

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 21040028-B
72 Carolina Lakes-Roof-Sterling

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: I46292676 thru I46292708

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844



May 26, 2021

Sevier, Scott

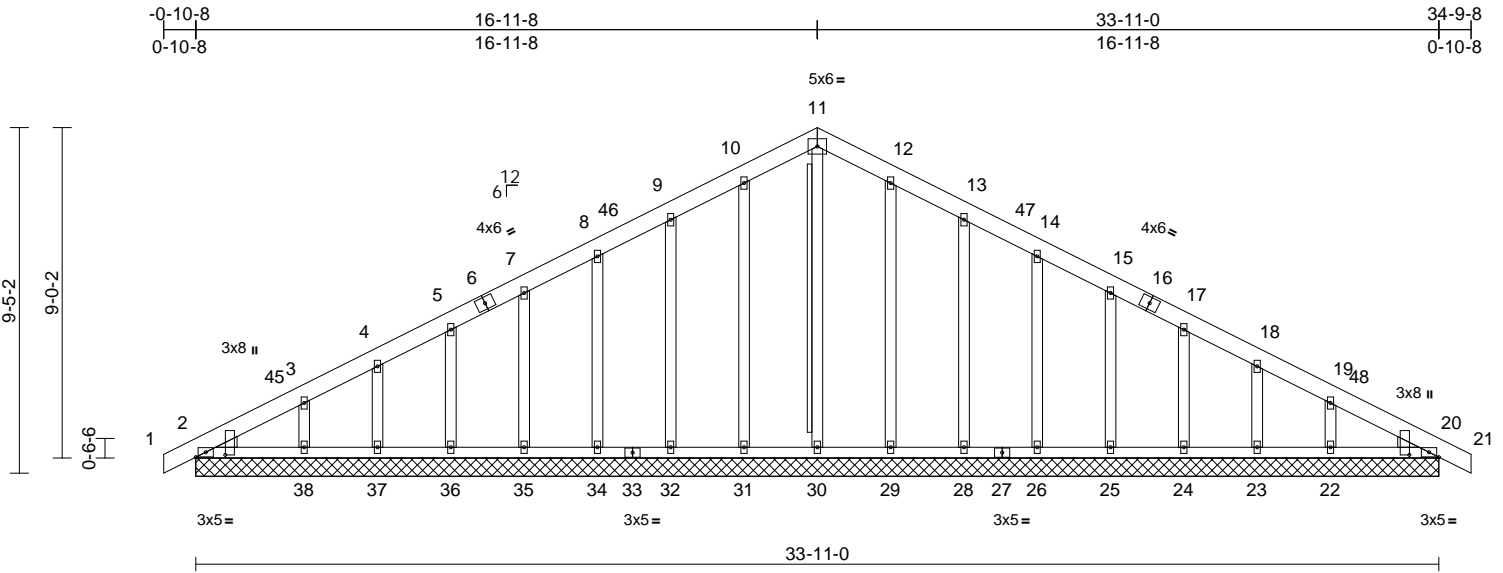
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 21040028-B	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292676
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:15
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Page: 1



Scale = 1:62.9

Plate Offsets (X, Y): [2:0-0-12,0-0-2], [2:0-0-12,0-9-11], [2:0-0-12,0-0-2], [2:0-0-12,0-9-11]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	20	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 248 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 0-0:2x4 SPF No.2(flat)
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS T-Brace: 2x4 SPF No.2 - 11-30
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
Brace must cover 90% of web length.

REACTIONS (size)
2=33-11-0, 20=33-11-0,
22=33-11-0, 23=33-11-0,
24=33-11-0, 25=33-11-0,
26=33-11-0, 28=33-11-0,
29=33-11-0, 30=33-11-0,
31=33-11-0, 32=33-11-0,
34=33-11-0, 35=33-11-0,
36=33-11-0, 37=33-11-0,
38=33-11-0, 39=33-11-0,
42=33-11-0
Max Horiz 2=-141 (LC 15), 39=-141 (LC 15)
Max Uplift 2=-24 (LC 15), 22=-67 (LC 15),
23=-37 (LC 15), 24=-45 (LC 15),
25=-43 (LC 15), 26=-44 (LC 15),
28=-53 (LC 15), 29=-20 (LC 15),
31=-28 (LC 14), 32=-50 (LC 14),
34=-44 (LC 14), 35=-43 (LC 14),
36=-45 (LC 14), 37=-35 (LC 14),
38=-72 (LC 14), 39=-24 (LC 15)

Max Grav 2=170 (LC 21), 20=170 (LC 22),
22=224 (LC 35), 23=141 (LC 22),
24=164 (LC 35), 25=159 (LC 1),
26=177 (LC 22), 28=230 (LC 22),
29=237 (LC 22), 30=181 (LC 27),
31=237 (LC 21), 32=230 (LC 21),
34=177 (LC 21), 35=159 (LC 1),
36=164 (LC 34), 37=141 (LC 21),
38=224 (LC 34), 39=170 (LC 21),
42=170 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-158/89, 3-4=-114/91,
4-5=-90/111, 5-7=-71/134, 7-8=61/157,
8-9=-71/191, 9-10=-91/240, 10-11=-105/272,
11-12=-105/272, 12-13=-91/240,
13-14=-71/191, 14-15=-55/146,
15-17=-47/100, 17-18=-46/55, 18-19=-59/17,
19-20=-83/42, 20-21=0/23
BOT CHORD 2-38=-32/128, 37-38=-32/128,
36-37=-32/128, 35-36=-32/128,
34-35=-32/128, 32-34=-32/128,
31-32=-32/128, 30-31=-32/128,
29-30=-32/128, 28-29=-32/128,
26-28=-32/128, 25-26=-32/128,
24-25=-32/128, 23-24=-32/128,
22-23=-32/128, 20-22=-32/128
WEBS 11-30=-150/23, 10-31=-197/52,
9-32=-190/88, 8-34=-137/77, 7-35=-120/77,
5-36=-122/79, 4-37=-107/68, 3-38=-166/117,
12-29=-197/47, 13-28=-190/88,
14-26=-137/77, 15-25=-120/77,
17-24=-122/79, 18-23=-107/68,
19-22=-166/117

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) -0-10-8 to 2-6-3, Exterior(2N) 2-6-3 to 13-6-13, Corner(3R) 13-6-13 to 20-4-3, Exterior (2N) 20-4-3 to 31-4-13, Corner(3E) 31-4-13 to 34-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.



May 26, 2021

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/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 21040028-B	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling I46292676 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

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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) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 31, 32, 34, 35, 36, 37, 38, 29, 28, 26, 25, 24, 23, and 22. This connection is for uplift only and does not consider lateral forces.
- 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) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

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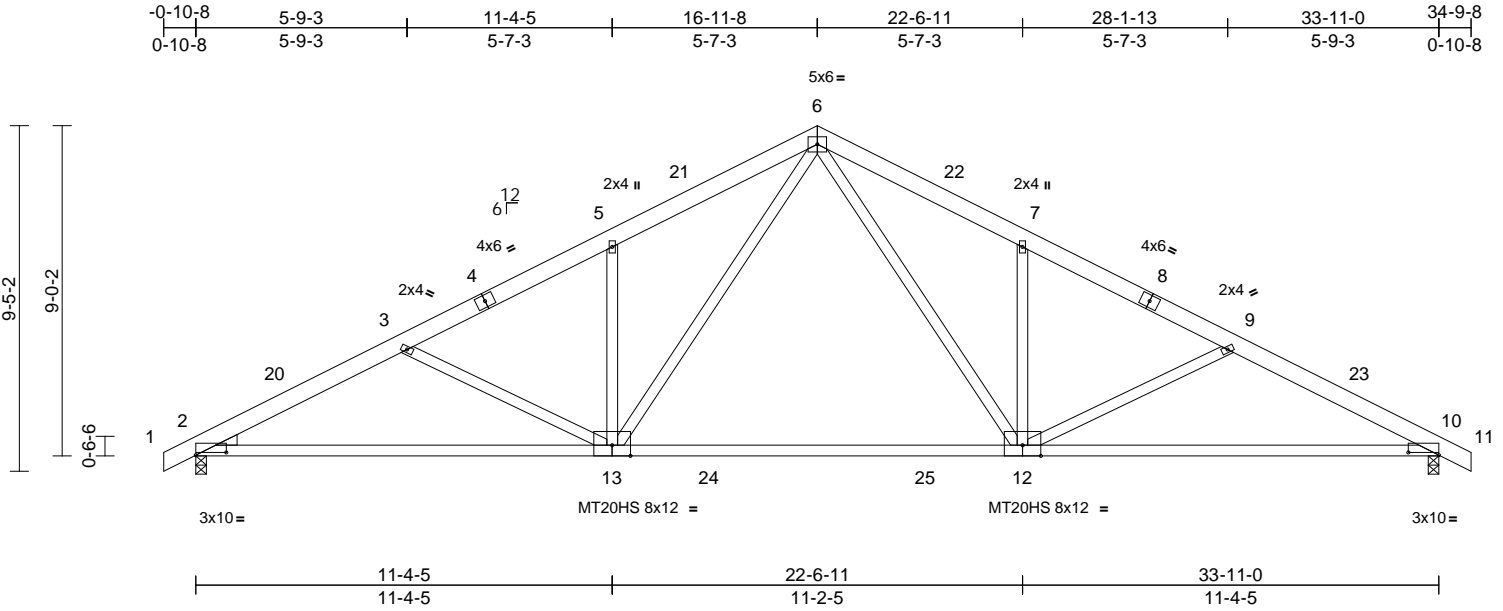
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss A02	Truss Type Common	Qty 4	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292677
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:18
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Page: 1



Scale = 1:62.9

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

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	0.28	Vert(LL)	-0.43	12-13	>953	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.65	12-13	>627	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 209 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x4 SP 2400F 2.0E
 WEBS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-3-11 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-3-8, 10=0-3-8
 Max Horiz 2=-141 (LC 19)
 Max Uplift 2=-148 (LC 14), 10=-148 (LC 15)
 Max Grav 2=1529 (LC 3), 10=1529 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/23, 2-3=-2668/293, 3-5=-2358/255, 5-6=-2395/360, 6-7=-2395/360, 7-9=-2358/255, 9-10=-2668/293, 10-11=0/23
 BOT CHORD 2-10=-301/2361
 WEBS 5-13=-476/215, 6-13=-193/1157, 3-13=-397/184, 6-12=-193/1157, 7-12=-476/214, 9-12=-397/185

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 2-6-3, Interior (1) 2-6-3 to 13-6-13, Exterior(2R) 13-6-13 to 20-4-3, Interior (1) 20-4-3 to 31-4-13, Exterior(2E) 31-4-13 to 34-9-8 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) 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, with BCDL = 10.0psf.
- 9) One RT7A MiTek 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.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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

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



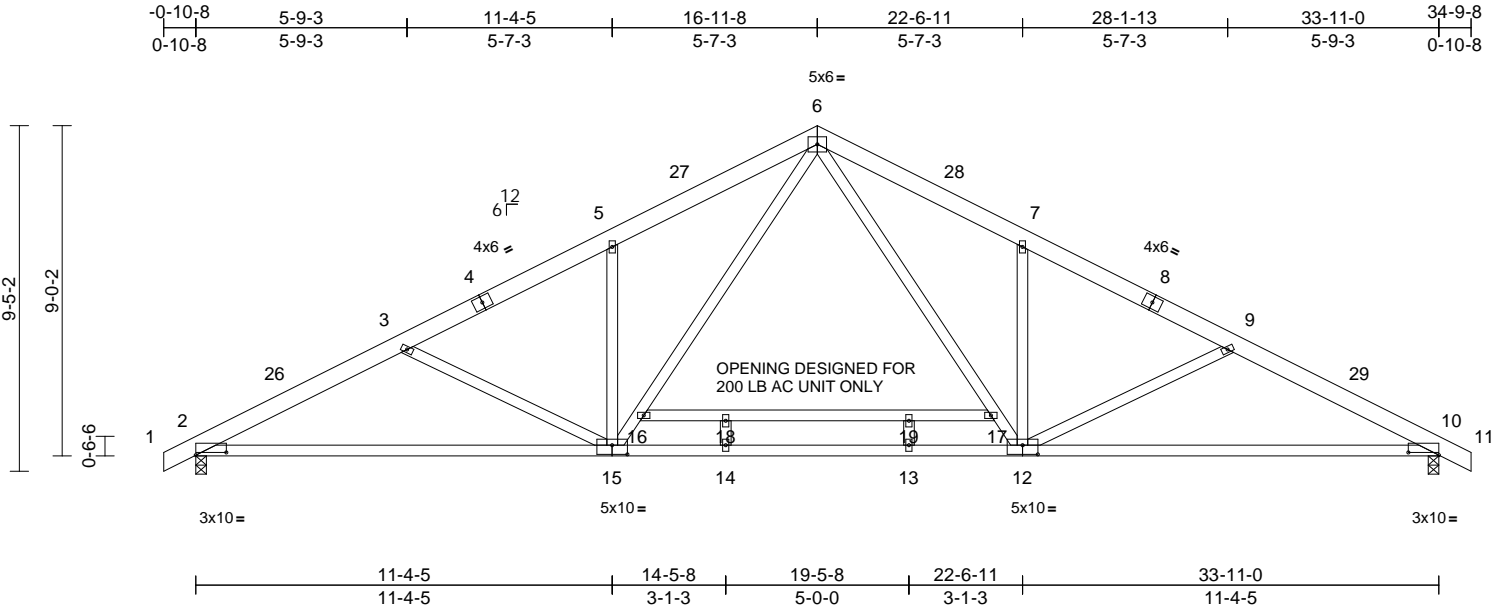
818 Soundside Road
 Edenton, NC 27932

Job 21040028-B	Truss A03	Truss Type Common	Qty 2	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292678
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:62.9

Plate Offsets (X, Y): [2:0-10-0,0-0-14], [10:0-10-0,0-0-14], [12:0-5-0,0-3-0], [15:0-5-0,0-3-0]

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	0.28	Vert(LL)	-0.18	12-22	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.54	13-14	>747	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 225 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 16-17:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-4-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-141 (LC 15)
Max Uplift 2=-48 (LC 14), 10=-48 (LC 15)
Max Grav 2=1509 (LC 1), 10=1509 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-2696/73, 3-5=-2342/22, 5-6=-2399/126, 6-7=-2399/126, 7-9=-2342/22, 9-10=-2696/73, 10-11=0/23
BOT CHORD 2-14=-110/2355, 13-14=0/1441, 10-13=-15/2355
WEBS 5-15=-479/212, 3-15=-378/205, 7-12=-479/211, 15-16=-119/1124, 6-16=-69/1147, 6-17=-69/1147, 12-17=-118/1124, 9-12=-378/207, 16-18=-27/41, 18-19=-27/41, 17-19=-27/41, 14-18=0/61, 13-19=0/61

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-6-3, Interior (1) 2-6-3 to 13-6-13, Exterior(2R) 13-6-13 to 20-4-3, Interior (1) 20-4-3 to 31-4-13, Exterior(2E) 31-4-13 to 34-9-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 16-11-8 from left end, supported at two points, 5-0-0 apart.
- All plates are 2x4 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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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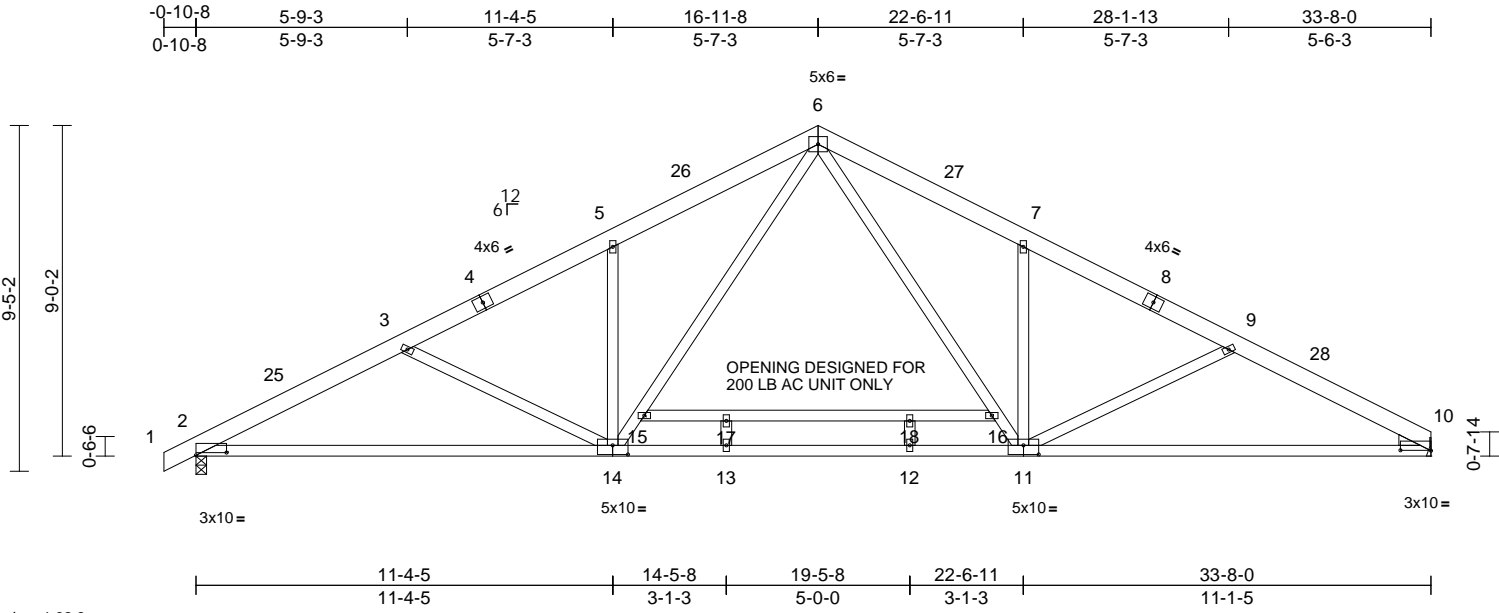
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss A04	Truss Type Common	Qty 5	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292679
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:62.8
Plate Offsets (X, Y): [2:0-10-0,0-0-14], [10:0-10-0,0-0-2], [11:0-5-0,0-3-0], [14:0-5-0,0-3-0]

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	0.31	Vert(LL)	-0.18	14-24	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.55	12-13	>739	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 222 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 15-16:2x4 SP No.2
WEDGE Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 10= Mechanical
Max Horiz 2=151 (LC 14)
Max Uplift 2=-48 (LC 14), 10=-28 (LC 15)
Max Grav 2=1499 (LC 1), 10=1447 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-2675/75, 3-5=-2324/24,
5-6=-2382/127, 6-7=-2358/129,
7-9=-2277/26, 9-10=-2593/83
BOT CHORD 2-13=-120/2336, 12-13=0/1422,
10-12=-68/2238
WEBS 5-14=-480/212, 3-14=-378/205,
7-11=-498/211, 14-15=-119/1126,
6-15=-69/1150, 6-16=-69/1115,
11-16=-118/1089, 9-11=-301/206,
15-17=-28/39, 17-18=-28/39, 16-18=-28/39,
13-17=0/61, 12-18=0/64

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-5-14, Interior (1) 2-5-14 to 13-7-2, Exterior(2R) 13-7-2 to 20-3-14, Interior (1) 20-3-14 to 30-3-10, Exterior(2E) 30-3-10 to 33-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 16-11-8 from left end, supported at two points, 5-0-0 apart.
- All plates are 2x4 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 10.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

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

LOAD CASE(S) Standard



May 26, 2021

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

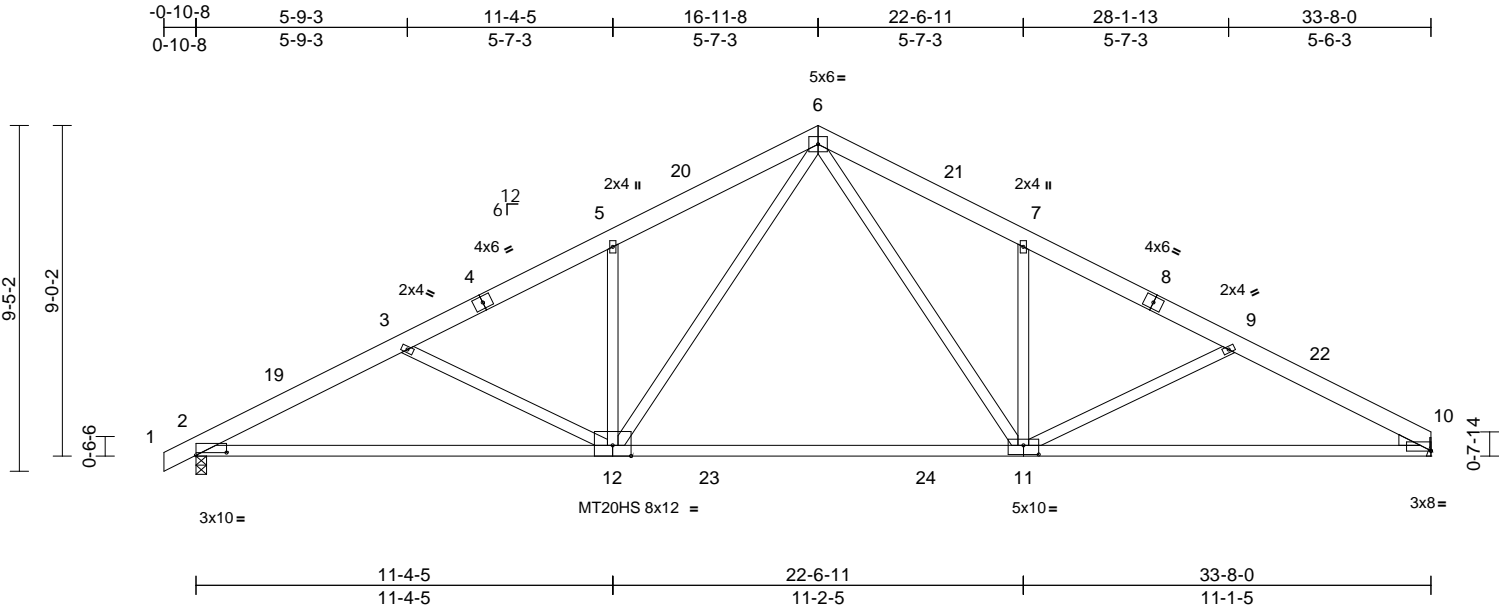
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss A05	Truss Type Common	Qty 4	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292680
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:19
ID:?w0cRT0WIMa9CGaJsKQF5zLppS-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:62.8
Plate Offsets (X, Y): [2:0-10-0,0-0-14], [10:Edge,0-0-2], [11:0-5-0,0-3-0]

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	0.28	Vert(LL)	-0.43	11-12	>941	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.65	11-12	>617	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 206 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP 2400F 2.0E
WEBS 2x4 SP No.3
WEDGE Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 10= Mechanical
Max Horiz 2=151 (LC 14)
Max Uplift 2=-148 (LC 14), 10=-128 (LC 15)
Max Grav 2=1519 (LC 3), 10=1475 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-2646/293, 3-5=-2339/255, 5-6=-2376/360, 6-7=-2353/361, 7-9=-2307/256, 9-10=-2573/295
BOT CHORD 2-10=-310/2342
WEBS 5-12=-477/215, 3-12=-397/184, 7-11=-494/216, 6-12=-193/1161, 6-11=-191/1125, 9-11=-327/178

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 10.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



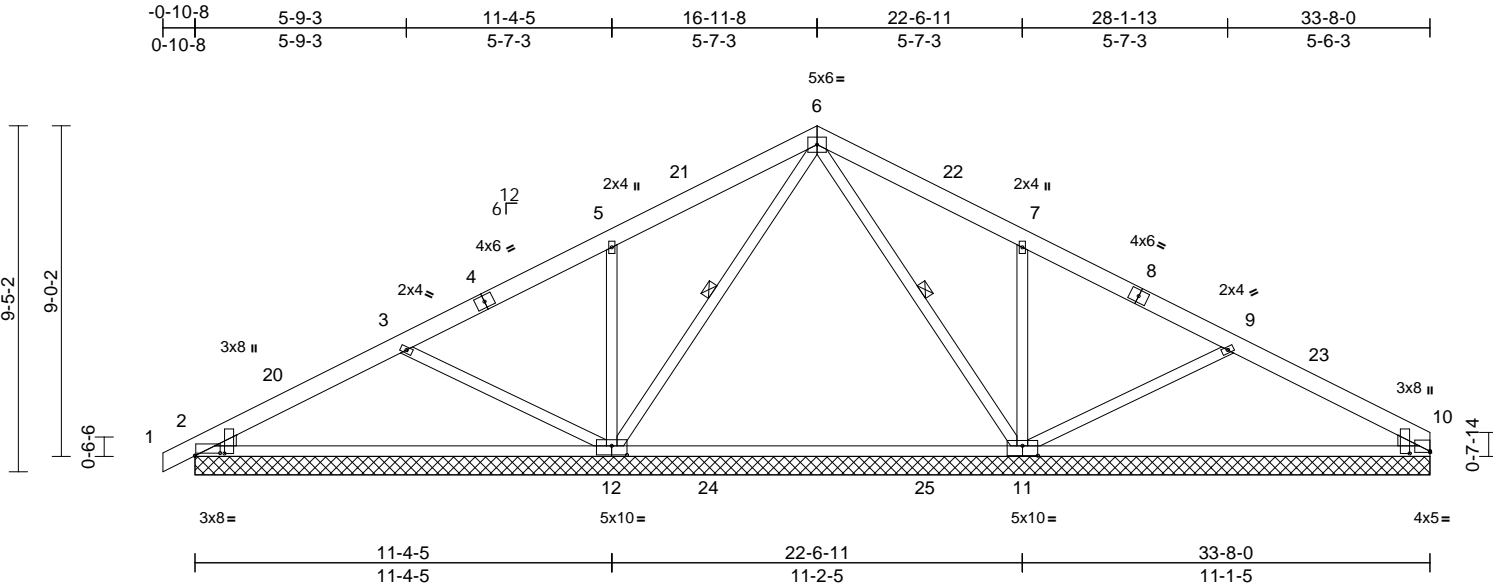
May 26, 2021

Job 21040028-B	Truss A06	Truss Type Common	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292681
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:20
ID:QsLtvZ5j1OfgmolD0p?uffHzLpo4-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCdoi7J4zJC?f

Page: 1



Scale = 1:62.8

Plate Offsets (X, Y): [2:0-8-4,0-0-14], [2:0-0-12,0-9-11], [10:Edge,0-0-6], [10:0-0-12,0-6-11], [11:0-5-0,0-3-4], [12:0-5-0,0-3-0]

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	0.47	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	-0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 207 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x4 SP 2400F 2.0E
 WEBS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.3
 Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
 WEBS 1 Row at midpt 6-12, 6-11

REACTIONS (size) 2=33-8-0, 10=33-8-0, 11=33-8-0, 12=33-8-0, 16=33-8-0, 17=33-8-0
 Max Horiz 2=151 (LC 14), 17=151 (LC 14)
 Max Uplift 2=-35 (LC 14), 11=-210 (LC 15), 12=-196 (LC 14), 17=-35 (LC 14)
 Max Grav 2=375 (LC 34), 10=1 (LC 7), 11=1819 (LC 6), 12=1092 (LC 5), 16=1 (LC 7), 17=375 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-276/156, 3-5=-82/446, 5-6=0/440, 6-7=0/971, 7-9=-112/953, 9-10=-29/541
 BOT CHORD 2-10=-383/229
 WEBS 5-12=-475/217, 3-12=-480/186, 7-11=-477/215, 6-12=-158/34, 6-11=-950/69, 9-11=-495/191

- 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 2-5-14, Interior (1) 2-5-14 to 13-7-2, Exterior(2R) 13-7-2 to 20-3-14, Interior (1) 20-3-14 to 30-3-10, Exterior(2E) 30-3-10 to 33-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- 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 RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 12, and 11. This connection is for uplift only and does not consider lateral forces.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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



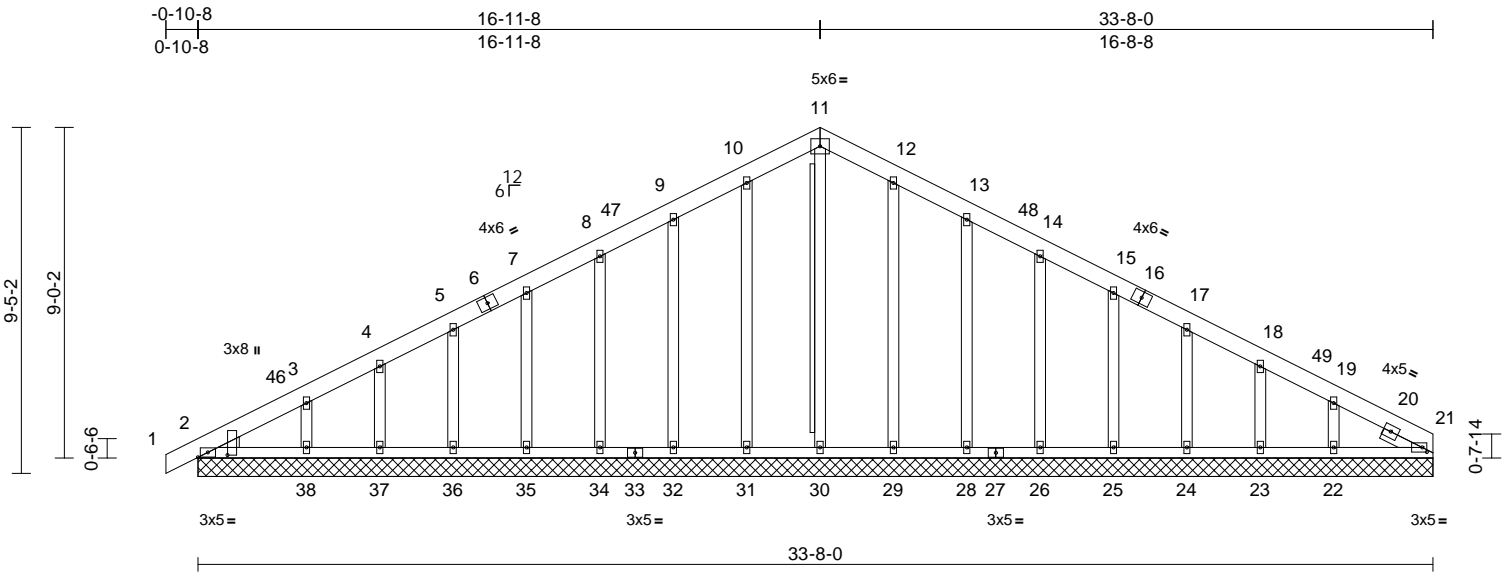
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss A07	Truss Type Common	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292682
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:62.8
Plate Offsets (X, Y): [2:0-0-12,0-0-2], [2:0-0-12,0-9-11], [21:0-1-8,0-1-8]

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.01	21	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 245 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 0-0:2x4 SPF No.2(flat)
WEDGE Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-1-14

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS T-Brace: 2x4 SPF No.2 - 11-30
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
Brace must cover 90% of web length.

REACTIONS (size)
2=33-8-0, 21=33-8-0, 22=33-8-0,
23=33-8-0, 24=33-8-0, 25=33-8-0,
26=33-8-0, 28=33-8-0, 29=33-8-0,
30=33-8-0, 31=33-8-0, 32=33-8-0,
34=33-8-0, 35=33-8-0, 36=33-8-0,
37=33-8-0, 38=33-8-0, 39=33-8-0,
42=33-8-0
Max Horiz 2=146 (LC 14), 39=146 (LC 14)
Max Uplift 2=-21 (LC 15), 22=-74 (LC 15),
23=-33 (LC 15), 24=-44 (LC 15),
25=-42 (LC 15), 26=-42 (LC 15),
28=-51 (LC 15), 29=-20 (LC 15),
31=-28 (LC 14), 32=-48 (LC 14),
34=-42 (LC 14), 35=-42 (LC 14),
36=-44 (LC 14), 37=-34 (LC 14),
38=-70 (LC 14), 39=-21 (LC 15)

Max Grav 2=166 (LC 1), 21=98 (LC 22),
22=215 (LC 35), 23=138 (LC 22),
24=158 (LC 35), 25=154 (LC 1),
26=172 (LC 22), 28=223 (LC 22),
29=230 (LC 22), 30=171 (LC 27),
31=230 (LC 21), 32=223 (LC 21),
34=172 (LC 21), 35=154 (LC 1),
36=159 (LC 34), 37=137 (LC 21),
38=217 (LC 34), 39=166 (LC 1),
42=98 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-157/80, 3-4=-115/82,
4-5=-91/102, 5-7=-71/124, 7-8=62/147,
8-9=-74/177, 9-10=-93/224, 10-11=-106/256,
11-12=-106/256, 12-13=-93/224,
13-14=-74/177, 14-15=-56/133,
15-17=-47/89, 17-18=-47/45, 18-19=-62/13,
19-21=-90/35
BOT CHORD 2-38=-31/105, 37-38=-31/105,
36-37=-31/105, 35-36=-31/105,
34-35=-31/105, 32-34=-31/105,
31-32=-31/105, 30-31=-31/105,
29-30=-31/105, 28-29=-31/105,
26-28=-31/105, 25-26=-31/105,
24-25=-31/105, 23-24=-31/105,
22-23=-31/105, 21-22=-31/105
WEBS 11-30=-139/26, 10-31=-191/51,
9-32=-184/85, 8-34=-133/75, 7-35=-116/74,
5-36=-118/76, 4-37=-104/66, 3-38=-161/114,
12-29=-191/46, 13-28=-184/85,
14-26=-133/75, 15-25=-116/74,
17-24=-118/76, 18-23=-104/65,
19-22=-160/147

- 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 2-5-14, Exterior (2N) 2-5-14 to 13-7-2, Corner(3R) 13-7-2 to 20-3-14, Exterior(2N) 20-3-14 to 30-3-10, Corner(3E) 30-3-10 to 33-8-0 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; Pf=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.

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



May 26, 2021

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/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	Truss	Truss Type	Qty	Ply	72 Carolina Lakes-Roof-Sterling	I46292682
21040028-B	A07	Common	1	1	Job Reference (optional)	

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

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:20
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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) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 31, 32, 34, 35, 36, 37, 38, 29, 28, 26, 25, 24, 23, and 22. This connection is for uplift only and does not consider lateral forces.
- 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 21.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 15) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 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



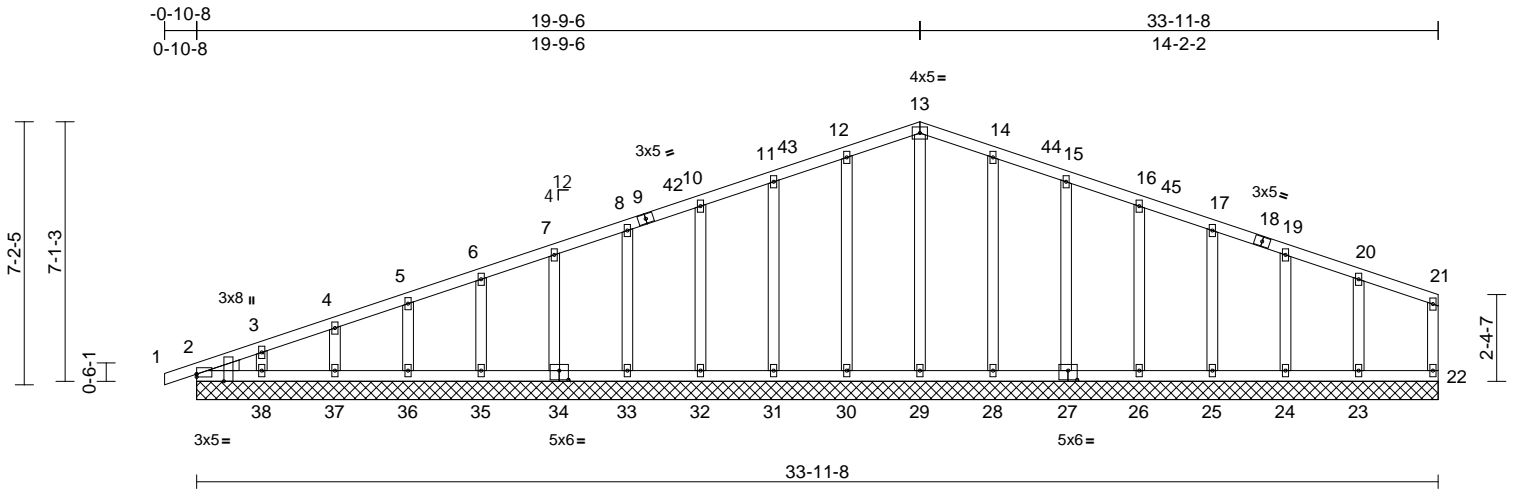
818 Soundside Road
 Edenton, NC 27932

Job 21040028-B	Truss B01	Truss Type Common Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292683
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:22
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Page: 1



Scale = 1:63

Plate Offsets (X, Y): [2:Edge,0-0-15], [2:0-2-6,Edge], [27:0-3-0,0-3-0], [34:0-3-0,0-3-0]

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	0.07	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	0.14	Horz(CT)	0.00	22	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 200 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
WEDGE	Left: 2x4 SP No.3

BRACING

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

REACTIONS (size)

2=33-11-8, 22=33-11-8,	2=149 (LC 14), 39=149 (LC 14)
23=33-11-8, 24=33-11-8,	2=17 (LC 15), 22=6 (LC 11),
25=33-11-8, 26=33-11-8,	23=44 (LC 15), 24=30 (LC 11),
27=33-11-8, 28=33-11-8,	25=33 (LC 15), 26=33 (LC 15),
29=33-11-8, 30=33-11-8,	27=34 (LC 11), 28=32 (LC 15),
31=33-11-8, 32=33-11-8,	30=34 (LC 14), 31=33 (LC 10),
33=33-11-8, 34=33-11-8,	32=32 (LC 14), 33=34 (LC 10),
35=33-11-8, 36=33-11-8,	34=32 (LC 14), 35=31 (LC 10),
37=33-11-8, 38=33-11-8,	36=33 (LC 14), 37=32 (LC 10),
39=33-11-8	38=47 (LC 14), 39=17 (LC 15)

Max Grav 2=125 (LC 1), 22=69 (LC 22),
23=170 (LC 35), 24=151 (LC 1),
25=157 (LC 22), 26=200 (LC 22),
27=213 (LC 22), 28=225 (LC 22),
29=152 (LC 27), 30=223 (LC 21),
31=212 (LC 21), 32=198 (LC 21),
33=153 (LC 1), 34=154 (LC 34),
35=157 (LC 21), 36=154 (LC 34),
37=159 (LC 1), 38=143 (LC 34),
39=125 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/16, 2-3=-134/60, 3-4=-115/66, 4-5=-91/73, 5-6=-73/83, 6-7=-58/97, 7-8=-42/111, 8-10=-44/125, 10-11=-55/139, 11-12=-66/154, 12-13=-77/174, 13-14=-77/174, 14-15=-66/138, 15-16=-54/112, 16-17=-43/87, 17-19=-32/62, 19-20=-23/38, 20-21=-20/18, 21-22=-52/19
BOT CHORD	2-38=-28/20, 37-38=-2/10, 36-37=-2/10, 35-36=-2/10, 33-35=-2/10, 32-33=0/6, 31-32=0/6, 30-31=0/6, 29-30=0/6, 28-29=0/6, 26-28=0/6, 25-26=0/6, 24-25=0/6, 23-24=0/6, 22-23=0/6
WEBS	13-29=-114/0, 12-30=-184/102, 11-31=-173/64, 10-32=-158/56, 8-33=-116/56, 7-34=-115/55, 6-35=-116/56, 5-36=-115/56, 4-37=-119/57, 3-38=-101/54, 14-28=-185/102, 15-27=-174/64, 16-26=-162/56, 17-25=-117/56, 19-24=-114/53, 20-23=-128/66

- 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 2-6-4, Exterior(2N) 2-6-4 to 16-4-10, Corner(3R) 16-4-10 to 23-2-2, Exterior (2N) 23-2-2 to 30-5-0, Corner(3E) 30-5-0 to 33-9-12 zone; cantilever 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.
- 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.

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



May 26, 2021

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 21040028-B	Truss B01	Truss Type Common Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling I46292683 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:22
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Page: 2

- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) n/a

- 13) 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

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



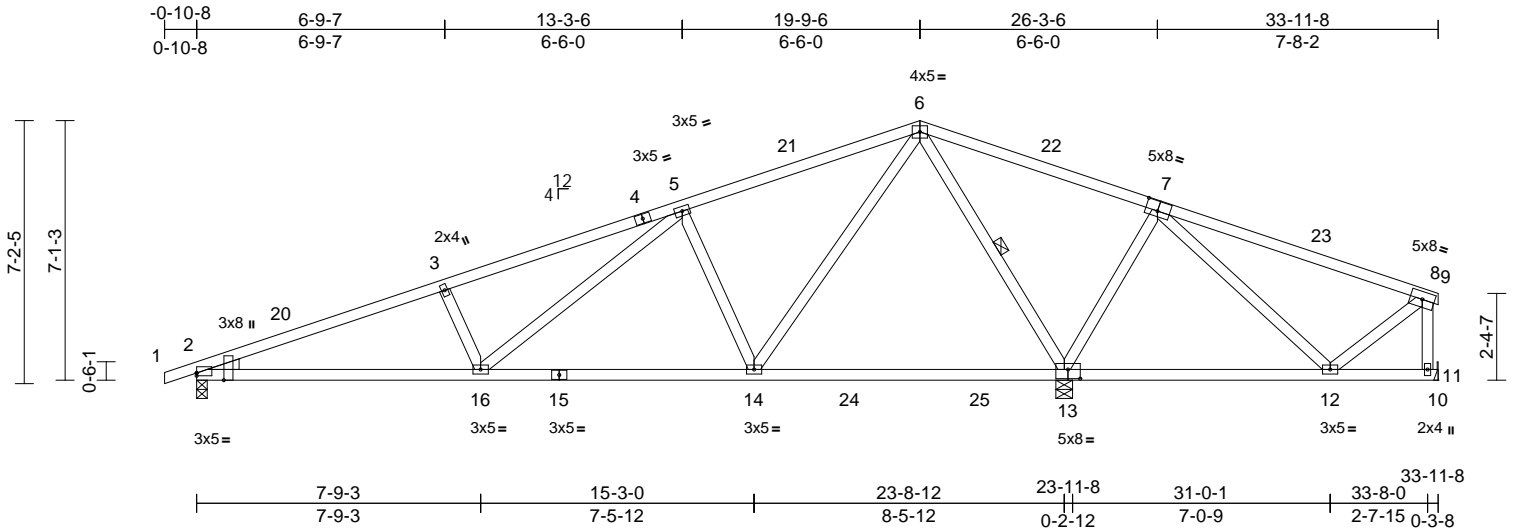
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss B02	Truss Type Common	Qty 3	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292684
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:23
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Page: 1



Scale = 1:63

Plate Offsets (X, Y): [2:Edge,0-0-15], [2:0-2-6,Edge], [7:0-4-0,0-3-4], [13:0-4-0,0-3-0]

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	0.91	Vert(LL)	-0.19	13-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.29	13-14	>971	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.03	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 175 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 6-13

REACTIONS (size) 2=0-3-8, 11= Mechanical, 13=0-5-8
 Max Horiz 2=153 (LC 14)
 Max Uplift 2=-137 (LC 10), 11=-222 (LC 34), 13=-228 (LC 10)
 Max Grav 2=892 (LC 5), 11=153 (LC 35), 13=2170 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-1721/249, 3-5=-1618/261, 5-6=-699/175, 6-8=-98/958, 8-9=0/6, 8-11=-129/236

BOT CHORD 2-16=-295/1607, 14-16=-139/866, 12-14=-660/113, 11-12=-52/87, 10-11=0/0

WEBS 3-16=-363/169, 5-16=-118/838, 5-14=-783/239, 6-14=-144/1173, 6-13=-1596/285, 7-13=-693/229, 7-12=-33/580, 8-12=-404/157

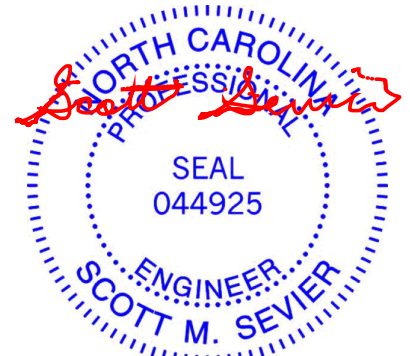
NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-6-4, Interior (1) 2-6-4 to 16-4-10, Exterior(2R) 16-4-10 to 23-2-2, Interior (1) 23-2-2 to 30-6-12, Exterior(2E) 30-6-12 to 33-11-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 222 lb uplift at joint 11.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13. This connection is for uplift only and does not consider lateral forces.

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

LOAD CASE(S) Standard



May 26, 2021

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



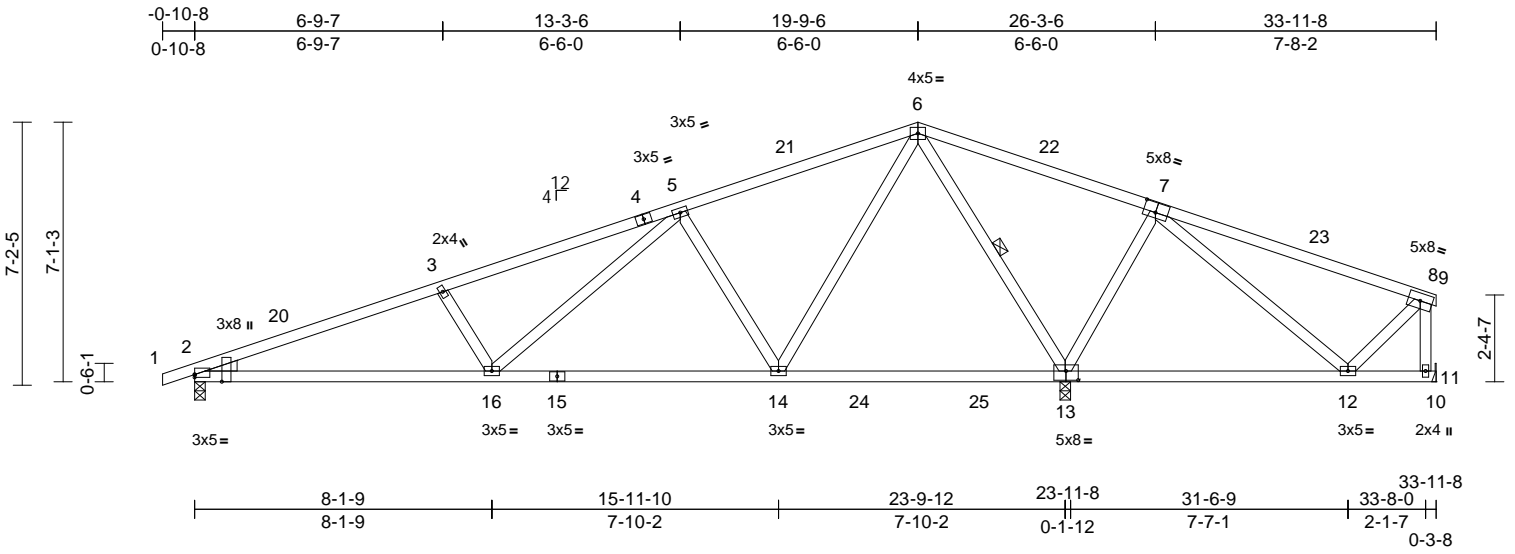
818 Soundside Road
 Edenton, NC 27932

Job 21040028-B	Truss B03	Truss Type Common	Qty 5	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292685
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:24
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Page: 1



Scale = 1:63

Plate Offsets (X, Y): [2:Edge,0-0-15], [2:0-2-6,Edge], [7:0-4-0,0-3-4], [13:0-4-0,0-3-0]

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	0.91	Vert(LL)	-0.12	13-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.21	16-19	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.03	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 175 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-13

REACTIONS (size) 2=0-3-8, 11= Mechanical, 13=0-3-8
Max Horiz 2=153 (LC 14)
Max Uplift 2=-136 (LC 10), 11=-214 (LC 34), 13=-229 (LC 10)
Max Grav 2=895 (LC 5), 11=159 (LC 35), 13=2151 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1727/251, 3-5=-1586/243, 5-6=-593/155, 6-8=-99/939, 8-9=0/6, 8-11=-153/207
BOT CHORD 2-16=-297/1613, 14-16=-143/863, 12-14=-646/113, 11-12=-55/86, 10-11=0/0
WEBS 3-16=-372/171, 5-16=-91/824, 5-14=-808/237, 6-14=-125/1089, 6-13=-1598/281, 7-13=-689/230, 7-12=-41/636, 8-12=-348/166

- 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 2-6-4, Interior (1) 2-6-4 to 16-4-10, Exterior(2R) 16-4-10 to 23-2-2, Interior (1) 23-2-2 to 30-6-12, Exterior(2E) 30-6-12 to 33-11-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 214 lb uplift at joint 11.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13. This connection is for uplift only and does not consider lateral forces.

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

LOAD CASE(S) Standard



May 26, 2021

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

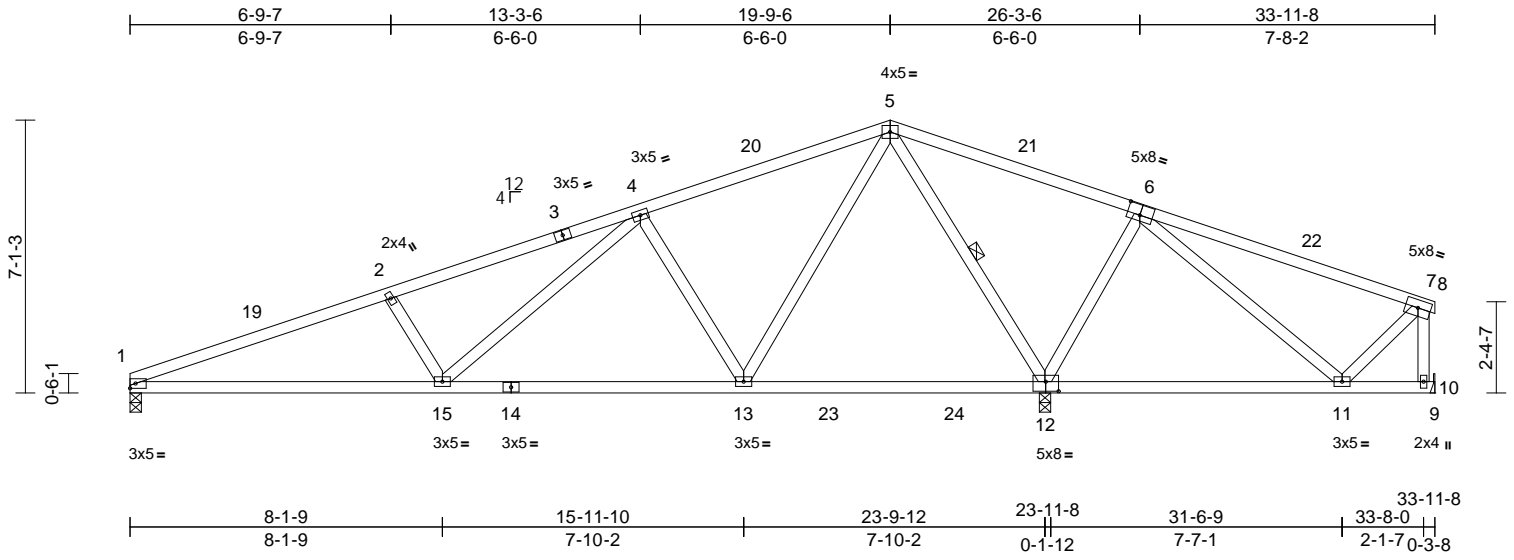
Job 21040028-B	Truss B04	Truss Type Common	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292686
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:24

Page: 1

ID: Pd2d69uljHC1MgHXIFhbyzLq9p-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCdoi7J4zJC?f



Scale = 1:60

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

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	0.91	Vert(LL)	-0.13	12-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.22	15-18	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.03	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 173 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 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-12

REACTIONS
(size) 1=0-3-8, 10= Mechanical, 12=0-3-8
Max Horiz 1=144 (LC 14)
Max Uplift 1=-102 (LC 10), 10=-237 (LC 33), 12=-234 (LC 10)
Max Grav 1=841 (LC 5), 10=148 (LC 34), 12=2184 (LC 4)

FORCES
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1725/268, 2-4=-1561/258, 4-5=-564/156, 5-7=-105/986, 7-8=0/6, 7-10=-143/229
BOT CHORD 1-15=-298/1590, 13-15=-139/836, 11-13=-684/119, 10-11=-55/86, 9-10=0/0
WEBS 2-15=-378/179, 4-15=-92/829, 4-13=-809/235, 5-13=-125/1090, 5-12=-1627/286, 6-12=-693/231, 6-11=-43/663, 7-11=-374/168

- 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) 0-0-0 to 3-4-12, Interior (1) 3-4-12 to 16-4-10, Exterior(2R) 16-4-10 to 23-2-2, Interior (1) 23-2-2 to 30-6-12, Exterior(2E) 30-6-12 to 33-11-8 zone; cantilever 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 a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 237 lb uplift at joint 10.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
- One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



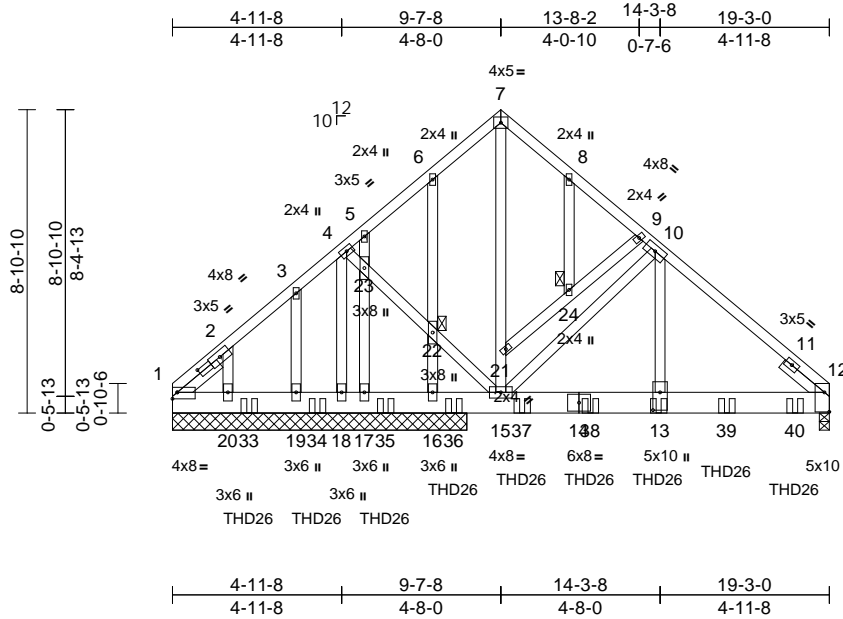
May 26, 2021

Job 21040028-B	Truss C01	Truss Type Common Girder	Qty 1	Ply 2	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292687
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:25
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Page: 1



Scale = 1:67.5

Plate Offsets (X, Y): [1:Edge,0-2-4], [1:0-10-7,0-1-8], [12:Edge,0-1-11], [13:0-6-4,0-2-8]

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	0.32	Vert(LL)	-0.04	13-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.08	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.75	Horz(CT)	0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 358 lb	FT = 20%

LUMBER
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x8 SP 2400F 2.0E
 WEBS 2x4 SP No.3
 OTHERS 2x4 SP No.3
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.2 -- 1-6-0

BRACING
 TOP CHORD Structural wood sheathing directly applied or 5-10-13 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 13-15,12-13.

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

REACTIONS (size)
 1=8-7-8, 12=0-3-8, 16=8-7-8, 17=8-7-8, 18=8-7-8, 19=8-7-8, 20=8-7-8
 Max Horiz 1=182 (LC 9)
 Max Uplift 1=-663 (LC 32), 12=-153 (LC 13), 16=-311 (LC 12), 17=-784 (LC 19), 18=-139 (LC 13), 19=-190 (LC 12), 20=-216 (LC 12)
 Max Grav 1=148 (LC 12), 12=4846 (LC 19), 16=4005 (LC 18), 17=-39 (LC 13), 18=3851 (LC 19), 19=1673 (LC 3), 20=1281 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-174/720, 2-3=-106/845, 3-4=-56/638, 4-5=-1182/91, 5-6=-1458/136, 6-7=-1455/169, 7-8=-1424/139, 8-9=-1520/104, 9-10=-1584/97, 10-12=-4346/170

BOT CHORD 1-20=-583/167, 19-20=-583/167, 18-19=-583/167, 17-18=-583/167, 16-17=-583/167, 15-16=-583/167, 13-15=-52/3281, 12-13=-52/3281
WEBS 15-21=-101/1580, 7-21=-128/1650, 10-15=-2948/234, 10-13=-80/3610, 4-23=-55/2173, 22-23=-59/2296, 15-22=-62/2442, 4-18=-2200/60, 21-24=-124/24, 9-24=-65/2, 6-22=-248/98, 16-22=-446/100, 5-23=-514/68, 17-23=-688/61, 3-19=-396/89, 2-20=-29/175, 8-24=-92/37

- NOTES**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-7-0 oc.
 Web connected as follows: 2x4 - 1 row at 0-7-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable 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.

- 11) N/A
 12) N/A



May 26, 2021

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/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 21040028-B	Truss C01	Truss Type Common Girder	Qty 1	Ply 2	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	I46292687
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:25
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Page: 2

- 13) One LUGT2 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 17. This connection is for uplift only and does not consider lateral forces.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 15) Use MiTek THD26 (With 18-16d nails into Girder & 12-10d x 1-1/2 nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-3-0 from the left end to 18-3-0 to connect truss(es) to back face of bottom chord.
- 16) Fill all nail holes where hanger is in contact with lumber.
- 17) Minimum of a double stud required directly beneath this truss to attach LUGT2 tiedown.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-58, 7-12=-58, 25-29=-19
Concentrated Loads (lb)
Vert: 13=-1427 (B), 33=-1327 (B), 34=-1327 (B),
35=-1327 (B), 36=-1327 (B), 37=-1427 (B),
38=-1427 (B), 39=-1427 (B), 40=-1429 (B)

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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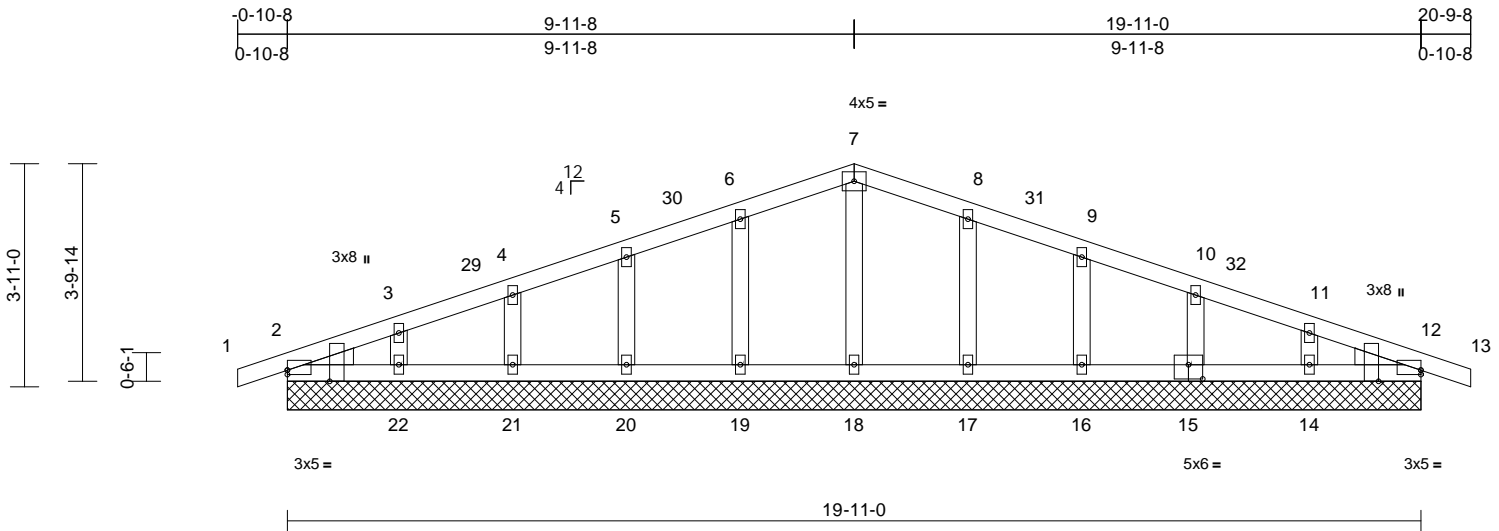
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss D01	Truss Type Common Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	I46292688
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:40.5

Plate Offsets (X, Y): [2:Edge,0-0-15], [2:0-2-6,Edge], [12:Edge,0-0-15], [12:0-2-6,Edge], [15:0-3-0,0-3-0]

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	0.07	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	0.05	Horz(CT)	0.00	26	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 90 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

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

REACTIONS (size)
2=19-11-0, 12=19-11-0,
14=19-11-0, 15=19-11-0,
16=19-11-0, 17=19-11-0,
18=19-11-0, 19=19-11-0,
20=19-11-0, 21=19-11-0,
22=19-11-0, 23=19-11-0,
26=19-11-0
Max Horiz 2=-57 (LC 15), 23=-57 (LC 15)
Max Uplift 2=-29 (LC 10), 12=-40 (LC 11),
14=-35 (LC 15), 15=-33 (LC 11),
16=-34 (LC 15), 17=-36 (LC 15),
19=-37 (LC 14), 20=-33 (LC 14),
21=-34 (LC 10), 22=-40 (LC 14),
23=-29 (LC 10), 26=-40 (LC 11)
Max Grav 2=133 (LC 21), 12=138 (LC 22),
14=158 (LC 35), 15=202 (LC 22),
16=215 (LC 22), 17=232 (LC 22),
18=147 (LC 22), 19=231 (LC 21),
20=217 (LC 21), 21=206 (LC 21),
22=158 (LC 34), 23=133 (LC 21),
26=138 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-53/35, 3-4=-41/41,
4-5=-34/54, 5-6=-33/78, 6-7=-39/119,
7-8=-39/119, 8-9=-32/78, 9-10=-32/45,
10-11=-36/19, 11-12=-24/14, 12-13=0/17
BOT CHORD 2-22=-13/55, 21-22=-12/55, 20-21=-12/55,
19-20=-12/55, 18-19=-12/55, 17-18=-12/55,
16-17=-12/55, 14-16=-12/55, 12-14=-12/48
WEBS 7-18=-107/13, 6-19=-191/107, 5-20=-177/80,
4-21=-167/81, 3-22=-110/68, 8-17=-191/107,
9-16=-177/80, 10-15=-163/79, 11-14=-109/68

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) -0-10-8 to 1-11-8, Exterior(2N) 1-11-8 to 6-11-8, Corner(3R) 6-11-8 to 12-11-8, Exterior (2N) 12-11-8 to 17-9-8, Corner(3E) 17-9-8 to 20-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.

- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- N/A
- N/A
- N/A
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 23.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



May 26, 2021

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/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 21040028-B	Truss D01	Truss Type Common Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling I46292688 Job Reference (optional)
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Page: 2

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

ENGINEERING BY
TRENCO
A MiTek Affiliate

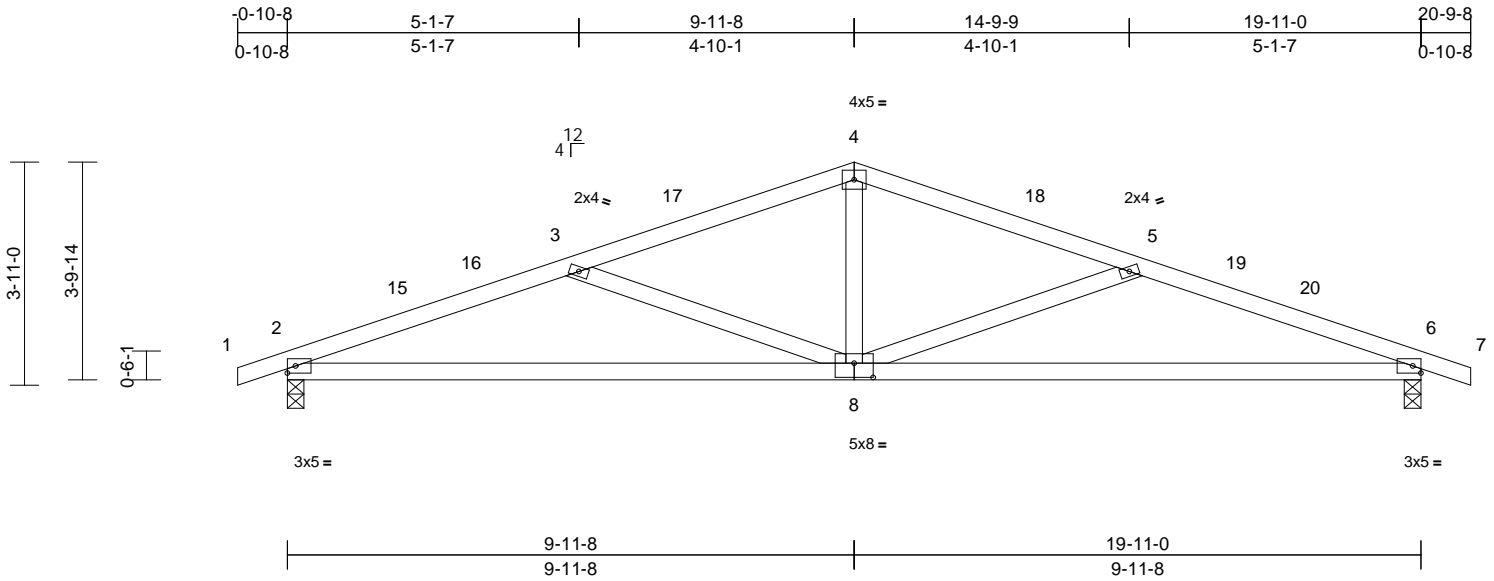
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss D02	Truss Type Common	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292689
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:40.5

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

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)	-0.15	8-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.32	8-14	>747	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.05	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 84 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-3-8, 6=0-3-8
Max Horiz 2=-57 (LC 15)
Max Uplift 2=-126 (LC 10), 6=-126 (LC 11)
Max Grav 2=906 (LC 21), 6=906 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1896/422, 3-4=-1304/290, 4-5=-1304/290, 5-6=-1896/422, 6-7=0/17
BOT CHORD 2-6=-325/1755
WEBS 4-8=-2/541, 5-8=-627/201, 3-8=-627/200

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

- 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 6-11-8, Exterior(2R) 6-11-8 to 12-11-8, Interior (1) 12-11-8 to 17-9-8, Exterior(2E) 17-9-8 to 20-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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



May 26, 2021

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



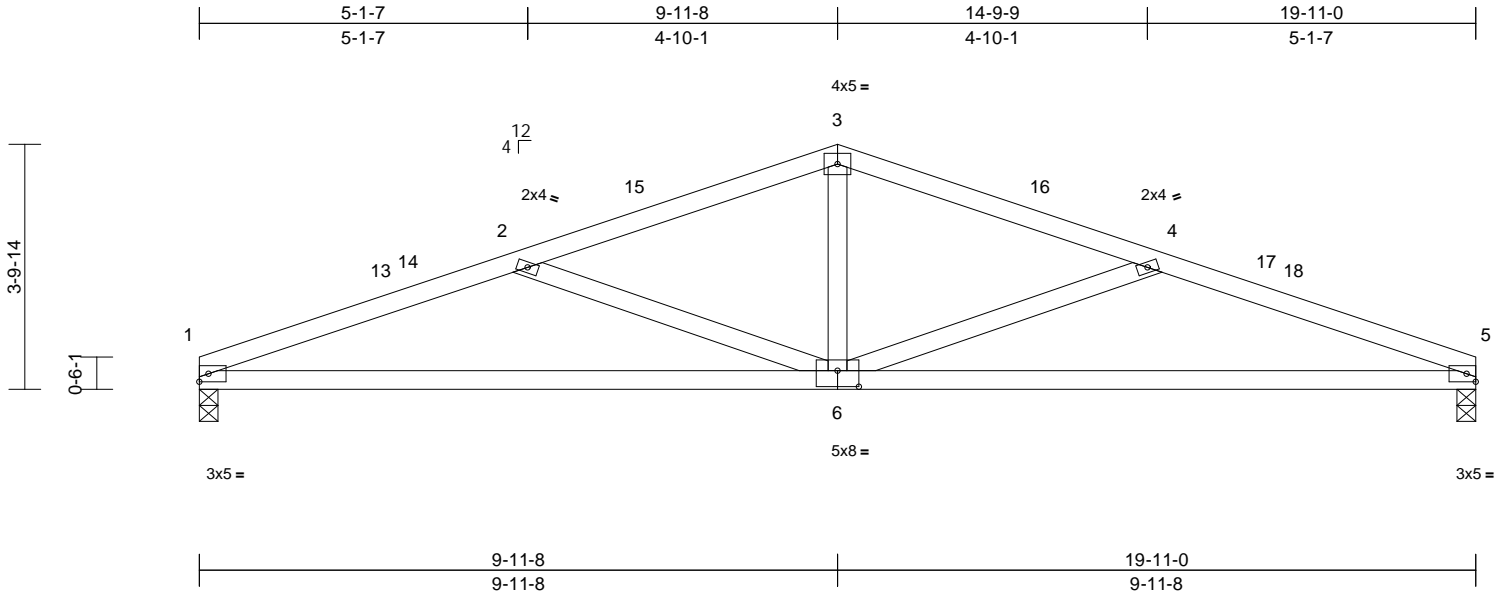
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss D03	Truss Type Common	Qty 3	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	I46292690
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:36
Plate Offsets (X, Y): [6:0-4-0,0-3-0]

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	0.53	Vert(LL)	-0.15	6-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.32	6-12	>744	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.05	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 81 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=-53 (LC 15)
Max Uplift 1=-94 (LC 10), 5=-94 (LC 11)
Max Grav 1=853 (LC 20), 5=853 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1908/459, 2-3=-1310/311, 3-4=-1310/311, 4-5=-1908/459
BOT CHORD 1-5=-380/1767
WEBS 3-6=-19/544, 4-6=-634/213, 2-6=-634/213

- 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 RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 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) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-11-8, Exterior(2R) 6-11-8 to 12-11-8, Interior (1) 12-11-8 to 16-11-0, Exterior(2E) 16-11-0 to 19-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10



May 26, 2021

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



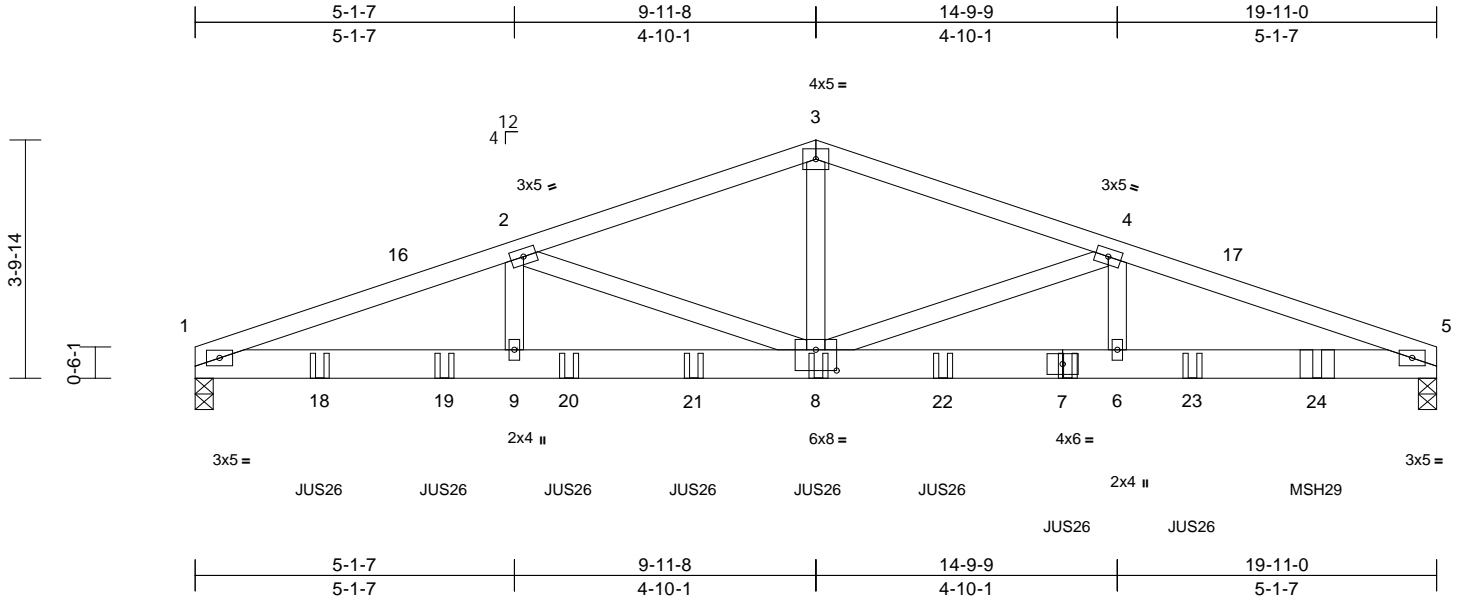
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss D04	Truss Type Common Girder	Qty 1	Ply 2	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292691
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:37
Plate Offsets (X, Y): [8:0-4-0,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.10	6-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.12	6-8	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.25	Horz(CT)	0.03	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 203 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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=-53 (LC 51)
Max Uplift 1=-575 (LC 45), 5=-585 (LC 44)
Max Grav 1=1405 (LC 2), 5=1410 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3295/1460, 2-3=-2392/977, 3-4=-2392/977, 4-5=-3304/1449
BOT CHORD 1-9=-1371/3088, 8-9=-1371/3088, 6-8=-1360/3096, 5-6=-1360/3096
WEBS 3-8=-760/1194, 4-8=-969/503, 4-6=-438/393, 2-8=-962/514, 2-9=-448/381

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - 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 RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
 - One RT8A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 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.
 - Use MiTek JUS26 (With 4-10d nails into Girder & 2-10d nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-0 from the left end to 16-0-0 to connect truss(es) to back face of bottom chord.
 - Use MiTek MSH29 (With 10d nails into Girder & 4-10d nails into Truss) or equivalent at 18-0-0 from the left end to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-5=-60, 10-13=-20
Concentrated Loads (lb)
Vert: 7=-92 (B), 8=-92 (B), 18=-87 (B), 19=-87 (B), 20=-87 (B), 21=-92 (B), 22=-92 (B), 23=-92 (B), 24=-78 (B)

- NOTES**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Unbalanced roof live loads have been considered for this design.



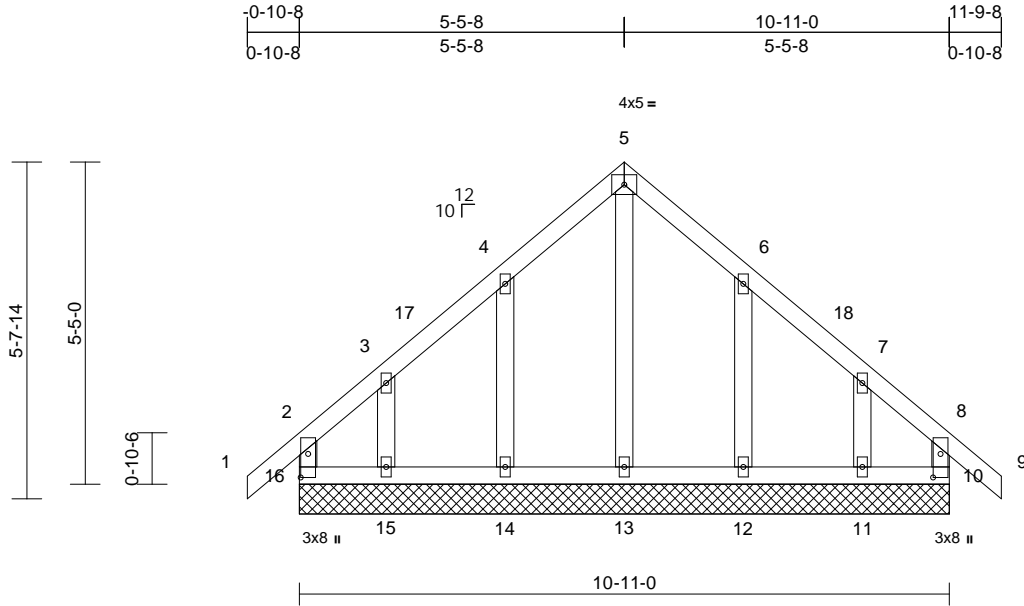
May 26, 2021

Job 21040028-B	Truss E01	Truss Type Common Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292692
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MITek Industries, Inc. Tue May 25 15:03:28
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Page: 1



Scale = 1:38.7

Plate Offsets (X, Y): [10:0-4-12,0-1-8], [16:0-4-12,0-1-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 64 lb	FT = 20%

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

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

REACTIONS (size)
10=10-11-0, 11=10-11-0,
12=10-11-0, 13=10-11-0,
14=10-11-0, 15=10-11-0,
16=10-11-0
Max Horiz 16=142 (LC 12)
Max Uplift 10=41 (LC 11), 11=95 (LC 15),
12=73 (LC 15), 14=73 (LC 14),
15=99 (LC 14), 16=59 (LC 10)
Max Grav 10=126 (LC 28), 11=155 (LC 22),
12=272 (LC 22), 13=170 (LC 27),
14=272 (LC 21), 15=159 (LC 24),
16=141 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-16=-115/96, 1-2=0/38, 2-3=-88/86,
3-4=-61/115, 4-5=-110/224, 5-6=-110/224,
6-7=-58/115, 7-8=-67/65, 8-9=0/38,
8-10=-105/96
BOT CHORD 15-16=-66/117, 14-15=-66/117,
13-14=-66/117, 12-13=-66/117,
11-12=-66/117, 10-11=-66/117
WEBS 5-13=-205/42, 4-14=-232/147,
3-15=-126/143, 6-12=-232/147,
7-11=-126/143

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) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 2-5-8, Corner(3R) 2-5-8 to 8-5-8, Exterior(2N) 8-5-8 to 8-9-8, Corner(3E) 8-9-8 to 11-9-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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.
- 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.

LOAD CASE(S) Standard



May 26, 2021

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

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TRENCO
A MITek Affiliate

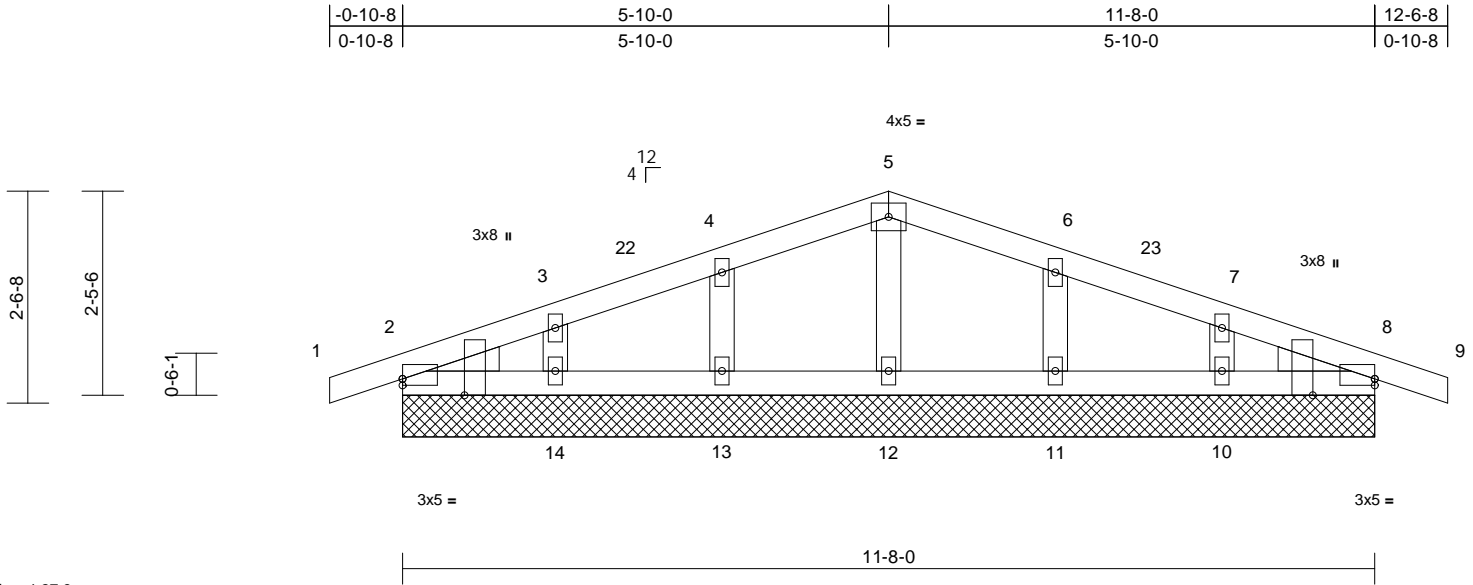
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss G01	Truss Type Common Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292693
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:27.6

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

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	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	19	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 49 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

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

REACTIONS (size)
2=11-8-0, 8=11-8-0, 10=11-8-0,
11=11-8-0, 12=11-8-0, 13=11-8-0,
14=11-8-0, 15=11-8-0, 19=11-8-0
Max Horiz 2=-34 (LC 15), 15=-34 (LC 15)
Max Uplift 2=-38 (LC 10), 8=-44 (LC 11),
10=-31 (LC 15), 11=-37 (LC 11),
13=-37 (LC 10), 14=-33 (LC 14),
15=-38 (LC 10), 19=-44 (LC 11)
Max Grav 2=177 (LC 21), 8=177 (LC 22),
10=193 (LC 22), 11=229 (LC 22),
12=139 (LC 21), 13=229 (LC 21),
14=193 (LC 21), 15=177 (LC 21),
19=177 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-23/25, 3-4=-32/41,
4-5=-38/96, 5-6=-38/96, 6-7=-32/41,
7-8=-19/19, 8-9=0/24
BOT CHORD 2-14=-14/48, 13-14=-5/48, 12-13=-5/48,
11-12=-5/48, 10-11=-5/48, 8-10=-14/48
WEBS 5-12=-100/54, 4-13=-191/150, 3-14=-146/99,
6-11=-191/150, 7-10=-146/99

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) -0-10-8 to 1-10-0, Exterior (2N) 1-10-0 to 2-10-0, Corner(3R) 2-10-0 to 8-10-0, Exterior(2N) 8-10-0 to 9-6-8, Corner(3E) 9-6-8 to 12-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- N/A

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

LOAD CASE(S) Standard



May 26, 2021

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



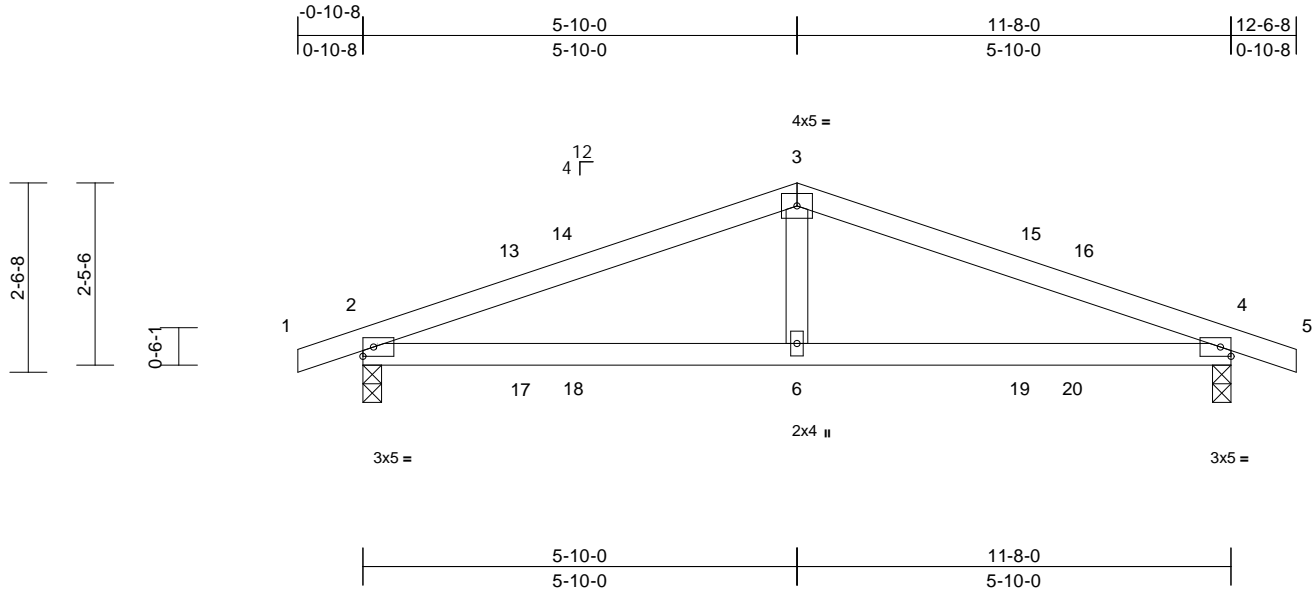
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss G02	Truss Type Common	Qty 5	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292694
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:29
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Page: 1



Scale = 1:31

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	0.59	Vert(LL)	0.07	6-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.08	6-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 41 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-2-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-8-8 oc bracing.

REACTIONS

(size) 2=0-3-0, 4=0-3-0
Max Horiz 2=-34 (LC 15)
Max Uplift 2=-184 (LC 10), 4=-184 (LC 11)
Max Grav 2=613 (LC 21), 4=613 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-803/1120, 3-4=-803/1120, 4-5=0/24
BOT CHORD 2-6=-970/685, 4-6=-970/685
WEBS 3-6=-420/239

NOTES

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

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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A MiTek Affiliate

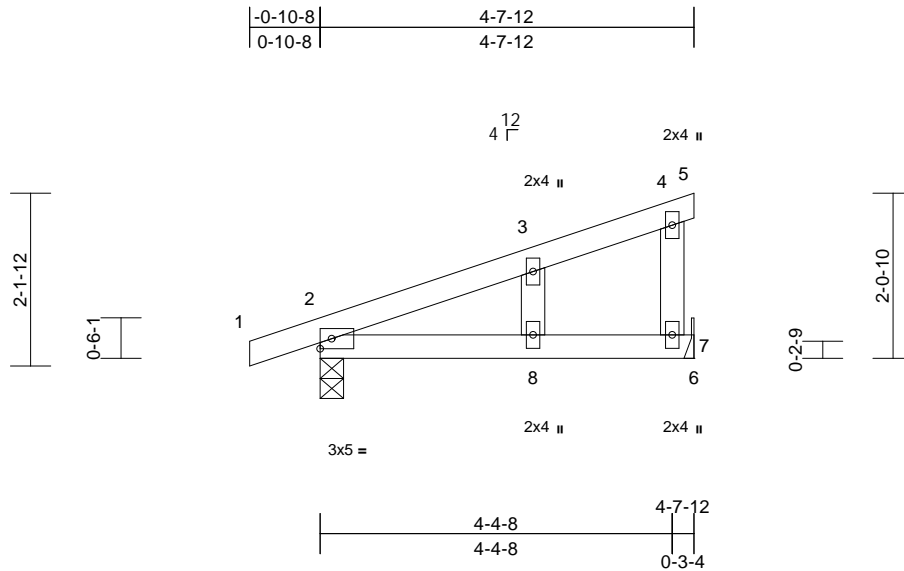
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss H01	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292695
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:30
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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	0.38	Vert(LL)	0.09	8-11	>604	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	0.07	8-11	>708	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	-0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 19 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 7= Mechanical
Max Horiz 2=71 (LC 10)
Max Uplift 2=-89 (LC 10), 7=-77 (LC 10)
Max Grav 2=323 (LC 21), 7=261 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-76/32, 3-4=-72/38, 4-5=-8/0, 4-7=-160/205
BOT CHORD 2-8=-110/49, 7-8=0/0, 6-7=0/0
WEBS 3-8=-81/46

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) zone; cantilever 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) 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 studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 7 and 89 lb uplift at joint 2.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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



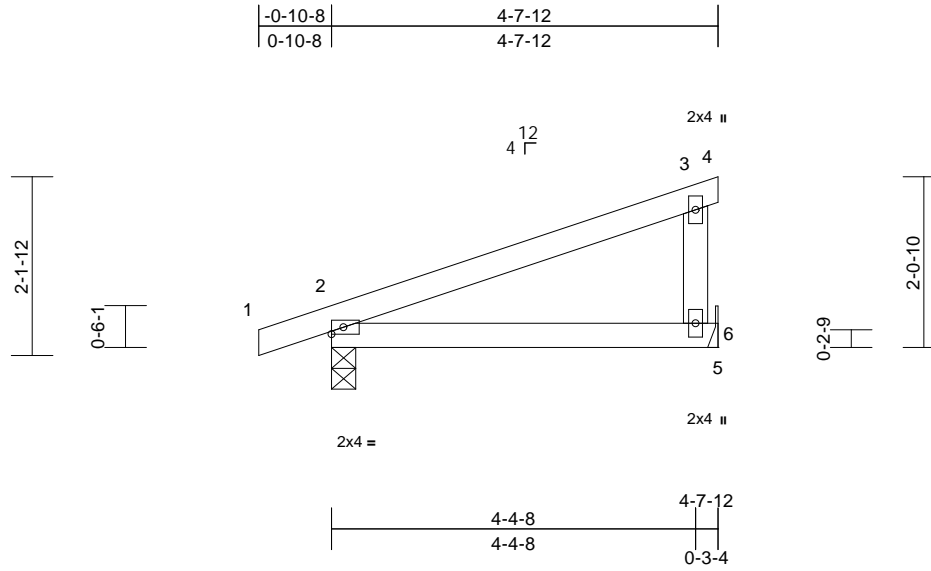
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss H02	Truss Type Monopitch	Qty 5	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292696
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:31
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Page: 1



Scale = 1:27.7

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	Vert(LL)	0.07	6-9	>747	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	0.06	6-9	>911	180		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	-0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 18 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-3-8, 6= Mechanical
Max Horiz 2=71 (LC 10)
Max Uplift 2=-89 (LC 10), 6=-77 (LC 10)
Max Grav 2=323 (LC 21), 6=261 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-68/90, 3-4=-8/0, 3-6=-193/167
BOT CHORD 2-6=-100/77, 5-6=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 6 and 89 lb uplift at joint 2.
- 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



May 26, 2021

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



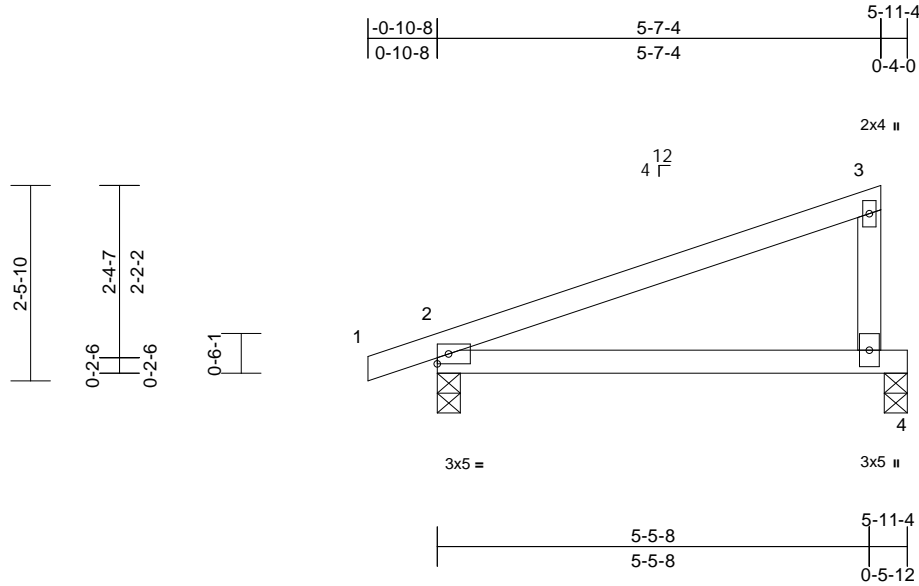
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss H03	Truss Type Roof Special	Qty 4	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292697
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:31
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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	0.66	Vert(LL)	0.17	4-7	>385	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	0.14	4-7	>473	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 22 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 4=0-3-8
Max Horiz 2=81 (LC 10)
Max Uplift 2=-103 (LC 10), 4=-93 (LC 20)
Max Grav 2=382 (LC 21), 4=291 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-88/121, 3-4=-212/209
BOT CHORD 2-4=-131/106

- * 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 93 lb uplift at joint 4 and 103 lb uplift at joint 2.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

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



May 26, 2021

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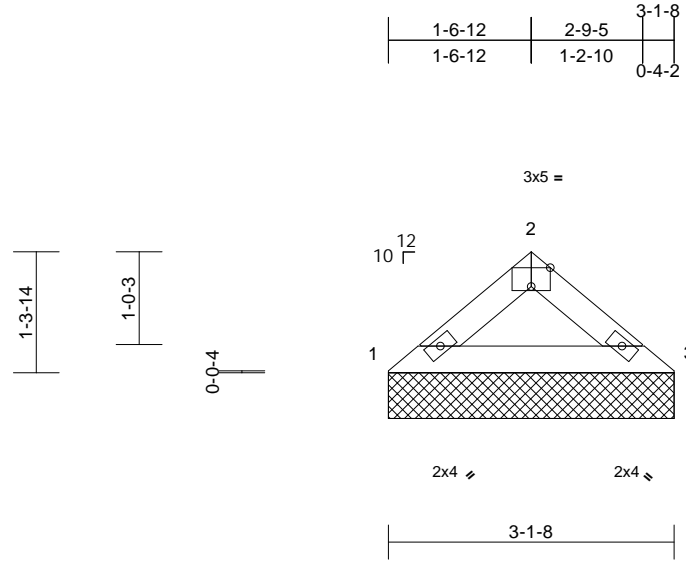
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss VL3	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	I46292698
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	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	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 9 lb	FT = 20%	

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

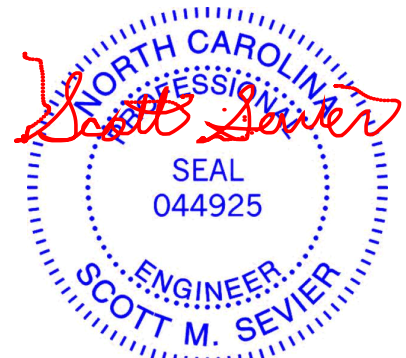
REACTIONS (size) 1=3-1-8, 3=3-1-8
Max Horiz 1=27 (LC 13)
Max Uplift 1=-10 (LC 14), 3=-10 (LC 15)
Max Grav 1=144 (LC 20), 3=144 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-182/74, 2-3=-182/74
BOT CHORD 1-3=-43/132

- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1 and 10 lb uplift at joint 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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



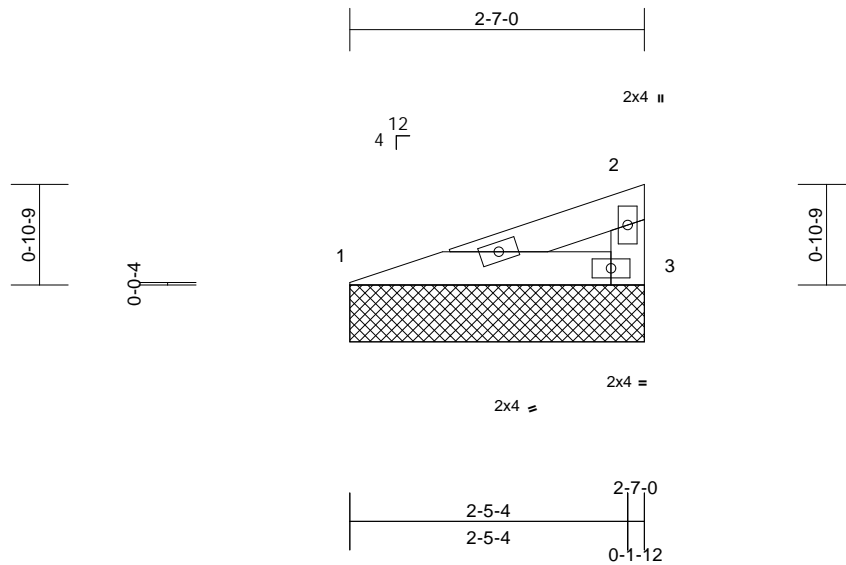
May 26, 2021

Job 21040028-B	Truss VL3A	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292699
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:20.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.08	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: 7 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 2-7-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=2-7-0, 3=2-7-0
Max Horiz 1=25 (LC 10)
Max Uplift 1=-12 (LC 10), 3=-19 (LC 10)
Max Grav 1=122 (LC 20), 3=122 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-179/76, 2-3=-63/44
BOT CHORD 1-3=-111/162

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 ;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.

- 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) 3 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1 and 19 lb uplift at joint 3.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard



May 26, 2021

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



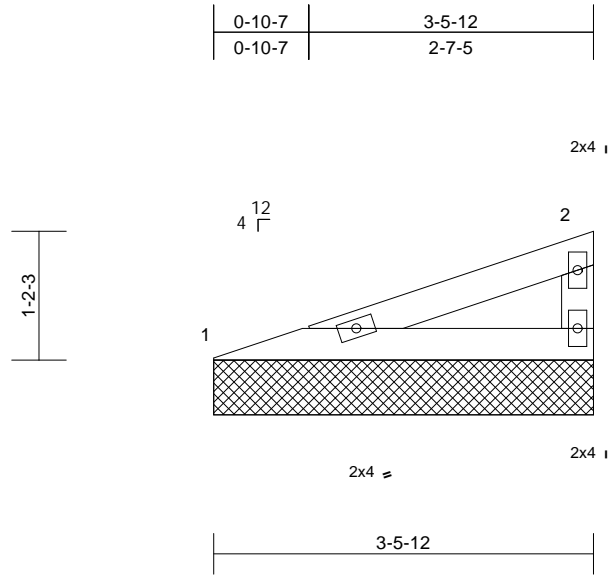
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	72 Carolina Lakes-Roof-Sterling	146292700
21040028-B	VL3B	Valley	1	1	Job Reference (optional)	

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

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 10 lb	FT = 20%	

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

BRACING
 TOP CHORD Structural wood sheathing directly applied or 3-5-12 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-5-12, 3=3-5-12
 Max Horiz 1=36 (LC 10)
 Max Uplift 1=-16 (LC 10), 3=-26 (LC 10)
 Max Grav 1=173 (LC 20), 3=173 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-323/139, 2-3=-104/80
 BOT CHORD 1-3=-195/297

- 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 26 lb uplift at joint 3 and 16 lb uplift at joint 1.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Wind: ASCE 7-16; Vult=130mph (3-second gust)
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever 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); ls=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.



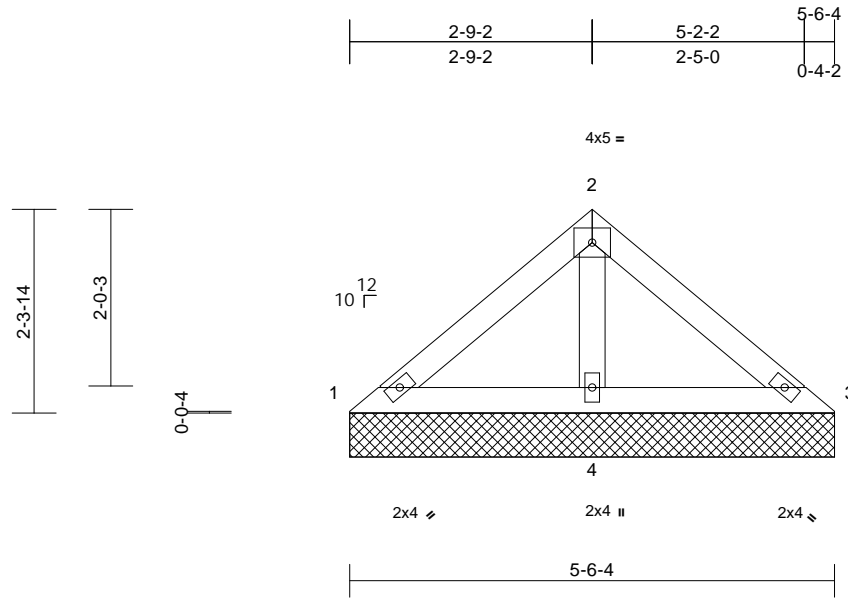
May 26, 2021

Job 21040028-B	Truss VL5	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292701
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:33
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Page: 1



Scale = 1:26.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	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	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 20 lb	FT = 20%	

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-6-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=5-6-4, 3=5-6-4, 4=5-6-4
Max Horiz 1=50 (LC 11)
Max Uplift 3=-5 (LC 15), 4=-43 (LC 14)
Max Grav 1=95 (LC 20), 3=95 (LC 21), 4=355 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-86/134, 2-3=-86/134
BOT CHORD 1-4=-101/107, 3-4=-101/107
WEBS 2-4=-231/126

NOTES

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

- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 3 and 43 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



May 26, 2021

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



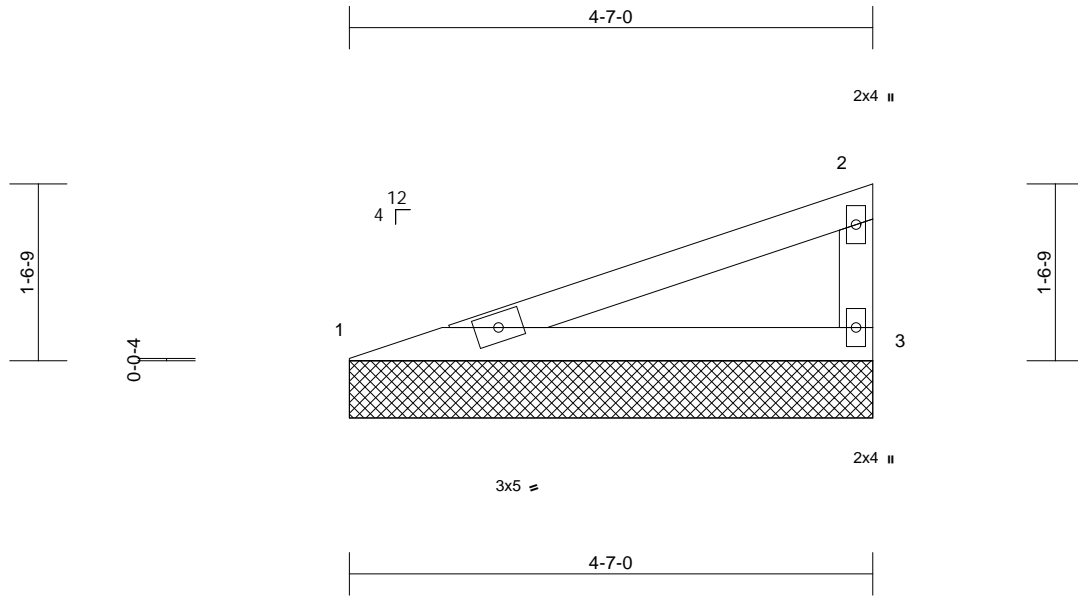
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss VL5A	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292702
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:33
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Page: 1



Scale = 1:20.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.39	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 14 lb	FT = 20%	

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=4-7-0, 3=4-7-0
Max Horiz 1=49 (LC 10)
Max Uplift 1=-21 (LC 10), 3=-36 (LC 10)
Max Grav 1=239 (LC 20), 3=239 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-509/217, 2-3=-153/118
BOT CHORD 1-3=-298/473

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 ;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.

- 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 36 lb uplift at joint 3 and 21 lb uplift at joint 1.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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

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TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

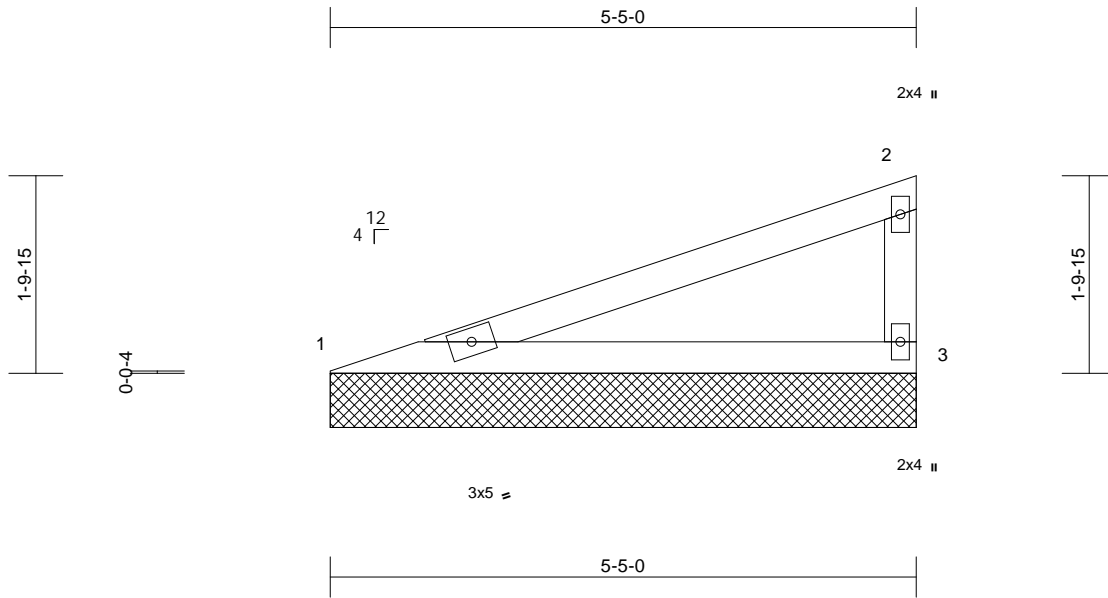
Job 21040028-B	Truss VL5B	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292703
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:34

Page: 1

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Scale = 1:21.3

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)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 17 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=5-5-0, 3=5-5-0
Max Horiz 1=58 (LC 10)
Max Uplift 1=-23 (LC 10), 3=-41 (LC 10)
Max Grav 1=278 (LC 20), 3=278 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-629/264, 2-3=-183/141
BOT CHORD 1-3=-361/586

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 ;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.

- 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 41 lb uplift at joint 3 and 23 lb uplift at joint 1.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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

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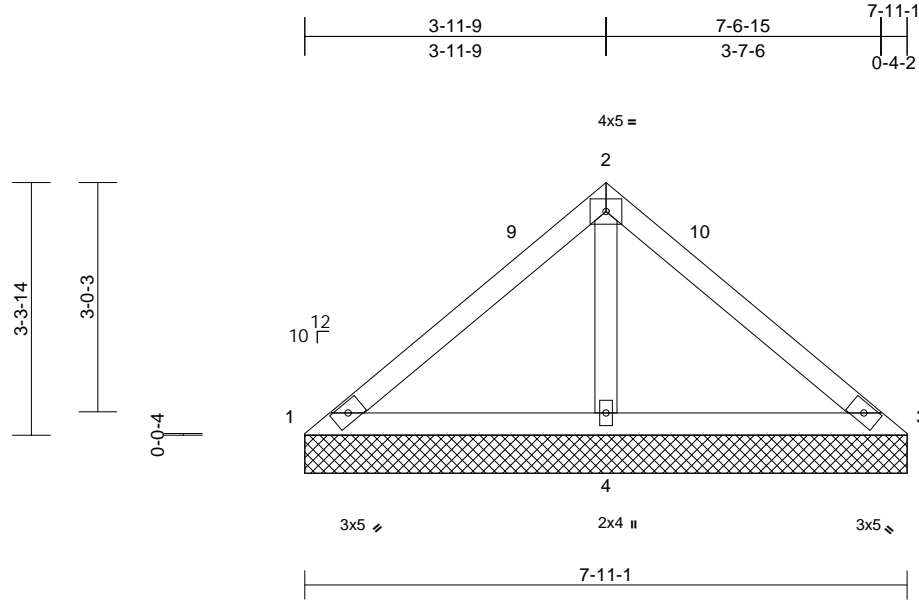
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss VL8	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292704
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:34
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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	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.32	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	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 7-11-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-11-1, 3=7-11-1, 4=7-11-1
Max Horiz 1=-74 (LC 12)
Max Uplift 1=-32 (LC 21), 3=-32 (LC 20), 4=-88 (LC 14)
Max Grav 1=105 (LC 20), 3=105 (LC 21), 4=613 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-107/274, 2-3=-107/274
BOT CHORD 1-4=-188/170, 3-4=-188/170
WEBS 2-4=-448/229

- 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 32 lb uplift at joint 1, 32 lb uplift at joint 3 and 88 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) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 4-11-6, Exterior(2E) 4-11-6 to 7-11-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.



May 26, 2021

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



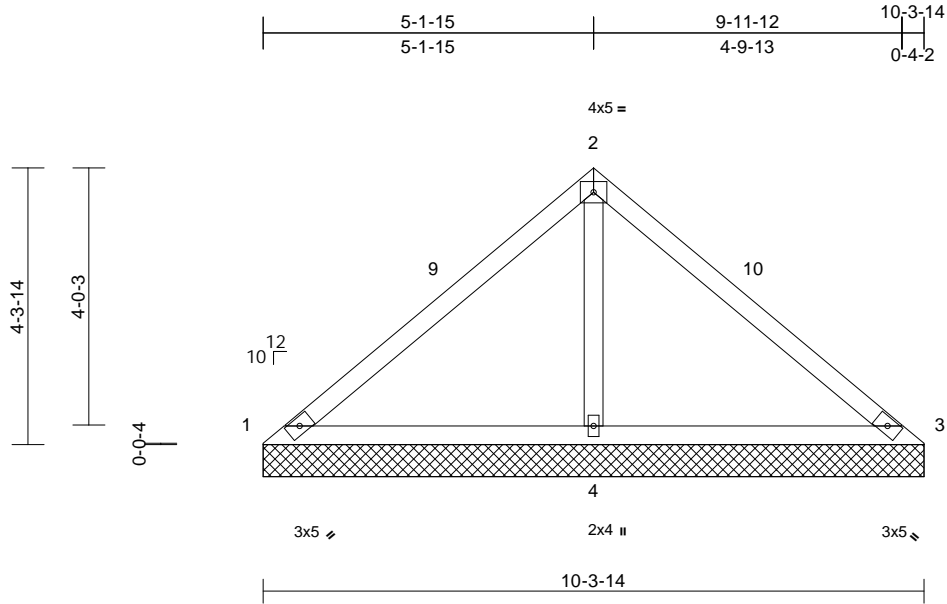
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss VL10	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292705
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:34
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Page: 1



Scale = 1:36

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.49	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 39 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=10-3-14, 3=10-3-14, 4=10-3-14
Max Horiz 1=-97 (LC 10)
Max Uplift 1=-67 (LC 21), 3=-67 (LC 20), 4=-124 (LC 14)
Max Grav 1=91 (LC 20), 3=91 (LC 21), 4=858 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-131/424, 2-3=-131/424
BOT CHORD 1-4=-241/187, 3-4=-241/187
WEBS 2-4=-670/295

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) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 7-4-3, Exterior(2E) 7-4-3 to 10-4-3 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.

- 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 67 lb uplift at joint 1, 67 lb uplift at joint 3 and 124 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



May 26, 2021

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
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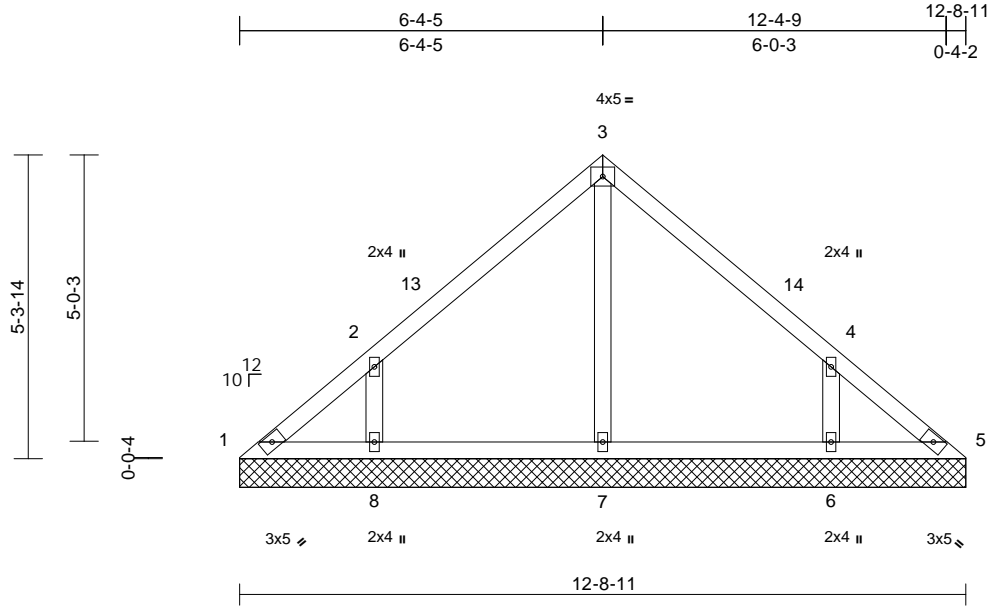
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss VL13	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292706
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:34
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Page: 1



Scale = 1:40.4

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	0.32	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	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 53 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=12-8-11, 5=12-8-11, 6=12-8-11, 7=12-8-11, 8=12-8-11
Max Horiz 1=120 (LC 11)
Max Uplift 1=-30 (LC 10), 6=-140 (LC 15), 8=-143 (LC 14)
Max Grav 1=103 (LC 24), 5=81 (LC 27), 6=435 (LC 21), 7=270 (LC 21), 8=435 (LC 20)

FORCES

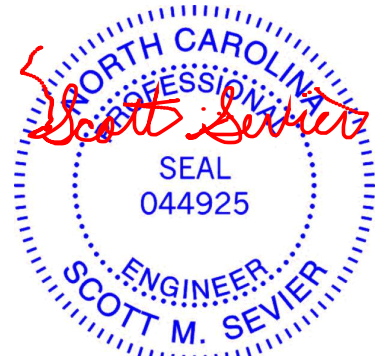
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-129/106, 2-3=-208/116, 3-4=-208/116, 4-5=-102/66
BOT CHORD 1-8=-37/94, 7-8=-37/79, 6-7=-37/79, 5-6=-37/79
WEBS 3-7=-184/0, 2-8=-384/204, 4-6=-384/204

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) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 3-4-10, Exterior(2R) 3-4-10 to 9-4-10, Interior (1) 9-4-10 to 9-9-0, Exterior(2E) 9-9-0 to 12-9-0 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 1, 143 lb uplift at joint 8 and 140 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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 ANSITPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



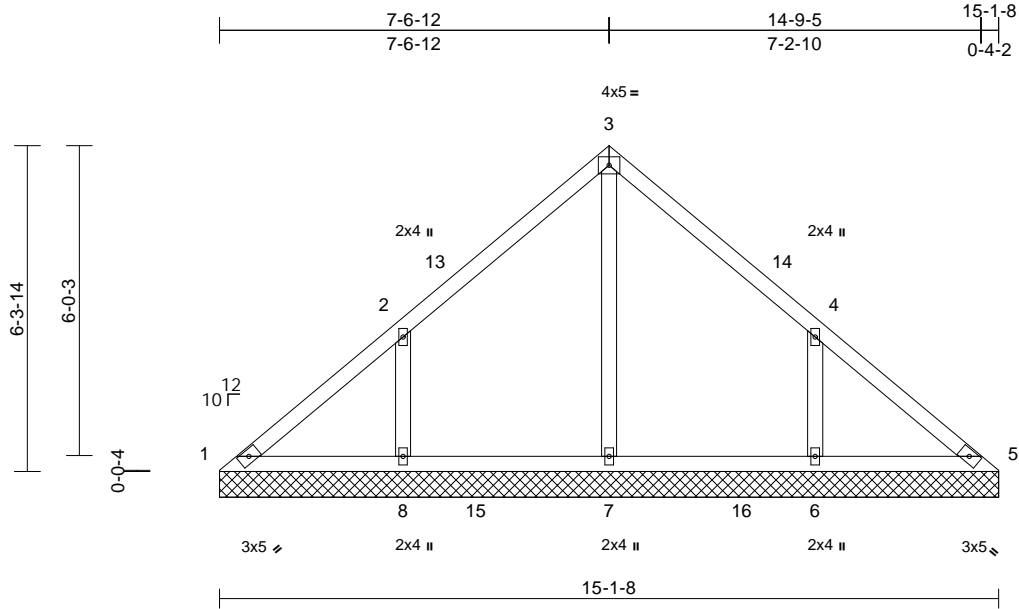
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss VL15	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292707
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.5 S 0 May 17 2021 Print: 8.500 S May 17 2021 MiTek Industries, Inc. Tue May 25 15:03:35
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 66 lb	FT = 20%	

LUMBER

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

BRACING

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

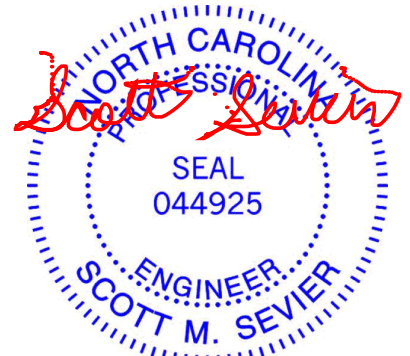
REACTIONS (size) 1=15-1-8, 5=15-1-8, 6=15-1-8, 7=15-1-8, 8=15-1-8
Max Horiz 1=144 (LC 10)
Max Uplift 1=23 (LC 10), 6=162 (LC 15), 8=165 (LC 14)
Max Grav 1=126 (LC 24), 5=100 (LC 23), 6=467 (LC 21), 7=428 (LC 23), 8=467 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=154/168, 2-3=160/136, 3-4=160/115, 4-5=123/131
BOT CHORD 1-8=73/131, 7-8=73/109, 6-7=73/109, 5-6=73/109
WEBS 3-7=244/0, 2-8=378/201, 4-6=378/200

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1, 165 lb uplift at joint 8 and 162 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 4-7-1, Exterior(2R) 4-7-1 to 10-7-1, Interior (1) 10-7-1 to 12-1-12, Exterior(2E) 12-1-12 to 15-1-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



May 26, 2021

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 ANSITPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



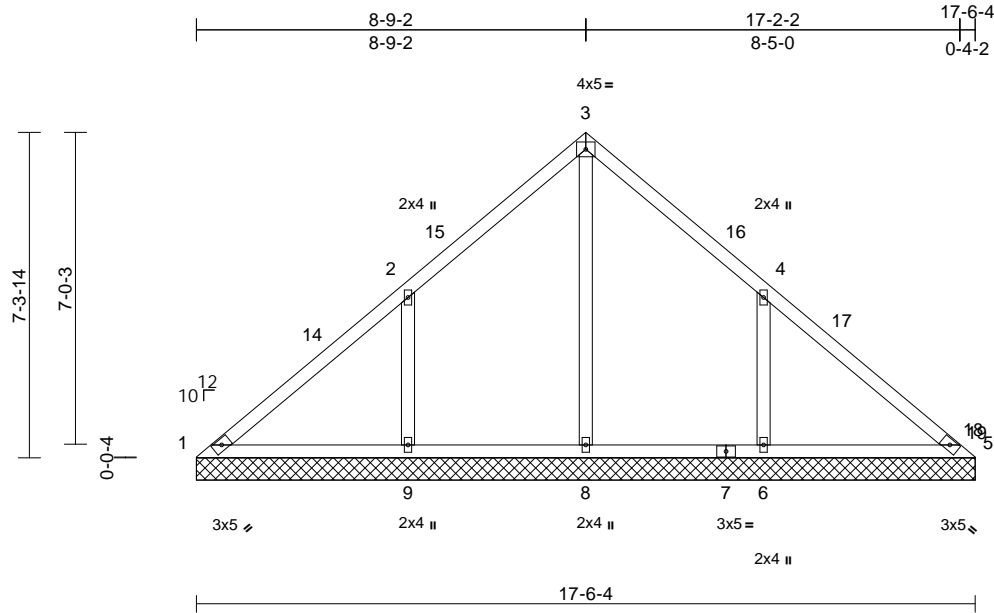
818 Soundside Road
Edenton, NC 27932

Job 21040028-B	Truss VL18	Truss Type Valley	Qty 1	Ply 1	72 Carolina Lakes-Roof-Sterling Job Reference (optional)	146292708
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:51.8

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	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 79 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=17-6-4, 5=17-6-4, 6=17-6-4, 8=17-6-4, 9=17-6-4
Max Horiz 1=167 (LC 11)
Max Uplift 1=-21 (LC 10), 6=-191 (LC 15), 9=-194 (LC 14)
Max Grav 1=119 (LC 24), 5=85 (LC 21), 6=550 (LC 24), 8=520 (LC 23), 9=554 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension

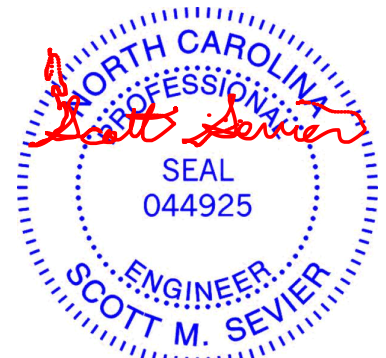
TOP CHORD 1-2=-154/285, 2-3=-89/210, 3-4=-90/190, 4-5=-115/242
BOT CHORD 1-9=-138/141, 8-9=-138/141, 6-8=-138/141, 5-6=-138/141
WEBS 3-8=-340/0, 2-9=-405/228, 4-6=-404/227

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) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-9-7, Exterior(2R) 5-9-7 to 11-9-7, Interior (1) 11-9-7 to 14-2-1, Exterior(2E) 14-2-1 to 17-2-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 1, 194 lb uplift at joint 9 and 191 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 26, 2021

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

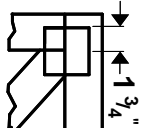
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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 ANSITPI1 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

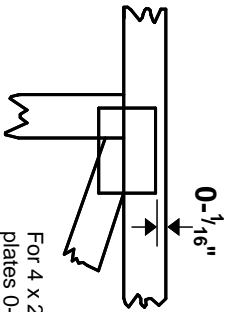
818 Soundside Road
Edenton, NC 27932

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

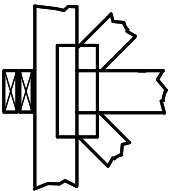
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



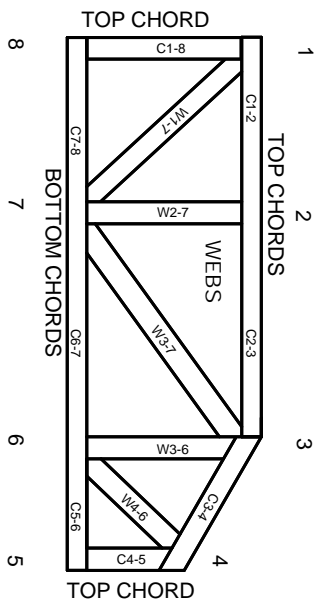
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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
BCSI: 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.