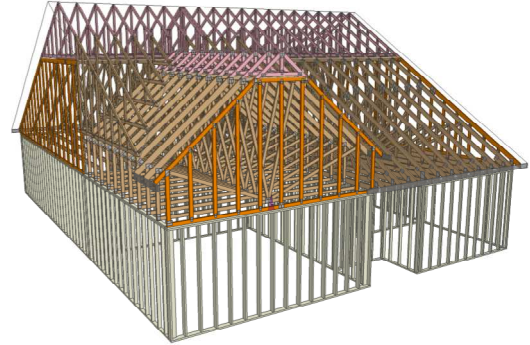




Carter Sanford Component Plant  
298 Harvey Faulk Rd  
Sanford, NC 27332

Phone #:919-775-1450



**Builder: DRB HOMES**

**Model: 81 FaNC**

**COOPER 3 ELV 6**

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

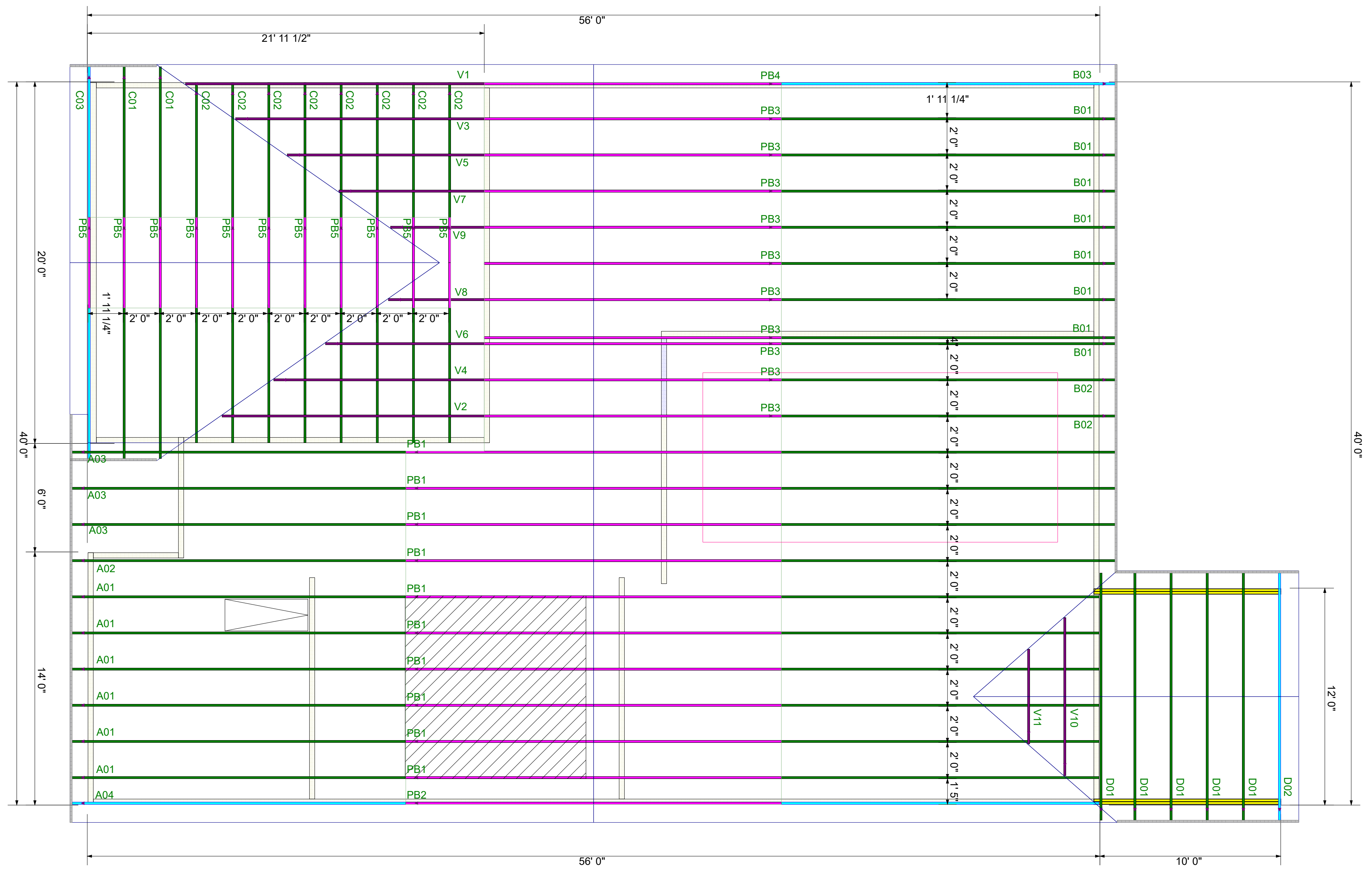
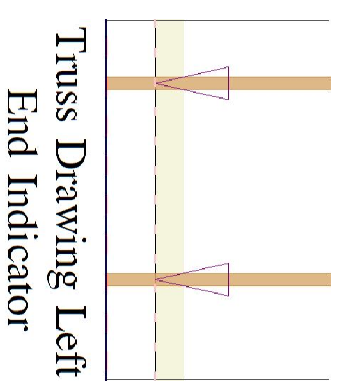
\*\* DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT.

\*\* 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.



\*\* GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

\*\* DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

\*\* TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.

Scale:	NTS
Date:	1/10/2024
Designer:	ND
Project Number:	23120147
Sheet Number:	1/1

DRB HOMES

81 FaNC  
COOPER 3 - ELV 6

**COMPONENT  
PLACEMENT PLAN**



**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

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

RE: 23120147  
 DRB GROUP - 81 FaNC

**Trenco**  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Customer: Project Name: 23120147  
 Lot/Block: Model:  
 Address: Subdivision:  
 City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.5  
 Wind Code: ASCE 7-16 Wind Speed: 130 mph  
 Roof Load: 40.0 psf Floor Load: N/A psf

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

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I58456832	A01	5/19/2023	21	I58456852	V4	5/19/2023
2	I58456833	A02	5/19/2023	22	I58456853	V5	5/19/2023
3	I58456834	A03	5/19/2023	23	I58456854	V6	5/19/2023
4	I58456835	A04	5/19/2023	24	I58456855	V7	5/19/2023
5	I58456836	B01	5/19/2023	25	I58456856	V8	5/19/2023
6	I58456837	B02	5/19/2023	26	I58456857	V9	5/19/2023
7	I58456838	B03	5/19/2023	27	I58456858	V10	5/19/2023
8	I58456839	C01	5/19/2023	28	I58456859	V11	5/19/2023
9	I58456840	C02	5/19/2023				
10	I58456841	C03	5/19/2023				
11	I58456842	D01	5/19/2023				
12	I58456843	D02	5/19/2023				
13	I58456844	PB1	5/19/2023				
14	I58456845	PB2	5/19/2023				
15	I58456846	PB3	5/19/2023				
16	I58456847	PB4	5/19/2023				
17	I58456848	PB5	5/19/2023				
18	I58456849	V1	5/19/2023				
19	I58456850	V2	5/19/2023				
20	I58456851	V3	5/19/2023				

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

Truss Design Engineer's Name: Gilbert, Eric

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

North Carolina COA: C-0844

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



May 19, 2023

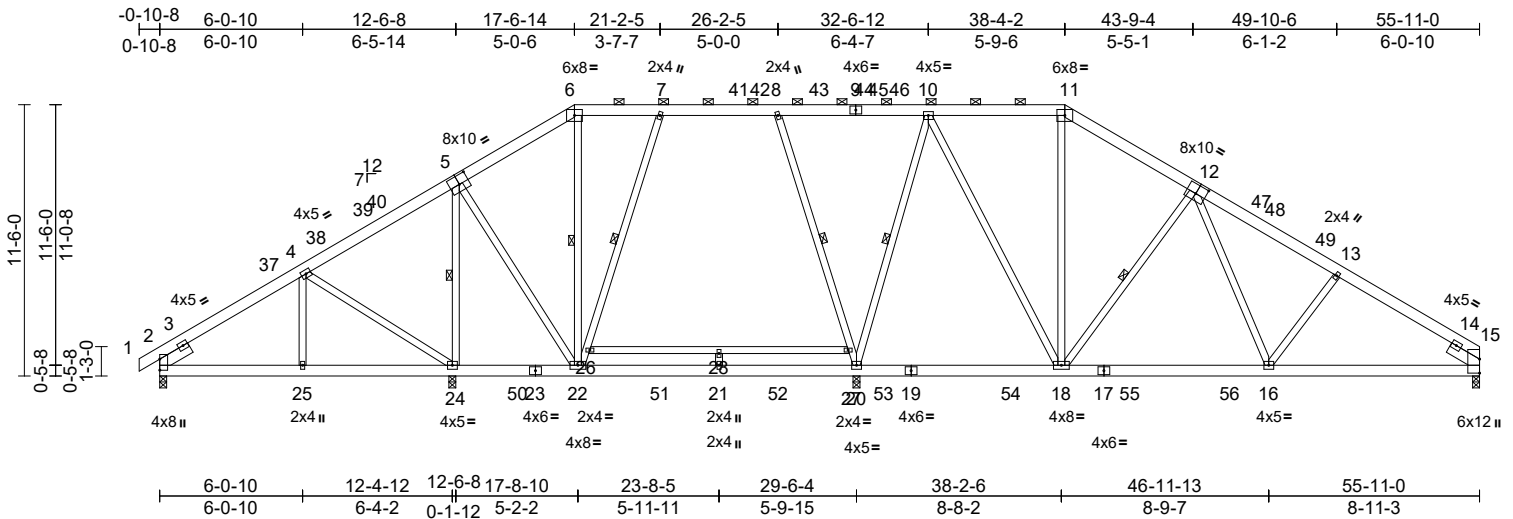
Job 23120147	Truss A01	Truss Type Piggyback Base	Qty 6	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456832
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:06

Page: 1

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Scale = 1:97.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.10	16-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.31	21-22	>662	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.04	15	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 475 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
22-6,22-7,20-8,20-10,18-10,18-11,26-27:2x4 SP No.2  
SLIDER Left 2x6 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-7-7 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-11.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 5-24, 6-22, 7-22, 8-20, 10-20, 12-18

**REACTIONS** (size) 2=0-3-8, 15=0-3-8, 20=0-3-8, 24=0-3-8  
Max Horiz 2=249 (LC 13)  
Max Uplift 2=-56 (LC 14), 15=-124 (LC 15), 20=-118 (LC 15), 24=-158 (LC 14)  
Max Grav 2=427 (LC 41), 15=1277 (LC 37), 20=1924 (LC 44), 24=1914 (LC 35)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/26, 2-4=-355/87, 4-6=-320/523, 6-7=-209/142, 7-8=-312/172, 8-10=-166/145, 10-11=-696/232, 11-13=-1605/227, 13-15=-1765/207  
BOT CHORD 2-25=-207/317, 24-25=-170/317, 22-24=-409/158, 21-22=-116/392, 20-21=-116/392, 18-20=-68/478, 16-18=-16/1155, 15-16=-96/1433

**WEBS** 4-25=0/282, 4-24=-655/165, 5-24=-1429/68, 5-22=0/934, 6-22=-231/42, 22-26=-345/117, 7-26=-333/130, 8-27=-493/142, 20-27=-505/129, 10-20=-1041/310, 10-18=-151/952, 11-18=-7/195, 12-18=-831/226, 12-16=-32/530, 13-16=-244/179, 26-28=-6/7, 27-28=-6/7, 21-28=0/42

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-10-8 to 5-1-6, Interior (1) 5-1-6 to 9-1-3, Exterior(2R) 9-1-3 to 26-1-7, Interior (1) 26-1-7 to 29-10-7, Exterior(2R) 29-10-7 to 46-9-13, Interior (1) 46-9-13 to 49-11-2, Exterior(2E) 49-11-2 to 55-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10  
4) Unbalanced snow loads have been considered for this design.  
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.  
6) 200.0lb AC unit load placed on the bottom chord, 23-8-8 from left end, supported at two points, 5-0-0 apart.  
7) Provide adequate drainage to prevent water ponding.  
8) All plates are 2x4 MT20 unless otherwise indicated.  
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 24, 20, and 15. This connection is for uplift only and does not consider lateral forces.  
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.  
**LOAD CASE(S)** Standard



May 19, 2023

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

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



818 Soundside Road  
Edenton, NC 27932

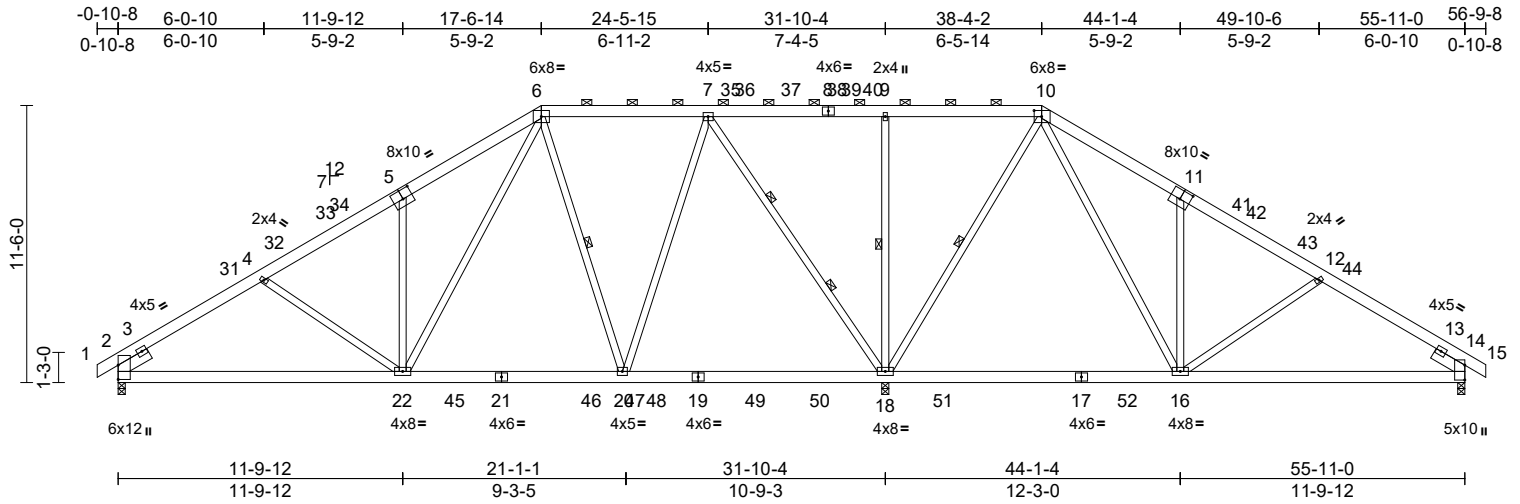
Job 23120147	Truss A02	Truss Type Piggyback Base	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456833
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:09

Page: 1

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Scale = 1:95.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.14	16-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.18	18-20	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.02	18	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 451 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 21-19:2x6 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 22-4,16-11,16-12,5-22:2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-7-5 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-10.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 16-18.  
WEBS 1 Row at midpt 9-18, 10-18, 6-20  
WEBS 2 Rows at 1/3 pts 7-18

**REACTIONS** (size) 2=0-3-8, 14=0-3-8, 18=0-3-8  
Max Horiz 2=-253 (LC 12)  
Max Uplift 2=-113 (LC 14), 14=-133 (LC 15), 18=-44 (LC 15)  
Max Grav 2=1402 (LC 35), 14=919 (LC 37), 18=3320 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/26, 2-4=-1855/182, 4-6=-1683/293, 6-7=-673/108, 7-9=0/681, 9-10=0/681, 10-12=-853/325, 12-14=-1102/213, 14-15=0/26  
BOT CHORD 2-22=-237/1552, 20-22=-67/867, 18-20=-81/532, 16-18=-196/175, 14-16=-86/883

**WEBS** 9-18=-592/185, 10-18=-1252/213, 4-22=-271/181, 6-22=-253/1185, 7-20=0/1237, 6-20=-648/239, 7-18=-1659/162, 11-16=-655/236, 10-16=-228/1321, 12-16=-347/181, 5-22=-679/235

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 5-1-6, Interior (1) 5-1-6 to 9-1-3, Exterior(2R) 9-1-3 to 26-0-9, Interior (1) 26-0-9 to 29-10-7, Exterior(2R) 29-10-7 to 46-9-13, Interior (1) 46-9-13 to 50-9-10, Exterior(2E) 50-9-10 to 56-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 200.0lb AC unit load placed on the bottom chord, 23-11-12 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 18, and 14. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



May 19, 2023

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

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



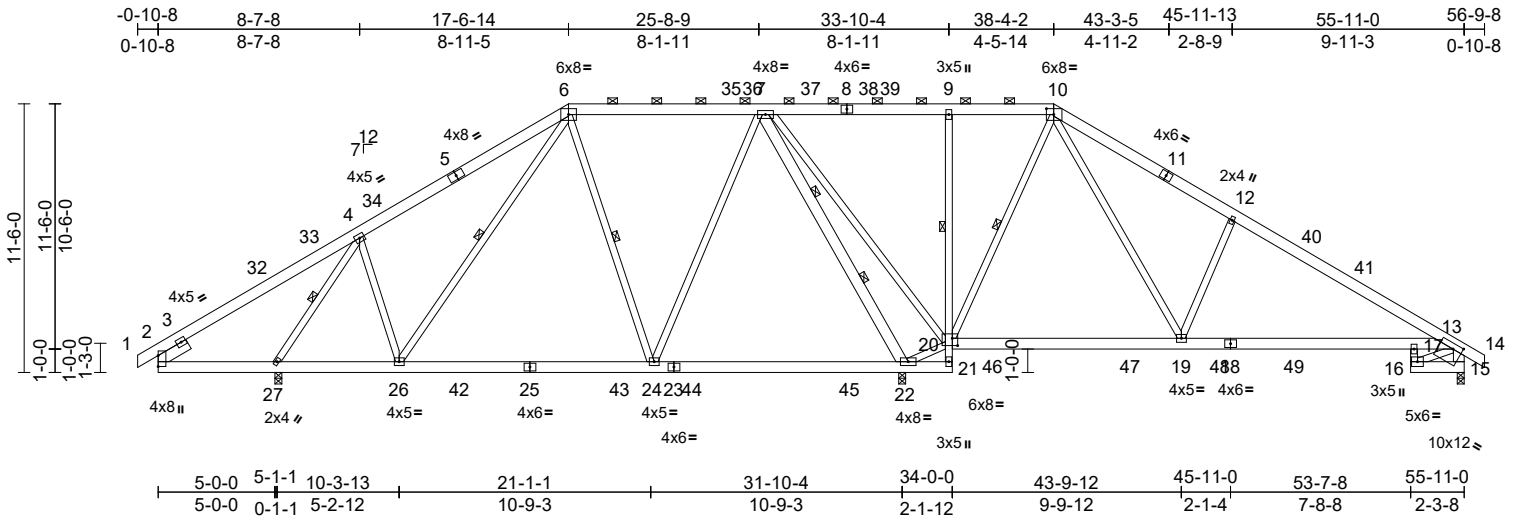
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss A03	Truss Type Piggyback Base	Qty 3	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456834
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:98.6  
Plate Offsets (X, Y): [10:0-3-12,0-3-0], [15:0-4-12,0-2-12], [20:0-2-12,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.19	17-19	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.36	17-19	>795	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.13	15	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 469 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 21-9:2x4 SP No.2, 17-16:2x4 SP No.3  
WEBS 2x4 SP No.2 \*Except\* 22-20,4-26,4-27,19-12,16-13:2x4 SP No.3, 15-13,7-22:2x6 SP No.2  
SLIDER Left 2x6 SP No.2 -- 1-6-0

**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 6-0-0 oc bracing. Except:  
1 Row at midpt 9-20  
WEBS 1 Row at midpt 10-20, 6-24, 4-27, 6-26  
WEBS 2 Rows at 1/3 pts 7-22

**REACTIONS** (size)  
15=0-3-8, 22=0-3-8, 27=0-3-8  
Max Horiz 27=279 (LC 13)  
Max Uplift 15=140 (LC 15), 22=-182 (LC 15), 27=-229 (LC 14)  
Max Grav 15=954 (LC 49), 22=2975 (LC 6), 27=1648 (LC 35)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/26, 2-4=-280/565, 4-6=-887/302, 6-7=-382/229, 7-9=0/562, 9-10=0/558, 10-12=-902/295, 12-13=-1106/206, 13-14=0/42, 13-15=-960/192  
BOT CHORD 2-27=-353/251, 26-27=-239/632, 24-26=-203/556, 22-24=-303/248, 21-22=-206/0, 20-21=-286/0, 9-20=-535/168, 19-20=-156/159, 17-19=-44/880, 13-17=-4/795, 16-17=-71/148, 15-16=-165/267

**WEBS** 20-22=-1089/395, 10-20=-1248/158, 7-22=-2221/164, 7-20=-127/896, 6-24=-440/142, 7-24=0/966, 4-26=-54/376, 4-27=-1632/262, 6-26=-95/365, 12-19=-794/306, 10-19=-180/1353, 13-16=-210/148

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-8-10, Interior (1) 4-8-10 to 9-7-15, Exterior(2R) 9-7-15 to 25-5-12, Interior (1) 25-5-12 to 30-5-4, Exterior(2R) 30-5-4 to 46-0-15, Interior (1) 46-0-15 to 51-2-6, Exterior(2E) 51-2-6 to 56-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10  
4) Unbalanced snow loads have been considered for this design.  
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.  
6) Provide adequate drainage to prevent water ponding.  
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15, 22, and 27. This connection is for uplift only and does not consider lateral forces.  
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



May 19, 2023

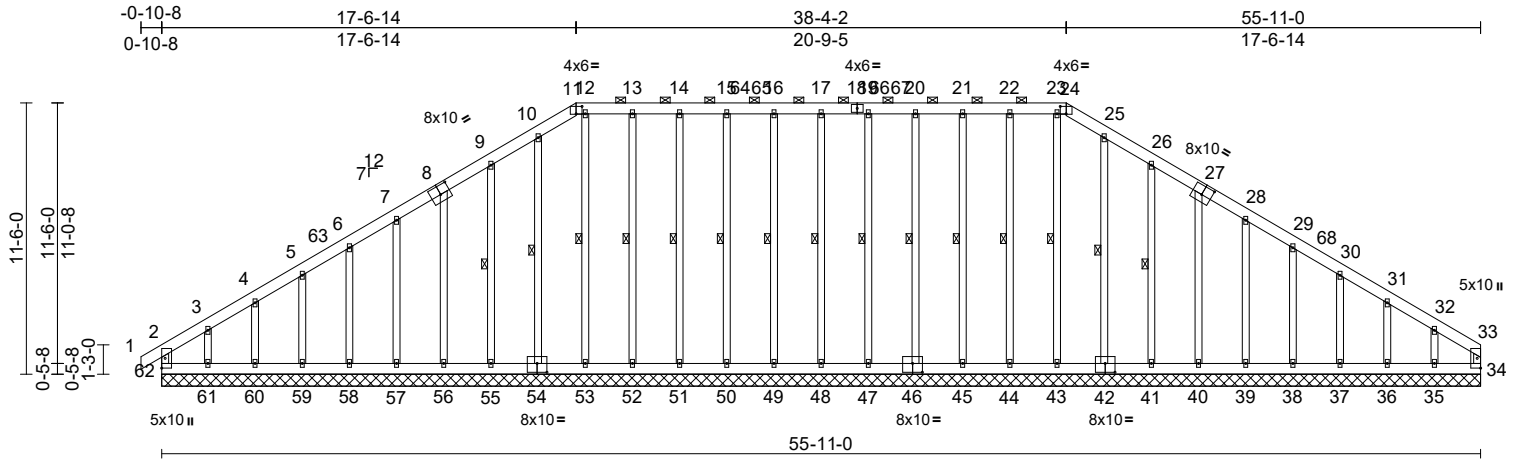
Job 23120147	Truss A04	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456835
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:12

Page: 1

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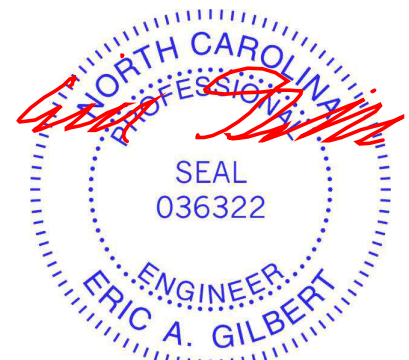


Scale = 1:97.7

Plate Offsets (X, Y): [8:0-5-0,0-4-8], [11:0-3-0,0-3-12], [24:0-3-0,0-3-12], [27:0-5-0,0-4-8], [42:0-5-0,0-4-8], [46:0-5-0,0-4-8], [54:0-5-0,0-4-8]

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	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	34	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 585 lb	FT = 20%

LUMBER		Max Uplift		TOP CHORD	
TOP CHORD	2x6 SP No.2	34=-60 (LC 13), 35=-132 (LC 15), 36=-32 (LC 15), 37=-52 (LC 15), 38=-49 (LC 15), 39=-39 (LC 15), 40=-53 (LC 15), 41=-62 (LC 15), 42=-10 (LC 15), 44=-26 (LC 11), 45=-26 (LC 11), 46=-26 (LC 10), 47=-27 (LC 11), 48=-24 (LC 10), 49=-25 (LC 11), 50=-25 (LC 11), 51=-28 (LC 10), 52=-24 (LC 10), 53=-1 (LC 11), 54=-15 (LC 14), 55=-60 (LC 14), 56=-53 (LC 14), 57=-39 (LC 14), 58=-49 (LC 14), 59=-53 (LC 14), 60=-27 (LC 14), 61=-155 (LC 14), 62=-127 (LC 10)		2-62=-182/99, 1-2=0/30, 2-3=-211/191, 3-4=-159/150, 4-5=-150/147, 5-6=-136/143, 6-7=-122/162, 7-9=-138/218, 9-10=-167/269, 10-11=-181/291, 11-12=-164/276, 12-13=-164/276, 13-14=-164/276, 14-15=-164/276, 15-16=-164/276, 16-17=-164/276, 17-19=-164/276, 19-20=-164/276, 20-21=-164/276, 21-22=-164/276, 22-23=-164/276, 23-24=-164/276, 24-25=-182/292, 25-26=-168/269, 26-28=-139/219, 28-29=-91/132, 29-30=-72/97, 30-31=-83/73, 31-32=-91/78, 32-33=-146/111, 33-34=-89/45	
BOT CHORD	2x6 SP No.2				
WEBS	2x4 SP No.3				
OTHERS	2x4 SP No.3 *Except* 48-17,49-16,50-15,51-14,52-13,53-12,47-19, 46-20,45-21,44-22,43-23:2x4 SP No.2				
BRACING		Max Grav			
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-24.	34=127 (LC 53), 35=213 (LC 29), 36=155 (LC 39), 37=165 (LC 43), 38=226 (LC 43), 39=220 (LC 43), 40=234 (LC 43), 41=253 (LC 43), 42=226 (LC 43), 43=171 (LC 50), 44=217 (LC 38), 45=220 (LC 38), 46=211 (LC 38), 47=171 (LC 38), 48=156 (LC 55), 49=173 (LC 38), 50=211 (LC 38), 51=218 (LC 38), 52=218 (LC 38), 53=183 (LC 52), 54=225 (LC 41), 55=252 (LC 41), 56=233 (LC 41), 57=219 (LC 41), 58=221 (LC 41), 59=165 (LC 24), 60=159 (LC 39), 61=226 (LC 28), 62=232 (LC 49)			
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.				
WEBS	1 Row at midpt 17-48, 16-49, 15-50, 14-51, 13-52, 12-53, 10-54, 9-55, 19-47, 20-46, 21-45, 22-44, 23-43, 25-42, 26-41				
REACTIONS (size)					
	34=55-11-0, 35=55-11-0, 36=55-11-0, 37=55-11-0, 38=55-11-0, 39=55-11-0, 40=55-11-0, 41=55-11-0, 42=55-11-0, 43=55-11-0, 44=55-11-0, 45=55-11-0, 46=55-11-0, 47=55-11-0, 48=55-11-0, 49=55-11-0, 50=55-11-0, 51=55-11-0, 52=55-11-0, 53=55-11-0, 54=55-11-0, 55=55-11-0, 56=55-11-0, 57=55-11-0, 58=55-11-0, 59=55-11-0, 60=55-11-0, 61=55-11-0, 62=55-11-0				
	Max Horiz 62=269 (LC 11)				
FORCES		(lb) - Maximum Compression/Maximum Tension			



May 19, 2023

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)



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRB GROUP - 81 FaNC	158456835
23120147	A04	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:12

Page: 2

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<p><b>BOT CHORD</b> 61-62=-104/119, 60-61=-104/119, 59-60=-104/119, 58-59=-104/119, 57-58=-104/119, 56-57=-104/119, 55-56=-105/118, 53-55=-105/118, 52-53=-105/118, 51-52=-105/118, 50-51=-105/118, 49-50=-105/118, 48-49=-105/118, 47-48=-105/118, 45-47=-105/118, 44-45=-105/118, 43-44=-105/118, 41-43=-105/118, 40-41=-105/118, 39-40=-103/117, 38-39=-103/117, 37-38=-103/117, 36-37=-103/117, 35-36=-103/117, 34-35=-103/117</p> <p><b>WEBS</b> 17-48=-116/48, 16-49=-134/48, 15-50=-172/48, 14-51=-179/51, 13-52=-179/48, 12-53=-143/25, 10-54=-187/38, 9-55=-214/83, 8-56=-194/77, 7-57=-181/62, 6-58=-183/73, 5-59=-123/73, 4-60=-120/64, 3-61=-146/121, 19-47=-134/49, 20-46=-172/49, 21-45=-179/51, 22-44=-179/49, 23-43=-131/2, 25-42=-187/33, 26-41=-215/84, 27-40=-195/76, 28-39=-181/62, 29-38=-187/73, 30-37=-127/73, 31-36=-119/66, 32-35=-147/112</p>	<p>14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 62, 60 lb uplift at joint 34, 24 lb uplift at joint 48, 25 lb uplift at joint 49, 25 lb uplift at joint 50, 28 lb uplift at joint 51, 24 lb uplift at joint 52, 1 lb uplift at joint 53, 15 lb uplift at joint 54, 60 lb uplift at joint 55, 53 lb uplift at joint 56, 39 lb uplift at joint 57, 49 lb uplift at joint 58, 53 lb uplift at joint 59, 27 lb uplift at joint 60, 155 lb uplift at joint 61, 27 lb uplift at joint 47, 26 lb uplift at joint 46, 26 lb uplift at joint 45, 26 lb uplift at joint 44, 10 lb uplift at joint 42, 62 lb uplift at joint 41, 53 lb uplift at joint 40, 39 lb uplift at joint 39, 49 lb uplift at joint 38, 52 lb uplift at joint 37, 32 lb uplift at joint 36 and 132 lb uplift at joint 35.</p> <p>15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.</p> <p>16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.</p> <p><b>LOAD CASE(S)</b> Standard</p>
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**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 5-1-6, Exterior(2N) 5-1-6 to 11-6-15, Corner(3R) 11-6-15 to 23-6-12, Exterior(2N) 23-6-12 to 32-4-4, Corner(3R) 32-4-4 to 44-2-7, Exterior(2N) 44-2-7 to 49-9-6, Corner(3E) 49-9-6 to 55-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) T CLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

**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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



818 Soundside Road  
Edenton, NC 27932

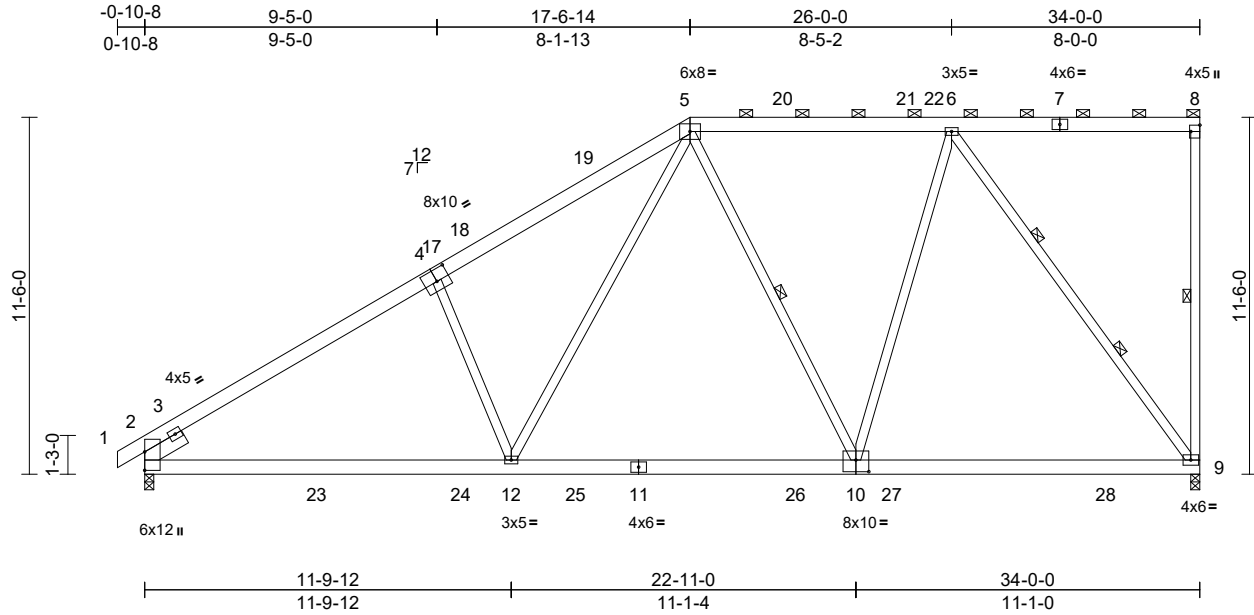


Job 23120147	Truss B01	Truss Type Piggyback Base	Qty 8	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456836
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:13  
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Page: 1



Scale = 1:74.2

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.20	9-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.32	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 268 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 6-9:2x4 SP No.1, 4-12:2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-1-1 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-8.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 8-9, 5-10  
WEBS 2 Rows at 1/3 pts 6-9

**REACTIONS**  
(size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=396 (LC 13)  
Max Uplift 2=-136 (LC 14), 9=-207 (LC 11)  
Max Grav 2=1661 (LC 40), 9=1772 (LC 37)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/26, 2-5=-2216/293, 5-6=-1167/220, 6-8=-151/162, 8-9=-275/91  
BOT CHORD 2-12=-363/1952, 9-12=-244/1245  
WEBS 5-12=-180/1113, 5-10=-432/166, 6-10=-16/989, 6-9=-1673/233, 4-12=-571/311

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

2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E)-0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-6-14, Exterior(2R) 14-6-14 to 20-6-14, Interior (1) 20-6-14 to 30-10-4, Exterior(2E) 30-10-4 to 33-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

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

5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.

6) Provide adequate drainage to prevent water ponding.

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

8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 2. This connection is for uplift only and does not consider lateral forces.

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

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



May 19, 2023

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

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



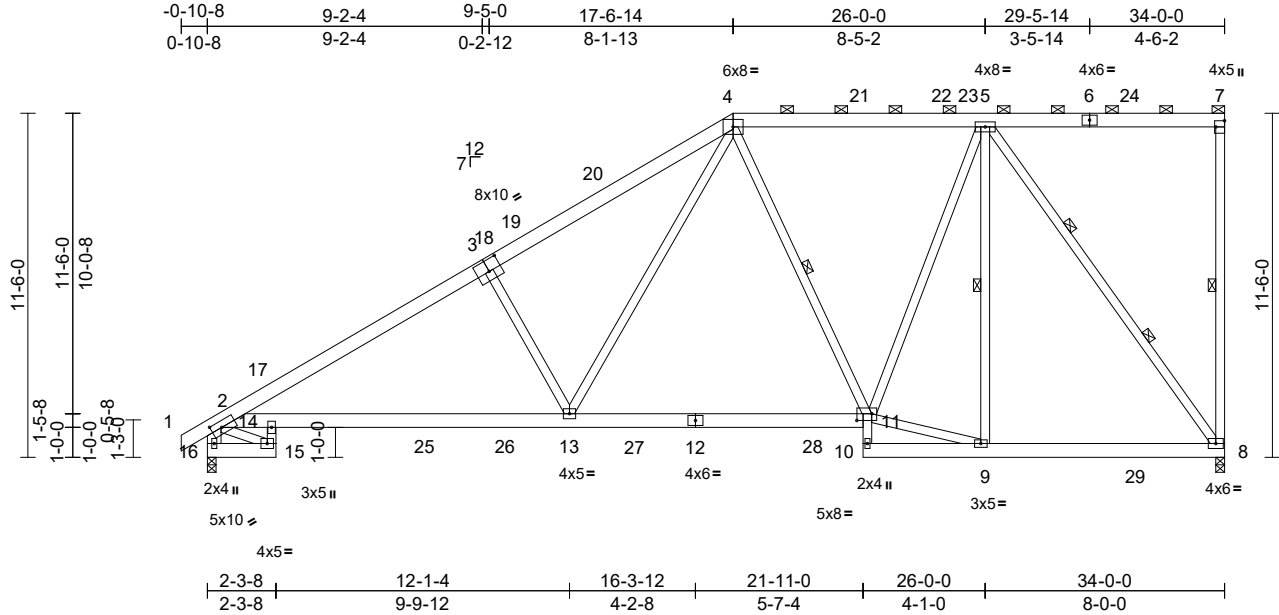
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss B02	Truss Type Piggyback Base	Qty 2	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456837
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:14  
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Page: 1



Scale = 1:77

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.21	13-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.40	13-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.17	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 290 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 15-14,11-10:2x4 SP No.3  
WEBS 2x4 SP No.2 \*Except\* 9-11,13-3,15-2:2x4 SP No.3, 8-5:2x4 SP No.1, 16-2:2x6 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-9-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-11-7 max.): 4-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
2-2-0 oc bracing: 13-14  
6-0-0 oc bracing: 9-10.  
WEBS 1 Row at midpt 7-8, 4-11, 5-9  
WEBS 2 Rows at 1/3 pts 5-8

**REACTIONS** (size) 8=0-3-8, 16=0-3-8  
Max Horiz 16=406 (LC 11)  
Max Uplift 8=-207 (LC 11), 16=-180 (LC 14)  
Max Grav 8=1728 (LC 37), 16=1652 (LC 40)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/42, 2-4=-2489/393, 4-5=-1219/239, 5-7=-149/162, 7-8=-274/91, 2-16=-1671/225  
BOT CHORD 15-16=-351/479, 14-15=-192/283, 2-14=-284/2127, 13-14=-351/2265, 11-13=-273/1315, 10-11=-7/25, 9-10=-143/0, 8-9=-205/981  
WEBS 4-11=-478/178, 9-11=-142/1107, 5-11=-89/893, 5-9=-81/216, 5-8=-1682/210, 3-13=-692/310, 4-13=-180/1351, 2-15=-386/333

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E)-0-10-8 to 2-1-8, Interior (1) 2-1-8 to 13-3-15, Exterior(2R) 13-3-15 to 21-9-12, Interior (1) 21-9-12 to 30-10-4, Exterior(2E) 30-10-4 to 33-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 16. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



May 19, 2023

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

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



818 Soundside Road  
Edenton, NC 27932

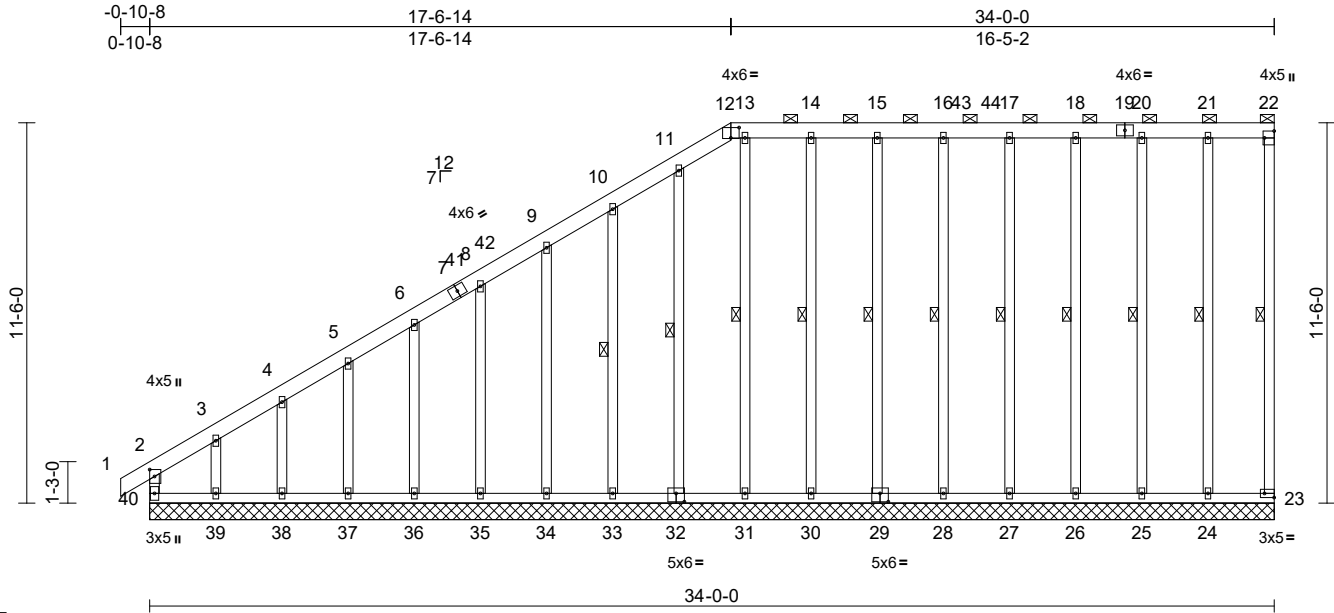
Job 23120147	Truss B03	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456838
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:14

Page: 1

ID:YRYnCOFH?hCFcyHRX82cVzphj9-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCdoi7J4zJC7f



Scale = 1:69.7

Plate Offsets (X, Y): [2:0-2-8,0-1-12], [12:0-3-0,0-3-12], [22:Edge,0-3-8], [23:Edge,0-1-8], [29:0-3-0,0-3-0], [32:0-3-0,0-3-0]

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	0.67	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	-0.01	23	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 353 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 22-23:2x4 SP No.2  
OTHERS 2x4 SP No.2 \*Except\*  
32-11,33-10,34-9,35-8,36-6,37-5,38-4,39-3:2  
x4 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.): 12-22.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 22-23, 21-24, 20-25, 18-26, 17-27, 16-28, 15-29, 14-30, 13-31, 11-32, 10-33

**REACTIONS** (size)  
23=34-0-0, 24=34-0-0, 25=34-0-0, 26=34-0-0, 27=34-0-0, 28=34-0-0, 29=34-0-0, 30=34-0-0, 31=34-0-0, 32=34-0-0, 33=34-0-0, 34=34-0-0, 35=34-0-0, 36=34-0-0, 37=34-0-0, 38=34-0-0, 39=34-0-0, 40=34-0-0  
Max Horiz 40=394 (LC 13)  
Max Uplift 23=-18 (LC 11), 24=-49 (LC 10), 25=-48 (LC 11), 26=-34 (LC 10), 27=-26 (LC 11), 28=-27 (LC 10), 29=-26 (LC 11), 30=-25 (LC 10), 31=-58 (LC 11), 32=-27 (LC 14), 33=-57 (LC 14), 34=-48 (LC 14), 35=-49 (LC 14), 36=-47 (LC 14), 37=-56 (LC 14), 38=-11 (LC 14), 39=-241 (LC 14), 40=-144 (LC 12)

Max Grav 23=86 (LC 35), 24=216 (LC 35), 25=219 (LC 35), 26=213 (LC 35), 27=203 (LC 35), 28=209 (LC 35), 29=217 (LC 35), 30=219 (LC 35), 31=175 (LC 35), 32=208 (LC 36), 33=217 (LC 36), 34=217 (LC 36), 35=193 (LC 36), 36=161 (LC 24), 37=165 (LC 24), 38=157 (LC 36), 39=258 (LC 40), 40=343 (LC 11)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-40=-267/116, 1-2=0/30, 2-3=-385/245, 3-4=-289/186, 4-5=-272/176, 5-6=-245/158, 6-8=-229/144, 8-9=-215/140, 9-10=-202/137, 10-11=-189/139, 11-12=-166/168, 12-13=-145/164, 13-14=-145/164, 14-15=-145/164, 15-16=-144/164, 16-17=-144/164, 17-18=-144/164, 18-20=-144/164, 20-21=-144/164, 21-22=-144/164, 22-23=-128/128  
BOT CHORD 39-40=-140/159, 38-39=-140/159, 37-38=-140/159, 36-37=-140/159, 35-36=-140/159, 34-35=-140/159, 33-34=-140/159, 31-33=-140/159, 30-31=-140/158, 28-30=-140/159, 27-28=-140/159, 26-27=-140/159, 25-26=-140/159, 24-25=-140/159, 23-24=-140/159  
WEBS 21-24=-174/102, 20-25=-181/52, 18-26=-174/51, 17-27=-164/48, 16-28=-171/49, 15-29=-178/50, 14-30=-179/49, 13-31=-136/82, 11-32=-169/50, 10-33=-180/79, 9-34=-177/72, 8-35=-154/72, 6-36=-123/72, 5-37=-124/74, 4-38=-119/53, 3-39=-177/191

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-0-0, Exterior(2N) 2-0-0 to 14-6-14, Corner(3R) 14-6-14 to 20-6-14, Exterior(2N) 20-6-14 to 30-10-4, Corner(3E) 30-10-4 to 33-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.



May 19, 2023

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)



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRB GROUP - 81 FaNC	I58456838
23120147	B03	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:14

Page: 2

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- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint 40, 18 lb uplift at joint 23, 49 lb uplift at joint 24, 48 lb uplift at joint 25, 34 lb uplift at joint 26, 26 lb uplift at joint 27, 27 lb uplift at joint 28, 26 lb uplift at joint 29, 25 lb uplift at joint 30, 58 lb uplift at joint 31, 27 lb uplift at joint 32, 57 lb uplift at joint 33, 48 lb uplift at joint 34, 49 lb uplift at joint 35, 47 lb uplift at joint 36, 56 lb uplift at joint 37, 11 lb uplift at joint 38 and 241 lb uplift at joint 39.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

**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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



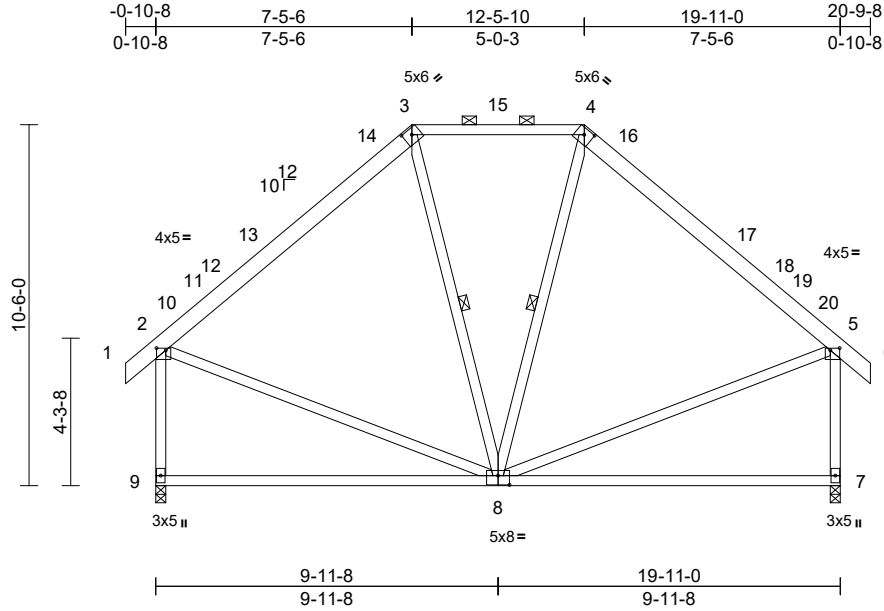
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss C01	Truss Type Piggyback Base	Qty 2	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456839
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 E Oct 7 2022 Print: 8.530 E Oct 7 2022 MiTek Industries, Inc. Fri May 19 13:29:31  
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Page: 1



Scale = 1:67

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

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	0.62	Vert(LL)	-0.19	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.38	7-8	>617	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	-0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 161 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2 \*Except\* 3-4:2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 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.): 3-4.

BOT CHORD Rigid ceiling directly applied or 6-7-7 oc bracing.

WEBS 1 Row at midpt 4-8, 3-8

**REACTIONS**

(size) 7=0-3-8, 9=0-3-8  
 Max Horiz 9=303 (LC 13)  
 Max Uplift 7=-80 (LC 15), 9=-80 (LC 14)  
 Max Grav 7=1017 (LC 40), 9=1017 (LC 40)

**FORCES**

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

TOP CHORD 2-3=-801/184, 3-4=-432/211, 4-5=-801/184, 2-9=-933/170, 5-7=-933/170

BOT CHORD 7-9=-266/290

WEBS 2-8=-75/438, 5-8=-76/438

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-2-8, Exterior(2R) 3-2-8 to 16-8-8, Interior (1) 16-8-8 to 17-9-8, Exterior(2E) 17-9-8 to 20-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) One RT4 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 9. This connection is for uplift only and does not consider lateral forces.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 12) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard



May 19, 2023

**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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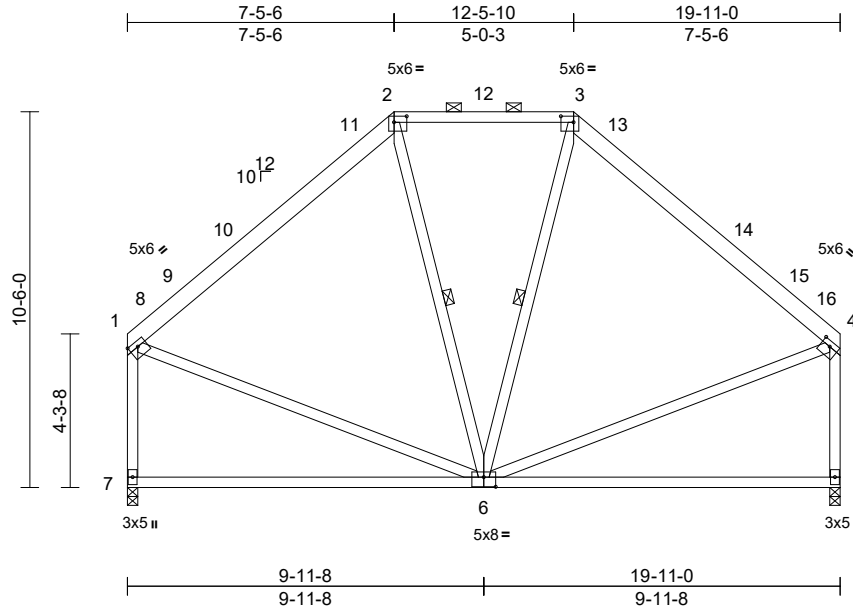
818 Soundside Road  
 Edenton, NC 27932

Job 23120147	Truss C02	Truss Type Piggyback Base	Qty 8	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456840
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:16  
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Page: 1



Scale = 1:64.4

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

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	Vert(LL)	-0.19	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.38	5-6	>616	180		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 156 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 6'-0" oc purlins, except end verticals, and 2'-0" oc purlins (6'-0" max.); 2-3.  
 BOT CHORD Rigid ceiling directly applied or 6'-7-7 oc bracing.

WEBS 1 Row at midpt 3-6, 2-6

**REACTIONS**

(size) 5=0-3-8, 7=0-3-8  
 Max Horiz 7=-283 (LC 12)  
 Max Uplift 5=-62 (LC 15), 7=-62 (LC 14)  
 Max Grav 5=956 (LC 39), 7=956 (LC 39)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-802/170, 2-3=-435/201, 3-4=-802/170, 1-7=-872/137, 4-5=-872/137  
 BOT CHORD 5-7=-247/270  
 WEBS 1-6=-78/445, 4-6=-79/445, 3-6=-117/145, 2-6=-117/145

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Exterior (2R) 3-1-12 to 16-9-4, Exterior(2E) 16-9-4 to 19-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Provide adequate drainage to prevent water ponding.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 5. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 11) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard



May 19, 2023

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

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



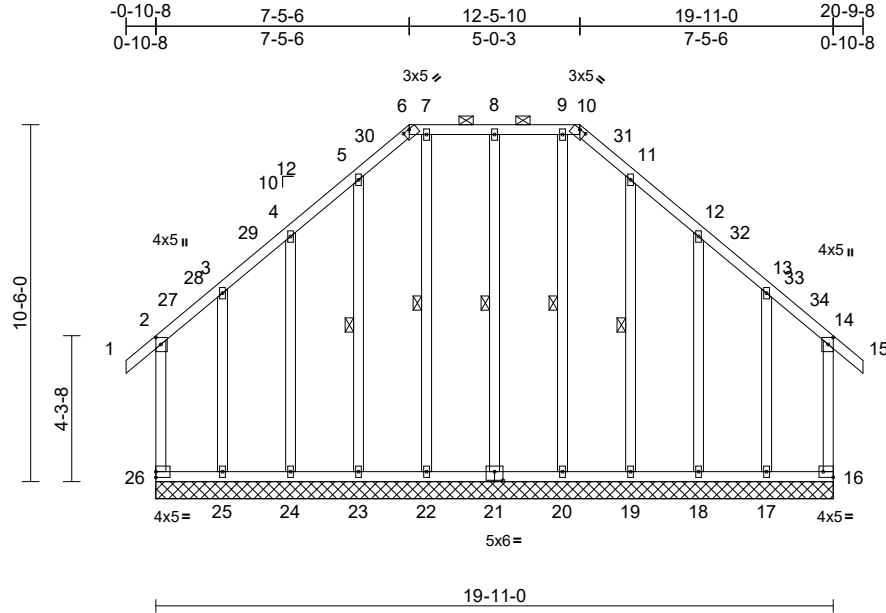
818 Soundside Road  
 Edenton, NC 27932

Job 23120147	Truss C03	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456841
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:16  
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Page: 1



Scale = 1:67.8

Plate Offsets (X, Y): [2:0-2-8,0-1-12], [6:0-2-8,0-0-3], [10:0-2-8,0-0-3], [14:0-2-8,0-1-12], [16:Edge,0-2-0], [21:0-3-0,0-3-0]

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	0.89	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horz(CT)	-0.01	16	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 189 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, and 2-0-0 oc purlins (6-0-0 max.): 6-10.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 8-21, 7-22, 5-23, 9-20, 11-19

REACTIONS	(size)
Max Horiz	26=294 (LC 12)
Max Uplift	16=340 (LC 11), 17=375 (LC 10), 18=71 (LC 15), 19=36 (LC 15), 21=41 (LC 10), 23=36 (LC 14), 24=72 (LC 14), 25=378 (LC 11), 26=343 (LC 10)
Max Grav	16=400 (LC 12), 17=494 (LC 13), 18=231 (LC 40), 19=230 (LC 50), 20=218 (LC 23), 21=238 (LC 39), 22=218 (LC 22), 23=231 (LC 48), 24=231 (LC 40), 25=497 (LC 12), 26=403 (LC 13)

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

TOP CHORD	
2-26	=-247/198, 1-2=0/38, 2-3=-208/207, 3-4=-117/213, 4-5=-154/297, 5-6=-165/329, 6-7=-134/287, 7-8=-134/287, 8-9=-134/287, 9-10=-134/287, 10-11=-165/329, 11-12=-154/297, 12-13=-117/213, 13-14=-206/205, 14-15=0/38, 14-16=-245/196
BOT CHORD	
25-26	=-163/145, 24-25=-163/145, 23-24=-163/145, 22-23=-163/145, 20-22=-163/145, 19-20=-163/145, 18-19=-163/145, 17-18=-163/145, 16-17=-163/145
WEBS	
8-21	=-199/89, 7-22=-179/29, 5-23=-185/57, 4-24=-192/110, 3-25=-296/209, 9-20=-179/29, 11-19=-185/57, 12-18=-192/110, 13-17=-295/208

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 1-11-8, Interior (1) 1-11-8 to 3-2-8, Exterior(2R) 3-2-8 to 16-8-8, Interior (1) 16-8-8 to 17-9-8, Exterior(2E) 17-9-8 to 20-9-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.



May 19, 2023

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.sbccomponents.com)

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

Job	Truss	Truss Type	Qty	Ply	DRB GROUP - 81 FaNC	I58456841
23120147	C03	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:16  
ID:mTC1KUI0mrxfallau1\_zozhpVg-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 343 lb uplift at joint 26, 340 lb uplift at joint 16, 41 lb uplift at joint 21, 36 lb uplift at joint 23, 72 lb uplift at joint 24, 378 lb uplift at joint 25, 36 lb uplift at joint 19, 71 lb uplift at joint 18 and 375 lb uplift at joint 17.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 17) Attic room checked for L/360 deflection.

**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



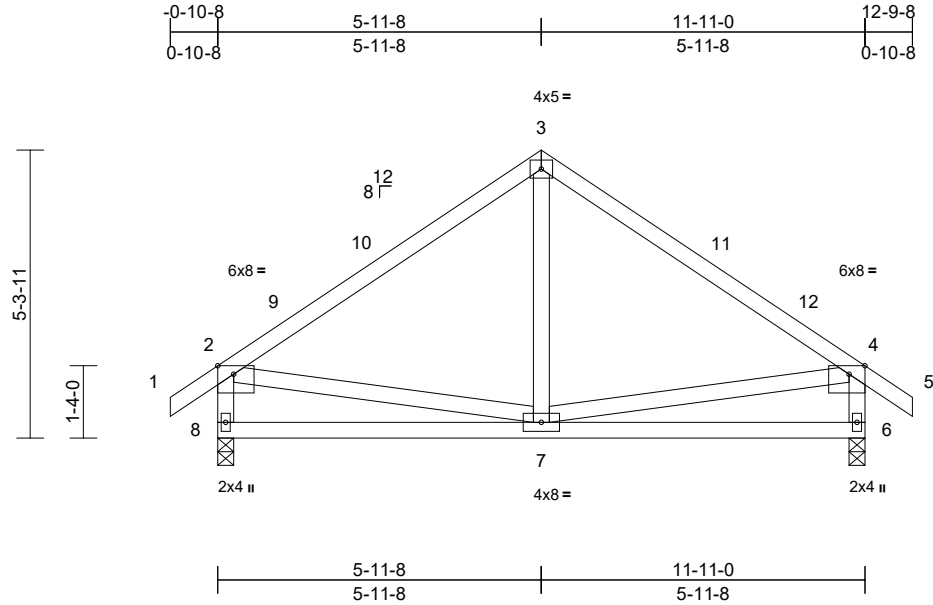
Job 23120147	Truss D01	Truss Type Common	Qty 5	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456842
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:17

Page: 1

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Scale = 1:42.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.02	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.05	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 69 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

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

Max Horiz 8=145 (LC 13)  
 Max Uplift 6=-56 (LC 15), 8=-56 (LC 14)  
 Max Grav 6=619 (LC 22), 8=619 (LC 21)

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

TOP CHORD 1-2=0/34, 2-3=-539/122, 3-4=-539/122, 4-5=0/34, 2-8=-566/164, 4-6=-566/164  
 BOT CHORD 7-8=-153/263, 6-7=-85/252  
 WEBS 3-7=0/208, 2-7=-36/249, 4-7=-39/249

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 2-11-8, Exterior(2R) 2-11-8 to 8-11-8, Interior (1) 8-11-8 to 9-9-8, Exterior(2E) 9-9-8 to 12-9-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 19, 2023

**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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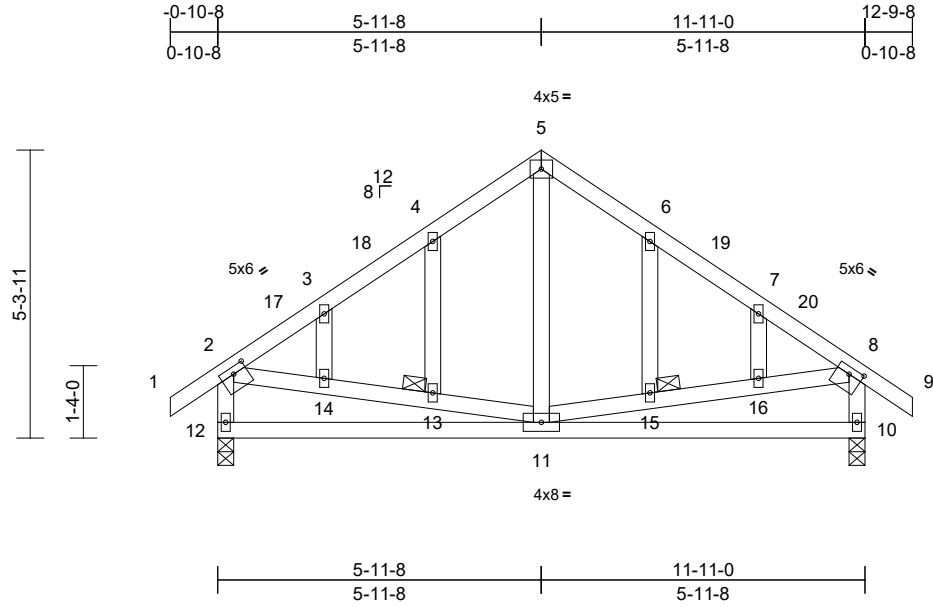
818 Soundside Road  
 Edenton, NC 27932

Job 23120147	Truss D02	Truss Type Common Structural Gable	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456843
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Carter Components (Sanford), Sanford, NC - 27332,

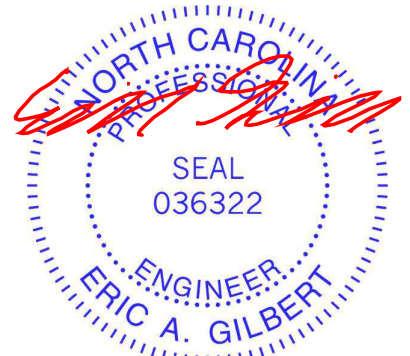
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Page: 1



Scale = 1:42.4		Plate Offsets (X, Y): [2:0-3-0,0-1-8], [8:0-3-0,0-1-8]										
<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.02	11-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.05	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 81 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.
- JOINTS**
- 1 Brace at Jt(s): 13, 15
- REACTIONS** (size)
- 10=0-3-8, 12=0-3-8
  - Max Horiz 12=-145 (LC 12)
  - Max Uplift 10=-56 (LC 15), 12=-56 (LC 14)
  - Max Grav 10=619 (LC 22), 12=619 (LC 21)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/34, 2-3=-511/79, 3-4=-436/98, 4-5=-380/134, 5-6=-380/134, 6-7=-436/98, 7-8=-511/79, 8-9=0/34, 2-12=-563/162, 8-10=-563/162
  - BOT CHORD 11-12=-135/232, 10-11=-57/206
  - WEBS 5-11=-11/209, 2-14=-22/253, 13-14=-22/250, 11-13=-27/254, 11-15=-31/254, 15-16=-26/250, 8-16=-25/253, 4-13=-82/43, 3-14=-23/13, 6-15=-82/43, 7-16=-23/13
- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E)-0-10-8 to 1-11-8, Interior (1) 1-11-8 to 2-11-8, Exterior(2R) 2-11-8 to 8-11-8, Interior (1) 8-11-8 to 9-9-8, Exterior(2E) 9-9-8 to 12-9-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12 and 10. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



May 19, 2023

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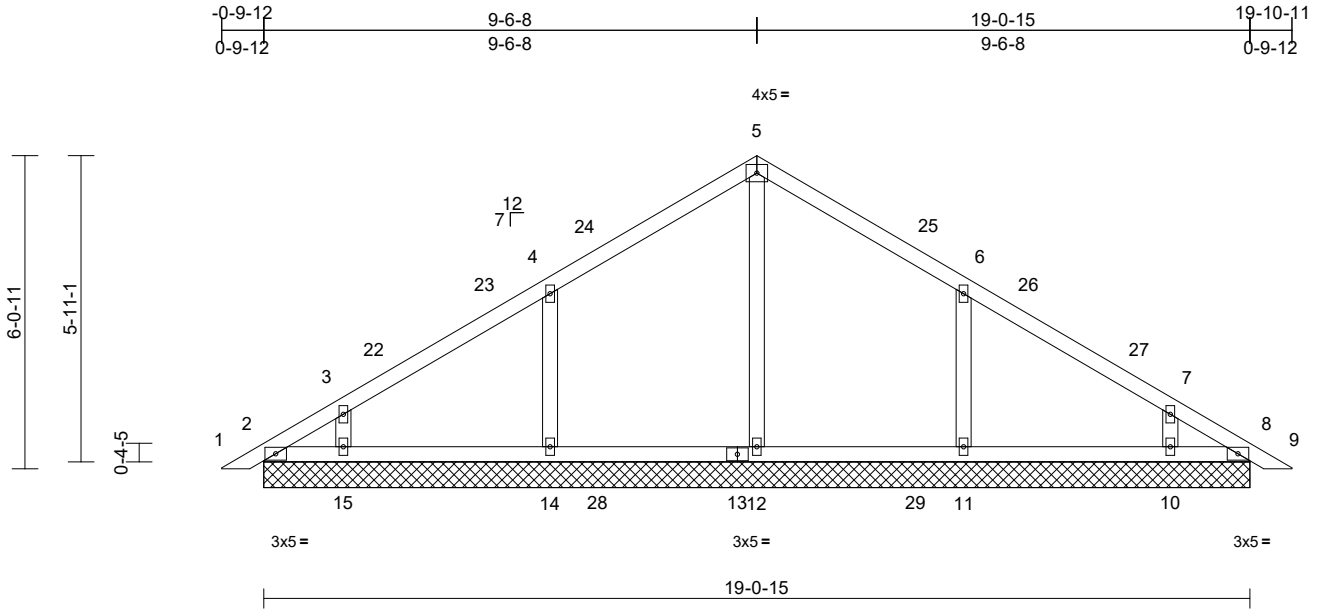
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss PB1	Truss Type Piggyback	Qty 10	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456844
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:18  
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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	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	19	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 83 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=19-0-15, 8=19-0-15, 10=19-0-15, 11=19-0-15, 12=19-0-15, 14=19-0-15, 15=19-0-15, 16=19-0-15, 19=19-0-15  
 Max Horiz 2=-138 (LC 12), 16=-138 (LC 12)  
 Max Uplift 2=-36 (LC 10), 8=-9 (LC 11), 10=-79 (LC 15), 11=-115 (LC 15), 14=-116 (LC 14), 15=-80 (LC 14), 16=-36 (LC 10), 19=-9 (LC 11)  
 Max Grav 2=89 (LC 25), 8=75 (LC 22), 10=310 (LC 25), 11=479 (LC 6), 12=374 (LC 24), 14=479 (LC 5), 15=311 (LC 24), 16=89 (LC 25), 19=75 (LC 22)

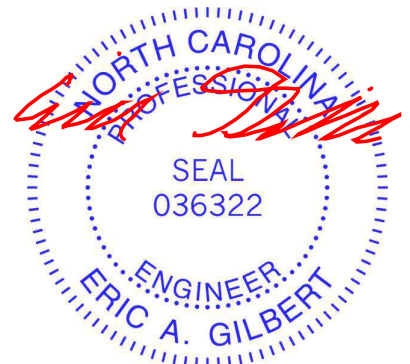
**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/16, 2-3=-127/108, 3-4=-130/87, 4-5=-147/128, 5-6=-147/111, 6-7=-90/52, 7-8=-91/55, 8-9=0/16  
 BOT CHORD 2-15=-39/90, 14-15=-39/90, 12-14=-39/90, 11-12=-39/90, 10-11=-39/90, 8-10=-39/90  
 WEBS 5-12=-203/0, 4-14=-395/165, 3-15=-206/129, 6-11=-395/164, 7-10=-206/128

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 7-4-10, Exterior(2R) 7-4-10 to 13-4-10, Interior (1) 13-4-10 to 17-5-10, Exterior(2E) 17-5-10 to 20-5-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4'-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- N/A

14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.  
**LOAD CASE(S)** Standard

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



May 19, 2023

**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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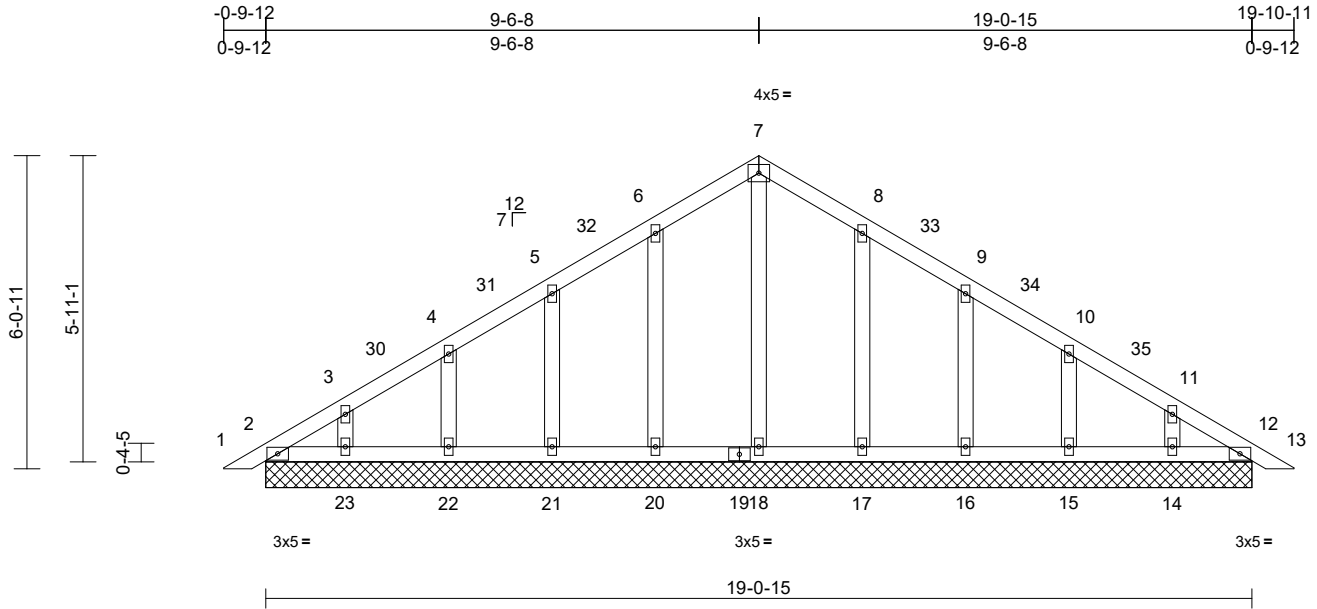
818 Soundside Road  
 Edenton, NC 27932

Job 23120147	Truss PB2	Truss Type Piggyback	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456845
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:18  
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Page: 1



Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 101 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=19-0-15, 12=19-0-15, 14=19-0-15, 15=19-0-15, 16=19-0-15, 17=19-0-15, 18=19-0-15, 20=19-0-15, 21=19-0-15, 22=19-0-15, 23=19-0-15, 24=19-0-15, 27=19-0-15  
Max Horiz 2=-134 (LC 12), 24=-134 (LC 12)  
Max Uplift 2=-24 (LC 10), 14=-47 (LC 15), 15=-49 (LC 15), 16=-50 (LC 15), 17=-50 (LC 15), 20=-51 (LC 14), 21=-49 (LC 14), 22=-49 (LC 14), 23=-49 (LC 14), 24=-24 (LC 10)  
Max Grav 2=102 (LC 25), 12=91 (LC 22), 14=151 (LC 25), 15=164 (LC 29), 16=219 (LC 22), 17=245 (LC 22), 18=149 (LC 27), 20=245 (LC 21), 21=219 (LC 21), 22=164 (LC 24), 23=153 (LC 24), 24=102 (LC 25), 27=91 (LC 22)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-114/100, 3-4=-96/86, 4-5=-87/74, 5-6=-76/99, 6-7=-82/124, 7-8=-82/116, 8-9=-64/68, 9-10=-49/36, 10-11=-57/34, 11-12=-79/48, 12-13=0/16

**BOT CHORD** 2-23=-42/92, 22-23=-42/92, 21-22=-42/92, 20-21=-42/92, 18-20=-42/92, 17-18=-42/92, 16-17=-42/92, 15-16=-42/92, 14-15=-42/92, 12-14=-42/92  
**WEBS** 7-18=-110/5, 6-20=-206/74, 5-21=-180/72, 4-22=-126/74, 3-23=-110/64, 8-17=-206/73, 9-16=-180/72, 10-15=-126/74, 11-14=-110/63

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 7-4-10, Exterior(2R) 7-4-10 to 13-4-10, Interior (1) 13-4-10 to 17-5-10, Exterior(2E) 17-5-10 to 20-5-10 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

12) N/A

- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



May 19, 2023

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

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



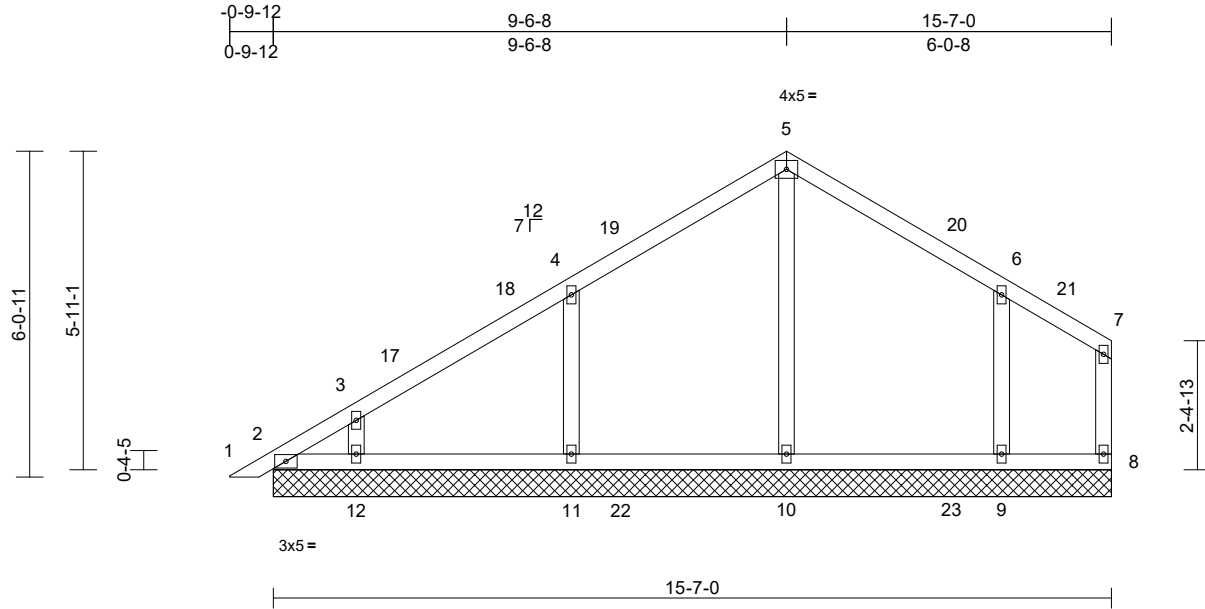
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss PB3	Truss Type Piggyback	Qty 10	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456846
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:19  
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Page: 1



Scale = 1:42.8

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	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	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	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 73 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 6-0-0 oc bracing.

**REACTIONS** (size)  
2=15-7-0, 8=15-7-0, 9=15-7-0, 10=15-7-0, 11=15-7-0, 12=15-7-0, 13=15-7-0  
Max Horiz 2=163 (LC 13), 13=163 (LC 13)  
Max Uplift 2=-58 (LC 10), 8=-12 (LC 14), 9=-104 (LC 15), 11=-116 (LC 14), 12=-80 (LC 14), 13=-58 (LC 10)  
Max Grav 2=94 (LC 25), 8=34 (LC 25), 9=436 (LC 22), 10=431 (LC 24), 11=478 (LC 5), 12=313 (LC 24), 13=94 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-159/147, 3-4=-143/132, 4-5=-124/140, 5-6=-114/139, 6-7=-44/78, 7-8=-34/28  
BOT CHORD 2-12=-34/38, 11-12=-34/38, 10-11=-34/38, 9-10=-34/38, 8-9=-34/38  
WEBS 5-10=-244/26, 4-11=-394/164, 3-12=-207/129, 6-9=-369/145

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 7-4-10, Exterior(2R) 7-4-10 to 13-3-6, Exterior (2E) 13-3-6 to 16-3-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- N/A

14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard

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



May 19, 2023

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

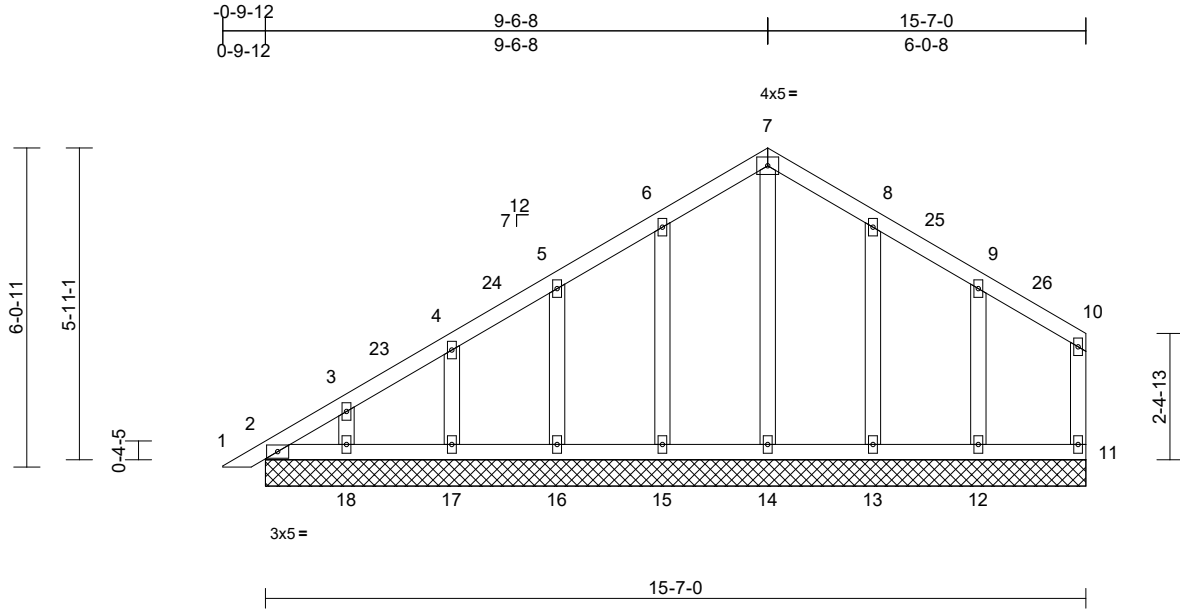
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss PB4	Truss Type Piggyback	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456847
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:19  
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Page: 1



Scale = 1:43.8

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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 88 lb	FT = 20%

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

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

**REACTIONS** (size)  
2=15-7-0, 11=15-7-0, 12=15-7-0,  
13=15-7-0, 14=15-7-0, 15=15-7-0,  
16=15-7-0, 17=15-7-0, 18=15-7-0,  
19=15-7-0  
Max Horiz 2=158 (LC 13), 19=158 (LC 13)  
Max Uplift 2=-46 (LC 10), 11=-12 (LC 14),  
12=-56 (LC 15), 13=-49 (LC 15),  
14=-3 (LC 11), 15=-51 (LC 14),  
16=-49 (LC 14), 17=-49 (LC 14),  
18=-49 (LC 14), 19=-46 (LC 10)  
Max Grav 2=116 (LC 25), 11=76 (LC 25),  
12=226 (LC 22), 13=244 (LC 22),  
14=160 (LC 24), 15=245 (LC 21),  
16=218 (LC 21), 17=164 (LC 24),  
18=154 (LC 24), 19=116 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-149/132, 3-4=-138/118,  
4-5=-125/115, 5-6=-112/147, 6-7=-116/203,  
7-8=-116/203, 8-9=-88/147, 9-10=-57/76,  
10-11=-63/66  
BOT CHORD 2-18=-31/41, 17-18=-31/41, 16-17=-31/41,  
15-16=-31/41, 14-15=-31/41, 13-14=-31/41,  
12-13=-31/41, 11-12=-31/41  
WEBS 7-14=-137/40, 6-15=-207/88, 5-16=-180/91,  
4-17=-126/94, 3-18=-111/93, 8-13=-205/89,  
9-12=-186/117

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-3-11 to 3-3-11, Exterior(2N) 3-3-11 to 7-4-10, Corner(3R) 7-4-10 to 13-3-6, Corner (3E) 13-3-6 to 16-3-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- N/A

- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



May 19, 2023

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

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



818 Soundside Road  
Edenton, NC 27932

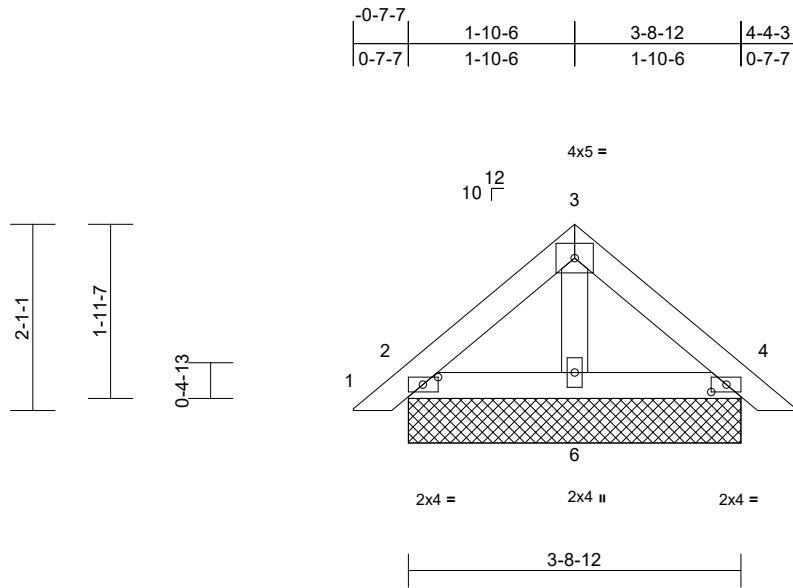
Job 23120147	Truss PB5	Truss Type Piggyback	Qty 11	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456848
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:20

Page: 1

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Scale = 1:25.8

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

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 lb	FT = 20%

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

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 5-0-3 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=3-8-12, 4=3-8-12, 6=3-8-12, 7=3-8-12, 10=3-8-12  
 Max Horiz 2=-44 (LC 12), 7=-44 (LC 12)  
 Max Uplift 2=-19 (LC 14), 4=-25 (LC 15), 7=-19 (LC 14), 10=-25 (LC 15)  
 Max Grav 2=154 (LC 21), 4=154 (LC 22), 6=126 (LC 21), 7=154 (LC 21), 10=154 (LC 22)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/23, 2-3=-77/56, 3-4=-77/56, 4-5=0/23  
 BOT CHORD 2-6=-10/46, 4-6=-8/46  
 WEBS 3-6=-50/2

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

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- N/A

- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



May 19, 2023

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

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



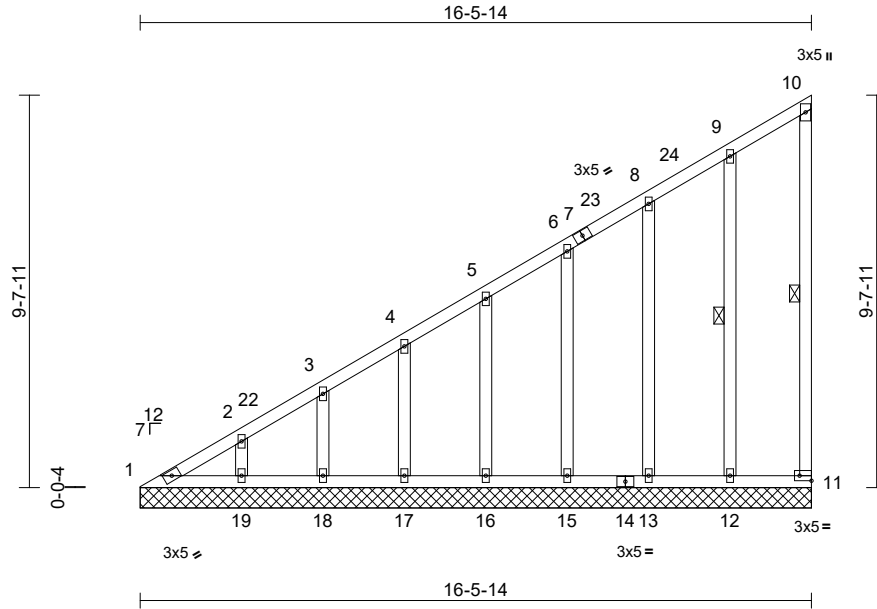
818 Soundside Road  
 Edenton, NC 27932

Job 23120147	Truss V1	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456849
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:20  
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Page: 1



Scale = 1:56.6

Plate Offsets (X, Y): [11: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	0.93	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.00	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 112 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.

WEBS 1 Row at midpt 10-11, 9-12

**REACTIONS** (size)  
1=16-5-14, 11=16-5-14,  
12=16-5-14, 13=16-5-14,  
15=16-5-14, 16=16-5-14,  
17=16-5-14, 18=16-5-14,  
19=16-5-14  
Max Horiz 1=323 (LC 11)  
Max Uplift 1=-35 (LC 10), 11=-53 (LC 13),  
12=-56 (LC 14), 13=-44 (LC 14),  
15=-51 (LC 14), 16=-48 (LC 14),  
17=-48 (LC 14), 18=-55 (LC 14),  
19=-30 (LC 14)  
Max Grav 1=145 (LC 24), 11=87 (LC 20),  
12=241 (LC 20), 13=223 (LC 20),  
15=164 (LC 20), 16=161 (LC 23),  
17=164 (LC 23), 18=150 (LC 23),  
19=202 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-278/186, 2-3=-258/165, 3-4=-231/149,  
4-5=-204/131, 5-6=-188/118, 6-8=-173/113,  
8-9=-167/115, 9-10=-115/120, 10-11=-72/40  
BOT CHORD 1-19=-133/163, 18-19=-133/163,  
17-18=-133/163, 16-17=-133/163,  
15-16=-133/163, 13-15=-133/163,  
12-13=-133/163, 11-12=-133/163

WEBS 9-12=-200/78, 8-13=-185/110, 6-15=-125/83,  
5-16=-122/88, 4-17=-124/86, 3-18=-119/90,  
2-19=-135/86

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-7 to 3-0-7, Exterior(2N) 3-0-7 to 13-4-9, Corner(3E) 13-4-9 to 16-4-9 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 11, 35 lb uplift at joint 1, 56 lb uplift at joint 12, 44 lb uplift at joint 13, 51 lb uplift at joint 15, 48 lb uplift at joint 16, 48 lb uplift at joint 17, 55 lb uplift at joint 18 and 30 lb uplift at joint 19.

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

**LOAD CASE(S)** Standard



May 19, 2023

**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.sbccomponents.com)



818 Soundside Road  
Edenton, NC 27932



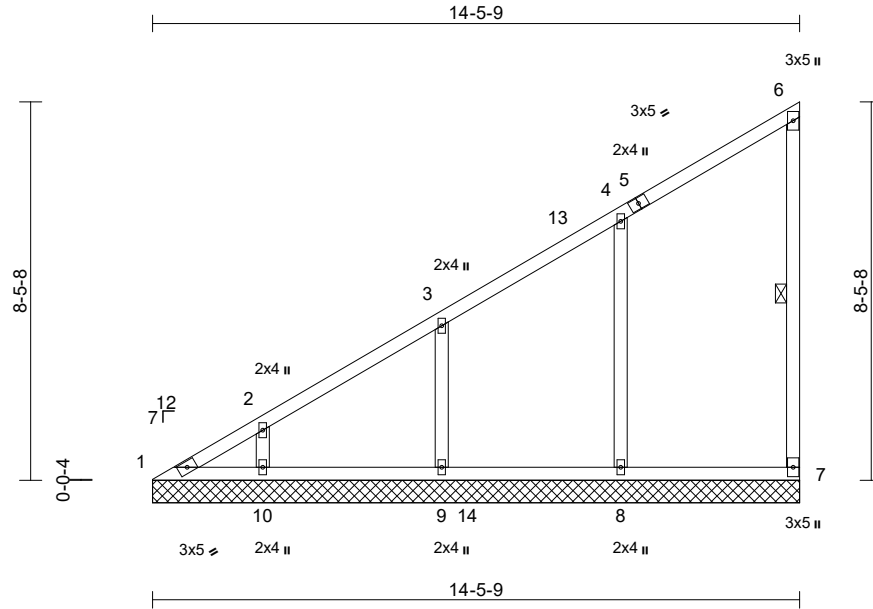
Job 23120147	Truss V2	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456850
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:20

Page: 1

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Scale = 1:51.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 72 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.  
WEBS 1 Row at midpt 6-7

**REACTIONS** (size)  
1=14-5-9, 7=14-5-9, 8=14-5-9,  
9=14-5-9, 10=14-5-9  
Max Horiz 1=292 (LC 11)  
Max Uplift 1=-34 (LC 10), 7=-42 (LC 11),  
8=-107 (LC 14), 9=-104 (LC 14),  
10=-67 (LC 14)  
Max Grav 1=127 (LC 24), 7=207 (LC 5),  
8=530 (LC 5), 9=417 (LC 23),  
10=341 (LC 23)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-255/174, 2-3=-220/148, 3-4=-183/118,  
4-6=-149/115, 6-7=-159/47  
BOT CHORD 1-10=-120/134, 9-10=-120/134,  
8-9=-120/134, 7-8=-120/134  
WEBS 4-8=-387/140, 3-9=-254/156, 2-10=-223/118

**NOTES**  
1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 11-4-4, Exterior(2E) 11-4-4 to 14-4-4 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=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 1, 42 lb uplift at joint 7, 107 lb uplift at joint 8, 104 lb uplift at joint 9 and 67 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 19, 2023

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

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

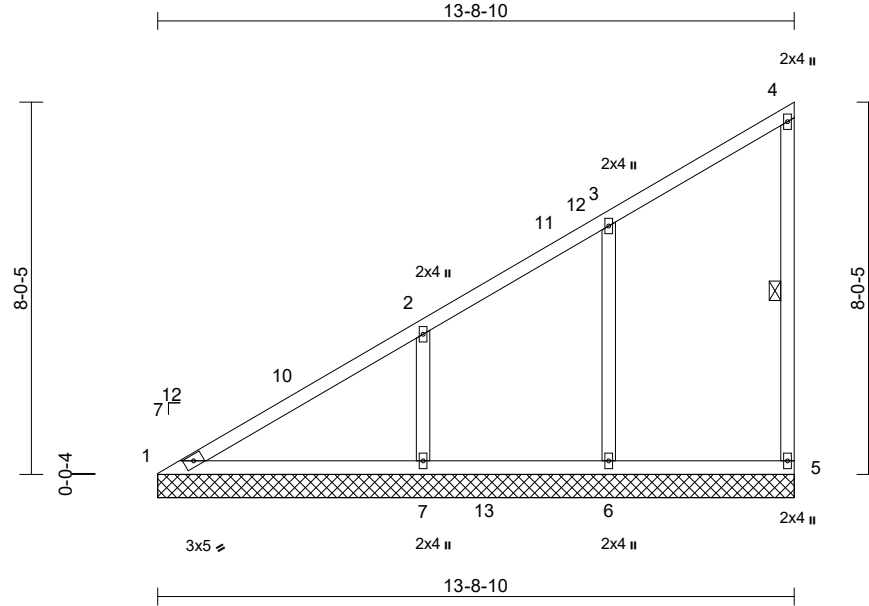
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss V3	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456851
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:49.7

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	0.62	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.34	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 66 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.  
WEBS 1 Row at midpt 4-5

**REACTIONS** (size)  
1=13-8-10, 5=13-8-10, 6=13-8-10, 7=13-8-10  
Max Horiz 1=276 (LC 11)  
Max Uplift 5=-40 (LC 11), 6=-41 (LC 16), 7=-110 (LC 14)  
Max Grav 1=238 (LC 24), 5=216 (LC 5), 6=475 (LC 5), 7=578 (LC 23)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-394/173, 2-3=-179/105, 3-4=-143/104, 4-5=-164/47  
BOT CHORD 1-7=-114/320, 6-7=-114/127, 5-6=-114/127  
WEBS 3-6=-362/106, 2-7=-338/148

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 9-4-7, Exterior(2R) 9-4-7 to 13-7-5 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=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 5, 41 lb uplift at joint 6 and 110 lb uplift at joint 7.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 19, 2023

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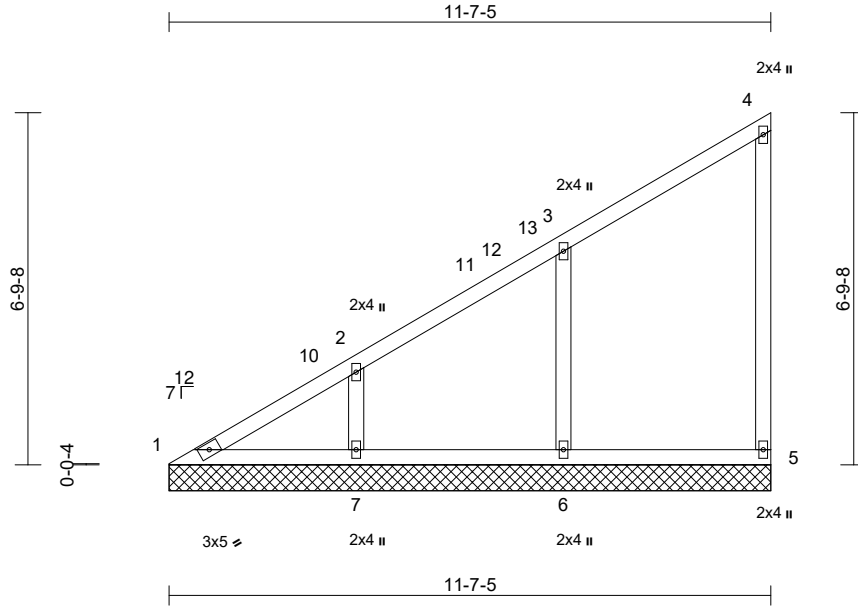
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss V4	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456852
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:44.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 54 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=11-7-5, 5=11-7-5, 6=11-7-5, 7=11-7-5
Max Horiz 1=232 (LC 11)
Max Uplift 1=-6 (LC 10), 5=-34 (LC 11), 6=-54 (LC 14), 7=-92 (LC 14)
Max Grav 1=159 (LC 24), 5=210 (LC 5), 6=494 (LC 5), 7=398 (LC 23)

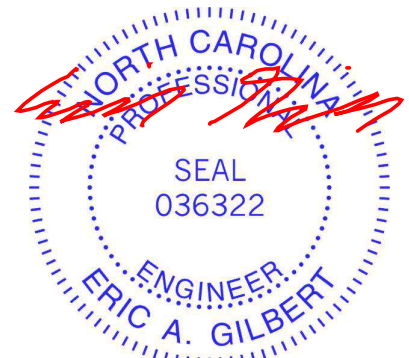
**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-252/136, 2-3=-158/110, 3-4=-135/86, 4-5=-159/45
BOT CHORD	1-7=-97/181, 6-7=-97/108, 5-6=-97/108
WEBS	3-6=-389/134, 2-7=-246/132

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 7-3-1, Exterior(2R) 7-3-1 to 11-5-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 5, 6 lb uplift at joint 1, 54 lb uplift at joint 6 and 92 lb uplift at joint 7.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 19, 2023

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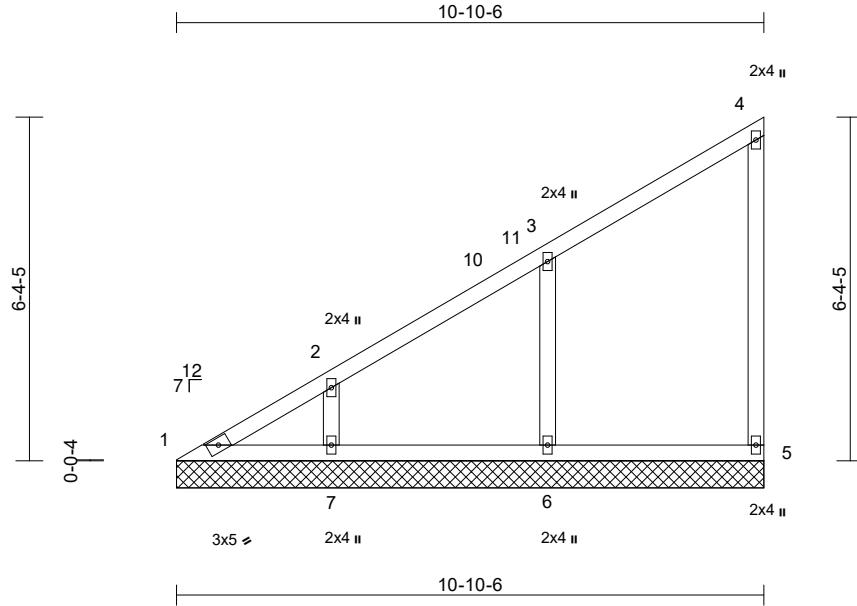
Job 23120147	Truss V5	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456853
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Carter Components (Sanford), Sanford, NC - 27332,

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Scale = 1:42.6

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	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 49 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=10-10-6, 5=10-10-6, 6=10-10-6, 7=10-10-6	
Max Horiz	1=216 (LC 11)
Max Uplift	1=-13 (LC 10), 5=-33 (LC 11), 6=-62 (LC 14), 7=-83 (LC 14)
Max Grav	1=127 (LC 24), 5=209 (LC 5), 6=503 (LC 5), 7=352 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-196/128, 2-3=-151/110, 3-4=-132/80, 4-5=-158/44
BOT CHORD	1-7=-91/125, 6-7=-91/101, 5-6=-91/101
WEBS	3-6=-393/143, 2-7=-223/127

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 2-10-13, Interior (1) 2-10-13 to 6-6-2, Exterior(2R) 6-6-2 to 10-9-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 5, 13 lb uplift at joint 1, 62 lb uplift at joint 6 and 83 lb uplift at joint 7.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 19, 2023

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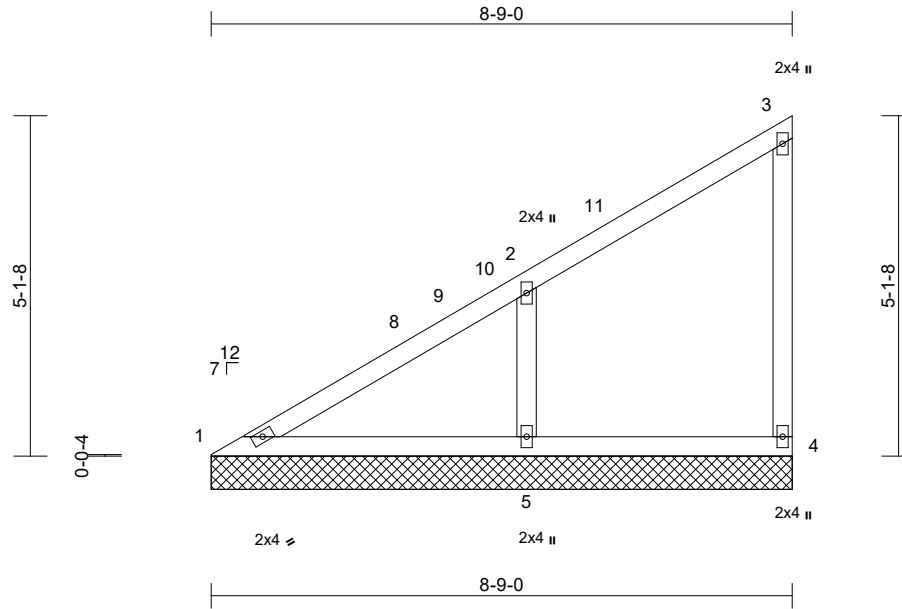
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss V6	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456854
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:22  
ID:9eP49nUaHIFJB4BPipajJzTR1W-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f

Page: 1



Scale = 1:34.7

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	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	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	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 37 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=8-9-0, 4=8-9-0, 5=8-9-0  
Max Horiz 1=172 (LC 11)  
Max Uplift 4=-27 (LC 11), 5=-111 (LC 14)  
Max Grav 1=159 (LC 24), 4=168 (LC 20), 5=563 (LC 20)

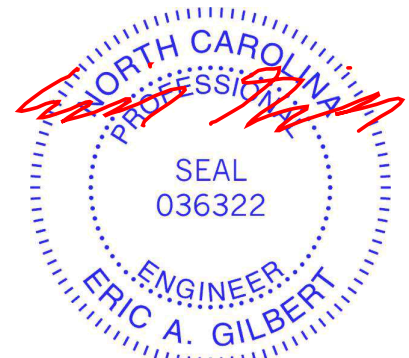
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-252/124, 2-3=-122/62, 3-4=-146/45  
BOT CHORD 1-5=-77/214, 4-5=-77/84  
WEBS 2-5=-435/188

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 4-4-12, Exterior(2R) 4-4-12 to 8-7-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4'-0'-0" oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-0"-0" tall by 2'-0"-0" wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 4 and 111 lb uplift at joint 5.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 19, 2023

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818 Soundside Road  
Edenton, NC 27932

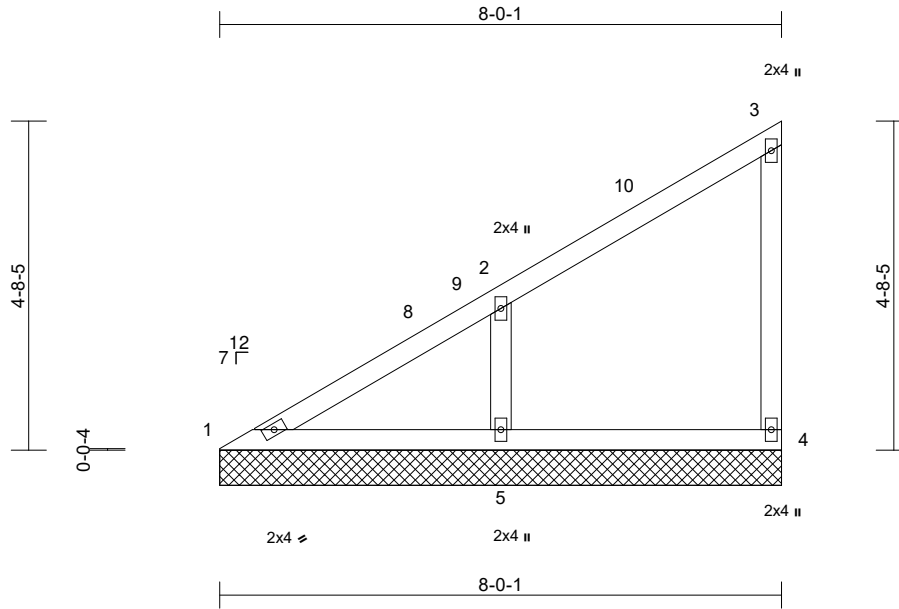
Job 23120147	Truss V7	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456855
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:22

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Scale = 1:32.8

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	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 34 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=8-0-1, 4=8-0-1, 5=8-0-1  
Max Horiz 1=157 (LC 11)  
Max Uplift 4=-25 (LC 11), 5=-105 (LC 14)  
Max Grav 1=134 (LC 24), 4=177 (LC 20), 5=524 (LC 20)

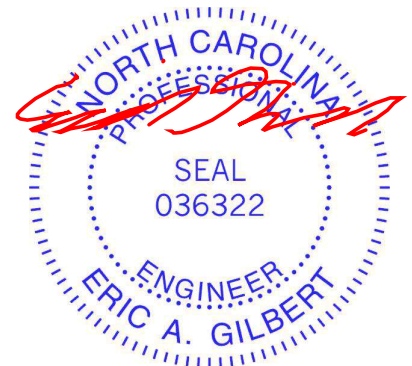
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-207/113, 2-3=-115/57, 3-4=-151/44  
BOT CHORD 1-5=-71/167, 4-5=-71/77  
WEBS 2-5=-413/185

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 3-7-13, Exterior(2R) 3-7-13 to 7-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4'-0'-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-0'-0 tall by 2'-0'-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 4 and 105 lb uplift at joint 5.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 19, 2023

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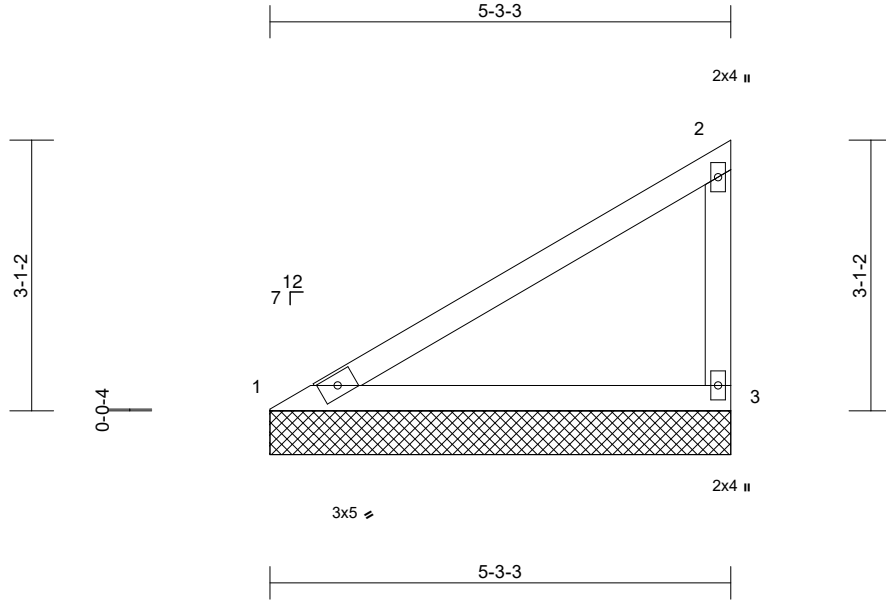
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss V8	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456856
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:22  
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Page: 1



Scale = 1:26.3

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	0.57	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.57	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 20 lb	FT = 20%	

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-3-3 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 1=5-3-3, 3=5-3-3  
Max Horiz 1=99 (LC 11)  
Max Uplift 1=-18 (LC 14), 3=-47 (LC 14)  
Max Grav 1=303 (LC 20), 3=303 (LC 20)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

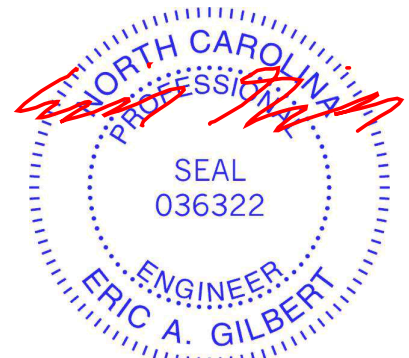
TOP CHORD 1-2=-471/85, 2-3=-208/66  
BOT CHORD 1-3=-84/399

#### NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 3 and 18 lb uplift at joint 1.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 19, 2023

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

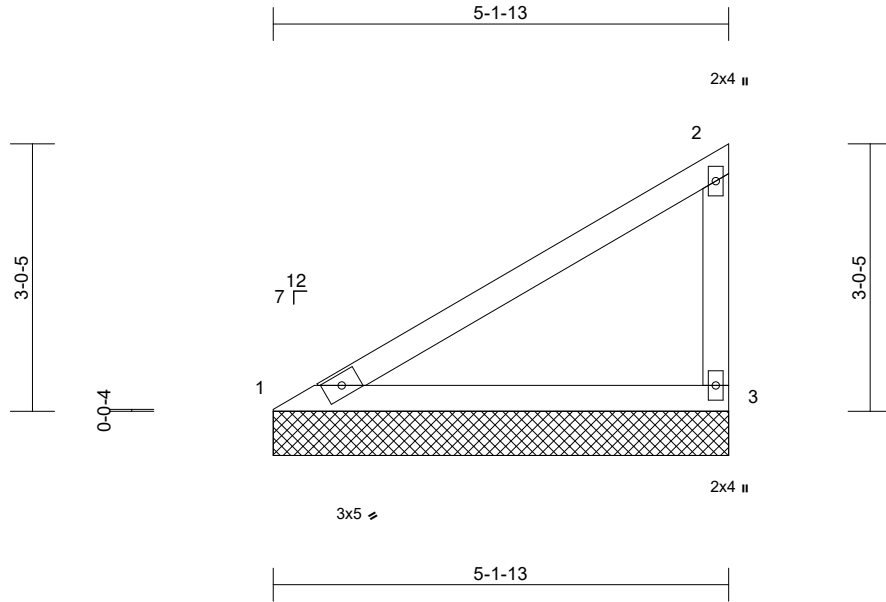
818 Soundside Road  
Edenton, NC 27932

Job 23120147	Truss V9	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 81 FaNC Job Reference (optional)	158456857
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Fri May 19 09:44:23  
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Page: 1



Scale = 1:26

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	0.54	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 19 lb	FT = 20%	

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-1-13 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 1=5-1-13, 3=5-1-13  
Max Horiz 1=97 (LC 11)  
Max Uplift 1=-17 (LC 14), 3=-46 (LC 14)  
Max Grav 1=296 (LC 20), 3=296 (LC 20)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-459/83, 2-3=-203/65  
BOT CHORD 1-3=-82/389

#### NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 3 and 17 lb uplift at joint 1.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 19, 2023

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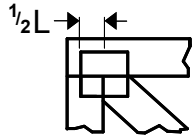




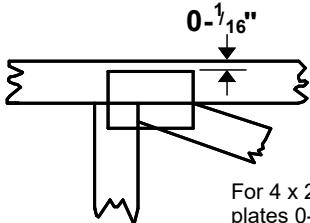


# Symbols

## 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.

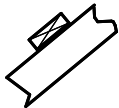
\* Plate location details available in MiTek software or upon request.

## PLATE SIZE

4 x 4

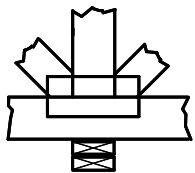
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

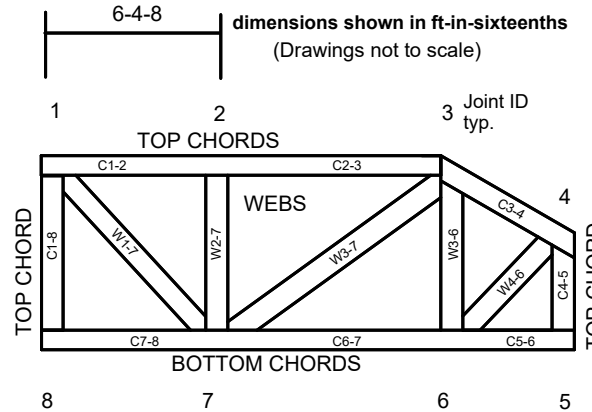


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

- ANSI/TPI1: 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



**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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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**MiTek**®

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-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/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 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/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.