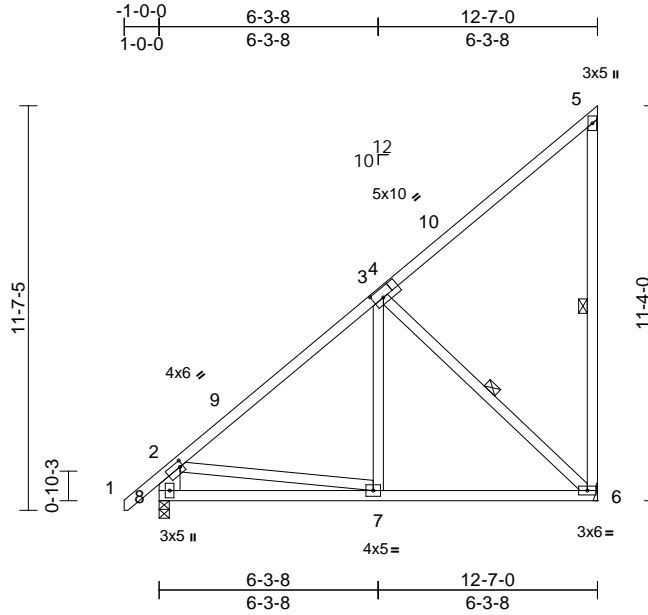
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss M1	Truss Type Jack-Closed	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	I68913538
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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 Oct 15 11:28:56  
ID:STDrWzvEM\_J7FryihVBbGyTWWC-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:66.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	0.05	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.08	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 92 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 8-2:2x8 SP 2400F  
 2.0E, 5-6:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or  
 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 7-1-12 oc  
 bracing.  
 WEBS 1 Row at midpt 5-6, 3-6

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

Max Horiz 8=328 (LC 10)  
 Max Uplift 6=-105 (LC 10)  
 Max Grav 6=536 (LC 29), 8=564 (LC 2)

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

TOP CHORD 2-8=-587/157, 1-2=0/60, 2-3=-586/109,  
 3-5=-276/220, 5-6=-243/226  
 BOT CHORD 7-8=-662/584, 6-7=-294/464  
 WEBS 3-7=0/167, 3-6=-491/240, 2-7=-169/371

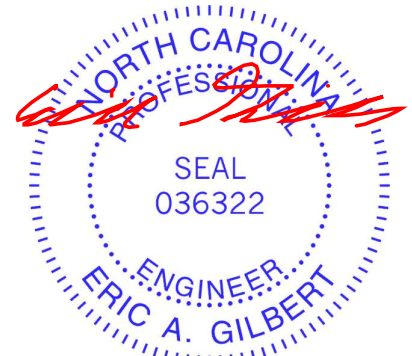
**NOTES**

- 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) and C-C  
 Exterior(2E) -0-11-6 to 2-0-10, Interior (1) 2-0-10 to  
 12-5-4 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=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15  
 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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) This truss has been designed for greater of min roof live  
 load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on  
 overhangs non-concurrent with other live loads.

4) \* 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.

- 5) Bearings are assumed to be: Joint 8 SP No.2 .
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 105 lb uplift at joint  
 6.

**LOAD CASE(S)** Standard



October 15, 2024

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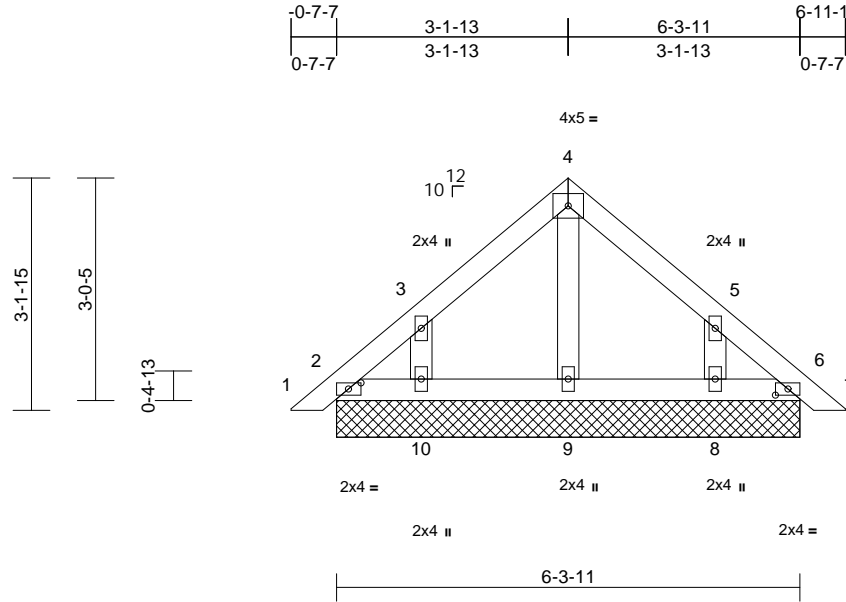
818 Soundside Road  
 Edenton, NC 27932

Job 24100066-01	Truss PB1	Truss Type Piggyback	Qty 2	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913539
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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 Oct 15 11:28:56  
ID:dmFR6rikcz04dGBeyRwMy9yV?h9-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:31.4  
Plate Offsets (X, Y): [2:0-2-1,0-1-0], [6:0-2-1,0-1-0]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	15	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 30 lb	FT = 20%	

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

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

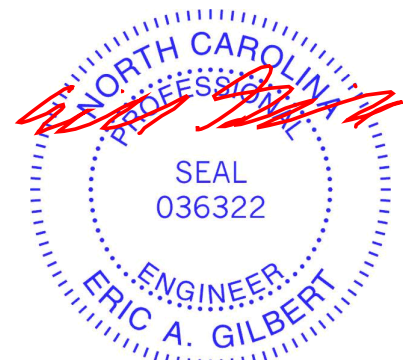
**REACTIONS** (size) 2=6-3-11, 6=6-3-11, 8=6-3-11, 9=6-3-11, 10=6-3-11, 11=6-3-11, 15=6-3-11  
Max Horiz 2=54 (LC 12), 11=54 (LC 12)  
Max Uplift 2=-9 (LC 9), 8=-43 (LC 14), 10=-43 (LC 13), 11=-9 (LC 9)  
Max Grav 2=67 (LC 30), 6=65 (LC 2), 8=159 (LC 30), 9=109 (LC 2), 10=159 (LC 29), 11=67 (LC 30), 15=65 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/19, 2-3=-59/42, 3-4=-85/79, 4-5=-85/78, 5-6=-58/35, 6-7=0/19  
BOT CHORD 2-10=-29/73, 9-10=-29/73, 8-9=-29/73, 6-8=-29/73  
WEBS 4-9=-67/0, 3-10=-177/177, 5-8=-177/176

**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) and C-C Exterior(2E) 0-2-14 to 3-2-14, Interior (1) 3-2-14 to 3-9-9, Exterior(2R) 3-9-9 to 6-7-8, Interior (1) 6-7-8 to 7-4-4 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=1.33

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 2, 43 lb uplift at joint 10, 43 lb uplift at joint 8 and 9 lb uplift at joint 2.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



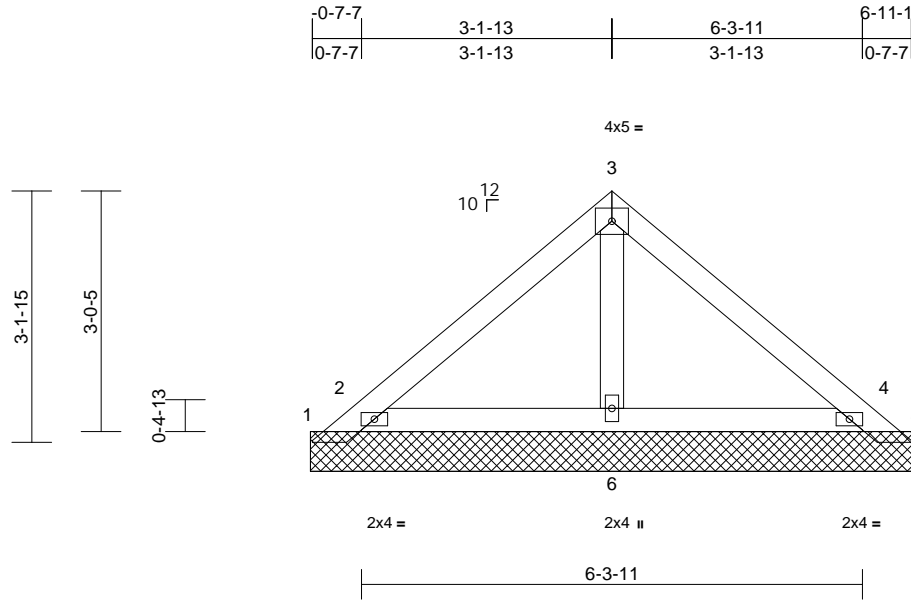
October 15, 2024

Job 24100066-01	Truss PB2	Truss Type Piggyback	Qty 22	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913540
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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 Oct 15 11:28:56  
ID:SvciNunVcprNELBeoJi1mCQyV?h3-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:29

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/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/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 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 1=7-7-2, 2=7-7-2, 4=7-7-2, 5=7-7-2, 6=7-7-2, 7=7-7-2, 10=7-7-2  
Max Horiz 1=-56 (LC 9)  
Max Uplift 1=-202 (LC 29), 2=-78 (LC 13), 4=-69 (LC 14), 5=-169 (LC 30), 7=-78 (LC 13), 10=-69 (LC 14)  
Max Grav 1=73 (LC 13), 2=397 (LC 29), 4=363 (LC 30), 5=55 (LC 14), 6=169 (LC 2), 7=397 (LC 29), 10=363 (LC 30)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-132/181, 2-3=-125/96, 3-4=-125/95, 4-5=-115/159  
BOT CHORD 2-6=-68/67, 4-6=-68/72  
WEBS 3-6=-84/8

#### 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) and C-C Exterior(2E) 0-2-14 to 3-2-14, Interior (1) 3-2-14 to 3-9-9, Exterior(2R) 3-9-9 to 6-7-8, Interior (1) 6-7-8 to 7-4-4 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=1.33

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 2, 69 lb uplift at joint 4, 202 lb uplift at joint 1, 169 lb uplift at joint 5, 78 lb uplift at joint 2 and 69 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



October 15, 2024

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ENGINEERING BY  
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A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

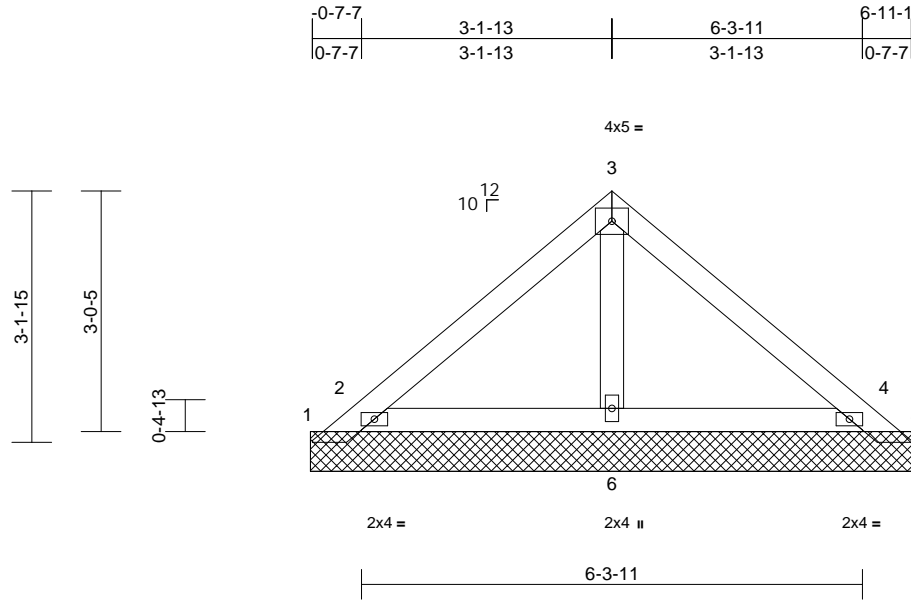


Job 24100066-01	Truss PB3	Truss Type Piggyback	Qty 1	Ply 2	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913541
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:56  
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Page: 1



Scale = 1:29

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
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 10-0-0 oc bracing.

#### REACTIONS

(size) 1=7-7-2, 2=7-7-2, 4=7-7-2, 5=7-7-2, 6=7-7-2, 7=7-7-2, 10=7-7-2  
Max Horiz 1=-56 (LC 11)  
Max Uplift 1=-192 (LC 29), 2=-76 (LC 13), 4=-67 (LC 14), 5=-160 (LC 30), 7=-76 (LC 13), 10=-67 (LC 14)  
Max Grav 1=71 (LC 13), 2=385 (LC 29), 4=352 (LC 30), 5=52 (LC 14), 6=174 (LC 2), 7=385 (LC 29), 10=352 (LC 30)

#### FORCES

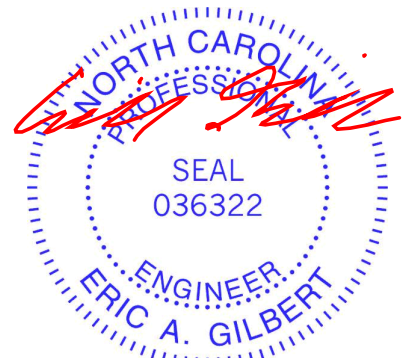
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-126/175, 2-3=-122/90, 3-4=-123/89, 4-5=-110/152  
BOT CHORD 2-6=-71/74, 4-6=-71/80  
WEBS 3-6=-87/9

#### NOTES

- 2-ply truss to be connected together as follows:  
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-14 to 3-2-14, Interior (1) 3-2-14 to 3-9-9, Exterior(2R) 3-9-9 to 6-7-8, Interior (1) 6-7-8 to 7-4-4 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 2, 67 lb uplift at joint 4, 192 lb uplift at joint 1, 160 lb uplift at joint 5, 76 lb uplift at joint 2 and 67 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



October 15, 2024

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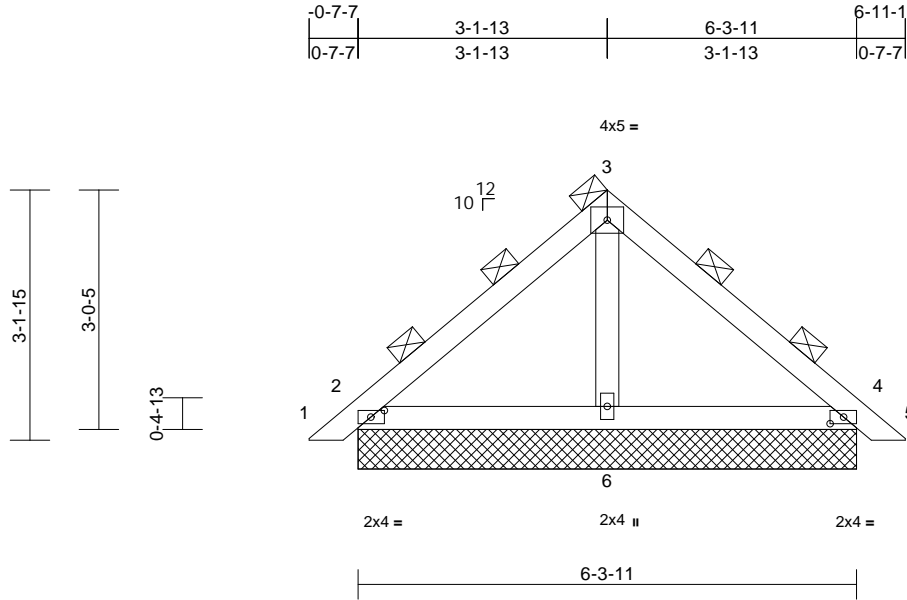
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss PB4	Truss Type Piggyback	Qty 1	Ply 2	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	I68913542
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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 Oct 15 11:28:56  
ID:DS5j2etWJGn5IQFLnNAeX6yV?gx-RfC?PsB70Hq3NSgPqnL8w3uITxBGKWrCDoi7J4zJC?F

Page: 1



Scale = 1:29.1

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

Loading	(psf)	Spacing	3-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
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 2-0-0 oc purlins (6-0-0 max.)  
(Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=6-3-11, 4=6-3-11, 6=6-3-11, 7=6-3-11, 11=6-3-11  
Max Horiz 2=-83 (LC 11), 7=-83 (LC 11)  
Max Uplift 2=-13 (LC 13), 4=-21 (LC 14), 7=-13 (LC 13), 11=-21 (LC 14)  
Max Grav 2=269 (LC 2), 4=269 (LC 2), 6=291 (LC 2), 7=269 (LC 2), 11=269 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/29, 2-3=-220/148, 3-4=-220/146, 4-5=0/29  
BOT CHORD 2-6=-44/108, 4-6=-39/114  
WEBS 3-6=-105/0

**NOTES**

- 2-ply truss to be connected together as follows:  
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-14 to 3-2-14, Interior (1) 3-2-14 to 3-9-9, Exterior(2R) 3-9-9 to 6-7-8, Interior (1) 6-7-8 to 7-4-4 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 2, 21 lb uplift at joint 4, 13 lb uplift at joint 2 and 21 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



October 15, 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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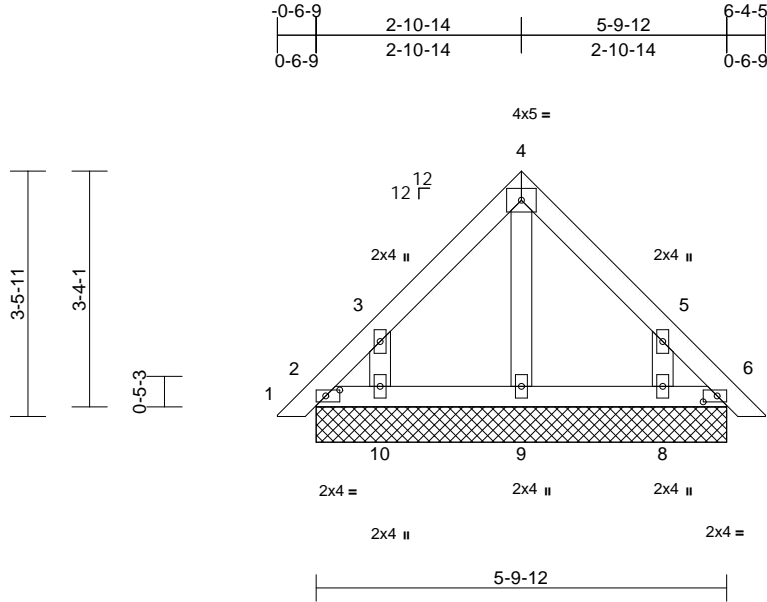


Job 24100066-01	Truss PB6	Truss Type Piggyback	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913544
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:56  
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Page: 1



Scale = 1:32.6

Plate Offsets (X, Y): [2:0-2-6,0-1-0], [6:0-2-6,0-1-0]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 29 lb	FT = 20%	

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(size) 2=5-9-12, 6=5-9-12, 8=5-9-12, 9=5-9-12, 10=5-9-12, 11=5-9-12, 14=5-9-12  
Max Horiz 2=59 (LC 12), 11=59 (LC 12)  
Max Uplift 2=-17 (LC 9), 6=-8 (LC 10), 8=-59 (LC 14), 10=-60 (LC 13), 11=-17 (LC 9), 14=-8 (LC 10)  
Max Grav 2=62 (LC 30), 6=54 (LC 29), 8=160 (LC 30), 9=103 (LC 2), 10=161 (LC 29), 11=62 (LC 30), 14=54 (LC 29)

**FORCES**

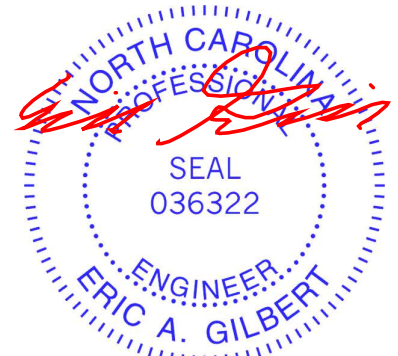
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/18, 2-3=-131/55, 3-4=-91/74, 4-5=-91/88, 5-6=-90/57, 6-7=0/18  
BOT CHORD 2-10=-37/84, 9-10=-37/84, 8-9=-37/84, 6-8=-37/84  
WEBS 4-9=-60/0, 3-10=-194/260, 5-8=-195/205

**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) 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=1.33

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 2, 8 lb uplift at joint 6, 60 lb uplift at joint 10, 59 lb uplift at joint 8, 17 lb uplift at joint 2 and 8 lb uplift at joint 6.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



October 15, 2024

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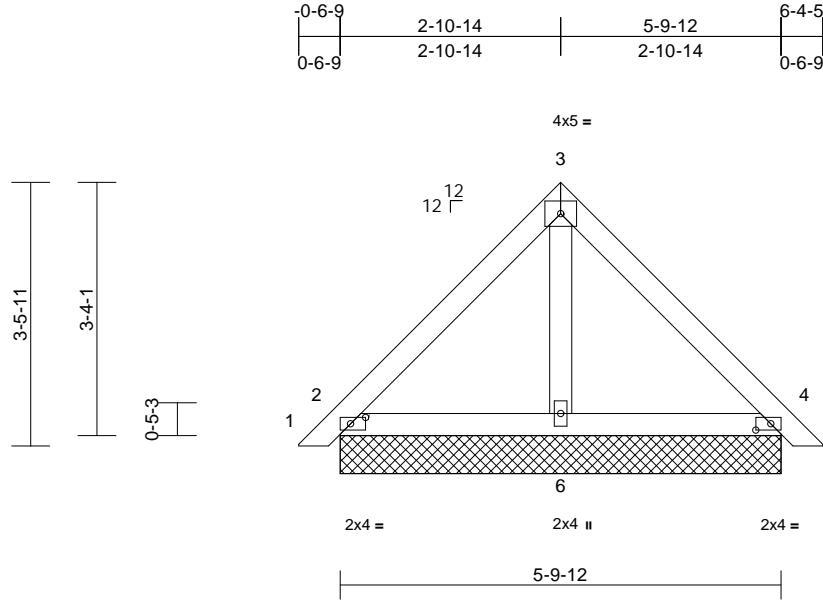


Job	Truss	Truss Type	Qty	Ply	14 Overhills Creek-Roof-1 BNS GRH	I68913545
24100066-01	PB7	Piggyback	10	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:30.4

Plate Offsets (X, Y): [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

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	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 27 lb	FT = 20%	

**LUMBER**

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

**BRACING**

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

**REACTIONS**

- (size) 2=5-9-12, 4=5-9-12, 6=5-9-12, 7=5-9-12, 10=5-9-12
- Max Horiz 2=61 (LC 12), 7=61 (LC 12)
- Max Uplift 2=-8 (LC 14), 4=-11 (LC 14), 7=-8 (LC 14), 10=-11 (LC 14)
- Max Grav 2=171 (LC 2), 4=171 (LC 2), 6=165 (LC 2), 7=171 (LC 2), 10=171 (LC 2)

**FORCES**

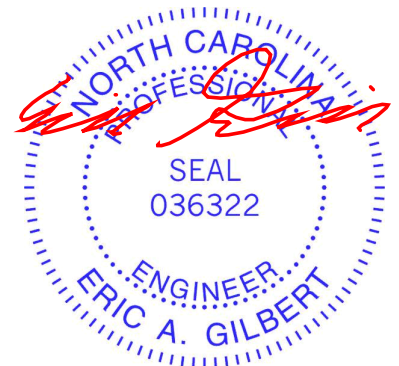
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/19, 2-3=-152/103, 3-4=-153/126, 4-5=0/19
- BOT CHORD 2-6=-56/64, 4-6=-33/68
- WEBS 3-6=-50/3

**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) 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 2, 11 lb uplift at joint 4, 8 lb uplift at joint 2 and 11 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



October 15, 2024

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



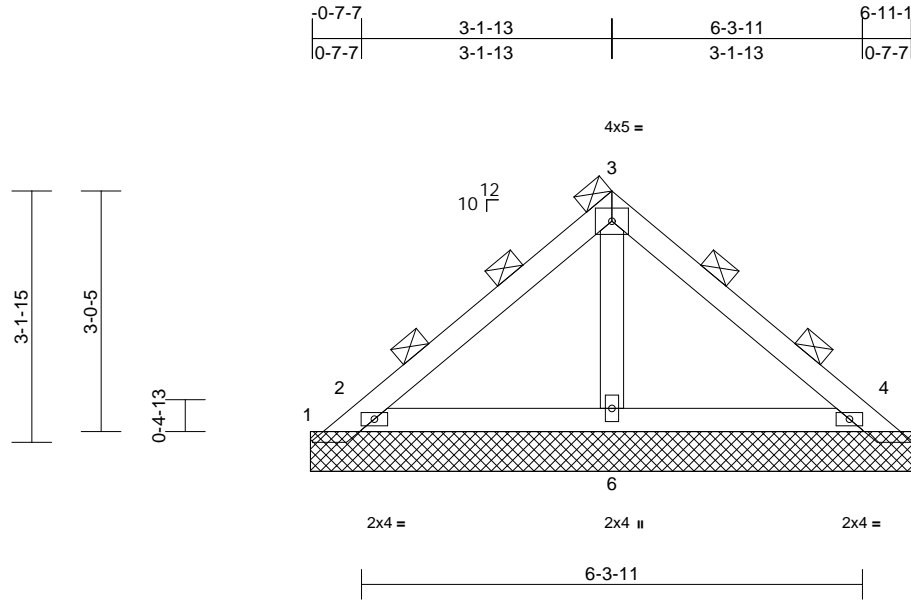
818 Soundside Road  
 Edenton, NC 27932

Job 24100066-01	Truss PB8	Truss Type Piggyback	Qty 1	Ply 2	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913546
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:29

Loading	(psf)	Spacing	2-10-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.01	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
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 2-0-0 oc purlins (6-0-0 max.)  
(Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 1=7-7-2, 2=7-7-2, 4=7-7-2, 5=7-7-2,  
6=7-7-2, 7=7-7-2, 10=7-7-2  
Max Horiz 1=-79 (LC 9)  
Max Uplift 1=-272 (LC 29), 2=-107 (LC 13),  
4=-95 (LC 14), 5=-227 (LC 30),  
7=-107 (LC 13), 10=-95 (LC 14)  
Max Grav 1=101 (LC 13), 2=546 (LC 29),  
4=499 (LC 30), 5=74 (LC 14),  
6=246 (LC 2), 7=546 (LC 29),  
10=499 (LC 30)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

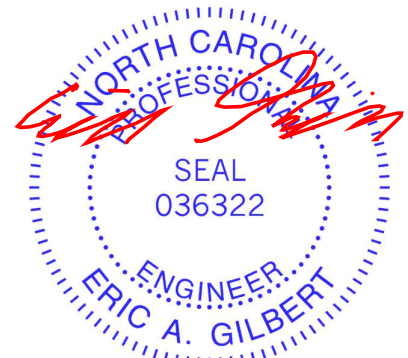
TOP CHORD 1-2=-168/248, 2-3=-171/124, 3-4=-171/122,  
4-5=-144/211  
BOT CHORD 2-6=-98/97, 4-6=-98/105  
WEBS 3-6=-123/11

**NOTES**

- 2-ply truss to be connected together as follows:  
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-14 to 3-2-14, Interior (1) 3-2-14 to 3-9-9, Exterior(2R) 3-9-9 to 6-7-8, Interior (1) 6-7-8 to 7-4-4 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No. 2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 107 lb uplift at joint 2, 95 lb uplift at joint 4, 272 lb uplift at joint 1, 227 lb uplift at joint 5, 107 lb uplift at joint 2 and 95 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 15, 2024

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



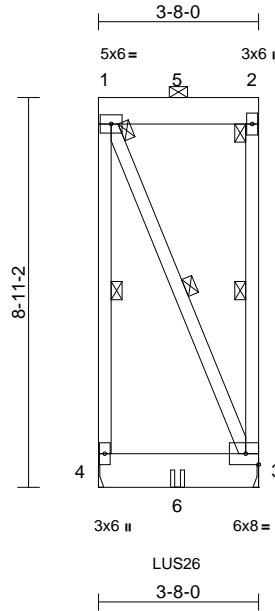
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss R1	Truss Type Flat Girder	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913547
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:52.8

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	0.00	3-4	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	3-4	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.11	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 60 lb	FT = 20%

#### LUMBER

TOP CHORD 2x8 SP 2400F 2.0E  
BOT CHORD 2x10 SP 2400F 2.0E  
WEBS 2x4 SP No.3

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 1-4, 2-3, 1-3

**REACTIONS** (size) 3= Mechanical, 4= Mechanical  
Max Horiz 4=-218 (LC 5)  
Max Uplift 3=-237 (LC 6), 4=-236 (LC 5)  
Max Grav 3=1195 (LC 20), 4=1163 (LC 21)

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

TOP CHORD 1-4=-868/197, 1-2=-87/64, 2-3=-751/0  
BOT CHORD 3-4=-196/173  
WEBS 1-3=-287/287

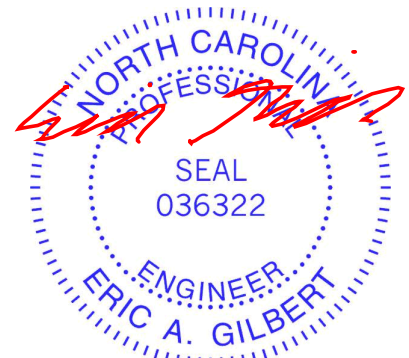
#### NOTES

- 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); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
- 3) Provide adequate drainage to prevent water ponding.
- 4) \* 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.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 236 lb uplift at joint 4 and 237 lb uplift at joint 3.

- 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 8) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 1-9-12 from the left end to connect truss(es) to back face of bottom chord.
- 9) Fill all nail holes where hanger is in contact with lumber.
- 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-56, 3-4=-19  
Concentrated Loads (lb)  
Vert: 5=-1258, 6=-388 (B)



October 15, 2024

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**TRENCO**  
A MITek Affiliate

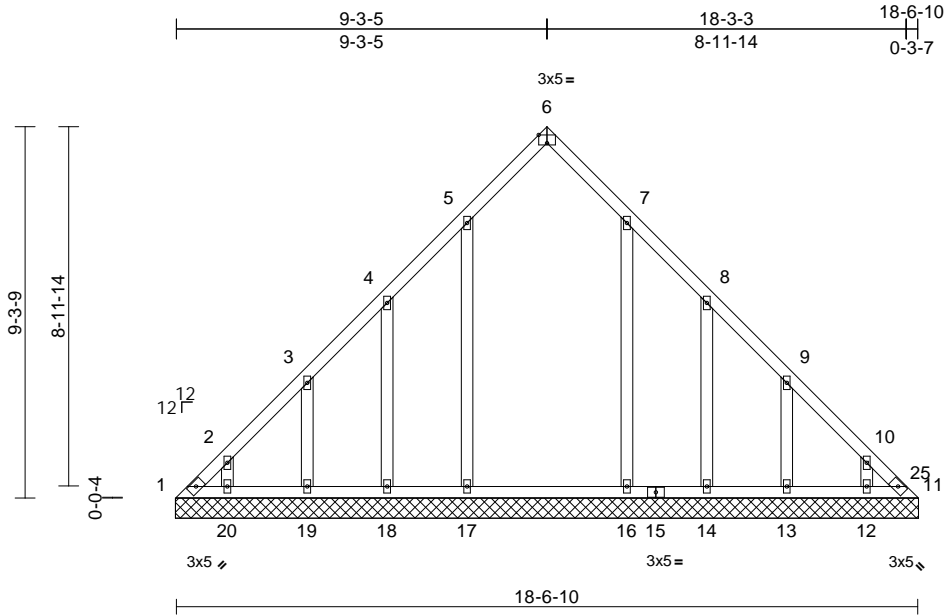
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss VL1	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913548
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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 Oct 15 11:28:57  
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Page: 1



Scale = 1:57.7

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

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.01	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 110 lb	FT = 20%

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

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

**REACTIONS** (size)  
1=18-7-2, 11=18-7-2, 12=18-7-2,  
13=18-7-2, 14=18-7-2, 16=18-7-2,  
17=18-7-2, 18=18-7-2, 19=18-7-2,  
20=18-7-2  
Max Horiz 1=165 (LC 10)  
Max Uplift 1=-52 (LC 11), 11=-37 (LC 12),  
13=-59 (LC 14), 14=-63 (LC 14),  
16=-25 (LC 14), 17=-28 (LC 13),  
18=-63 (LC 13), 19=-57 (LC 13)  
Max Grav 1=135 (LC 13), 11=127 (LC 14),  
12=161 (LC 29), 13=214 (LC 29),  
14=162 (LC 29), 16=296 (LC 29),  
17=300 (LC 28), 18=160 (LC 28),  
19=212 (LC 28), 20=181 (LC 28)

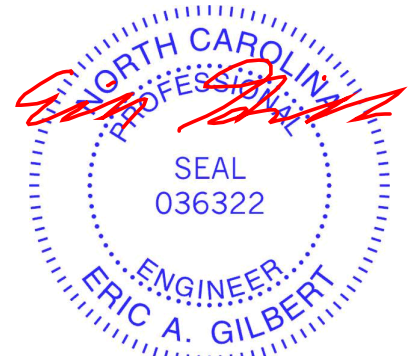
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-370/154, 2-3=-297/123, 3-4=-173/65,  
4-5=-123/35, 5-6=-121/55, 6-7=-121/55,  
7-8=-118/28, 8-9=-174/65, 9-10=-297/123,  
10-11=-368/154  
BOT CHORD 1-20=-111/285, 19-20=-111/285,  
18-19=-111/285, 17-18=-111/285,  
16-17=-111/285, 14-16=-111/285,  
13-14=-111/285, 12-13=-111/285,  
11-12=-111/285

**WEBS**  
5-17=-157/113, 4-18=-155/141,  
3-19=-160/152, 2-20=-125/96,  
7-16=-157/113, 8-14=-155/141,  
9-13=-160/152, 10-12=-124/94

**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) and C-C Corner (3E) 0-0-0 to 3-3-9, Exterior(2N) 3-3-9 to 9-3-9, Corner (3R) 9-3-9 to 12-3-9, Exterior(2N) 12-3-9 to 18-2-14 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 1, 37 lb uplift at joint 11, 28 lb uplift at joint 17, 63 lb uplift at joint 18, 57 lb uplift at joint 19, 25 lb uplift at joint 16, 63 lb uplift at joint 14 and 59 lb uplift at joint 13.

11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 11.  
**LOAD CASE(S)** Standard



October 15, 2024

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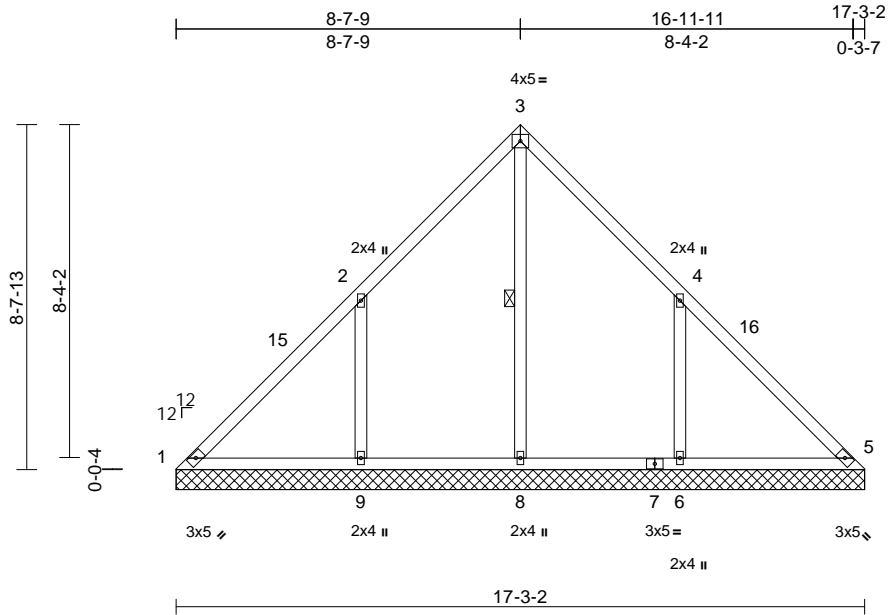


Job 24100066-01	Truss VL2	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913549
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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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	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 85 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.

WEBS 1 Row at midpt 3-8

**REACTIONS** (size) 1=17-3-2, 5=17-3-2, 6=17-3-2, 8=17-3-2, 9=17-3-2, 14=17-3-2  
Max Horiz 1=158 (LC 10)  
Max Uplift 1=-82 (LC 9), 6=-132 (LC 14), 9=-137 (LC 13)  
Max Grav 1=100 (LC 12), 5=1 (LC 29), 6=536 (LC 29), 8=682 (LC 28), 9=538 (LC 28), 14=1 (LC 29)

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

TOP CHORD 1-2=-127/393, 2-3=-34/315, 3-4=-34/299, 4-5=-310/320

BOT CHORD 1-9=-188/130, 8-9=-188/130, 6-8=-188/130, 5-6=-188/130

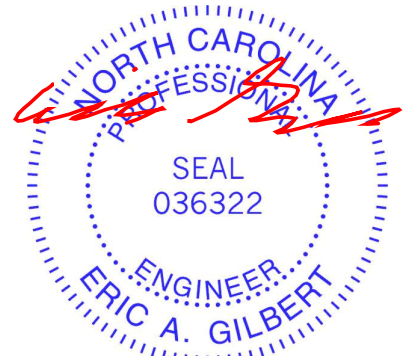
WEBS 3-8=-499/0, 2-9=-377/330, 4-6=-376/330

**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) and C-C Corner (3E) 0-0-4 to 3-0-4, Exterior(2N) 3-0-4 to 8-7-13, Corner (3R) 8-7-13 to 11-7-13, Exterior(2N) 11-7-13 to 16-11-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 1, 137 lb uplift at joint 9 and 132 lb uplift at joint 6.

**LOAD CASE(S)** Standard



October 15, 2024

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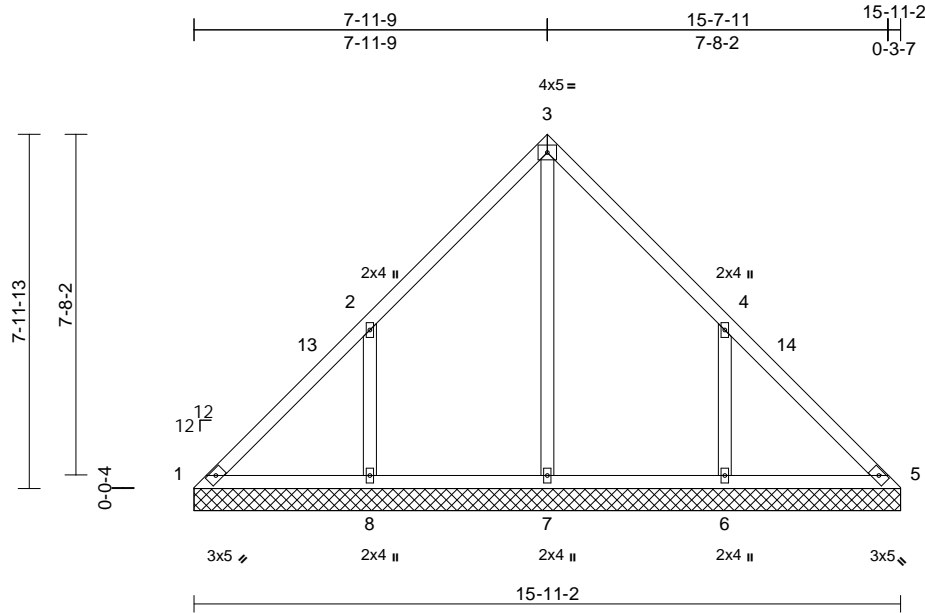
Job 24100066-01	Truss VL3	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913550
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:57

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 77 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=15-11-2, 5=15-11-2, 6=15-11-2, 7=15-11-2, 8=15-11-2  
Max Horiz 1=-146 (LC 9)  
Max Uplift 1=-24 (LC 9), 6=-118 (LC 14), 8=-121 (LC 13)  
Max Grav 1=139 (LC 29), 5=114 (LC 28), 6=498 (LC 29), 7=444 (LC 28), 8=501 (LC 28)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

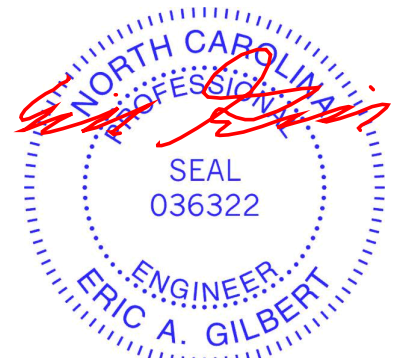
TOP CHORD 1-2=-160/198, 2-3=-81/134, 3-4=-81/134, 4-5=-153/169  
BOT CHORD 1-8=-105/195, 7-8=-105/195, 6-7=-105/195, 5-6=-105/195  
WEBS 3-7=-253/0, 2-8=-353/319, 4-6=-353/319

**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) and C-C Corner (3E) 0-0-4 to 3-0-4, Exterior(2N) 3-0-4 to 7-11-13, Corner(3R) 7-11-13 to 10-11-13, Exterior(2N) 10-11-13 to 15-11-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 1, 121 lb uplift at joint 8 and 118 lb uplift at joint 6.

**LOAD CASE(S)** Standard



October 15, 2024

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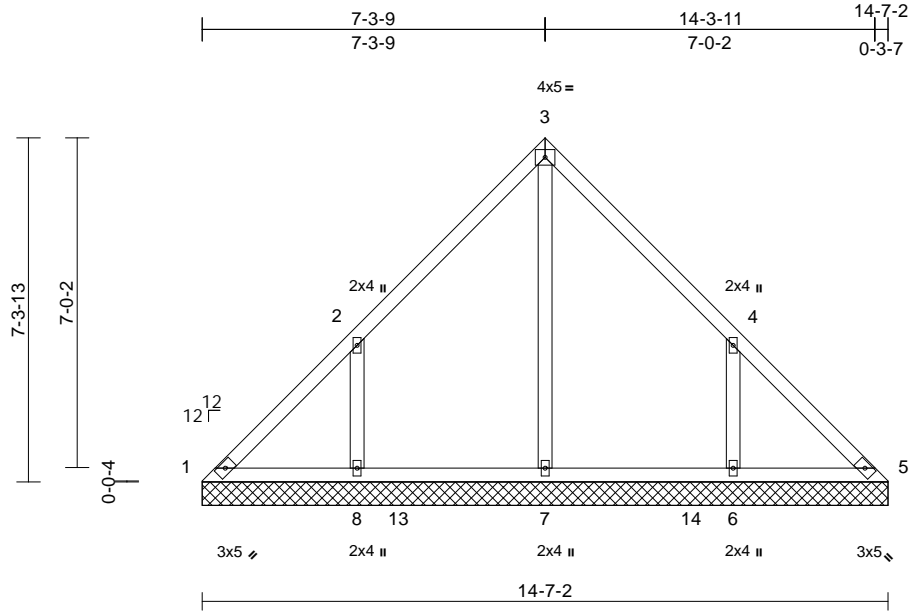
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss VL4	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913551
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:49

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	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	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 69 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=14-7-2, 5=14-7-2, 6=14-7-2, 7=14-7-2, 8=14-7-2  
Max Horiz 1=-134 (LC 9)  
Max Uplift 1=-25 (LC 9), 6=-108 (LC 14), 8=-110 (LC 13)  
Max Grav 1=136 (LC 29), 5=113 (LC 28), 6=444 (LC 29), 7=398 (LC 28), 8=448 (LC 28)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

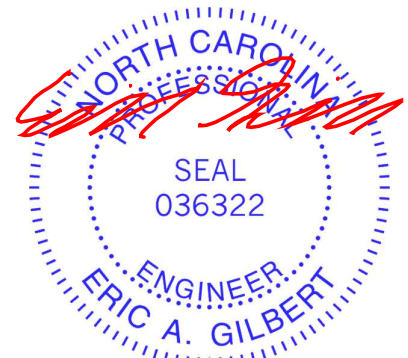
TOP CHORD 1-2=-152/143, 2-3=-126/147, 3-4=-126/148, 4-5=-136/114  
BOT CHORD 1-8=-73/168, 7-8=-73/168, 6-7=-73/168, 5-6=-73/168  
WEBS 3-7=-205/0, 2-8=-334/322, 4-6=-334/322

**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) and C-C Corner (3E) 0-0-4 to 3-3-13, Exterior(2N) 3-3-13 to 7-3-13, Corner(3R) 7-3-13 to 10-3-13, Exterior(2N) 10-3-13 to 14-7-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1, 110 lb uplift at joint 8 and 108 lb uplift at joint 6.

**LOAD CASE(S)** Standard



October 15, 2024

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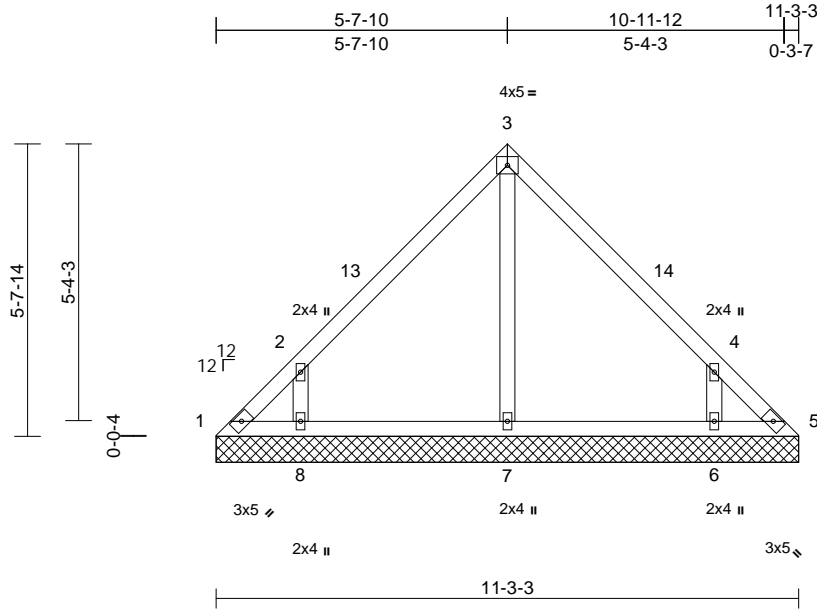
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss VL5	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913552
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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 Oct 15 11:28:57  
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Page: 1



Scale = 1:44.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 50 lb	FT = 20%	

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(size) 1=11-3-3, 5=11-3-3, 6=11-3-3, 7=11-3-3, 8=11-3-3  
Max Horiz 1=102 (LC 10)  
Max Uplift 1=-45 (LC 11), 5=-19 (LC 12), 6=-91 (LC 14), 8=-95 (LC 13)  
Max Grav 1=82 (LC 29), 5=63 (LC 28), 6=320 (LC 29), 7=215 (LC 2), 8=325 (LC 28)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

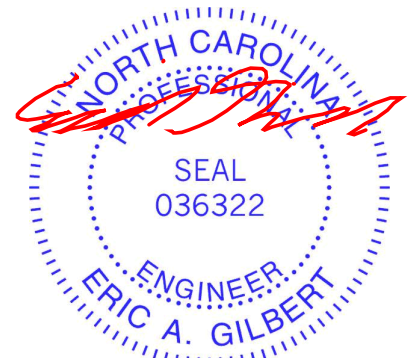
TOP CHORD 1-2=-177/103, 2-3=-185/154, 3-4=-185/153, 4-5=-169/75  
BOT CHORD 1-8=-35/108, 7-8=-28/108, 6-7=-28/108, 5-6=-35/108  
WEBS 3-7=-128/0, 2-8=-351/396, 4-6=-351/396

**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) and C-C Corner (3E) 0-0-4 to 3-0-4, Exterior(2N) 3-0-4 to 5-7-14, Corner (3R) 5-7-14 to 8-7-14, Exterior(2N) 8-7-14 to 11-3-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 1, 19 lb uplift at joint 5, 95 lb uplift at joint 8 and 91 lb uplift at joint 6.

**LOAD CASE(S)** Standard



October 15, 2024

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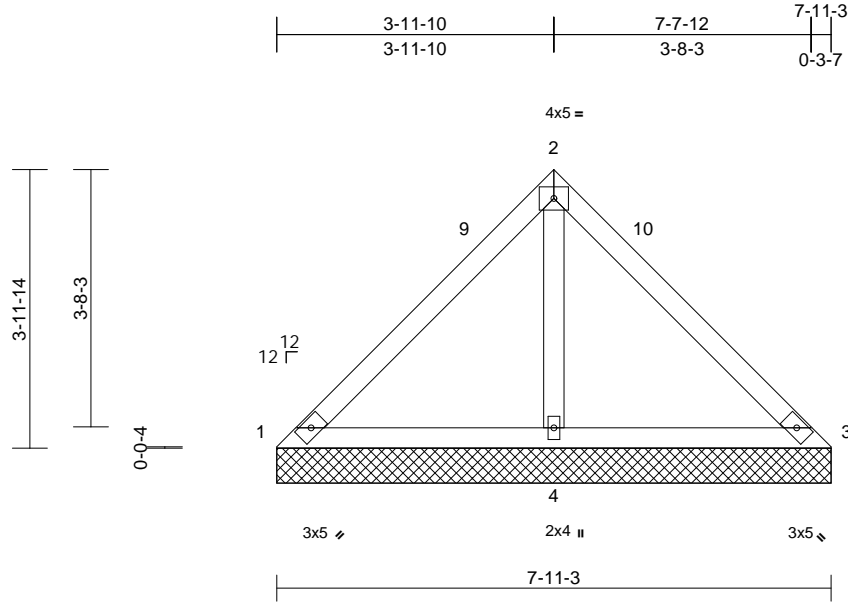


Job 24100066-01	Truss VL6	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913553
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:58  
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Page: 1



Scale = 1:33

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.28	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 32 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 7-11-3 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

#### REACTIONS

(size) 1=7-11-3, 3=7-11-3, 4=7-11-3  
Max Horiz 1=-71 (LC 9)  
Max Uplift 1=-13 (LC 35), 3=-13 (LC 34),  
4=-37 (LC 13)  
Max Grav 1=66 (LC 34), 3=66 (LC 35), 4=563 (LC 2)

#### FORCES

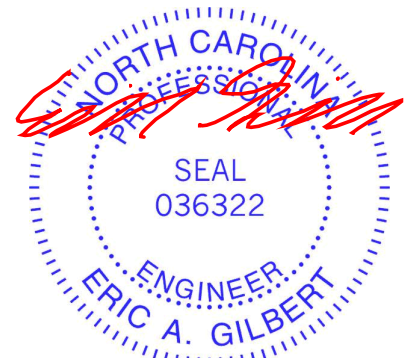
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-179/247, 2-3=-167/247  
BOT CHORD 1-4=-195/268, 3-4=-195/268  
WEBS 2-4=-500/354

#### 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) and C-C Corner (3E) 0-0-4 to 3-0-4, Exterior(2N) 3-0-4 to 3-11-14, Corner(3R) 3-11-14 to 7-3-4, Exterior(2N) 7-3-4 to 7-11-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 4-0-0 oc.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - All bearings are assumed to be SP No.2.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1, 13 lb uplift at joint 3 and 37 lb uplift at joint 4.
- LOAD CASE(S) Standard



October 15, 2024

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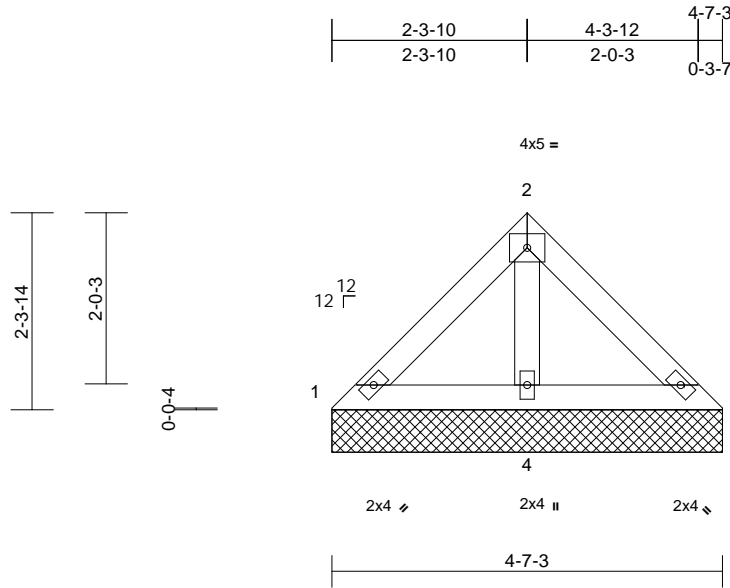
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss VL7	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913554
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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 Oct 15 11:28:58  
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Page: 1



Scale = 1:27.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 18 lb	FT = 20%	

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-3 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 1=4-7-3, 3=4-7-3, 4=4-7-3  
Max Horiz 1=40 (LC 10)  
Max Uplift 4=-5 (LC 13)  
Max Grav 1=61 (LC 34), 3=61 (LC 35), 4=265 (LC 2)

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

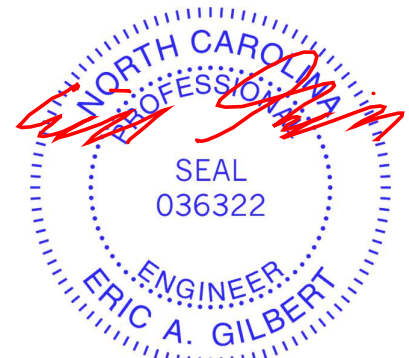
TOP CHORD 1-2=-51/76, 2-3=-51/76  
BOT CHORD 1-4=-73/132, 3-4=-73/132  
WEBS 2-4=-190/143

#### 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) and C-C Corner (3E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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) Gable requires continuous bottom chord bearing.

- 6) Gable studs spaced at 4-0-0 oc.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 4.

**LOAD CASE(S)** Standard



October 15, 2024

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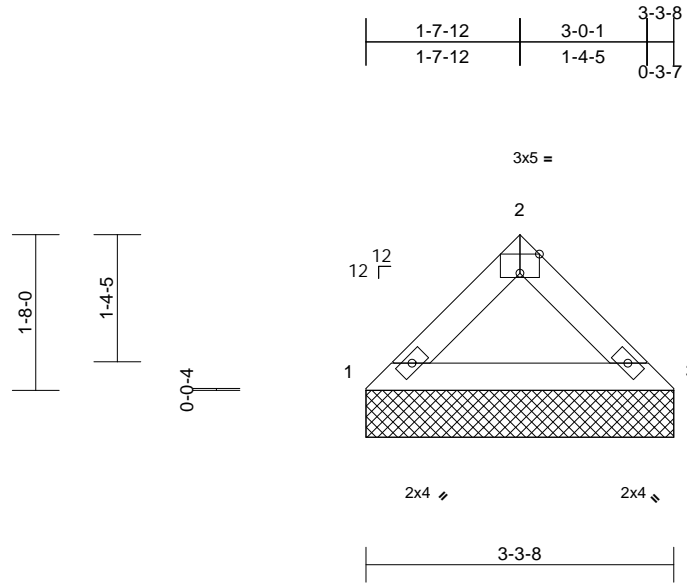
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	14 Overhills Creek-Roof-1 BNS GRH	I68913555
24100066-01	VL8	Valley	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 Oct 15 11:28:58  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 11 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 3-3-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=3-3-8, 3=3-3-8  
Max Horiz 1=27 (LC 12)  
Max Grav 1=132 (LC 2), 3=132 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-183/110, 2-3=-183/110  
BOT CHORD 1-3=-58/120

- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 .
- 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) and C-C Corner (3E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.



October 15, 2024

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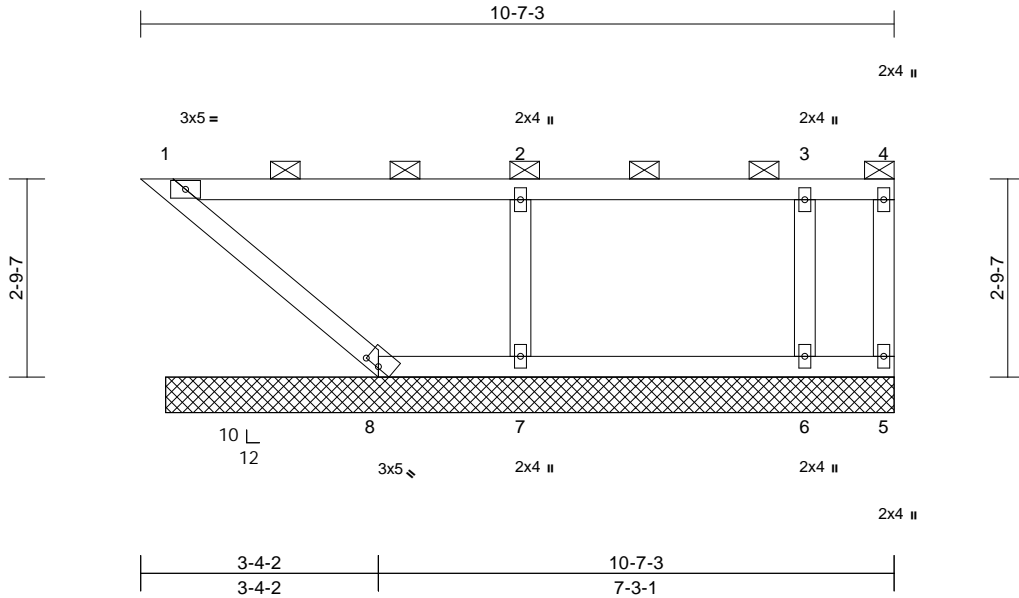
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss VL9	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	I68913556
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:32.4  
Plate Offsets (X, Y): [8:0-2-8,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 42 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 2-0-0 oc purlins (10-0-0 max.): 1-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
6-0-0 oc bracing: 1-8.

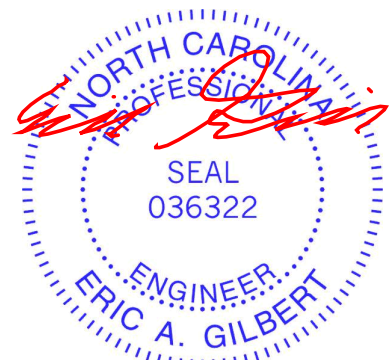
**REACTIONS** (size)  
1=10-3-0, 5=10-3-0, 6=10-3-0, 7=10-3-0, 8=10-3-0  
Max Uplift 1=-7 (LC 11), 5=-20 (LC 2), 7=-20 (LC 11)  
Max Grav 1=135 (LC 2), 5=-3 (LC 11), 6=252 (LC 2), 7=349 (LC 2), 8=92 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-63/45, 2-3=0/0, 3-4=0/0  
BOT CHORD 1-8=-130/142, 7-8=0/0, 6-7=0/0, 5-6=0/0  
WEBS 2-7=-296/334, 3-6=-176/208, 4-5=-12/9

- 4) Unbalanced snow loads have been considered for this design.
- 5) Provide adequate drainage to prevent water ponding.
- 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 7) Gable studs spaced at 4-0-0 oc.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) All bearings are assumed to be SP No.2 .
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 1, 20 lb uplift at joint 5 and 20 lb uplift at joint 7.
- 11) Non Standard bearing condition. Review required.
- 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

- 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) and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0



October 15, 2024

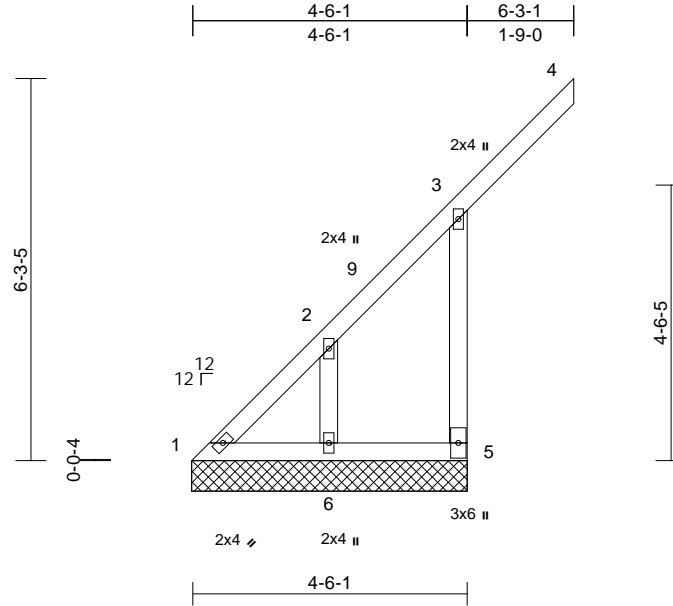


Job 24100066-01	Truss VL10	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913557
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Tue Oct 15 11:28:58  
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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	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 27 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 4-6-5 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size)	1=4-6-5, 5=4-6-5, 6=4-6-5
Max Horiz	1=177 (LC 10)
Max Uplift	1=-19 (LC 9), 5=-176 (LC 10), 6=-20 (LC 13)
Max Grav	1=126 (LC 30), 5=253 (LC 19), 6=159 (LC 29)

#### FORCES

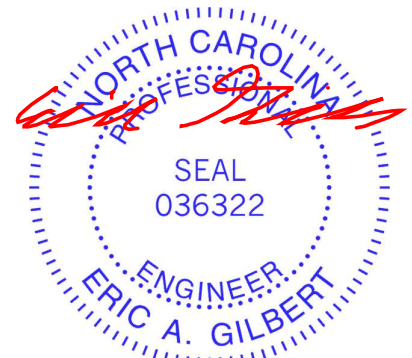
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-523/160, 2-3=-453/109, 3-4=-101/0, 3-5=-257/547
BOT CHORD	1-6=-140/110, 5-6=-70/76
WEBS	2-6=-196/78

#### 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) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-3-5 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=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; ce=0.9; Cs=1.00; Ct=1.10
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 176 lb uplift at joint 5, 19 lb uplift at joint 1 and 20 lb uplift at joint 6.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.

LOAD CASE(S) Standard



October 15, 2024

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

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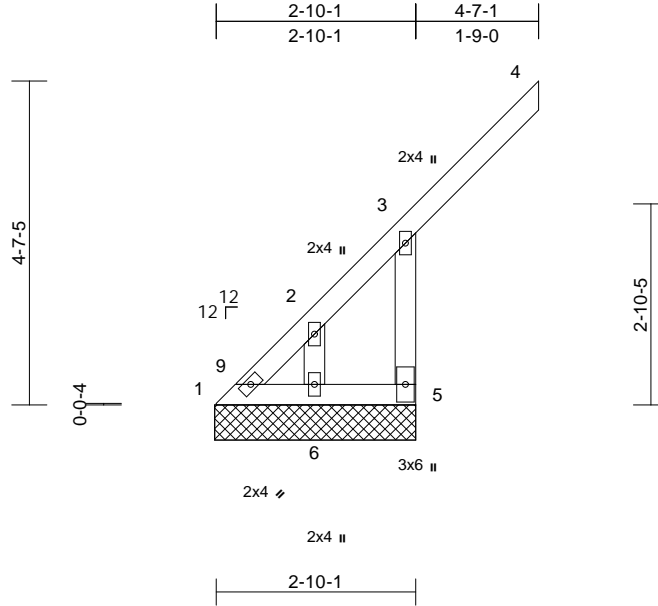
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss VL11	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913558
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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 Oct 15 11:28:58  
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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 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 2-10-5 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size)	1=2-10-5, 5=2-10-5, 6=2-10-5
Max Horiz	1=128 (LC 10)
Max Uplift	1=9 (LC 9), 5=194 (LC 10), 6=79 (LC 19)
Max Grav	1=87 (LC 30), 5=289 (LC 19), 6=96 (LC 10)

**FORCES**

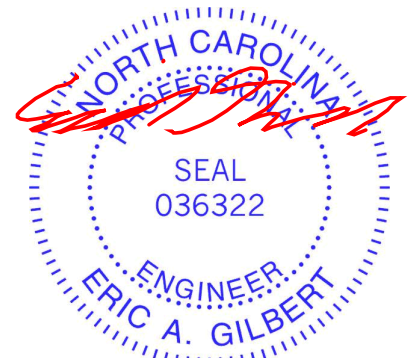
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-388/79, 2-3=-491/135, 3-4=-101/0, 3-5=-317/628
BOT CHORD	1-6=-145/63, 5-6=-41/44
WEBS	2-6=-158/144

**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) and C-C Exterior(2E) 0-0-0 to 2-8-9, Interior (1) 2-8-9 to 4-7-5 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=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; ce=0.9; Cs=1.00; Ct=1.10
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 194 lb uplift at joint 5, 9 lb uplift at joint 1 and 79 lb uplift at joint 6.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.

**LOAD CASE(S)** Standard



October 15, 2024

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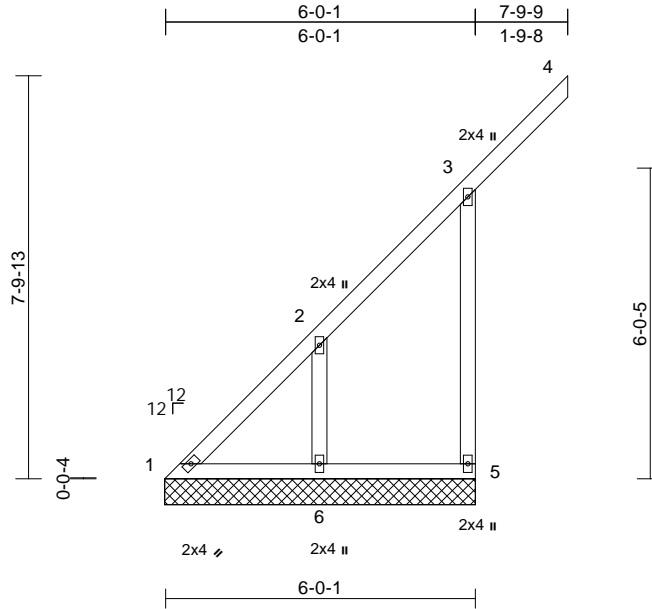
818 Soundside Road  
Edenton, NC 27932

Job 24100066-01	Truss VL12	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913559
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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 Oct 15 11:28:58  
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Scale = 1:44.7

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	0.55	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 36 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(size)	1=6-0-5, 5=6-0-5, 6=6-0-5
Max Horiz	1=222 (LC 10)
Max Uplift	1=-26 (LC 9), 5=-179 (LC 10), 6=-54 (LC 13)
Max Grav	1=163 (LC 30), 5=268 (LC 29), 6=257 (LC 29)

**FORCES**

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-402/269, 2-3=-286/117, 3-4=-103/0, 3-5=-302/281
BOT CHORD	1-6=-131/166, 5-6=-95/103
WEBS	2-6=-333/137

- 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) and C-C Exterior(2E) 0-0-0 to 3-0-1, Interior (1) 3-0-1 to 7-9-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; ce=0.9; Cs=1.00; Ct=1.10
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 179 lb uplift at joint 5, 26 lb uplift at joint 1 and 54 lb uplift at joint 6.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.

**LOAD CASE(S)** Standard



October 15, 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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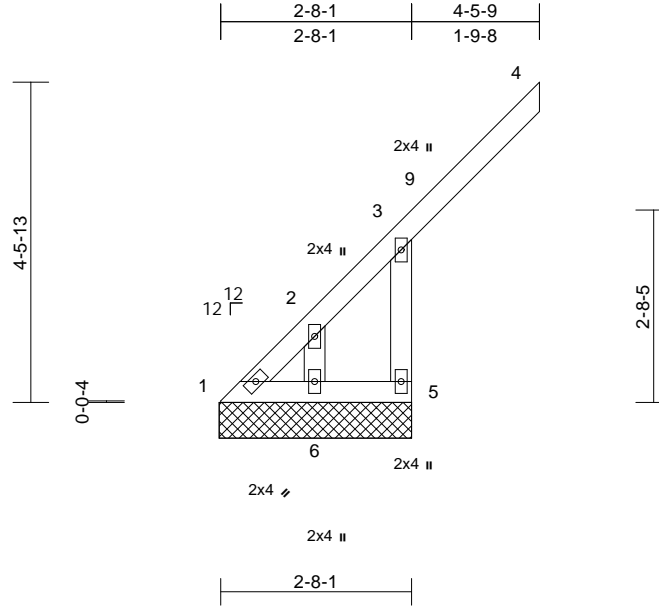


Job 24100066-01	Truss VL14	Truss Type Valley	Qty 1	Ply 1	14 Overhills Creek-Roof-1 BNS GRH Job Reference (optional)	168913561
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:32.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 lb	FT = 20%

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

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 2-8-5 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

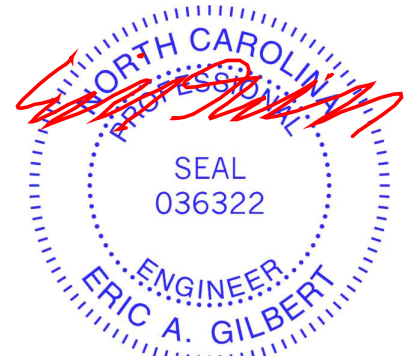
**REACTIONS** (size) 1=2-8-5, 5=2-8-5, 6=2-8-5  
 Max Horiz 1=125 (LC 10)  
 Max Uplift 1=8 (LC 9), 5=-204 (LC 10), 6=-99 (LC 19)  
 Max Grav 1=84 (LC 30), 5=305 (LC 19), 6=109 (LC 10)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-185/79, 2-3=-231/184, 3-4=-103/0, 3-5=-386/263  
 BOT CHORD 1-6=-76/58, 5-6=-38/41  
 WEBS 2-6=-215/166

- 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) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-5-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; ce=0.9; Cs=1.00; Ct=1.10
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 204 lb uplift at joint 5, 8 lb uplift at joint 1 and 99 lb uplift at joint 6.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.

**LOAD CASE(S)** Standard



October 15, 2024

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

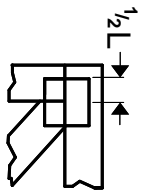
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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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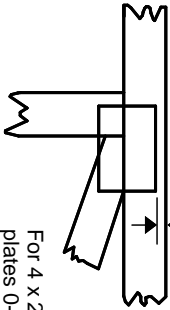
818 Soundside Road  
 Edenton, NC 27932

# 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.



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

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

## PLATE SIZE

4 X 4

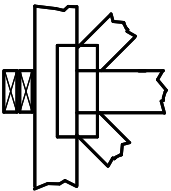
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



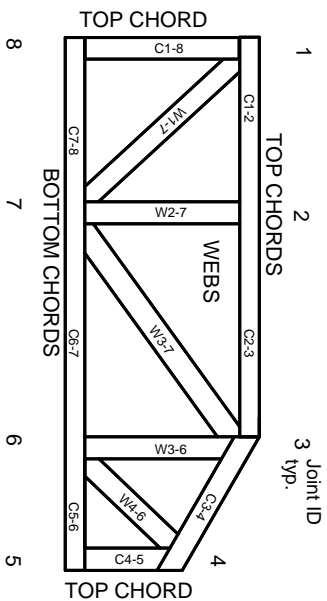
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

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

# Numbering System

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



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

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

# Product Code Approvals

ICC-ES Reports:

ESR-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.