

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 22080003  
DRB GROUP - 121 FaNC

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

Pages or sheets covered by this seal: I53485631 thru I53485665

My license renewal date for the state of North Carolina is December 31, 2022.

North Carolina COA: C-0844



August 5, 2022

Gilbert, Eric

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

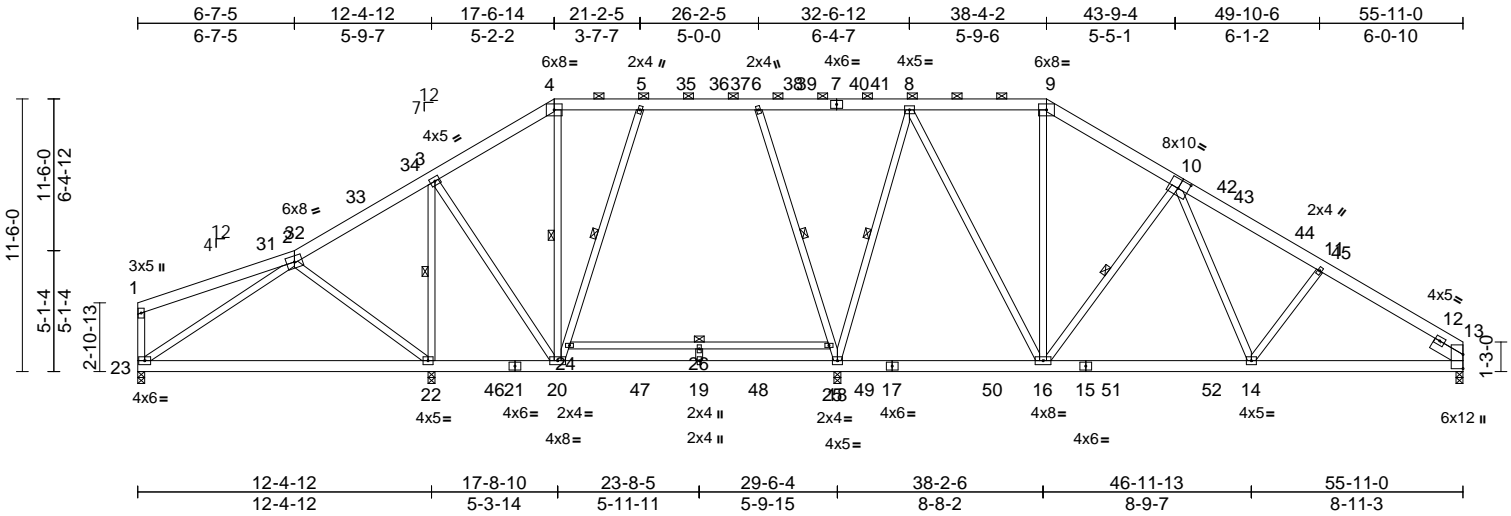
Job 22080003	Truss A01	Truss Type Piggyback Base	Qty 6	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485631
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:33

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Scale = 1:97.2

Plate Offsets (X, Y): [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)	-0.17	22-23	>861	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.35	22-23	>422	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.04	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 476 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
18-6,18-8,16-8,16-9,20-4,20-5,24-25:2x4 SP No.2  
SLIDER Right 2x6 SP No.2 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-8-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-9.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
6-0-0 oc bracing: 22-23,20-22.  
WEBS 1 Row at midpt 3-22, 6-18, 8-18, 10-16, 4-20, 5-20, 24-25

**REACTIONS** (size) 13=0-3-8, 18=0-3-8, 22=0-3-8, 23=0-3-8  
Max Horiz 23=263 (LC 11)  
Max Uplift 13=-103 (LC 15), 18=-73 (LC 10), 22=-73 (LC 14), 23=-87 (LC 10)  
Max Grav 13=1266 (LC 52), 18=1961 (LC 6), 22=1874 (LC 34), 23=419 (LC 43)

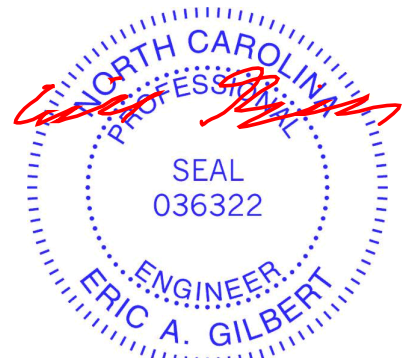
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-177/92, 2-3=-42/484, 3-4=-346/158, 4-5=-199/182, 5-6=-302/218, 6-8=-157/176, 8-9=-673/331, 9-11=-1587/350, 11-13=-1745/332, 1-23=-313/130  
BOT CHORD 22-23=-264/121, 20-22=-386/203, 19-20=-109/380, 18-19=-109/380, 16-18=-55/487, 14-16=-56/1141, 13-14=-183/1417

**WEBS** 2-22=-394/225, 3-22=-1369/168, 6-25=-521/143, 18-25=-533/130, 8-18=-1042/321, 8-16=-154/951, 9-16=0/192, 10-16=-825/247, 10-14=-42/531, 11-14=-240/191, 2-23=-37/313, 3-20=0/863, 4-20=-244/60, 20-24=-346/116, 5-24=-334/129, 24-26=-6/8, 25-26=-6/8, 19-26=0/45

- 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) 5-7-0 to 11-2-2, Interior (1) 11-2-2 to 17-5-0, Exterior(2R) 17-5-0 to 28-7-3, Interior (1) 28-7-3 to 38-0-0, Exterior(2R) 38-0-0 to 49-5-6, Interior (1) 49-5-6 to 55-9-2, Exterior(2E) 55-9-2 to 61-4-4 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
  - 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.
  - 200.0lb AC unit load placed on the bottom chord, 23-8-8 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) 22, 18, 23, and 13. 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



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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 ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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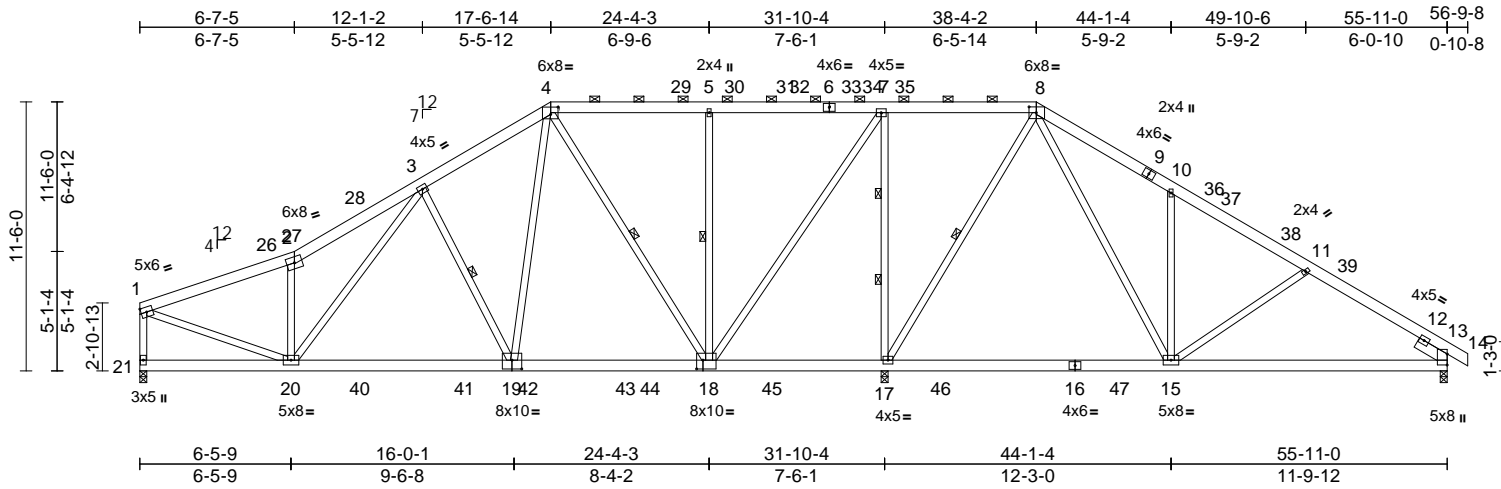
Job 22080003	Truss A02	Truss Type Piggyback Base	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485632
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:36

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Scale = 1:98.5

Plate Offsets (X, Y): [4:0-3-12,0-3-12], [8:0-3-12,0-3-0], [18:0-3-4,0-4-8], [19:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.55	Vert(LL)	-0.16	15-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.23	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.02	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 467 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2

BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 19-18:2x6 SP No.2

WEBS 2x4 SP No.3 \*Except\* 17-7,17-8,18-7,19-4,18-4,18-5,15-8:2x4 SP No.2

SLIDER Right 2x6 SP No.2 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-1-1 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-8.

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

WEBS 1 Row at midpt 8-17, 3-19, 4-18, 5-18

WEBS 2 Rows at 1/3 pts 7-17

**REACTIONS** (size) 13=0-3-8, 17=0-3-8, 21=0-3-8  
Max Horiz 21=259 (LC 13)  
Max Uplift 13=-133 (LC 15), 21=-34 (LC 14)  
Max Grav 13=943 (LC 53), 17=3220 (LC 3), 21=1331 (LC 60)

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

TOP CHORD 1-2=-1707/177, 2-3=-1950/320, 3-4=-1374/217, 4-5=-499/196, 5-7=-499/196, 7-8=0/615, 8-10=-884/360, 10-11=-836/197, 11-13=-1125/244, 13-14=0/26, 1-21=-1239/181

BOT CHORD 20-21=-236/202, 17-20=-679/1352, 15-17=-89/199, 13-15=-82/901

WEBS 1-20=-58/1668, 7-17=-1881/285, 8-17=-1252/249, 7-18=-119/1701, 2-20=-694/259, 3-20=-172/568, 3-19=-704/280, 4-19=0/1170, 4-18=-986/83, 5-18=-593/193, 10-15=-654/252, 8-15=-236/1351, 11-15=-343/198

- 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) 5-7-0 to 11-2-2, Interior (1) 11-2-2 to 17-5-0, Exterior(2R) 17-5-0 to 28-7-3, Interior (1) 28-7-3 to 38-2-5, Exterior(2R) 38-2-5 to 49-6-8, Interior (1) 49-6-8 to 56-7-10, Exterior(2E) 56-7-10 to 62-2-12 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
  - 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, 18-3-8 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(2) and 13. 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



August 5, 2022

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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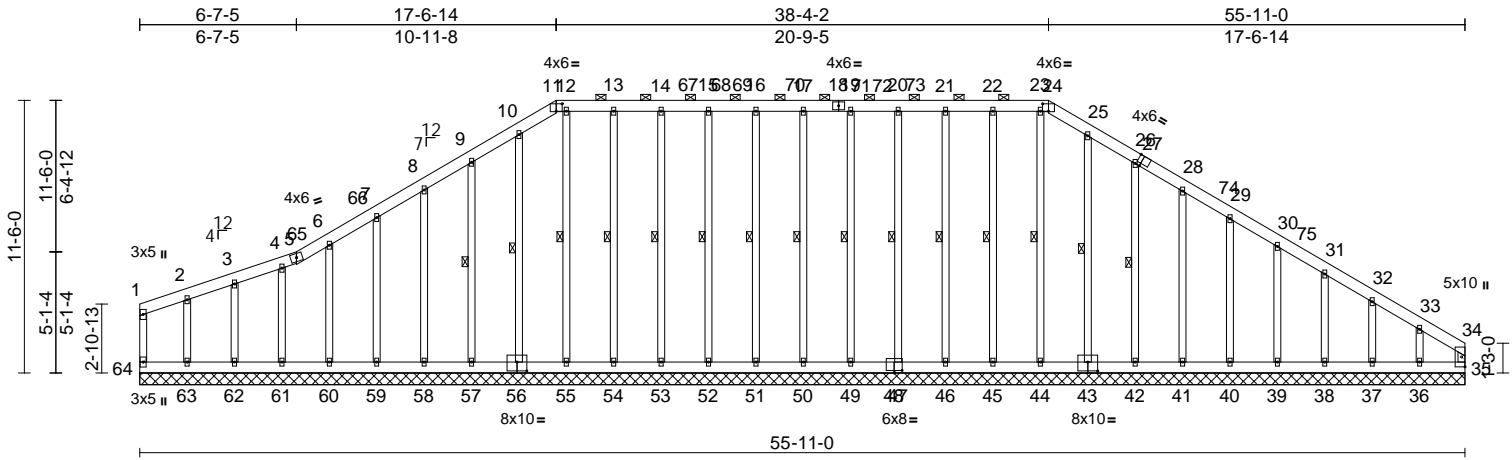
Job 22080003	Truss A03	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485633
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Carter Components (Sanford), Sanford, NC - 27332,

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Scale = 1:97.2

Plate Offsets (X, Y): [11:0-3-0,0-3-12], [24:0-3-0,0-3-12], [27:0-2-1,Edge], [43:0-5-0,0-4-8], [47:0-4-0,0-1-4], [56:0-5-0,0-4-8]

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	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	-0.01	35	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											

Weight: 587 lb FT = 20%

LUMBER		Max Uplift	35=212 (LC 11), 36=158 (LC 15),	TOP CHORD	1-64=69/31, 1-2=52/43, 2-3=47/60,
TOP CHORD	2x6 SP No.2	37=28 (LC 15), 38=53 (LC 15),		3-4=56/82, 4-5=69/108, 5-6=68/119,	
BOT CHORD	2x6 SP No.2	39=48 (LC 15), 40=49 (LC 15),		6-7=95/167, 7-8=113/211, 8-9=132/273,	
WEBS	2x4 SP No.3	41=49 (LC 15), 42=57 (LC 15),		9-10=155/356, 10-11=162/398,	
OTHERS	2x4 SP No.3 *Except*	43=18 (LC 15), 45=23 (LC 10),		11-12=150/384, 12-13=150/384,	
	55-12,54-13,53-14,52-15,51-16,50-17,49-19,	46=29 (LC 11), 47=25 (LC 11),		13-14=150/384, 14-15=150/384,	
	47-20,46-21,45-22,44-23:2x4 SP No.2	49=25 (LC 10), 50=25 (LC 10),		15-16=150/384, 16-17=150/384,	
		51=24 (LC 10), 52=25 (LC 11),		17-19=150/384, 19-20=150/384,	
		53=28 (LC 11), 54=26 (LC 10),		20-21=150/384, 21-22=150/384,	
		57=61 (LC 14), 58=49 (LC 14),		22-23=150/384, 23-24=150/384,	
		59=48 (LC 14), 60=51 (LC 14),		24-25=163/400, 25-26=154/352,	
		61=46 (LC 14), 62=43 (LC 10),		26-28=132/270, 28-29=113/224,	
		63=77 (LC 11), 64=39 (LC 10)		29-30=113/217, 30-31=127/220,	
				31-32=140/224, 32-33=150/223,	
				33-34=194/267, 34-35=125/158	

BRACING		Max Grav	35=182 (LC 12), 36=277 (LC 24),		
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.	37=155 (LC 40), 38=166 (LC 24),			
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	39=219 (LC 46), 40=236 (LC 46),			
WEBS	1 Row at midpt 9-57, 10-56, 12-55, 13-54, 14-53, 15-52, 16-51, 17-50, 19-49, 20-47, 21-46, 22-45, 23-44, 25-43, 26-42	41=234 (LC 46), 42=238 (LC 46),			

REACTIONS (size)		FORCES	(lb) - Maximum Compression/Maximum Tension		
	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, 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, 63=55-11-0,				
	64=55-11-0				
Max Horiz	64=266 (LC 11)				



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Continued on page 2

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Job 22080003	Truss A03	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	I53485633
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:37

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**BOT CHORD** 63-64=-223/163, 62-63=-223/163,  
61-62=-223/163, 60-61=-223/163,  
59-60=-223/163, 58-59=-223/163,  
57-58=-223/163, 55-57=-223/163,  
54-55=-223/163, 53-54=-223/163,  
52-53=-223/163, 51-52=-223/163,  
50-51=-223/163, 49-50=-223/163,  
47-49=-223/163, 46-47=-223/163,  
45-46=-223/163, 44-45=-223/163,  
42-44=-223/163, 41-42=-223/163,  
40-41=-223/163, 39-40=-223/163,  
38-39=-223/163, 37-38=-223/163,  
36-37=-223/163, 35-36=-223/163

**WEBS** 2-63=-182/80, 3-62=-181/60, 4-61=-147/74,  
6-60=-180/75, 7-59=-198/71, 8-58=-195/99,  
9-57=-199/143, 10-56=-187/63,  
12-55=-141/9, 13-54=-179/81,  
14-53=-179/90, 15-52=-172/54,  
16-51=-151/48, 17-50=-138/48,  
19-49=-151/48, 20-47=-172/55,  
21-46=-179/92, 22-45=-179/78,  
23-44=-150/21, 25-43=-189/72,  
26-42=-199/142, 28-41=-195/99,  
29-40=-197/72, 30-39=-180/72,  
31-38=-123/73, 32-37=-116/65,  
33-36=-176/123

#### 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; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 5-7-0 to 11-5-4, Exterior(2N) 11-5-4 to 17-5-0, Corner(3R) 17-5-0 to 28-7-3, Exterior (2N) 28-7-3 to 38-2-5, Corner(3R) 38-2-5 to 49-5-4, Exterior(2N) 49-5-4 to 55-5-4, Corner(3E) 55-5-4 to 61-2-8 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) 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) Provide adequate drainage to prevent water ponding.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) N/A
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

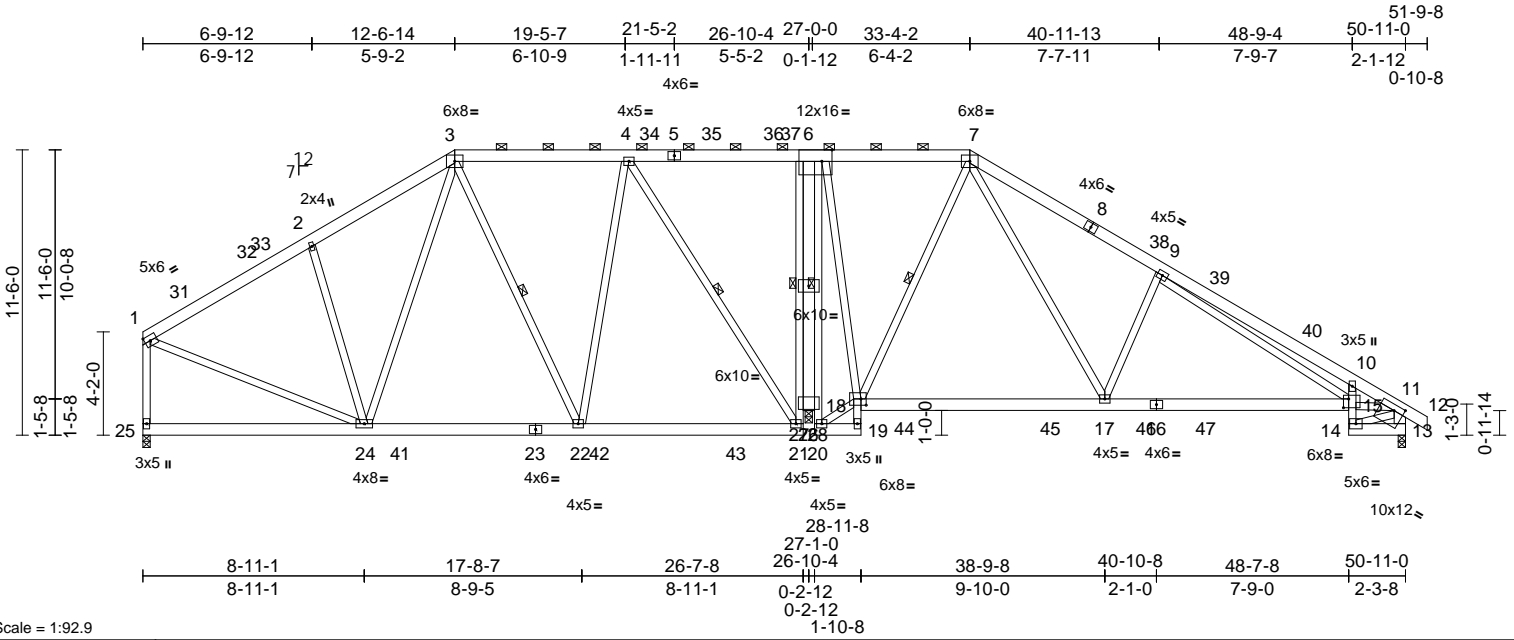
Job 22080003	Truss B01	Truss Type Piggyback Base	Qty 3	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	I53485634
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:39

Page: 1

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Scale = 1:92.9

Plate Offsets (X, Y): [6:0-5-0,Edge], [13:0-4-12,0-2-12], [15:0-2-8,0-4-4], [18:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.13	17-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.22	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.05	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 485 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 19-18,10-14:2x4 SP No.3  
WEBS 2x4 SP No.3 \*Except\* 21-6,20-6,4-21,24-3,22-3,22-4,18-7,17-7:2x4 SP No.2, 13-11:2x6 SP No.2  
OTHERS 2x6 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-6-5 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 14-15,19-20.  
WEBS 1 Row at midpt 4-21, 3-22, 7-18, 6-26, 28-30

**REACTIONS** (size) 13=0-3-8, 25=0-3-8, 26=0-3-8  
Max Horiz 25=-314 (LC 10)  
Max Uplift 13=-243 (LC 15), 25=-188 (LC 14), 26=-95 (LC 11)  
Max Grav 13=1262 (LC 49), 25=1324 (LC 35), 26=2453 (LC 44)

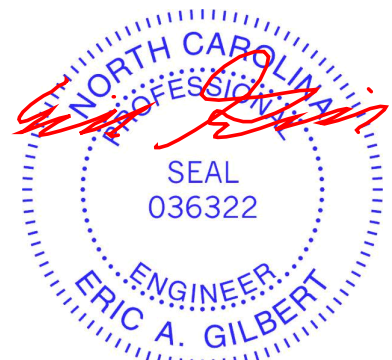
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1268/255, 2-3=-1151/339, 3-4=-686/315, 4-29=-147/357, 6-29=-132/355, 6-30=-132/355, 7-30=-223/354, 7-9=-1523/481, 9-10=-2379/569, 10-11=-2171/439, 11-12=0/33, 1-25=-1192/231, 11-13=-1247/262  
BOT CHORD 24-25=-241/294, 22-24=-133/748, 21-22=-113/607, 18-19=0/22, 17-18=-11/491, 15-17=-209/1344, 14-15=-26/42, 10-15=-247/180, 13-14=0/55, 19-20=-176/0

**WEBS** 4-21=-1177/169, 2-24=-644/243, 3-24=-60/540, 1-24=-153/1067, 3-22=-325/69, 4-22=0/755, 7-18=-909/92, 7-17=-163/1293, 9-17=-753/303, 9-15=-173/820, 11-14=-89/150, 11-15=-287/1611, 18-20=-1/161, 18-30=0/1095, 6-26=-1448/48, 21-26=-101/1140, 26-29=-101/1140, 20-26=-39/21, 26-30=-39/21

**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) 5-1-12 to 10-2-14, Exterior (2R) 10-2-14 to 24-5-14, Interior (1) 24-5-14 to 31-1-12, Exterior(2R) 31-1-12 to 45-6-9, Interior (1) 45-6-9 to 51-8-6, Exterior(2E) 51-8-6 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) Bearing at joint(s) 26 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 25, 13, and 26. This connection is for uplift only and does not consider lateral forces.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



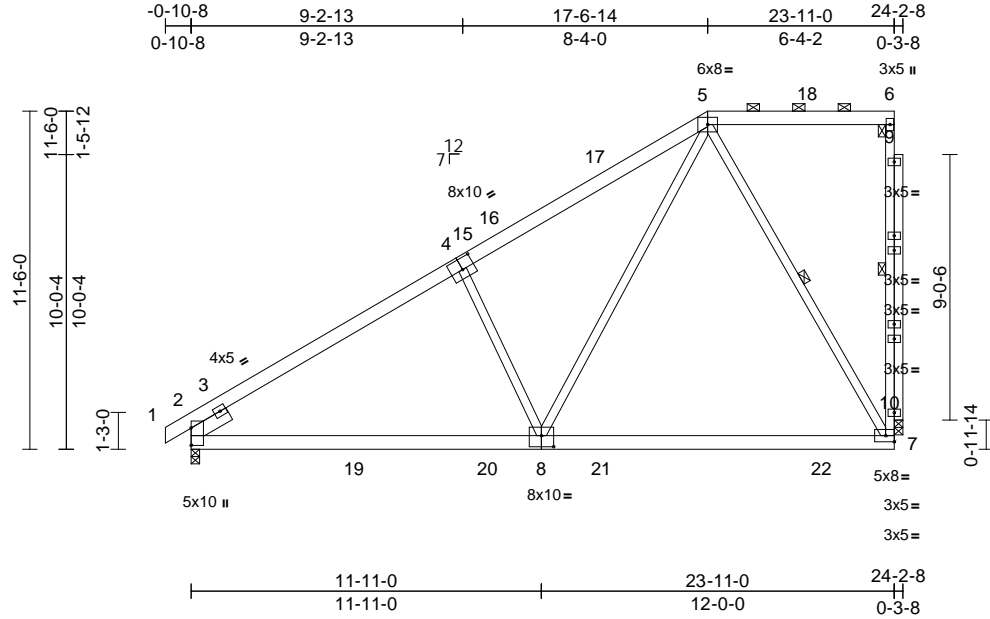
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss C01	Truss Type Piggyback Base	Qty 5	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485635
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:40  
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Page: 1



Scale = 1:78.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.26	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.40	7-8	>717	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	-0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 199 lb	FT = 20%

**LUMBER**

- TOP CHORD 2x6 SP No.2
- BOT CHORD 2x6 SP No.2
- WEBS 2x4 SP No.2 \*Except\* 4-8:2x4 SP No.3
- OTHERS 2x4 SP No.3
- SLIDER Left 2x6 SP No.2 -- 1-6-0

**BRACING**

- TOP CHORD Structural wood sheathing directly applied or 5-8-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
- BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

- WEBS 1 Row at midpt 6-7, 5-7

**REACTIONS**

- (size) 2=0-3-8, 10=0-3-8
- Max Horiz 2=396 (LC 13)
- Max Uplift 2=-107 (LC 14), 10=-140 (LC 11)
- Max Grav 2=1246 (LC 40), 10=1116 (LC 24)

**FORCES**

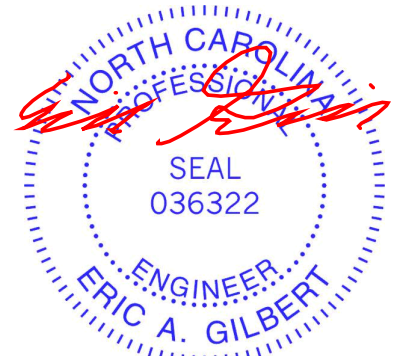
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/26, 2-5=-1500/232, 5-6=-159/164, 7-10=-90/1109, 6-10=-263/87
- BOT CHORD 2-7=-311/1366
- WEBS 5-8=-164/1246, 5-7=-1011/183, 4-8=-597/313

**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 2-6-5, Interior (1) 2-6-5 to 14-2-1, Exterior(2R) 14-2-1 to 20-11-11, Interior (1) 20-11-11 to 23-9-4 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

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 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.
- 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



August 5, 2022

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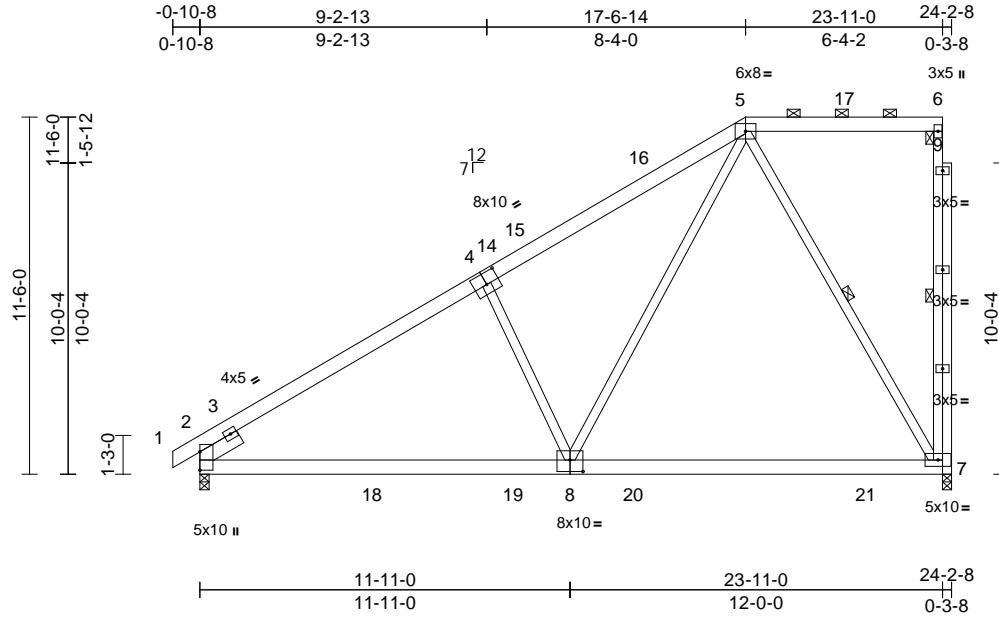
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss C02	Truss Type Piggyback Base	Qty 3	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485636
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:41  
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Page: 1



Scale = 1:74.2

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

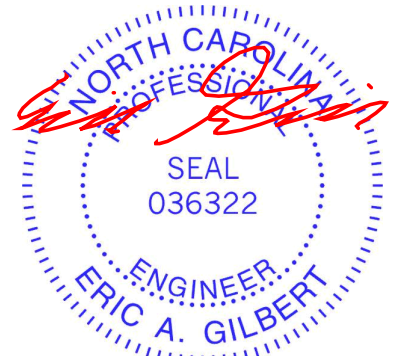
Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.27	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.41	7-8	>694	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 201 lb	FT = 20%

LUMBER	
TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.2 *Except* 4-8:2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-6-0
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 5-7-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-7, 5-7
REACTIONS	
(size)	2=0-3-8, 7=0-3-8
Max Horiz	2=396 (LC 13)
Max Uplift	2=-108 (LC 14), 7=-135 (LC 11)
Max Grav	2=1253 (LC 40), 7=1114 (LC 3)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/26, 2-5=-1513/232, 5-6=-162/164, 6-7=-263/87
BOT CHORD	2-7=-311/1377
WEBS	5-8=-163/1248, 5-7=-1012/182, 4-8=-596/313

- 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 14-6-14, Exterior(2R) 14-6-14 to 20-9-4, Exterior(2E) 20-9-4 to 23-9-4 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

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 7. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



August 5, 2022

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818 Soundside Road  
Edenton, NC 27932

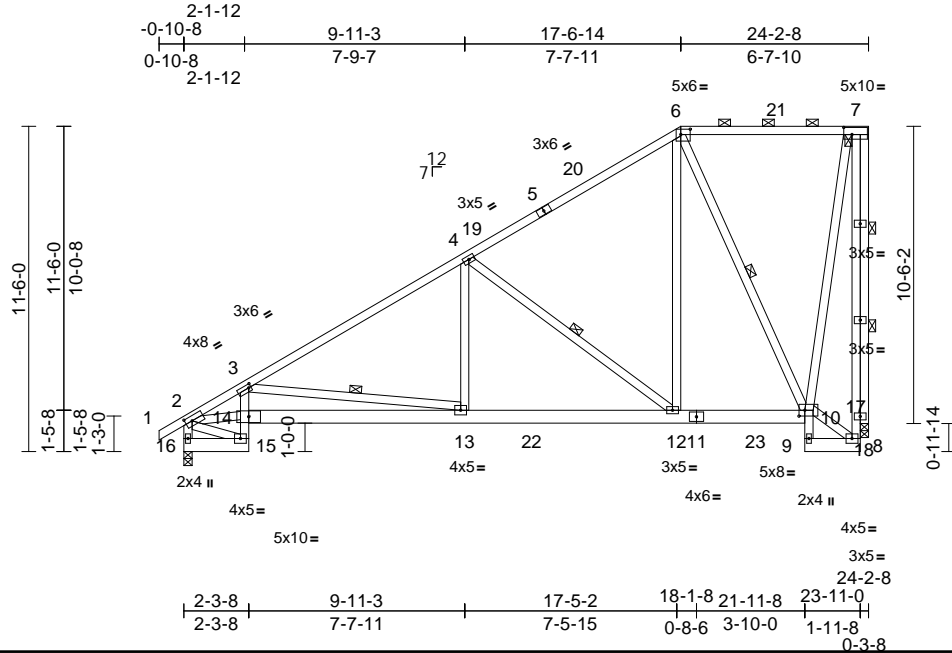


Job 22080003	Truss C03	Truss Type Piggyback Base	Qty 2	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485637
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:41  
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Page: 1



Scale = 1:81.5

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [3:0-1-0,0-1-8], [6:0-4-0,0-2-4], [7:0-3-8,0-3-0], [10:0-2-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.08	13-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.16	13-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.08	18	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 219 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 1-5:2x4 SP No.1  
BOT CHORD 2x6 SP No.2 \*Except\* 15-3,10-9:2x4 SP No.3  
WEBS 2x4 SP No.3 \*Except\* 7-8,10-6:2x4 SP No.2  
OTHERS 2x4 SP No.3

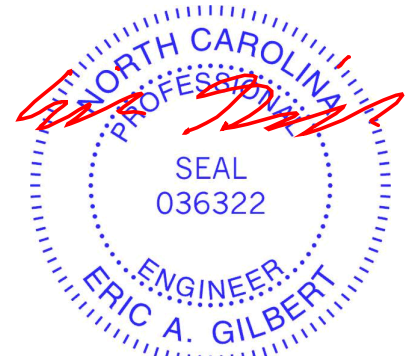
**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-6-8 max.): 6-7.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 3-13, 4-12, 6-10  
WEBS 2 Rows at 1/3 pts 7-18

**REACTIONS** (size) 16=0-3-8, 18=0-3-8  
Max Horiz 16=367 (LC 14)  
Max Uplift 16=64 (LC 14), 18=158 (LC 14)  
Max Grav 16=1227 (LC 40), 18=1040 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-2271/407, 3-4=-1662/113, 4-6=-828/66, 6-7=-191/28, 8-17=-3/35, 7-17=-3/35, 2-16=-1221/100  
BOT CHORD 15-16=-328/174, 14-15=-105/44, 3-14=-85/199, 13-14=-785/2294, 12-13=-317/1441, 10-12=-94/588, 9-10=-17/18, 8-9=-14/0  
WEBS 3-13=-911/472, 4-13=0/467, 4-12=-1052/277, 6-12=-85/888, 6-10=-960/195, 8-10=-16/60, 7-10=-143/998, 2-15=-18/302, 2-14=-571/1809, 7-18=-1040/164

- 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 2-6-5, Interior (1) 2-6-5 to 14-2-1, Exterior(2R) 14-2-1 to 20-11-11, Interior (1) 20-11-11 to 23-9-4 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 16 and 18. 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



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

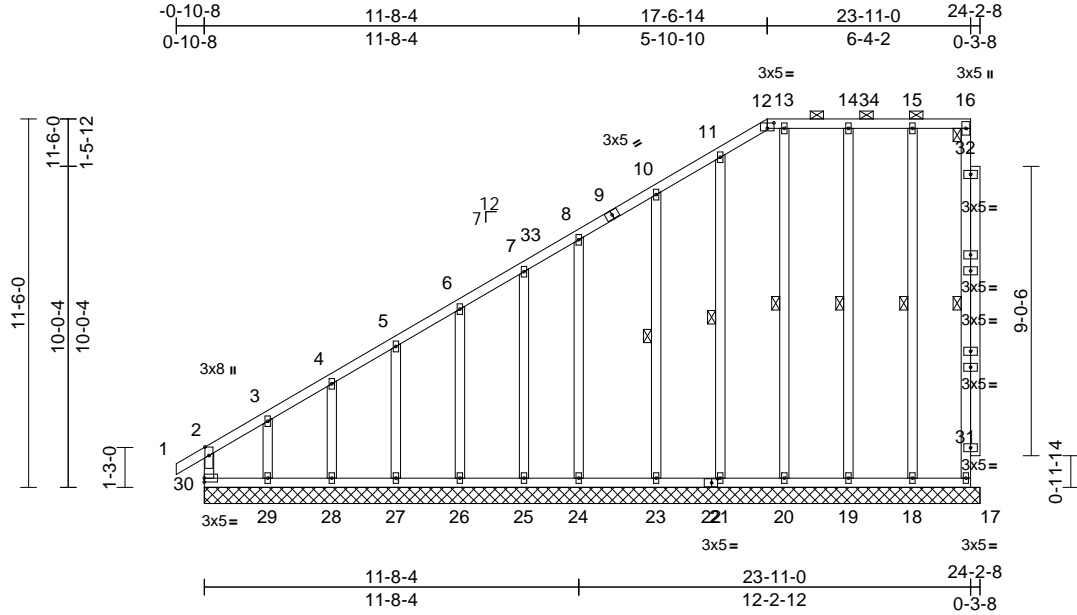
Job 22080003	Truss C04	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485638
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:42

Page: 1

ID:YRYnCOFh?hCFcyHRX82cVpzhpj9-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC7f



Scale = 1:71.9

Plate Offsets (X, Y): [12:0-2-8,0-2-1], [22:0-2-4,0-1-8]

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	0.45	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	-0.01	17	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 227 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 16-17:2x4 SP No.2  
OTHERS 2x4 SP No.3 \*Except\* 21-11,20-13,19-14,18-15:2x4 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.): 12-16.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 16-17, 10-23, 11-21, 13-20, 14-19, 15-18

**REACTIONS** (size)  
17=24-2-8, 18=24-2-8, 19=24-2-8, 20=24-2-8, 21=24-2-8, 23=24-2-8, 24=24-2-8, 25=24-2-8, 26=24-2-8, 27=24-2-8, 28=24-2-8, 29=24-2-8, 30=24-2-8

Max Horiz 30=396 (LC 11)  
Max Uplift 17=16 (LC 11), 18=29 (LC 10), 19=30 (LC 10), 20=59 (LC 11), 21=30 (LC 14), 23=60 (LC 14), 24=51 (LC 14), 25=44 (LC 14), 26=47 (LC 14), 27=61 (LC 14), 29=274 (LC 14), 30=161 (LC 12)  
Max Grav 17=73 (LC 35), 18=209 (LC 35), 19=223 (LC 35), 20=188 (LC 37), 21=227 (LC 40), 23=289 (LC 40), 24=273 (LC 40), 25=177 (LC 40), 26=195 (LC 24), 27=196 (LC 40), 28=183 (LC 25), 29=304 (LC 40), 30=369 (LC 11)

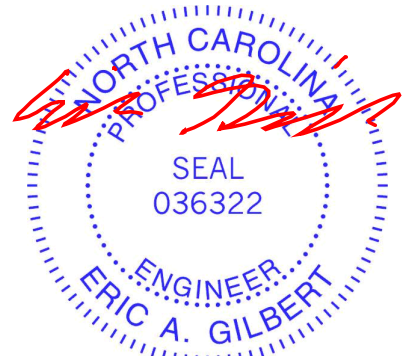
**FORCES** (lb) - Maximum Compression/Maximum Tension

**TOP CHORD** 2-30=-265/114, 1-2=0/30, 2-3=-382/243, 3-4=-286/184, 4-5=-273/175, 5-6=-244/156, 6-7=-228/142, 7-8=-214/139, 8-10=-203/137, 10-11=-190/160, 11-12=-170/188, 12-13=-152/180, 13-14=-152/180, 14-15=-152/180, 15-16=-152/180, 16-17=-78/80  
**BOT CHORD** 29-30=-151/178, 28-29=-151/178, 27-28=-151/178, 26-27=-151/178, 25-26=-151/178, 24-25=-151/178, 23-24=-151/178, 21-23=-151/178, 20-21=-151/178, 19-20=-151/178, 18-19=-151/178, 17-18=-151/178  
**WEBS** 10-23=-201/87, 11-21=-169/53, 13-20=-144/85, 14-19=-184/64, 15-18=-170/74, 8-24=-189/76, 5-27=-125/78, 4-28=-119/49, 3-29=-178/193, 6-26=-125/72, 7-25=-123/63

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 1-11-12, Exterior (2N) 1-11-12 to 14-6-14, Corner(3R) 14-6-14 to 20-9-4, Corner(3E) 20-9-4 to 23-9-4 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.



August 5, 2022

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss C04	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	I53485638
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:42  
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Page: 2

- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 30, 16 lb uplift at joint 17, 60 lb uplift at joint 23, 30 lb uplift at joint 21, 59 lb uplift at joint 20, 30 lb uplift at joint 19, 29 lb uplift at joint 18, 51 lb uplift at joint 24, 61 lb uplift at joint 27, 274 lb uplift at joint 29, 47 lb uplift at joint 26 and 44 lb uplift at joint 25.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

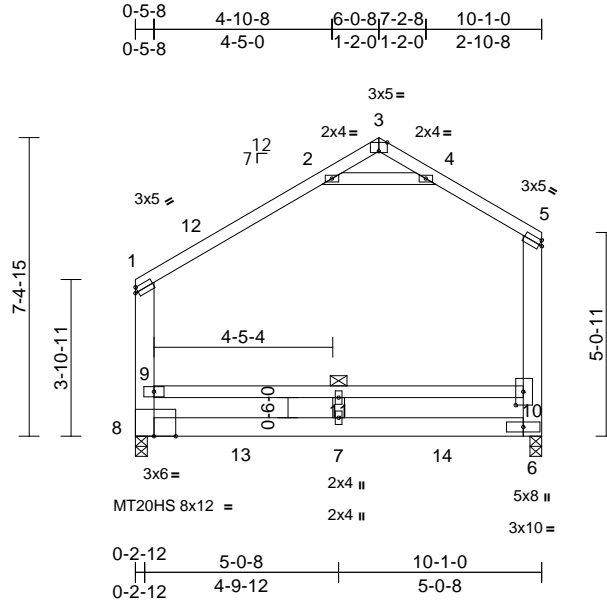
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss D01	Truss Type Common	Qty 10	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485639
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:43  
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Page: 1



Scale = 1:57.2

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

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	0.71	Vert(LL)	-0.05	7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.16	7	>737	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 78 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 8-1:2x6 SP No.2  
 OTHERS 2x4 SP No.3 \*Except\* 6-5:2x6 SP No.2

**BRACING**

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

WEBS 1 Row at midpt 9-10

**REACTIONS** (size) 6=0-3-8, 8=0-3-8  
 Max Horiz 8=343 (LC 14)  
 Max Grav 6=555 (LC 23), 8=553 (LC 22)

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

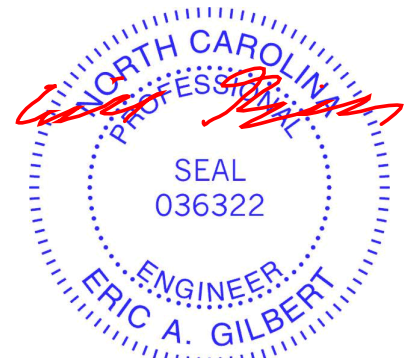
TOP CHORD 1-2=-352/170, 2-3=-258/83, 3-4=-281/140, 4-5=-301/179, 8-9=-392/162, 1-9=-382/171, 6-10=-361/164, 5-10=-350/174  
 BOT CHORD 7-8=-157/429, 6-7=-157/429  
 WEBS 9-11=-378/341, 10-11=-378/341, 2-4=-117/150, 7-11=0/34

**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) 4-9-1 to 7-9-1, Interior (1) 7-9-1 to 10-6-13, Exterior(2R) 10-6-13 to 13-6-13, Interior (1) 13-6-13 to 14-4-9 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

- 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) 200.0lb AC unit load placed on the bottom chord, 5-1-8 from left end, supported at two points, 5-0-0 apart.
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Bearing at joint(s) 8, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 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



August 5, 2022

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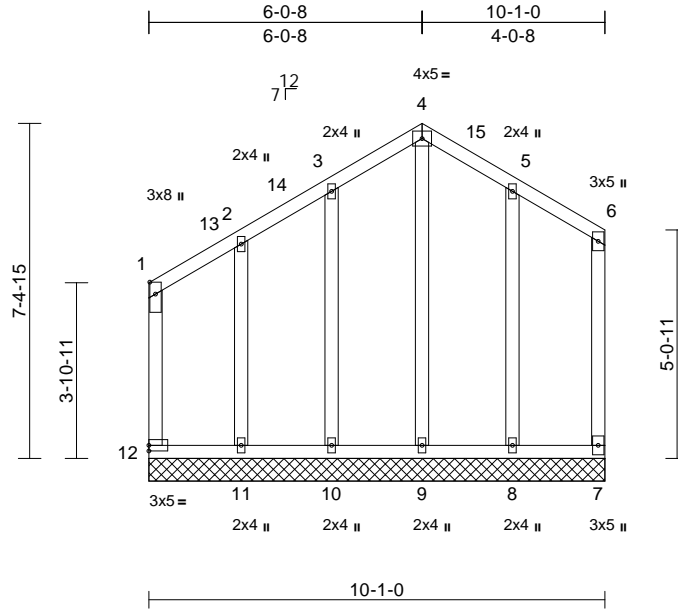
818 Soundside Road  
 Edenton, NC 27932

Job 22080003	Truss D02	Truss Type Common Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485640
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:51

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	0.33	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 79 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) 7=10-1-0, 8=10-1-0, 9=10-1-0, 10=10-1-0, 11=10-1-0, 12=10-1-0  
Max Horiz 12=221 (LC 11)  
Max Uplift 7=141 (LC 11), 8=178 (LC 10), 9=27 (LC 13), 10=45 (LC 14), 11=307 (LC 11), 12=225 (LC 10)  
Max Grav 7=176 (LC 12), 8=321 (LC 24), 9=170 (LC 27), 10=243 (LC 20), 11=397 (LC 12), 12=299 (LC 13)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-12=-160/119, 1-2=-150/123, 2-3=-120/190, 3-4=-154/256, 4-5=-152/252, 5-6=-128/191, 6-7=-116/167  
BOT CHORD 11-12=-108/90, 10-11=-108/90, 9-10=-108/90, 8-9=-108/90, 7-8=-108/90  
WEBS 4-9=-159/51, 3-10=-204/107, 2-11=-221/174, 5-8=-223/97

**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 Corner(3E) 0-1-12 to 3-1-12, Corner(3R) 3-1-12 to 6-11-4, Corner(3E) 6-11-4 to 9-11-4 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); 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.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 225 lb uplift at joint 12, 141 lb uplift at joint 7, 27 lb uplift at joint 9, 45 lb uplift at joint 10, 307 lb uplift at joint 11 and 178 lb uplift at joint 8.
- 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



August 5, 2022

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

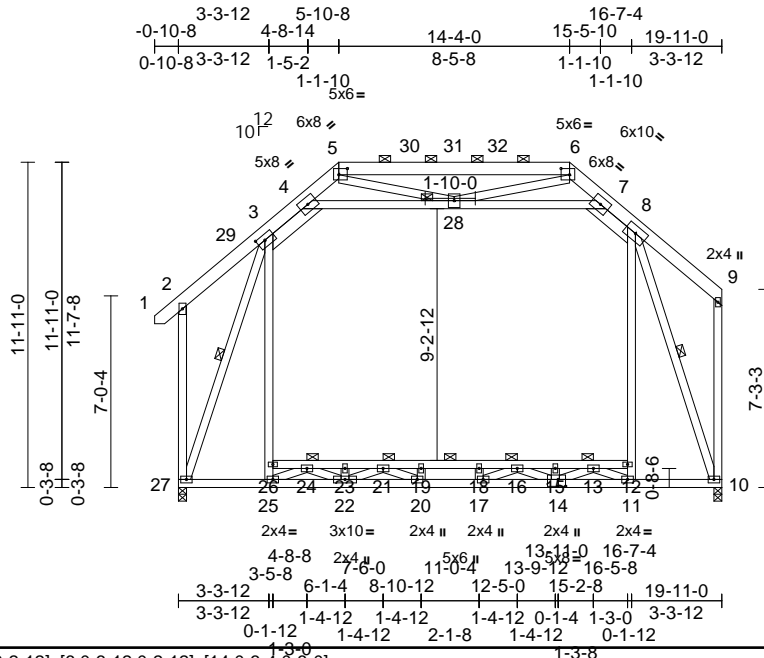
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss G01	Truss Type Attic	Qty 4	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485641
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:44  
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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	0.73	Vert(LL)	-0.23	18-19	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.38	18-19	>624	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.20	12-26	>795	360		
BCDL	10.0											
											Weight: 239 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP No.2 \*Except\* 27-14:2x4 SP No.1  
WEBS 2x4 SP No.3 \*Except\* 3-25,8-11,4-7:2x4 SP No.2, 3-4,7-8:2x6 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 (4-10-14 max.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
2-10-0 oc bracing: 16-21  
3-9-0 oc bracing: 21-24  
3-11-0 oc bracing: 13-16  
10-0-0 oc bracing: 24-26, 12-13  
WEBS 1 Row at midpt 8-10, 3-27  
JOINTS 1 Brace at Jt(s): 13, 24, 16, 21, 28

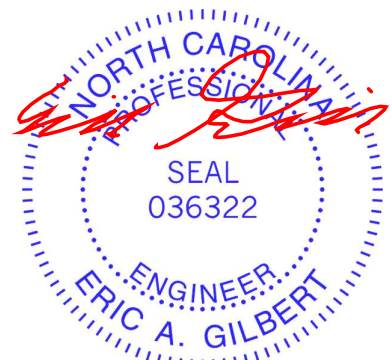
**REACTIONS** (size) 10=0-3-8, 27=0-3-8  
Max Horiz 27=358 (LC 13)  
Max Grav 10=1500 (LC 46), 27=1572 (LC 46)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/52, 2-3=-314/273, 3-4=-660/148, 4-5=-1003/346, 5-6=-983/117, 6-7=-973/339, 7-8=-661/162, 8-9=-291/232, 2-27=-467/254, 9-10=-358/238  
BOT CHORD 25-27=-91/548, 22-25=-5/1654, 20-22=0/3362, 17-20=0/3867, 11-17=0/3346, 10-11=-71/532, 24-26=-95/227, 23-24=-2165/0, 21-23=-2165/0, 19-21=-3446/0, 18-19=-3446/0, 16-18=-3446/0, 15-16=-2115/0, 13-15=-2086/0, 12-13=-105/245

**WEBS** 25-26=0/858, 3-26=0/1025, 11-12=0/854, 8-12=0/1031, 8-10=-1624/81, 4-28=-502/547, 7-28=-539/493, 3-27=-1608/59, 11-13=-1440/0, 24-25=-1459/0, 13-14=0/1093, 22-24=0/1125, 14-15=-192/0, 22-23=-160/0, 14-16=-893/0, 21-22=-867/0, 16-17=-15/617, 20-21=0/590, 17-18=-204/0, 19-20=-197/0, 6-28=-212/410, 5-28=-188/407

- 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) 0-8-5 to 2-3-11, Exterior(2R) 2-3-11 to 16-7-4, Exterior(2E) 16-7-4 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
  - 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 3x5 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Ceiling dead load (5.0 psf) on member(s). 3-4, 7-8, 4-28, 7-28; Wall dead load (5.0psf) on member(s).3-26, 8-12
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 24-26, 23-24, 21-23, 19-21, 18-19, 16-18, 15-16, 13-15, 12-13
  - 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.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

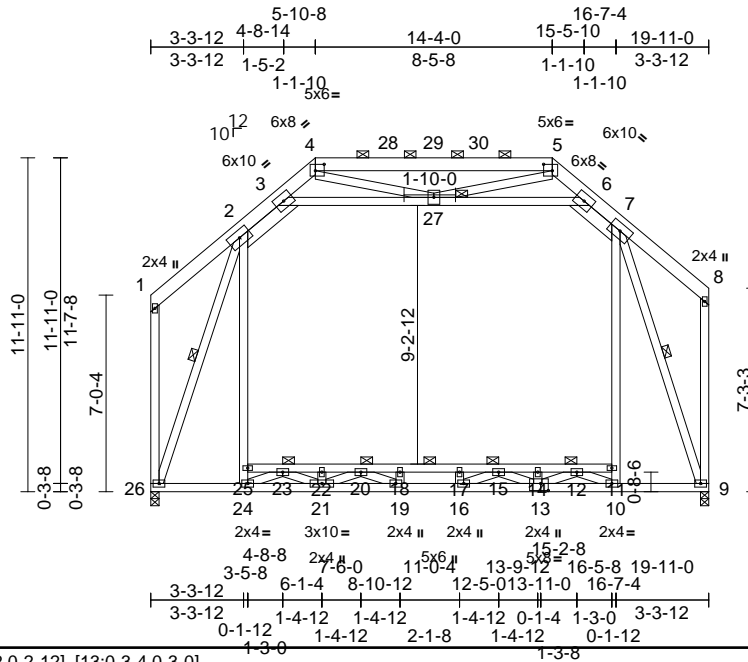
Job 22080003	Truss G02	Truss Type Attic	Qty 6	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485642
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:45

Page: 1

ID: PwMtYSc3X5EpgzXspX1pmRzhpep-RfC?PsB70Hq3NSgPqnl8w3ulTXbGKwRCdoi7J4zJC?f



Scale = 1:82.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.23	17-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.38	17-18	>623	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.06	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.20	11-25	>795	360		
BCDL	10.0											
											Weight: 237 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP No.2 \*Except\* 26-13:2x4 SP No.1  
WEBS 2x4 SP No.3 \*Except\* 2-24,7-10,3-6:2x4 SP No.2, 2-3,6-7:2x6 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 (4-10-14 max.): 4-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
2-10-0 oc bracing: 15-20  
3-9-0 oc bracing: 20-23  
3-11-0 oc bracing: 12-15  
10-0-0 oc bracing: 23-25, 11-12  
WEBS 1 Row at midpt 7-9, 2-26  
JOINTS 1 Brace at Jt(s): 12, 23, 15, 20, 27

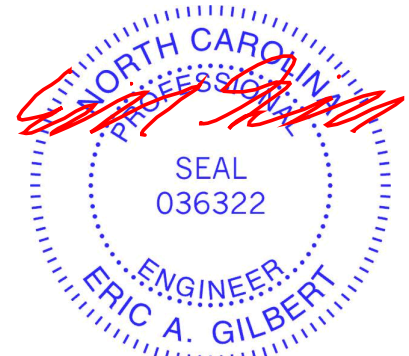
**REACTIONS** (size) 9=0-3-8, 26=0-3-8  
Max Horiz 26=347 (LC 11)  
Max Grav 9=1501 (LC 45), 26=1506 (LC 45)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-301/227, 2-3=-660/144, 3-4=-1003/343, 4-5=-982/118, 5-6=-972/342, 6-7=-662/147, 7-8=-288/234, 1-26=-382/233, 8-9=-352/241  
BOT CHORD 24-26=-88/547, 21-24=0/1655, 19-21=0/3363, 16-19=0/3868, 10-16=0/3346, 9-10=-68/531, 23-25=-98/223, 22-23=-2166/0, 20-22=-2166/0, 18-20=-3446/0, 17-18=-3446/0, 15-17=-3446/0, 14-15=-2114/0, 12-14=-2085/0, 11-12=-101/246

**WEBS** 24-25=0/857, 2-25=0/1024, 10-11=0/854, 7-11=0/1031, 7-9=-1622/71, 3-27=-501/546, 6-27=-542/490, 2-26=-1592/70, 10-12=-1440/0, 23-24=-1459/0, 12-13=0/1093, 21-23=0/1125, 13-14=-192/0, 21-22=-160/0, 13-15=-894/0, 20-21=-867/0, 15-16=-10/618, 19-20=0/586, 16-17=-204/0, 18-19=-197/0, 4-27=-193/399, 5-27=-203/406

- 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) 0-1-12 to 3-3-12, Exterior (2R) 3-3-12 to 16-7-4, Exterior(2E) 16-7-4 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 3x5 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Ceiling dead load (5.0 psf) on member(s) 2-3, 6-7, 3-27, 6-27; Wall dead load (5.0psf) on member(s) 2-25, 7-11

- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 23-25, 22-23, 20-22, 18-20, 17-18, 15-17, 14-15, 12-14, 11-12
  - 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.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

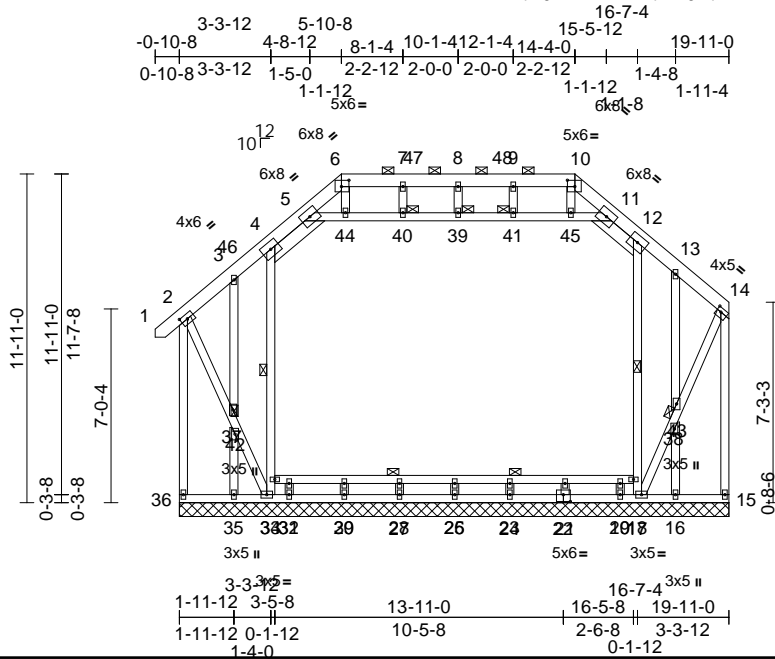
Job 22080003	Truss G03	Truss Type Attic Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485643
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:46

Page: 1

ID: mTC1KUI0mrxfallau1\_zozhpVg-RfC?PsB7H43NS2PqnL8w3uTXbGKWRcDOI7J4zJC?f



Scale = 1:83.5

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [6:0-3-4,0-2-12], [10:0-3-4,0-2-12], [14:0-2-0,0-1-12], [22:0-3-0,0-3-0]

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	0.50	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	-0.01	15	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 236 lb	FT = 20%

LUMBER		TOP CHORD	
TOP CHORD	2x6 SP No.2	2-36	=411/283, 1-2=0/50, 2-3=-176/212,
BOT CHORD	2x4 SP No.2	3-4	=169/234, 4-5=-367/248, 5-6=-994/267,
WEBS	2x4 SP No.3 *Except* 5-11:2x4 SP No.2, 4-5,11-12:2x6 SP No.2	6-7	=903/243, 7-8=-903/243, 8-9=-903/243,
OTHERS	2x4 SP No.3	9-10	=903/243, 10-11=-1002/266,
BRACING		BOT CHORD	
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.	11-12	=371/248, 12-13=-176/229,
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 34-35. 6-0-0 oc bracing: 18-33	13-14	=178/192, 14-15=-359/257,
WEBS	1 Row at midpt 4-34, 12-17	15-16	=95/115, 16-17=-94/114,
JOINTS	1 Brace at Jt(s): 37, 38, 39, 40, 41	17-18	=410/118, 18-19=-8/5,
REACTIONS		WEBS	
(size)	15=19-11-0, 16=19-11-0, 17=19-11-0, 20=19-11-0, 22=19-11-0, 24=19-11-0, 26=19-11-0, 28=19-11-0, 30=19-11-0, 32=19-11-0, 34=19-11-0, 35=19-11-0, 36=19-11-0	19-20	=119/0, 20-21=-116/0,
Max Horiz	36=329 (LC 13)	21-22	=411, 22-23=-4/11,
Max Uplift	15=-274 (LC 11), 16=-32 (LC 15), 17=-254 (LC 10), 34=-328 (LC 11), 35=-27 (LC 14), 36=-297 (LC 10)	23-24	=-116/0, 24-25=-116/0,
Max Grav	15=396 (LC 47), 16=191 (LC 50), 17=347 (LC 50), 20=202 (LC 21), 22=238 (LC 21), 24=229 (LC 21), 26=234 (LC 21), 28=230 (LC 21), 30=239 (LC 21), 32=194 (LC 21), 34=400 (LC 48), 35=161 (LC 48), 36=448 (LC 49)	25-26	=116/0, 26-27=-4/11,
FORCES		NOTES	
(lb) - Maximum Compression/Maximum Tension		1)	Unbalanced roof live loads have been considered for this design.

2-36	=411/283, 1-2=0/50, 2-3=-176/212,
3-4	=169/234, 4-5=-367/248, 5-6=-994/267,
6-7	=903/243, 7-8=-903/243, 8-9=-903/243,
9-10	=903/243, 10-11=-1002/266,
11-12	=371/248, 12-13=-176/229,
13-14	=178/192, 14-15=-359/257,
15-16	=95/115, 16-17=-94/114,
17-18	=410/118, 18-19=-8/5,
19-20	=119/0, 20-21=-116/0,
21-22	=411, 22-23=-4/11,
23-24	=-116/0, 24-25=-116/0,
25-26	=116/0, 26-27=-4/11,
27-28	=115/0, 28-29=-116/0,
29-30	=120/0, 30-31=-120/0,
31-32	=98/0, 32-33=-98/0,
33-34	=447/144, 34-35=-454/146,
35-36	=300/262, 36-37=-300/262,
37-38	=275/316, 38-39=-264/274,
39-40	=166/790, 40-41=-166/790,
41-42	=166/790, 42-43=-166/790,
43-44	=277/318, 44-45=-277/318,
45-46	=130/84, 46-47=-130/84,

- 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) -0-8-5 to 2-3-11, Exterior(2N) 2-3-11 to 2-10-8, Corner(3R) 2-10-8 to 8-10-8, Exterior (2N) 8-10-8 to 11-4-0, Corner(3R) 11-4-0 to 16-7-4, Corner(3E) 16-7-4 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
- 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.



August 5, 2022

Continued on page 2

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Job 22080003	Truss G03	Truss Type Attic Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	I53485643
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:46  
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Page: 2

- 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, with BCDL = 10.0psf.
- 14) Ceiling dead load (5.0 psf) on member(s). 4-5, 11-12, 5-44, 40-44, 39-40, 39-41, 41-45, 11-45; Wall dead load (5.0psf) on member(s).33-34, 4-33, 17-18, 12-18
- 15) N/A

- 16) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 18) 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. 5/19/2020 BEFORE USE.**

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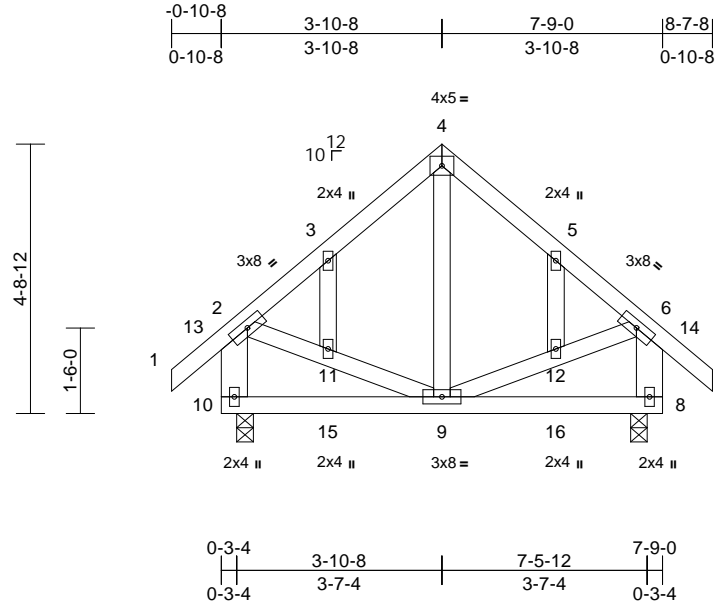
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss H01	Truss Type Common	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485644
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:47  
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Page: 1



Scale = 1:40.5

Loading (psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	TC	0.24	Vert(LL)	0.01	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	BC	0.12	Vert(CT)	-0.01	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	WB	0.28	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	Matrix-MSH								
BCDL	10.0	IRC2018/TPI2014								Weight: 58 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 10-2,8-6:2x6 SP No.2  
OTHERS 2x4 SP No.3

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

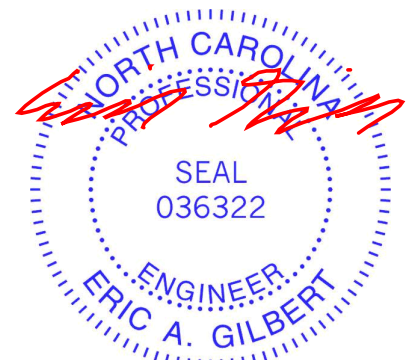
**REACTIONS** (size) 8=0-3-8, 10=0-3-8  
Max Horiz 10=135 (LC 12)  
Max Uplift 8=-36 (LC 15), 10=-36 (LC 14)  
Max Grav 8=462 (LC 22), 10=462 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-3=-289/266, 3-4=-204/303, 4-5=-204/303, 5-6=-289/266, 6-7=0/53, 2-10=-428/319, 6-8=-428/319  
BOT CHORD 9-10=-120/133, 8-9=-19/61  
WEBS 4-9=-252/105, 2-11=-44/126, 9-11=-49/126, 9-12=-52/126, 6-12=-46/126, 3-11=-55/34, 5-12=-55/34

**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 1-10-8, Exterior (2R) 1-10-8 to 5-10-8, Exterior(2E) 5-10-8 to 8-7-8 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- 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) 10 and 8. 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



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

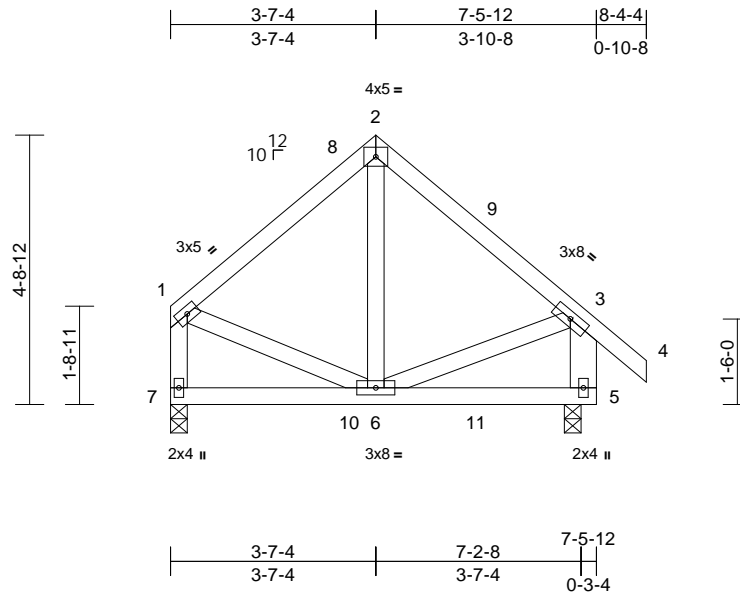
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss H02	Truss Type Common	Qty 3	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485645
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:48  
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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	0.41	Vert(LL)	0.01	5-6	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.01	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
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 \*Except\* 5-3:2x6 SP No.2

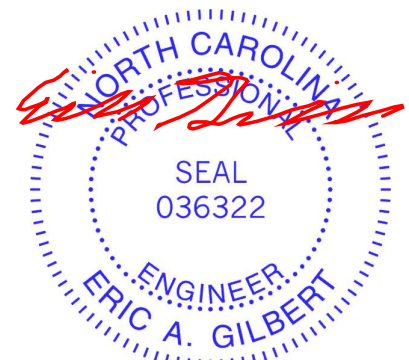
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 5=0-3-8, 7=0-3-8  
Max Horiz 7=-134 (LC 10)  
Max Uplift 5=-36 (LC 15), 7=-25 (LC 10)  
Max Grav 5=436 (LC 22), 7=373 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-262/274, 2-3=-285/276, 3-4=0/42, 1-7=-347/280, 3-5=-408/324  
BOT CHORD 6-7=-118/123, 5-6=-23/25  
WEBS 2-6=-203/97, 1-6=-112/142, 3-6=-37/139

- 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) 7 and 5. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Exterior (2R) 3-1-12 to 5-4-4, Exterior(2E) 5-4-4 to 8-4-4 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.



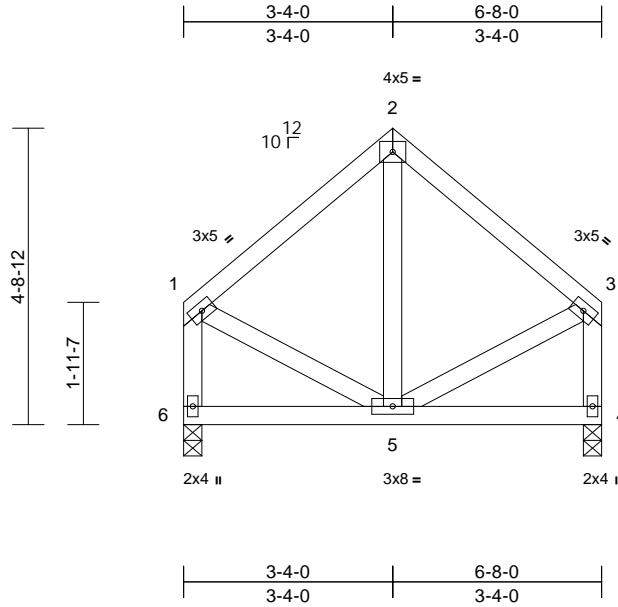
August 5, 2022

Job 22080003	Truss H04	Truss Type Common	Qty 3	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485646
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:48  
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Page: 1



Scale = 1:36.7

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	0.31	Vert(LL)	0.01	5-6	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	5-6	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 44 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) 4=0-3-8, 6=0-3-8  
Max Horiz 6=-122 (LC 10)  
Max Uplift 4=-28 (LC 11), 6=-28 (LC 10)  
Max Grav 4=321 (LC 21), 6=321 (LC 20)

**FORCES**

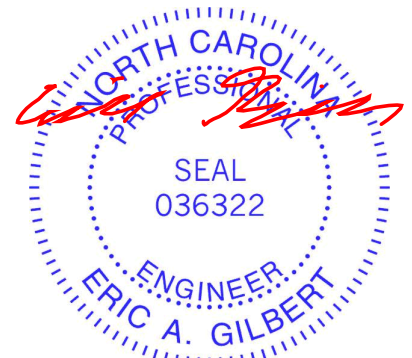
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-213/235, 2-3=-213/235, 1-6=-296/248, 3-4=-296/248  
BOT CHORD 5-6=-114/109, 4-5=-29/32  
WEBS 2-5=-157/70, 1-5=-80/117, 3-5=-80/117

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; porch 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 a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 4. This connection is for uplift only and does not consider lateral forces.
- 8) 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



August 5, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



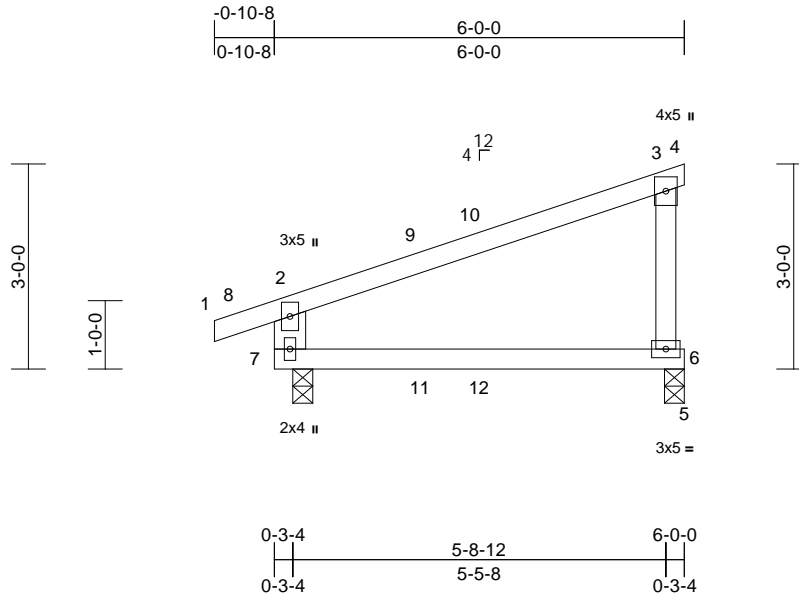
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss J01	Truss Type Monopitch	Qty 6	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485647
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:48  
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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	Vert(LL)	0.09	6-7	>714	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	0.08	6-7	>879	180		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0									Weight: 25 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 7-2:2x6 SP No.2

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

**REACTIONS** (size) 6=0-3-8, 7=0-3-8  
Max Horiz 7=109 (LC 13)  
Max Uplift 6=-92 (LC 10), 7=-116 (LC 10)  
Max Grav 6=322 (LC 21), 7=395 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/28, 2-3=-177/130, 3-4=-8/0,  
3-6=-239/164, 2-7=-362/276  
BOT CHORD 6-7=-96/95, 5-6=0/0

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 7. This connection is for uplift only and does not consider lateral forces.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

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



August 5, 2022

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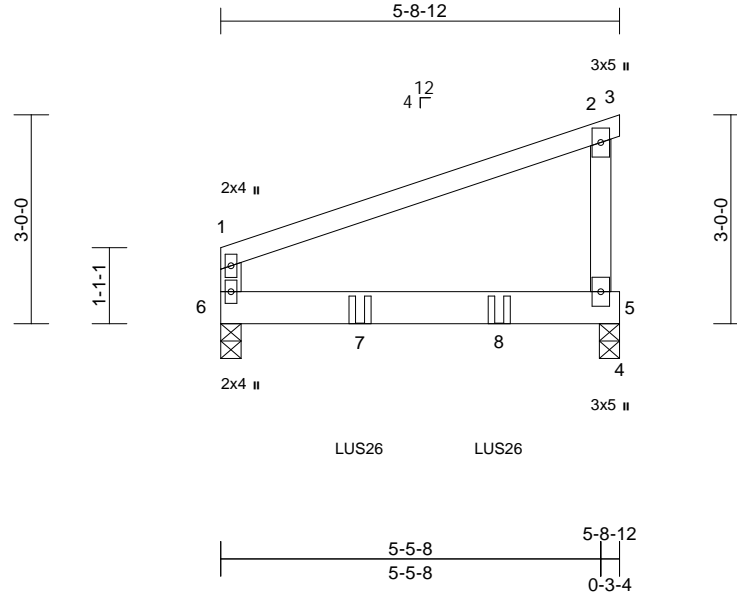
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss J02	Truss Type Monopitch Girder	Qty 1	Ply 2	DRB GROUP - 121 FaNC Job Reference (optional)	153485648
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:49  
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Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.03	5-6	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.04	5-6	>999	180	
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	5	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
										Weight: 53 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-8-12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 5=0-3-8, 6=0-3-8  
Max Horiz 6=96 (LC 32)  
Max Uplift 5=-109 (LC 8), 6=-87 (LC 8)  
Max Grav 5=690 (LC 18), 6=607 (LC 18)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-231/32, 2-3=-7/0, 2-5=-225/73,  
1-6=-256/64  
BOT CHORD 5-6=-47/159, 4-5=0/0

**NOTES**

- 2-ply truss to be connected together as follows:  
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 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.
- Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 2-0-0 from the left end to 4-0-0 to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-58, 2-3=-58, 4-6=-19  
Concentrated Loads (lb)  
Vert: 7=-354 (F), 8=-354 (F)



August 5, 2022

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818 Soundside Road  
Edenton, NC 27932

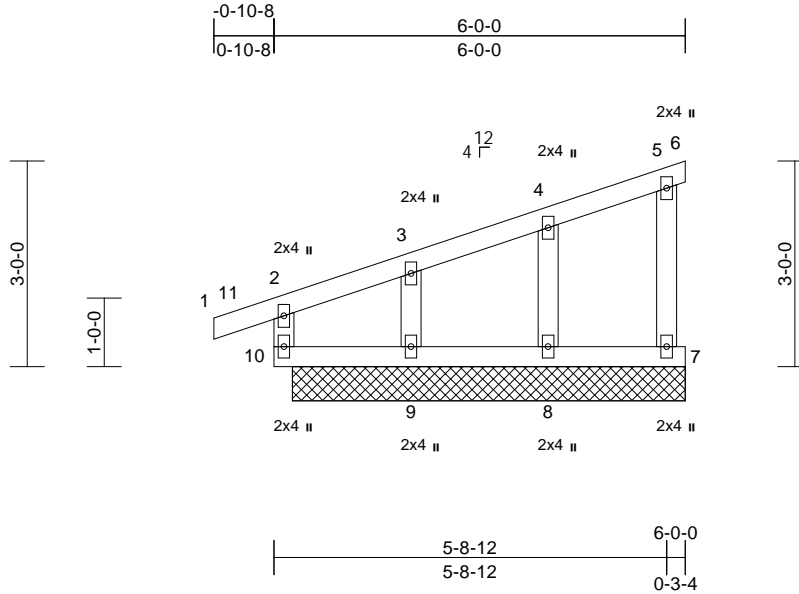
Job 22080003	Truss J03	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485649
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:49

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Scale = 1:33.6

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	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 28 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) 6=5-8-12, 7=5-8-12, 8=5-8-12, 9=5-8-12, 10=5-8-12  
Max Horiz 10=106 (LC 11)  
Max Uplift 6=-28 (LC 10), 7=-22 (LC 11), 8=-24 (LC 10), 9=-56 (LC 14), 10=-23 (LC 10)  
Max Grav 6=14 (LC 19), 7=96 (LC 21), 8=212 (LC 21), 9=197 (LC 21), 10=182 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-10=-164/127, 1-2=0/25, 2-3=-84/20, 3-4=-51/24, 4-5=-48/44, 5-6=-24/13, 5-7=-81/20  
BOT CHORD 9-10=-36/43, 8-9=-36/43, 7-8=-36/43  
WEBS 4-8=-174/149, 3-9=-160/194

**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) -0-10-8 to 2-0-0, Exterior(2N) 2-0-0 to 6-0-0 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

- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 6.



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

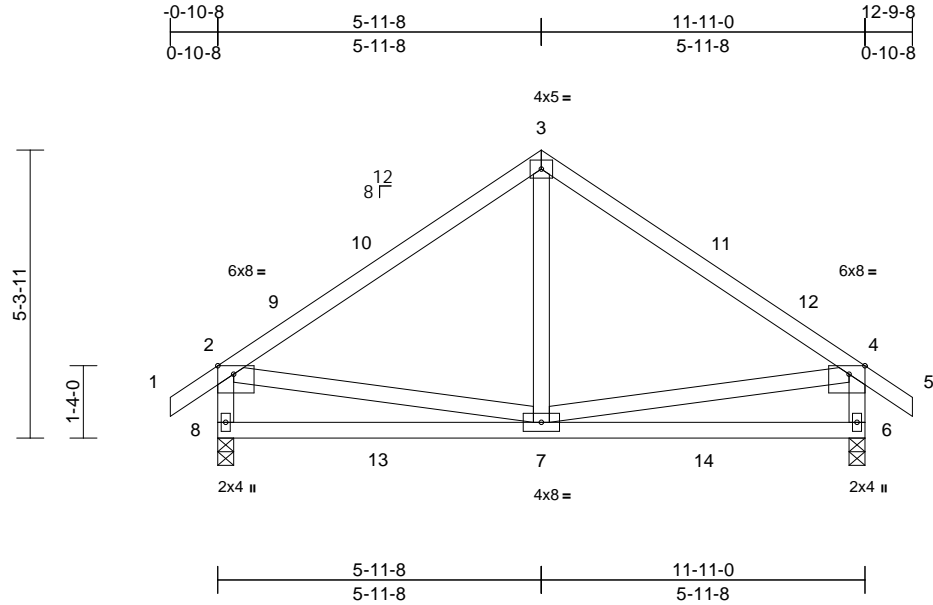
Job 22080003	Truss L01	Truss Type Common Supported Gable	Qty 5	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485650
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:49

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)	0.05	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	0.13	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 2-8=-566/356, 1-2=0/34, 2-3=-539/408,  
 3-4=-539/408, 4-5=0/34, 4-6=-566/356  
 BOT CHORD 7-8=-173/252, 6-7=-115/252  
 WEBS 3-7=-284/208, 4-7=-92/249, 2-7=-88/249

**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 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; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) 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.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
 Edenton, NC 27932

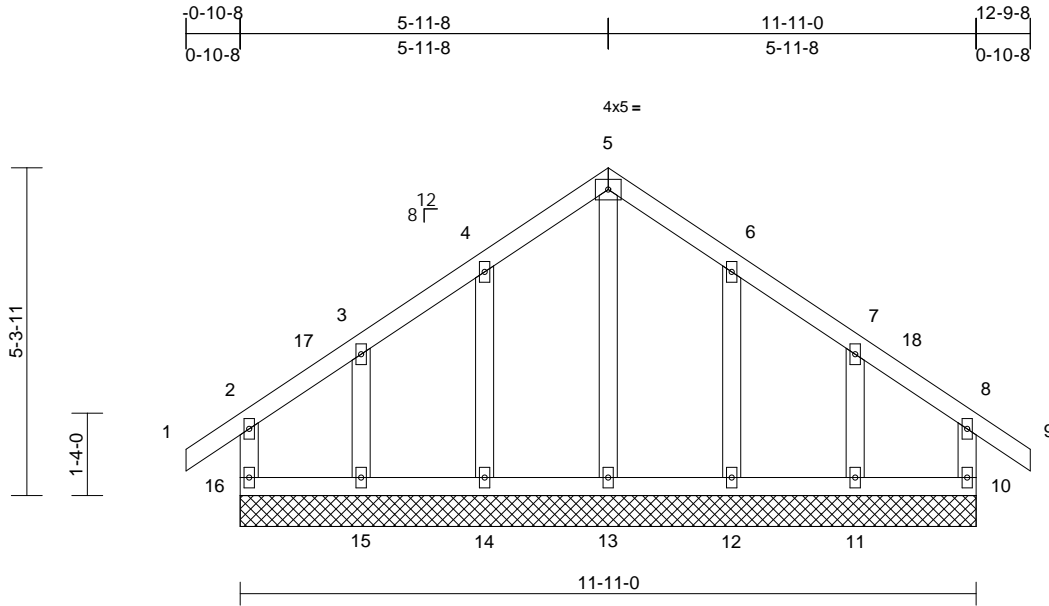


Job 22080003	Truss L02	Truss Type Common Supported Gable	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485651
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Carter Components (Sanford), Sanford, NC - 27332,

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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	0.11	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	0.09	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 69 lb	FT = 20%

LUMBER	BRACING	REACTIONS	FORCES	NOTES
<b>TOP CHORD</b> 2x4 SP No.2 <b>BOT CHORD</b> 2x4 SP No.2 <b>WEBS</b> 2x4 SP No.3 <b>OTHERS</b> 2x4 SP No.3	<b>TOP CHORD</b> Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. <b>BOT CHORD</b> Rigid ceiling directly applied or 6-0-0 oc bracing.	<b>(size)</b> 10=11-11-0, 11=11-11-0, 12=11-11-0, 13=11-11-0, 14=11-11-0, 15=11-11-0, 16=11-11-0 <b>Max Horiz</b> 16=141 (LC 12) <b>Max Uplift</b> 10=46 (LC 14), 11=80 (LC 15), 12=53 (LC 15), 14=52 (LC 14), 15=82 (LC 14), 16=53 (LC 10) <b>Max Grav</b> 10=143 (LC 24), 11=200 (LC 22), 12=256 (LC 22), 13=161 (LC 27), 14=256 (LC 21), 15=200 (LC 21), 16=149 (LC 25)	<b>(lb) - Maximum Compression/Maximum Tension</b> <b>TOP CHORD</b> 2-16=-118/157, 1-2=0/33, 2-3=-77/96, 3-4=-75/173, 4-5=-113/248, 5-6=-113/248, 6-7=-75/173, 7-8=-68/96, 8-9=0/33, 8-10=-117/157 <b>BOT CHORD</b> 15-16=-71/68, 14-15=-71/68, 13-14=-71/68, 12-13=-71/68, 11-12=-71/68, 10-11=-71/68 <b>WEBS</b> 5-13=-197/32, 4-14=-217/112, 3-15=-162/117, 6-12=-217/112, 7-11=-162/117	<b>1)</b> Unbalanced roof live loads have been considered for this design. <b>2)</b> 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 1-11-8, Exterior(2N) 1-11-8 to 2-11-8, Corner(3R) 2-11-8 to 8-11-8, Exterior (2N) 8-11-8 to 9-9-8, Corner(3E) 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 <b>3)</b> 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. <b>4)</b> 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 <b>5)</b> Unbalanced snow loads have been considered for this design. <b>6)</b> 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. <b>7)</b> All plates are 2x4 MT20 unless otherwise indicated. <b>8)</b> Gable requires continuous bottom chord bearing. <b>9)</b> Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web). <b>10)</b> Gable studs spaced at 2-0-0 oc. <b>11)</b> This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads. <b>12)</b> * 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. <b>13)</b> Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 16, 46 lb uplift at joint 10, 52 lb uplift at joint 14, 82 lb uplift at joint 15, 53 lb uplift at joint 12 and 80 lb uplift at joint 11. <b>14)</b> 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.



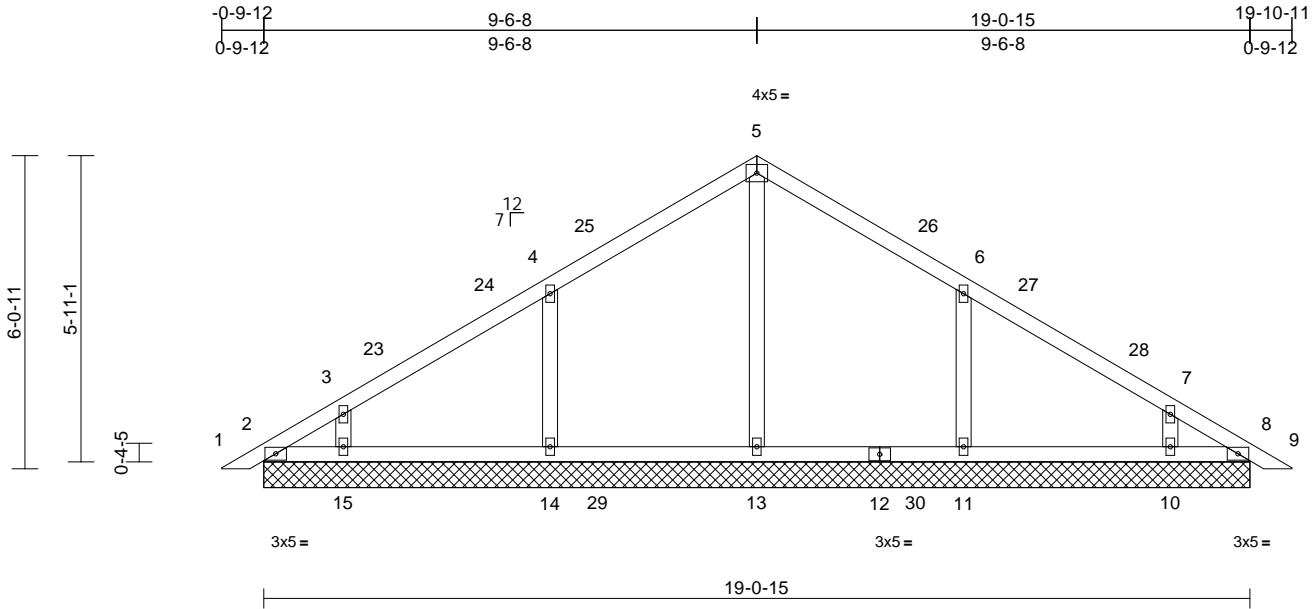
August 5, 2022

Job 22080003	Truss PB1	Truss Type Piggyback	Qty 10	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485652
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Carter Components (Sanford), Sanford, NC - 27332,

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	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	20	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, 13=19-0-15, 14=19-0-15, 15=19-0-15, 16=19-0-15, 20=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), 20=-9 (LC 11)  
Max Grav 2=89 (LC 25), 8=75 (LC 22), 10=310 (LC 25), 11=479 (LC 6), 13=374 (LC 24), 14=479 (LC 5), 15=311 (LC 24), 16=89 (LC 25), 20=75 (LC 22)

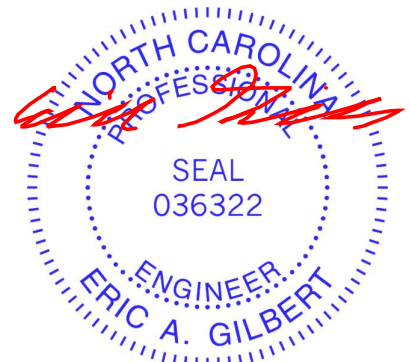
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-127/108, 3-4=-130/87, 4-5=-147/128, 5-6=-147/111, 6-7=-90/52, 7-8=-91/55, 8-9=0/16  
BOT CHORD 2-15=-39/90, 14-15=-39/90, 13-14=-39/90, 11-13=-39/90, 10-11=-39/90, 8-10=-39/90  
WEBS 5-13=-203/0, 4-14=-395/165, 3-15=-206/129, 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.



August 5, 2022

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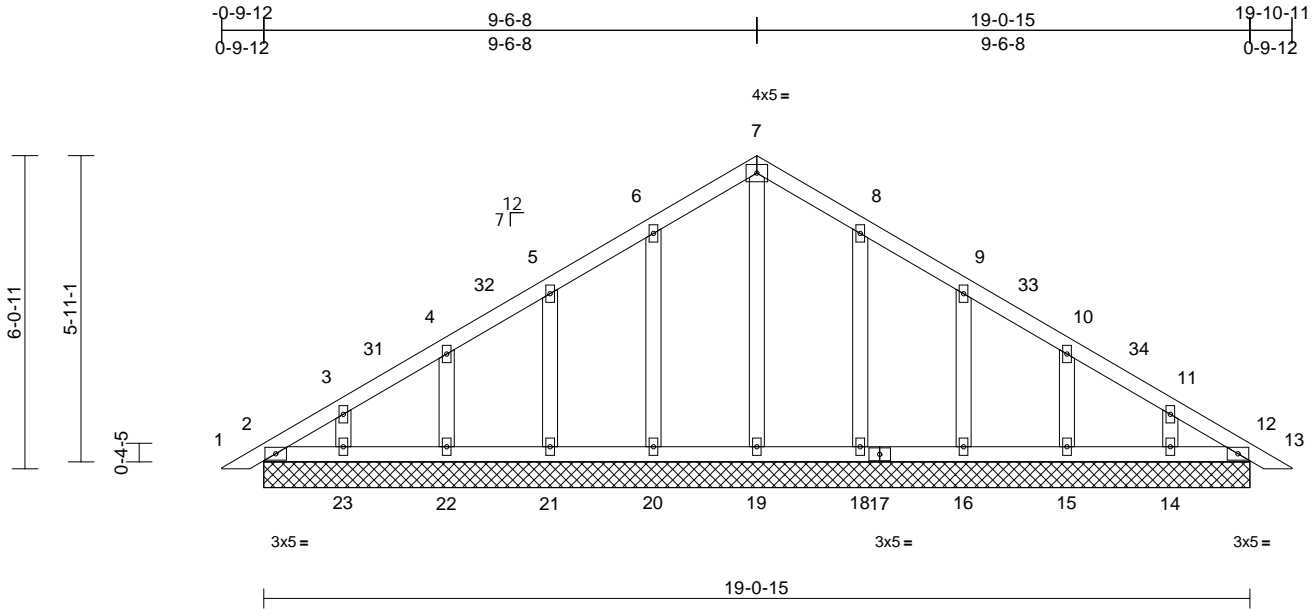
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss PB2	Truss Type Piggyback	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	I53485653
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:44.6

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	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, 18=19-0-15, 19=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), 18=-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 25), 16=219 (LC 22), 18=245 (LC 22), 19=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=-82/148, 7-8=-82/148, 8-9=-64/97, 9-10=-49/45, 10-11=-57/34, 11-12=-79/48, 12-13=0/16

**BOT CHORD** 2-23=-42/97, 22-23=-42/97, 21-22=-42/97, 20-21=-42/97, 19-20=-42/97, 18-19=-42/97, 16-18=-42/97, 15-16=-42/97, 14-15=-42/97, 12-14=-42/97  
**WEBS** 7-19=-110/5, 6-20=-206/79, 5-21=-180/80, 4-22=-126/83, 3-23=-110/81, 8-18=-206/79, 9-16=-180/80, 10-15=-126/83, 11-14=-110/81

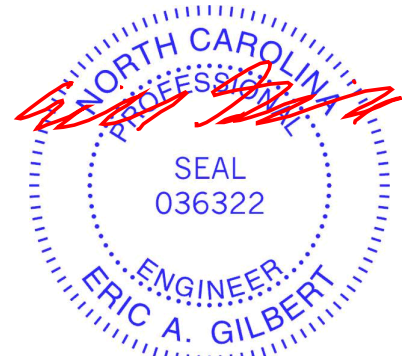
- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-3-11 to 3-3-11, Exterior(2N) 3-3-11 to 7-4-10, Corner(3R) 7-4-10 to 13-4-10, Exterior (2N) 13-4-10 to 17-5-10, Corner(3E) 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

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

**LOAD CASE(S)** Standard



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

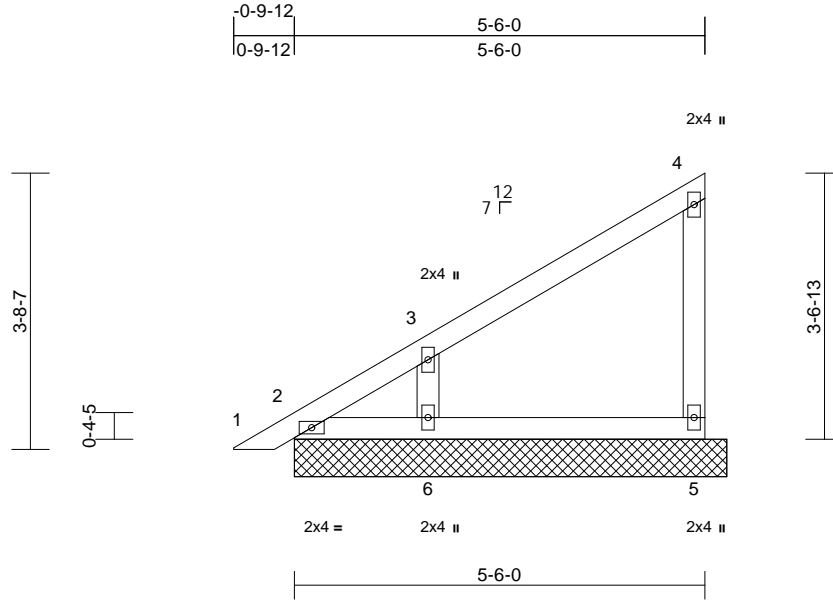
Job 22080003	Truss PB3	Truss Type Piggyback	Qty 10	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485654
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:51

Page: 1

ID:gKt\_2hRk?ORISCJExemzTUzHww5-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:30.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 25 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.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=5-9-8, 5=5-9-8, 6=5-9-8, 7=5-9-8  
Max Horiz 2=124 (LC 14), 7=124 (LC 14)  
Max Uplift 5=-37 (LC 14), 6=-93 (LC 14)  
Max Grav 2=64 (LC 30), 5=172 (LC 21), 6=425 (LC 21), 7=64 (LC 30)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-164/102, 3-4=-105/54  
BOT CHORD 2-6=-12/12, 5-6=0/0  
WEBS 3-6=-369/193, 4-5=-142/73

**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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) N/A
- 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.
- 12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



August 5, 2022

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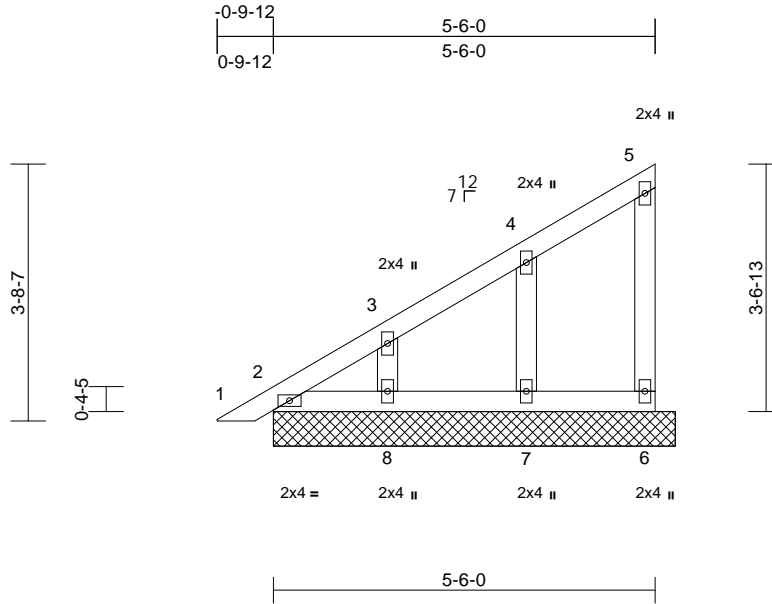
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss PB4	Truss Type Piggyback	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485655
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:51  
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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	0.04	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 lb	FT = 20%

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

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

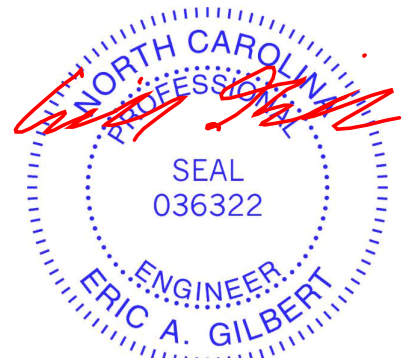
**REACTIONS** (size)  
2=5-9-8, 6=5-9-8, 7=5-9-8, 8=5-9-8, 9=5-9-8  
Max Horiz 2=121 (LC 14), 9=121 (LC 14)  
Max Uplift 6=-16 (LC 14), 7=-50 (LC 14), 8=-50 (LC 14)  
Max Grav 2=94 (LC 21), 6=75 (LC 21), 7=238 (LC 21), 8=221 (LC 21), 9=94 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-140/83, 3-4=-90/53, 4-5=-51/23  
BOT CHORD 2-8=-15/21, 7-8=0/0, 6-7=0/0  
WEBS 4-7=-199/103, 3-8=-174/87, 5-6=-62/32

**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.

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



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

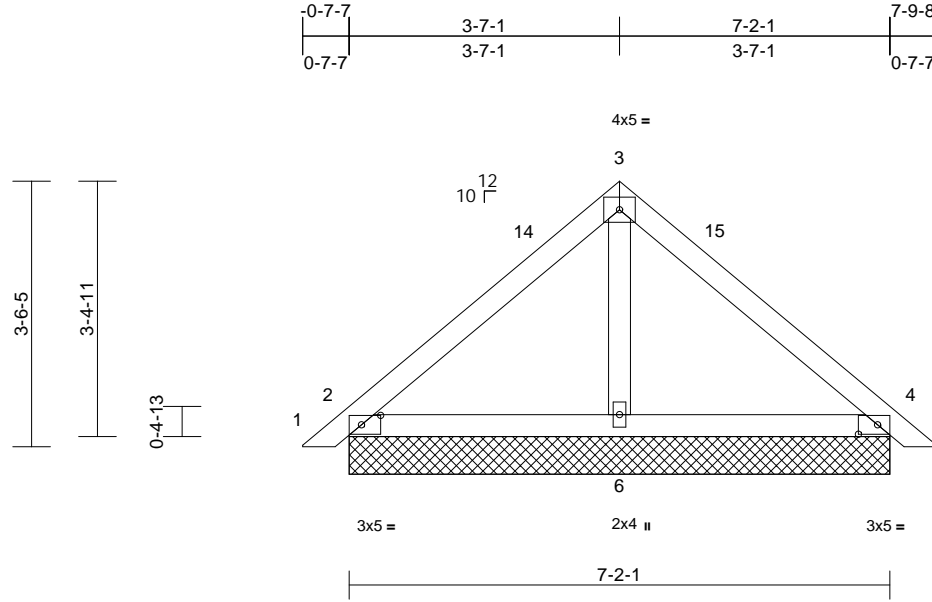
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss PB5	Truss Type Piggyback	Qty 10	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	I53485656
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:52  
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Page: 1



Scale = 1:30.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 31 lb	FT = 20%	

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
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=7-2-1, 4=7-2-1, 6=7-2-1, 7=7-2-1, 11=7-2-1  
Max Horiz 2=-78 (LC 12), 7=-78 (LC 12)  
Max Uplift 2=-37 (LC 14), 4=-46 (LC 15), 7=-37 (LC 14), 11=-46 (LC 15)  
Max Grav 2=300 (LC 21), 4=300 (LC 22), 6=228 (LC 21), 7=300 (LC 21), 11=300 (LC 22)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/26, 2-3=-206/113, 3-4=-206/113, 4-5=0/26  
BOT CHORD 2-6=-34/82, 4-6=-24/82  
WEBS 3-6=-80/0

**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) 0-2-14 to 3-2-14, Exterior (2R) 3-2-14 to 5-2-10, Exterior(2E) 5-2-10 to 8-2-10 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.
- 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



August 5, 2022

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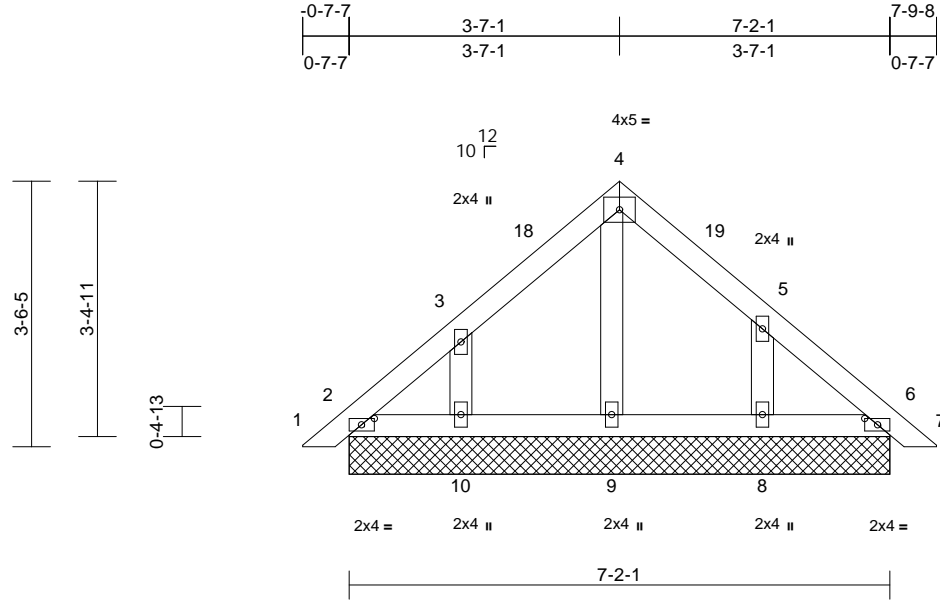
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss PB6	Truss Type Piggyback	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	I53485657
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:52  
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Page: 1



Scale = 1:30.6

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

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	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	0.05	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 35 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=7-2-1, 6=7-2-1, 8=7-2-1, 9=7-2-1, 10=7-2-1, 11=7-2-1, 15=7-2-1  
Max Horiz 2=-76 (LC 12), 11=-76 (LC 12)  
Max Uplift 2=-11 (LC 10), 8=-85 (LC 15), 10=-90 (LC 14), 11=-11 (LC 10)  
Max Grav 2=117 (LC 21), 6=136 (LC 22), 8=251 (LC 22), 9=114 (LC 21), 10=253 (LC 21), 11=117 (LC 21), 15=136 (LC 22)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/25, 2-3=-60/55, 3-4=-102/82, 4-5=-97/86, 5-6=-48/33, 6-7=0/25  
BOT CHORD 2-10=-25/77, 9-10=-25/77, 8-9=-24/78, 6-8=-24/78  
WEBS 3-10=-215/160, 4-9=-75/0, 5-8=-204/151

**NOTES**

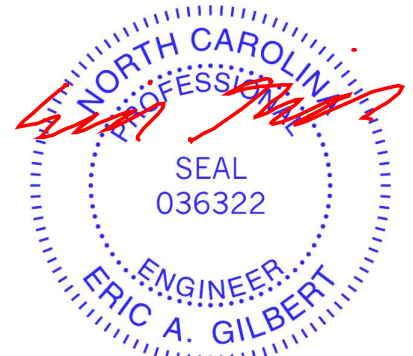
1) Unbalanced roof live loads have been considered for this design.

- 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) 0-2-14 to 3-2-14, Exterior (2R) 3-2-14 to 5-2-10, Exterior(2E) 5-2-10 to 8-2-10 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.
- 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

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

**LOAD CASE(S)** Standard

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.



August 5, 2022

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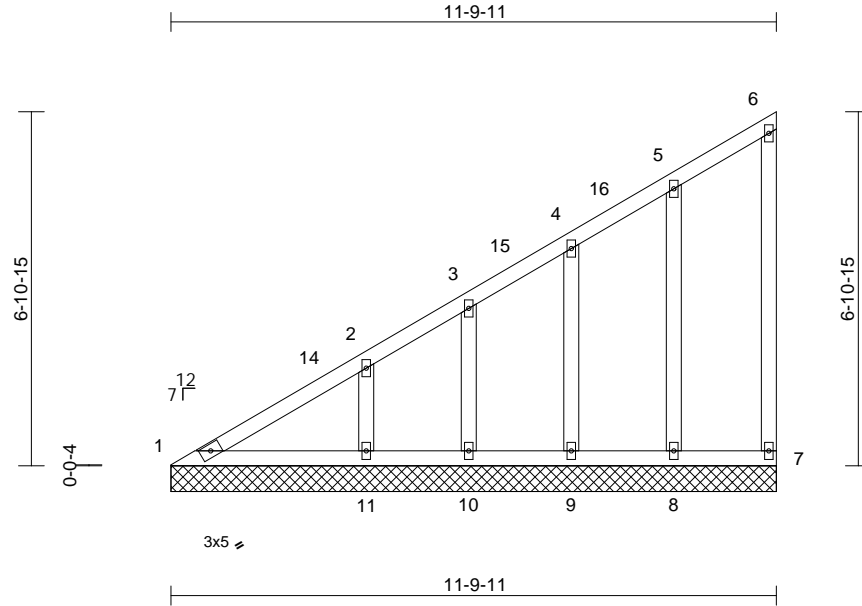
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss V1	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485658
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:52  
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Page: 1



Scale = 1:44.9

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	0.49	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	0.12	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 67 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=11-9-11, 7=11-9-11, 8=11-9-11, 9=11-9-11, 10=11-9-11, 11=11-9-11
Max Horiz	1=229 (LC 11)
Max Uplift	1=-3 (LC 10), 7=-32 (LC 11), 8=-52 (LC 14), 9=-50 (LC 14), 10=-40 (LC 14), 11=-74 (LC 14)
Max Grav	1=152 (LC 24), 7=87 (LC 20), 8=239 (LC 20), 9=238 (LC 20), 10=104 (LC 20), 11=306 (LC 23)

#### FORCES

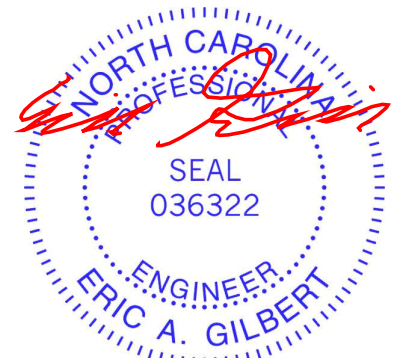
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-241/135, 2-3=-153/93, 3-4=-132/85, 4-5=-125/83, 5-6=-93/94, 6-7=-72/26
BOT CHORD	1-11=-98/177, 10-11=-98/124, 9-10=-98/124, 8-9=-98/124, 7-8=-98/124
WEBS	5-8=-200/74, 4-9=-192/123, 3-10=-95/82, 2-11=-199/157

#### 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 8-8-6, Corner(3E) 8-8-6 to 11-8-6 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

- 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 32 lb uplift at joint 7, 3 lb uplift at joint 1, 52 lb uplift at joint 8, 50 lb uplift at joint 9, 40 lb uplift at joint 10 and 74 lb uplift at joint 11.
- 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



August 5, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

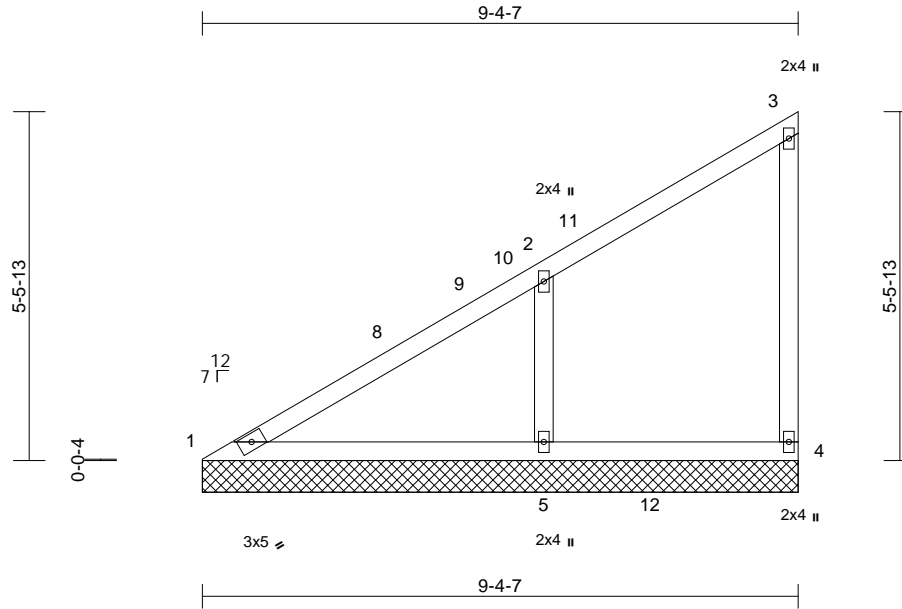


Job 22080003	Truss V2	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485659
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:53  
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Page: 1



Scale = 1:36.2

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	0.39	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	0.10	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 40 lb	FT = 20%	

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

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

**REACTIONS** (size) 1=9-4-7, 4=9-4-7, 5=9-4-7  
Max Horiz 1=179 (LC 11)  
Max Uplift 4=-28 (LC 11), 5=-112 (LC 14)  
Max Grav 1=192 (LC 24), 4=170 (LC 5), 5=579 (LC 5)

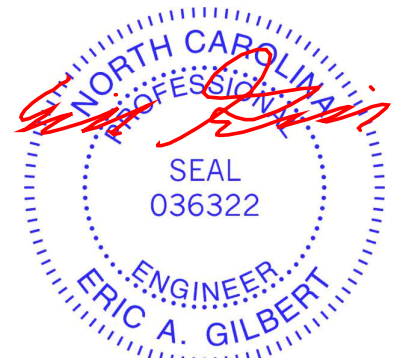
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-312/130, 2-3=-123/65, 3-4=-141/41  
BOT CHORD 1-5=-78/272, 4-5=-78/86  
WEBS 2-5=-433/169

**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 5-0-3, Exterior(2R) 5-0-3 to 9-3-2 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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" 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" tall by 2'-0" 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 28 lb uplift at joint 4 and 112 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



August 5, 2022

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



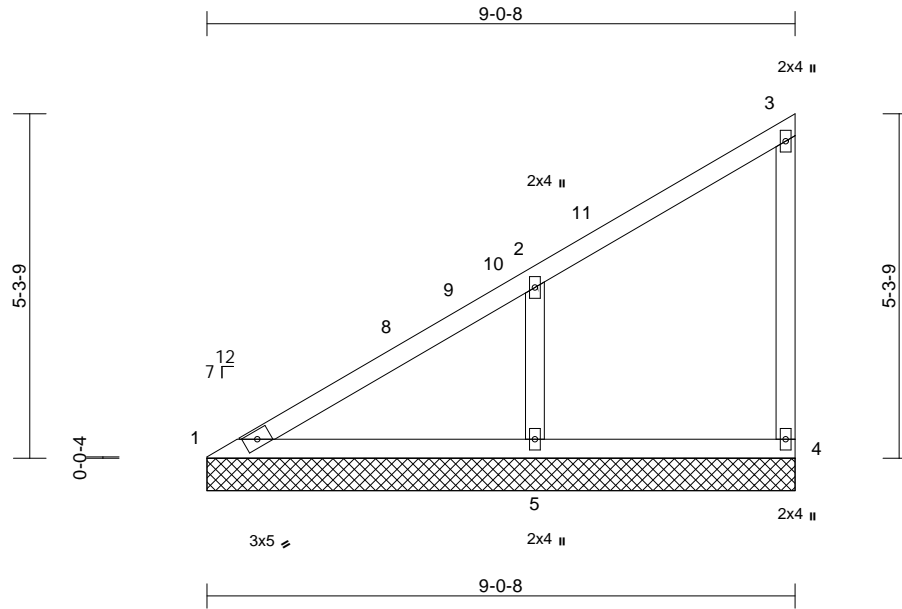
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss V3	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485660
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:35.4

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	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.25	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-MSH								
BCDL	10.0											
											Weight: 39 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=9-0-8, 4=9-0-8, 5=9-0-8  
Max Horiz 1=178 (LC 11)  
Max Uplift 4=-28 (LC 11), 5=-113 (LC 14)  
Max Grav 1=170 (LC 28), 4=169 (LC 20), 5=570 (LC 20)

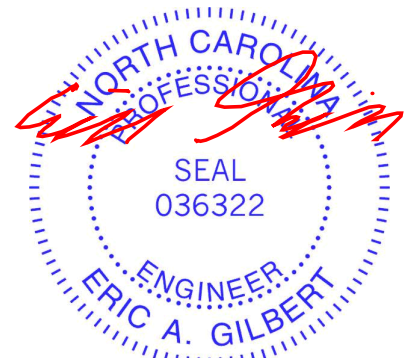
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-270/126, 2-3=-123/63, 3-4=-148/42  
BOT CHORD 1-5=-77/235, 4-5=-77/85  
WEBS 2-5=-435/173

**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 4-8-4, Exterior(2R) 4-8-4 to 8-11-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 28 lb uplift at joint 4 and 113 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



August 5, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



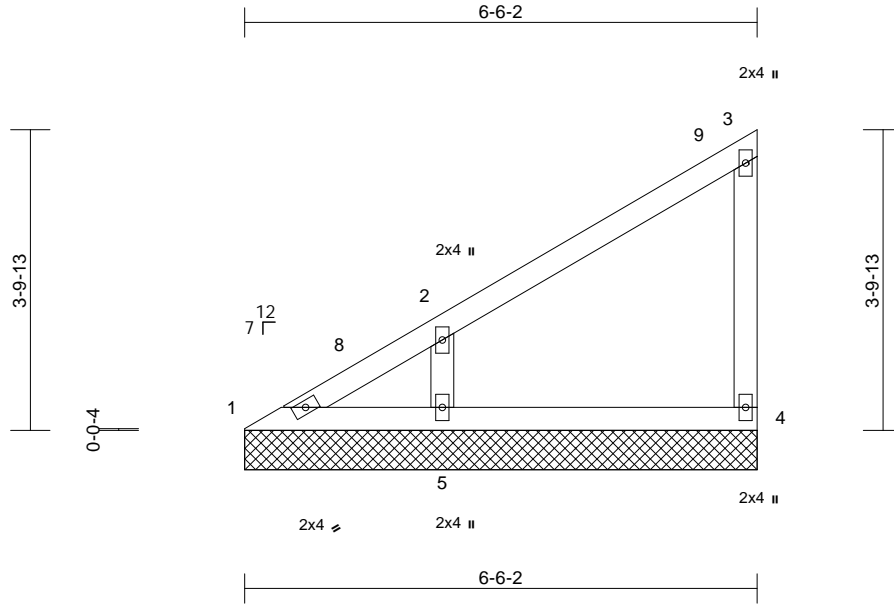
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss V4	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485661
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:29.3

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	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 26 lb	FT = 20%

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

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

**REACTIONS** (size) 1=6-6-2, 4=6-6-2, 5=6-6-2  
Max Horiz 1=125 (LC 11)  
Max Uplift 1=-5 (LC 10), 4=-22 (LC 11), 5=-93 (LC 14)  
Max Grav 1=75 (LC 24), 4=186 (LC 20), 5=468 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-108/97, 2-3=-114/59, 3-4=-154/40  
BOT CHORD 1-5=-58/63, 4-5=-58/63  
WEBS 2-5=-401/195

- 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 5 lb uplift at joint 1, 22 lb uplift at joint 4 and 93 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



August 5, 2022

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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

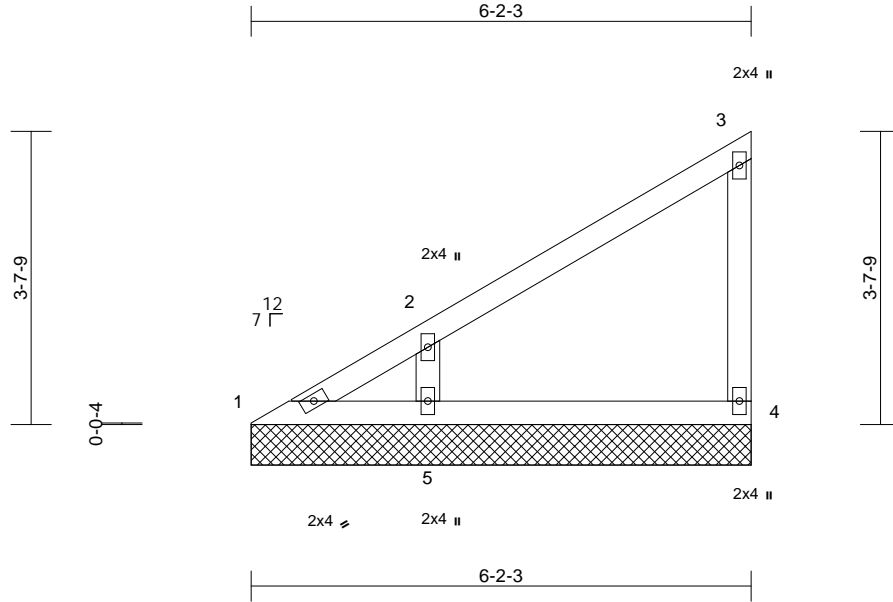
Job 22080003	Truss V5	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485662
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:53

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Scale = 1:28.5

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	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 25 lb	FT = 20%	

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

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

**REACTIONS** (size) 1=6-2-3, 4=6-2-3, 5=6-2-3  
Max Horiz 1=119 (LC 11)  
Max Uplift 1=-10 (LC 10), 4=-27 (LC 14), 5=-90 (LC 14)  
Max Grav 1=59 (LC 28), 4=186 (LC 20), 5=464 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-113/98, 2-3=-114/58, 3-4=-153/45  
BOT CHORD 1-5=-55/60, 4-5=-55/60  
WEBS 2-5=-412/207

**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 27 lb uplift at joint 4, 10 lb uplift at joint 1 and 90 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



August 5, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



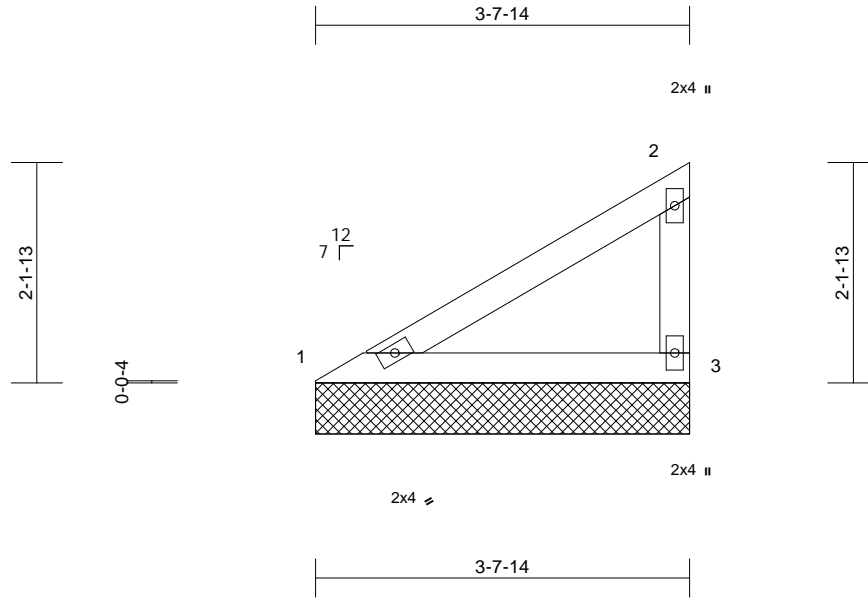
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss V6	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485663
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:54  
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Page: 1



Scale = 1:22.5					
<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 0.21	Vert(LL) n/a - n/a 999	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.25	Vert(TL) n/a - n/a 999		
TCDL 10.0	Rep Stress Incr YES	WB 0.00	Horiz(TL) 0.00 3 n/a n/a		
BCLL 0.0*	Code IRC2018/TPI2014	Matrix-MP			
BCDL 10.0				Weight: 13 lb	FT = 20%

<b>LUMBER</b>	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
<b>BRACING</b>	
TOP CHORD	Structural wood sheathing directly applied or 3-7-14 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
<b>REACTIONS</b> (size) 1=3-7-14, 3=3-7-14	
Max Horiz	1=66 (LC 11)
Max Uplift	1=-13 (LC 14), 3=-32 (LC 14)
Max Grav	1=197 (LC 20), 3=197 (LC 20)
<b>FORCES</b> (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-289/54, 2-3=-130/46
BOT CHORD	1-3=-61/240

- 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 32 lb uplift at joint 3 and 13 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

- 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); ls=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.



August 5, 2022

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



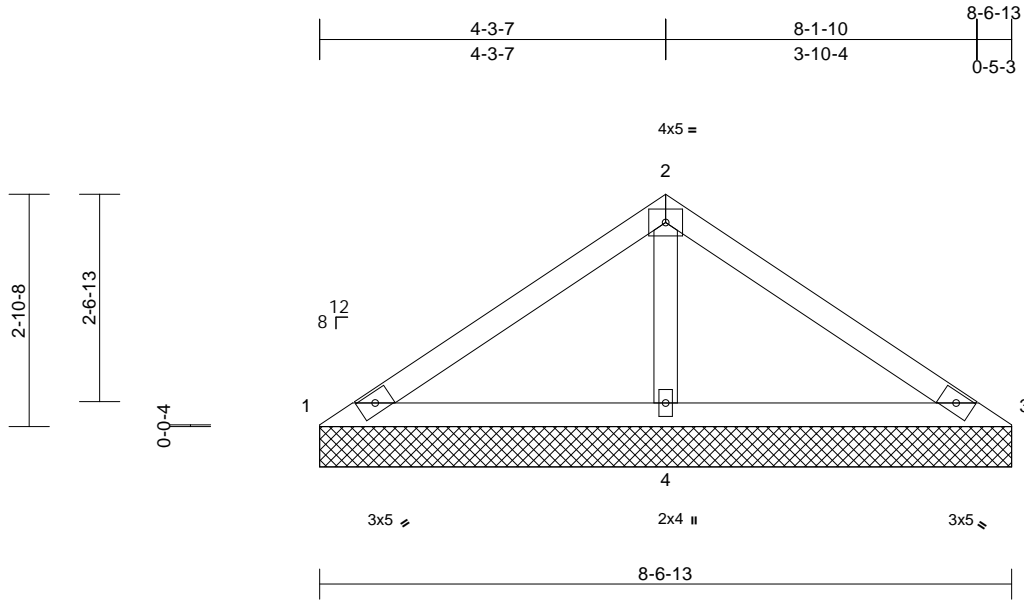
818 Soundside Road  
Edenton, NC 27932

Job 22080003	Truss V7	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485664
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Jul 18 2022 Print: 8.530 S Jul 18 2022 MiTek Industries, Inc. Thu Aug 04 09:17:54  
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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.36	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 30 lb	FT = 20%

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 8-6-13 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

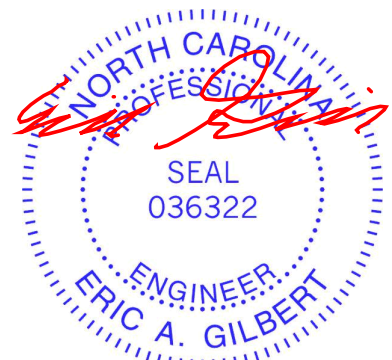
**REACTIONS** (size) 1=8-6-13, 3=8-6-13, 4=8-6-13  
Max Horiz 1=-63 (LC 10)  
Max Uplift 1=-38 (LC 21), 3=-38 (LC 20), 4=-74 (LC 14)  
Max Grav 1=104 (LC 20), 3=104 (LC 21), 4=663 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-106/327, 2-3=-106/327  
BOT CHORD 1-4=-223/159, 3-4=-223/159  
WEBS 2-4=-490/205

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 1, 38 lb uplift at joint 3 and 74 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 5-7-3, Exterior(2E) 5-7-3 to 8-7-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.



August 5, 2022

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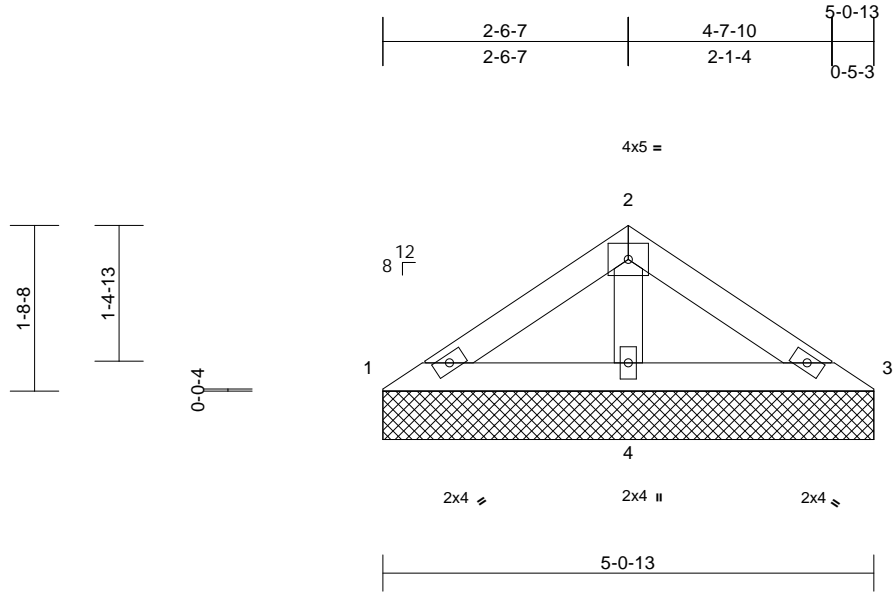


Job 22080003	Truss V8	Truss Type Valley	Qty 1	Ply 1	DRB GROUP - 121 FaNC Job Reference (optional)	153485665
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:23.8					
<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 0.09	Vert(LL) n/a - n/a 999	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.11	Vert(TL) n/a - n/a 999		
TCDL 10.0	Rep Stress Incr YES	WB 0.04	Horiz(TL) 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 5-0-13 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 1=5-0-13, 3=5-0-13, 4=5-0-13  
Max Horiz 1=36 (LC 11)  
Max Uplift 1=-5 (LC 14), 3=-11 (LC 15), 4=-27 (LC 14)  
Max Grav 1=88 (LC 20), 3=88 (LC 21), 4=305 (LC 21)

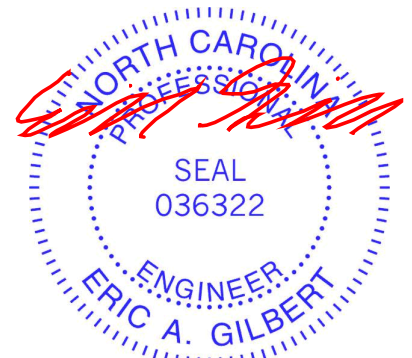
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-86/115, 2-3=-87/115  
BOT CHORD 1-4=-88/80, 3-4=-88/80  
WEBS 2-4=-189/96

- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 1, 11 lb uplift at joint 3 and 27 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

**NOTES**

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



August 5, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

\* Plate location details available in **MITek 20/20 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 where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



# General Safety Notes

## Failure to Follow Could Cause Property Damage or Personal Injury

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