

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 19610-19610A  
Pinehurst C Vault

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I35695768 thru I35695773

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

North Carolina COA: C-0844



January 2, 2019

Sevier, Scott

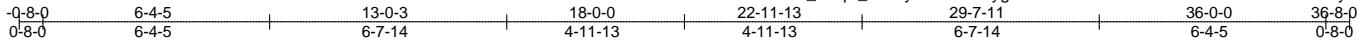
**IMPORTANT NOTE:** Truss Engineer's responsibility is solely for design of individual trusses based upon design parameters shown on referenced truss drawings. Parameters have not been verified as appropriate for any use. Any location identification specified is for file reference only and has not been used in preparing design. Suitability of truss designs for any particular building is the responsibility of the building designer, not the Truss Engineer, per ANSI/TPI-1, Chapter 2.

Job 19610-19610A	Truss T1	Truss Type ROOF TRUSS	Qty 3	Ply 1	Pinehurst C Vault	135695768
---------------------	-------------	--------------------------	----------	----------	-------------------	-----------

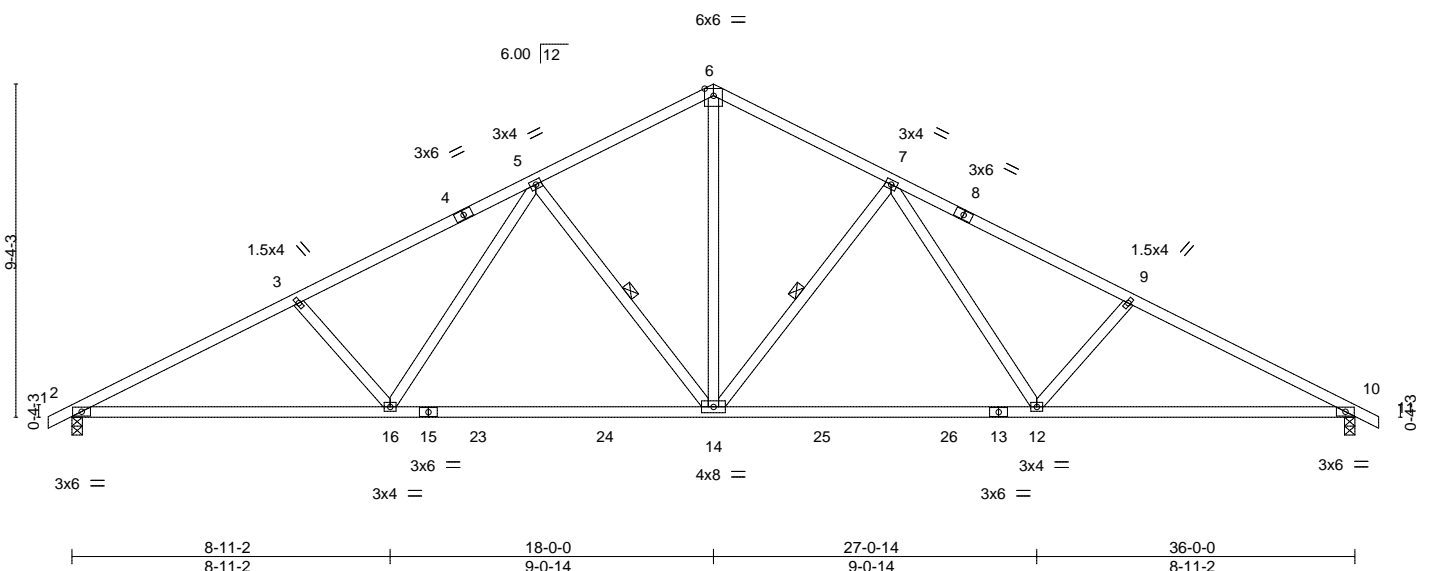
84 Components, Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Dec 31 07:39:31 2018 Page 1

ID:1?J1fE9KDJT\_RLqY\_LzZ2yKaGd-D?lfygv7R8m6EbuRSiTm7kZ7JCE5B8fMwsauUGy3WBg



Scale = 1:64.7



<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 20.0	Plate Grip DOL	1.15	TC 0.55	Vert(LL)	-0.25 14-16	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.93	Vert(CT)	-0.46 14-16	>947	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.51	Horz(CT)	0.11 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 186 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-11-12 oc purlins.
BOT CHORD 2x4 SP No.2 *Except*	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
13-15: 2x4 SP No.1	WEBS 1 Row at midpt 5-14, 7-14
WEBS 2x4 SP No.3	

**REACTIONS.** (lb/size) 2=1480/0-3-8, 10=1480/0-3-8  
 Max Horz 2=-122(LC 11)  
 Max Uplift 2=-48(LC 10), 10=-48(LC 11)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2725/365, 3-5=-2496/360, 5-6=-1703/322, 6-7=-1703/322, 7-9=-2496/360,  
 9-10=-2725/365  
 BOT CHORD 2-16=-240/2399, 14-16=-109/1844, 12-14=-109/1844, 10-12=-240/2399  
 WEBS 3-16=-389/176, 5-16=-34/580, 5-14=-651/191, 6-14=-193/1238, 7-14=-651/191,  
 7-12=-34/580, 9-12=-389/176

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* 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.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 2 and 48 lb uplift at joint 10.



January 2, 2019

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



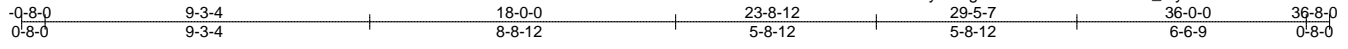
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Pinehurst C Vault	135695769
19610-19610A	T1A	ROOF TRUSS	8	1		

84 Components, Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Dec 31 07:39:32 2018 Page 1

ID:b22ZGPIZud3kUePrMk4H8PyKaEg-hBs1A?wCRuzslTd?P\_bfy5C3caEwZhWkVJR0iy3WBf



Scale = 1:65.8

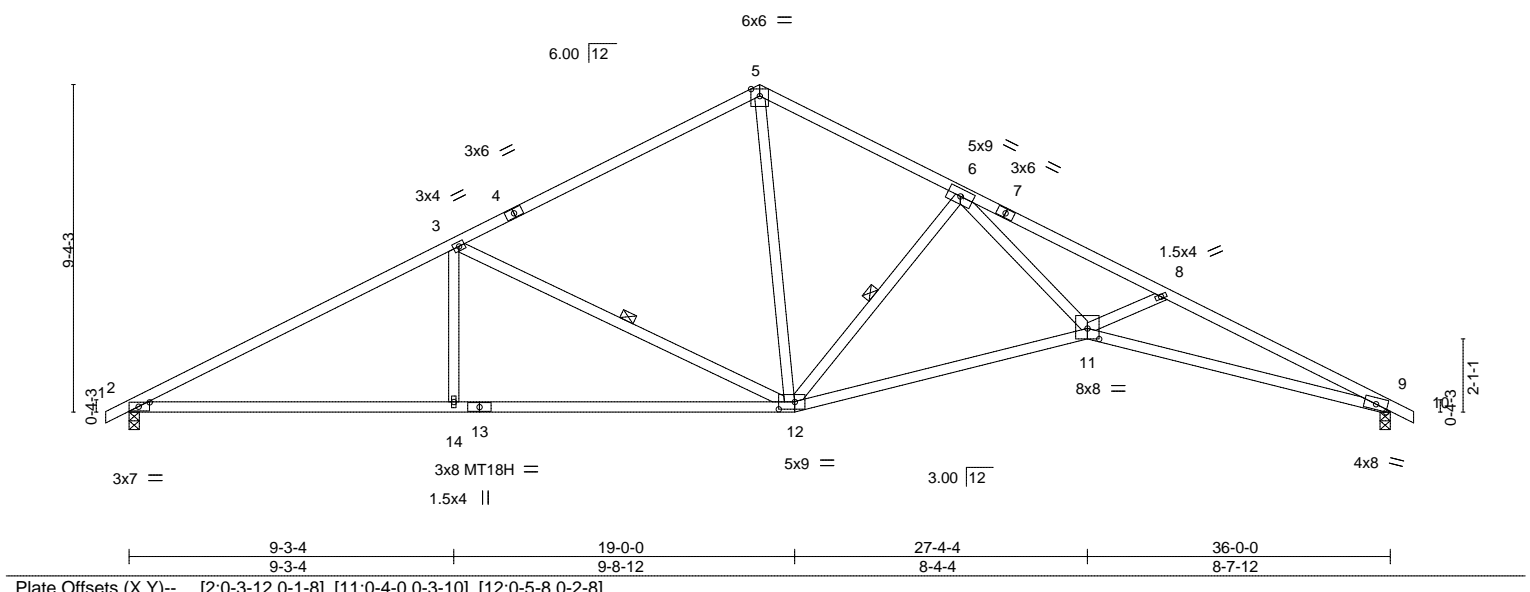


Plate Offsets (X,Y)--	[2:0-3-12,0-1-8], [11:0-4-0,0-3-10], [12:0-5-8,0-2-8]
-----------------------	---

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.93	Vert(LL)	-0.33	11-12	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.94	Vert(CT)	-0.78	11-12	>556	MT18H	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.65	Horz(CT)	0.33	9	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 175 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.1 *Except* 11-12,12-13: 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 6-11: 2x4 SP No.2	WEBS 1 Row at midpt 3-12, 6-12

**REACTIONS.** (lb/size) 2=1480/0-3-8, 9=1480/0-3-8  
 Max Horz 2=122(LC 10)  
 Max Uplift 2=-48(LC 10), 9=-48(LC 11)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2634/333, 3-5=-1704/303, 5-6=-1781/332, 6-8=-4670/512, 8-9=-5027/590  
 BOT CHORD 2-14=-183/2269, 12-14=-183/2269, 11-12=-169/2433, 9-11=-461/4576  
 WEBS 3-14=0/432, 3-12=-969/206, 5-12=-129/1079, 6-12=-1348/231, 6-11=-180/2668,  
 8-11=-358/183

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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=1.60
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 9 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 48 lb uplift at joint 2 and 48 lb uplift at joint 9.



January 2, 2019

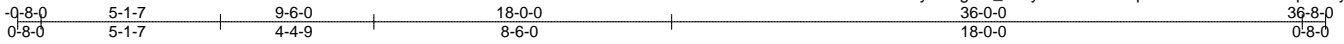
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss 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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
---	---

Job	Truss	Truss Type	Qty	Ply	Pinehurst C Vault	135695770
19610-19610A	T1AGEV	GABLE	1	1		
Job Reference (optional)						

84 Components, Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Dec 31 07:39:34 2018 Page 1

ID:b22ZGPIZud3kUePrMk4H8PyKaEg-da\_nahy?k38h53c07q13INBePQGfOPJoCqoY5ay3WBd



Scale = 1:65.8

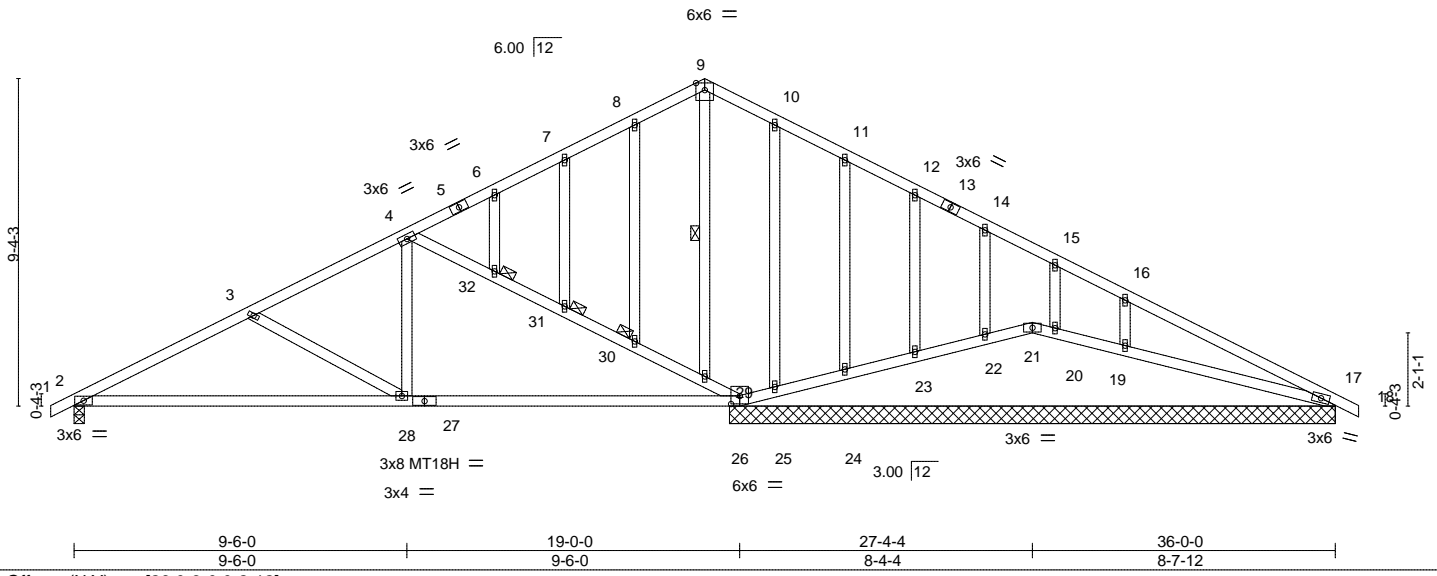


Plate Offsets (X,Y)--	[26:0-3-0,0-2-12]				
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>
TCLL 20.0	Plate Grip DOL 1.15		TC 0.56	in (loc) l/defl L/d	GRIP
TCDL 10.0	Lumber DOL 1.15		BC 0.94	Vert(LL) -0.16 2-28 >999 240	MT20 244/190
BCLL 0.0 *	Rep Stress Incr YES		WB 0.90	Vert(CT) -0.35 2-28 >643 180	MT18H 244/190
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Horz(CT) -0.04 2 n/a n/a	Weight: 215 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-1-3 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
WEBS 2x4 SP No.3	2-2-0 oc bracing: 2-28,26-28.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 9-29
	JOINTS 1 Brace at Jt(s): 30, 31, 32

**REACTIONS.** All bearings 17-3-8 except (jt=length) 2=0-3-8.  
 (lb) - Max Horz 26=122(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 17, 25, 24, 23, 22, 19 except 20=112(LC 3)  
 Max Grav All reactions 250 lb or less at joint(s) 21, 25, 24, 23, 22 except 2=937(LC 1), 26=663(LC 3), 17=319(LC 1), 19=527(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1524/283, 3-4=-1266/241, 4-6=-454/184, 6-7=-376/193, 7-8=-360/221, 8-9=-330/249, 9-10=-382/259, 10-11=-347/228, 11-12=-382/194, 12-14=-378/160, 14-15=-360/140, 15-16=-424/128, 16-17=-425/94  
 BOT CHORD 2-28=-179/1310, 26-28=-74/1094, 25-26=-53/325, 24-25=-41/350, 23-24=-44/347, 22-23=-43/348, 21-22=-43/345, 20-21=-38/353, 19-20=-48/336, 17-19=-49/361  
 WEBS 16-19=-365/172, 4-28=0/482, 4-32=-858/149, 31-32=-852/149, 30-31=-890/165, 29-30=-909/182, 26-29=-862/122

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 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) 2, 17, 25, 24, 23, 22, 19 except (jt=length) 20=112.



January 2, 2019

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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

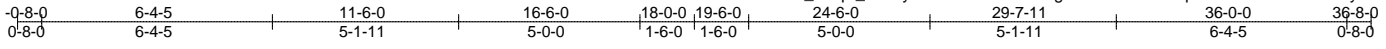
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Pinehurst C Vault	135695771
19610-19610A	T1B	ROOF TRUSS	6	1		
Job Reference (optional)						

84 Components, Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Dec 31 07:39:36 2018 Page 1

ID:1??J1fE9KDJT\_RLqY\_LzZ2yKaGd-Zz5Y?NzGGgOPLMmOEF3XqoGwIDzosNC5f8Hf9Ty3WBb



Scale: 3/16"=1'

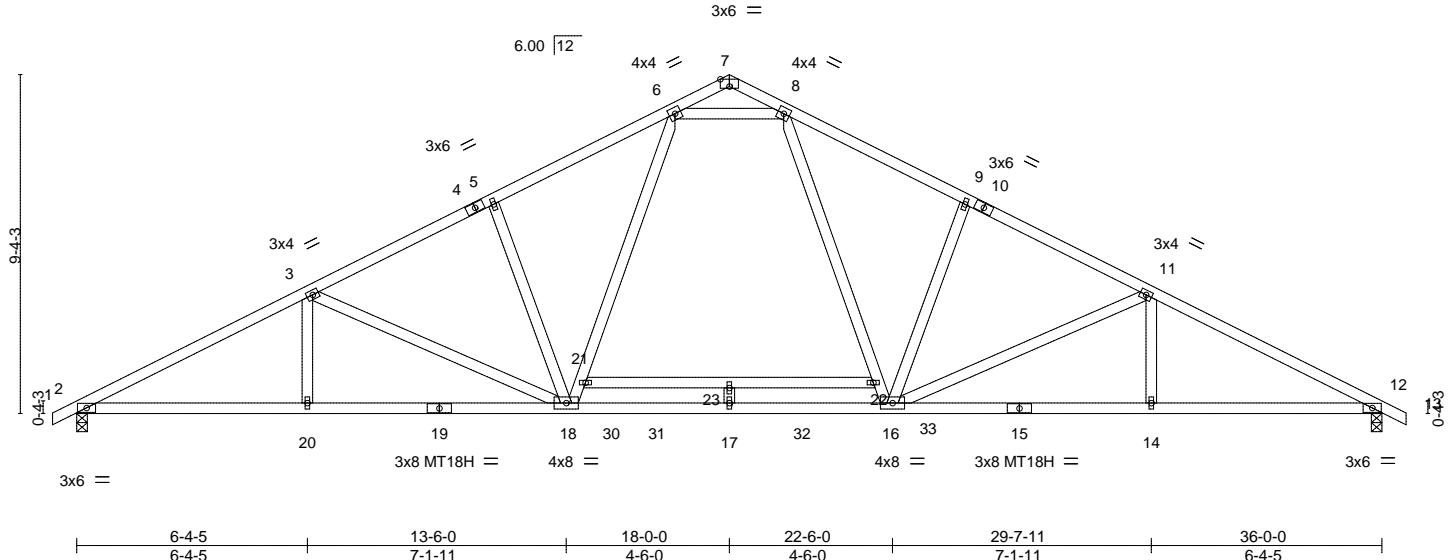


Plate Offsets (X,Y)--	[7:0-3-0,Edge]
-----------------------	----------------

<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 20.0	Plate Grip DOL 1.15	TC 0.79	Vert(LL) -0.24 18-20 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.84	Vert(CT) -0.42 16-17 >999 180	MT18H	244/190
BCLL 0.0 *	Rep Stress Incr YES	WB 0.68	Horz(CT) 0.12 12 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS			
				Weight: 207 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
21-22: 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-9-3 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=1480/0-3-8, 12=1480/0-3-8  
Max Horz 2=-122(LC 15)  
Max Uplift 2=-48(LC 10), 12=-48(LC 11)  
Max Grav 2=1515(LC 27), 12=1480(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2840/338, 3-5=-2255/323, 5-6=-2150/366, 8-9=-2151/366, 9-11=-2256/323,  
11-12=-2844/338  
BOT CHORD 2-20=-215/2477, 18-20=-215/2477, 17-18=-27/1520, 16-17=-27/1520, 14-16=-215/2481,  
12-14=-215/2481  
WEBS 3-20=0/275, 11-14=0/275, 3-18=-581/116, 11-16=-585/116, 5-18=-344/146,  
9-16=-344/146, 18-21=-88/776, 6-21=-77/755, 8-22=-77/756, 16-22=-88/777,  
6-8=-1642/382

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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=1.60
  - 3) All plates are MT20 plates unless otherwise indicated.
  - 4) All plates are 1.5x4 MT20 unless otherwise indicated.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 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) 2, 12.
  - 8) Load case(s) 26, 27, 28, 29, 30 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
  - 9) MULTIPLE LOADCASES - This design is the composite result of multiple load cases.
  - 10) User moving load cases exist: Review the load cases for details.
  - 11) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.
  - 12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard Except:



January 2, 2019

Continued on page 2

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
---	---

Job	Truss	Truss Type	Qty	Ply	Pinehurst C Vault	I35695771
19610-19610A	T1B	ROOF TRUSS	6	1	Job Reference (optional)	

84 Components, Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Dec 31 07:39:36 2018 Page 2

ID:!!??J1fE9KDJT\_RLqY\_LzZ2yKaGd-Zz5Y?NzGGgOPLMmOEF3XqoGwIDzosNC5f8Hf9Ty3WBb

**LOAD CASE(S)** Standard Except:

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-7=-60, 7-13=-60, 24-27=-20
- 26) User defined: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-7=-60(F), 7-12=-60(F), 24-27=-20(F)
- 27) 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-7=-60(F), 7-12=-60(F), 24-30=-20(F), 30-31=-50(F=-20), 27-31=-20(F)
- 28) 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-7=-60(F), 7-12=-60(F), 24-31=-20(F), 17-31=-50(F=-20), 17-27=-20(F)
- 29) 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-7=-60(F), 7-12=-60(F), 17-24=-20(F), 17-32=-50(F=-20), 27-32=-20(F)
- 30) 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-7=-60(F), 7-12=-60(F), 24-32=-20(F), 32-33=-50(F=-20), 27-33=-20(F)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
Edenton, NC 27932

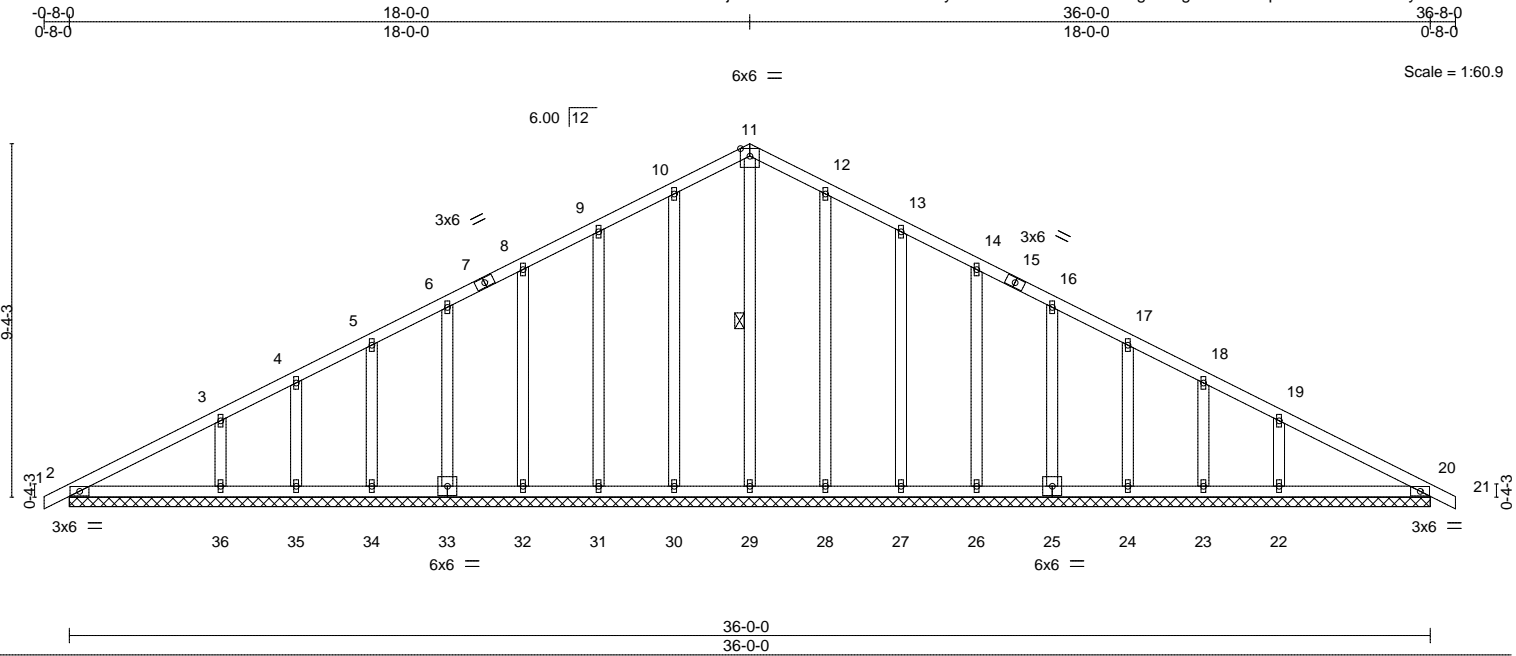


Job	Truss	Truss Type	Qty	Ply	Pinehurst C Vault	135695772
19610-19610A	T1GE	ROOF TRUSS	1	1		
Job Reference (optional)						

84 Components, Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Dec 31 07:39:38 2018 Page 1

ID:j2G2Sw6tGwCEzK2ldV?Ow6yKa6T-WLDIQ3?WoHe7agwnMg5?vDLP31pHKPuO7SmmEMy3WBZ 36-0-0 36-8-0 18-0-0 0-8-0



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.20	Vert(LL)	0.00	21	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.13	Vert(CT)	0.01	21	n/r		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.16	Horz(CT)	0.01	20	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 229 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied 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	WEBS 1 Row at midpt 11-29

**REACTIONS.** All bearings 36-0-0.  
 (lb) - Max Horz 2=-122(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 30, 31, 32, 33, 34, 35, 36, 28, 27, 26, 25, 24, 23, 22  
 Max Grav All reactions 250 lb or less at joint(s) 2, 29, 30, 31, 32, 33, 34, 35, 28, 27, 26, 25, 24, 23, 20  
 except 36=320(LC 21), 22=320(LC 22)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 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) 2, 30, 31, 32, 33, 34, 35, 36, 28, 27, 26, 25, 24, 23, 22.



January 2, 2019

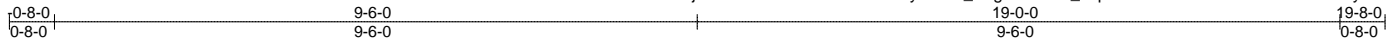
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss 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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>818 Soundside Road Edenton, NC 27932</p>
---	---

Job	Truss	Truss Type	Qty	Ply	Pinehurst C Vault	135695773
19610-19610A	T2GE	ROOF TRUSS	1	1		
Job Reference (optional)						

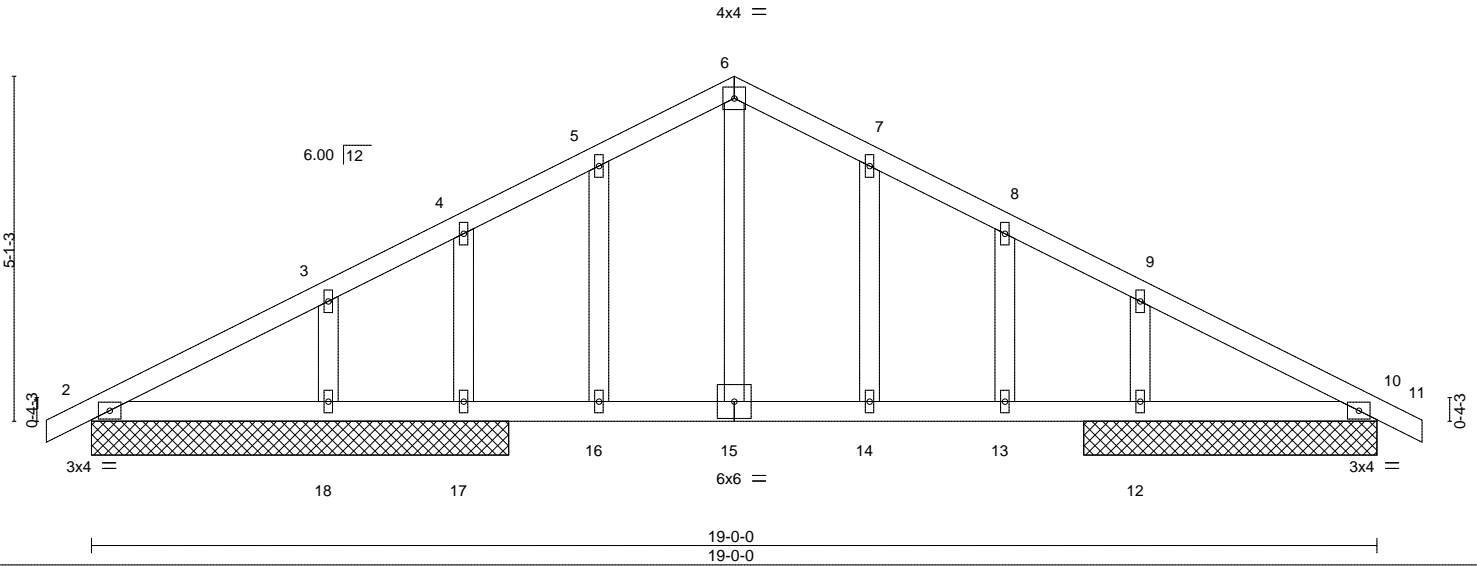
84 Components, Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Dec 31 07:39:39 2018 Page 1

ID:j2G2Sw6tGwCEzK2ldV?Ow6yKa6T-\_XngeP?8Zbn\_CqVzwNcESQuXVR6k3tPYL6WJmoy3WBY



Scale = 1:34.1



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.34	Vert(LL)	-0.04 13-14	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.37	Vert(CT)	-0.08 13-14	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.08	Horz(CT)	0.01 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 92 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied 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 6-2-0 except (jt=length) 12=4-4-0, 10=4-4-0.  
 (lb) - Max Horz 2=66(LC 15)  
 Max Uplift All uplift 100 lb or less at joint(s) 17, 18, 12  
 Max Grav All reactions 250 lb or less at joint(s) 18 except 2=367(LC 1), 17=259(LC 21), 12=459(LC 22), 10=319(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-491/0, 3-4=-473/25, 4-5=-484/59, 5-6=-452/92, 6-7=-445/90, 7-8=-468/56, 8-9=-511/30, 9-10=-481/0  
 BOT CHORD 2-18=0/398, 17-18=0/398, 16-17=0/398, 15-16=0/398, 14-15=0/398, 13-14=0/398, 12-13=0/398, 10-12=0/398  
 WEBS 9-12=-282/110

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 1.5x4 MT20 unless otherwise indicated.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 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) 17, 18, 12.



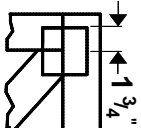
January 2, 2019

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>818 Soundside Road Edenton, NC 27932</p>
---	---

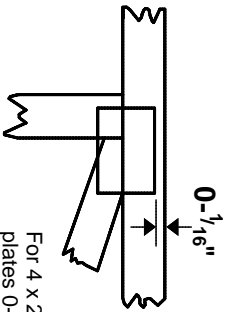


# Symbols

## 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 **MITrak 20/20 software or upon request.**

## PLATE SIZE

4 X 4

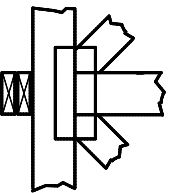
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



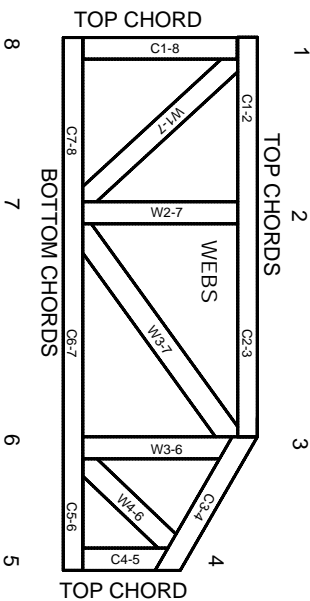
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCSI: 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.

© 2012 MITTEK® All Rights Reserved



MITek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

# General Safety Notes

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

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