ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 19120017-A
KMB - Cypress II

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: E13837756 thru E13837782

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844

December 6,2019

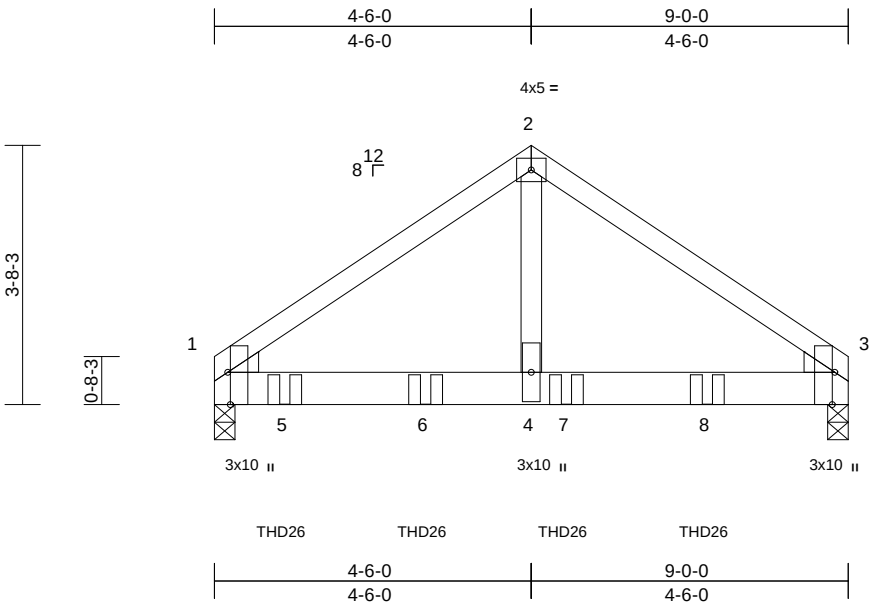
Strzyzewski, Marvin

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	KMB - Cypress II	
19120017-A	FG	Common Girder	1	2	Job Reference (optional)	E13837756

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:03
ID:yRScGHjCVrDkz0TCwP1fCWyC_zf-PSto80PZYiDoN4kyQIBeUBBTkKKNxlD20_6MXJyBjXg



Scale = 1:32.7

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

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.42	Vert(LL)	-0.03	1-4	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.67	Vert(CT)	-0.05	1-4	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.51	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 87 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

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

REACTIONS (lb/size) 1=2520/0-3-8, 3=2070/0-3-8

FORCES (lb) - Maximum Compression/Maximum Tension

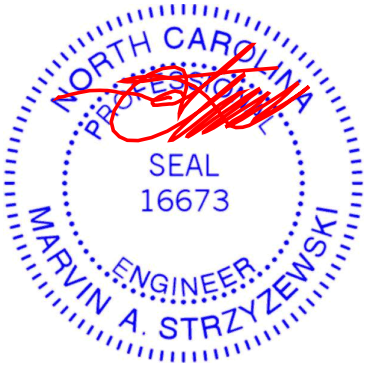
TOP CHORD	1-2=-2502/0, 2-3=-2502/0
BOT CHORD	1-5=0/1951, 5-6=0/1951, 4-6=0/1951, 4-7=0/1951, 7-8=0/1951, 3-8=0/1951
WEBS	2-4=0/2684

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-8-0 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) This truss has been checked for uniform roof live load only, except as noted.
4) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2); Lumber DOL=1.60 plate grip DOL=1.00
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) 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 1-0-0 from the left end to 7-0-0 to connect truss(es) to back face of bottom chord.
8) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-58, 2-3=-58, 1-3=-19
Concentrated Loads (lb)
Vert: 5=-980 (B), 6=-978 (B), 7=-978 (B), 8=-978 (B)



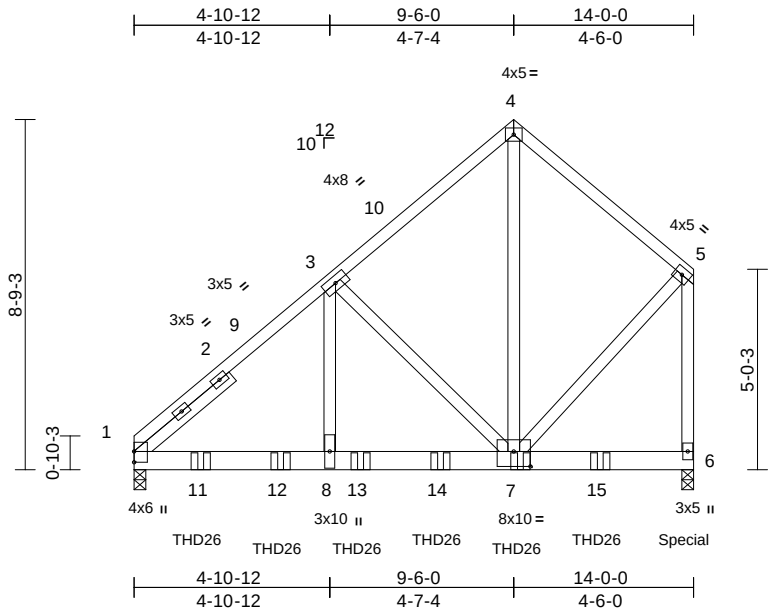
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	DG	Common Girder	1	2	Job Reference (optional)	E13837757

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:00
ID:yRScGHjCVrDkz0TCwP1fCWyC_zf-?tBfW?NhFnrEWd?Nl9exsYZvc7FzkNacK0tiw_yBjXj



Scale = 1:57.7

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

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.60	Vert(LL)	-0.05	1-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.84	Vert(CT)	-0.09	1-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.57	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 215 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 3-8,6-5:2x4 SP No.3
SLIDER Left 2x4 SP No.2 -- 3-1-3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-11-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=4101/0-3-8, 6=5148/0-3-8
Max Horiz 1=121 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

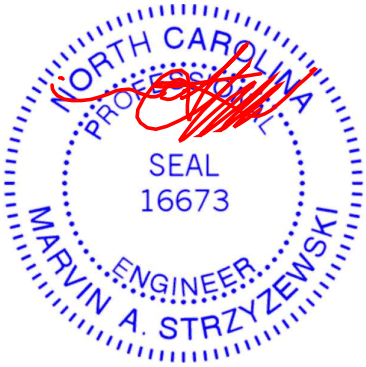
TOP CHORD 1-2=-4713/0, 2-9=-4625/0, 3-9=-4598/0, 3-10=-2362/0, 4-10=-2314/0, 4-5=-2387/0, 5-6=-3493/0
BOT CHORD 1-11=0/3445, 11-12=0/3445, 8-12=0/3445, 8-13=0/3445, 13-14=0/3445, 7-14=0/3445, 7-15=-3/28, 6-15=-3/28
WEBS 4-7=0/2657, 5-7=0/2583, 3-7=-2334/0, 3-8=0/2989

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 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) This truss has been checked for uniform roof live load only, except as noted.
4) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-6-0, Exterior (2) 6-6-0 to 13-10-4; Lumber DOL=1.60 plate grip DOL=1.00
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) 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 1-8-0 from the left end to 11-8-0 to connect truss(es) to back face of bottom chord.
8) Fill all nail holes where hanger is in contact with lumber.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1202 lb down at 13-10-4 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-4=-58, 4-5=-58, 1-6=-19
Concentrated Loads (lb)
Vert: 6=-1202 (B), 7=-1194 (B), 11=-1004 (B), 12=-1194 (B), 13=-1194 (B), 14=-1194 (B), 15=-1194 (B)



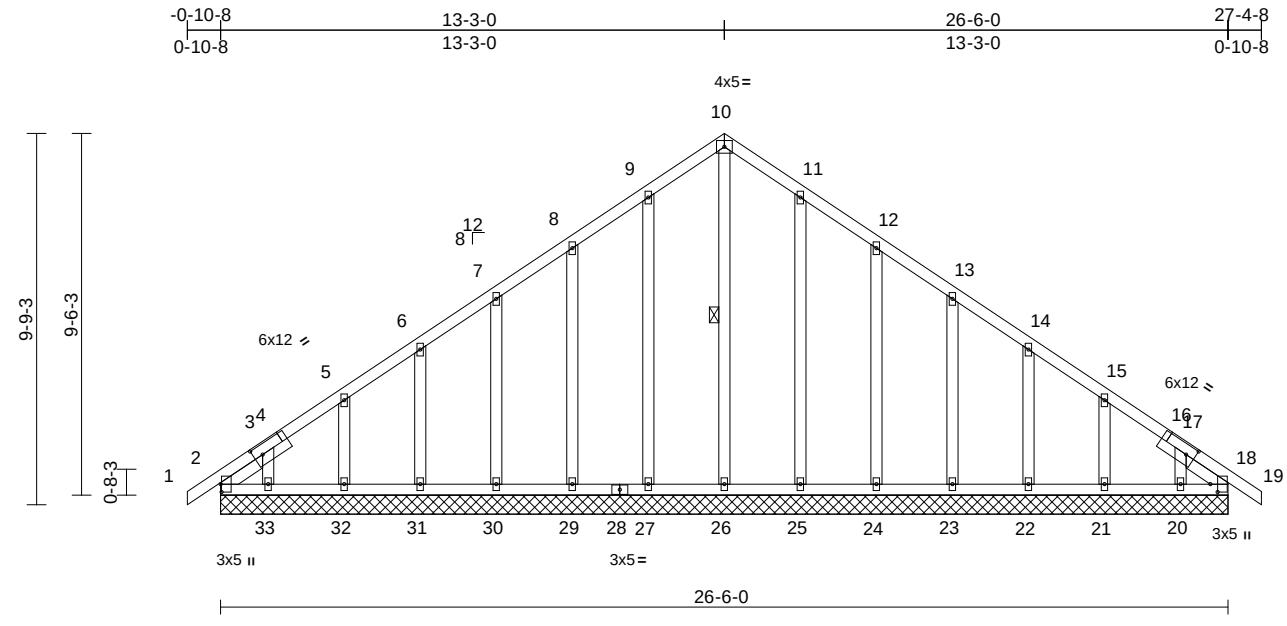
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II
19120017-A	CE	Common Supported Gable	1	1	E13837758 Job Reference (optional)

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:59 Page: 1
ID:YtmTdFhKCwq95ZkdFHTyauyC_zi-WgdHJfM3UUjNuTRBBS6iKL0tZj6c?0kT6M79OYyBjXk



Scale = 1:60.6

Plate Offsets (X, Y): [2:0-2-8,0-0-5], [4:0-2-12,0-3-0], [16:0-2-12,0-3-0], [18:0-2-8,0-2-5]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	18	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 184 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 26-10,27-9,29-8,25-11,24-12:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-4-3, Right 2x4 SP No.3 -- 1-4-3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-26

REACTIONS (lb/size) 2=115/26-6-0, 18=115/26-6-0, 20=118/26-6-0, 21=158/26-6-0, 22=154/26-6-0, 23=155/26-6-0, 24=154/26-6-0, 25=160/26-6-0, 26=125/26-6-0, 27=160/26-6-0, 29=154/26-6-0, 30=155/26-6-0, 31=154/26-6-0, 32=158/26-6-0, 33=118/26-6-0
Max Uplift 2=-43 (LC 4), 18=-43 (LC 4), 20=-86 (LC 3), 21=-82 (LC 3), 22=-80 (LC 3), 23=-79 (LC 3), 24=-83 (LC 3), 25=-75 (LC 3), 26=-28 (LC 4), 27=-75 (LC 3), 29=-83 (LC 3), 30=-79 (LC 3), 31=-80 (LC 3), 32=-82 (LC 3), 33=-86 (LC 3)
Max Grav 2=115 (LC 1), 18=115 (LC 1), 20=174 (LC 6), 21=188 (LC 6), 22=185 (LC 6), 23=185 (LC 6), 24=187 (LC 6), 25=187 (LC 6), 26=125 (LC 1), 27=187 (LC 6), 29=187 (LC 6), 30=185 (LC 6), 31=185 (LC 6), 32=188 (LC 6), 33=174 (LC 6)

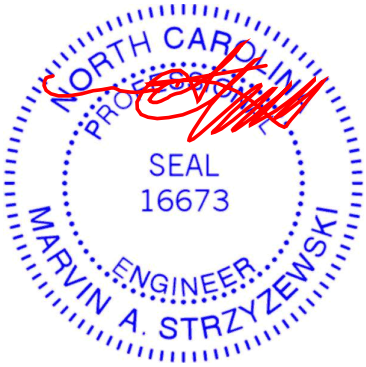
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/13, 2-3=-113/110, 3-4=-60/39, 4-5=-60/58, 5-6=-51/23, 6-7=-58/30, 7-8=-85/73, 8-9=-114/120, 9-10=-148/161, 10-11=-148/161, 11-12=-114/120, 12-13=-85/73, 13-14=-58/30, 14-15=-51/23, 15-16=-60/58, 16-17=-60/39, 17-18=-113/110, 18-19=0/13
BOT CHORD 2-33=-77/110, 32-33=-77/110, 31-32=-77/110, 30-31=-77/110, 29-30=-77/110, 28-29=-77/110, 27-28=-77/110, 26-27=-77/110, 25-26=-77/110, 24-25=-77/110, 23-24=-77/110, 22-23=-77/110, 21-22=-77/110, 20-21=-77/110, 18-20=-77/110
WEBS 10-26=-120/67, 9-27=-148/75, 8-29=-148/83, 7-30=-146/79, 6-31=-146/80, 5-32=-149/81, 3-33=-139/87, 11-25=-148/75, 12-24=-148/83, 13-23=-146/79, 14-22=-146/80, 15-21=-149/81, 17-20=-139/87

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 10-3-0, Corner (3) 10-3-0 to 16-3-0, Exterior (2) 16-3-0 to 24-4-8, Corner (3) 24-4-8 to 27-4-8; Lumber DOL=1.60 plate grip DOL=1.00
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 26, 27, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20, and 18. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



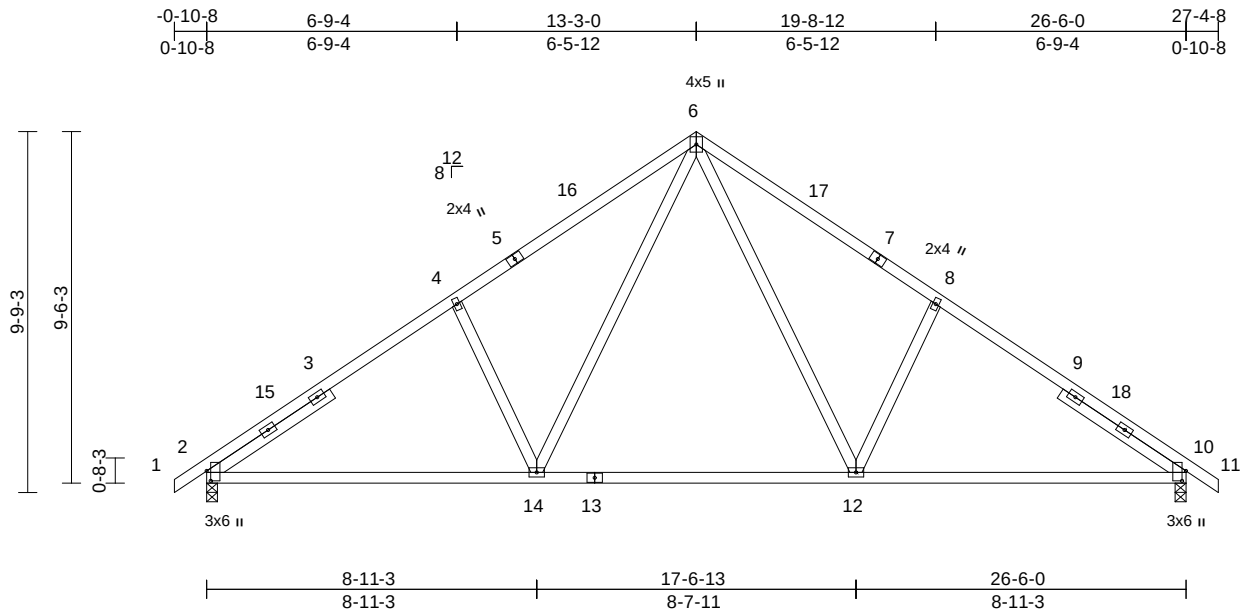
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	C	Common	6	1	Job Reference (optional)	E13837759

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:58
ID:YtmTdFhKCwq95ZkdFHTyauyC_zi-2U3v5JMRjAbWGJs_dlbTn7UboJdgGX3JtiObr6yBjXl



Scale = 1:62.3

Plate Offsets (X, Y): [2:0-3-4,0-1-5], [10:0-3-4,0-1-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.50	Vert(LL)	-0.04	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.58	Vert(CT)	-0.20	10-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.04	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 147 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 4-0-3, Right 2x4 SP No.3 -- 4-0-3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-1-11 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1113/0-3-8, 10=1113/0-3-8
Max Uplift 2=-377 (LC 3), 10=-377 (LC 3)
Max Grav 2=1194 (LC 6), 10=1194 (LC 6)

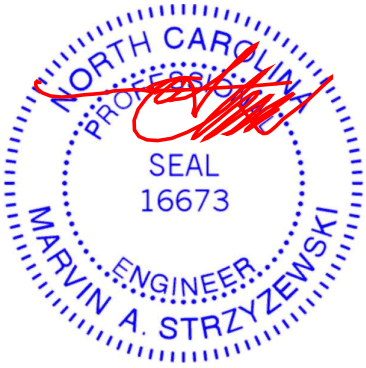
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-15=-1600/453, 3-15=-1555/453, 3-4=-1446/454, 4-5=-1493/486, 5-16=-1396/486, 6-16=-1395/486, 6-17=-1395/486, 7-17=-1396/486, 7-8=-1493/486, 8-9=-1446/454, 9-18=-1555/453, 10-18=-1600/453, 10-11=0/13
BOT CHORD	2-14=-299/1213, 13-14=-126/770, 12-13=-126/770, 10-12=-299/1213
WEBS	6-12=-207/628, 8-12=-421/204, 6-14=-207/628, 4-14=-421/204

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-3-0, Exterior (2) 10-3-0 to 16-3-0, Interior (1) 16-3-0 to 24-4-8, Exterior (2) 24-4-8 to 27-4-8; Lumber DOL=1.60 plate grip DOL=1.00
3) All plates are 3x5 MT20 unless otherwise indicated.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



December 6,2019

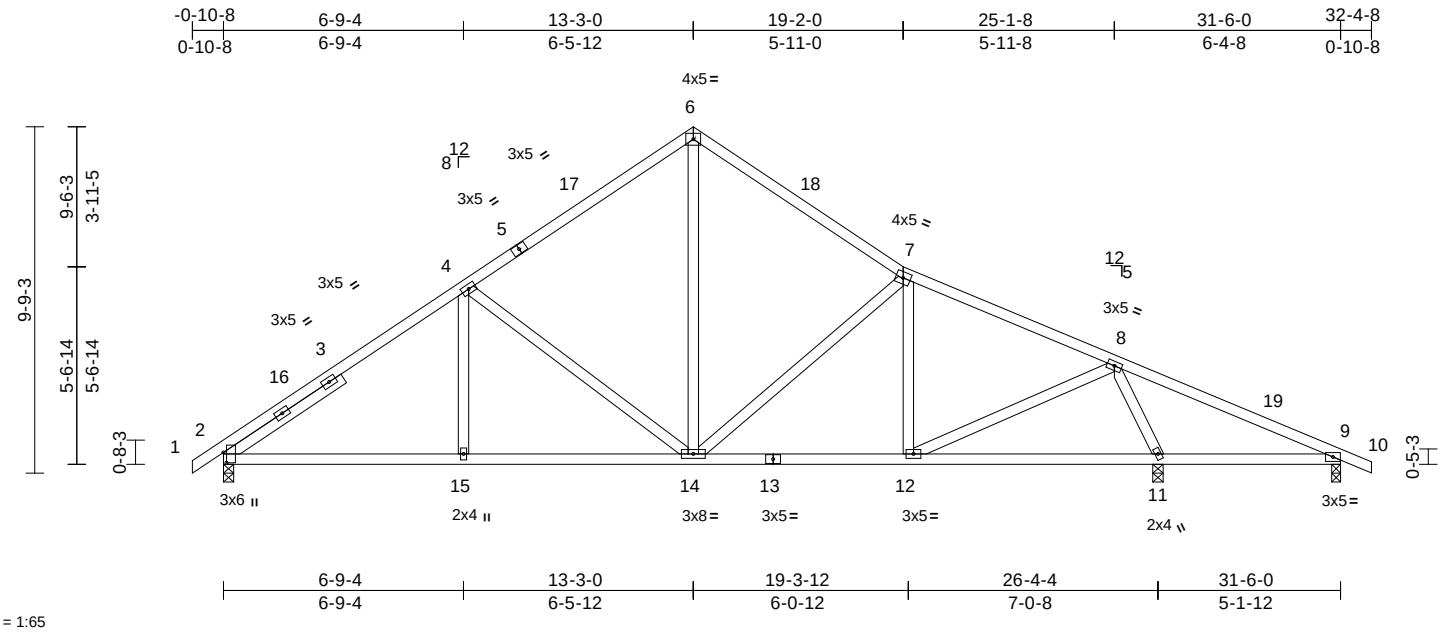
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	A	Roof Special	1	1	Job Reference (optional)	E13837760

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:51

ID:4gC5QwgiRdiJUP9RhZyj1gyC_zj-tNvlnYDXJoC4SdWtUxvurpWiYtwvBTCiLVDWzFyBjXw



Scale = 1:65

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.56	Vert(LL)	-0.04	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.40	Vert(CT)	-0.09	14-15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.04	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 174 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

WEBS 2x4 SP No.2 *Except* 12-7,11-8,15-4:2x4 SP No.3

SLIDER Left 2x4 SP No.3 -- 4-0-1

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-4 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 9-11.

REACTIONS (lb/size) 2=1072/0-3-8, 9=59/0-3-0, 11=1491/0-3-8

Max Horiz 2=-61 (LC 4)

Max Uplift 2=-366 (LC 3), 9=-78 (LC 3), 11=-450 (LC 3)

Max Grav 2=1137 (LC 6), 9=59 (LC 1), 11=1556 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/13, 2-16=-1531/434, 3-16=-1486/434, 3-4=-1375/435, 4-5=-1086/361, 5-17=-990/361, 6-17=-990/361, 6-18=-987/360, 7-18=-1068/360, 7-8=-1172/368, 8-19=-122/546, 9-19=-122/459, 9-10=0/14

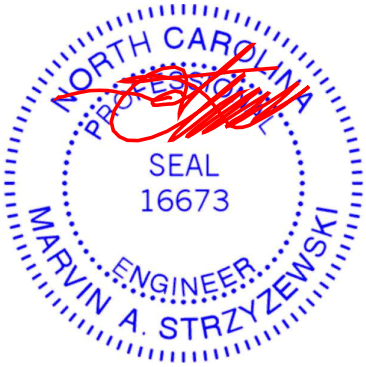
BOT CHORD 2-15=-280/1198, 14-15=-280/1198, 13-14=-223/995, 12-13=-223/995, 11-12=-43/217, 9-11=-443/162

WEBS 7-12=-248/88, 8-12=-197/864, 8-11=-1538/483, 4-15=-3/147, 4-14=-568/217, 6-14=-235/686, 7-14=-335/156

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-3-0, Exterior (2) 10-3-0 to 16-3-0, Interior (1) 16-3-0 to 29-4-8, Exterior (2) 29-4-8 to 32-4-8; Lumber DOL=1.60 plate grip DOL=1.00
3) All plates are 3x5 MT20 unless otherwise indicated.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
6) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11. This connection is for uplift only and does not consider lateral forces.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



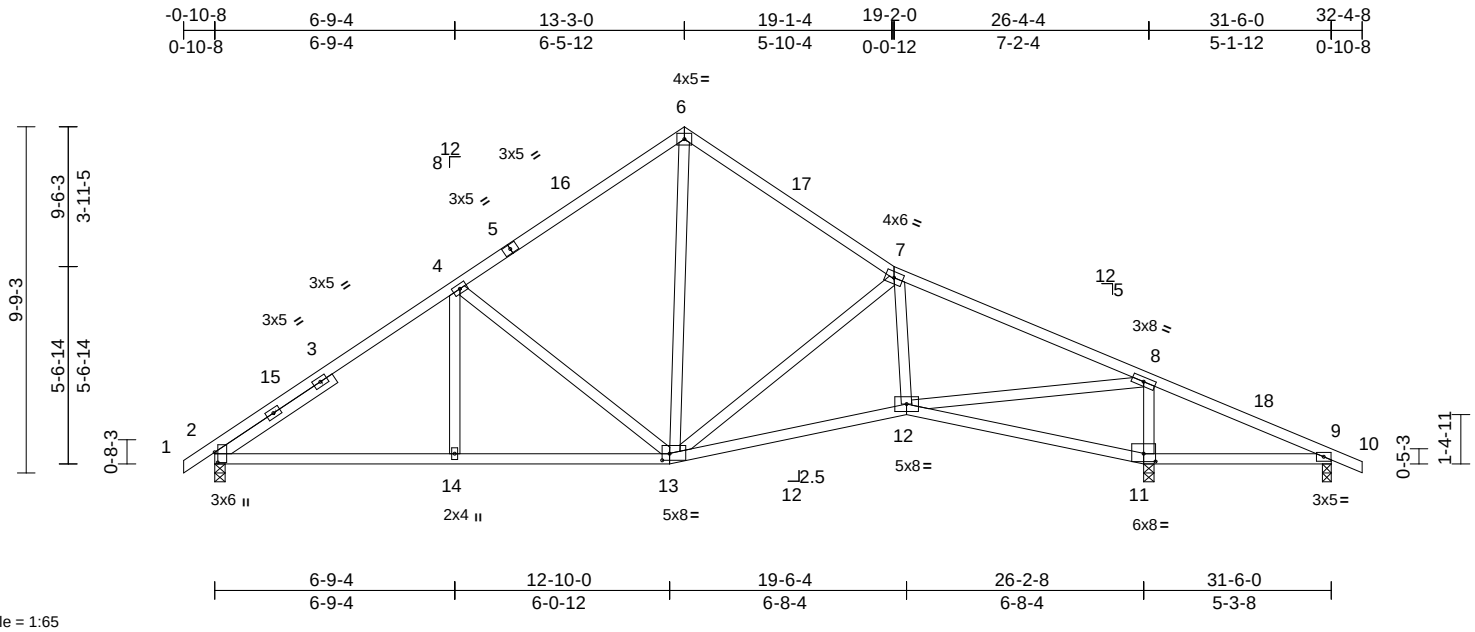
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	AA	Roof Special	1	1	Job Reference (optional)	E13837761

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:54 Page: 1
ID:YtmTdFhKCwq95ZkdFHTyauyC_zi-iXG02bIIvezDAYz1qB?I44mjsIzpb9jajQgqAuyBjXq



Scale = 1:65

Plate Offsets (X, Y): [2:0-3-8,0-1-1], [11:0-4-0,0-2-11], [13:0-2-8,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.64	Vert(LL)	-0.05	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.43	Vert(CT)	-0.17	12-13	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.05	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 172 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 4-14,12-7,11-8:2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 4-0-1

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-10-9 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=1051/0-3-8, 9=16/0-3-0, 11=1556/0-3-8
Max Horiz 2=-61 (LC 4)
Max Uplift 2=-359 (LC 3), 9=-63 (LC 3), 11=-472 (LC 3)
Max Grav 2=1115 (LC 6), 9=16 (LC 1), 11=1623 (LC 6)

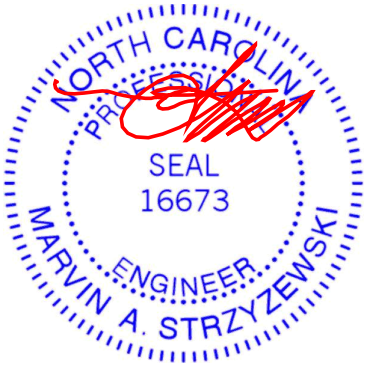
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-15=-1494/423, 3-15=-1449/423, 3-4=-1338/424, 4-5=-1068/357, 5-16=-972/357, 6-16=-972/357, 6-17=-935/344, 7-17=-1016/344, 7-8=-1437/410, 8-18=-118/561, 9-18=-118/492, 9-10=0/14
BOT CHORD	2-14=-270/1168, 13-14=-270/1168, 12-13=-274/1260, 11-12=-568/179, 9-11=-454/147
WEBS	4-14=-3/145, 4-13=-563/216, 6-13=-226/652, 7-13=-677/229, 7-12=0/92, 8-12=-443/1781, 8-11=-1381/433

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-3-0, Exterior (2) 10-3-0 to 16-3-0, Interior (1) 16-3-0 to 29-4-8, Exterior (2) 29-4-8 to 32-4-8; Lumber DOL=1.60 plate grip DOL=1.00
3) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
4) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
5) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11. This connection is for uplift only and does not consider lateral forces.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



December 6,2019

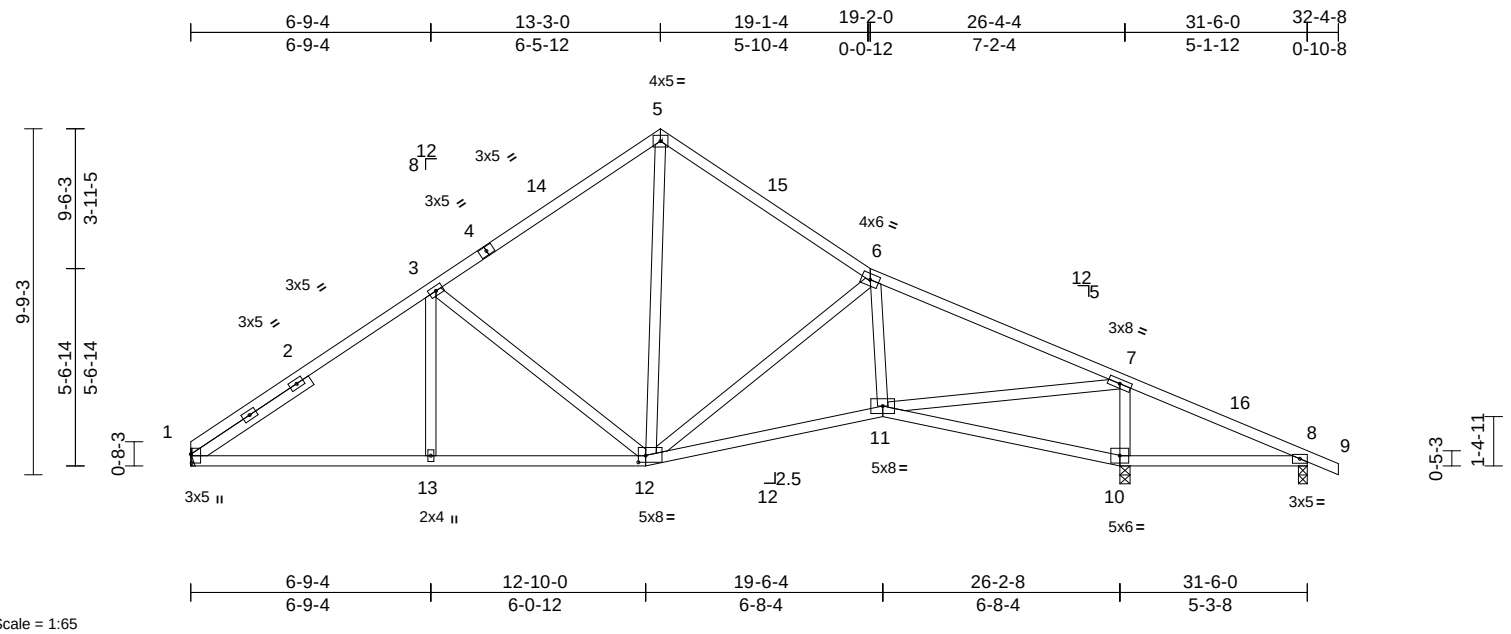
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	AB	Roof Special	5	1	Job Reference (optional)	E13837762

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:54

ID:YtmTdFhKCwq95ZkdFHTyauyC_zi-AjqOFxIwgx54oiYDOvXXdHJuciJ2Kczky4QOiLyBjXp



Scale = 1:65

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.64	Vert(LL)	-0.05	11-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.43	Vert(CT)	-0.17	11-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.05	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 171 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 3-13,11-6,10-7:2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 4-0-1

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-10-7 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 1=998/ Mechanical, 8=16/0-3-0, 10=1556/0-3-8
Max Horiz 1=-65 (LC 4)
Max Uplift 1=-325 (LC 3), 8=-64 (LC 3), 10=-472 (LC 3)
Max Grav 1=1084 (LC 6), 8=16 (LC 1), 10=1623 (LC 6)

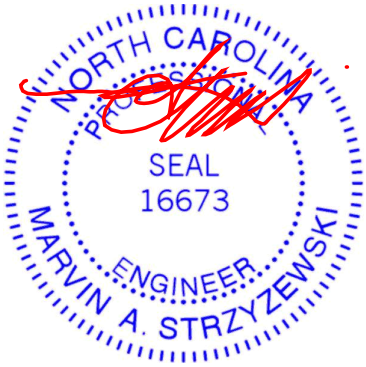
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-1496/429, 2-3=-1340/430, 3-4=-1069/361, 4-14=-973/361, 5-14=-972/361, 5-15=-936/347, 6-15=-1017/347, 6-7=-1438/413, 7-16=-116/561, 8-16=-116/492, 8-9=0/14
BOT CHORD	1-13=-278/1171, 12-13=-278/1171, 11-12=-278/1262, 10-11=-568/177, 8-10=-453/145
WEBS	3-13=-4/146, 3-12=-566/223, 5-12=-230/653, 6-12=-677/231, 6-11=0/92, 7-11=-445/1782, 7-10=-1382/434

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 10-3-0, Exterior (2) 10-3-0 to 16-3-0, Interior (1) 16-3-0 to 29-4-8, Exterior (2) 29-4-8 to 32-4-8; Lumber DOL=1.60 plate grip DOL=1.00
3) Bearings are assumed to be: , Joint 10 SP No.2 crushing capacity of 565 psi, Joint 8 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 325 lb uplift at joint 1.
6) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10. This connection is for uplift only and does not consider lateral forces.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



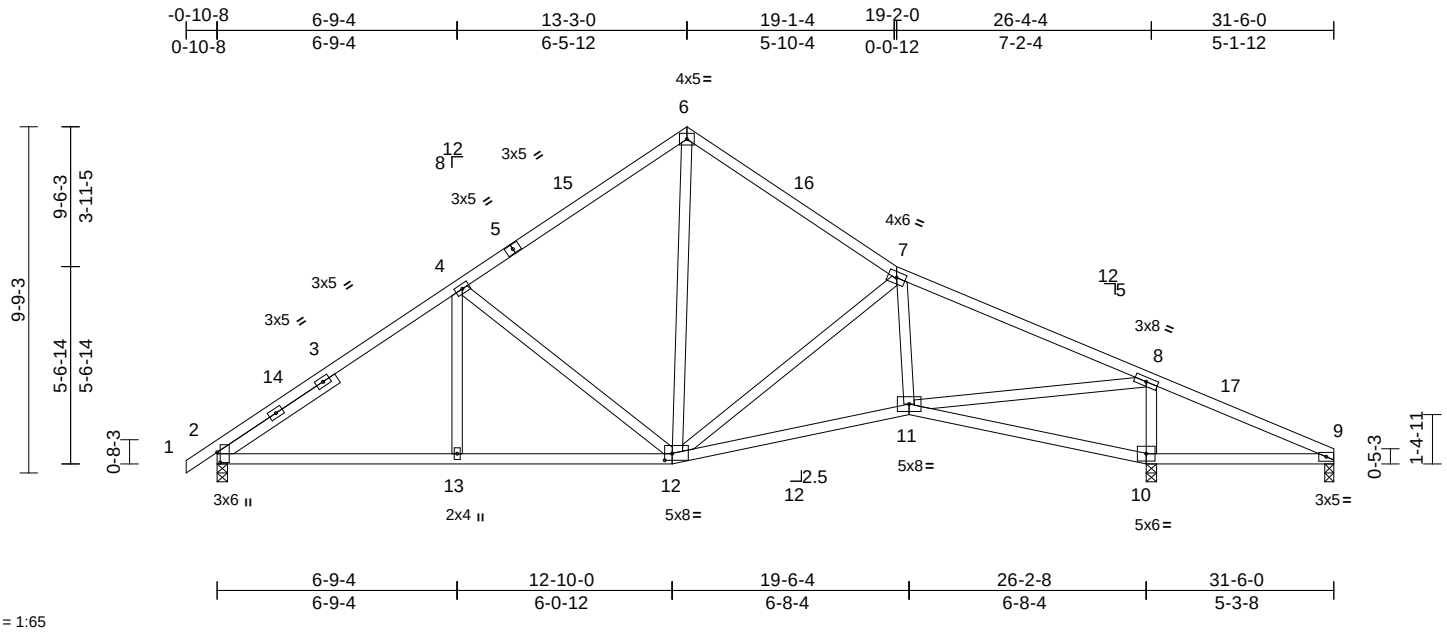
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	AC	Roof Special	2	1	Job Reference (optional)	E13837763

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:55
ID:YtmTdFhKCwq95ZkdFHTyauyC_zi-evOmTHJYRFDxPs7Pyc2m9Vs2C6fH33EtBk9xFnyBjXo



Scale = 1:65

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.65	Vert(LL)	-0.05	11-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.43	Vert(CT)	-0.17	11-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.05	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 171 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 4-13,11-7,10-8:2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 4-0-1

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-10-14 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=1051/0-3-8, 9=-51/0-3-0, 10=1562/0-3-8
Max Horiz 2=-59 (LC 4)
Max Uplift 2=-359 (LC 3), 9=-68 (LC 6), 10=-487 (LC 3)
Max Grav 2=1115 (LC 6), 9=-5 (LC 3), 10=1627 (LC 6)

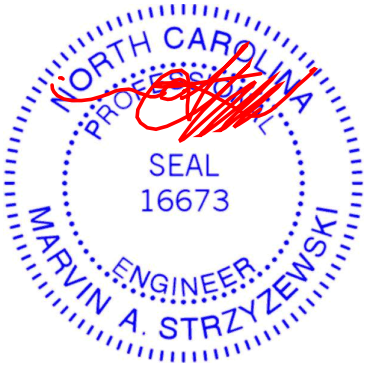
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-14=-1494/422, 3-14=-1449/422, 3-4=-1338/423, 4-5=-1068/356, 5-15=-972/356, 6-15=-971/356, 6-16=-935/343, 7-16=-1016/343, 7-8=-1436/409, 8-17=-126/561, 9-17=-126/490
BOT CHORD	2-13=-278/1167, 12-13=-278/1167, 11-12=-281/1258, 10-11=-568/175, 9-10=-453/142
WEBS	4-13=-3/145, 4-12=-563/216, 6-12=-224/652, 7-12=-676/229, 7-11=0/92, 8-11=-446/1779, 8-10=-1384/447

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-3-0, Exterior (2) 10-3-0 to 16-3-0, Interior (1) 16-3-0 to 28-4-8, Exterior (2) 28-4-8 to 31-4-8; Lumber DOL=1.60 plate grip DOL=1.00
3) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
4) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 2. This connection is for uplift only and does not consider lateral forces.
5) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10. This connection is for uplift only and does not consider lateral forces.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

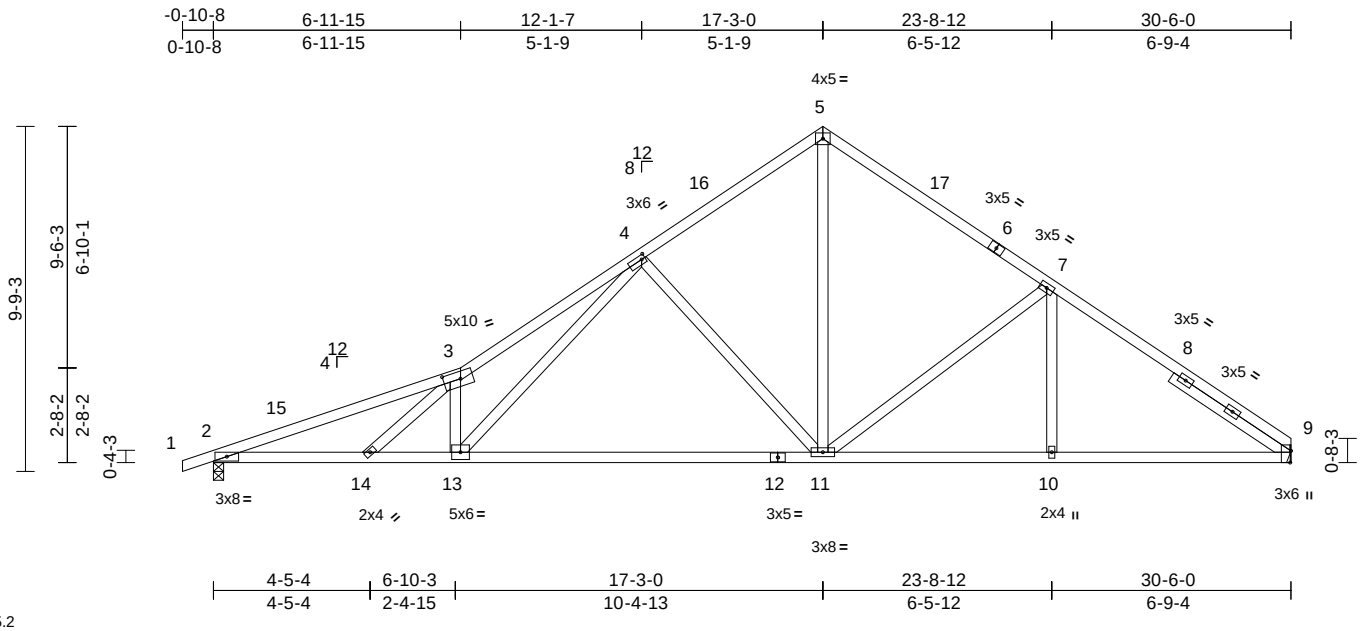


December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	BA	Roof Special	6	1	Job Reference (optional)	E13837764

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:57 Page: 1
ID:UFuE2xjakY5tLtu0MiWQfJyC_zg-65y8gdKABZLo1?icWKZ?iiO9UWuroUD0POvUnDyBjXn



Scale = 1:65.2

Plate Offsets (X, Y): [3:0-5-12,0-2-8], [4:0-1-4,0-1-8], [9:0-4-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.93	Vert(LL)	-0.19	11-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.86	Vert(CT)	-0.58	11-13	>627	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.09	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 168 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3:2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 14-3,13-3,10-7:2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 4-0-1

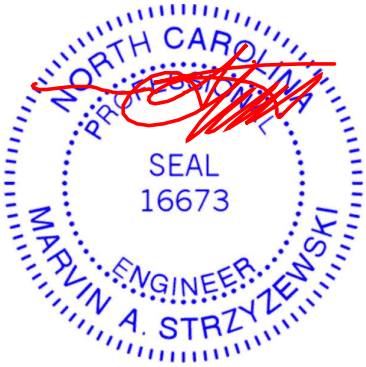
BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 6-4-7 oc bracing.

REACTIONS (lb/size) 2=1276/0-3-8, 9=1213/ Mechanical
Max Horiz 2=30 (LC 4)
Max Uplift 2=-448 (LC 3), 9=-390 (LC 3)
Max Grav 2=1324 (LC 6), 9=1324 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-15=-3256/924, 3-15=-3199/924, 3-4=-3812/1139, 4-16=-1463/476, 5-16=-1387/476, 5-17=-1378/466, 6-17=-1379/466, 6-7=-1476/466, 7-8=-1740/540, 8-9=-1895/539
BOT CHORD 2-14=-832/2991, 13-14=-815/2967, 12-13=-415/1605, 11-12=-415/1605, 10-11=-377/1447, 9-10=-377/1447
WEBS 3-14=-22/34, 3-13=-1402/477, 4-13=-638/2148, 4-11=-883/323, 5-11=-376/1172, 7-11=-536/221, 7-10=-2/122

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-3-0, Exterior (2) 14-3-0 to 20-3-0, Interior (1) 20-3-0 to 27-6-0, Exterior (2) 27-6-0 to 30-6-0; Lumber DOL=1.60 plate grip DOL=1.00
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 390 lb uplift at joint 9.
6) 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.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



December 6,2019

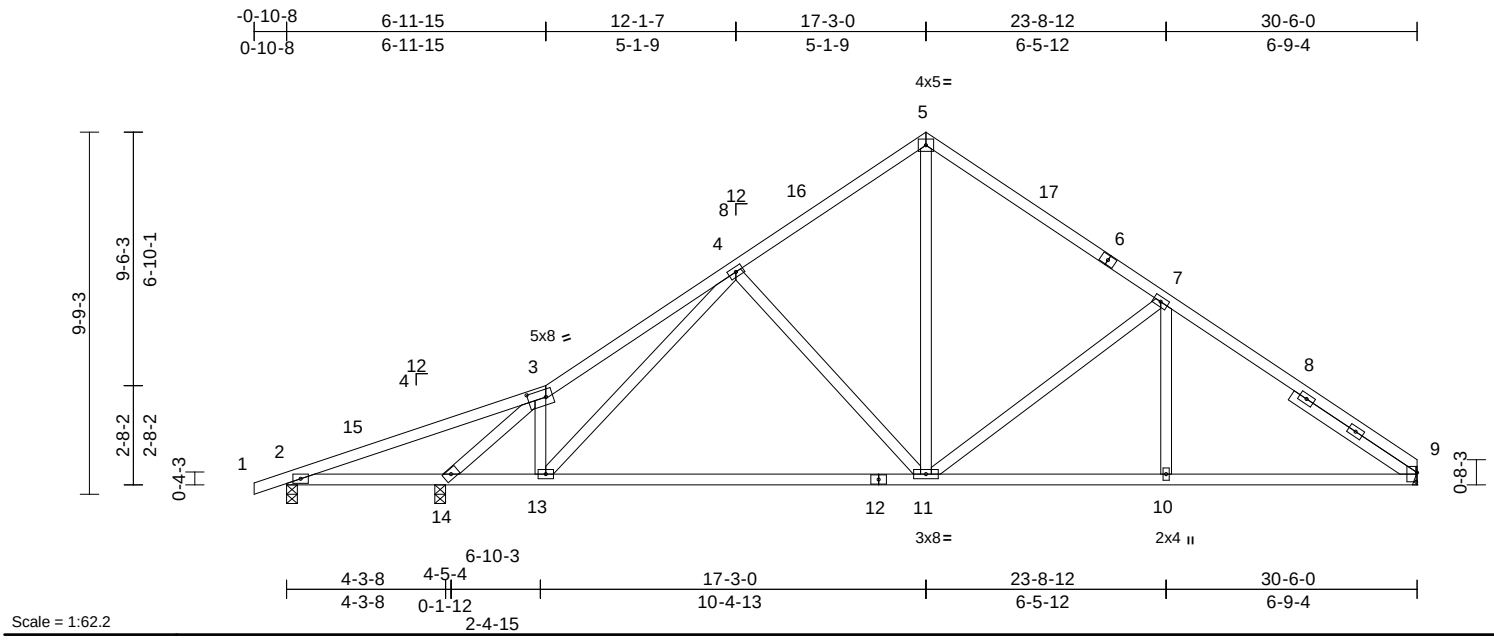
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	B	Roof Special	1	1	Job Reference (optional)	E13837765

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:56
ID:UFuE2xjakY5tLtu0MiWQfJyC_zg-65y8gdKABZLo1?icWKZ?iiODsWyboZd0POvUnDyBjXn

Page: 1



Scale = 1:62.2

Plate Offsets (X, Y): [3:0-5-12,0-2-8], [9:0-3-0,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.65	Vert(LL)	-0.05	11-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.62	Vert(CT)	-0.32	11-13	>969	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.04	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 168 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 14-3,13-3,10-7:2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 4-0-1

BRACING

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

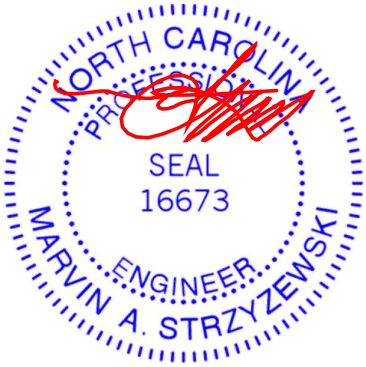
REACTIONS (lb/size) 2=72/0-3-8, 9=1024/ Mechanical, 14=1394/0-3-8
Max Horiz 2=30 (LC 4)
Max Uplift 2=-71 (LC 3), 9=-331 (LC 3), 14=-435 (LC 3)
Max Grav 2=72 (LC 1), 9=1121 (LC 6), 14=1494 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-15=-189/599, 3-15=-189/679, 3-4=-1307/410, 4-16=-1109/372, 5-16=-1033/372, 5-17=-1026/363, 6-17=-1028/363, 6-7=-1125/363, 7-8=-1398/440, 8-9=-1553/439
BOT CHORD 2-14=-622/220, 13-14=-234/971, 12-13=-226/957, 11-12=-226/957, 10-11=-296/1170, 9-10=-296/1170
WEBS 3-14=-2111/601, 3-13=0/138, 4-13=-15/49, 4-11=-349/167, 5-11=-262/781, 7-11=-557/227, 7-10=-3/125

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-3-0, Exterior (2) 14-3-0 to 20-3-0, Interior (1) 20-3-0 to 27-6-0, Exterior (2) 27-6-0 to 30-6-0; Lumber DOL=1.60 plate grip DOL=1.00
3) All plates are 3x5 MT20 unless otherwise indicated.
4) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 14 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 331 lb uplift at joint 9.
7) 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.
8) One RT16A USP 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.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



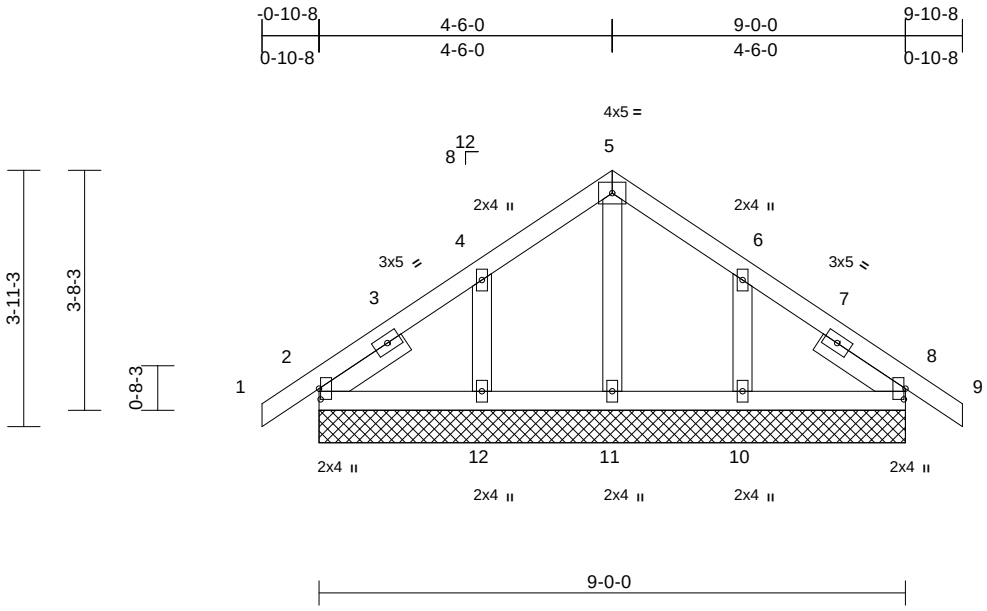
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II
19120017-A	FE	Common Supported Gable	1	1	E13837766 Job Reference (optional)

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:02 Page: 1
ID:03KsrbiyzEy0jjJqp_?B65yC_zh-xFJQxgPxnP5xlw9lsagPxzeOdw84CPRvoKMp_tyBjXh



Scale = 1:35.4

Plate Offsets (X, Y): [2:0-2-0,0-0-5], [8:0-2-0,0-0-5]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 48 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 -- 1-6-7, Right 2x4 SP No.3 -- 1-6-7

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=167/9-0-0, 8=167/9-0-0, 10=194/9-0-0, 11=77/9-0-0, 12=194/9-0-0
Max Uplift 2=-87 (LC 3), 8=-87 (LC 3), 10=-113 (LC 3), 11=-6 (LC 4), 12=-113 (LC 3)
Max Grav 2=167 (LC 1), 8=167 (LC 1), 10=247 (LC 6), 11=77 (LC 1), 12=247 (LC 6)

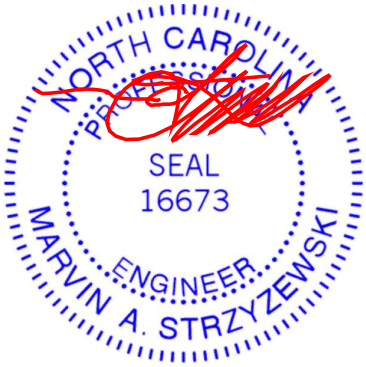
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-3=-90/21, 3-4=-51/22, 4-5=-124/84, 5-6=-124/84, 6-7=-51/22, 7-8=-90/21, 8-9=0/13
BOT CHORD	2-12=0/32, 11-12=0/32, 10-11=0/32, 8-10=0/32
WEBS	5-11=-48/37, 4-12=-194/113, 6-10=-194/113

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Corner (3); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 8, 11, 12, and 10. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

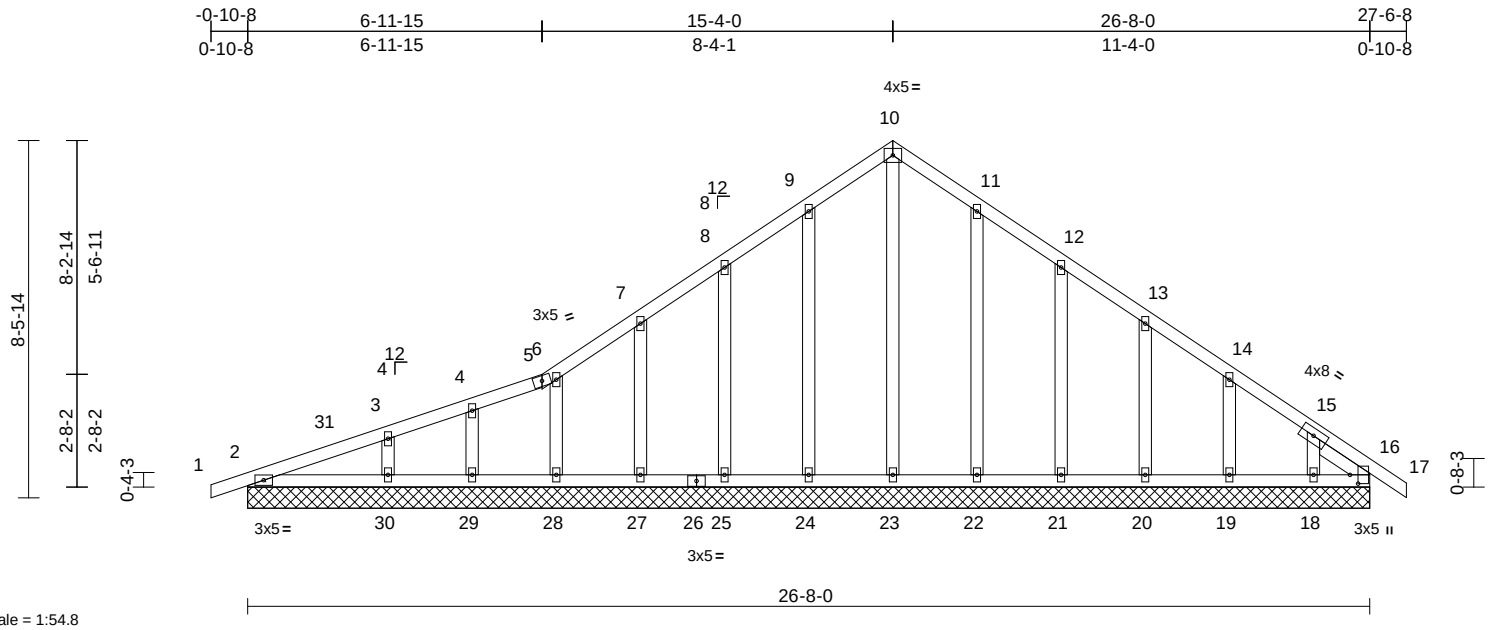


December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	EE	Roof Special Supported Gable	1	1	Job Reference (optional)	E13837767

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:02 Page: 1
ID:03KsrbiyzEy0jjJqp_?B65yC_zh-xFJQxgPxnP5xlw9lsagPxzeNzw8mCOAvoKMp_tyBjXh



Scale = 1:54.8

Plate Offsets (X, Y): [16:0-2-8,0-2-5]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 160 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 23-10,24-9,25-8,22-11,21-12:2x4 SP No.2
SLIDER Right 2x4 SP No.3 -- 1-5-6

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.

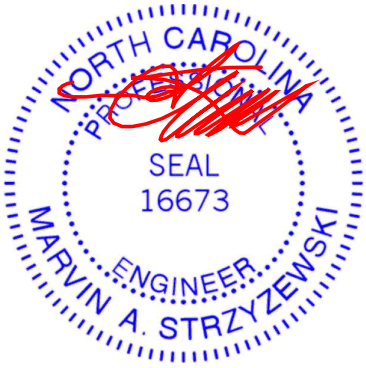
REACTIONS (lb/size) 2=169/26-8-0, 16=114/26-8-0, 18=123/26-8-0, 19=158/26-8-0, 20=154/26-8-0, 21=154/26-8-0, 22=161/26-8-0, 23=129/26-8-0, 24=161/26-8-0, 25=155/26-8-0, 27=153/26-8-0, 28=167/26-8-0, 29=120/26-8-0, 30=250/26-8-0
Max Horiz 2=30 (LC 3)
Max Uplift 2=-101 (LC 3), 16=-24 (LC 4), 18=-81 (LC 3), 19=-82 (LC 3), 20=-79 (LC 3), 21=-82 (LC 3), 22=-77 (LC 3), 23=-12 (LC 4), 24=-77 (LC 3), 25=-82 (LC 3), 27=-79 (LC 3), 28=-78 (LC 3), 29=-48 (LC 3), 30=-135 (LC 3)
Max Grav 2=169 (LC 1), 16=114 (LC 1), 18=174 (LC 6), 19=188 (LC 6), 20=184 (LC 6), 21=186 (LC 6), 22=189 (LC 6), 23=129 (LC 1), 24=189 (LC 6), 25=186 (LC 6), 27=185 (LC 6), 28=182 (LC 6), 29=120 (LC 1), 30=254 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/14, 2-31=-80/35, 3-31=-80/47, 3-4=-39/25, 4-5=-30/21, 5-6=-28/33, 6-7=-47/17, 7-8=-70/57, 8-9=-98/103, 9-10=-131/145, 10-11=-131/145, 11-12=-98/103, 12-13=-70/57, 13-14=-47/18, 14-15=-46/40, 15-16=-82/88, 16-17=0/13
BOT CHORD 2-30=-62/88, 29-30=-62/88, 28-29=-62/88, 27-28=-62/88, 26-27=-62/88, 25-26=-62/88, 24-25=-62/88, 23-24=-62/88, 22-23=-62/88, 21-22=-62/88, 20-21=-62/88, 19-20=-62/88, 18-19=-62/88, 16-18=-62/88
WEBS 10-23=-104/50, 9-24=-150/77, 8-25=-147/82, 7-27=-148/79, 6-28=-140/77, 4-29=-94/51, 3-30=-182/128, 11-22=-150/77, 12-21=-147/82, 13-20=-146/79, 14-19=-149/81, 15-18=-139/82

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 12-4-0, Corner (3) 12-4-0 to 18-4-0, Exterior (2) 18-4-0 to 24-6-8, Corner (3) 24-6-8 to 27-6-8; Lumber DOL=1.60 plate grip DOL=1.00
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 23, 24, 25, 27, 28, 29, 30, 22, 21, 20, 19, 18, and 16. This connection is for uplift only and does not consider lateral forces.
9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



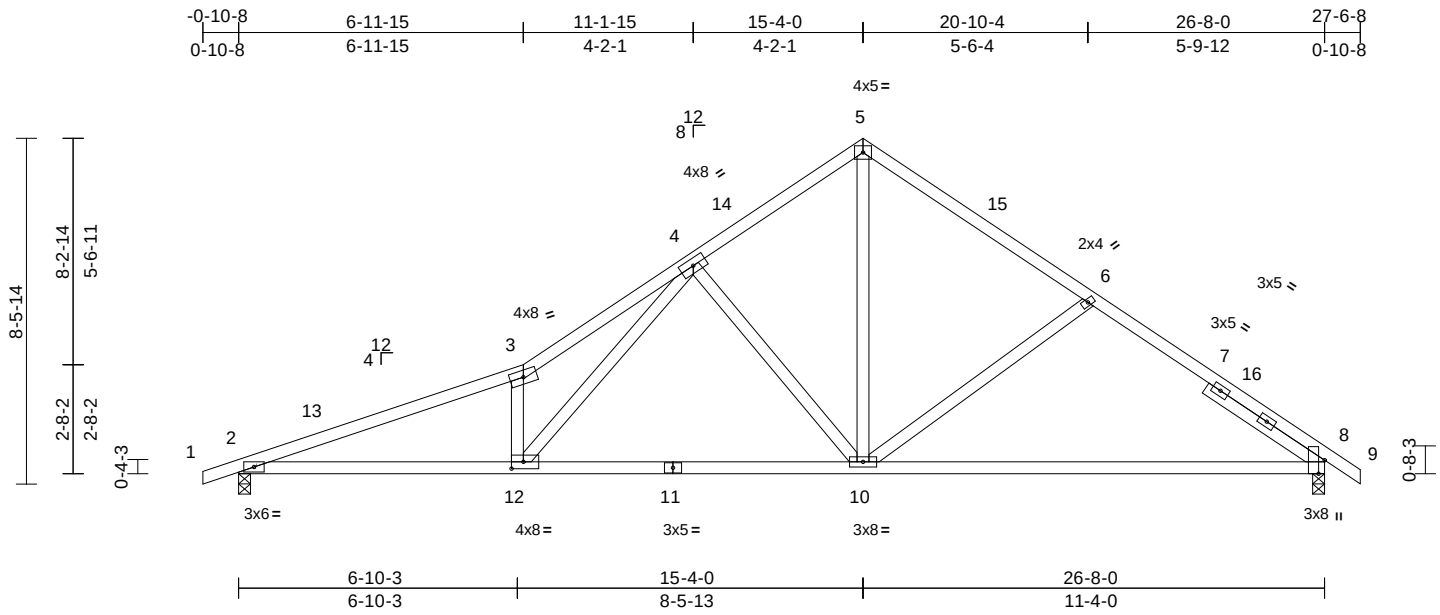
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	E	Roof Special	12	1	Job Reference (optional)	E13837768

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:01 Page: 1
ID:03KsrbiyzEy0jjJqp_?B65yC_zh-T3l1jKOJ05z57naZIt9APm50fXbNTpbmZgdFSRyBjXi



Scale = 1:56.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.84	Vert(LL)	-0.13	12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.83	Vert(CT)	-0.49	8-10	>650	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 138 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3:2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 12-3:2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 3-5-4

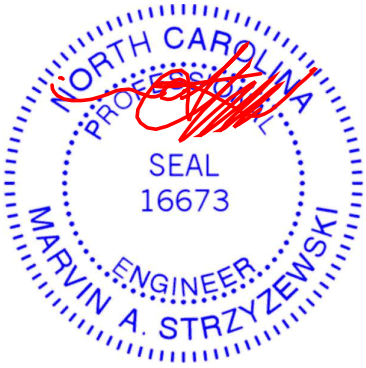
BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-0-12 oc bracing.

REACTIONS (lb/size) 2=1122/0-3-8, 8=1113/0-3-8
Max Horiz 2=26 (LC 4)
Max Uplift 2=-401 (LC 3), 8=-379 (LC 3)
Max Grav 2=1157 (LC 6), 8=1186 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-13=-2694/767, 3-13=-2638/767, 3-4=-3176/971, 4-14=-1291/419, 5-14=-1231/419, 5-15=-1223/408, 6-15=-1308/408, 6-7=-1451/469, 7-16=-1533/468, 8-16=-1582/468, 8-9=0/13
BOT CHORD 2-12=-678/2464, 11-12=-352/1401, 10-11=-352/1401, 8-10=-317/1211
WEBS 3-12=-1202/414, 4-12=-547/1768, 4-10=-778/286, 5-10=-330/1049, 6-10=-372/180

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 12-4-0, Exterior (2) 12-4-0 to 18-4-0, Interior (1) 18-4-0 to 24-6-8, Exterior (2) 24-6-8 to 27-6-8; Lumber DOL=1.60 plate grip DOL=1.00
3) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
4) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
5) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

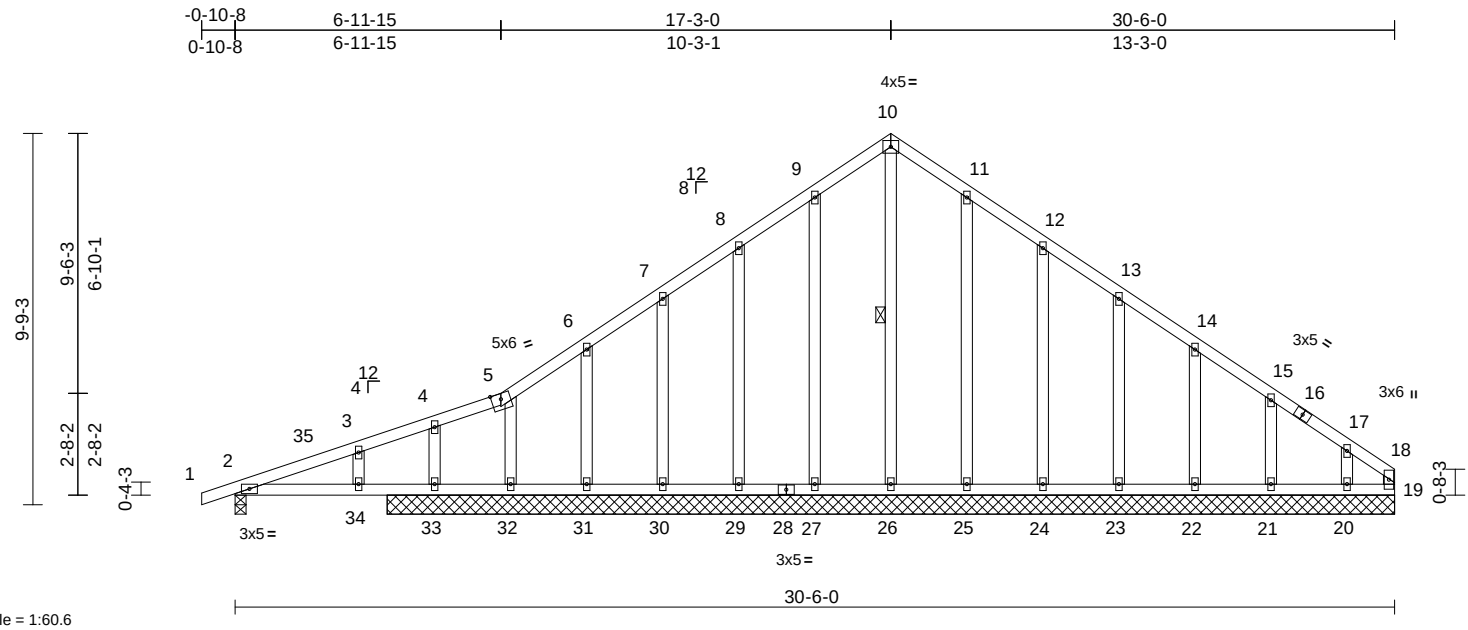


December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II
19120017-A	BE	Roof Special Supported Gable	1	1	E13837769 Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:57 Page: 1
ID:YtmTdFhKCwq95ZkdFHTyauyC_zi-aIWXuzLoysTff9Ho314EEwxVhvOIX7AAe2e2JfyBjXm



Scale = 1:60.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.20	Vert(LL)	-0.02	2-34	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.20	Vert(CT)	-0.04	2-34	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	19	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 193 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*
26-10,27-9,29-8,25-11,24-12:2x4 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 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-26

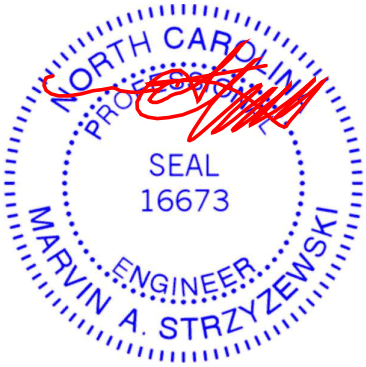
REACTIONS (lb/size) 2=243/0-3-8, 19=46/26-6-0, 20=130/26-6-0, 21=166/26-6-0, 22=159/26-6-0, 23=160/26-6-0, 24=159/26-6-0, 25=165/26-6-0, 26=127/26-6-0, 27=165/26-6-0, 29=162/26-6-0, 30=149/26-6-0, 31=202/26-6-0, 32=31/26-6-0, 33=414/26-6-0
Max Horiz 2=53 (LC 3)
Max Uplift 2=-141 (LC 3), 19=-45 (LC 4), 20=-113 (LC 3), 21=-80 (LC 3), 22=-83 (LC 3), 23=-81 (LC 3), 24=-86 (LC 3), 25=-76 (LC 3), 26=-48 (LC 4), 27=-76 (LC 3), 29=-88 (LC 3), 30=-75 (LC 3), 31=-107 (LC 3), 33=-206 (LC 3)
Max Grav 2=243 (LC 1), 19=75 (LC 3), 20=186 (LC 6), 21=194 (LC 6), 22=191 (LC 6), 23=191 (LC 6), 24=193 (LC 6), 25=192 (LC 6), 26=143 (LC 3), 27=192 (LC 6), 29=196 (LC 6), 30=178 (LC 6), 31=239 (LC 6), 32=39 (LC 6), 33=416 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/14, 2-35=-81/30, 3-35=-81/36, 3-4=-61/43, 4-5=-58/7, 5-6=-45/23, 6-7=-77/50, 7-8=-101/93, 8-9=-134/141, 9-10=-170/184, 10-11=-170/184, 11-12=-134/141, 12-13=-102/94, 13-14=-73/48, 14-15=-55/11, 15-16=-43/42, 16-17=-53/31, 17-18=-93/80, 18-19=-54/34
BOT CHORD 2-34=-54/72, 33-34=-54/72, 32-33=-54/72, 31-32=-59/76, 30-31=-59/76, 29-30=-59/76, 28-29=-59/76, 27-28=-59/76, 26-27=-59/76, 25-26=-59/76, 24-25=-59/76, 23-24=-59/76, 22-23=-59/76, 21-22=-59/76, 20-21=-59/76, 19-20=-59/76
WEBS 10-26=-143/88, 9-27=-152/76, 8-29=-155/87, 7-30=-143/78, 6-31=-180/97, 5-32=-70/37, 4-33=-236/129, 3-34=-58/61, 11-25=-152/77, 12-24=-153/86, 13-23=-151/82, 14-22=-151/83, 15-21=-155/83, 17-20=-139/90

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 14-3-0, Corner (3) 14-3-0 to 20-3-0, Exterior (2) 20-3-0 to 27-3-0, Corner (3) 27-3-0 to 30-4-4; Lumber DOL=1.60 plate grip DOL=1.00
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 19, 2, 26, 27, 29, 30, 31, 33, 25, 24, 23, 22, 21, and 20. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



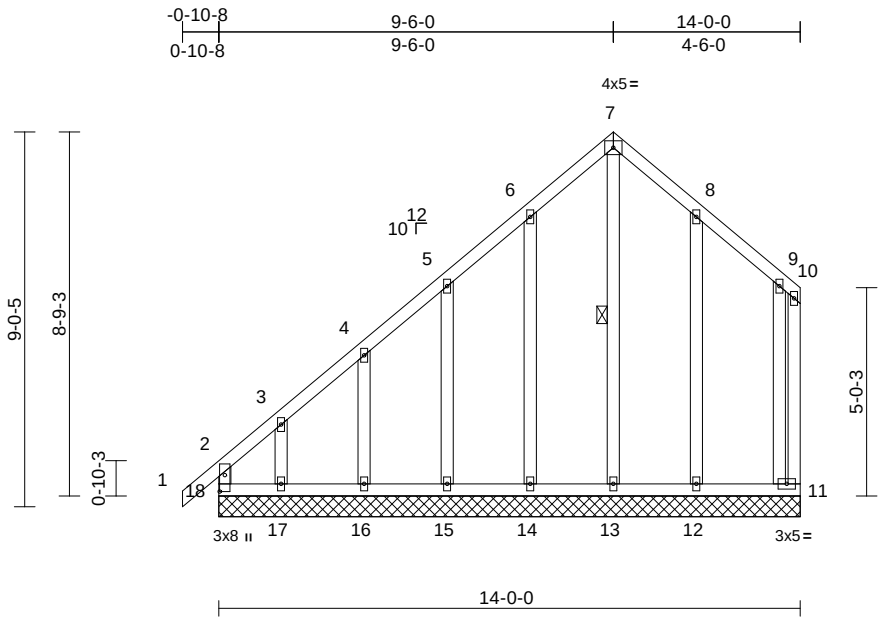
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	DE	Common Supported Gable	1	1	Job Reference (optional)	E13837770

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:00 Page: 1
ID:03KsrbiyzEy0jjJqp_?B65yC_zh-?tBfW?NhFnrEWd?Nl9exsYZ0b7SFkTNcK0tiw_yBjXj



Scale = 1:55.5

Plate Offsets (X, Y): [18:0-4-12,0-1-8]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-R							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* 13-7,14-6,12-8:2x4 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 10-0-0 oc bracing.
WEBS	1 Row at midpt 7-13

REACTIONS (lb/size) 11=92/14-0-0, 12=175/14-0-0, 13=135/14-0-0, 14=163/14-0-0, 15=152/14-0-0, 16=163/14-0-0, 17=111/14-0-0, 18=128/14-0-0
Max Horiz 18=155 (LC 3)
Max Uplift 11=-66 (LC 3), 12=-100 (LC 3), 14=-95 (LC 3), 15=-100 (LC 3), 16=-88 (LC 3), 17=-150 (LC 3), 18=-90 (LC 4)
Max Grav 11=121 (LC 6), 12=215 (LC 6), 13=135 (LC 1), 14=200 (LC 6), 15=195 (LC 6), 16=195 (LC 6), 17=204 (LC 6), 18=128 (LC 1)

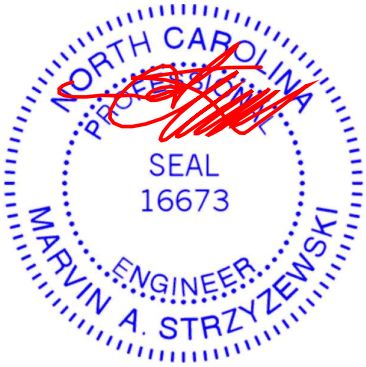
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-18=-112/76, 1-2=0/38, 2-3=-148/137, 3-4=-76/75, 4-5=-43/36, 5-6=-64/47, 6-7=-105/108, 7-8=-106/109, 8-9=-59/44, 9-10=-3/14, 10-11=-7/6
BOT CHORD	17-18=-4/5, 16-17=-4/5, 15-16=-4/5, 14-15=-4/5, 13-14=-4/5, 12-13=-4/5, 11-12=-4/5
WEBS	7-13=-98/36, 6-14=-161/95, 5-15=-156/99, 4-16=-158/95, 3-17=-152/111, 8-12=-171/101, 9-11=-109/72

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 6-6-0, Corner (3) 6-6-0 to 13-10-4; Lumber DOL=1.60 plate grip DOL=1.00
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18, 14, 15, 16, 17, and 12. This connection is for uplift only and does not consider lateral forces.
10) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



December 6,2019

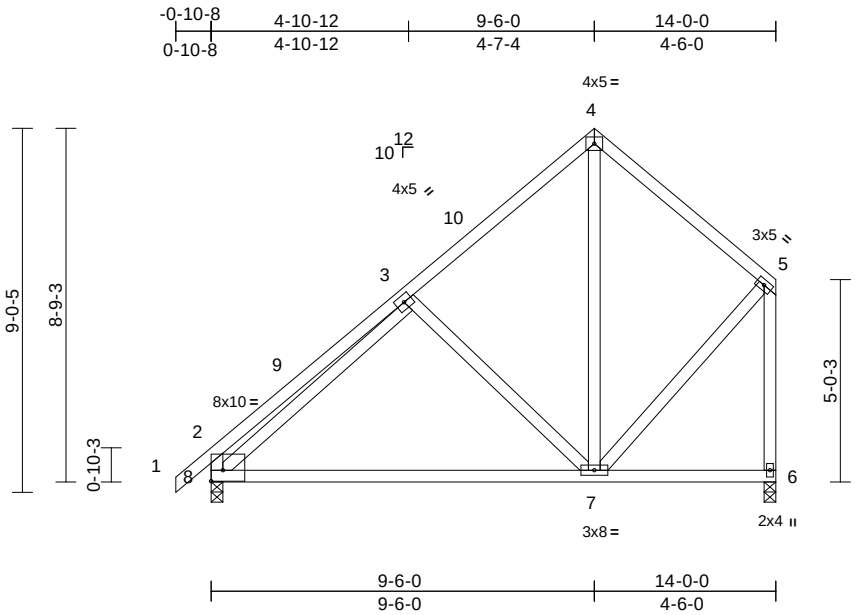
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	D	Common	2	1	Job Reference (optional)	E13837771

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:55:59

ID:03KsrbiyzEy0jjJqp_?B65yC_zh-WgdHJfM3UUjNuTRBBS6iKL0oaj?E??oT6M79OYyBjXk



Scale = 1:57.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.37	Vert(LL)	-0.01	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.49	Vert(CT)	-0.20	7-8	>837	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 97 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 8-2,6-5:2x4 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 (lb/size) 6=546/0-3-8, 8=612/0-3-8
Max Horiz 8=143 (LC 3)
Max Uplift 6=-213 (LC 3), 8=-215 (LC 3)
Max Grav 6=617 (LC 6), 8=626 (LC 6)

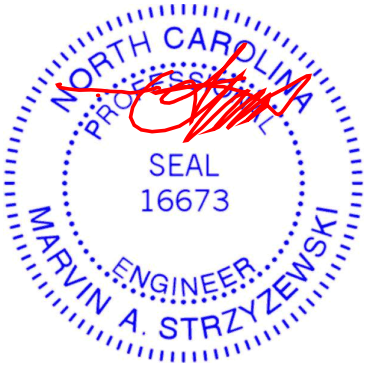
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/39, 2-9=-451/159, 3-9=-351/159, 3-10=-427/149, 4-10=-345/149, 4-5=-408/144, 2-8=-427/208, 5-6=-604/212
BOT CHORD 7-8=-184/451, 6-7=-7/10
WEBS 4-7=-58/159, 5-7=-80/330, 3-7=-303/171, 3-8=-213/10

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-6-0, Exterior (2) 6-6-0 to 13-10-4; Lumber DOL=1.60 plate grip DOL=1.00
3) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
4) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 8. This connection is for uplift only and does not consider lateral forces.
5) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



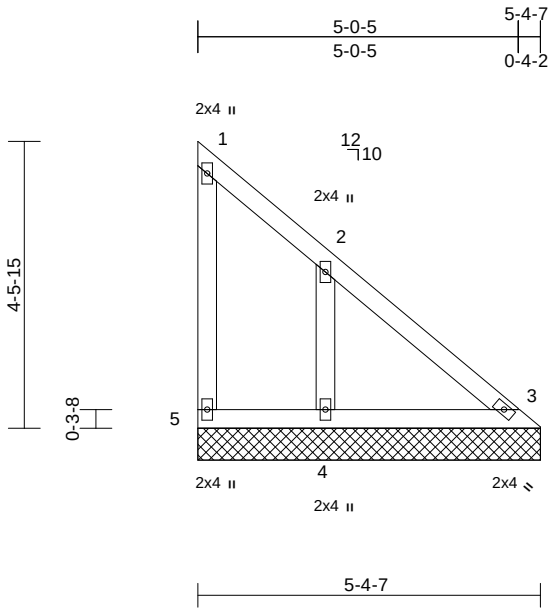
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	VC	Valley	1	1	Job Reference (optional)	E13837772

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:07 Page: 1
ID:UFuE2xjakY5tLtu0MiWQfJyC_zg-HD6J_OT4cxkEri2jf8Gae1LEHxr4tgPexc4ag4yBjXc



Scale = 1:36.1

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 27 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-4-12 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=94/5-4-7, 4=245/5-4-7, 5=37/5-4-7
Max Horiz 5=-130 (LC 3)
Max Uplift 4=-172 (LC 3), 5=-26 (LC 3)
Max Grav 3=94 (LC 1), 4=315 (LC 6), 5=48 (LC 6)

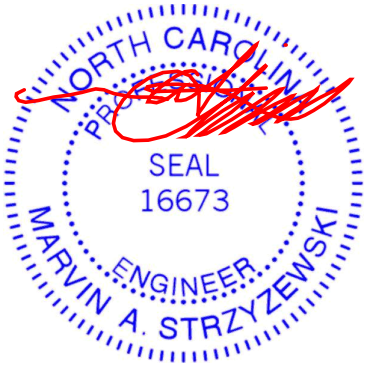
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-5=-39/26, 1-2=-51/19, 2-3=-127/130
BOT CHORD	4-5=-102/130, 3-4=-102/130
WEBS	2-4=-254/172

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 4. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



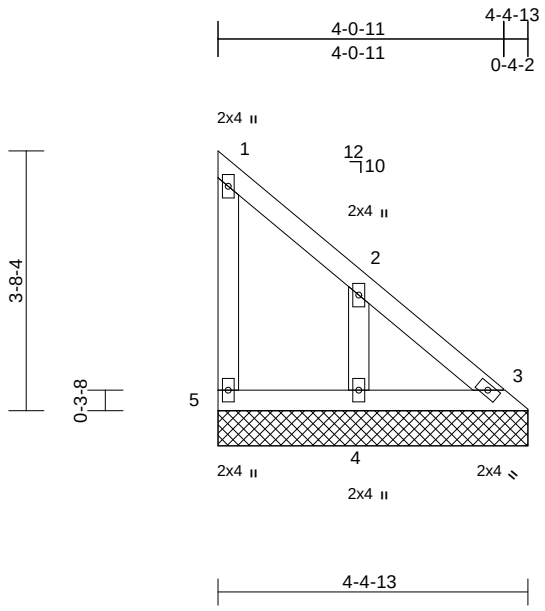
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	VD	Valley	1	1	Job Reference (optional)	E13837773

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:08 Page: 1
ID:UFuE2xjakY5tLtu0MiWQfJyC_zg-HD6J_OT4cxkEri2jf8Gae1LE7xrNtgaexc4ag4yBjXc



Scale = 1:32.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 21 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-5-2 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=63/4-4-13, 4=193/4-4-13, 5=54/4-4-13
Max Horiz 5=-108 (LC 3)
Max Uplift 3=-4 (LC 4), 4=-136 (LC 3), 5=-39 (LC 3)
Max Grav 3=63 (LC 1), 4=249 (LC 6), 5=70 (LC 6)

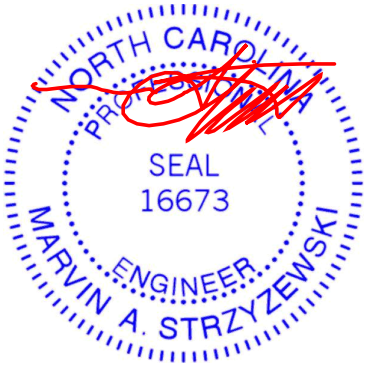
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-5=-57/39, 1-2=-45/30, 2-3=-112/105
BOT CHORD	4-5=-84/108, 3-4=-84/108
WEBS	2-4=-201/136

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5, 3, and 4. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



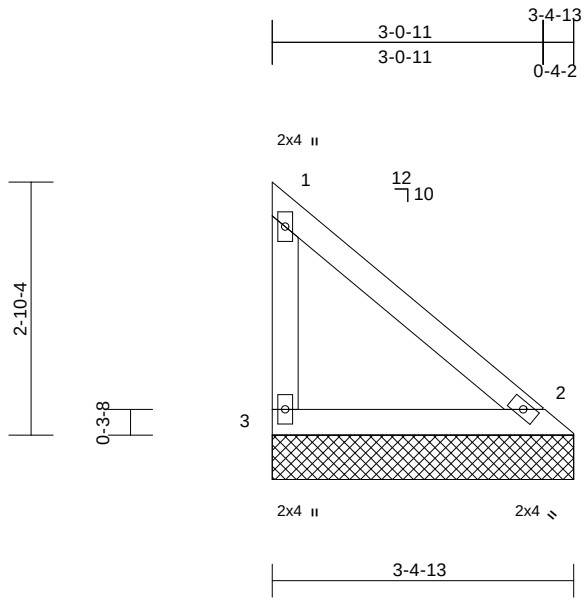
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	VF	Valley	1	1	Job Reference (optional)	E13837774

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:09
ID:UFuE2xjakY5tLtu0MiWQfJyC_zg-EcE3P4UK8Y_y5?B6mYI2kSRZIIWELahxPwZgkzyBjXa



Scale = 1:26

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 14 lb	FT = 20%

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

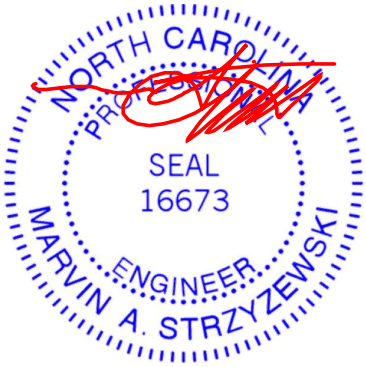
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=115/3-4-13, 3=115/3-4-13
Max Horiz 3=-80 (LC 3)
Max Uplift 2=-15 (LC 3), 3=-81 (LC 3)
Max Grav 2=115 (LC 1), 3=149 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-120/81, 1-2=-52/67
BOT CHORD 2-3=-63/80

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 3 and 2. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



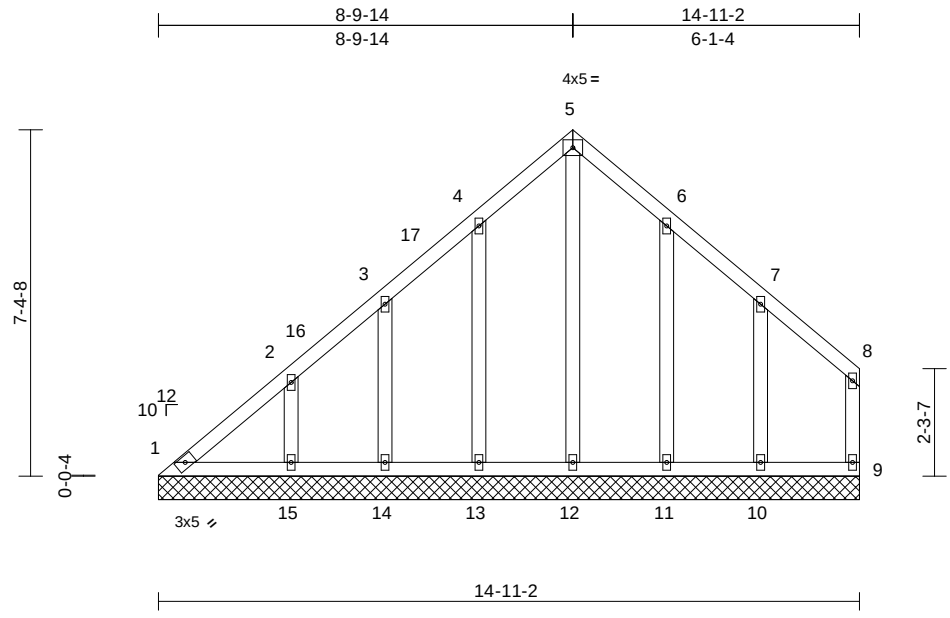
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	V	Valley	1	1	Job Reference (optional)	E13837775

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:04 Page: 1
ID:03KsrbiyzEy0jjJqp_?B65yC_zh-teRAMMQBJ0Mf_EJ8_?it1OjjvkpbgIhCFerw3lyBjXf



Scale = 1:49.1

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 92 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.2 *Except* 14-3,15-2,10-7:2x4 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 (lb/size) 1=81/14-11-2, 9=72/14-11-2, 10=162/14-11-2, 11=160/14-11-2, 12=135/14-11-2, 13=165/14-11-2, 14=139/14-11-2, 15=202/14-11-2
Max Horiz 1=49 (LC 3)
Max Uplift 1=-5 (LC 3), 9=-32 (LC 3), 10=-112 (LC 3), 11=-90 (LC 3), 12=-40 (LC 4), 13=-94 (LC 3), 14=-74 (LC 3), 15=-120 (LC 3)
Max Grav 1=81 (LC 1), 9=82 (LC 6), 10=212 (LC 6), 11=195 (LC 6), 12=135 (LC 1), 13=203 (LC 6), 14=177 (LC 6), 15=254 (LC 6)

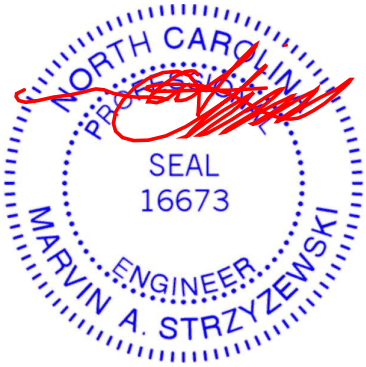
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-46/66, 2-16=-59/40, 3-16=-19/40, 3-17=-90/89, 4-17=-75/89, 4-5=-139/149, 5-6=-139/148, 6-7=-93/90, 7-8=-45/34, 8-9=-67/35
BOT CHORD	1-15=0/5, 14-15=0/5, 13-14=0/5, 12-13=0/5, 11-12=0/5, 10-11=0/5, 9-10=0/5
WEBS	5-12=-133/78, 4-13=-163/94, 3-14=-144/76, 2-15=-195/114, 6-11=-158/91, 7-10=-169/108

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) 0-4-13 to 3-4-13, Interior (1) 3-4-13 to 5-10-3, Exterior (2) 5-10-3 to 14-9-11; Lumber DOL=1.60 plate grip DOL=1.00
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 9, 12, 13, 14, 15, 11, and 10. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



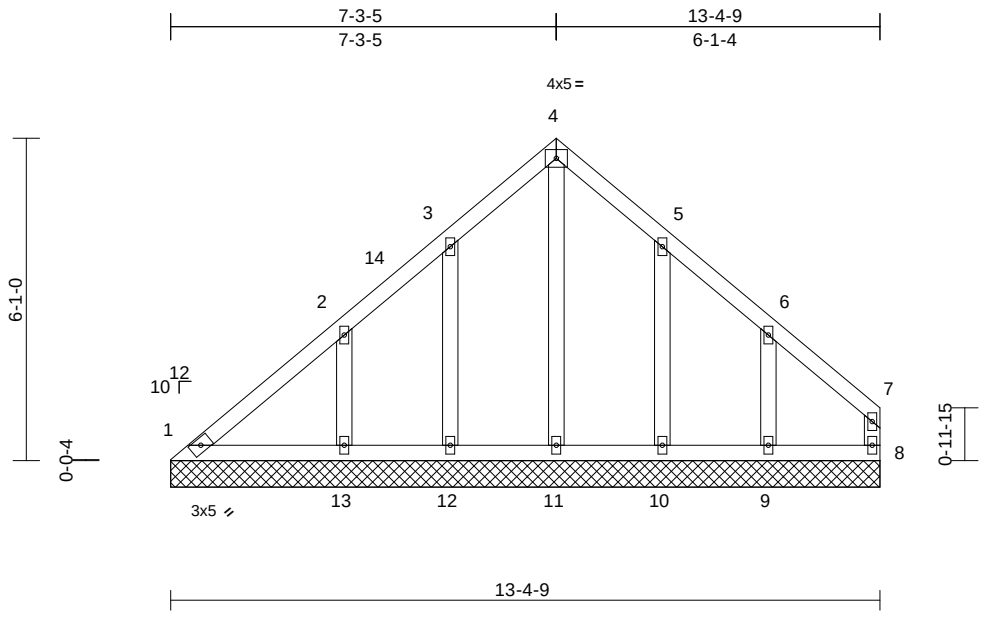
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	VA	Valley	1	1	Job Reference (optional)	E13837776

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:05
ID:03KsrbiyzEy0jjJqp_?B65yC_zh-Lq?YZiRq4KUWcOuKXjD6ZcGuO89aPmmLUIbTbCyBjXe



Scale = 1:43.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 72 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3 *Except* 11-4:2x4 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 10-0-0 oc bracing.

REACTIONS (lb/size) 1=108/13-4-9, 8=84/13-4-9, 9=168/13-4-9, 10=163/13-4-9, 11=129/13-4-9, 12=139/13-4-9, 13=238/13-4-9

Max Horiz 1=19 (LC 3)

Max Uplift 1=-26 (LC 3), 8=-10 (LC 3), 9=-127 (LC 3), 10=-94 (LC 3), 11=-18 (LC 4), 12=-81 (LC 3), 13=-145 (LC 3)

Max Grav 1=108 (LC 1), 8=84 (LC 1), 9=225 (LC 6), 10=200 (LC 6), 11=129 (LC 1), 12=173 (LC 6), 13=301 (LC 6)

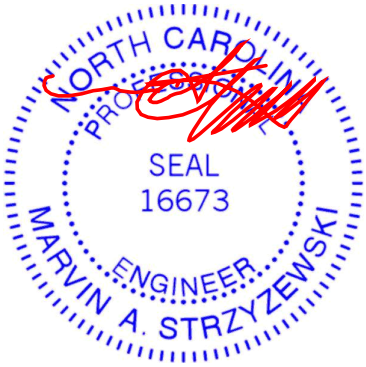
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-70/44, 2-14=-103/76, 3-14=-63/76, 3-4=-131/130, 4-5=-133/132, 5-6=-93/70, 6-7=-55/21, 7-8=-66/18
BOT CHORD	1-13=-11/21, 12-13=-11/21, 11-12=-11/21, 10-11=-11/21, 9-10=-11/21, 8-9=-11/21
WEBS	4-11=-107/61, 3-12=-144/84, 2-13=-231/137, 5-10=-163/96, 6-9=-176/116

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2) 0-4-13 to 3-3-10, Interior (1) 3-3-10 to 4-3-10, Exterior (2) 4-3-10 to 13-3-2; Lumber DOL=1.60 plate grip DOL=1.00
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 8, 11, 12, 13, 10, and 9. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



December 6,2019

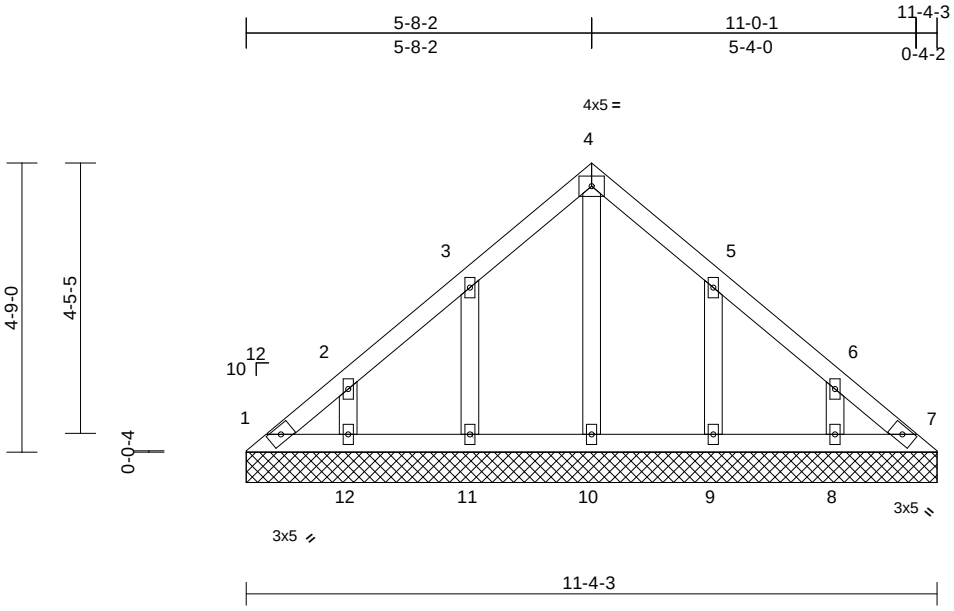
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	VB	Valley	1	1	Job Reference (optional)	E13837777

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:06

ID:03KsrbiyzEy0jjJqp_?B65yC_zh-p1Ywn2SSrdcNEYTX5QkL6pp4qYVD8DSVjyK08eyBjXd



Scale = 1:37.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 54 lb	FT = 20%

LUMBER

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

BRACING

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

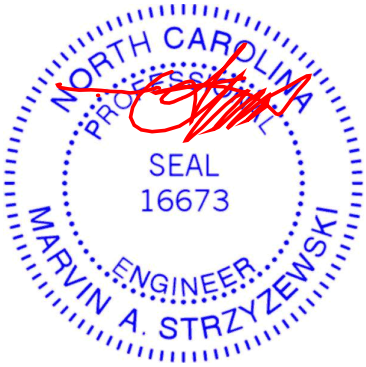
REACTIONS (lb/size) 1=50/11-4-3, 7=50/11-4-3, 8=145/11-4-3, 9=170/11-4-3, 10=117/11-4-3, 11=170/11-4-3, 12=145/11-4-3
Max Uplift 8=-94 (LC 3), 9=-108 (LC 3), 11=-108 (LC 3), 12=-94 (LC 3)
Max Grav 1=50 (LC 1), 7=50 (LC 1), 8=184 (LC 6), 9=214 (LC 6), 10=117 (LC 1), 11=214 (LC 6), 12=184 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-55/47, 2-3=-61/16, 3-4=-100/73, 4-5=-100/73, 5-6=-61/16, 6-7=-55/47
BOT CHORD 1-12=-38/54, 11-12=-38/54, 10-11=-38/54, 9-10=-38/54, 8-9=-38/54, 7-8=-38/54
WEBS 4-10=-77/4, 3-11=-173/108, 2-12=-145/92, 5-9=-173/108, 6-8=-145/92

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2); Lumber DOL=1.60 plate grip DOL=1.00
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11, 12, 9, and 8. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



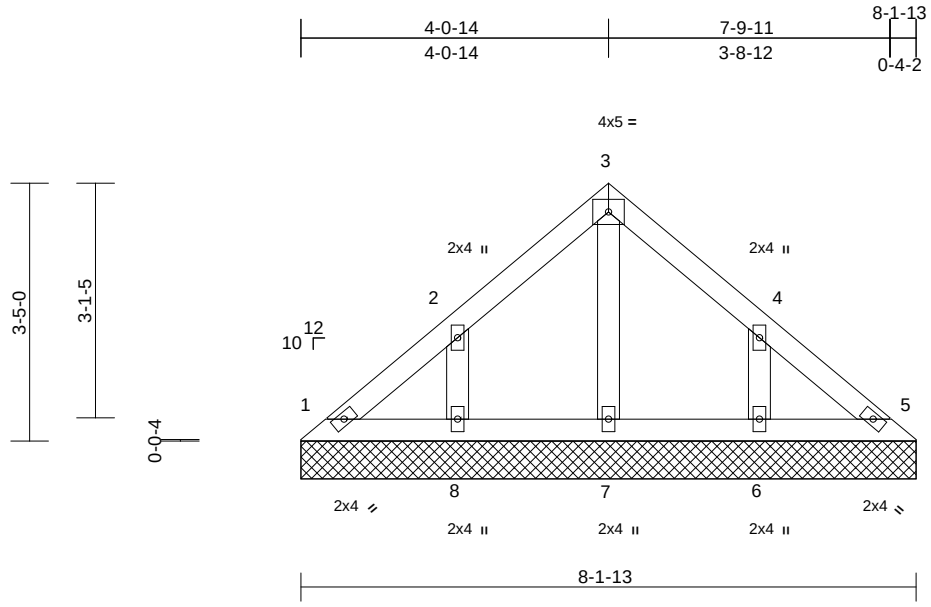
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	VE	Valley	1	1	Job Reference (optional)	E13837778

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:08 Page: 1
ID:UFuE2xjakY5tLtu0MiWQfJyC_zg-mPghBkTiNFs5TrdvDrnpBEuQ7LBic7toAGp7CXyBjXb



Scale = 1:30.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 34 lb	FT = 20%

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

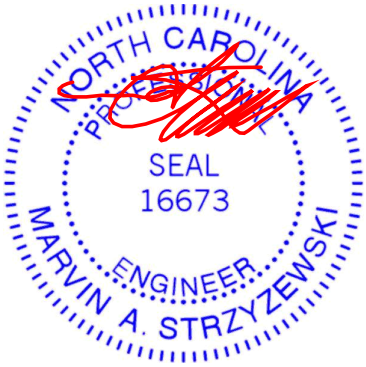
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=62/8-1-13, 5=62/8-1-13, 6=180/8-1-13, 7=108/8-1-13, 8=180/8-1-13
Max Uplift 1=-2 (LC 3), 5=-2 (LC 3), 6=-123 (LC 3), 8=-123 (LC 3)
Max Grav 1=62 (LC 1), 5=62 (LC 1), 6=231 (LC 6), 7=108 (LC 1), 8=231 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-37/34, 2-3=-87/51, 3-4=-87/51, 4-5=-37/34
BOT CHORD 1-8=-24/37, 7-8=-24/37, 6-7=-24/37, 5-6=-24/37
WEBS 3-7=-68/0, 2-8=-189/123, 4-6=-189/123

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 5, 8, and 6. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



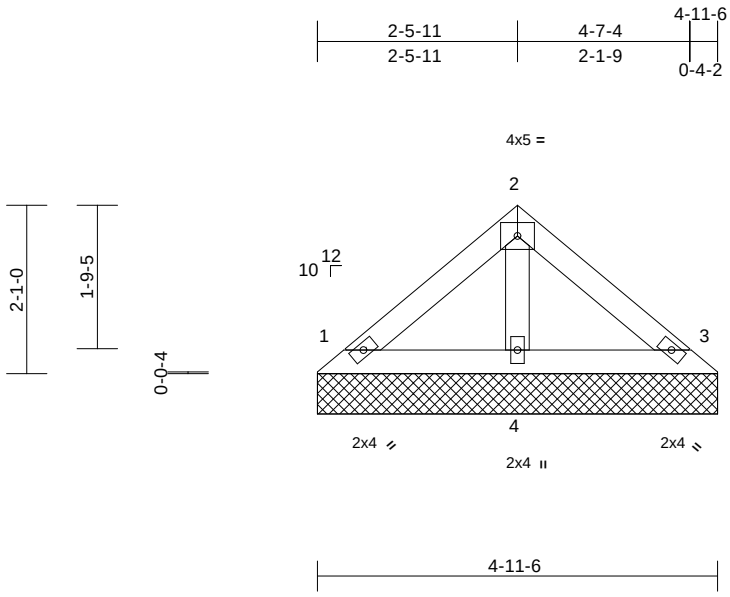
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	VG	Valley	1	1	Job Reference (optional)	E13837779

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:10
ID:UFuE2xjakY5tLtu0MiWQfJyC_zg-EcE3P4UK8Y_y5?B6mYI2kSRaYlXlLaQxPwZgkzyBjXa



Scale = 1:28.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 18 lb	FT = 20%

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

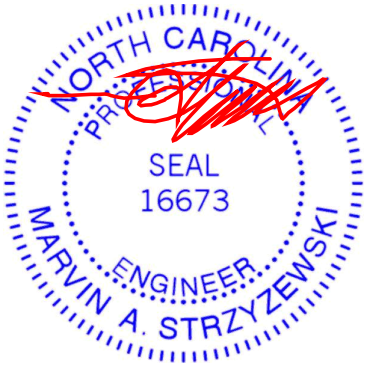
BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=96/4-11-6, 3=96/4-11-6, 4=143/4-11-6
Max Uplift 1=-50 (LC 3), 3=-50 (LC 3), 4=-39 (LC 3)
Max Grav 1=112 (LC 6), 3=112 (LC 6), 4=151 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-64/24, 2-3=-64/24
BOT CHORD 1-4=-1/21, 3-4=-1/21
WEBS 2-4=-99/39

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 3, and 4. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



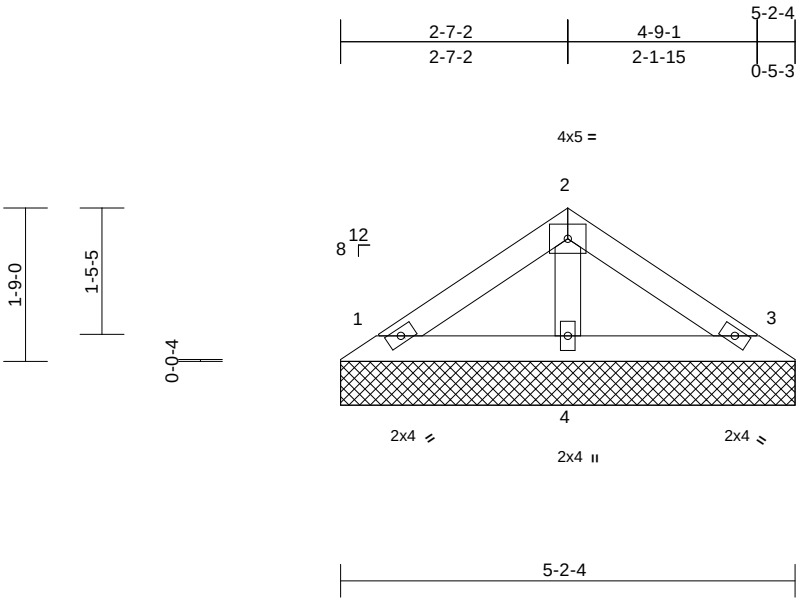
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	VH	Valley	1	1	Job Reference (optional)	E13837780

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:10
ID:UFuE2xjakY5tLtu0MiWQfJyC_zg-iooRcPVyus6pi9mIKGpHGfzIN9t_41f4daIEHPyBjXZ



Scale = 1:26.3

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 17 lb	FT = 20%

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

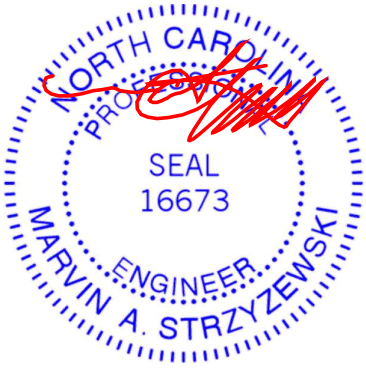
BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=90/5-2-4, 3=90/5-2-4, 4=153/5-2-4
Max Uplift 1=-46 (LC 3), 3=-46 (LC 3), 4=-47 (LC 3)
Max Grav 1=104 (LC 6), 3=104 (LC 6), 4=164 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-53/20, 2-3=-53/20
BOT CHORD 1-4=0/18, 3-4=0/18
WEBS 2-4=-112/47

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Exterior (2); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.
8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



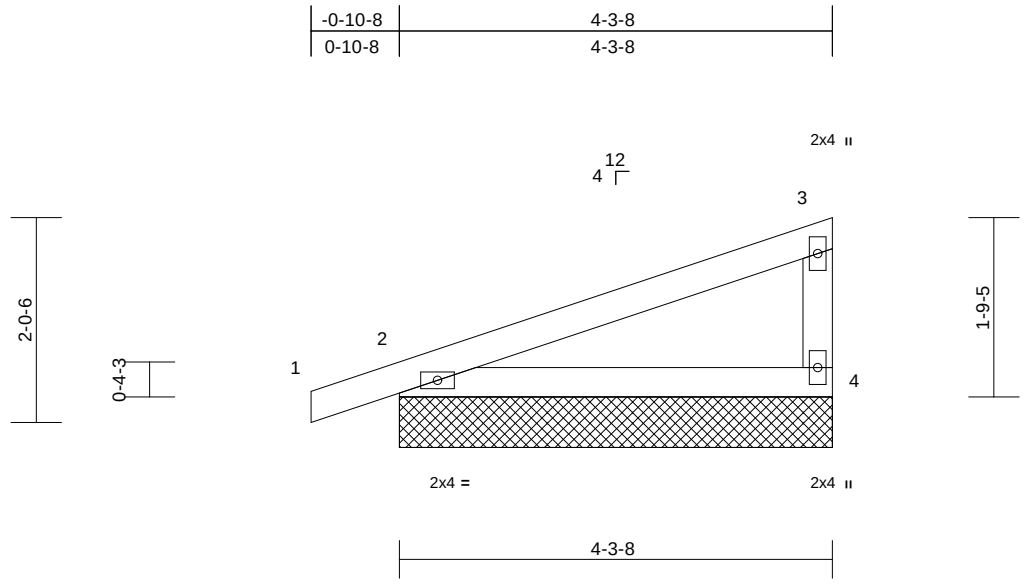
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	NE	Monopitch Supported Gable	1	1	Job Reference (optional)	E13837781

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:04 Page: 1
ID:03KsrbiyzEy0jjJqp_?B65yC_zh-teRAMMQBJ0Mf_EJ8_?it1OjgtknwgJSCFerw3lyBjXf



Scale = 1:22.8

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.14	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	n/a	-	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 16 lb	FT = 20%

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

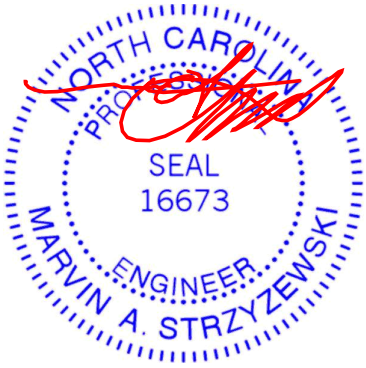
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=217/4-3-8, 4=155/4-3-8
Max Horiz 2=114 (LC 3)
Max Uplift 2=-204 (LC 3), 4=-142 (LC 3)
Max Grav 2=217 (LC 1), 4=165 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-3=-46/34, 3-4=-125/142
BOT CHORD 2-4=0/0

NOTES
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Corner (3); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 2. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



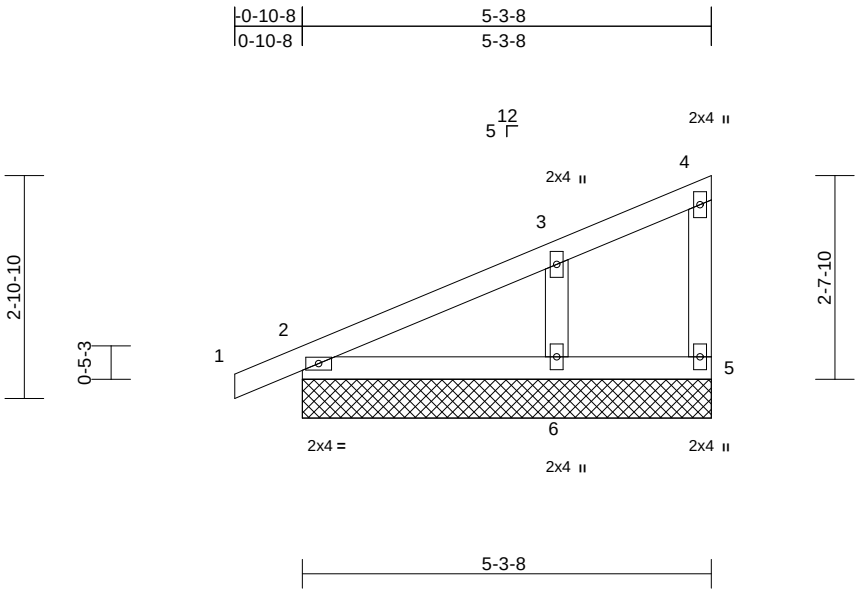
December 6,2019

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

Job	Truss	Truss Type	Qty	Ply	KMB - Cypress II	
19120017-A	WE	Monopitch Supported Gable	1	1	Job Reference (optional)	E13837782

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

Run: 8.32 E Nov 19 2019 Print: 8.320 E Nov 19 2019 MiTek Industries, Inc. Fri Dec 06 09:56:11 Page: 1
ID:1HPKC_mKOo_ehEKQ6qCFTDyBm9x-A_MpqlWafAEgKJLUuzKWptWwaZCrpT2EsE2npsyBjXY



Scale = 1:29.8

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	n/a	-	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 23 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 5-3-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=164/5-3-8, 5=33/5-3-8, 6=253/5-3-8
Max Horiz 2=168 (LC 3)
Max Uplift 2=-128 (LC 3), 5=-34 (LC 3), 6=-248 (LC 3)
Max Grav 2=164 (LC 1), 5=34 (LC 6), 6=273 (LC 6)

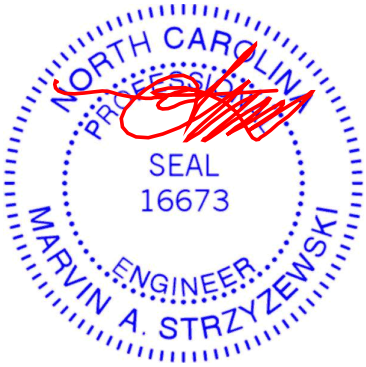
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-3=-113/58, 3-4=-31/7, 4-5=-26/34
BOT CHORD	2-6=0/0, 5-6=0/0
WEBS	3-6=-206/248

NOTES

1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=0.0psf; BCDL=0.0psf; h=0ft; Cat. II; Exp B; Enclosed; C-C Corner (3); Lumber DOL=1.60 plate grip DOL=1.00
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5, 2, and 6. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

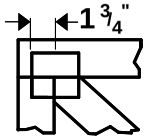


December 6,2019

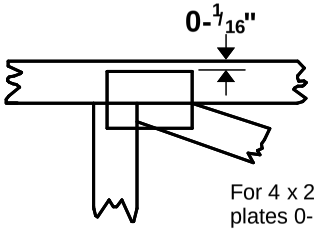
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

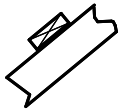
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

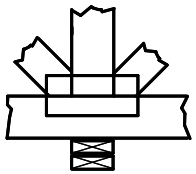
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

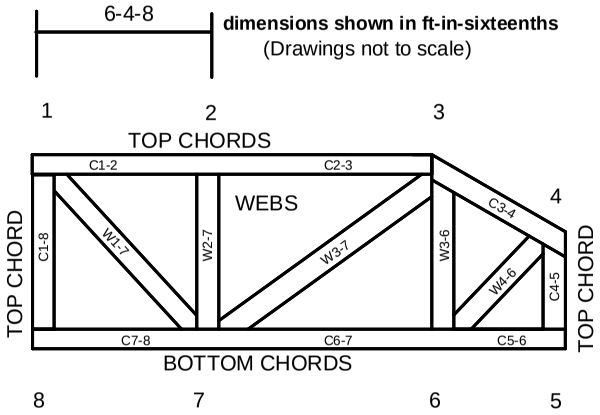


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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. 10/03/2015

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.