ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 20090102
A&G RESIDENTIAL - 46SV

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: E14920679 thru E14920692

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844

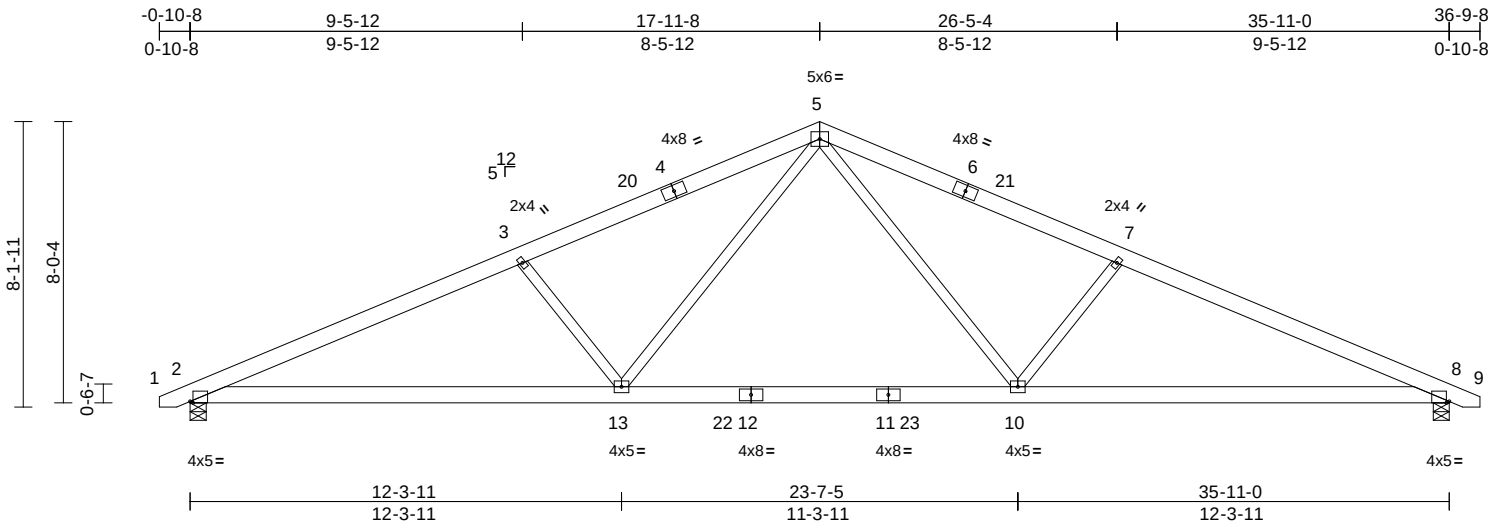
September 30,2020

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	A01	Common	4	1	E14920679 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:35 Page: 1
ID:GePeabhrSJ?UwFbiu4vKCwykESO-Mock Me



Scale = 1:65.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.23	10-13	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.39	13-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.09	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 220 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 10-7,13-3:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=73 (LC 15)
Max Grav 2=1598 (LC 3), 8=1598 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-3120/0, 3-20=-2853/0, 4-20=-2767/0, 4-5=-2759/0, 5-6=-2759/0, 6-21=-2767/0, 7-21=-2853/0, 7-8=-3120/0, 8-9=0/18
BOT CHORD 2-13=-3/2844, 13-22=0/1891, 12-22=0/1891, 11-12=0/1891, 11-23=0/1891, 10-23=0/1891, 8-10=0/2844
WEBS 5-10=0/1108, 7-10=-590/157, 5-13=0/1108, 3-13=-590/157

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) 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 30,2020

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

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	A02	Common	2	1	E14920680 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:37 Page: 1
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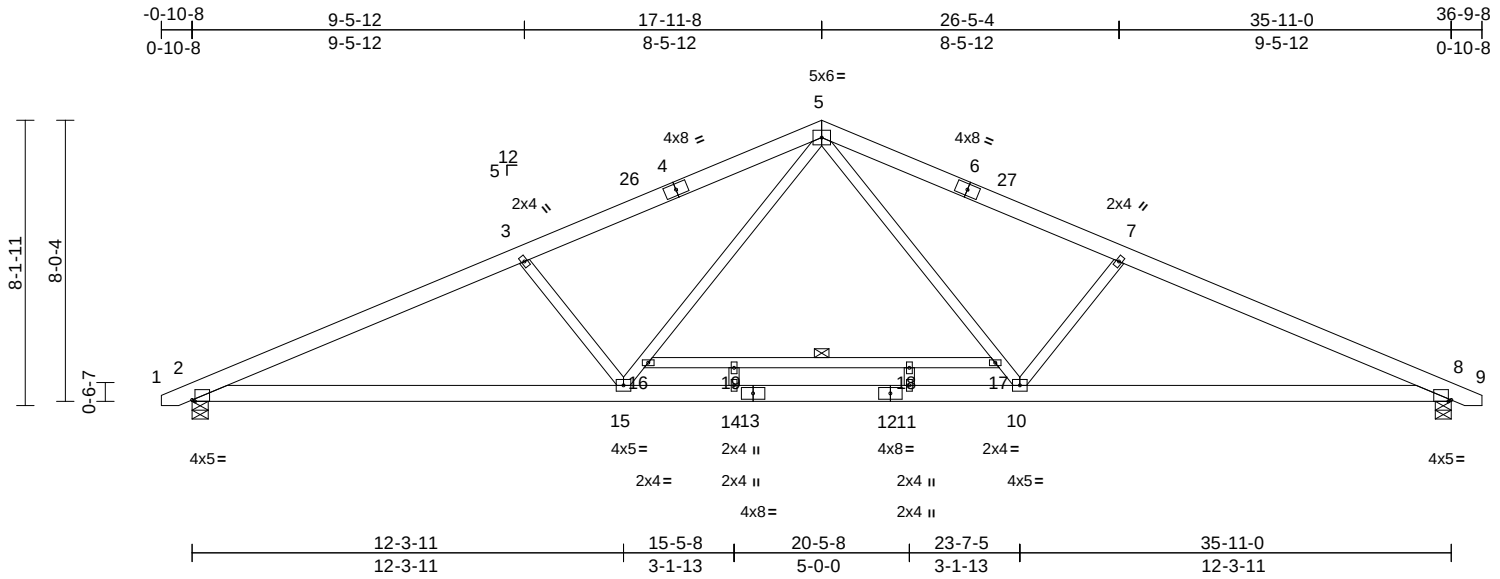

Scale = 1:65.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.13	15-22	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.40	11-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.09	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 237 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 10-5,15-5,16-17:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 16-17

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=73 (LC 15)
Max Grav 2=1574 (LC 2), 8=1574 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-3150/0, 3-26=-2837/0, 4-26=-2733/0, 4-5=-2726/0, 5-6=-2726/0, 6-27=-2734/0, 7-27=-2837/0, 7-8=-3150/0, 8-9=0/18
BOT CHORD 2-15=0/2856, 14-15=0/2019, 13-14=0/2019, 12-13=0/2019, 11-12=0/2019, 10-11=0/2019, 8-10=0/2856
WEBS 5-17=0/1050, 10-17=0/976, 7-10=-579/168, 15-16=0/976, 5-16=0/1050, 3-15=-579/167, 16-19=-129/0, 18-19=-129/0, 17-18=-129/0, 11-18=0/24, 14-19=0/24

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 17-11-8 from left end, supported at two points, 5-0-0 apart.
7) All plates are 2x4 MT20 unless otherwise indicated.
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) 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 30,2020

ENGINEERING BY TRENCO
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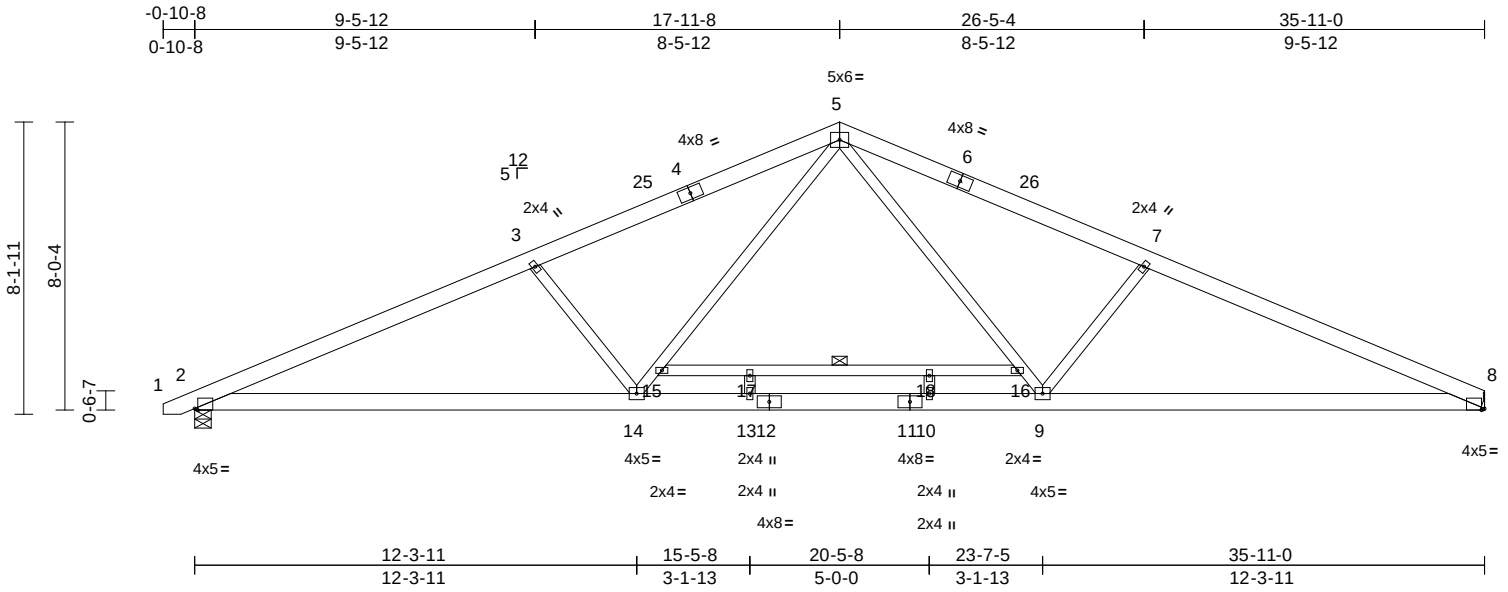
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV	E14920681
20090102	A03	Common	5	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:38 Page: 1
ID:HMgvFkITPYQMJNbNrnyC5mykEPk-Mock Me



Scale = 1:64.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.13	9-24	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.39	10-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.09	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 235 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 9-5,14-5,15-16:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 15-16

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=76 (LC 15)
Max Grav 2=1575 (LC 2), 8=1536 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-3151/0, 3-25=-2837/0, 4-25=-2734/0, 4-5=-2727/0, 5-6=-2717/0, 6-26=-2728/0, 7-26=-2839/0, 7-8=-3152/0
BOT CHORD 2-14=0/2856, 13-14=0/2019, 12-13=0/2019, 11-12=0/2019, 10-11=0/2019, 9-10=0/2019, 8-9=0/2858
WEBS 5-16=0/1052, 9-16=0/978, 7-9=-580/168, 14-15=0/975, 5-15=0/1050, 3-14=-579/167, 15-17=-129/0, 17-18=-129/0, 16-18=-129/0, 13-17=0/24, 10-18=0/23

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 17-11-8 from left end, supported at two points, 5-0-0 apart.
7) All plates are 2x4 MT20 unless otherwise indicated.
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) 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 30,2020

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	A04	Common	3	1	E14920682 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:38 Page: 1
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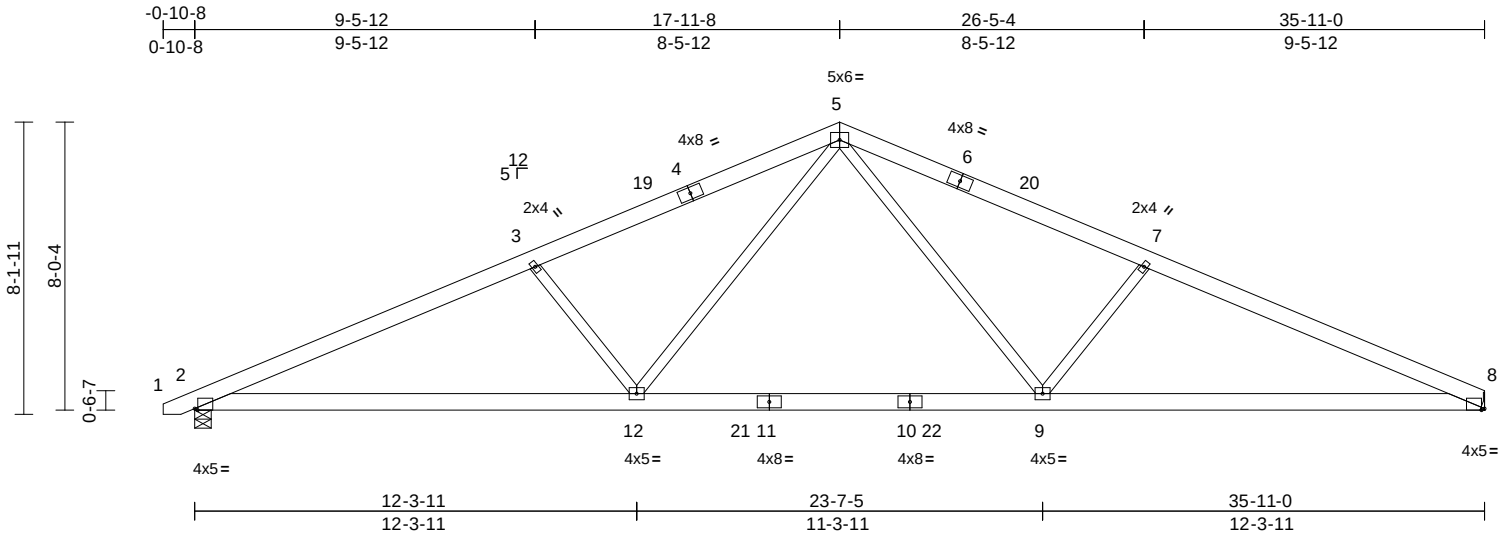

Scale = 1:64.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.23	9-12	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.39	9-18	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.09	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 218 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 9-7,12-3:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=76 (LC 15)
Max Grav 2=1598 (LC 3), 8=1566 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-3121/0, 3-19=-2853/0, 4-19=-2767/0, 4-5=-2759/0, 5-6=-2753/0, 6-20=-2760/0, 7-20=-2855/0, 7-8=-3122/0
BOT CHORD 2-12=-5/2845, 12-21=0/1892, 11-21=0/1892, 10-11=0/1892, 10-22=0/1892, 9-22=0/1892, 8-9=0/2847
WEBS 5-9=0/1110, 7-9=-591/157, 5-12=0/1108, 3-12=-590/157

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 30,2020

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	A05	Common Supported Gable	1	1	E14920683 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:39 Page: 1
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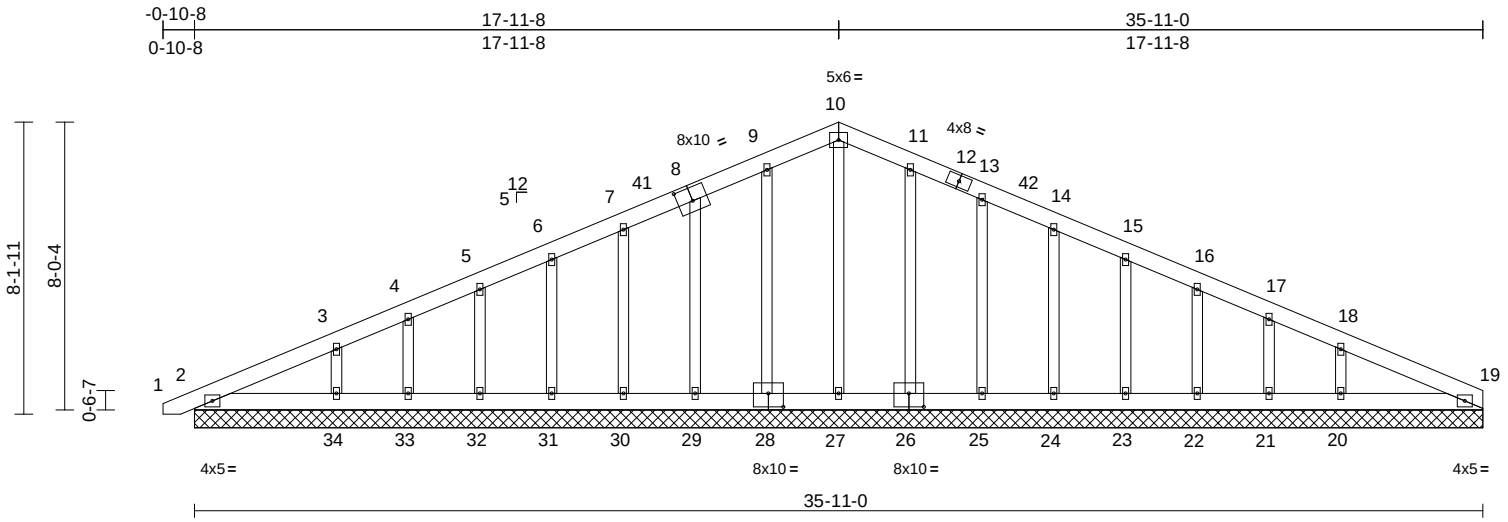


Scale = 1:64.2

Plate Offsets (X, Y): [8:0-5-0,0-4-8], [26:0-5-0,0-4-8], [28:0-5-0,0-4-8]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	19	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 267 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3 *Except*
27-10,28-9,29-8,26-11,25-13:2x4 SP No.2

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=35-11-0, 19=35-11-0, 20=35-11-0, 21=35-11-0, 22=35-11-0, 23=35-11-0, 24=35-11-0, 25=35-11-0, 26=35-11-0, 27=35-11-0, 28=35-11-0, 29=35-11-0, 30=35-11-0, 31=35-11-0, 32=35-11-0, 33=35-11-0, 34=35-11-0, 35=35-11-0, 38=35-11-0
Max Horiz 2=73 (LC 15), 35=73 (LC 15)
Max Uplift 20=-25 (LC 16), 21=-7 (LC 16), 22=-12 (LC 16), 23=-11 (LC 16), 24=-11 (LC 16), 25=-15 (LC 16), 26=-2 (LC 16), 28=-6 (LC 15), 29=-14 (LC 15), 30=-9 (LC 15), 31=-12 (LC 15), 32=-12 (LC 15), 33=-7 (LC 15), 34=-24 (LC 15)
Max Grav 2=174 (LC 2), 19=132 (LC 2), 20=309 (LC 36), 21=93 (LC 2), 22=168 (LC 36), 23=153 (LC 2), 24=155 (LC 2), 25=179 (LC 23), 26=188 (LC 23), 27=137 (LC 32), 28=196 (LC 22), 29=178 (LC 22), 30=148 (LC 2), 31=154 (LC 35), 32=168 (LC 35), 33=96 (LC 2), 34=303 (LC 35), 35=174 (LC 2), 38=132 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-84/46, 3-4=-73/38, 4-5=-55/52, 5-6=-47/66, 6-7=-48/80, 7-41=-61/86, 8-41=-53/93, 8-9=-75/108, 9-10=-87/119, 10-11=-87/116, 11-12=-71/96, 12-13=-76/91, 13-42=-52/73, 14-42=-60/68, 14-15=-46/51, 15-16=-37/35, 16-17=-35/21, 17-18=-48/8, 18-19=-56/34
BOT CHORD 2-34=-32/70, 33-34=-32/70, 32-33=-32/70, 31-32=-32/70, 30-31=-32/70, 29-30=-32/70, 28-29=-34/70, 27-28=-34/70, 26-27=-34/70, 25-26=-34/70, 24-25=-34/70, 23-24=-34/70, 22-23=-34/70, 21-22=-34/70, 20-21=-34/70, 19-20=-34/70
WEBS 10-27=-99/4, 9-28=-157/30, 8-29=-139/38, 7-30=-109/32, 6-31=-117/35, 5-32=-121/36, 4-33=-88/30, 3-34=-196/49, 11-26=-149/25, 13-25=-140/39, 14-24=-115/34, 15-23=-116/35, 16-22=-121/36, 17-21=-87/30, 18-20=-199/49

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) 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 2.00 times flat roof load of 13.9 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.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036322 ENGINEER ERIC A. GILBERT

September 30,2020

Continued on page 2

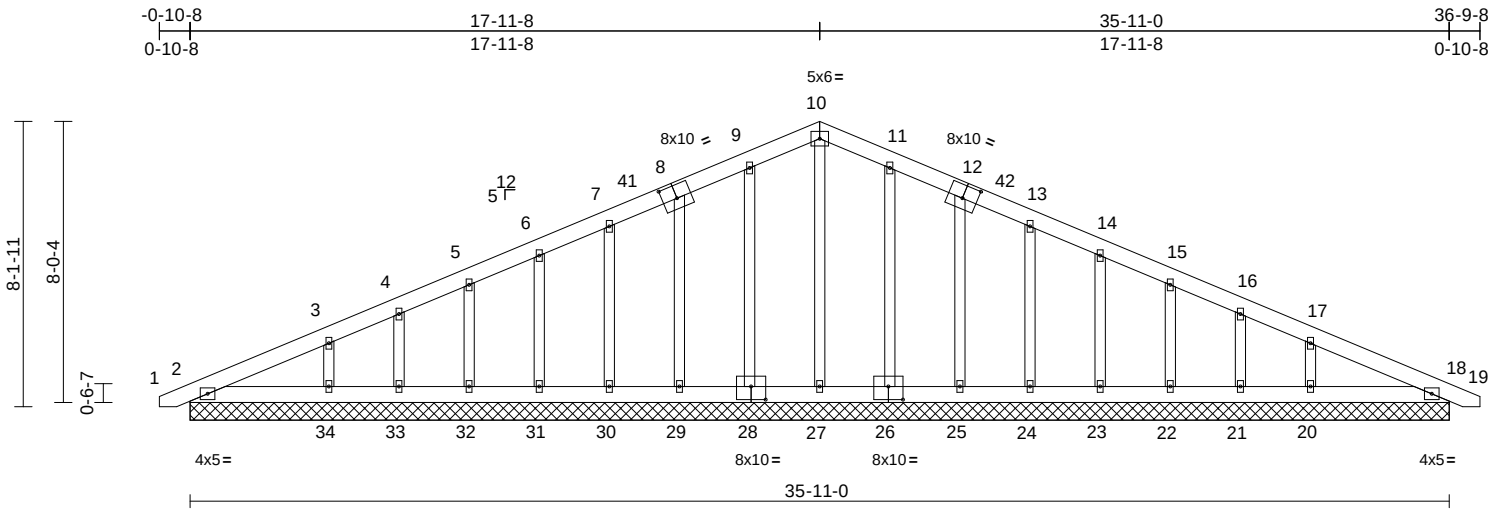
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

9) Gable studs spaced at 2-0-0 oc.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 28, 29, 30, 31, 32, 33, 34, 26, 25, 24, 23, 22, 21, and 20. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	A06	Common Supported Gable	1	1	E14920684 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:39 Page: 1
ID:Xdn9HRGRHmqFz_NetJEHKrykEP3-Mock Me



Scale = 1:65.7

Plate Offsets (X, Y): [8:0-5-0,0-4-8], [12:0-5-0,0-4-8], [26:0-5-0,0-4-8], [28:0-5-0,0-4-8]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	18	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 269 lb	FT = 20%

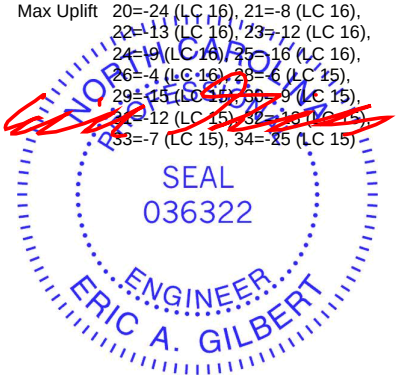
LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3 *Except*
27-10,28-9,29-8,26-11,25-12:2x4 SP No.2

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=35-11-0, 18=35-11-0, 20=35-11-0, 21=35-11-0, 22=35-11-0, 23=35-11-0, 24=35-11-0, 25=35-11-0, 26=35-11-0, 27=35-11-0, 28=35-11-0, 29=35-11-0, 30=35-11-0, 31=35-11-0, 32=35-11-0, 33=35-11-0, 34=35-11-0, 35=35-11-0, 38=35-11-0
Max Horiz 2=73 (LC 15), 35=73 (LC 15)
Max Uplift 20=-24 (LC 16), 21=-8 (LC 16), 22=-13 (LC 16), 23=-12 (LC 16), 24=-9 (LC 16), 25=-16 (LC 16), 26=-4 (LC 16), 28=-6 (LC 15), 29=-15 (LC 16), 30=-9 (LC 15), 31=-12 (LC 15), 32=-13 (LC 15), 33=-7 (LC 15), 34=-25 (LC 15)
Max Grav 2=179 (LC 2), 18=179 (LC 2), 20=312 (LC 36), 21=99 (LC 2), 22=173 (LC 36), 23=158 (LC 2), 24=153 (LC 2), 25=184 (LC 23), 26=202 (LC 23), 27=142 (LC 32), 28=202 (LC 22), 29=184 (LC 22), 30=153 (LC 2), 31=158 (LC 2), 32=173 (LC 35), 33=99 (LC 2), 34=312 (LC 35), 35=179 (LC 2), 38=179 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-86/50, 3-4=-73/41, 4-5=-55/55, 5-6=-46/70, 6-7=-51/85, 7-41=-64/90, 8-41=-56/98, 8-9=-79/113, 9-10=-91/125, 10-11=-91/121, 11-12=-79/101, 12-42=-56/77, 13-42=-64/69, 13-14=-51/56, 14-15=-40/38, 15-16=-39/24, 16-17=-50/9, 17-18=-54/34, 18-19=0/18
BOT CHORD 2-34=-36/75, 33-34=-36/75, 32-33=-36/75, 31-32=-36/75, 30-31=-36/75, 29-30=-36/75, 28-29=-38/76, 27-28=-38/76, 26-27=-38/76, 25-26=-38/76, 24-25=-36/75, 23-24=-36/75, 22-23=-36/75, 21-22=-36/75, 20-21=-36/75, 18-20=-36/75
WEBS 10-27=-104/5, 9-28=-162/30, 8-29=-143/39, 7-30=-112/33, 6-31=-121/36, 5-32=-125/37, 4-33=-91/31, 3-34=-202/51, 11-26=-162/28, 12-25=-143/40, 13-24=-112/33, 14-23=-121/36, 15-22=-125/37, 16-21=-91/31, 17-20=-202/50

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) 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 2.00 times flat roof load of 13.9 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.



September 30,2020

Continued on page 2

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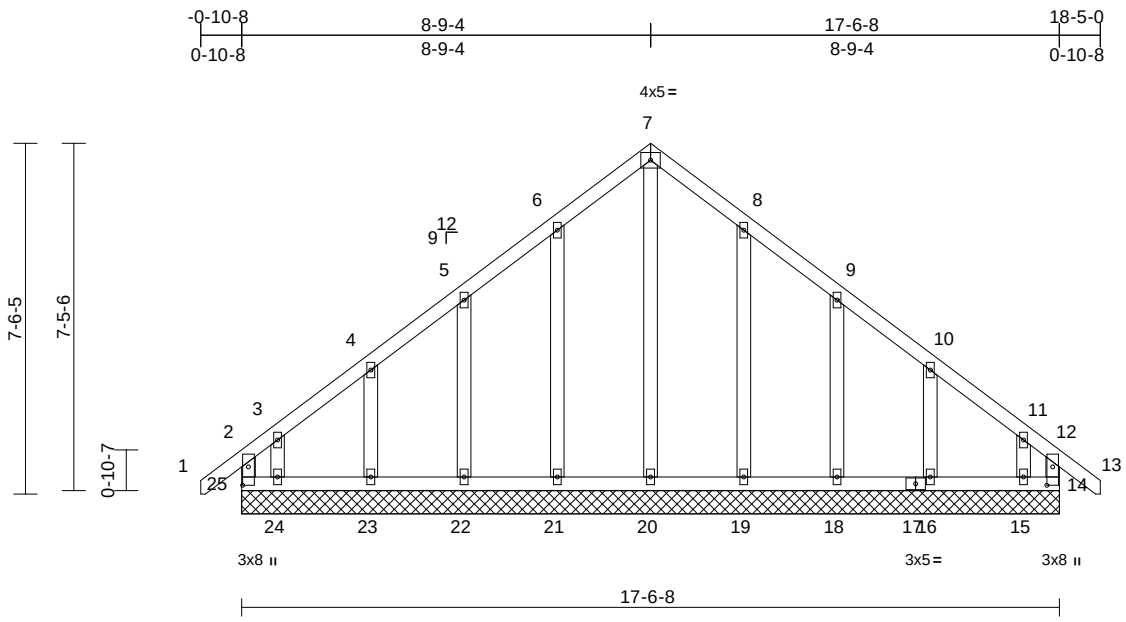
818 Soundside Road
Edenton, NC 27932

9) Gable studs spaced at 2-0-0 oc.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 28, 29, 30, 31, 32, 33, 34, 26, 25, 24, 23, 22, 21, and 20. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	B01	Common Supported Gable	1	1	E14920685 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:40 Page: 1
ID:e7340tQbDlTP1_t87YzKMaykEOs-Mock Me



Scale = 1:49.4

Plate Offsets (X, Y): [14:0-4-12,0-1-8], [25:0-4-12,0-1-8]

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.05	Vert(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-MR								
BCDL	10.0										Weight: 111 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 *Except* 20-7,21-6,19-8:2x4 SP No.2

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

REACTIONS (size) 14=17-6-8, 15=17-6-8, 16=17-6-8, 18=17-6-8, 19=17-6-8, 20=17-6-8, 21=17-6-8, 22=17-6-8, 23=17-6-8, 24=17-6-8, 25=17-6-8
Max Horiz 25=-148 (LC 11)
Max Uplift 14=-70 (LC 10), 15=-90 (LC 14), 16=-29 (LC 14), 18=-33 (LC 14), 19=-29 (LC 14), 21=-29 (LC 13), 22=-33 (LC 13), 23=-28 (LC 13), 24=-113 (LC 10), 25=-111 (LC 9)
Max Grav 14=136 (LC 25), 15=140 (LC 12), 16=166 (LC 26), 18=159 (LC 26), 19=169 (LC 26), 20=160 (LC 28), 21=170 (LC 25), 22=159 (LC 25), 23=166 (LC 25), 24=168 (LC 11), 25=170 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-132/116, 3-4=-85/86, 4-5=-78/77, 5-6=-81/94, 6-7=-118/121, 7-8=-118/114, 8-9=-81/84, 9-10=-55/53, 10-11=-63/63, 11-12=-97/78, 12-13=0/43, 2-25=-132/77, 12-14=-108/48
BOT CHORD 24-25=-67/79, 23-24=-67/79, 22-23=-67/79, 21-22=-67/79, 20-21=-67/79, 19-20=-67/79, 18-19=-67/79, 17-18=-67/79, 16-17=-67/79, 15-16=-67/79, 14-15=-67/79
WEBS 7-20=-121/51, 6-21=-131/53, 5-22=-120/55, 4-23=-127/55, 3-24=-99/76, 8-19=-130/52, 9-18=-120/55, 10-16=-128/55, 11-15=-94/71

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 25, 21, 22, 23, 24, 19, 18, 16, 15, and 14. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

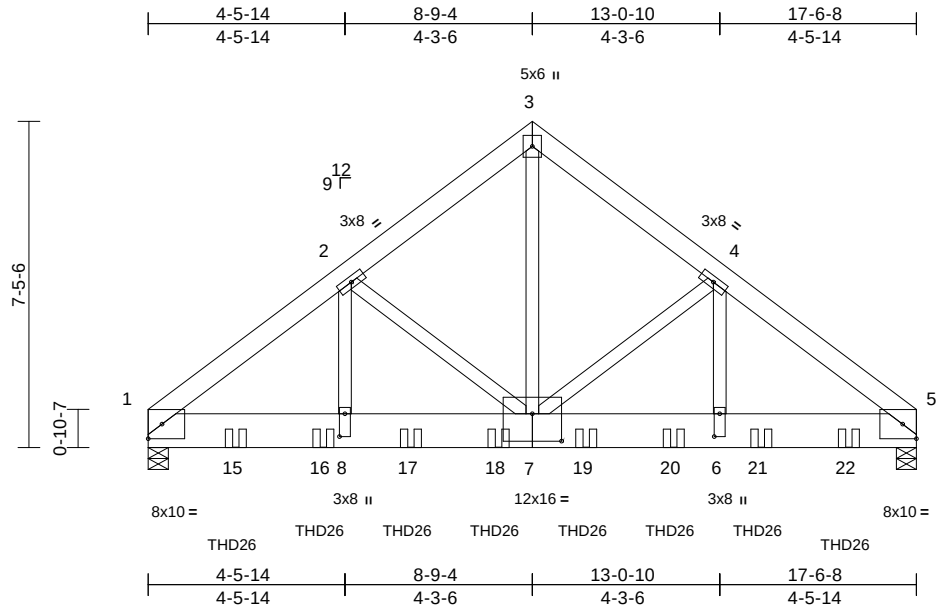
LOAD CASE(S) Standard

September 30,2020

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

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV	
20090102	B02	Common Girder	1	2	Job Reference (optional)	E14920686

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:40 Page: 1
ID:bniF?NfWlbsjpvqol1pndbykEOZ-Mock Me



Scale = 1:52.6

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

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	-0.06	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.13	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.85	Horz(CT)	0.03	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 309 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP No.2
WEBS 2x4 SP No.3 *Except* 7-3:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-2-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 5=0-5-8
Max Horiz 1=120 (LC 8)
Max Grav 1=6357 (LC 2), 5=6838 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-8275/0, 2-3=-6099/0, 3-4=-6100/0, 4-5=-8484/0
BOT CHORD 1-15=0/6541, 15-16=0/6541, 8-16=0/6541, 8-17=0/6541, 17-18=0/6541, 7-18=0/6541, 7-19=0/6725, 19-20=0/6725, 6-20=0/6725, 6-21=0/6725, 21-22=0/6725, 5-22=0/6725
WEBS 2-8=0/2834, 2-7=-2393/0, 3-7=0/6892, 4-7=-2429/0, 4-6=0/2831

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-6-0 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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
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) 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.
8) Use USP 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 2-0-0 from the left end to 16-0-0 to connect truss(es) to back face of bottom chord.
9) 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: 1-3=-46, 3-5=-46, 9-12=-19
Concentrated Loads (lb)
Vert: 15=-1197 (B), 16=-1197 (B), 17=-1197 (B), 18=-1297 (B), 19=-1297 (B), 20=-1297 (B), 21=-1297 (B), 22=-1297 (B)

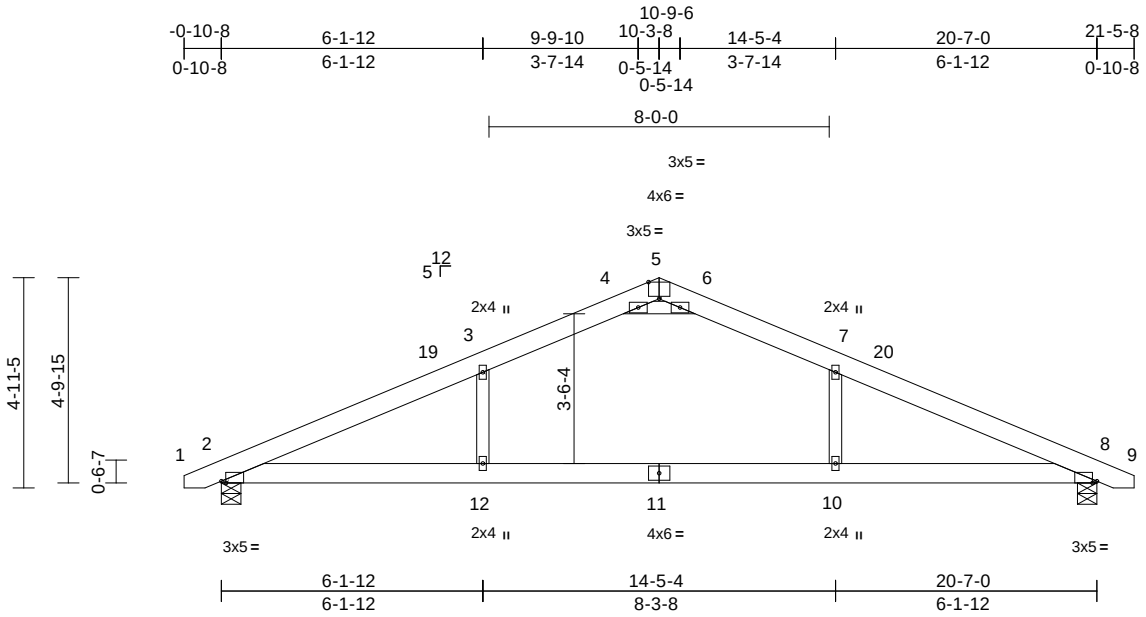
September 30,2020

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

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	C01	Common	5	1	E14920687 Job Reference (optional)

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

Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:40
ID:Or2q3gQ9pyjDn5qofdPUPtykEL_-Mock Me



Scale = 1:54.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.14	12-15	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.27	10-12	>905	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 114 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=-43 (LC 20)
Max Grav 2=861 (LC 2), 8=861 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-19=-1395/0, 3-19=-1295/0, 3-4=-1199/13, 4-5=0/1076, 5-6=0/1076, 6-7=-1199/13, 7-20=-1295/0, 8-20=-1395/0, 8-9=0/18
BOT CHORD 2-12=0/1196, 11-12=0/1196, 10-11=0/1196, 8-10=0/1196
WEBS 3-12=0/241, 7-10=0/241, 4-6=-2364/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) * 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) 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 30,2020

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

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	C02	Common Supported Gable	1	1	E14920688
					Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:41 Page: 1
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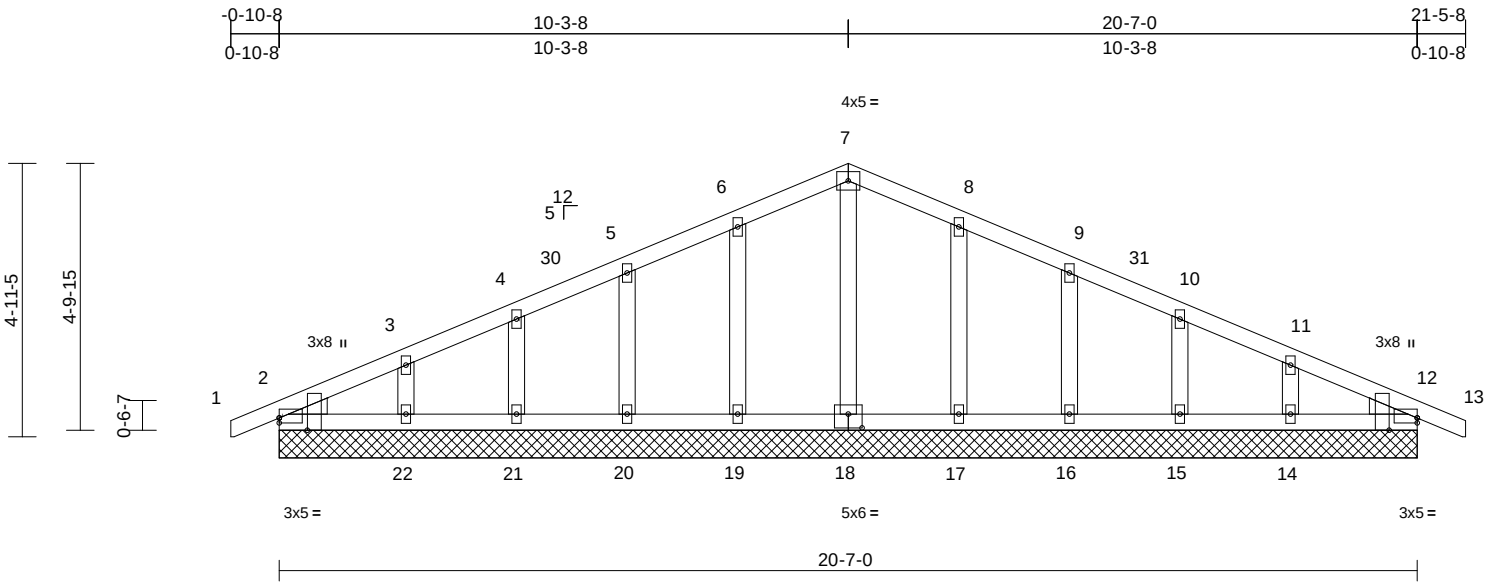


Scale = 1:41.7

Plate Offsets (X, Y): [2:Edge,0-1-1], [2:0-2-11,Edge], [12:Edge,0-1-1], [12:0-2-11,Edge], [18:0-3-0,0-3-0]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 101 lb	FT = 20%

LUMBER

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

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=20-7-0, 12=20-7-0, 14=20-7-0, 15=20-7-0, 16=20-7-0, 17=20-7-0, 18=20-7-0, 19=20-7-0, 20=20-7-0, 21=20-7-0, 22=20-7-0, 23=20-7-0, 27=20-7-0
Max Horiz 2=42 (LC 15), 23=42 (LC 15)
Max Uplift 2=-5 (LC 11), 12=-6 (LC 12), 14=-18 (LC 16), 15=-10 (LC 16), 16=-12 (LC 16), 17=-12 (LC 16), 19=-13 (LC 15), 20=-12 (LC 15), 21=-9 (LC 15), 22=-21 (LC 15), 23=-5 (LC 11), 27=-6 (LC 12)
Max Grav 2=140 (LC 2), 12=140 (LC 2), 14=175 (LC 36), 15=150 (LC 2), 16=178 (LC 23), 17=193 (LC 23), 18=133 (LC 2), 19=193 (LC 22), 20=178 (LC 22), 21=150 (LC 2), 22=175 (LC 35), 23=140 (LC 2), 27=140 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/24, 2-3=-44/26, 3-4=-46/31, 4-30=-38/37, 5-30=-24/45, 5-6=-43/59, 6-7=-58/73, 7-8=-58/70, 8-9=-43/47, 9-31=-24/27, 10-31=-38/20, 10-11=-38/13, 11-12=-28/14, 12-13=0/24
BOT CHORD	2-22=-18/43, 21-22=-18/43, 20-21=-18/43, 19-20=-18/43, 18-19=-18/43, 17-18=-18/43, 16-17=-18/43, 15-16=-18/43, 14-15=-18/43, 12-14=-18/43
WEBS	7-18=-94/0, 6-19=-155/36, 5-20=-139/35, 4-21=-115/35, 3-22=-120/36, 8-17=-155/36, 9-16=-139/35, 10-15=-115/35, 11-14=-120/35

NOTES

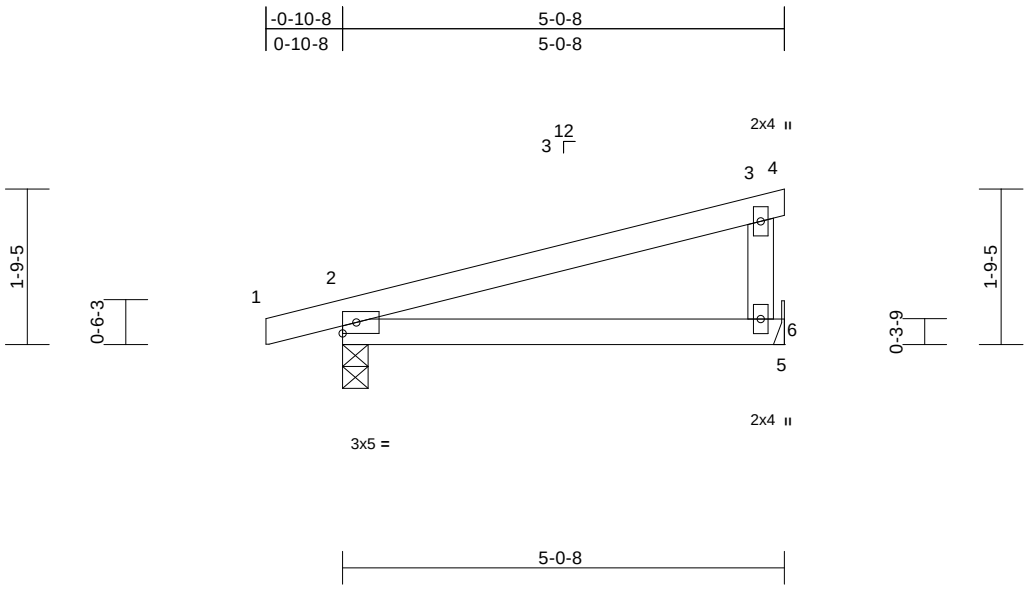
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) 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 2.00 times flat roof load of 13.9 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 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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 19, 20, 21, 22, 17, 16, 15, 14, and 12. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

September 30,2020

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	J01	Monopitch	8	1	E14920689 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:41 Page: 1
ID:Q_3xr7KmlBPO1k0t4ziE??ykEFx-Mock Me



Scale = 1:26.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	0.03	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	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 5-0-8 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=43 (LC 14)
Max Uplift 2=-67 (LC 11), 6=-45 (LC 11)
Max Grav 2=273 (LC 22), 6=230 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-45/66, 3-4=-4/0, 3-6=-162/32
BOT CHORD 2-6=-29/84, 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) and C-C Exterior (2) 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) 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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) * 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.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 6.
8) One RT7A USP 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.
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.

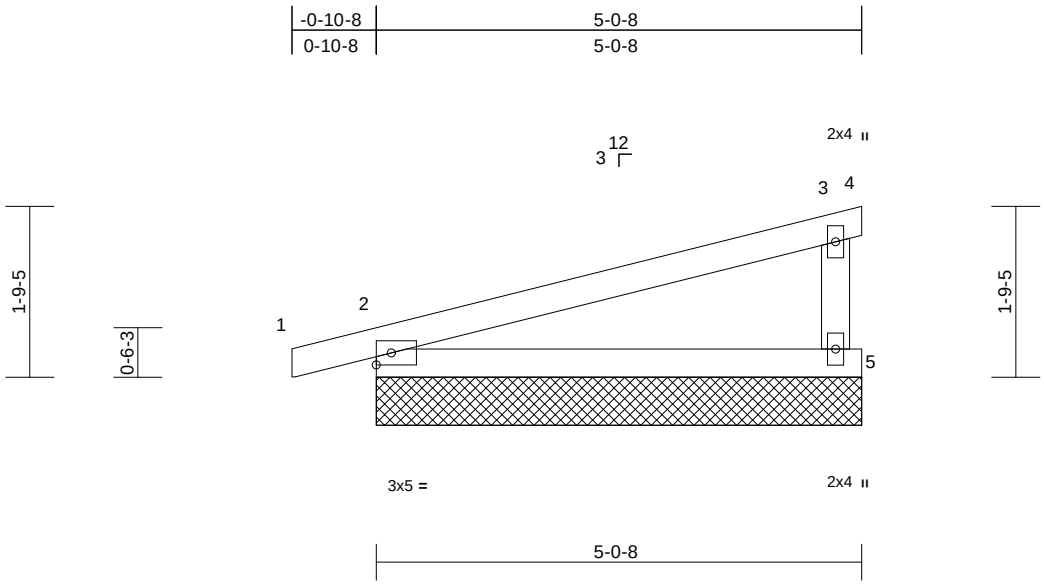
LOAD CASE(S) Standard

September 30,2020

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

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	J02	Monopitch Supported Gable	2	1	E14920690 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:41 Page: 1
ID:c5E59tTg9aoqsQM?DnPpyJykEFm-Mock Me



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Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	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 5-0-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=5-0-8, 5=5-0-8, 6=5-0-8
Max Horiz 2=42 (LC 14), 6=42 (LC 14)
Max Uplift 2=-24 (LC 11), 5=-5 (LC 15), 6=-24 (LC 11)
Max Grav 2=265 (LC 22), 5=222 (LC 22), 6=265 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-3=-48/54, 3-4=-4/0, 3-5=-157/26
BOT CHORD 2-5=-32/78

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 5. 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

September 30,2020

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

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	J03	Monopitch	6	1	E14920691 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:41 Page: 1
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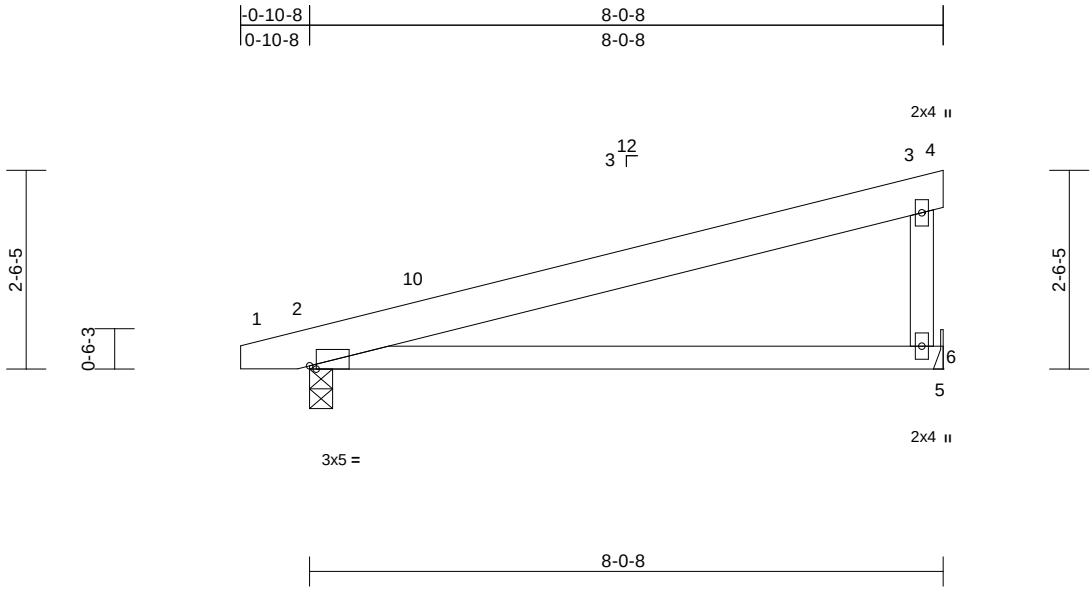

Scale = 1:29.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	0.12	6-9	>759	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.20	6-9	>464	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 36 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-8, 6= Mechanical
Max Horiz 2=62 (LC 14)
Max Uplift 2=-84 (LC 11), 6=-75 (LC 11)
Max Grav 2=342 (LC 2), 6=363 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/9, 2-10=-234/45, 3-10=-52/64, 3-4=-4/0, 3-6=-282/59
BOT CHORD 2-6=-38/162, 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) and C-C Exterior (2) 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) 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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) * 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.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 6.
8) One RT7A USP 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.
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 30,2020

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

Job	Truss	Truss Type	Qty	Ply	A&G RESIDENTIAL - 46SV
20090102	J04	Monopitch Supported Gable	2	1	E14920692 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.42 S Aug 25 2020 Print: 8.420 S Aug 25 2020 MiTek Industries, Inc. Tue Sep 29 22:08:41 Page: 1
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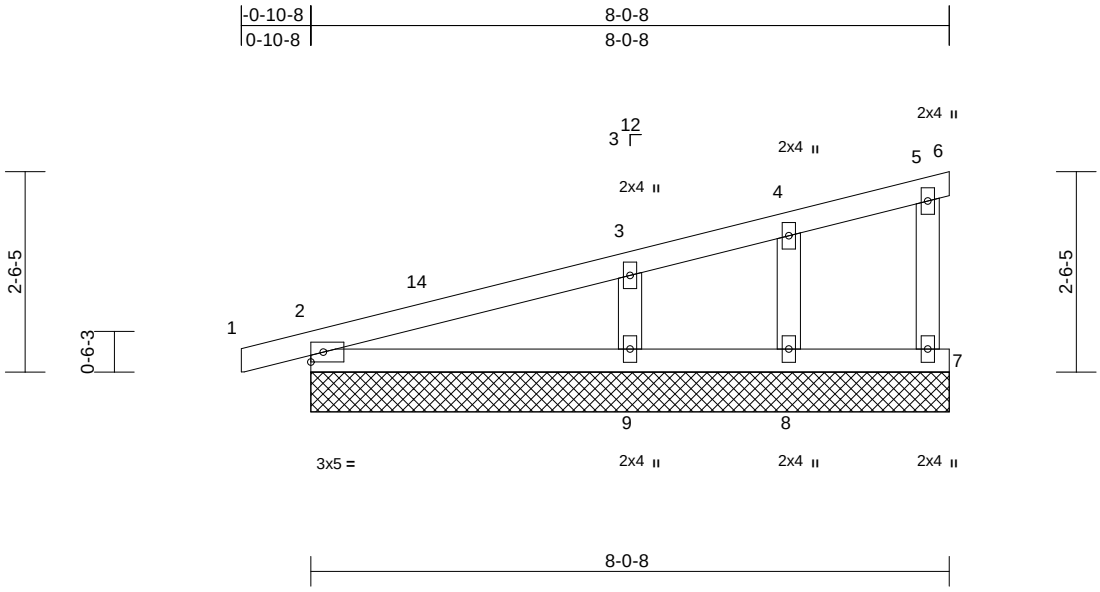


Scale = 1:29

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	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 32 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 2=8-0-8, 7=8-0-8, 8=8-0-8, 9=8-0-8, 10=8-0-8
Max Horiz 2=63 (LC 14), 10=63 (LC 14)
Max Uplift 2=-19 (LC 11), 7=-2 (LC 15), 8=-4 (LC 11), 9=-15 (LC 15), 10=-19 (LC 11)
Max Grav 2=184 (LC 2), 7=90 (LC 22), 8=109 (LC 22), 9=330 (LC 22), 10=184 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/15, 2-14=-43/59, 3-14=-38/71, 3-4=-40/42, 4-5=-35/40, 5-6=-4/0, 5-7=-72/10
BOT CHORD	2-9=-37/70, 8-9=-34/38, 7-8=-34/38
WEBS	3-9=-234/48, 4-8=-94/24

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 7, 9, and 8. 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.

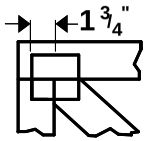
LOAD CASE(S) Standard

September 30,2020

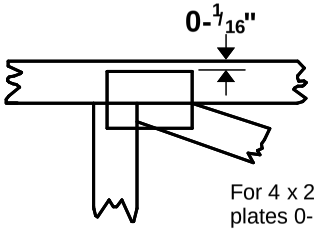
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

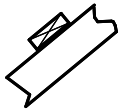
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

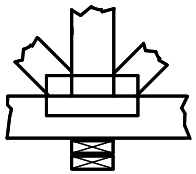
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

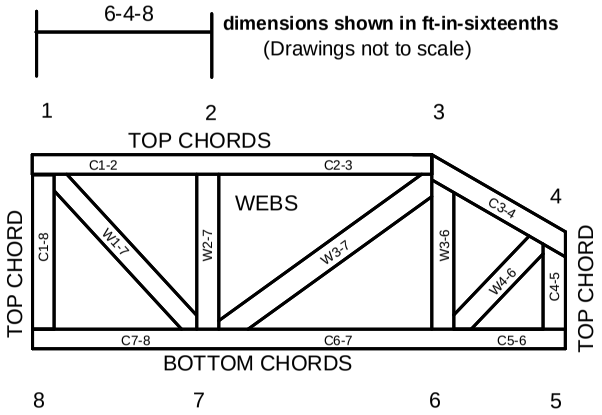


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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 BY TRENCO
A MiTek Affiliate

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.