ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 21070050-K
4892 HWY 27-Roof

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: I48109335 thru I48109342

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

North Carolina COA: C-0844

September 28,2021

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	Truss	Truss Type	Qty	Ply	4892 HWY 27-Roof
21070050-K	A1	Roof Special	13	1	I48109335 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.52 S Aug 27 2021 Print: 8.520 S Aug 27 2021 MiTek Industries, Inc. Tue Sep 28 08:30:25 Page: 1
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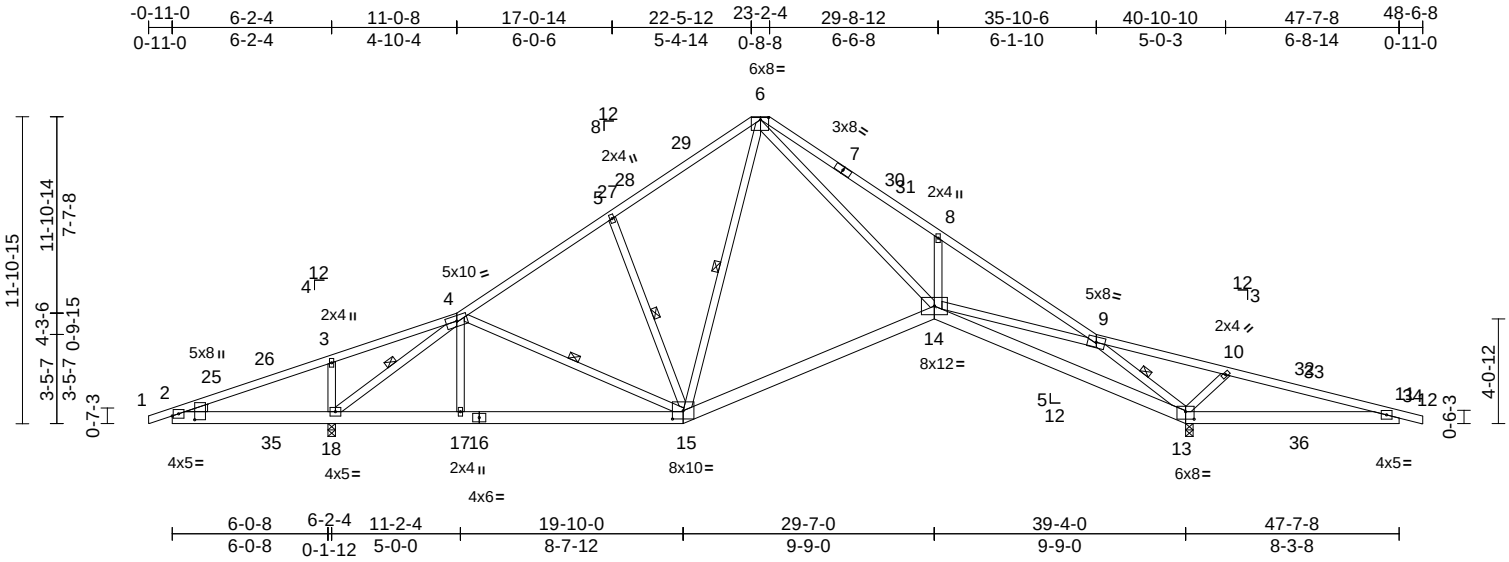

Scale = 1:89.4

Plate Offsets (X, Y): [2:0-0-7,0-1-0], [2:0-1-12,0-10-7], [6:0-3-12,0-1-0], [13:0-4-0,0-3-8], [15:0-5-0,0-3-14]

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	0.86	Vert(LL)	-0.19	14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.38	14-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.23	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 298 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 6-7,7-9:2x4 SP 2400F 2.0E, 9-12:2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 6-15:2x4 SP No.2
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-0-4 oc bracing.
WEBS 1 Row at midpt 6-15, 4-15, 9-13, 4-18, 5-15

REACTIONS (lb/size) 13=2083/0-3-8, 18=1834/0-3-8
Max Horiz 18=-186 (LC 15)
Max Uplift 13=-253 (LC 15), 18=-222 (LC 14)
Max Grav 13=2170 (LC 45), 18=1908 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-781/1038, 3-4=-705/1008, 4-5=-1396/158, 5-6=-1306/250, 6-8=-3088/258, 8-9=-3015/150, 9-10=-1457/2029, 10-11=-1346/1571, 11-12=0/16
BOT CHORD 2-18=-904/801, 17-18=-133/1087, 15-17=-130/1091, 14-15=0/989, 13-14=-781/1757, 11-13=-1446/1343
WEBS 4-17=0/252, 6-14=-35/2353, 6-15=-145/346, 4-15=-281/152, 8-14=-512/309, 9-14=-877/1610, 9-13=-2814/223, 10-13=-701/258, 4-18=-2072/453, 5-15=-465/236, 3-18=-535/186

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) -0-10-11 to 3-10-7, Interior (1) 3-10-7 to 18-0-14, Exterior(2R) 18-0-14 to 27-7-2, Interior (1) 27-7-2 to 43-9-2, Exterior(2E) 43-9-2 to 48-6-5 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
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13 and 18. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 28,2021

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

Job	Truss	Truss Type	Qty	Ply	4892 HWY 27-Roof
21070050-K	A2	Roof Special Structural Gable	1	1	I48109336 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.52 S Aug 27 2021 Print: 8.520 S Aug 27 2021 MiTek Industries, Inc. Tue Sep 28 08:30:28 Page: 1
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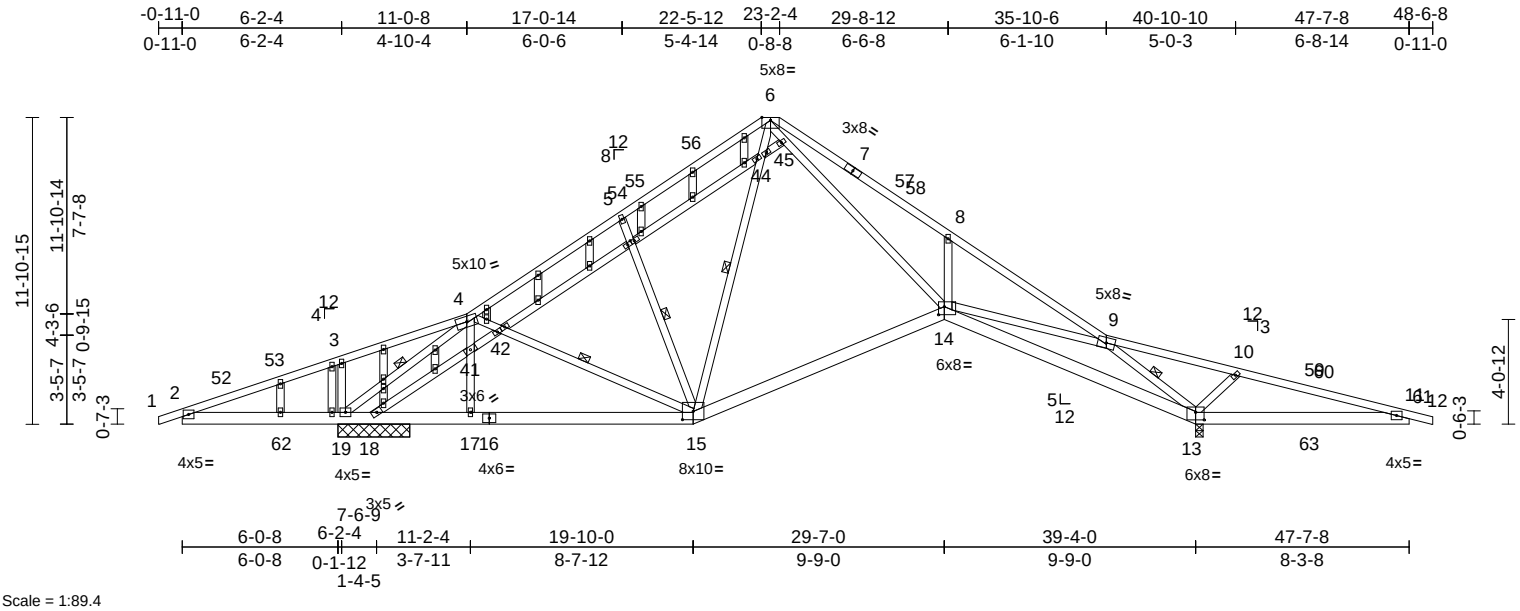

Scale = 1:89.4

Plate Offsets (X, Y): [13:0-4-0,0-3-8], [14:0-2-12,0-3-12], [15:0-5-0,0-3-14], [43:0-1-10,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.21	14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.41	14-15	>982	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.26	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 343 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 6-7,7-9:2x4 SP 2400F 2.0E, 9-12:2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 6-15:2x4 SP No.2, 14-6:2x4 SP No.1
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-0-4 oc bracing.
WEBS 1 Row at midpt 6-15, 4-15, 9-13, 4-19, 5-15

REACTIONS (lb/size) 13=2083/0-3-8, 19=1834/2-9-8
Max Horiz 19=-186 (LC 15)
Max Uplift 13=-253 (LC 15), 19=-222 (LC 14)
Max Grav 13=2170 (LC 45), 19=1908 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/26, 2-3=-773/1028, 3-4=-693/990, 4-5=-1397/158, 5-6=-1307/250, 6-8=-3081/258, 8-9=-3030/150, 9-10=-1457/2029, 10-11=-1346/1571, 11-12=0/16
BOT CHORD 2-19=-889/789, 18-19=-137/1039, 17-18=-131/1114, 15-17=-128/1095, 14-15=0/976, 13-14=-781/1756, 11-13=-1446/1343
WEBS 17-41=0/266, 4-41=0/209, 8-14=-510/310, 15-44=-146/353, 6-44=-183/280, 4-42=-296/162, 15-42=-265/137, 6-45=-35/2324, 14-45=-35/2351, 9-13=-2813/223, 9-14=-878/1609, 10-13=-701/258, 4-19=-1954/374, 5-15=-465/236, 3-19=-558/191, 41-42=-42/53, 18-41=-155/94, 44-45=-5/171

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) -0-10-11 to 3-10-7, Interior (1) 3-10-7 to 18-0-14, Exterior(2R) 18-0-14 to 27-7-2, Interior (1) 27-7-2 to 43-9-2, Exterior(2E) 43-9-2 to 48-6-5 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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

September 28,2021

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

Job	Truss	Truss Type	Qty	Ply	4892 HWY 27-Roof	
21070050-K	B1	Roof Special	10	1	Job Reference (optional)	I48109337

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

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Page: 1

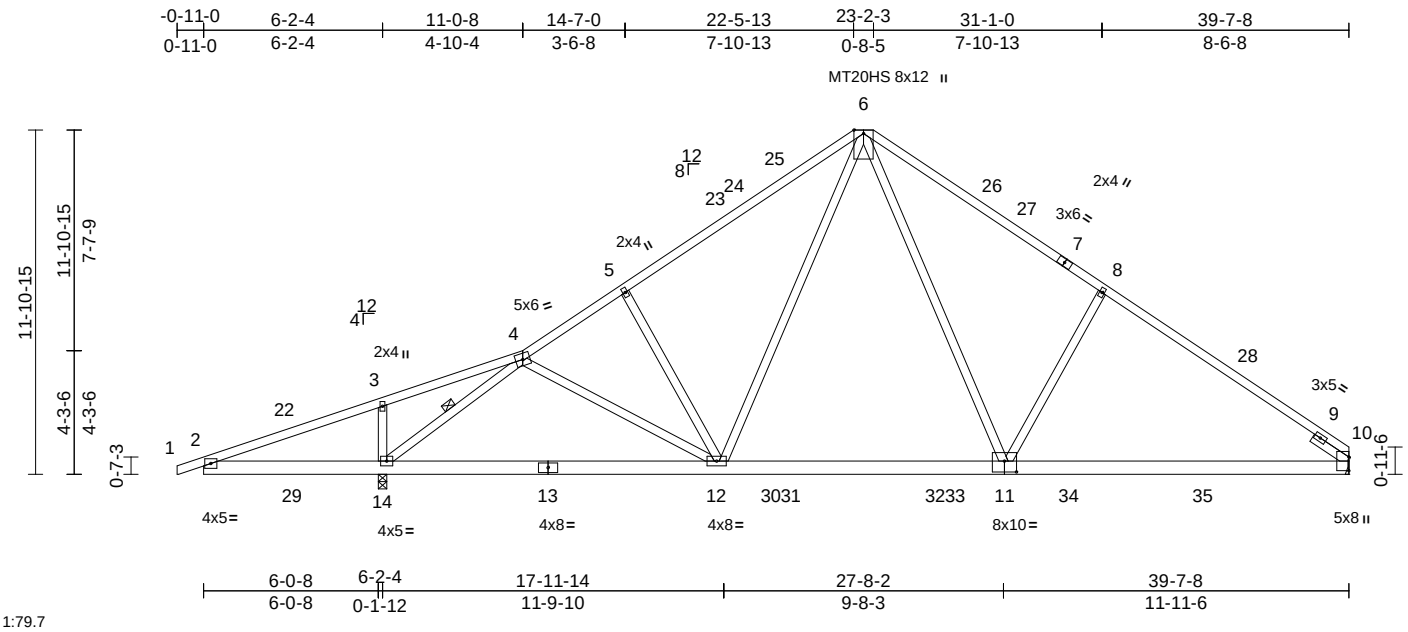

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Plate Offsets (X, Y): [11:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.15	11-20	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.29	11-12	>999	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 244 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 2400F 2.0E *Except* 1-4:2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 6-12,11-6:2x4 SP No.2
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-14.
WEBS 1 Row at midpt 4-14

REACTIONS (lb/size) 10=1381/ Mechanical, 14=2043/0-3-8
Max Horiz 14=288 (LC 11)
Max Uplift 10=-16 (LC 15), 14=-119 (LC 14)
Max Grav 10=1629 (LC 25), 14=2213 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-815/987, 3-4=-731/935, 4-5=-1920/0, 5-6=-1868/74, 6-8=-1980/192, 8-10=-2155/114
BOT CHORD 2-14=-854/826, 12-14=-41/1507, 10-12=-113/1719
WEBS 6-12=-10/817, 4-12=-230/368, 6-11=-61/1067, 4-14=-2371/568, 5-12=-517/268, 3-14=-541/205, 8-11=-490/315

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) -0-10-11 to 3-0-13, Interior (1) 3-0-13 to 18-10-7, Exterior(2R) 18-10-7 to 26-9-9, Interior (1) 26-9-9 to 35-7-15, Exterior(2E) 35-7-15 to 39-7-8 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 22-10-0 from left end, supported at two points, 5-0-0 apart.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 10.
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14. 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

September 28,2021

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

Job	Truss	Truss Type	Qty	Ply	4892 HWY 27-Roof	
21070050-K	B2	Roof Special Supported Gable	1	1	Job Reference (optional)	I48109338

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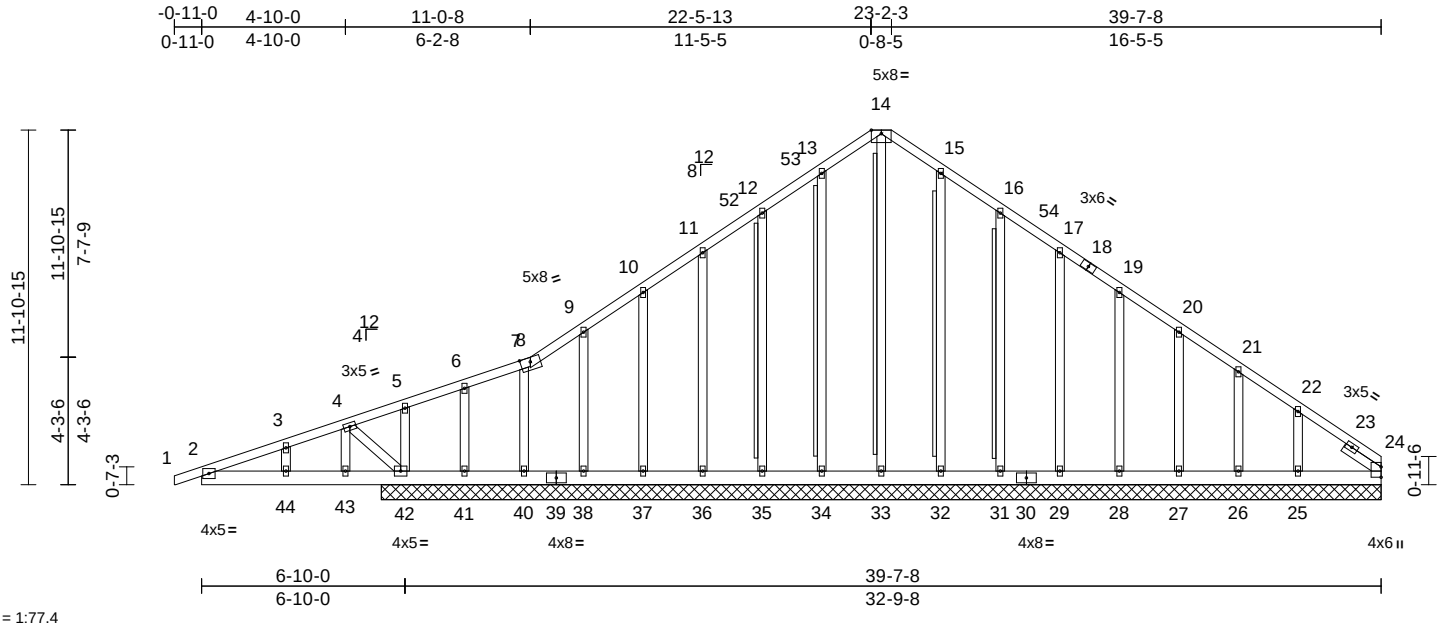

Scale = 1:77.4

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	0.63	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	-0.04	24	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 320 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except* 33-14,32-15,34-13:2x4 SP No.2, 0-0,0-0,0-0,0-0,0-0:2x4 SPF No.2 (flat)
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 9-9-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-10-10 oc bracing.
WEBS T-Brace: 2x4 SPF No.2 - 14-33, 15-32, 16-31, 13-34, 12-35
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 (lb/size) 24=-475/33-7-0, 25=447/33-7-0, 26=60/33-7-0, 27=186/33-7-0, 28=153/33-7-0, 29=165/33-7-0, 31=140/33-7-0, 32=211/33-7-0, 33=914/33-7-0, 34=211/33-7-0, 35=141/33-7-0, 36=160/33-7-0, 37=174/33-7-0, 38=99/33-7-0, 40=104/33-7-0, 41=-375/33-7-0, 42=908/33-7-0, 48=-475/33-7-0
Max Horiz 42=291 (LC 11)
Max Uplift 24=-706 (LC 39), 25=-148 (LC 15), 26=-27 (LC 15), 27=-66 (LC 15), 28=-56 (LC 15), 29=-57 (LC 15), 31=-64 (LC 15), 32=-47 (LC 15), 33=-61 (LC 10), 34=-49 (LC 14), 35=-63 (LC 14), 36=-57 (LC 14), 37=-58 (LC 14), 38=-58 (LC 14), 40=-19 (LC 15), 41=-487 (LC 39), 42=-212 (LC 10), 48=-706 (LC 39)
Max Grav 24=268 (LC 10), 25=454 (LC 25), 26=100 (LC 43), 27=194 (LC 25), 28=162 (LC 25), 29=178 (LC 41), 31=233 (LC 41), 32=296 (LC 41), 33=1133 (LC 39), 34=304 (LC 21), 35=210 (LC 38), 36=202 (LC 40), 37=209 (LC 40), 38=167 (LC 40), 40=109 (LC 40), 41=96 (LC 10), 42=1199 (LC 39), 48=268 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-173/841, 3-4=-147/856, 4-5=-164/928, 5-6=-143/874, 6-7=-115/902, 7-8=-96/948, 8-9=-92/998, 9-10=-69/1025, 10-11=-72/1020, 11-12=-76/1019, 12-13=-81/1033, 13-14=-85/997, 14-15=-100/997, 15-16=-138/1033, 16-17=-170/1019, 17-19=-204/1021, 19-20=-237/1020, 20-21=-272/1024, 21-22=-298/1003, 22-24=-353/1068
BOT CHORD 2-44=-774/195, 43-44=-774/195, 42-43=-774/195, 41-42=-835/300, 40-41=-835/300, 38-40=-835/300, 37-38=-835/300, 36-37=-835/300, 35-36=-835/300, 34-35=-835/300, 33-34=-835/300, 32-33=-835/300, 31-32=-835/300, 29-31=-835/300, 28-29=-835/300, 27-28=-835/300, 26-27=-835/300, 25-26=-835/300, 24-25=-835/300
WEBS 14-33=-1093/85, 15-32=-256/137, 16-31=-193/116, 17-29=-137/81, 19-28=-127/82, 20-27=-135/84, 21-26=-102/71, 22-25=-226/117, 13-34=-264/137, 12-35=-170/116, 11-36=-163/81, 10-37=-163/83, 9-38=-147/80, 7-40=0/111, 6-41=-66/67, 5-42=-342/90, 4-43=-72/53, 3-44=-142/56, 4-42=-111/137

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-11 to 2-10-0, Exterior (2N) 2-10-0 to 18-10-0, Corner(3R) 18-10-0 to 26-10-0, Exterior(2N) 26-10-0 to 35-7-15, Corner(3E) 35-7-15 to 39-7-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.

September 28,2021

Continued on page 2

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6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) N/A

12) N/A

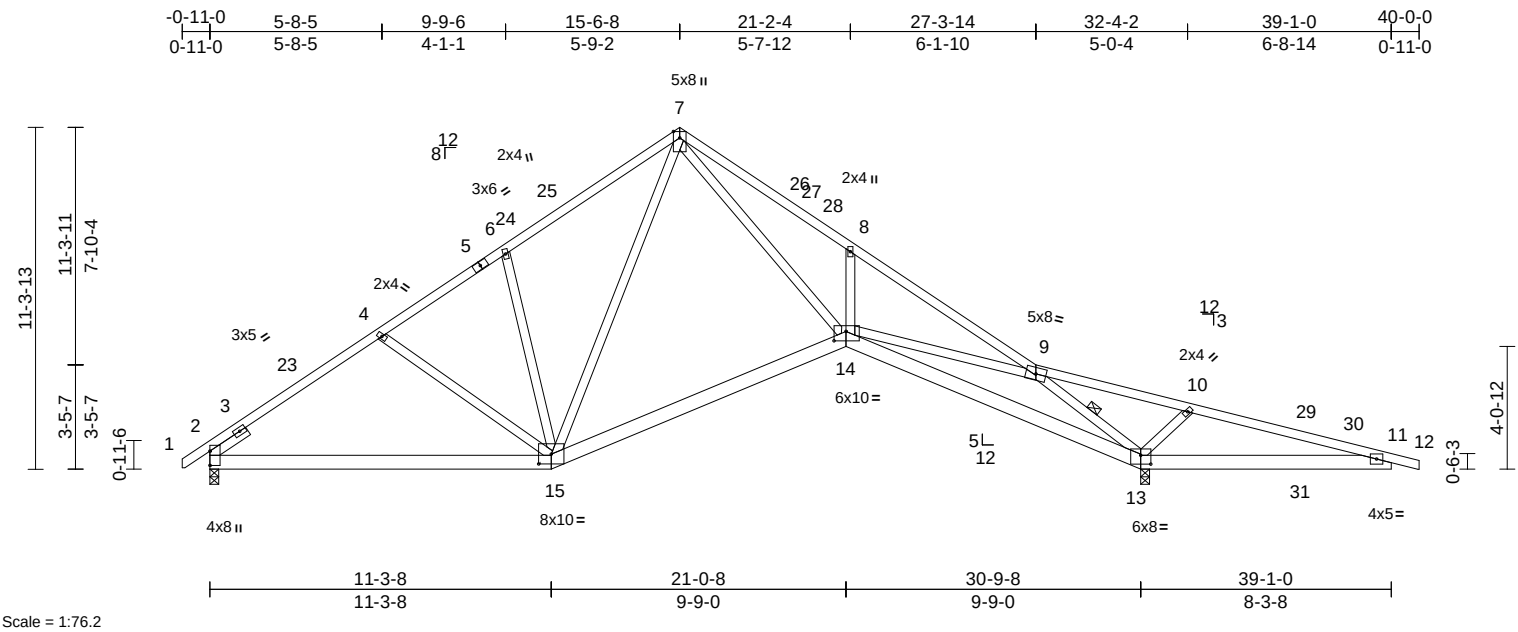
13) Non Standard bearing condition. Review required.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	4892 HWY 27-Roof
21070050-K	C1	Roof Special	4	1	I48109339 Job Reference (optional)

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

Run: 8.52 S Aug 27 2021 Print: 8.520 S Aug 27 2021 MiTek Industries, Inc. Tue Sep 28 08:30:30 Page: 1
ID:WWTZnGaySh3KnB4S9IYw39yZAZw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:76.2

Plate Offsets (X, Y): [13:0-4-0,0-3-8], [14:0-4-12,0-3-12], [15:0-5-0,0-3-14]

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	0.83	Vert(LL)	-0.17	14-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.36	14-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.22	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 241 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 7-9,9-12:2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 7-15:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 5-9-6 oc bracing.
WEBS 1 Row at midpt 9-13

REACTIONS (lb/size) 2=1143/0-3-8, 13=1989/0-3-8
Max Horiz 2=-256 (LC 12)
Max Uplift 2=-121 (LC 14), 13=-237 (LC 15)
Max Grav 2=1217 (LC 21), 13=1989 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-4=-1559/188, 4-6=-1361/168, 6-7=-1381/277, 7-8=-2706/264, 8-9=-2663/172, 9-10=-1374/1713, 10-11=-1272/1294, 11-12=0/13
BOT CHORD 2-15=-240/1223, 14-15=-16/995, 13-14=-489/1522, 11-13=-1185/1269
WEBS 4-15=-213/140, 7-14=-41/2095, 9-13=-2623/208, 10-13=-639/239, 9-14=-846/1418, 8-14=-500/262, 7-15=-271/344, 6-15=-426/198

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 3-0-7, Interior (1) 3-0-7 to 11-7-10, Exterior(2R) 11-7-10 to 19-5-6, Interior (1) 19-5-6 to 36-0-14, Exterior(2E) 36-0-14 to 39-11-13 zone; cantilever right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 28,2021

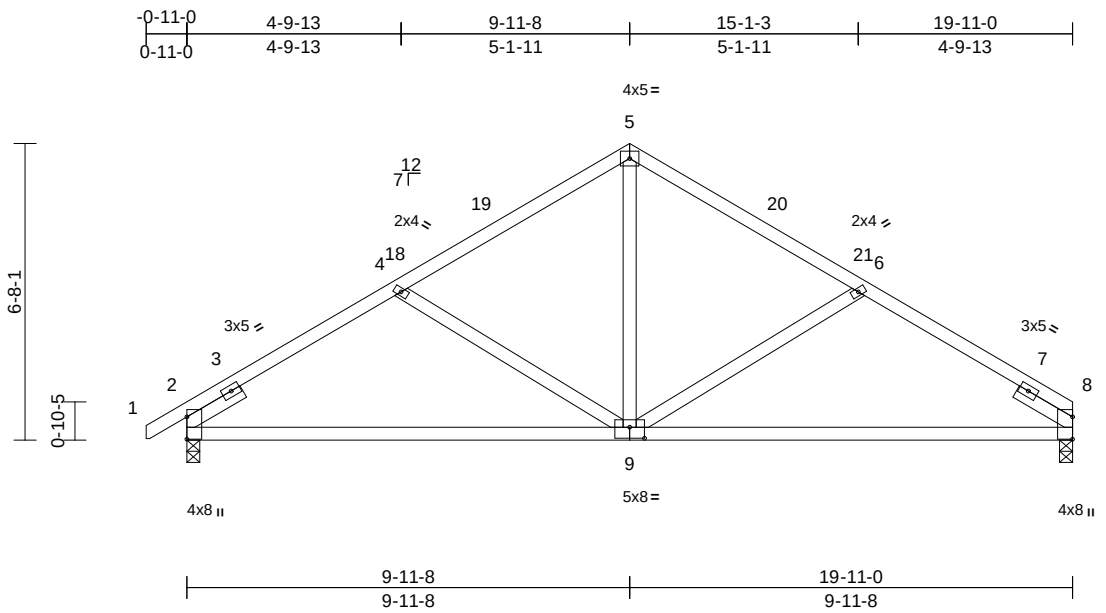
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4892 HWY 27-Roof	
21070050-K	D1	Common	3	1	Job Reference (optional)	I48109340

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

Run: 8.52 S Aug 27 2021 Print: 8.520 S Aug 27 2021 MiTek Industries, Inc. Tue Sep 28 08:30:30 ID:fAzu2DNPMTqA95z5O4jtbayZAXb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:51.8

Plate Offsets (X, Y): [9:0-4-0,0-3-0]

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	0.65	Vert(LL)	-0.13	9-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.27	9-12	>901	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 97 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-5-11 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=850/0-3-8, 8=796/0-3-8
Max Horiz 2=144 (LC 11)
Max Uplift 2=-88 (LC 14), 8=-71 (LC 15)
Max Grav 2=899 (LC 21), 8=844 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/27, 2-4=-1169/153, 4-5=-893/129, 5-6=-894/129, 6-8=-1173/154
BOT CHORD	2-8=-209/965
WEBS	5-9=0/513, 4-9=-352/179, 6-9=-357/180

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 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;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 2. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 28,2021

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

Job	Truss	Truss Type	Qty	Ply	4892 HWY 27-Roof	
21070050-K	D2	Common Girder	1	3	Job Reference (optional)	I48109341

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

Run: 8.52 S Aug 27 2021 Print: 8.520 S Aug 27 2021 MiTek Industries, Inc. Tue Sep 28 08:30:31
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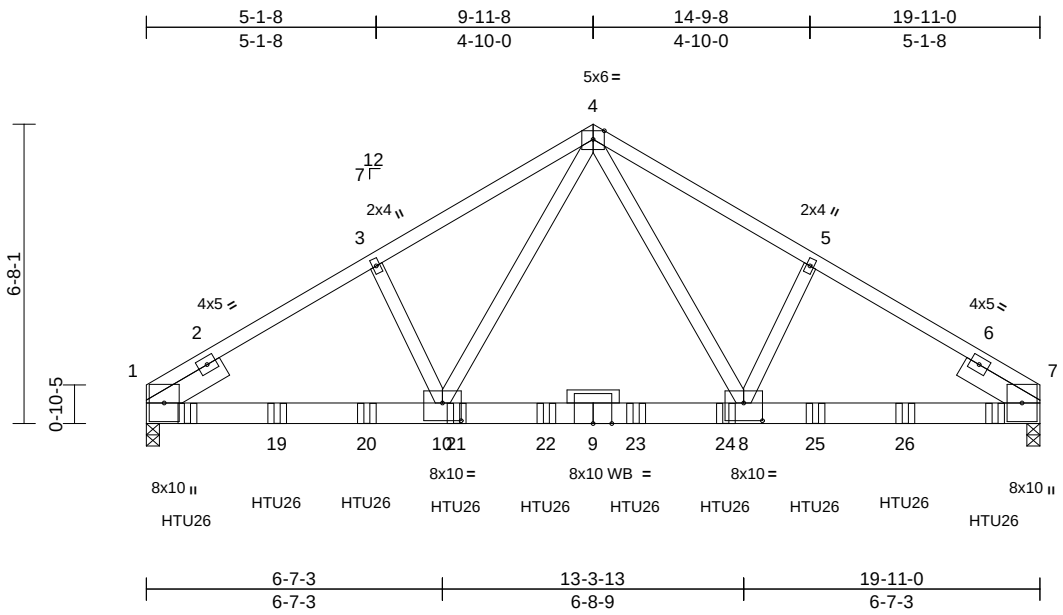

Scale = 1:51.3

Plate Offsets (X, Y): [1:0-5-0,0-0-13], [7:0-5-13,0-0-13], [8:0-5-0,0-4-12], [10:0-5-0,0-4-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.16	8-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.29	8-10	>810	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.04	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 367 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP 2400F 2.0E
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-11-0, Right 2x6 SP No.2 -- 1-11-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-8-14 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=7833/0-3-8, 7=7785/0-3-8
Max Horiz 1=136 (LC 11)
Max Uplift 1=-212 (LC 12), 7=-212 (LC 13)
Max Grav 1=9046 (LC 21), 7=8990 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-11383/297, 3-4=-11287/343, 4-5=-11265/343, 5-7=-11362/296
BOT CHORD	1-10=-278/9820, 8-10=-121/6820, 7-8=-185/9697
WEBS	3-10=-185/255, 4-10=-191/6294, 4-8=-191/6254, 5-8=-181/257

NOTES

1) 3-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 0-5-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) 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; Lumber DOL=1.60 plate grip DOL=1.60
5) 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
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 7. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 0-11-0 from the left end to 18-11-0 to connect truss(es) to back face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-7=-60, 11-15=-20
Concentrated Loads (lb)
Vert: 13=-1403 (B), 17=-1402 (B), 19=-1402 (B), 20=-1402 (B), 21=-1402 (B), 22=-1402 (B), 23=-1402 (B), 24=-1402 (B), 25=-1402 (B), 26=-1402 (B)

September 28,2021

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

Job	Truss	Truss Type	Qty	Ply	4892 HWY 27-Roof	
21070050-K	D3	Common Supported Gable	1	1	Job Reference (optional)	I48109342

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.52 S Aug 27 2021 Print: 8.520 S Aug 27 2021 MiTek Industries, Inc. Tue Sep 28 08:30:31 Page: 1
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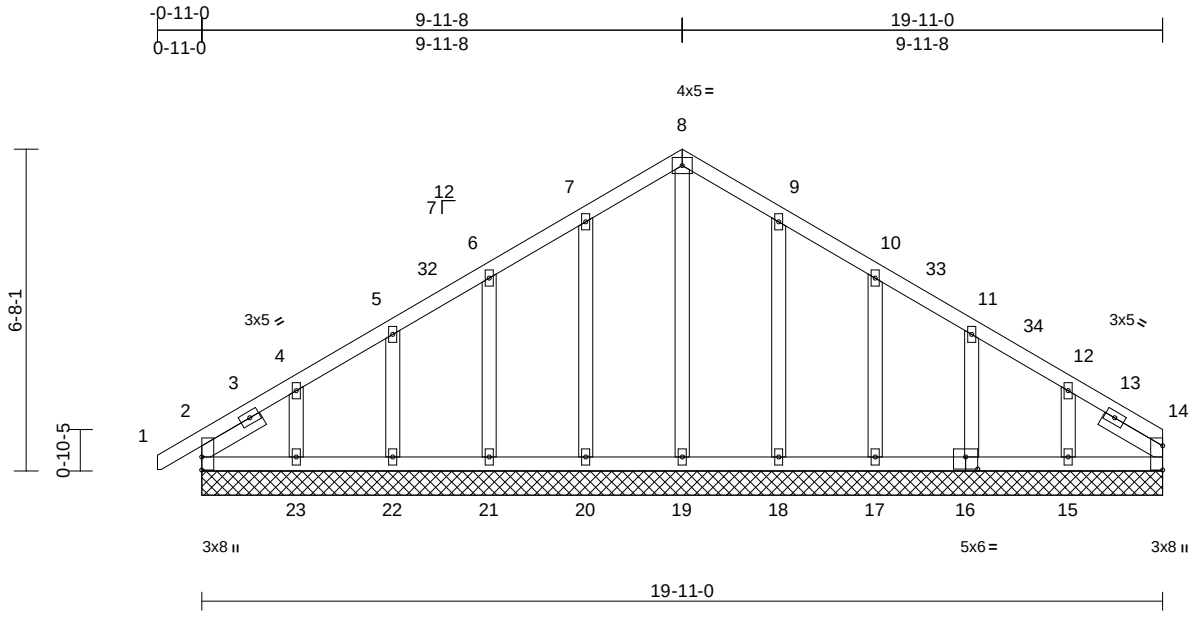


Scale = 1:47.8

Plate Offsets (X, Y): [16:0-3-0,0-3-0]

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	0.08	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	0.11	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 118 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

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

REACTIONS (lb/size) 2=148/19-11-0, 14=85/19-11-0, 15=169/19-11-0, 16=156/19-11-0, 17=157/19-11-0, 18=166/19-11-0, 19=126/19-11-0, 20=166/19-11-0, 21=159/19-11-0, 22=162/19-11-0, 23=152/19-11-0, 24=148/19-11-0, 28=85/19-11-0
Max Horiz 2=144 (LC 11), 24=144 (LC 11)
Max Uplift 2=-38 (LC 10), 14=-7 (LC 11), 15=-86 (LC 15), 16=-41 (LC 15), 17=-55 (LC 15), 18=-49 (LC 15), 20=-50 (LC 14), 21=-54 (LC 14), 22=-40 (LC 14), 23=-97 (LC 14), 24=-38 (LC 10), 28=-7 (LC 11)
Max Grav 2=165 (LC 29), 14=98 (LC 24), 15=193 (LC 25), 16=161 (LC 22), 17=225 (LC 22), 18=253 (LC 22), 19=155 (LC 27), 20=252 (LC 21), 21=226 (LC 21), 22=167 (LC 21), 23=190 (LC 24), 24=165 (LC 29), 28=98 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-120/105, 4-5=-102/78, 5-6=-94/90, 6-7=-83/126, 7-8=-109/176, 8-9=-109/176, 9-10=-82/125, 10-11=-61/72, 11-12=-74/35, 12-14=-75/55
BOT CHORD 2-23=-43/80, 22-23=-43/80, 21-22=-43/80, 20-21=-43/80, 19-20=-43/80, 18-19=-43/80, 17-18=-43/80, 15-17=-43/80, 14-15=-40/77
WEBS 8-19=-117/25, 7-20=-212/77, 6-21=-186/83, 5-22=-128/75, 4-23=-138/103, 9-18=-212/77, 10-17=-186/82, 11-16=-123/76, 12-15=-139/115

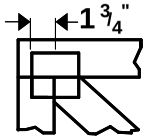
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 1-11-8, Exterior(2N) 1-11-8 to 6-11-8, Corner(3R) 6-11-8 to 12-11-8, Exterior (2N) 12-11-8 to 16-11-0, Corner(3E) 16-11-0 to 19-11-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) 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.

September 28,2021

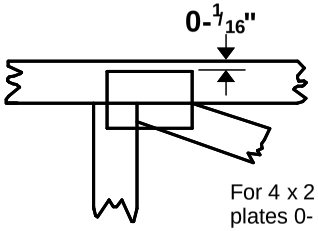
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

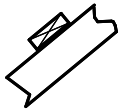
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

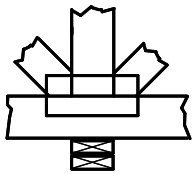
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

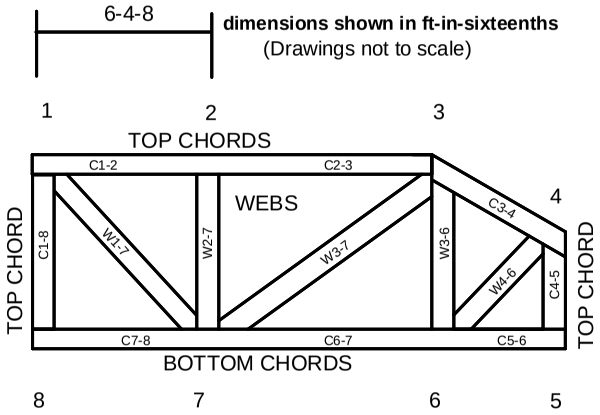


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

MiTek Engineering Reference Sheet: MII-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/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.