

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 21030011-01  
165 Crossings at AC-Braxton C-Roof

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

Pages or sheets covered by this seal: I45052375 thru I45052402

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

North Carolina COA: C-0844



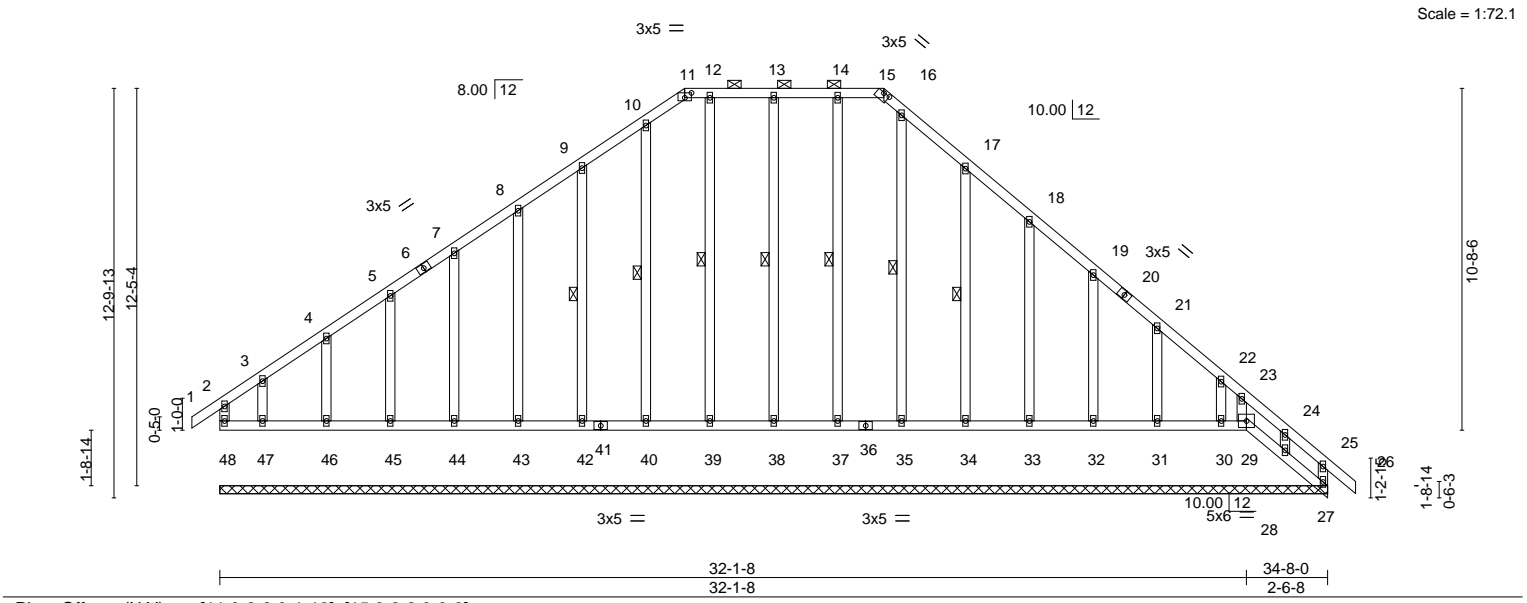
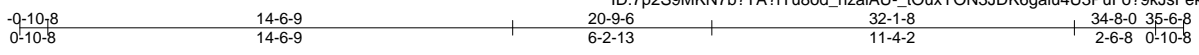
March 5, 2021

Sevier, Scott

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

Job 21030011-01	Truss T6GE	Truss Type GABLE	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052375
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Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:37 2021 Page 1  
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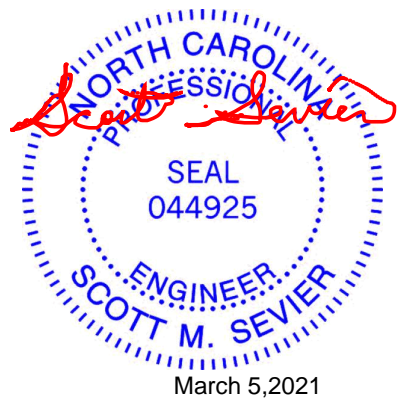
<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	-0.00	26	n/r	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.00	26	n/r		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.01	27	n/a		
BCLL	0.0 *	Code IRC2015/TPI2014		Matrix-R						
BCDL	10.0								Weight: 273 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-15.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	2x4 SP No.3	WEBS	1 Row at midpt 13-38, 12-39, 10-40, 9-42, 14-37, 16-35, 17-34
OTHERS	2x4 SP No.2 *Except*		
	5-45,4-46,3-47,19-32,21-31,22-30,24-28: 2x4 SP No.3		

**REACTIONS.** All bearings 34-8-0.  
 (lb) - Max Horz 48--253(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 27, 38, 42, 43, 44, 45, 46, 34, 33, 32, 31 except 48--159(LC 9), 29--134(LC 12), 47--134(LC 10), 30--104(LC 14), 28--180(LC 14)  
 Max Grav All reactions 250 lb or less at joint(s) 27, 48, 29, 38, 39, 40, 42, 43, 44, 45, 46, 47, 37, 35, 34, 33, 32, 31, 30, 28

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 9-10--267/314, 10-11--273/319, 11-12--251/303, 12-13--251/303, 13-14--251/303, 14-15--251/303, 15-16--242/279, 16-17--303/355, 17-18--219/257

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27, 38, 42, 43, 44, 45, 46, 34, 33, 32, 31 except (jt=lb) 48=159, 29=134, 47=134, 30=104, 28=180.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 27, 48, 29, 38, 39, 40, 42, 43, 44, 45, 46, 47, 37, 35, 34, 33, 32, 31, 30, 28.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

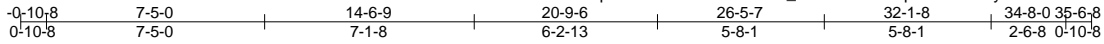
Job 21030011-01	Truss T6	Truss Type Piggyback Base	Qty 4	Ply 1	165 Crossings at AC-Braxton C-Roof	145052376
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Carter Components (Sanford), Sanford, NC - 27332,

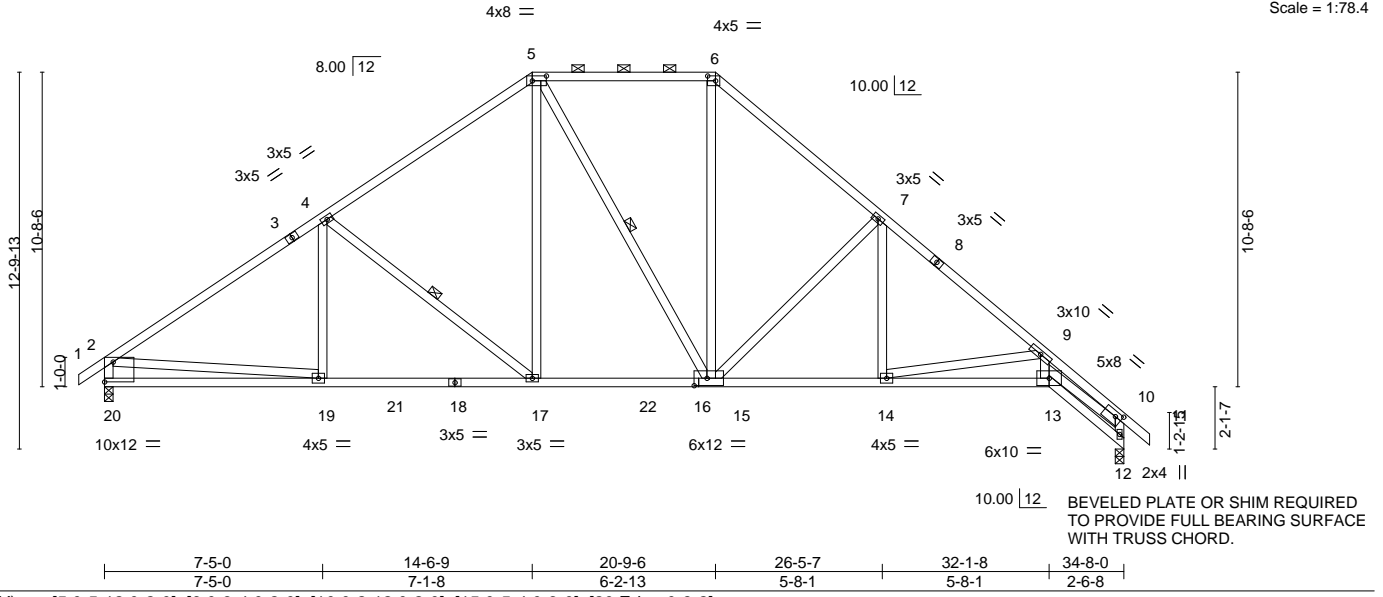
8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:29 2021 Page 1

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Job Reference (optional)



Scale = 1:78.4



BEVELED PLATE OR SHIM REQUIRED TO PROVIDE FULL BEARING SURFACE WITH TRUSS CHORD.

Plate Offsets (X, Y)--	[5:0-5-12,0-2-0], [6:0-3-4,0-2-0], [10:0-2-12,0-2-0], [15:0-5-4,0-3-0], [20:Edge,0-8-2]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL	1.15	TC 0.82	Vert(LL)	-0.14	13-14	>999	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Lumber DOL	1.15	BC 0.93	Vert(CT)	-0.31	13-14	>999		
TCDL 10.0	Rep Stress Incr	YES	WB 0.84	Horz(CT)	0.27	12	n/a		
BCLL 0.0 *	Code IRC2015/TPI2014		Matrix-MSH						
BCDL 10.0								Weight: 233 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Sheathed or 2-7-13 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-10 max.): 5-6.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
WEBS 2x4 SP No.2 *Except* 10-12,9-13,2-20: 2x4 SP No.3	WEBS 2-2-0 oc bracing: 13-14. 1 Row at midpt 4-17, 5-15

**REACTIONS.** (size) 12=0-3-8, 20=0-3-8  
Max Horz 20=-253(LC 9)  
Max Grav 12=1436(LC 2), 20=1436(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1875/340, 4-5=-1477/379, 5-6=-1103/370, 6-7=-1551/401, 7-9=-2078/371,  
9-10=-4292/615, 10-12=-1450/263, 2-20=-1367/303  
BOT CHORD 19-20=-219/518, 17-19=-77/1581, 15-17=0/1179, 14-15=-83/1551, 13-14=-385/3027  
WEBS 4-17=-518/197, 5-17=-43/548, 6-15=-101/639, 7-15=-679/232, 7-14=0/420,  
9-14=-1501/308, 9-13=-121/1532, 10-13=-456/3443, 2-19=-28/1130

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 5) Provide adequate drainage to prevent water ponding.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 7) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 12.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

Job 21030011-01	Truss PB1	Truss Type GABLE	Qty 19	Ply 1	165 Crossings at AC-Braxton C-Roof Job Reference (optional)	145052377
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Carter Components (Sanford),

Sanford, NC - 27332,

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5x6

Scale: 3/4"=1'

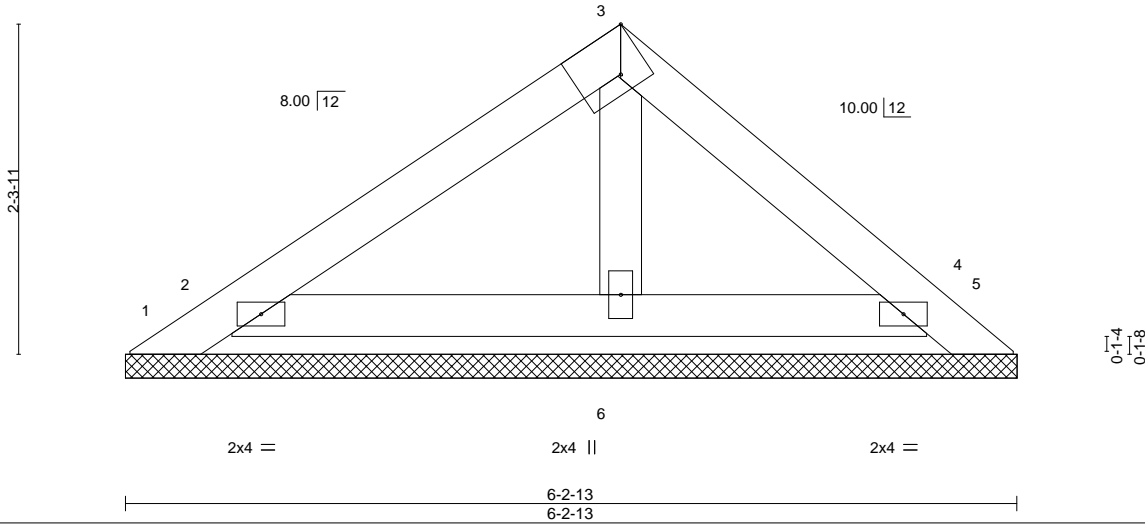


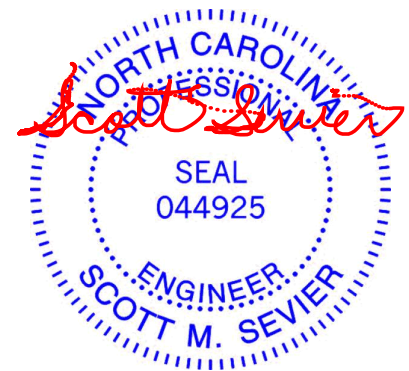
Plate Offsets (X,Y)-- [3:0-2-5,Edge]											
<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>		<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	4	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P						Weight: 21 lb	FT = 20%
BCDL	10.0										

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Sheathed or 6-0-0 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS	2x4 SP No.3		

**REACTIONS.** All bearings 6-2-13.  
 (lb) - Max Horz 1=42(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 5, 2, 4 except 1=106(LC 25)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 4, 6 except 2=266(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2, 4 except (jt=lb) 1=106.
  - 9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

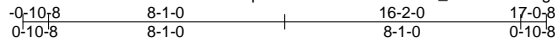


Job 21030011-01	Truss T15GE	Truss Type Roof Special Supported Gable	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof Job Reference (optional)	145052378
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Carter Components (Sanford), Sanford, NC - 27332,

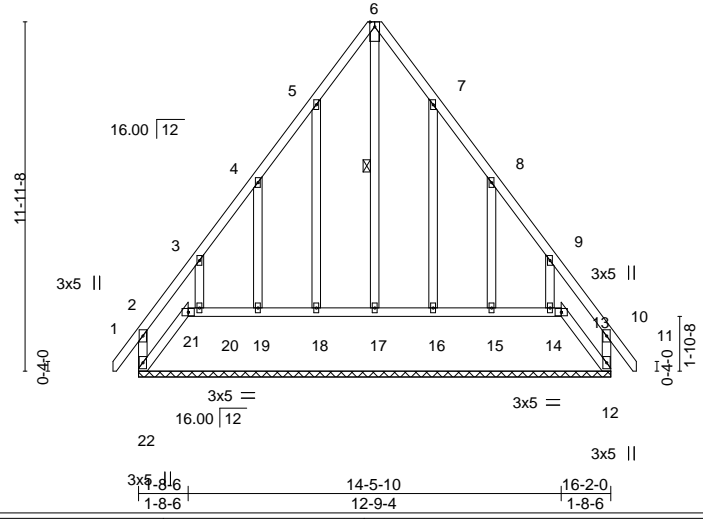
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4x8 ||

Scale = 1:78.9



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.33	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.20	Vert(LL) -0.00 11 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.37	Vert(CT) -0.00 11 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) -0.01 12 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 130 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-17
OTHERS 2x4 SP No.3 *Except* 6-17,5-18,7-16: 2x4 SP No.2	

<b>REACTIONS.</b>	All bearings 16-2-0.
(lb) - Max Horz	22=-294(LC 11)
Max Uplift	All uplift 100 lb or less at joint(s) 12, 13, 17, 18, 19, 16, 15 except 22=-437(LC 9), 21=-305(LC 12), 20=-117(LC 13), 14=-113(LC 14)
Max Grav	All reactions 250 lb or less at joint(s) 12, 13, 18, 19, 20, 16, 15, 14 except 22=505(LC 12), 21=319(LC 11), 17=491(LC 14)

<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	4-5=-313/415, 5-6=-440/565, 6-7=-440/565, 7-8=-313/414
BOT CHORD	21-22=-309/299
WEBS	6-17=-824/570, 3-20=-258/229, 9-14=-255/228

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 6) All plates are 2x4 MT20 unless otherwise indicated.
  - 7) Gable requires continuous bottom chord bearing.
  - 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 9) Gable studs spaced at 2-0-0 oc.
  - 10) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 13, 17, 18, 19, 16, 15 except (jt=lb) 22=437, 21=305, 20=117, 14=113.
  - 12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 21, 13, 17, 18, 19, 20, 16, 15, 14.



March 5, 2021

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

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**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

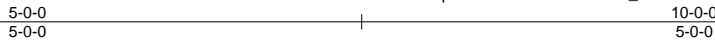
Job 21030011-01	Truss T16GR	Truss Type Flat Girder	Qty 1	Ply 2	165 Crossings at AC-Braxton C-Roof	145052379
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:14 2021 Page 1

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Job Reference (optional)



Scale = 1:17.3

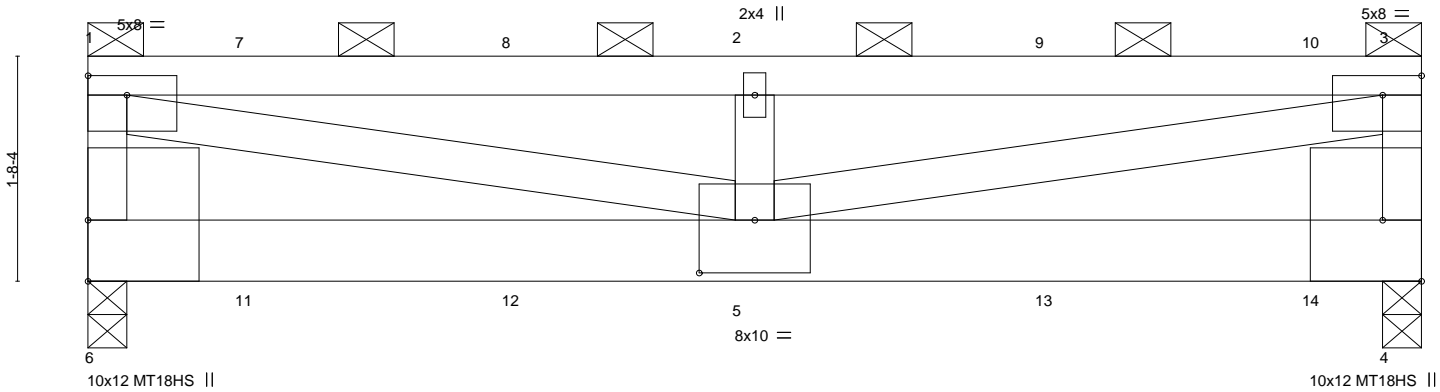


Plate Offsets (X,Y)--	[1:Edge,0-1-12], [3:Edge,0-1-12], [4:Edge,0-3-8], [5:0-5-0,0-4-12]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.80	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Plate Grip DOL 1.15	BC 0.96	Vert(LL) -0.12 5-6 >999 240	MT18HS	244/190
TCDL 10.0	Lumber DOL 1.15	WB 0.85	Vert(CT) -0.23 5-6 >509 180		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-MSH	Horz(CT) 0.00 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 112 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD 2-0-0 oc purlins (3-9-14 max.): 1-3, except end verticals.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 2-5: 2x4 SP No.3	

**REACTIONS.** (size) 6=0-3-8, 4=0-3-8  
 Max Horz 6=-38(LC 5)  
 Max Grav 6=3629(LC 2), 4=3933(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-6=-2059/0, 1-2=-7317/0, 2-3=-7317/0, 3-4=-2070/0  
 BOT CHORD 5-6=0/659, 4-5=0/616  
 WEBS 1-5=0/6897, 3-5=0/6942

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 50 lb down and 2 lb up at 0-1-12, 36 lb down and 12 lb up at 1-3-4, 36 lb down and 12 lb up at 3-3-4, 36 lb down and 12 lb up at 5-3-4, 36 lb down and 12 lb up at 7-3-4, and 33 lb down and 15 lb up at 9-3-4, and 49 lb down and 3 lb up at 9-10-4 on top chord, and 1342 lb down at 1-3-4, 7 lb down and 1 lb up at 1-3-4, 1342 lb down at 3-3-4, 7 lb down and 1 lb up at 3-3-4, 1342 lb down at 5-3-4, 7 lb down and 1 lb up at 5-3-4, 1342 lb down at 7-3-4, 7 lb down and 1 lb up at 7-3-4, and 1347 lb down at 9-3-4, and 10 lb down and 0 lb up at 9-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.



March 5, 2021

**LOAD CASE(S)** Standard

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

Job 21030011-01	Truss T16GR	Truss Type Flat Girder	Qty 1	Ply <b>2</b>	165 Crossings at AC-Braxton C-Roof I45052379 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:14 2021 Page 2  
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**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-58, 4-6=-20

Concentrated Loads (lb)

Vert: 1=-14 3=-14 5=-1271(F=0, B=-1271) 11=-1271(F=0, B=-1271) 12=-1271(F=0, B=-1271) 13=-1271(F=0, B=-1271) 14=-1275(F=0, B=-1275)

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

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818 Soundside Road  
Edenton, NC 27932

Job 21030011-01	Truss T7	Truss Type Piggyback Base	Qty 5	Ply 1	165 Crossings at AC-Braxton C-Roof	145052380
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Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:40 2021 Page 1

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-0-10-8	7-5-0	14-6-9	20-9-6	27-0-8	34-4-8
0-10-8	7-5-0	7-1-8	6-2-13	6-3-2	7-4-0

Scale = 1:68.4

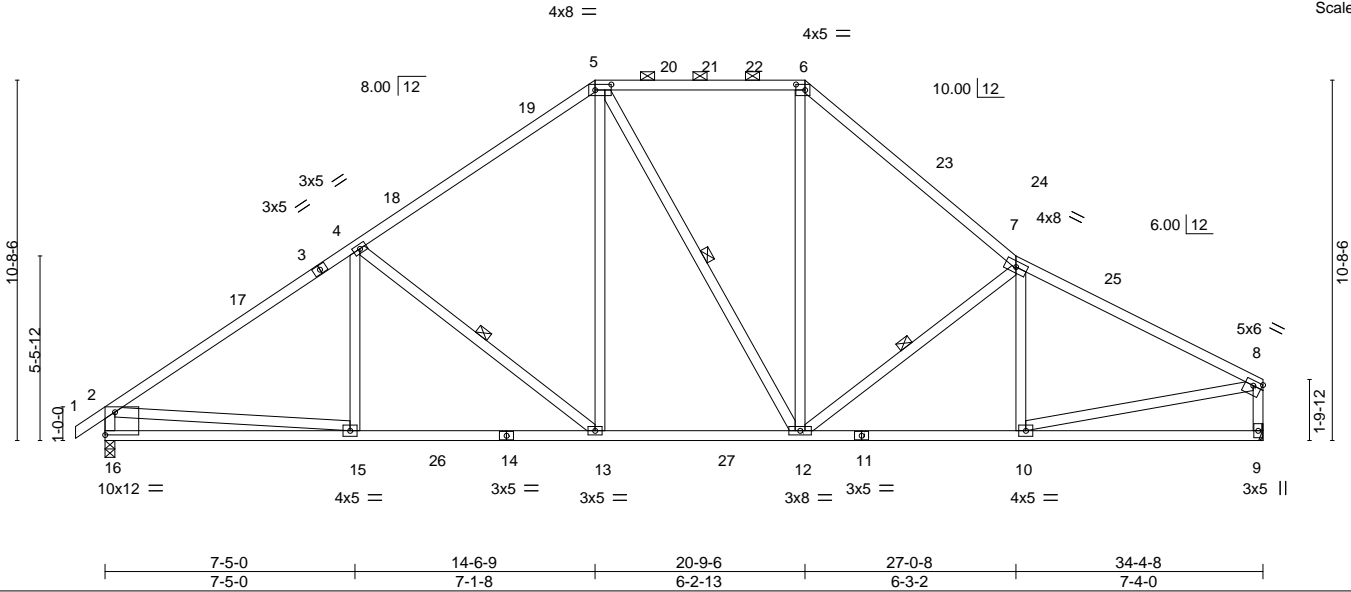


Plate Offsets (X,Y)-- [5:0-5-12,0-2-0], [6:0-3-4,0-2-0], [8:Edge,0-1-12], [16:Edge,0-8-2]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.83	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Plate Grip DOL 1.15	BC 0.62	Vert(LL) -0.10 12-13 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.38	Vert(CT) -0.18 13-15 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MSH	Horz(CT) 0.05 9 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 224 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1 *Except* 6-7: 2x4 SP 2400F 2.0E, 1-3: 2x4 SP No.2	TOP CHORD Sheathed or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-2 max.): 5-6.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 7-10,2-16,8-9: 2x4 SP No.3	WEBS 1 Row at midpt 4-13, 5-12, 7-12

**REACTIONS.** (size) 16=0-3-8, 9=Mechanical  
Max Horz 16=-218(LC 13)  
Max Grav 16=1533(LC 40), 9=1362(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-2078/349, 4-5=-1621/390, 5-6=-1143/385, 6-7=-1671/404, 7-8=-1815/362,  
2-16=-1463/312, 8-9=-1294/298  
BOT CHORD 15-16=-202/497, 13-15=-220/1699, 12-13=-64/1203, 10-12=-253/1593  
WEBS 4-13=-638/198, 5-13=-43/619, 6-12=-84/618, 7-12=-588/250, 2-15=-44/1351,  
8-10=-189/1551

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

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

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



818 Soundside Road  
Edenton, NC 27932



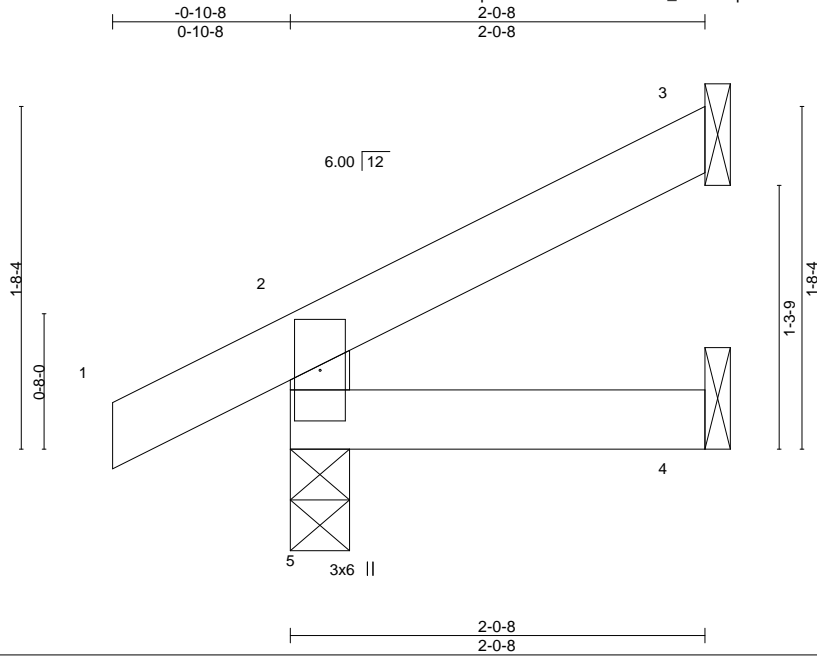
Job 21030011-01	Truss T5	Truss Type Jack-Open	Qty 5	Ply 1	165 Crossings at AC-Braxton C-Roof	I45052381
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Carter Components (Sanford),

Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:26 2021 Page 1

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Scale = 1:11.3

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.09	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.03	Vert(LL) 0.00 5 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.00 5 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MR	Horz(CT) -0.00 3 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 8 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Sheathed or 2-0-8 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
 Max Horz 5=33(LC 15)  
 Max Uplift 5=2(LC 15), 3=18(LC 15)  
 Max Grav 5=152(LC 2), 3=41(LC 2), 4=18(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.



March 5, 2021

Job 21030011-01	Truss T5GE	Truss Type Jack-Open Supported Gable	Qty 2	Ply 1	165 Crossings at AC-Braxton C-Roof Job Reference (optional)	145052382
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:27 2021 Page 1  
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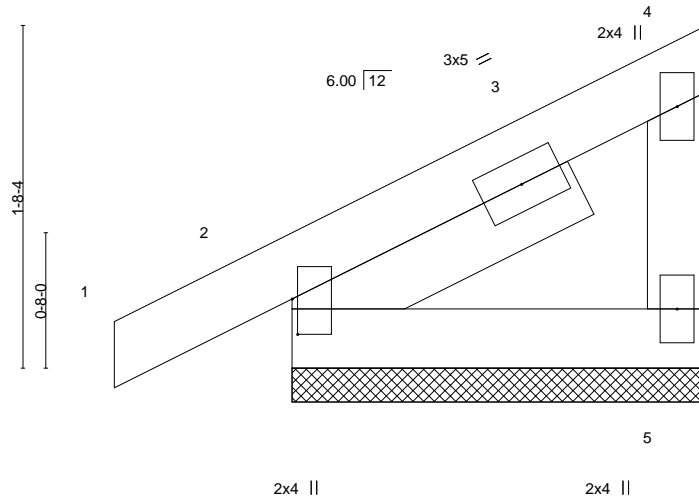


Plate Offsets (X,Y)-- [2:0-2-1,0-0-5]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.06	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.03	Vert(LL) 0.00 1 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 12 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -t 1-6-7

**BRACING-**  
TOP CHORD Sheathed or 2-0-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=2-0-8, 2=2-0-8  
Max Horz 2=42(LC 12)  
Max Uplift 5=9(LC 12), 2=7(LC 15)  
Max Grav 5=64(LC 2), 2=140(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.



March 5, 2021

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

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

ENGINEERING BY  
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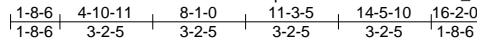
818 Soundside Road  
Edenton, NC 27932

Job 21030011-01	Truss T15GR	Truss Type ROOF SPECIAL GIRDER	Qty 1	Ply 2	165 Crossings at AC-Braxton C-Roof Job Reference (optional)	145052383
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:12 2021 Page 1

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5x8 ||

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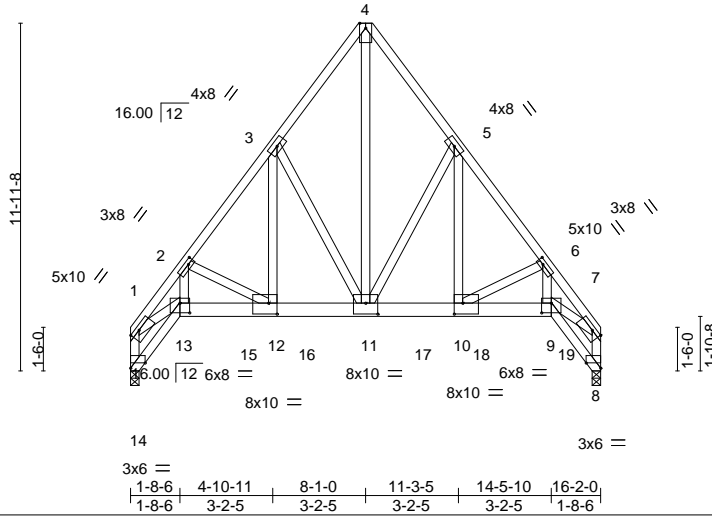


Plate Offsets (X,Y)-- [1:0-3-12,0-1-8], [2:0-2-8,0-1-8], [6:0-2-8,0-1-8], [7:0-3-12,0-1-8], [8:Edge,0-2-3], [9:0-4-0,0-4-0], [10:0-3-8,0-4-8], [11:0-5-0,0-4-8], [12:0-3-8,0-4-8], [13:0-4-0,0-4-0], [14:Edge,0-2-3]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/def	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.59	Vert(LL)	-0.10 10-11	>999	240	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.39	Vert(CT)	-0.21 10-11	>906	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.90	Horz(CT)	0.35 8	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-MSH					Weight: 300 lb	FT = 20%
BCDL 10.0	Code IRC2015/TPI2014							

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\*  
 9-13: 2x6 SP 2400F 2.0E  
 WEBS 2x4 SP No.2 \*Except\*  
 1-14,7-8,6-10,6-9,2-12,2-13: 2x4 SP No.3

**BRACING-**  
 TOP CHORD Sheathed or 3-3-12 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 14=0-3-8, 8=0-3-8  
 Max Horz 14=263(LC 5)  
 Max Grav 14=6162(LC 3), 8=7250(LC 3)

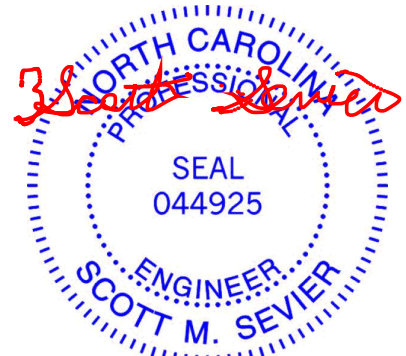
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-14=5982/0, 1-2=10815/0, 2-3=6663/0, 3-4=4668/0, 4-5=4667/0, 5-6=6783/0,  
 6-7=10582/0, 7-8=5851/0  
 BOT CHORD 13-14=490/377, 12-13=0/6060, 11-12=0/3985, 10-11=0/4056, 9-10=0/5955  
 WEBS 4-11=0/7106, 5-11=2460/0, 5-10=0/3731, 6-10=2148/0, 6-9=0/3983, 7-9=0/6834,  
 3-11=2315/0, 3-12=0/3508, 2-12=2361/0, 2-13=0/4361, 1-13=0/6978

**NOTES-**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.  
 Bottom chords connected as follows: 2x4 - 1 row at 0-3-0 oc, 2x6 - 2 rows staggered at 0-5-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (flat roof snow); Pf=13.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 14, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1530 lb down at 1-8-6, 1530 lb down at 3-11-4, 1620 lb down at 5-11-4, 1670 lb down at 7-11-4, 1636 lb down at 9-11-4, 1530 lb down at 11-11-4, and 1581 lb down at 13-11-4, and 1352 lb down at 16-0-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

Continued on page 2



March 5, 2021

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

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818 Soundside Road  
 Edenton, NC 27932

Job 21030011-01	Truss T15GR	Truss Type ROOF SPECIAL GIRDER	Qty 1	Ply <b>2</b>	165 Crossings at AC-Braxton C-Roof I45052383 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:12 2021 Page 2  
ID:7p2S9MKN7b?TA?FTu8od\_hzaiAU-D4ORh?4ixd3tcq9uwKYCvdjRP477Vkz3UVbu2RzeLNP

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-4=-48, 4-7=-48, 13-14=-20, 9-13=-20, 8-9=-20

Concentrated Loads (lb)

Vert: 8=-1175(B) 13=-1383(B) 11=-1453(B) 15=-1410(B) 16=-1435(B) 17=-1438(B) 18=-1414(B) 19=-1387(B)

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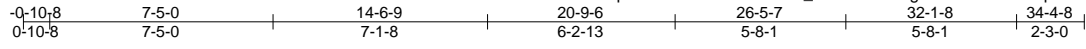
818 Soundside Road  
Edenton, NC 27932

Job 21030011-01	Truss T6A	Truss Type Piggyback Base	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052384
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:31 2021 Page 1

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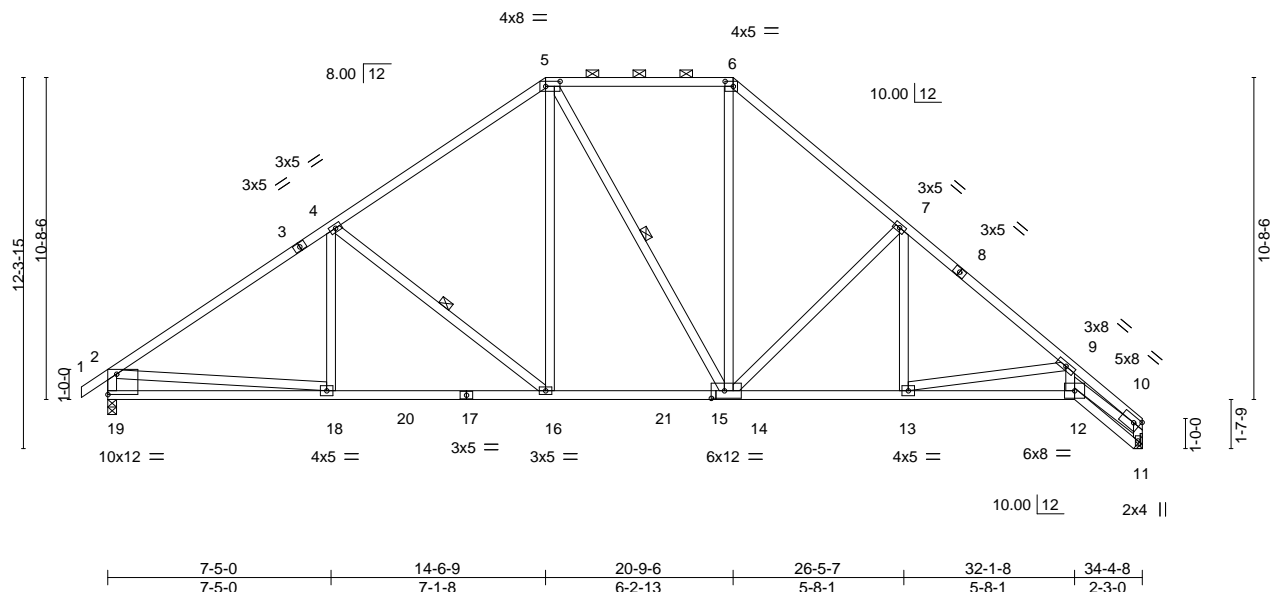


Plate Offsets (X,Y)--	[5:0-5-12,0-2-0], [6:0-3-4,0-2-0], [10:0-2-8,0-2-4], [14:0-5-4,0-3-0], [19:Edge,0-8-2]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.81	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Plate Grip DOL 1.15	BC 0.84	Vert(LL) -0.13 14-16 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.75	Vert(CT) -0.25 12-13 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MSH	Horz(CT) 0.22 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 229 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Sheathed or 2-10-12 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-5 max.): 5-6.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
WEBS 2x4 SP No.2 *Except* 10-11,9-12,2-19: 2x4 SP No.3	WEBS 8-7-1 oc bracing: 12-13. 1 Row at midpt 4-16, 5-14

REACTIONS.
(size) 11=Mechanical, 19=0-3-8 Max Horz 19=243(LC 2) Max Grav 11=1362(LC 2), 19=1426(LC 2)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1858/341, 4-5=-1459/381, 5-6=-1082/372, 6-7=-1523/403, 7-9=-2014/377, 9-10=-3827/656, 10-11=-1358/232, 2-19=-1356/304
BOT CHORD 18-19=-228/508, 16-18=-135/1558, 14-16=0/1155, 13-14=-144/1499, 12-13=-472/2732
WEBS 4-16=-520/197, 5-16=-43/548, 6-14=-102/621, 7-14=-637/236, 7-13=0/371, 9-13=-1254/334, 9-12=-145/1220, 10-12=-514/3045, 2-18=-30/1118

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

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Job 21030011-01	Truss T8	Truss Type Piggyback Base	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052385
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Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:42 2021 Page 1

ID:7p2S9MKN7b?TA?Ttu8od\_hzaiAU-LrCn\_GSWtrrcCRSfge4E6yyVwADuXIBTOAsU4izeLMx

0-10-8	7-5-0	14-6-9	17-7-15	20-9-6	25-8-4	30-7-3	34-4-8
0-10-8	7-5-0	7-1-8	3-1-6	3-1-6	4-10-15	4-10-15	3-9-5

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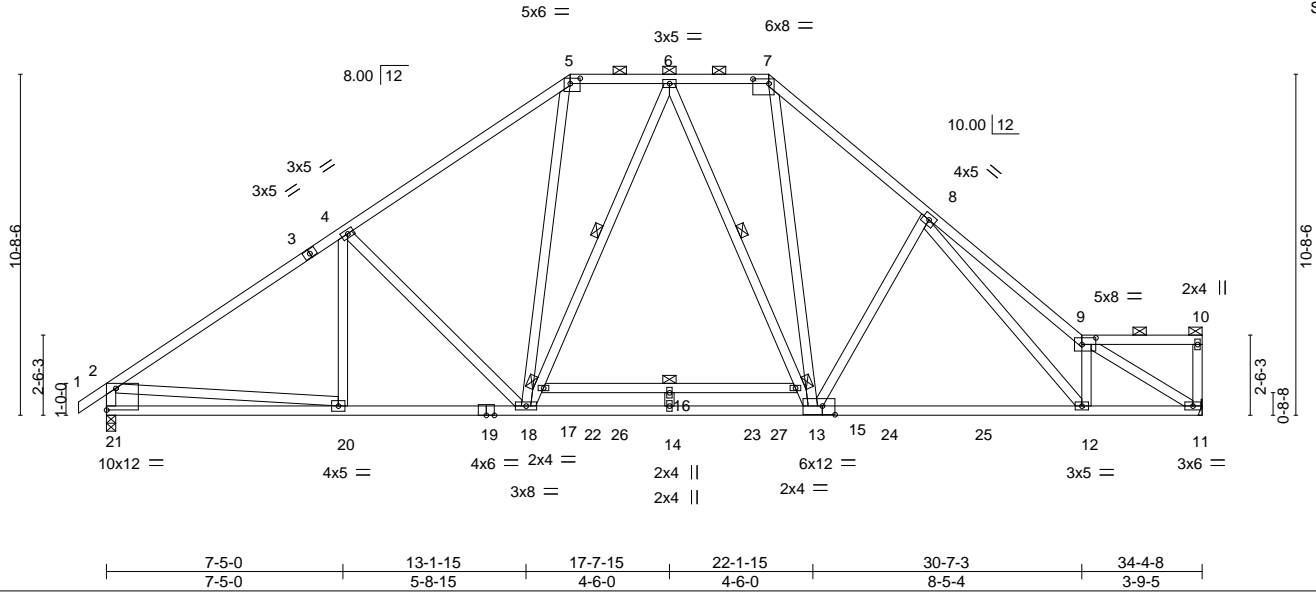


Plate Offsets (X,Y)--	[5:0-3-12,0-2-0], [7:0-6-0,0-1-12], [9:0-5-4,0-2-8], [13:0-4-12,0-3-4], [21:Edge,0-8-2]
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LOADING (psf)	SPACING-	CS.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.84	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Plate Grip DOL 1.15	BC 0.98	Vert(LL) -0.33 14 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.98	Vert(CT) -0.71 14 >579 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MSH	Horz(CT) 0.07 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 252 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Sheathed, except end verticals, and 2-0-0 oc purlins (4-9-7 max.):
BOT CHORD 2x4 SP No.1 *Except* 15-17: 2x4 SP No.2	5-7, 9-10.
WEBS 2x4 SP No.2 *Except* 10-11,9-12,9-11,2-21,14-16: 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 6-0-0 oc bracing: 15-17
	WEBS 1 Row at midpt 6-17, 6-15

**REACTIONS.** (size) 11=Mechanical, 21=0-3-8  
 Max Horz 21=238(LC 12)  
 Max Grav 11=1601(LC 3), 21=1622(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2147/122, 4-5=-1933/141, 5-6=-1424/185, 6-7=-1399/179, 7-8=-2113/161,  
 8-9=-3230/268, 2-21=-1536/168  
 BOT CHORD 20-21=-226/549, 18-20=-86/1829, 14-18=0/1511, 13-14=0/1511, 12-13=-36/1789,  
 11-12=-110/2412  
 WEBS 4-18=-417/246, 5-18=0/759, 17-18=-304/86, 6-15=-252/117, 13-15=-338/56,  
 7-13=0/1103, 8-13=-546/262, 8-12=-191/1095, 9-12=-759/211, 9-11=-2789/101,  
 2-20=0/1352

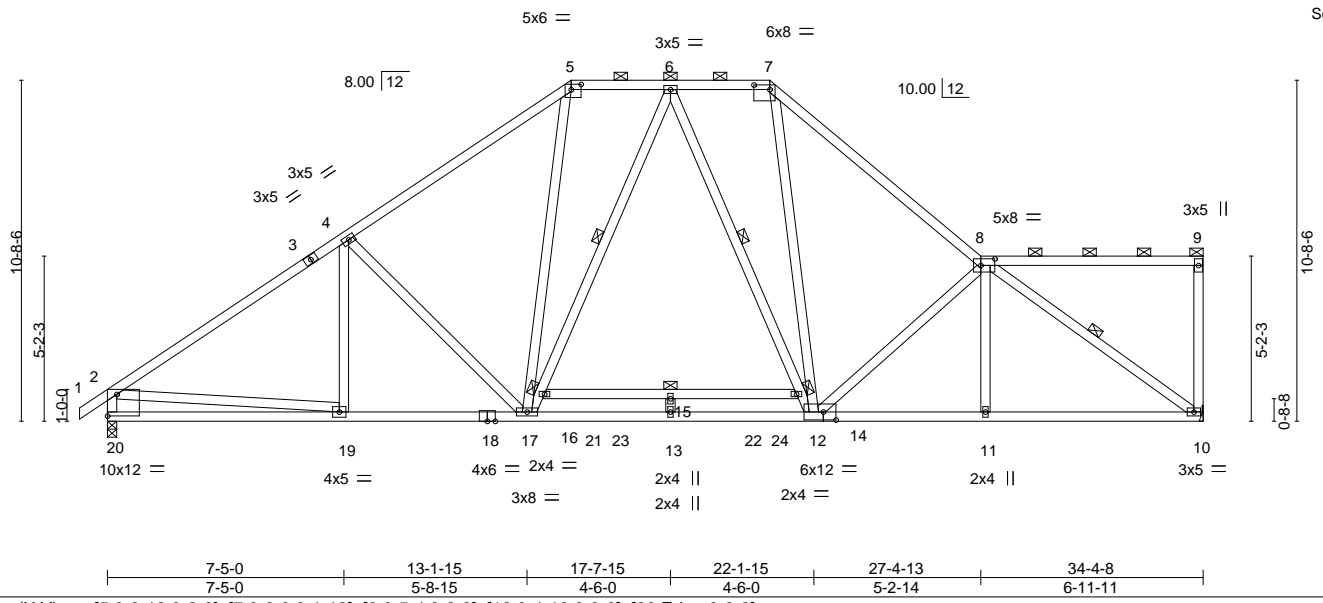
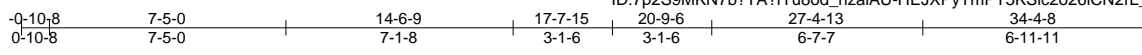
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCWL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 5) 200.0lb AC unit load placed on the bottom chord, 17-7-15 from left end, supported at two points, 5-0-0 apart.
  - 6) Provide adequate drainage to prevent water ponding.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

Job 21030011-01	Truss T9	Truss Type Piggyback Base	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052386
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Job Reference (optional)  
Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:44 2021 Page 1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.84	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Plate Grip DOL 1.15	BC 0.94	Vert(LL) -0.33 15 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.71	Vert(CT) -0.68 15 >598 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MSH	Horz(CT) 0.06 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 253 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* 7-8: 2x4 SP No.1	TOP CHORD Sheathed, except end verticals, and 2-0-0 oc purlins (4-10-0 max.): 5-7, 8-9.
BOT CHORD 2x4 SP 2400F 2.0E *Except* 14-16: 2x4 SP No.2, 12-18: 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 6-0-0 oc bracing: 14-16
WEBS 2x4 SP No.2 *Except* 9-10,8-11,2-20,13-15: 2x4 SP No.3	WEBS 1 Row at midpt 6-16, 6-14, 8-10

**REACTIONS.** (size) 10=Mechanical, 20=0-3-8  
Max Horz 20=266(LC 10)  
Max Grav 10=1550(LC 2), 20=1603(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-2119/122, 4-5=-1900/141, 5-6=-1401/185, 6-7=-1356/186, 7-8=-2042/121,  
2-20=-1520/168  
BOT CHORD 19-20=-364/623, 17-19=-211/1797, 13-17=-16/1472, 12-13=-16/1472, 11-12=-134/1828,  
10-11=-132/1829  
WEBS 4-17=-417/249, 5-17=0/732, 16-17=-272/83, 12-14=-342/54, 7-12=0/983, 8-12=-556/238,  
8-10=-2214/106, 2-19=0/1314

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCWL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 5) 200.0lb AC unit load placed on the bottom chord, 17-7-15 from left end, supported at two points, 5-0-0 apart.
  - 6) Provide adequate drainage to prevent water ponding.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

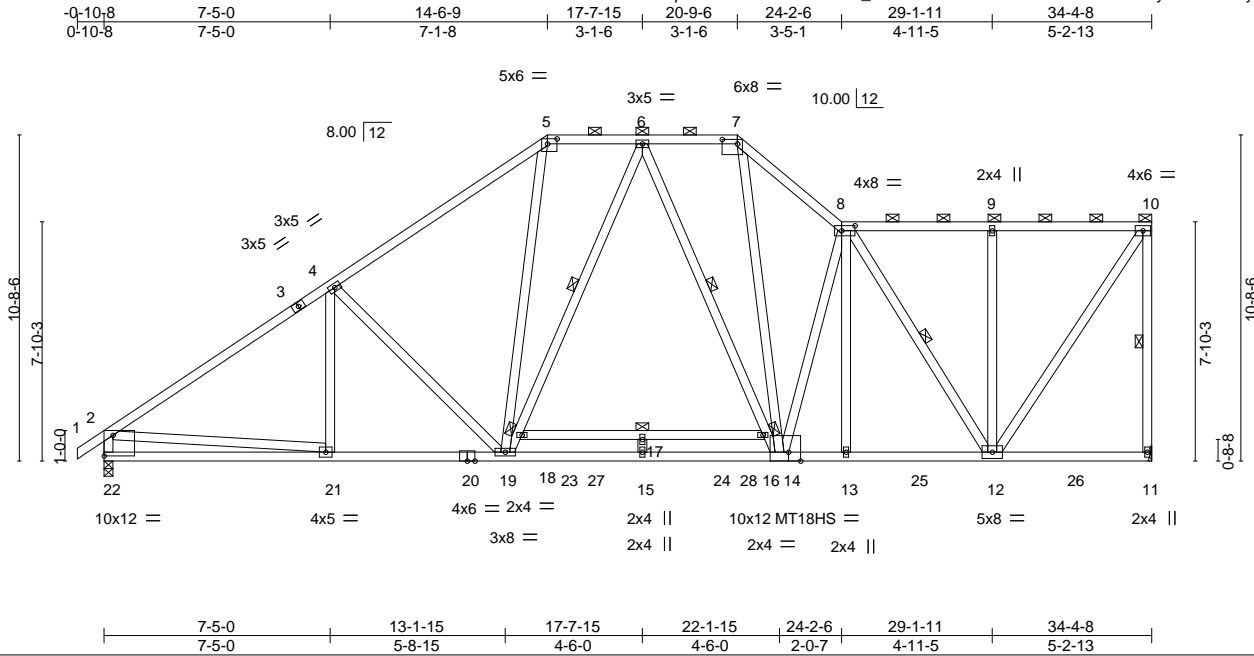
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**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	165 Crossings at AC-Braxton C-Roof	145052387
21030011-01	T10	Piggyback Base	1	1		

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:02 2021 Page 1

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Scale = 1:75.6

LOADING (psf)		SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	-0.29	17	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.61	17	>667	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.04	11	n/a	n/a		
BCLL	0.0 *	Code IRC2015/TPI2014		Matrix-MSH							
BCDL	10.0										Weight: 286 lb FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Sheathed, except end verticals, and 2-0-0 oc purlins (4-9-7 max.):
BOT CHORD	2x4 SP 2400F 2.0E *Except* 16-18: 2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
WEBS	2x4 SP No.2 *Except* 2-22,15-17: 2x4 SP No.3	WEBS	6-0-0 oc bracing: 16-18 1 Row at midpt 10-11, 6-18, 6-16, 8-12


**REACTIONS.** (size) 11=Mechanical, 22=0-3-8  
Max Horz 22=295(LC 12)  
Max Grav 11=1656(LC 3), 22=1624(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-2148/122, 4-5=-1935/140, 5-6=-1429/184, 6-7=-1391/175, 7-8=-2095/177,  
8-9=-987/162, 9-10=-987/162, 10-11=-1562/152, 2-22=-1536/168  
BOT CHORD 21-22=-499/748, 19-21=-323/1822, 15-19=-127/1546, 14-15=-127/1546, 13-14=-149/1637,  
12-13=-151/1633  
WEBS 4-19=-422/252, 5-19=0/753, 18-19=-299/80, 14-16=-350/32, 7-14=-16/1132,  
8-14=-386/331, 8-12=-1180/30, 9-12=-357/170, 10-12=-124/1754, 2-21=0/1339

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 200.0lb AC unit load placed on the bottom chord, 17-7-15 from left end, supported at two points, 5-0-0 apart.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

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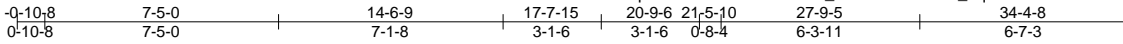


Job 21030011-01	Truss T11	Truss Type Piggyback Base	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052388
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:04 2021 Page 1

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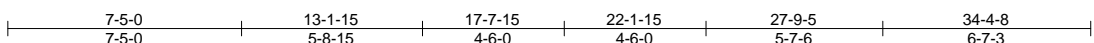
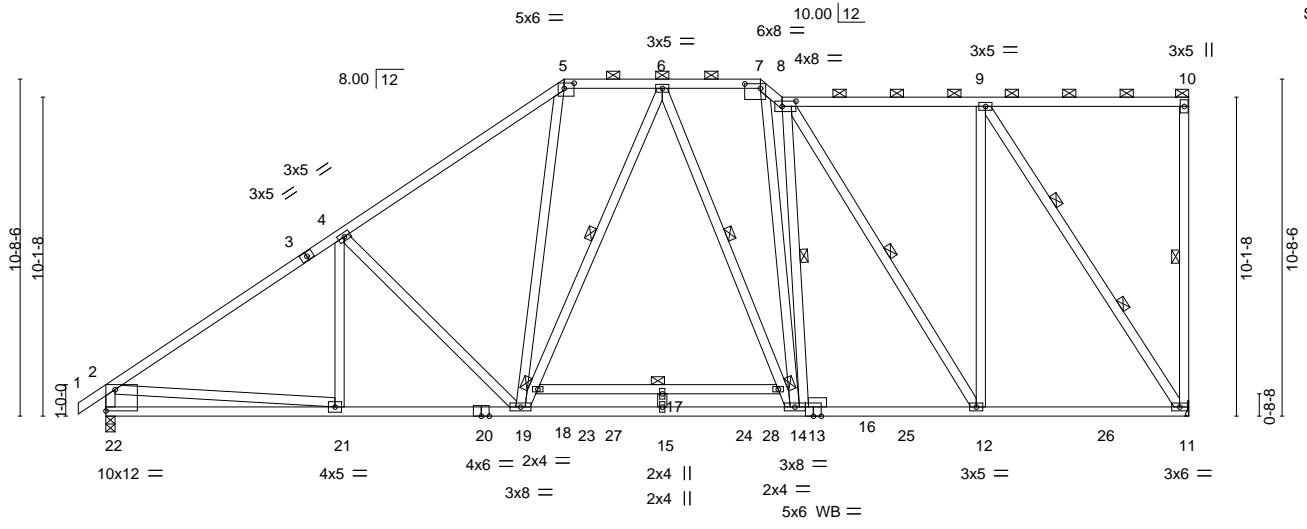


Plate Offsets (X, Y)-- [5:0-3-12,0-2-0], [7:0-6-0,0-1-12], [8:0-5-4,0-2-0], [22:Edge,0-8-2]

<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>		<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.31	15	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.65	15	>631	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.06	11	n/a	n/a		
BCLL	0.0 *	Code IRC2015/TPI2014		Matrix-MSH								
BCDL	10.0											Weight: 292 lb FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\*  
 13-20: 2x4 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 2-22,15-17: 2x4 SP No.3  
 OTHERS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Sheathed, except end verticals, and 2-0-0 oc purlins (4-8-2 max.):  
 5-7, 8-10.  
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except:  
 6-0-0 oc bracing: 16-18  
 WEBS 1 Row at midpt 10-11, 6-18, 6-16, 8-14, 8-12  
 2 Rows at 1/3 pts 9-11

**REACTIONS.** (size) 11=Mechanical, 22=0-3-8  
 Max Horz 22=320(LC 12)  
 Max Grav 11=1690(LC 3), 22=1634(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2166/122, 4-5=-1960/144, 5-6=-1437/187, 6-7=-1449/176, 7-8=-1939/231,  
 8-9=-979/202, 2-22=-1550/168  
 BOT CHORD 21-22=-607/838, 19-21=-409/1826, 15-19=-195/1516, 14-15=-195/1516, 12-14=-170/1539,  
 11-12=-177/971  
 WEBS 4-19=-435/252, 5-19=0/764, 18-19=-327/93, 14-16=-255/61, 7-14=-89/1016,  
 8-14=-454/313, 8-12=-1065/0, 9-12=0/1087, 9-11=-1753/172, 2-21=0/1381

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 5) 200.0lb AC unit load placed on the bottom chord, 17-7-15 from left end, supported at two points, 5-0-0 apart.
  - 6) Provide adequate drainage to prevent water ponding.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

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

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



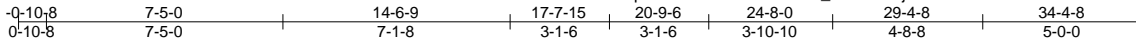
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	165 Crossings at AC-Braxton C-Roof	145052389
21030011-01	T12	Piggyback Base	1	1		
					Job Reference (optional)	

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

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:05 2021 Page 1

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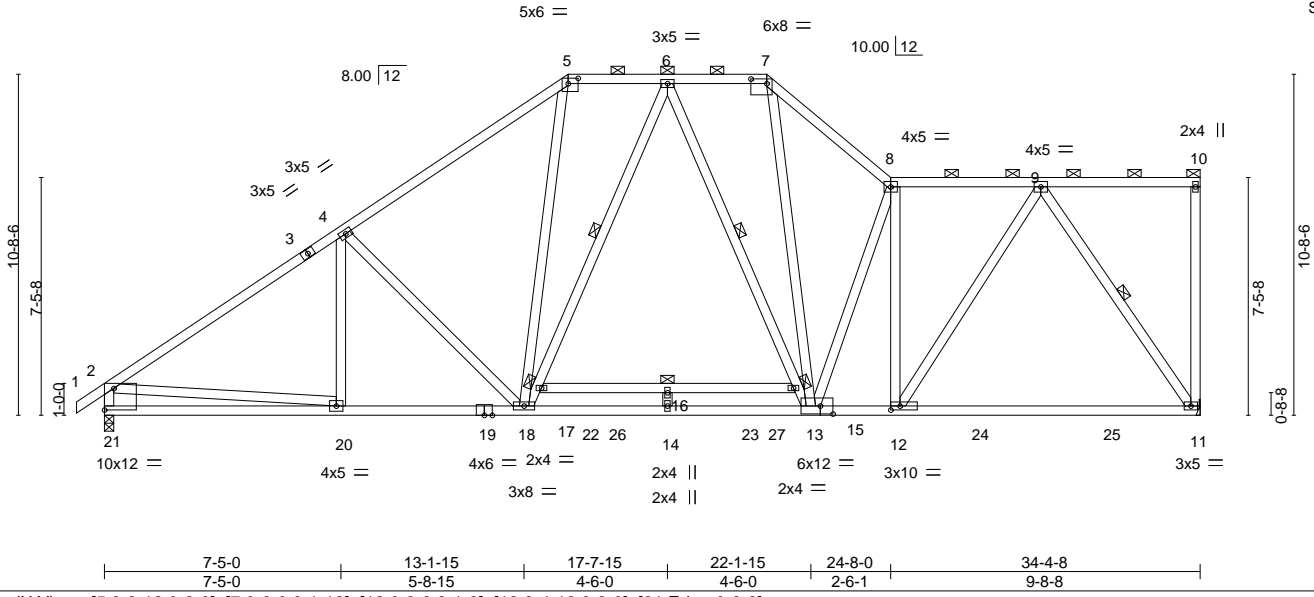


Plate Offsets (X,Y)--		[5:0-3-12,0-2-0], [7:0-6-0,0-1-12], [12:0-3-8,0-1-8], [13:0-4-12,0-3-0], [21:Edge,0-8-2]	
<b>LOADING (psf)</b>		<b>SPACING-</b>	2-0-0
TCLL (roof)	20.0	Plate Grip DOL	1.15
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15
TCDL	10.0	Rep Stress Incr	YES
BCLL	0.0 *	Code	IRC2015/TPI2014
BCDL	10.0		
		<b>CS.I.</b>	
		TC	0.84
		BC	0.95
		WB	0.90
		Matrix	MSH
		<b>DEFL.</b>	
		Vert(LL)	-0.32 14 >999 240
		Vert(CT)	-0.67 14 >609 180
		Horz(CT)	0.05 11 n/a n/a
		<b>PLATES</b>	<b>GRIP</b>
		MT20	244/190
		Weight: 272 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Sheathed, except end verticals, and 2-0-0 oc purlins (4-4-3 max.):
BOT CHORD	2x4 SP 2400F 2.0E *Except*	BOT CHORD	5-7, 8-10.
	15-17: 2x4 SP No.2, 13-19: 2x4 SP No.1		Rigid ceiling directly applied or 2-2-0 oc bracing. Except:
WEBS	2x4 SP No.2 *Except*	WEBS	6-0-0 oc bracing: 15-17
	2-21,14-16: 2x4 SP No.3		1 Row at midpt 6-17, 6-15, 9-11

**REACTIONS.** (size) 11=Mechanical, 21=0-3-8  
 Max Horiz 21=291(LC 12)  
 Max Grav 11=1640(LC 3), 21=1621(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2142/122, 4-5=-1928/141, 5-6=-1423/184, 6-7=-1389/174, 7-8=-2054/165, 8-9=-1678/139, 2-21=-1533/168  
 BOT CHORD 20-21=-479/730, 18-20=-307/1818, 14-18=-106/1502, 13-14=-106/1502, 12-13=-132/1698, 11-12=-148/965  
 WEBS 4-18=-422/251, 5-18=0/751, 17-18=-296/83, 6-15=-252/92, 13-15=-337/33, 7-13=0/1087, 8-13=-517/252, 8-12=-991/12, 9-12=0/1327, 9-11=-1689/163, 2-20=0/1335

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 200.0lb AC unit load placed on the bottom chord, 17-7-15 from left end, supported at two points, 5-0-0 apart.
  - Provide adequate drainage to prevent water ponding.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

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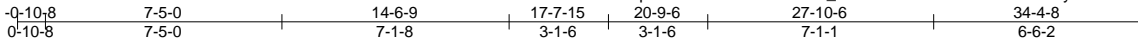
**ENGINEERING BY TRESCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job 21030011-01	Truss T13	Truss Type Piggyback Base	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052390
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:07 2021 Page 1

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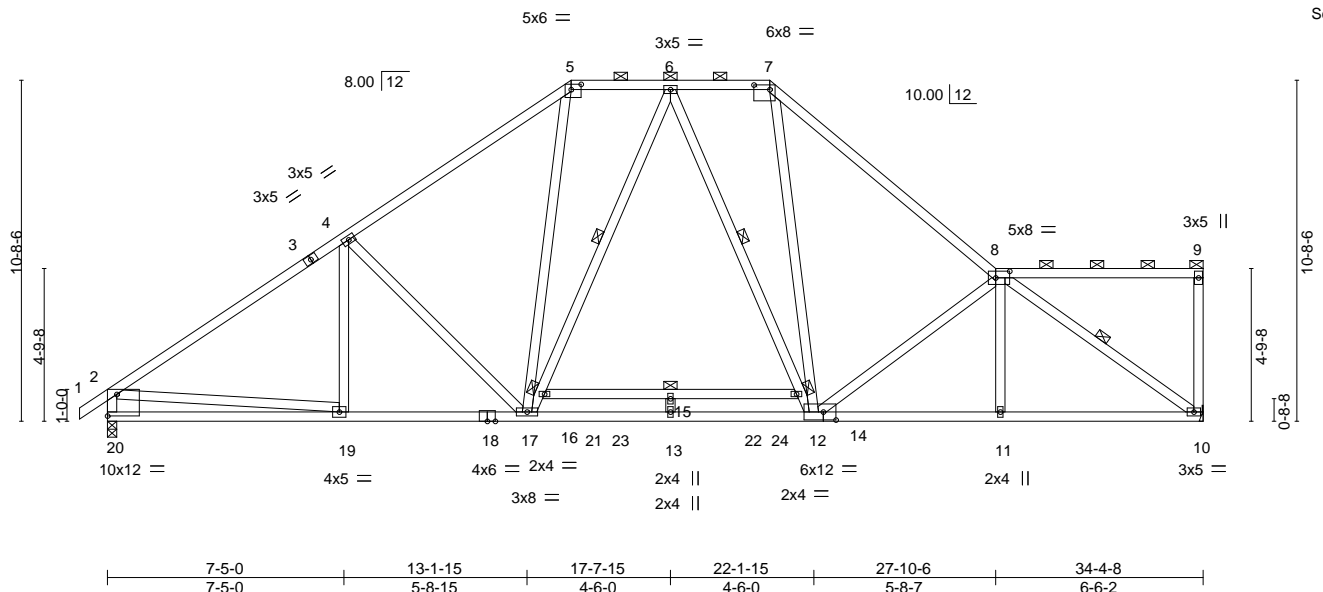


Plate Offsets (X,Y)--	[5:0-3-12,0-2-0], [7:0-6-0,0-1-12], [8:0-5-4,0-2-8], [12:0-4-12,0-3-0], [20:Edge,0-8-2]
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LOADING (psf)	SPACING-	CS.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.84	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Plate Grip DOL 1.15	BC 0.94	Vert(LL) -0.33 15 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.63	Vert(CT) -0.68 15 >599 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MSH	Horz(CT) 0.06 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 252 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* 7-8: 2x4 SP 2400F 2.0E	TOP CHORD Sheathed, except end verticals, and 2-0-0 oc purlins (4-9-14 max.): 5-7, 8-9.
BOT CHORD 2x4 SP 2400F 2.0E *Except* 14-16: 2x4 SP No.2, 12-18: 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 6-0-0 oc bracing: 14-16
WEBS 2x4 SP No.2 *Except* 9-10,8-11,2-20,13-15: 2x4 SP No.3	WEBS 1 Row at midpt 6-16, 6-14, 8-10

**REACTIONS.** (size) 10=Mechanical, 20=0-3-8  
Max Horz 20=262(LC 10)  
Max Grav 10=1550(LC 2), 20=1603(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-2119/122, 4-5=-1900/141, 5-6=-1401/185, 6-7=-1358/188, 7-8=-2047/112,  
2-20=-1520/168  
BOT CHORD 19-20=-344/604, 17-19=-193/1797, 13-17=0/1472, 12-13=0/1472, 11-12=-135/1872,  
10-11=-133/1873  
WEBS 4-17=-416/248, 5-17=0/731, 16-17=-270/83, 12-14=-340/57, 7-12=0/966, 8-12=-581/242,  
8-10=-2261/112, 2-19=0/1313

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 5) 200.0lb AC unit load placed on the bottom chord, 17-7-15 from left end, supported at two points, 5-0-0 apart.
  - 6) Provide adequate drainage to prevent water ponding.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

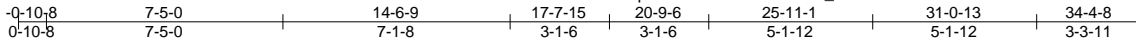
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	165 Crossings at AC-Braxton C-Roof	145052391
21030011-01	T14	Piggyback Base	1	1		

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:08 2021 Page 1

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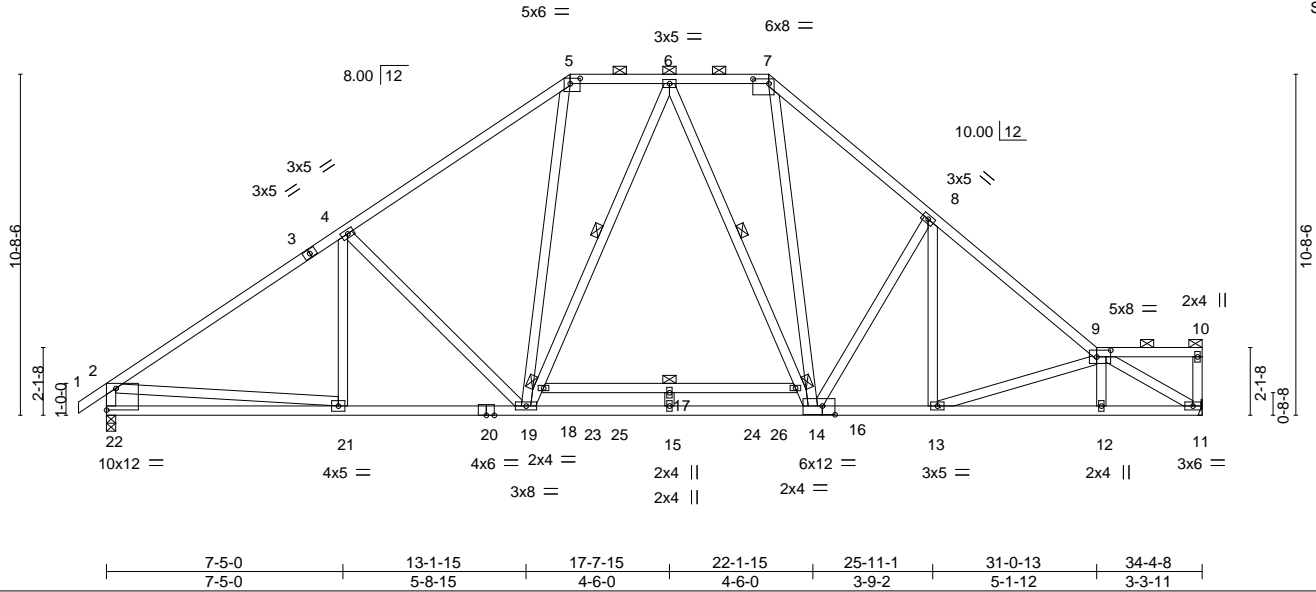


Plate Offsets (X,Y)--	[5:0-3-12,0-2-0], [7:0-6-0,0-1-12], [9:0-5-4,0-2-8], [14:0-4-12,0-3-4], [22:Edge,0-8-2]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.84	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Plate Grip DOL 1.15	BC 0.95	Vert(LL) -0.32 15 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.80	Vert(CT) -0.68 15 >600 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MSH	Horz(CT) 0.06 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 255 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Sheathed, except end verticals, and 2-0-0 oc purlins (4-10-0 max.): 5-7, 9-10.
BOT CHORD 2x4 SP 2400F 2.0E *Except* 16-18: 2x4 SP No.2, 14-20: 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 15-19,14-15. 6-0-0 oc bracing: 16-18
WEBS 2x4 SP No.2 *Except* 10-11,9-12,9-11,2-22,15-17: 2x4 SP No.3	WEBS 1 Row at midpt 6-18, 6-16

**REACTIONS.** (size) 11=Mechanical, 22=0-3-8  
Max Horz 22=233(LC 10)  
Max Grav 11=1550(LC 2), 22=1603(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-2120/122, 4-5=-1899/141, 5-6=-1398/185, 6-7=-1353/177, 7-8=-2046/157, 8-9=-2272/115, 2-22=-1520/168  
BOT CHORD 21-22=-214/559, 19-21=-67/1800, 15-19=0/1476, 14-15=0/1476, 13-14=-27/1713, 12-13=-115/2461, 11-12=-109/2467  
WEBS 4-19=-414/246, 5-19=0/742, 18-19=-278/87, 6-16=-252/121, 14-16=-340/62, 7-14=0/1056, 8-14=-551/275, 8-13=-57/293, 9-13=-818/125, 9-11=-2806/102, 2-21=0/1314

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 5) 200.0lb AC unit load placed on the bottom chord, 17-7-15 from left end, supported at two points, 5-0-0 apart.
  - 6) Provide adequate drainage to prevent water ponding.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 5, 2021

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

Job 21030011-01	Truss T6AGE	Truss Type GABLE	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052392
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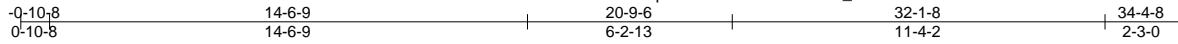
Carter Components (Sanford),

Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:33 2021 Page 1

ID:7p2S9MKN7b?TA?FTu8od\_hzaiAU-669N5BL?4iud2GwfFQ7F247UYNSwRf8JGBVHjeLN4

Job Reference (optional)



Scale = 1:70.1

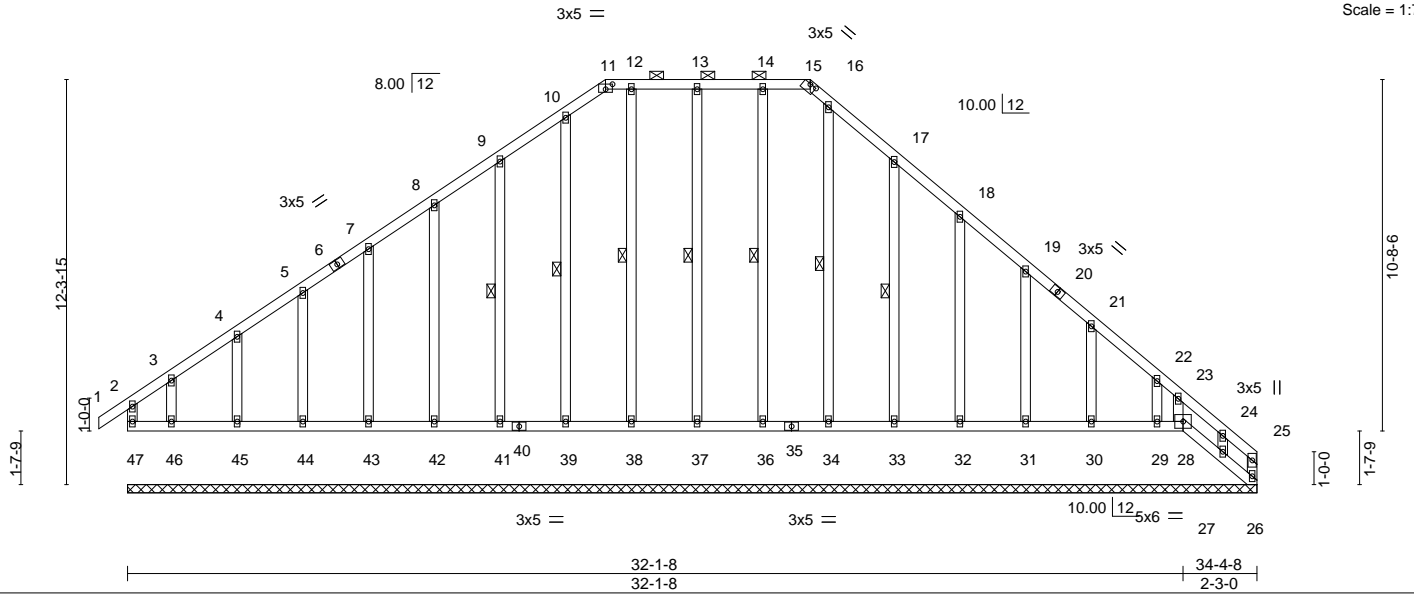


Plate Offsets (X, Y)-- [11:0-2-8,0-1-13], [15:0-2-8,0-0-3]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.18	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 18.9/20.0	Plate Grip DOL 1.15	BC 0.10	Vert(LL) -0.00 1 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.10	Vert(CT) -0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.02 25 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 270 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\*  
 5-44,4-45,3-46,19-31,21-30,22-29,24-27: 2x4 SP No.3

**BRACING-**  
 TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-15.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 13-37, 12-38, 10-39, 9-41, 14-36, 16-34, 17-33

**REACTIONS.** All bearings 34-4-8.  
 (lb) - Max Horz 47=243(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 26, 37, 41, 42, 43, 44, 45, 33, 32, 31, 30, 29 except 25=112(LC 12), 47=150(LC 9), 28=126(LC 12), 46=137(LC 10), 27=204(LC 14)  
 Max Grav All reactions 250 lb or less at joint(s) 26, 25, 47, 28, 37, 38, 39, 41, 42, 43, 44, 45, 46, 36, 34, 33, 32, 31, 30, 29, 27

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 9-10=-258/300, 10-11=-265/306, 11-12=-244/291, 12-13=-244/291, 13-14=-244/291, 14-15=-244/291, 15-16=-235/269, 16-17=-293/339

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 25 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 26, 37, 41, 42, 43, 44, 45, 33, 32, 31, 30, 29 except (jt=lb) 25=112, 47=150, 28=126, 46=137, 27=204.



March 5, 2021

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
 Edenton, NC 27932

Job 21030011-01	Truss T6AGE	Truss Type GABLE	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof I45052392 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:34 2021 Page 2  
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**NOTES-**

- 14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 47, 28, 37, 38, 39, 41, 42, 43, 44, 45, 46, 36, 34, 33, 32, 31, 30, 29, 27.
- 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

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



818 Soundside Road  
Edenton, NC 27932

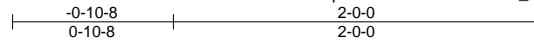
Job 21030011-01	Truss T2GE	Truss Type Monopitch Supported Gable	Qty 2	Ply 1	165 Crossings at AC-Braxton C-Roof Job Reference (optional)	145052393
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Carter Components (Sanford),

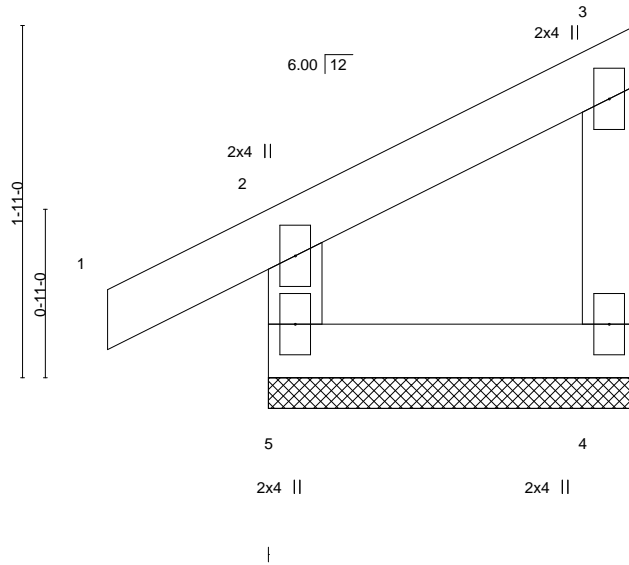
Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:19 2021 Page 1

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Scale = 1:12.5



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.11	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) -0.00 1 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) -0.00 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 11 lb	FT = 20%

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

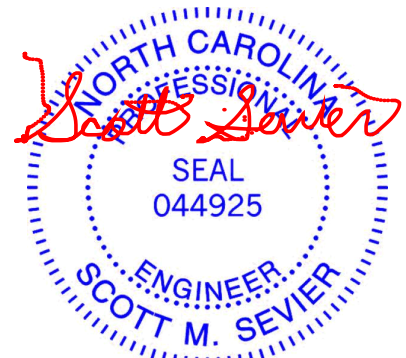
**BRACING-**  
TOP CHORD Sheathed or 2-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 5=2-0-0, 4=2-0-0  
Max Horz 5=53(LC 12)  
Max Uplift 5=8(LC 15), 4=18(LC 12)  
Max Grav 5=148(LC 2), 4=53(LC 29)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 8) Gable studs spaced at 2-0-0 oc.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 4.



March 5, 2021

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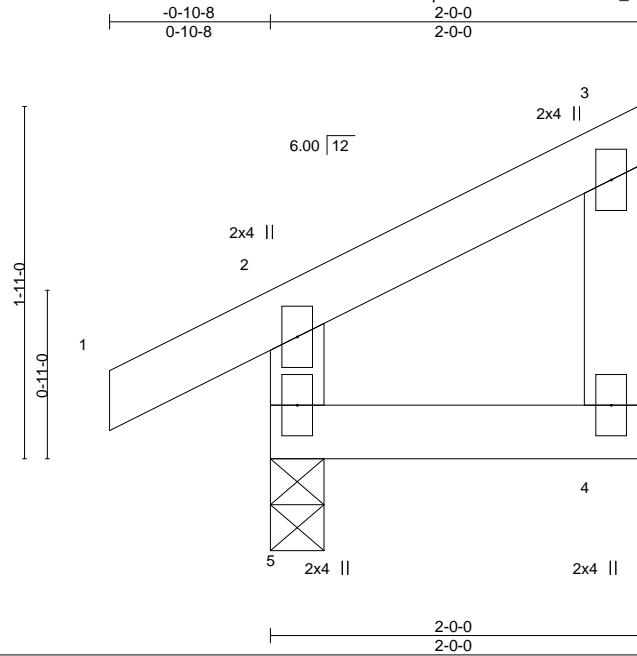
818 Soundside Road  
Edenton, NC 27932

Job 21030011-01	Truss T2	Truss Type Monopitch	Qty 2	Ply 1	165 Crossings at AC-Braxton C-Roof Job Reference (optional)	145052394
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:18 2021 Page 1

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Scale = 1:12.5

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.11	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) 0.00 5 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.00 5 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MR	Horz(CT) -0.00 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 11 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Sheathed or 2-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 4=Mechanical, 5=0-3-8  
Max Horz 5=53(LC 12)  
Max Uplift 4=-18(LC 12), 5=-8(LC 15)  
Max Grav 4=53(LC 29), 5=148(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5.



March 5, 2021



Job 21030011-01	Truss T3GE	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052395
Carter Components (Sanford), Sanford, NC - 27332,					8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:21 2021 Page 1	
					Job Reference (optional)	

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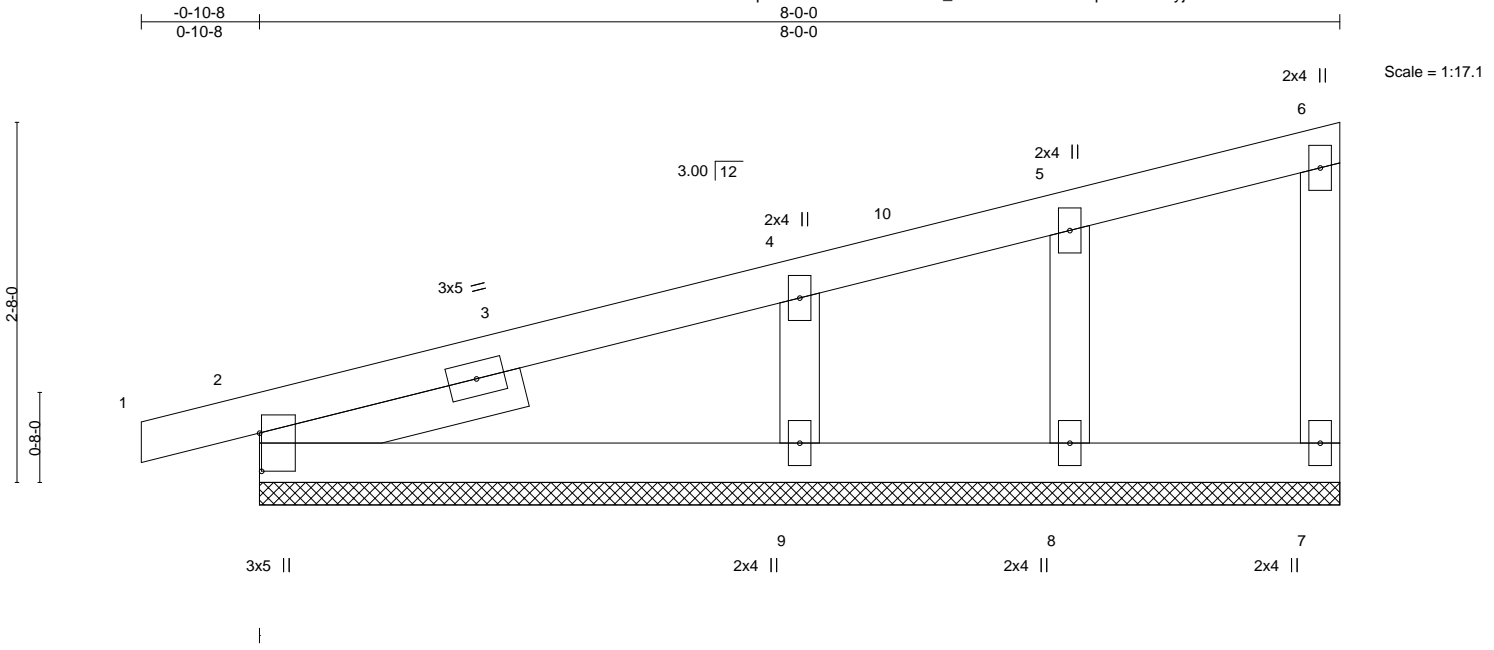


Plate Offsets (X,Y)-- [2:0-3-6,0-0-3]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.20	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.09	Vert(LL) 0.00 1 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.06	Vert(CT) 0.01 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 7 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 36 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 -t 2-0-1	

**REACTIONS.** All bearings 8-0-0.  
 (lb) - Max Horz 2=70(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 8, 9  
 Max Grav All reactions 250 lb or less at joint(s) 7, 2, 8 except 9=303(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Gable studs spaced at 2-0-0 oc.
  - 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8, 9.



March 5, 2021

Job 21030011-01	Truss T3	Truss Type Monopitch	Qty 4	Ply 1	165 Crossings at AC-Braxton C-Roof	145052396
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:20 2021 Page 1

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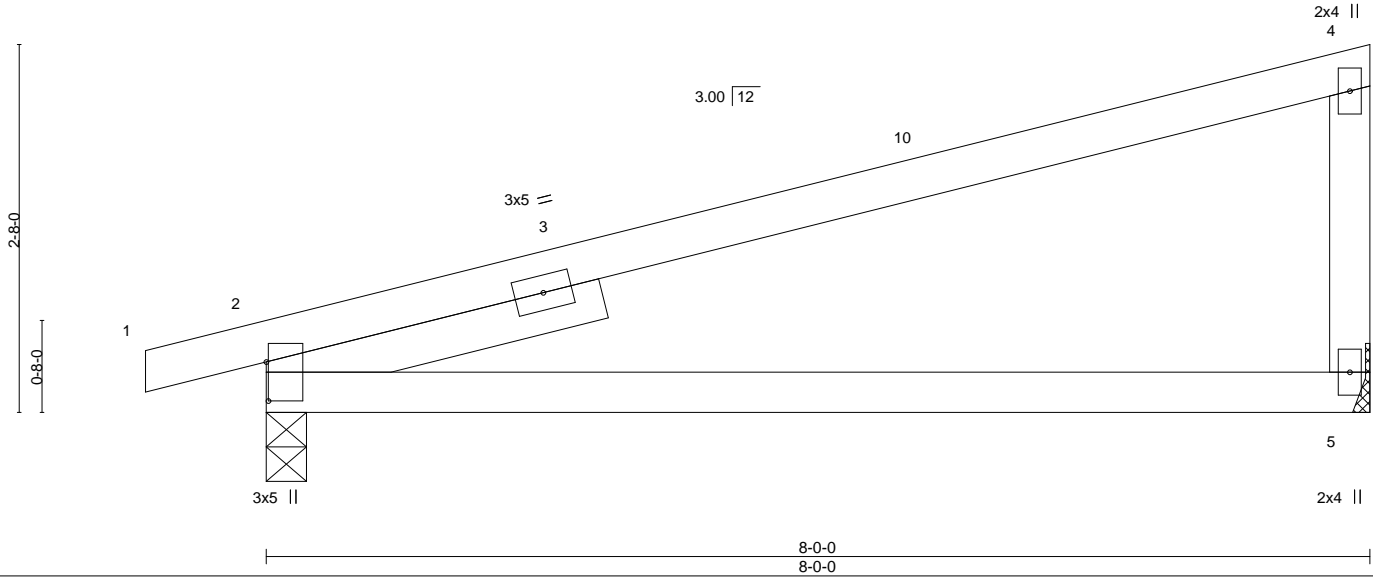


Plate Offsets (X,Y)-- [2:0-3-6,0-0-3]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.80	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.69	Vert(LL) 0.17 5-8 >553 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.36 5-8 >261 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MP	Horz(CT) 0.06 2 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 32 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -t 2-6-0

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

**REACTIONS.** (size) 5=Mechanical, 2=0-3-8  
Max Horz 2=72(LC 14)  
Max Uplift 5=-15(LC 15), 2=-34(LC 11)  
Max Grav 5=311(LC 2), 2=370(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-319/65

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.



March 5, 2021

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

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



818 Soundside Road  
Edenton, NC 27932

Job 21030011-01	Truss T4	Truss Type Half Hip	Qty 5	Ply 1	165 Crossings at AC-Braxton C-Roof	145052397
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:22 2021 Page 1

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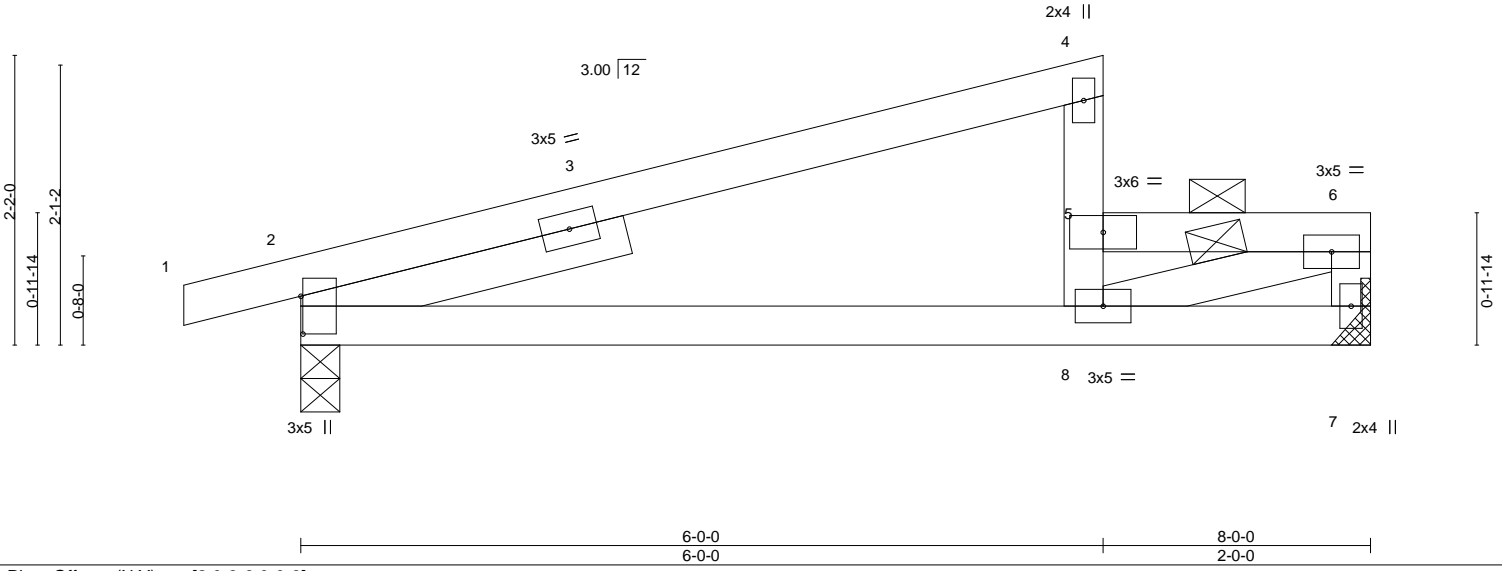


Plate Offsets (X, Y)-- [2:0-3-6,0-0-3]												
<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.06	8-11	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.12	8-11	>755	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.46	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 35 lb	FT = 20%

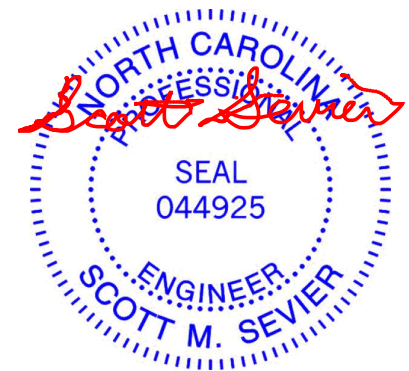
<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-7-11 max.): 5-8, 5-6.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3 *Except*		
	4-8: 2x4 SP No.1		
SLIDER	Left 2x4 SP No.3 -t 2-6-0		

**REACTIONS.** (size) 7=Mechanical, 2=0-3-8  
 Max Horz 2=71(LC 15)  
 Max Uplift 7=-11(LC 15), 2=-32(LC 11)  
 Max Grav 7=475(LC 2), 2=460(LC 35)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-407/143, 5-8=-264/171, 5-6=-1038/415, 6-7=-464/205  
 BOT CHORD 2-8=-190/395  
 WEBS 6-8=-448/1100

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 7-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - 6) Provide adequate drainage to prevent water ponding.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 135 lb down and 46 lb up at 5-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard  
 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15



March 5, 2021

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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Job 21030011-01	Truss T4	Truss Type Half Hip	Qty 5	Ply 1	165 Crossings at AC-Braxton C-Roof I45052397 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:22 2021 Page 2  
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**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-4=-48, 5-6=-98, 7-9=-20

Concentrated Loads (lb)

Vert: 4=-120

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

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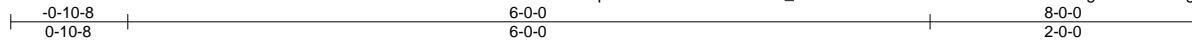
818 Soundside Road  
Edenton, NC 27932

Job 21030011-01	Truss T4GR	Truss Type HALF HIP	Qty 2	Ply 2	165 Crossings at AC-Braxton C-Roof Job Reference (optional)	145052398
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:23 2021 Page 1

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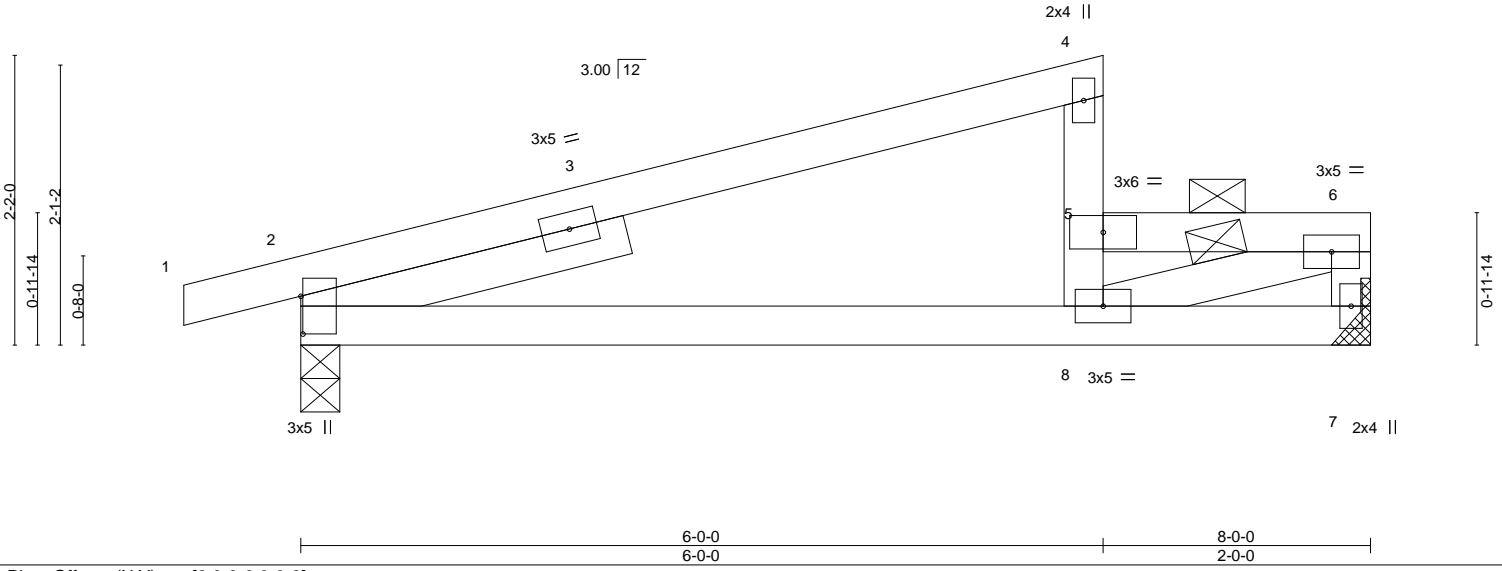


PLATE OFFSETS (X, Y)-- [2:0-3-6,0-0-3]											
<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.03 8-11	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.07 8-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.22	Horz(CT)	0.01 2	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 70 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-8, 5-6.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3		
SLIDER	Left 2x4 SP No.3 -t 2-6-0		

**REACTIONS.** (size) 7=Mechanical, 2=0-3-8  
 Max Horz 2=71(LC 11)  
 Max Uplift 7=-14(LC 11), 2=-32(LC 7)  
 Max Grav 7=563(LC 2), 2=455(LC 31)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-385/2, 5-8=-251/48, 5-6=-982/42, 6-7=-547/23  
 BOT CHORD 2-8=-17/374  
 WEBS 6-8=-39/1040

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard  
 Continued on page 2



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

Job 21030011-01	Truss T4GR	Truss Type HALF HIP	Qty 2	Ply <b>2</b>	165 Crossings at AC-Braxton C-Roof I45052398 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:24 2021 Page 2  
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**LOAD CASE(S)** Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-4=-48, 5-6=-198, 7-9=-20

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

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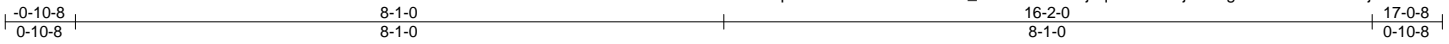
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	165 Crossings at AC-Braxton C-Roof	145052399
21030011-01	T1GE	Common Supported Gable	1	1	Job Reference (optional)	

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

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:17 2021 Page 1

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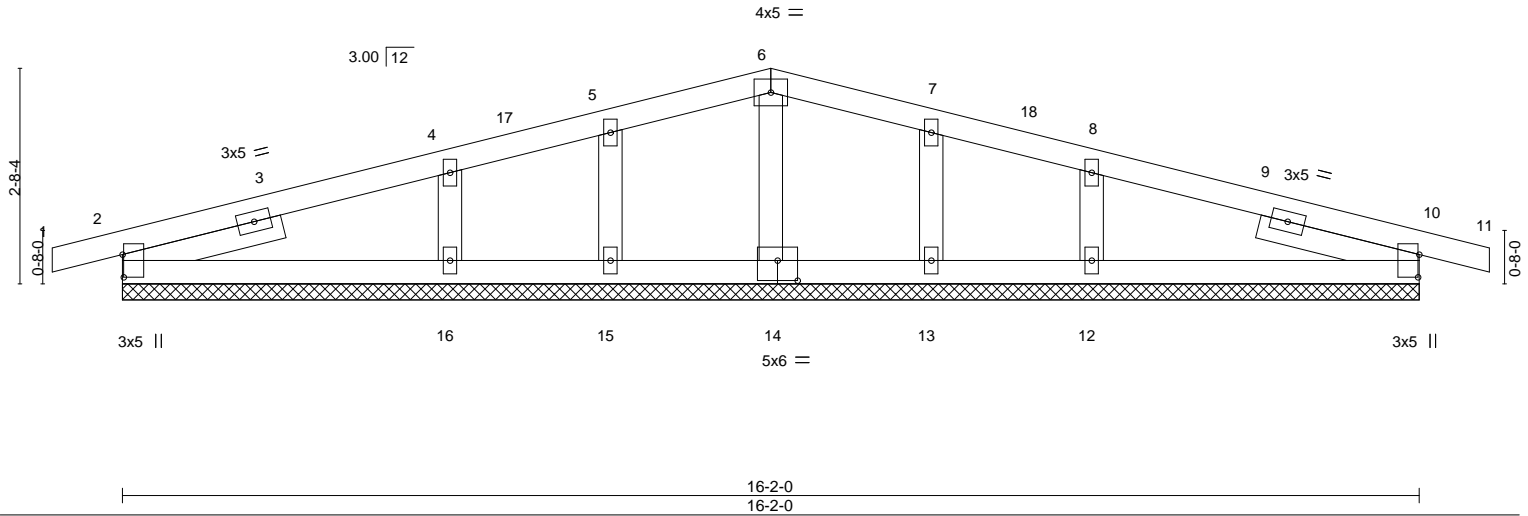


Plate Offsets (X,Y)--	[2:0-3-6,0-0-3], [10:0-3-6,0-0-3], [14:0-3-0,0-3-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.17	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Plate Grip DOL 1.15	BC 0.10	Vert(LL) 0.00 11 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.04	Vert(CT) 0.01 11 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 69 lb	FT = 20%

<b>LUMBER-</b>	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -t 2-0-9, Right 2x4 SP No.3 -t 2-0-9

<b>BRACING-</b>	
TOP CHORD	Sheathed or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 16-2-0.  
 (lb) - Max Horz 2--22(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 15, 16, 13, 12, 10  
 Max Grav All reactions 250 lb or less at joint(s) 2, 14, 15, 13, 10 except 16=299(LC 34), 12=300(LC 35)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 15, 16, 13, 12, 10.



March 5, 2021

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ENGINEERING BY  
**TRENCO**  
 A MITEK AFFILIATE  
 818 Soundside Road  
 Edenton, NC 27932

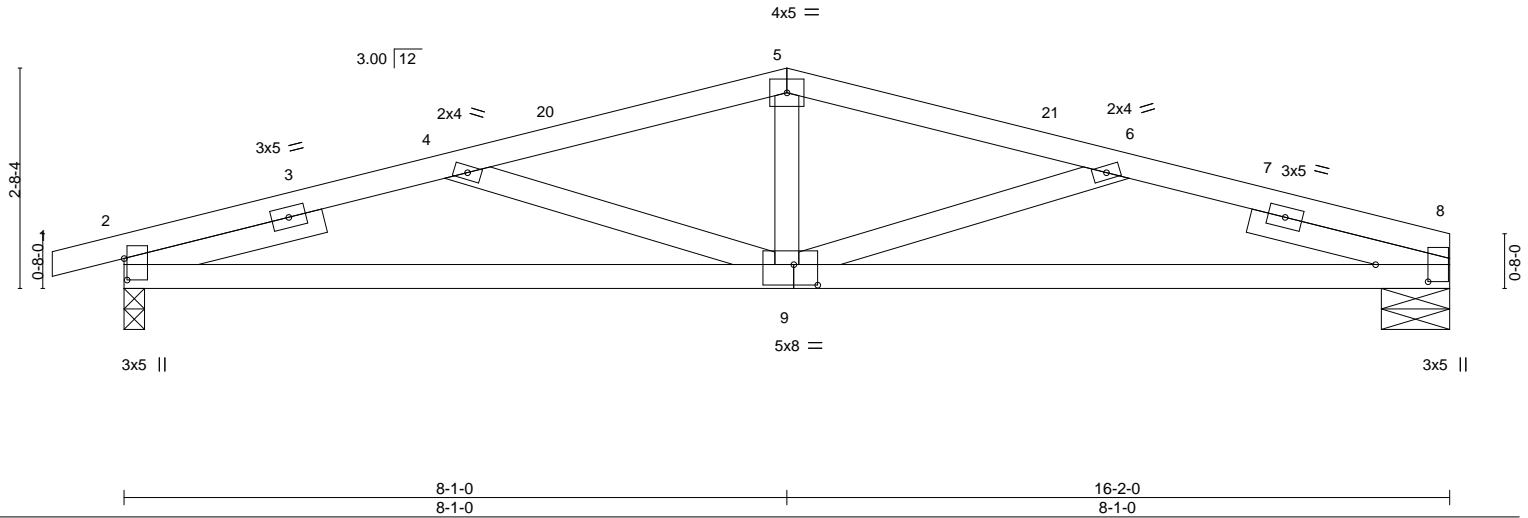
Job 21030011-01	Truss T1	Truss Type Common	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052400
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Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:01 2021 Page 1

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Scale = 1:28.1



<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>		<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.05	9	>999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.12	9-18	>999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.03	8	n/a		
BCLL	0.0 *	Code IRC2015/TPI2014		Matrix-MSH							
BCDL	10.0									Weight: 73 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Sheathed or 4-8-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-10-15 oc bracing.

**REACTIONS.** (size) 8=0-10-0, 2=0-3-0  
Max Horz 2=25(LC 15)  
Max Uplift 8=6(LC 12), 2=32(LC 11)  
Max Grav 8=662(LC 2), 2=684(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1391/396, 4-5=-1135/281, 5-6=-1142/280, 6-8=-1286/370  
BOT CHORD 2-9=-346/1333, 8-9=-318/1217  
WEBS 5-9=0/257, 4-9=-325/150

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2.



March 5, 2021

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Job 21030011-01	Truss T1A	Truss Type Common	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052401
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Carter Components (Sanford), Sanford, NC - 27332,

8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:15 2021 Page 1

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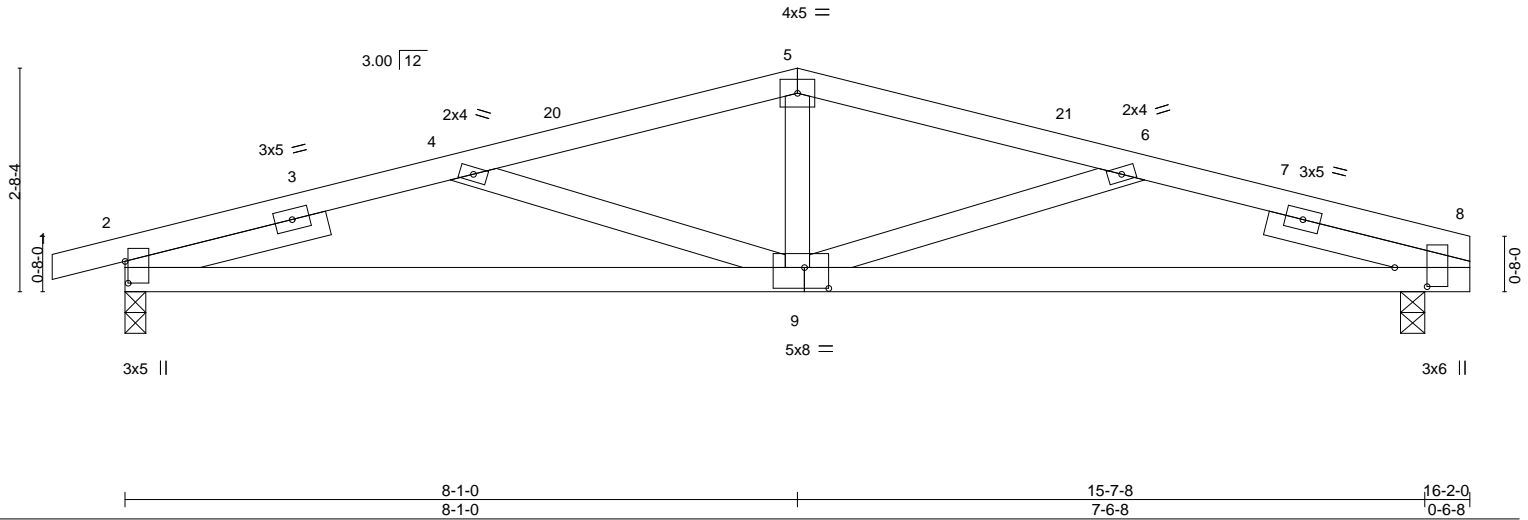


Plate Offsets (X,Y)--	[2:0-3-2,0-0-7], [8:0-2-12,0-4-11], [9:0-3-8,0-3-0]							
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.35	Vert(LL) -0.05	9	>999	240	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Lumber DOL 1.15	BC 0.50	Vert(CT) -0.12	9-18	>999	180		
TCDL 10.0	Rep Stress Incr YES	WB 0.12	Horz(CT) 0.03	8	n/a	n/a		
BCLL 0.0 *	Code IRC2015/TPI2014	Matrix-MSH						
BCDL 10.0							Weight: 73 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Sheathed or 4-9-2 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-11-9 oc bracing.

**REACTIONS.** (size) 8=0-3-8, 2=0-3-0  
Max Horz 2=25(LC 15)  
Max Uplift 8=6(LC 12), 2=32(LC 11)  
Max Grav 8=668(LC 2), 2=678(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1375/392, 4-5=-1115/276, 5-6=-1121/275, 6-8=-1238/358  
BOT CHORD 2-9=-342/1318, 8-9=-305/1167  
WEBS 4-9=-328/151

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCWL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2.



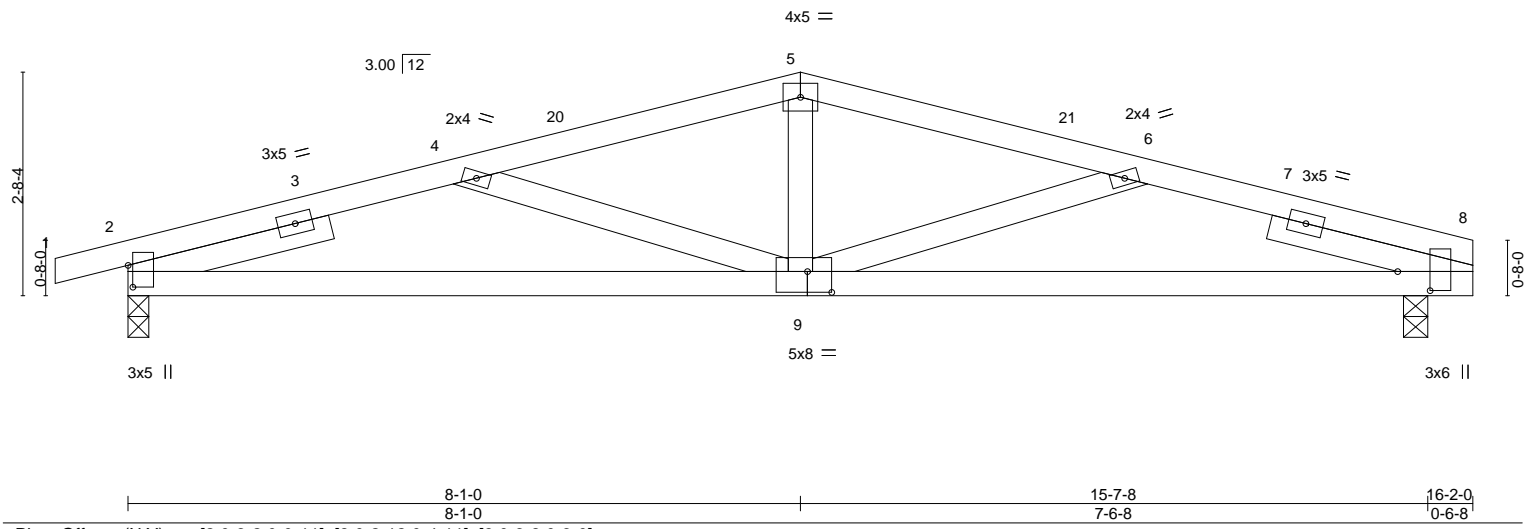
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job 21030011-01	Truss T1AA	Truss Type Common	Qty 1	Ply 1	165 Crossings at AC-Braxton C-Roof	145052402
Carter Components (Sanford), Sanford, NC - 27332,					8.430 s Feb 12 2021 MiTek Industries, Inc. Thu Mar 4 09:22:16 2021 Page 1	
Job Reference (optional)					ID:7p2S9MKN7b?TA?FTu8od_hzaiAU-6rddyXN7C?sZI5RTf9Ac83TiAJhUYRiBeP7Z6BCzeLNl	



Scale = 1:27.7



LOADING (psf)	SPACING-	1-11-4	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL	1.15	TC 0.34	Vert(LL)	-0.05	9	>999	MT20	244/190
Snow (Pf/Pg) 13.9/20.0	Lumber DOL	1.15	BC 0.48	Vert(CT)	-0.12	9-18	>999		
TCDL 10.0	Rep Stress Incr	YES	WB 0.12	Horz(CT)	0.03	8	n/a		
BCLL 0.0 *	Code	IRC2015/TPI2014	Matrix-MSH						
BCDL 10.0								Weight: 73 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Sheathed or 4-10-5 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 8=0-3-8, 2=0-3-0  
Max Horz 2=24(LC 15)  
Max Uplift 8=6(LC 12), 2=31(LC 11)  
Max Grav 8=647(LC 2), 2=657(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1332/380, 4-5=-1080/267, 5-6=-1086/266, 6-8=-1199/347  
BOT CHORD 2-9=-331/1277, 8-9=-296/1130  
WEBS 4-9=-318/146

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
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# 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/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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



# General Safety Notes

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

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