


ProdID	Length	Product	Piles	Nat Qty	Fab Type
BMT	26-00-00	1 3/4" x 14" 2.0E Microlam® LVL	2	2	MFD
Truss Connector Total List					
Manuf	Product	Qty			
Simpson	THA29	6			

**QUALITY AUDITED BY:**



ANSI Z399.1  
ANSI Z399.2  
ANSI Z399.3  
ANSI Z399.4  
ANSI Z399.5  
ANSI Z399.6  
ANSI Z399.7  
ANSI Z399.8  
ANSI Z399.9  
ANSI Z399.10  
ANSI Z399.11  
ANSI Z399.12  
ANSI Z399.13  
ANSI Z399.14  
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ANSI Z399.37  
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ANSI Z399.39  
ANSI Z399.40  
ANSI Z399.41  
ANSI Z399.42  
ANSI Z399.43  
ANSI Z399.44  
ANSI Z399.45  
ANSI Z399.46  
ANSI Z399.47  
ANSI Z399.48  
ANSI Z399.49  
ANSI Z399.50

**CAROLINA STRUCTURAL SYSTEMS, LLC**  
256 NC - 704-633-4377  
910-491-6004

**ROOF DATA**

Roof Area: 8341.07 sq SF  
Overhang Length: 96.15 LF  
Eave Length: 215.5 LF  
Hip Length: 0 LF  
Valley Length: 95.6 LF  
Ridge Length: 108.22 LF

**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY**

These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 561 D'Onofrio Drive, Madison, WI 53179.

**SHOP DRAWING APPROVAL**

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

Job #: 200883RT1	Plan: FFH - WILSON - PERO
Customer: GARRIS EVANS LUMBER CO	Date: 6/12/2020
Site Address:	Sales Rep: JSL
City, ST, ZIP:	Designer: ET

DATE



**Carolina Structural Systems**  
Roof Trusses • Floor Trusses • EWP

**Carolina Structural Systems**  
P.O. Box 157, Elmer, NC 27247  
225 Frame Shop Rd., Star, NC 27358  
910-491-0004

**Trenco**

818 Soundside Rd  
Edenton, NC 27932

Re: 200883RT1  
FFH-PERO

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: E14513077 thru E14513098

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

North Carolina COA: C-0844



June 16, 2020

Gilbert, Eric

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

**Trenco**  
818 Soundside Rd  
Edenton, NC 27932

Re: 200883RT1  
FFH-PERO

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: E14513077 thru E14513098

My license renewal date for the state of South Carolina is June 30, 2020.

South Carolina COA: 923

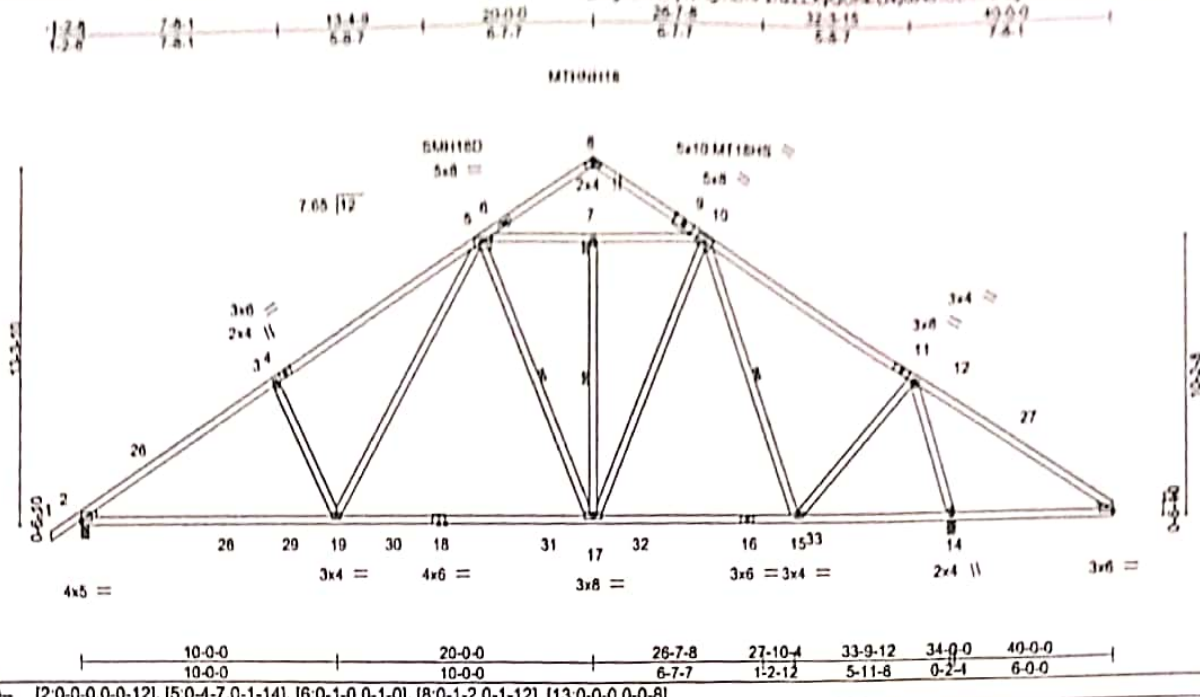


June 16, 2020

Gilbert, Eric

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





LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.00	TC 0.67	Vert(LL)	-0.31	17-19	>999	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.77	Vert(CT)	-0.49	17-19	>835	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr YES	WB 0.85	Horz(CT)	0.05	14	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS					Weight: 251 lb	FT = 20%

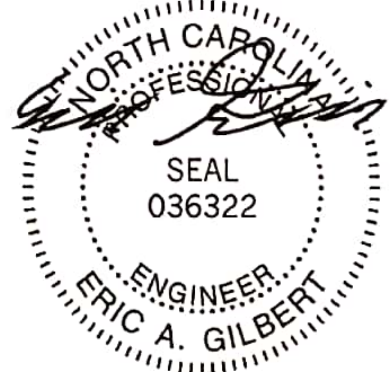
**LUMBER-**  
 TOP CHORD 2x4 SP No.1 \*Except\*  
 5-10: 2x4 SP No.2  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2  
 WEDGE  
 Left: 2x4 SP No.3, Right: 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-6-14 oc purlins.  
 Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 BOT CHORD 6-0-0 oc bracing: 13-14.  
 WEBS 1 Row at midpt 5-17, 7-17, 10-15  
 JOINTS 1 Brace at Jt(s): 7

**REACTIONS.** (size) 2=0-3-8, 14=0-3-8  
 Max Horz 2=237(LC 10)  
 Max Uplift 2=-40(LC 11), 14=-13(LC 11)  
 Max Grav 2=1469(LC 16), 14=1887(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2118/94, 3-5=-1971/169, 5-8=-262/56, 8-10=-284/63, 10-12=-1034/124,  
 12-13=-176/512, 5-7=980/131, 7-10=980/132  
 BOT CHORD 2-19=0/1861, 17-19=0/1261, 15-17=0/962, 14-15=0/251, 13-14=-313/197  
 WEBS 3-19=-431/174, 5-19=-40/849, 5-17=-289/107, 10-17=0/589, 12-15=0/844,  
 12-14=-1767/225, 10-15=-474/75

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; B=45ft; L=40ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 2-9-8, Interior(1) 2-9-8 to 20-0-0, Exterior(2) 20-0-0 to 24-1-15, Interior(1) 24-1-15 to 40-0-0 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
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - Attach MITek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - See HNGE PLATE DETAILS for plate placement.
  - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - \* 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 BC DL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 14.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



June 16, 2020

**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 ANSIP/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 TRENGO**  
 A MITek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932



Job 20083101	Truss A02	Truss Type GABLE	Qty 1	Ply 1	FFH PERO E14513078
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Job Reference (optional)

8:330 s May 6 2020 MITek Industries, Inc. Mon Jun 15 17:55:54 2020 Page 1  
ID ng l n AR At y W l g m L m P 2 h Z L L X y Q U n k d f O U U 5 o Z h 1 s Y l F 2 h D 0 b X c O O F e v 0 c t q 9 T o b z 3



MTHNH18

Scale = 1/8" = 1'-0"

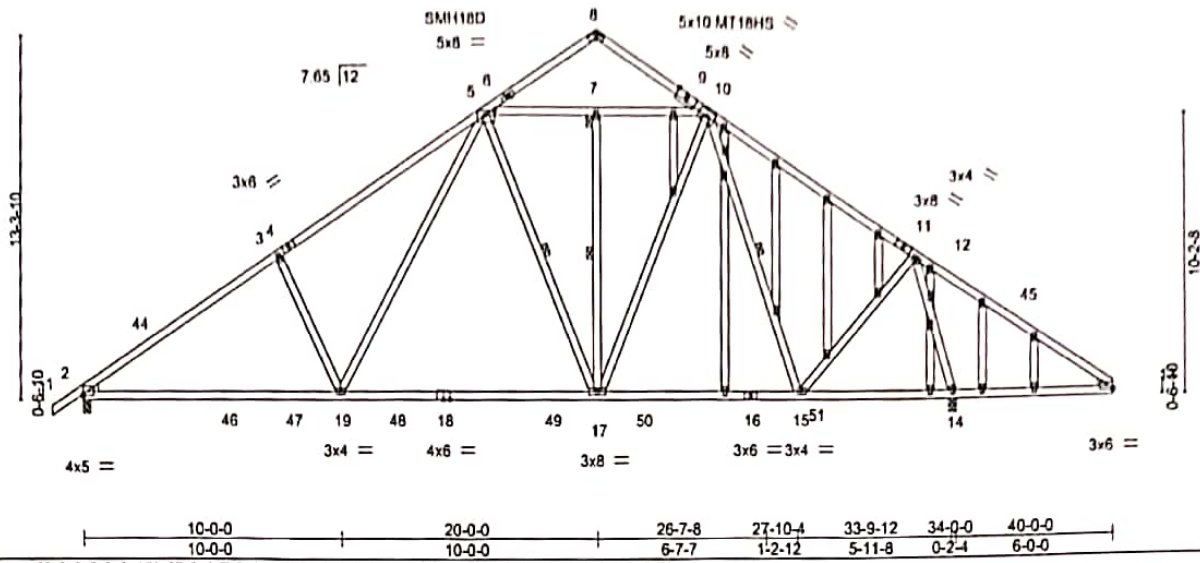


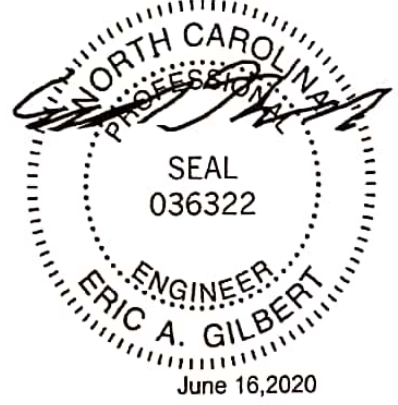
Plate Offsets (X,Y) =	[2:0-0-0,0-0-12], [5:0-4-7,0-1-14], [6:0-1-0,0-1-0], [8:0-1-2,0-1-12], [13:0-0-0,0-0-8]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.00	TC 0.67	Vert(LL) -0.31 17-19 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.77	Vert(CT) -0.49 17-19 >835 180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr YES	WB 0.85	Horz(CT) 0.05 14 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS			
				Weight: 305 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1 *Except* 5-10: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-6-14 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
WEBS 2x4 SP No.2	6-0-0 oc bracing: 13-14.
OTHERS 2x4 SP No.2	WEBS 1 Row at midpt 5-17, 7-17, 10-15
WEDGE	JOINTS 1 Brace at Jt(s): 7
Left: 2x4 SP No.3, Right: 2x4 SP No.3	

**REACTIONS.** (size) 2=0-3-8, 14=0-3-8  
 Max Horz 2=237(LC 10)  
 Max Uplift 2=-40(LC 11), 14=-13(LC 11)  
 Max Grav 2=1469(LC 16), 14=1887(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2118/94, 3-5=-1971/169, 5-8=-262/56, 8-10=-284/63, 10-12=-1034/124,  
 12-13=-176/512, 5-7=-980/131, 7-10=-980/132  
 BOT CHORD 2-19=0/1861, 17-19=0/1261, 15-17=0/962, 14-15=0/251, 13-14=-313/197  
 WEBS 3-19=-431/174, 5-19=-40/849, 5-17=-289/107, 10-17=0/589, 12-15=0/844,  
 12-14=-1767/225, 10-15=-474/75

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=40ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 2-9-8, Interior(1) 2-9-8 to 20-0-0, Exterior(2) 20-0-0 to 24-1-15, Interior(1) 24-1-15 to 40-0-0 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Attach MITek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - See HINGE PLATE DETAILS for plate placement.
  - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - 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, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 14.
  - 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. 10/03/2015 BEFORE USE.**  
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**ENGINEERING BY**  
**TRENCO**  
 A MITek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

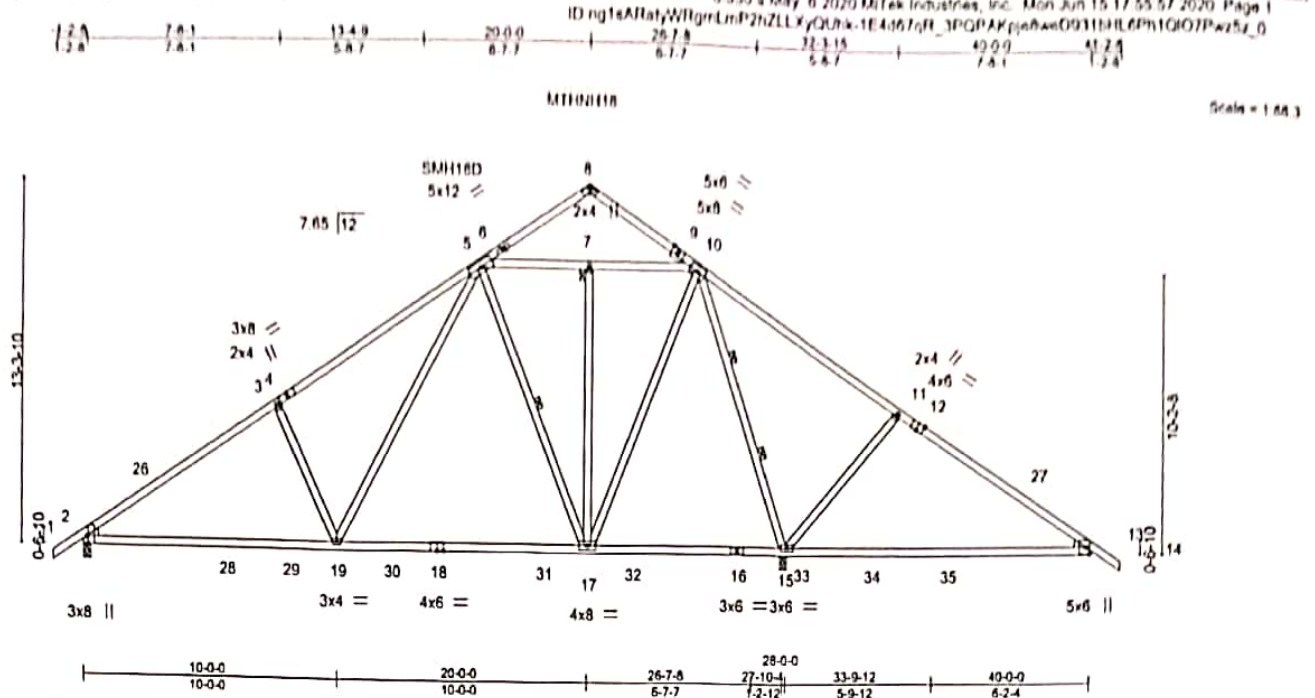


Plate Offsets (X,Y) - [2:0-3-8,Edge], [2:0-1-1,0-5-5], [2:0-0-8,0-0-13], [6:0-1-0,0-1-0], [8:0-1-2,0-1-12], [12:0-3-0,Edge], [13:0-0-8,0-0-13], [13:0-1-0,0-5-4]

<b>LOADING (psf)</b>	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.83	in (loc) l/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.77	Vert(LL) -0.32 17-19 >999 240	MT18HS	244/190
BCLL 0.0 *	Lumber DOL 1.15	WB 0.76	Vert(CT) -0.85 15-25 >170 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.02 15 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.59 15-25 >246 120	Weight: 246 lb	FT = 20%

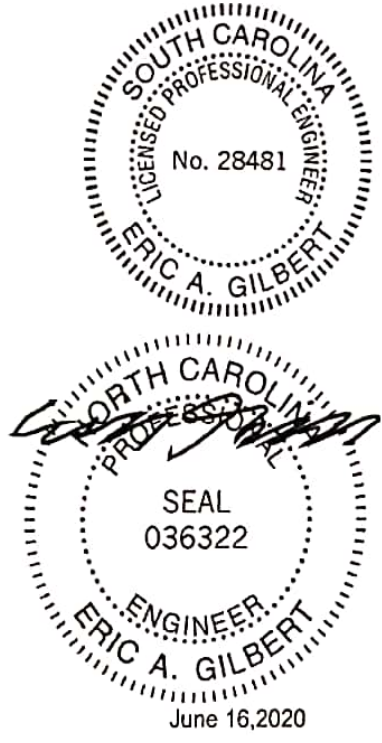
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2  
 WEDGE  
 Left: 2x4 SP No.2, Right: 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-10-12 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-17  
 2 Rows at 1/3 pts 10-15  
 JOINTS 1 Brace at Jt(s): 7

**REACTIONS.** (size) 2=0-3-8, 15=0-3-8  
 Max Horz 2=241(LC 9)  
 Max Uplift 2=24(LC 11), 15=60(LC 11)  
 Max Grav 2=1041(LC 16), 15=2450(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=1376/37, 3-5=1234/110, 5-8=264/58, 8-10=285/64, 10-11=331/1117, 11-13=336/772  
 BOT CHORD 2-19=0/1235, 17-19=0/610, 15-17=294/386, 13-15=515/355  
 WEBS 3-19=440/173, 5-19=54/890, 5-17=726/226, 10-17=32/980, 11-15=487/221, 10-15=1905/340

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=40ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 1-2-8 to 2-9-8, Interior(1) 2-9-8 to 20-0-0, Exterior(2) 20-0-0 to 24-1-15, Interior(1) 24-1-15 to 41-2-8 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) Provide adequate drainage to prevent water ponding.
  - 4) All plates are MT20 plates unless otherwise indicated.
  - 5) Attach MitTek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - 6) See HINGE PLATE DETAILS for plate placement.
  - 7) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - 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, with BCDL = 10.0psf.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 15.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.





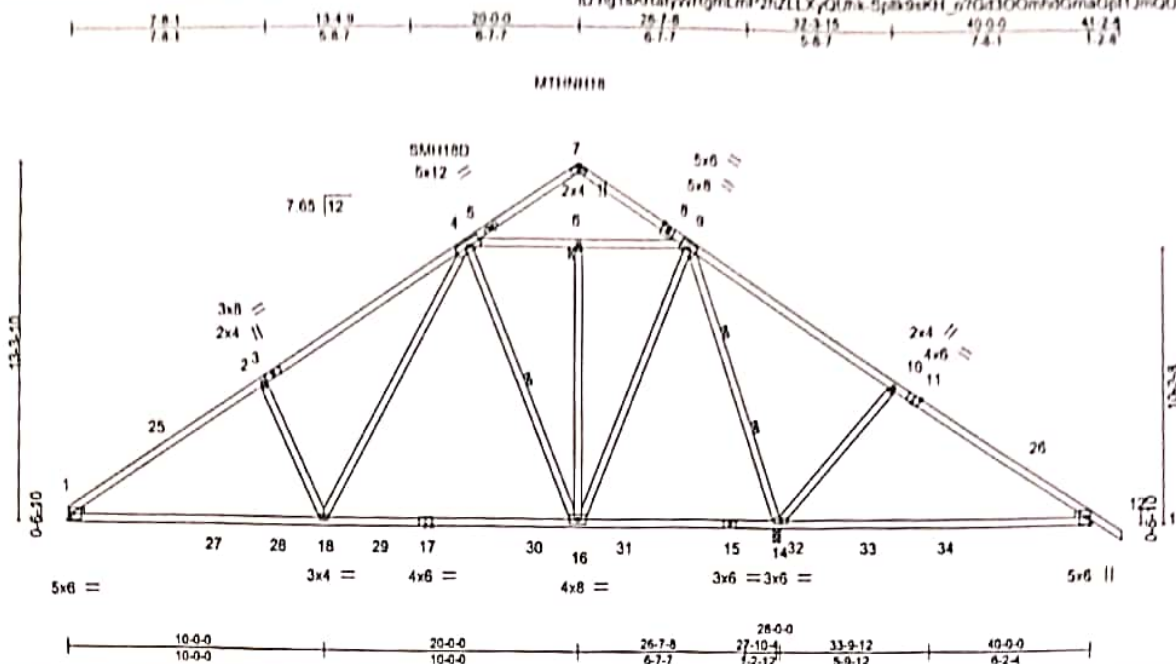


Plate Offsets (X,Y) - [1:0-5-5,0-1-1], [1:0-0-13,0-0-8], [5:0-1-0,0-1-0], [7:0-1-2,0-1-12], [11:0-3-0,Edge], [12:0-0-8,0-0-13], [12:0-1-0,0-5-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.83	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.77	Vert(LL) -0.32 16-18 >999 240	MT18HS	244/190
BCLL 0.0	Lumber DOL 1.15	WB 0.76	Vert(CT) -0.85 14-24 >170 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.02 14 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.59 14-24 >246 120	Weight: 244 lb	FT = 20%

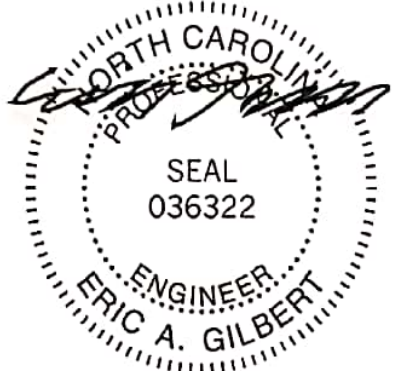
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2  
 WEDGE  
 Left: 2x4 SP No.2, Right: 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-10-12 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 4-16  
 2 Rows at 1/3 pts 9-14  
 JOINTS 1 Brace at Jt(s): 6

**REACTIONS.** (size) 1=Mechanical, 14=0-3-8  
 Max Horz 1=-237(LC 9)  
 Max Uplift 14=-61(LC 11)  
 Max Grav 1=975(LC 16), 14=2451(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-1382/40, 2-4=-1240/113, 4-7=-264/58, 7-9=-285/64, 9-10=-331/1117,  
 10-12=-336/772  
 BOT CHORD 1-18=0/1242, 16-18=0/612, 14-16=-294/386, 12-14=-515/355  
 WEBS 2-18=-444/179, 4-18=-64/897, 4-16=-728/227, 9-16=-33/981, 10-14=-487/221,  
 9-14=-1906/341

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=40ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-0-0 to 4-0-0, Interior(1) 4-0-0 to 20-0-0, Exterior(2) 20-0-0 to 24-1-15, Interior(1) 24-1-15 to 41-2-8 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) Provide adequate drainage to prevent water ponding.
  - 4) All plates are MT20 plates unless otherwise indicated.
  - 5) Attach Mitek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - 6) See HINGE PLATE DETAILS for plate placement.
  - 7) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - 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, with BCDL = 10.0psf.
  - 9) Refer to girder(s) for truss to truss connections.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 14.
  - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



June 16, 2020





Carolina Structural Systems, LLC, Ether, NC - 27247.

Job Reference (optional)  
8 330 x May 6 2020 Mitek Industries, Inc. Mon Jun 15 17:56:04 2020 Page 1

ID:ngtAAtAtyWfRgnLmp2iZLLxyGURkKa10aWwKpKDfXfMAstemZCvKvCyQfDc31La780a5yye



MTHNH18

Scale = 1/8" = 1'

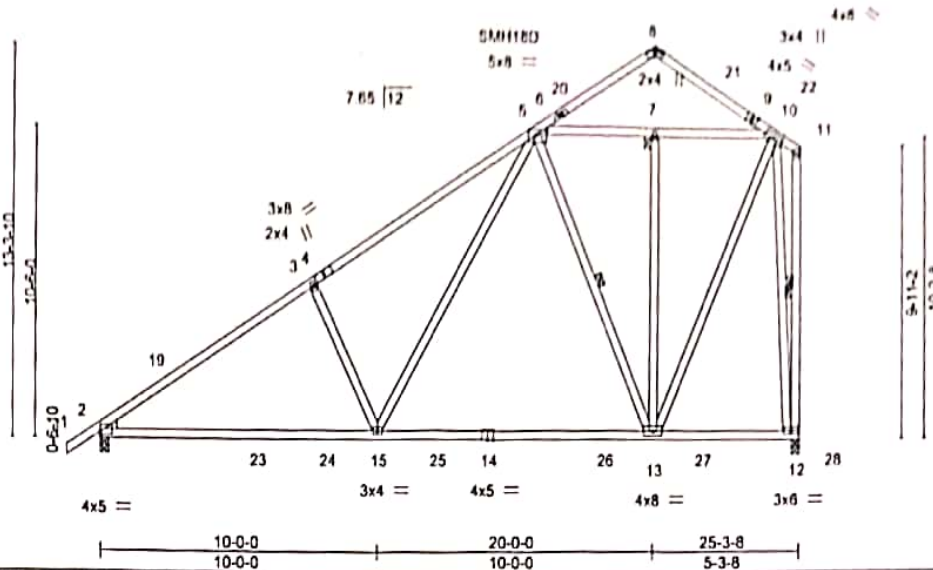


Plate Offsets (X,Y) - [2-0-0,0-1-4], [5-0-4,7-0-1-14], [6-0-1,0-0-1-0], [8-0-1,2-0-1-12]

LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.00	TC 0.60	Vert(LL) -0.32	13-15	>930	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.74	Vert(CT) -0.49	13-15	>620	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr YES	WB 0.52	Horz(CT) 0.03	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS					Weight: 199 lb FT = 20%

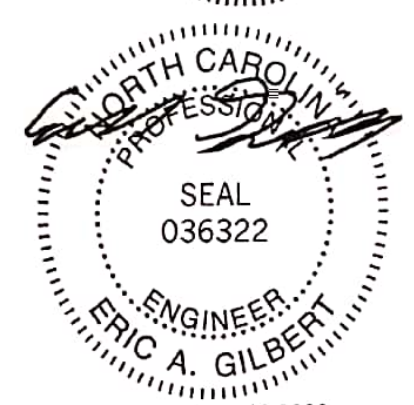
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 11-12: 2x4 SP No.1  
**WEDGE**  
 Left: 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-8-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-13, 11-12, 10-12  
 JOINTS 1 Brace at Jt(s): 7

**REACTIONS.** (size) 2=0-3-8, 12=0-3-8  
 Max Horz 2=352(LC 10)  
 Max Uplift 2=-29(LC 11), 12=-16(LC 11)  
 Max Grav 2=1116(LC 16), 12=1150(LC 16)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1497/102, 3-5=-1351/177, 5-8=-293/64, 8-10=-295/68, 5-7=-346/138, 7-10=-347/138  
 BOT CHORD 2-15=-278/1321, 13-15=-182/707  
 WEBS 3-15=-438/175, 5-15=-44/875, 5-13=-619/184, 10-13=-37/927, 10-12=-1108/271

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 1-2-8 to 1-9-8, Interior(1) 1-9-8 to 20-0-0, Exterior(2) 20-0-0 to 23-0-0, Interior(1) 23-0-0 to 25-1-12 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
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - Attach Mitek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - See HINGE PLATE DETAILS for plate placement.
  - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



June 16, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**

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ENGINEERING BY  
**TRENCO**  
 A Mitek Affiliate

818 Soundside Road  
 Edenton, NC 27932



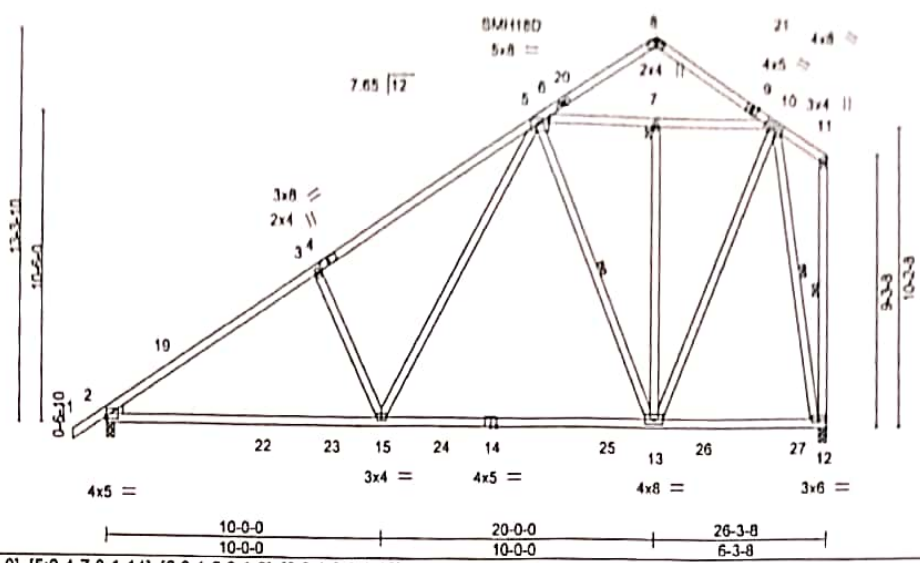
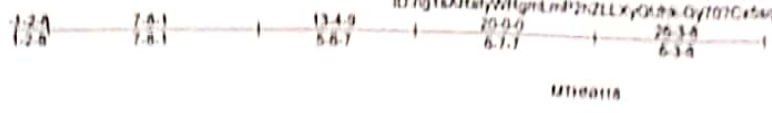


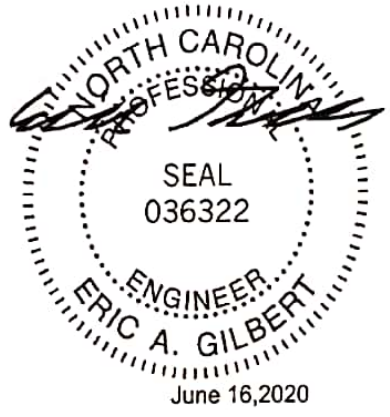
Plate Offsets (X,Y) -		[2:0-0-0,0-1-0], [5:0-4-7,0-1-14], [6:0-1-0,0-1-0], [8:0-1-2,0-1-12]
LOADING (psf)	SPACING-	2-0-0
TCLL 20.0	Plate Grip DOL	1.00
TCDL 10.0	Lumber DOL	1.15
BCLL 0.0	Rep Stress Incr	YES
BCDL 10.0	Code	IRC2015/TPI2014
	CSI.	Matrix-MS
	DEFL.	in (loc) l/defl L/d
	Vert(LL)	-0.32 13-15 >987 240
	Vert(CT)	-0.48 13-15 >658 180
	Horz(CT)	0.03 12 n/a n/a
	PLATES	GRIP
	MT20	244/190
	MT18HS	244/190
	Weight:	201 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-6-1 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 11-12: 2x4 SP No.1	WEBS 1 Row at midpt 5-13, 11-12, 10-12
WEDGE Left: 2x4 SP No.3	JOINTS 1 Brace at JI(s): 7

REACTIONS. (size) 2=0-3-8, 12=0-3-8  
 Max Horz 2=345(LC 10)  
 Max Uplift 2=-31(LC 11), 12=-15(LC 11)  
 Max Grav 2=1162(LC 16), 12=1188(LC 16)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1578/103, 3-5=-1432/178, 5-8=-290/67, 8-10=-294/67, 5-7=-411/135,  
 7-10=-412/136  
 BOT CHORD 2-15=-270/1391, 13-15=-175/780, 12-13=-105/262  
 WEBS 3-15=-437/174, 5-15=-43/870, 5-13=-564/167, 10-13=-19/891, 10-12=-1125/202

- NOTES-
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vu1=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 1-2-8 to 1-9-8, Interior(1) 1-9-8 to 20-0-0, Exterior(2) 20-0-0 to 23-0-0, Interior(1) 23-0-0 to 26-1-12 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
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - Attach Mitek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - See HINGE PLATE DETAILS for plate placement.
  - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.





Carolina Structural Systems, LLC, Ether, NC - 27247.

Job Reference (optional)  
8:330 a May 6 2020 MiTek Industries, Inc. Mon Jun 15 17:56:08 2020 Page 1  
ID ng1sAltatyWfignLmP2hZLLXyQUhs.DLEnQuLORosDsgsRrVaX6AP1BVBVqfrzYCHnz5yrr



Scale = 1/8" = 1'-0"

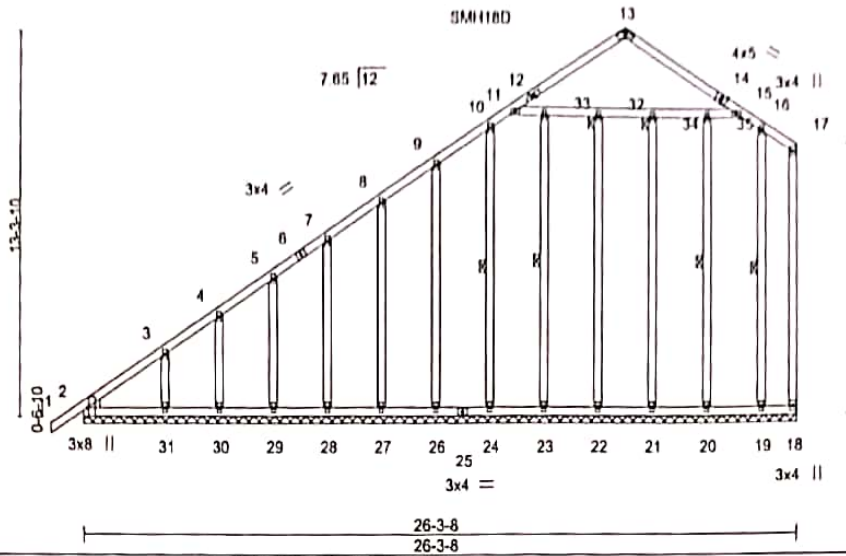


Plate Offsets (X,Y)-- [2:0-3-8,Edge], [2:0-1-1,0-5-5], [2:0-0-8,0-0-13], [12:0-1-0,0-1-0], [13:0-1-2,0-1-12]

<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	1.00	TC 0.37	Vert(LL)	-0.00	1	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.15	Vert(CT)	0.00	1	n/r	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.29	Horz(CT)	-0.00	18	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 248 lb	FT = 20%

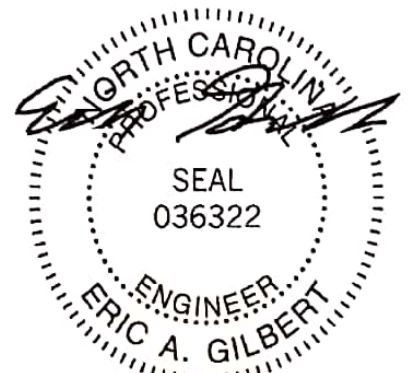
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.1 \*Except\*  
 11-15: 2x4 SP No.2  
**OTHERS** 2x4 SP No.2  
**WEDGE**  
 Left: 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 23-33, 10-24, 20-35, 16-19  
 JOINTS 1 Brace at Jt(s): 32, 34

**REACTIONS.** All bearings 26-3-8.  
 (lb) - Max Horz 2=344(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 18, 22, 23, 24, 26, 27, 28, 29, 30, 31, 19  
 Max Grav All reactions 250 lb or less at joint(s) 18, 22, 23, 26, 27, 28, 29, 30, 31, 21, 20 except 2=264(LC 17), 24=461(LC 16), 19=443(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-399/378, 3-4=-316/299, 4-5=-272/268, 11-13=-313/80, 13-15=-305/77  
 WEBS 10-24=-421/182, 16-19=-446/233

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=26ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) -1-2-8 to 1-9-8, Exterior(2) 1-9-8 to 20-0-0, Corner(3) 20-0-0 to 23-0-0, Exterior(2) 23-0-0 to 26-1-12 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 MT20 plates unless otherwise indicated.
  - 5) All plates are 2x4 MT20 unless otherwise indicated.
  - 6) Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - 7) See HINGE PLATE DETAILS for plate placement.
  - 8) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - 9) Gable requires continuous bottom chord bearing.
  - 10) Gable studs spaced at 2-0-0 oc.
  - 11) \* 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.
  - 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 18, 22, 23, 24, 26, 27, 28, 29, 30, 31, 19.



June 16, 2020

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 A MiTek Affiliate  
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 Edenton, NC 27932

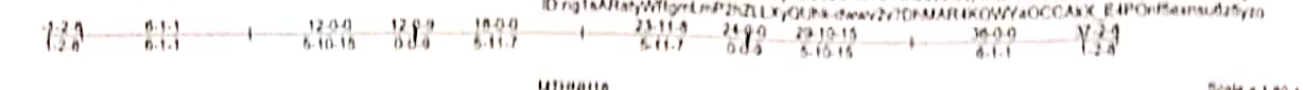


Plate Offsets (X,Y)→ [2:0-0-13,0-0-8], [2:0-5-5,0-1-1], [3:0-3-0,0-3-4], [6:0-1-0,0-1-0], [8:0-1-2,0-1-12], [9:0-1-0,0-1-0], [12:0-3-0,0-3-4], [13:0-5-4,0-1-0], [13:0-0-13,0-0-8], [15:0-6-0,0-3-0], [18:0-6-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.00	TC 0.55	Vert(LL) -1.08 18-26 >402 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.65	Vert(CT) -1.22 18-26 >355 180	MT18HS	244/190
BCLL 0.0 *	Rep Strass Incr YES	WB 0.60	Horz(CT) 0.07 13 n/a n/a		
BCDL 10.0	Code IRC2015/TP12014	Matrix-MS		Weight: 225 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1 *Except* 3-6,9-12: 2x4 SP DSS, 5-10: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-1-4 oc purlins.
BOT CHORD 2x4 SP DSS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 20-21
WEDGE	JOINTS 1 Brace at J1(s): 19, 7
Left: 2x4 SP No.2, Right: 2x4 SP No.2	

**REACTIONS.** (size) 2=0-3-8, 13=0-3-8  
 Max Horz 2=-216(LC 9)  
 Max Uplift 2=-41(LC 11), 13=-41(LC 11)  
 Max Grav 2=1513(LC 1), 13=1513(LC 1)

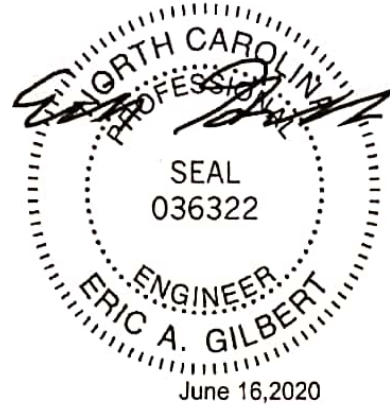
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-2184/136, 3-4=-1879/129, 4-5=-594/135, 10-11=-594/135, 11-12=-1879/129, 12-13=-2184/136, 5-7=-386/140, 7-10=-386/140

BOT CHORD 2-18=-13/1774, 17-18=0/1548, 16-17=0/1548, 15-16=0/1548, 13-15=-17/1773

WEBS 12-15=-475/118, 3-18=-475/118, 18-20=0/421, 4-20=0/426, 15-21=0/426, 11-21=0/426, 4-19=-1058/76, 11-19=-1058/76, 5-19=-177/267, 10-19=-177/267

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=36ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 2-4-11, Interior(1) 2-4-11 to 18-0-0, Exterior(2) 18-0-0 to 21-7-3, Interior(1) 21-7-3 to 37-2-8 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
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - See HINGE PLATE DETAILS for plate placement.
  - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - \* 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, 13.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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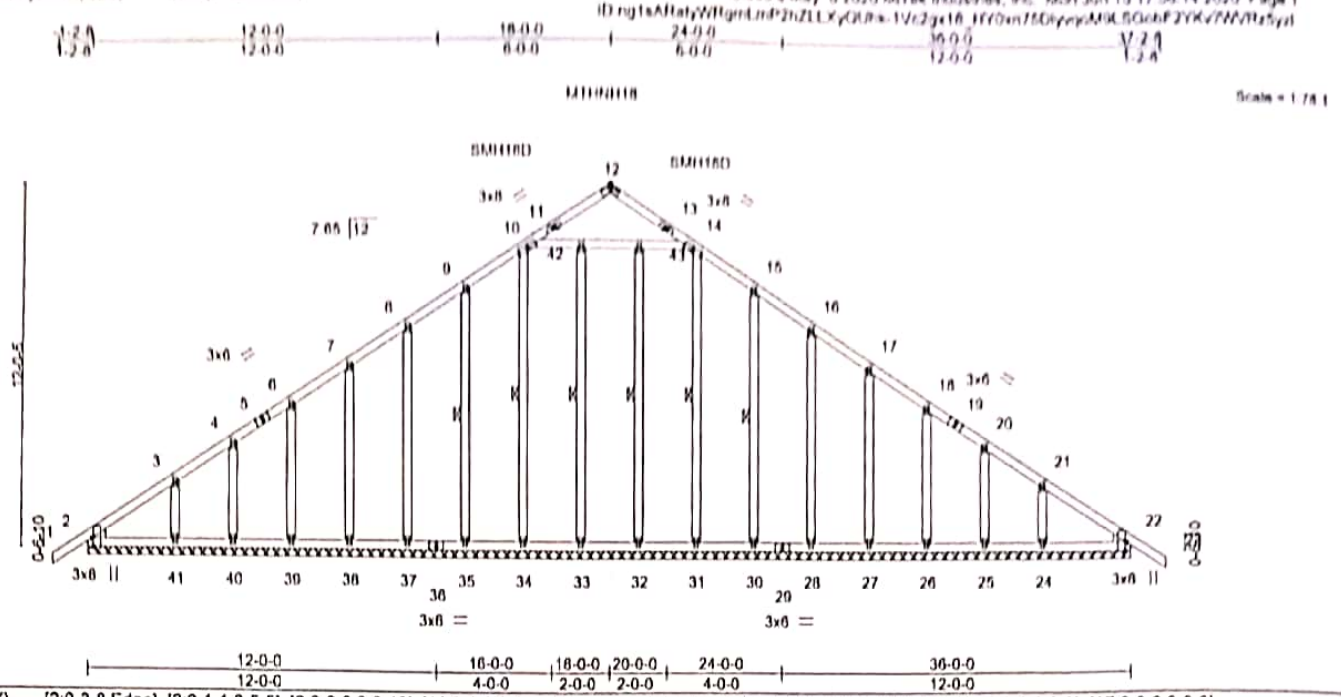


Plate Offsets (X,Y)-	[2:0-3-8,Edge], [2:0-1-1,0-5-5], [2:0-0-8,0-0-13], [11:0-1-0,0-1-0], [12:0-1-2,0-1-12], [13:0-1-0,0-1-0], [15:0-0-0,0-0-0], [16:0-0-0,0-0-0], [17:0-0-0,0-0-0], [18:0-0-0,0-0-0], [20:0-0-0,0-0-0], [21:0-0-0,0-0-0], [22:0-1-0,0-5-4], [22:0-3-8,Edge], [22:0-0-8,0-0-13]
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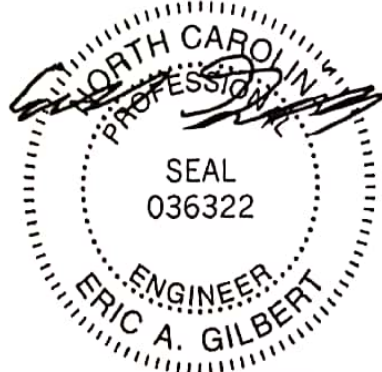
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI,</b>	<b>DEFL.</b>	in (loc)	l/doff	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.00	TC 0.09	Vort(LL)	-0.00	23	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vort(CT)	0.00	22	n/r	MT18HS	244/190
BCLL 0.0	Rep Stress Incr	YES	WB 0.11	Horz(CT)	0.01	22	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 280 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 33-42, 10-34, 9-35, 32-43, 14-31, 15-30
OTHERS 2x4 SP No.2	
WEDGE	
Left: 2x4 SP No.2, Right: 2x4 SP No.2	

**REACTIONS.** All bearings 36-0-0.  
 (lb) - Max Horz 2=216(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 35, 37, 38, 39, 40, 41, 30, 28, 27, 26, 25, 24  
 Max Grav All reactions 250 lb or less at joint(s) 2, 22, 33, 35, 37, 38, 39, 40, 41, 32, 30, 28, 27, 26, 25, 24 except 34=278(LC 16), 31=265(LC 1)

**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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=36ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) 1-2-8 to 2-4-11, Exterior(2) 2-4-11 to 18-0-0, Corner(3) 18-0-0 to 21-7-3, Exterior(2) 21-7-3 to 37-2-8 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 2x4 MT20 unless otherwise indicated.
  - Attach MITek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - See HINGE PLATE DETAILS for plate placement.
  - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - Gable requires continuous bottom chord bearing.
  - 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) 2, 35, 37, 38, 39, 40, 41, 30, 28, 27, 26, 25, 24.





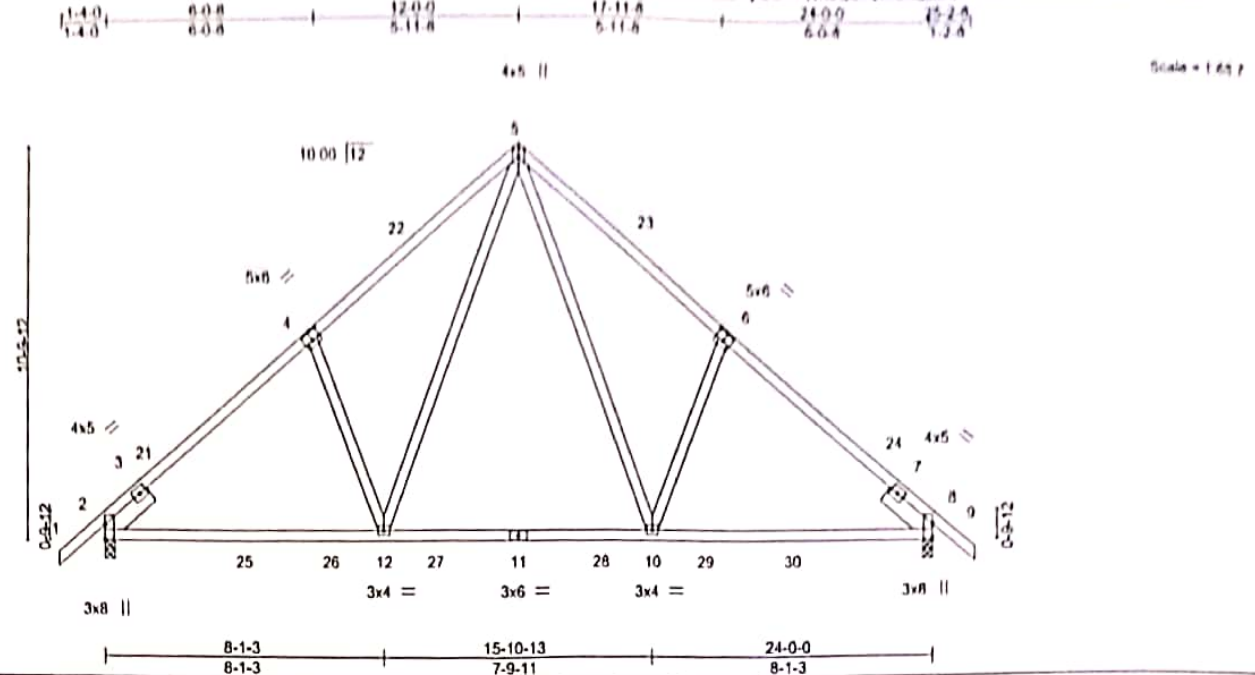


Plate Offsets (X,Y) - [2:Edge,0-0-0], [4:0-3-0,0-3-0], [6:0-3-0,0-3-0], [8:Edge,0-0-0]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.32	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.44	Vert(LL) -0.13 10-12 >999 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.19	Vert(CT) -0.19 10-12 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.03 8 n/a n/a		
	Code IRC2015/TPI2014			Weight: 145 lb	FT = 20%

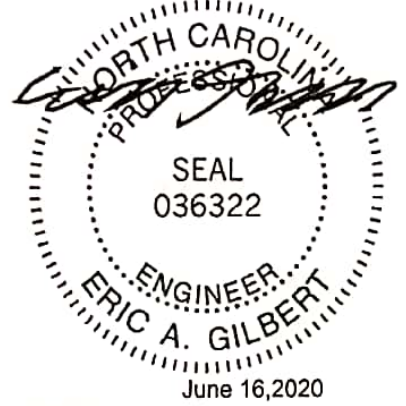
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2  
 SLIDER Left 2x6 SP No.2 -x 1-7-15, Right 2x6 SP No.2 -x 1-7-15

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

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=200(LC 10)  
 Max Uplift 2=-41(LC 11), 8=-37(LC 11)  
 Max Grav 2=1077(LC 16), 8=1069(LC 17)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1202/94, 4-5=-1127/190, 5-6=-1128/192, 6-8=-1202/95  
 BOT CHORD 2-12=0/986, 10-12=0/663, 8-10=0/888  
 WEBS 5-10=-71/606, 6-10=-322/169, 5-12=-71/604, 4-12=-322/169

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-4-0 to 1-8-0, Interior(1) 1-8-0 to 12-0-0, Exterior(2) 12-0-0 to 15-0-0, Interior(1) 15-0-0 to 25-2-8 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
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.







Job 200003011	Truss C03	Truss Type Common	Qty 1	By 1	FFH PERD	E14513049
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Job Reference (optional)

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 15 17:56:18 2020 Page 1  
 ID ng ts AHaly Wll gnt Lnd P 2 h ZLLX y Qutk -w G R Z W 14 6 W 1 5 G O R 4 5 Y r \_ e Wng W D X to F W X e C 2 5 y h  
 0-0-0 12-0-0 17-11-8 24-0-0  
 0-0-0 5-11-8 5-11-8 6-0-8

Scale = 1/8" = 1'-0"

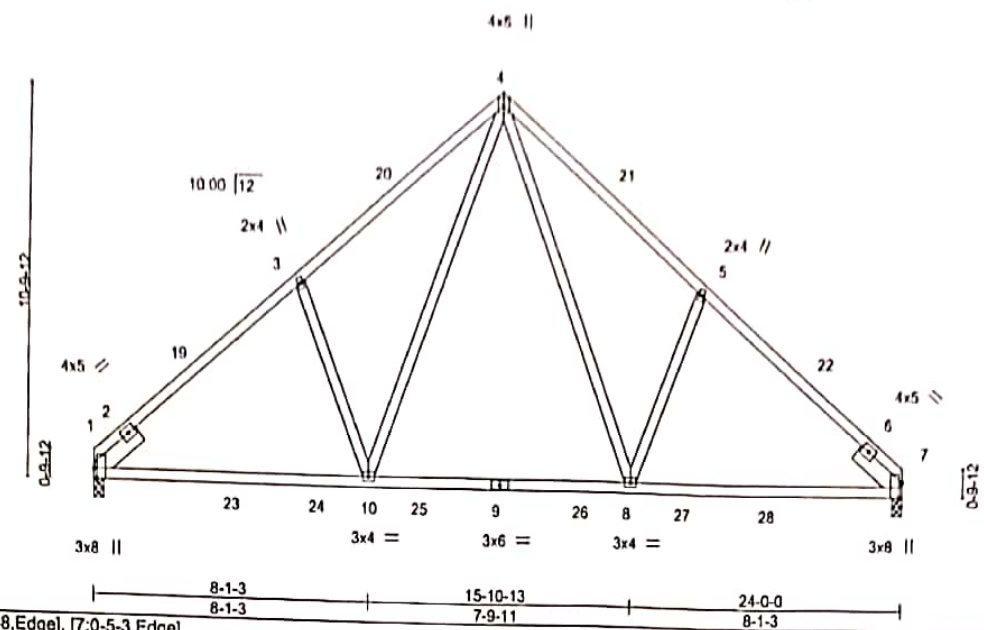


Plate Offsets (X,Y) =	[1:0-3-8,Edge], [7:0-5-3,Edge]	8-1-3	8-1-3	15-10-13	7-9-11	24-0-0	8-1-3		
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.32	Vert(LL)	-0.12	8-10	>999	240	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.45	Vert(CT)	-0.19	8-10	>999	180	
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.19	Horz(CT)	0.02	7	n/a	n/a	
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-MS						
								Weight: 140 lb	FT = 20%

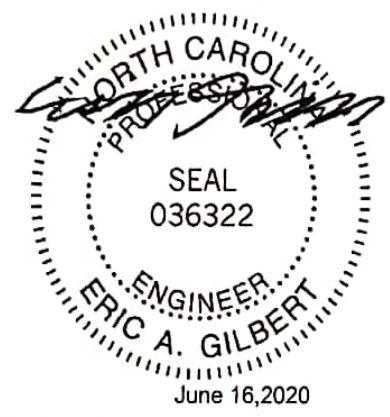
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2  
 SLIDER Left 2x6 SP No.2 -x 1-7-15, Right 2x6 SP No.2 -x 1-7-15

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-6-4 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=0-3-8, 7=0-3-8  
 Max Horz 1=180(LC 10)  
 Max Uplift 1=7(LC 11), 7=7(LC 11)  
 Max Grav 1=1004(LC 16), 7=1004(LC 17)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-3=-1209/103, 3-4=-1137/203, 4-5=-1138/203, 5-7=-1209/103  
 BOT CHORD 1-10=0/984, 8-10=0/657, 7-8=0/885  
 WEBS 4-8=-74/616, 5-8=-323/171, 4-10=-74/616, 3-10=-323/171

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 12-0-0, Exterior(2) 12-0-0 to 15-0-0, Interior(1) 15-0-0 to 24-0-0 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
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-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 ANSV/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

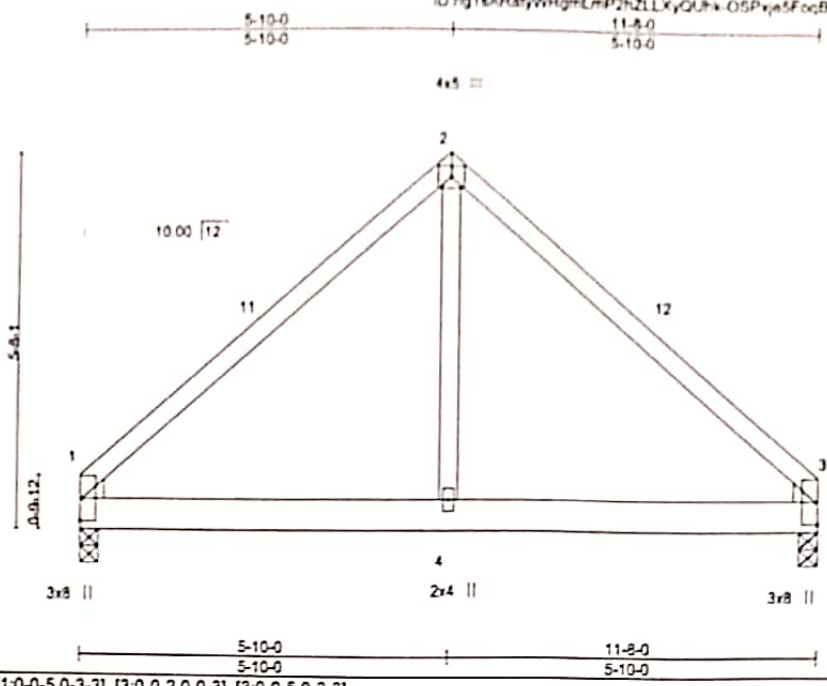
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932



Job 200883HT1	Truss D01	Truss Type Common Girders	Qty 1	Ply 1	FFH-PERO	E14513090
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Carolina Structural Systems, LLC, Ether, NC - 27247.

8:330 s May 6 2020 Mitek Industries, Inc. Mon Jun 15 17:56:19 2020 Page 1  
ID ng1sARatyWRgmlmP2hZLLKyQUtk.OSPya5FccBJ2Y720FX4Xs3zuTx7GXJHTAJHAtz5ygz



Scale = 1:32.4

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

<b>LOADING</b> (psf)	<b>SPACING</b>	<b>CSL</b>	<b>DEFL</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.29	in (loc) Vdef L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.16	Vert(LL) -0.01 4-7 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.05	Vert(CT) -0.02 4-7 >999 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.01 1 n/a n/a		
	Code IRC2015/TPI2014			Weight: 59 lb	FT = 20%

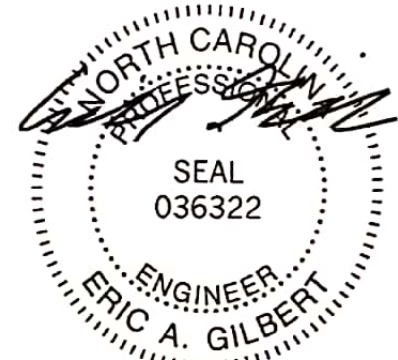
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2  
 WEDGE  
 Left: 2x4 SP No.3, Right: 2x4 SP No.3

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

**REACTIONS.** (size) 1=0-3-8, 3=0-3-8  
 Max Horz 1=88(LC 9)  
 Max Uplift 1=3(LC 11), 3=3(LC 11)  
 Max Grav 1=467(LC 1), 3=467(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=502/92, 2-3=502/91  
 BOT CHORD 1-4=0/300, 3-4=0/300

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 5-10-0, Exterior(2) 5-10-0 to 8-10-0, Interior(1) 8-10-0 to 11-8-0 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
  - \* 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) 1, 3.



June 16, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIK-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 ANSITPH 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 200003HT1	Truss D02	Truss Type Common Supported Gable	Qty 1	Ply 1	FFH-PERO	E14513091
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Carolina Structural Systems, LLC, Ether, NC - 27247. 8:33:05 AM May 6 2020 Mitek Industries, Inc. Mon Jun 15 17:56:20 2020 Page 1  
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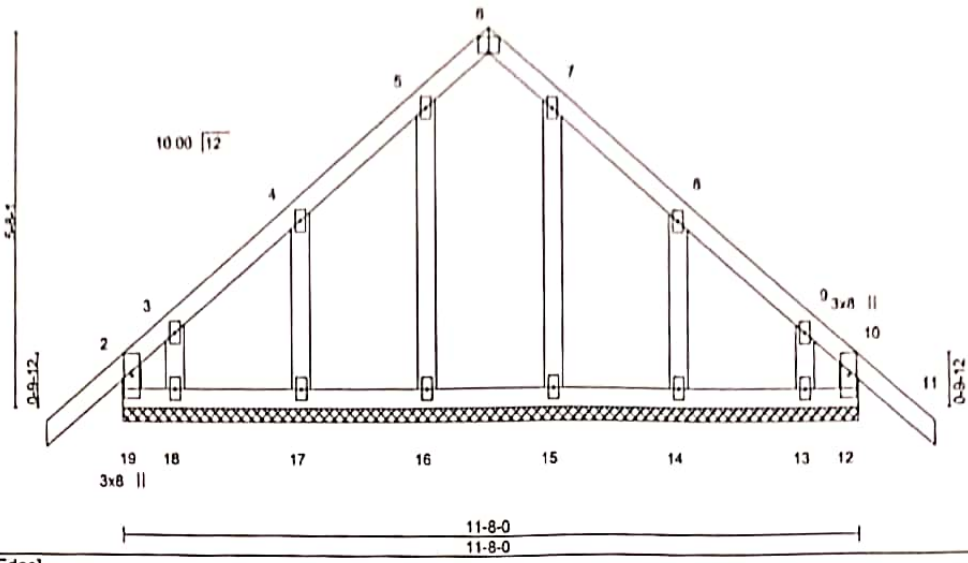


Plate Offsets (X,Y)- [6:0-2:0,Edge]		LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	2-0-0	2-0-0	TC	0.10	in	(loc)	l/defl	L/d	MT20	244/190	Weight: 70 lb	FT = 20%
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(LL)	-0.01	11	n/r				
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Vert(CT)	-0.01	11	n/r				
BCDL	10.0	Code IRC2015/TPI2014		Matrix-R		Horz(CT)	0.00	12	n/a				

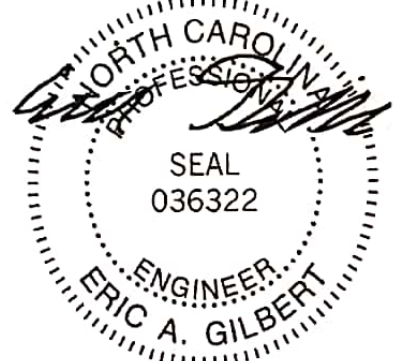
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** All bearings 11-8-0.  
 (lb) - Max Horz 19=122(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 19, 12, 17, 18, 14, 13  
 Max Grav All reactions 250 lb or less at joint(s) 19, 12, 16, 17, 18, 15, 14, 13

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

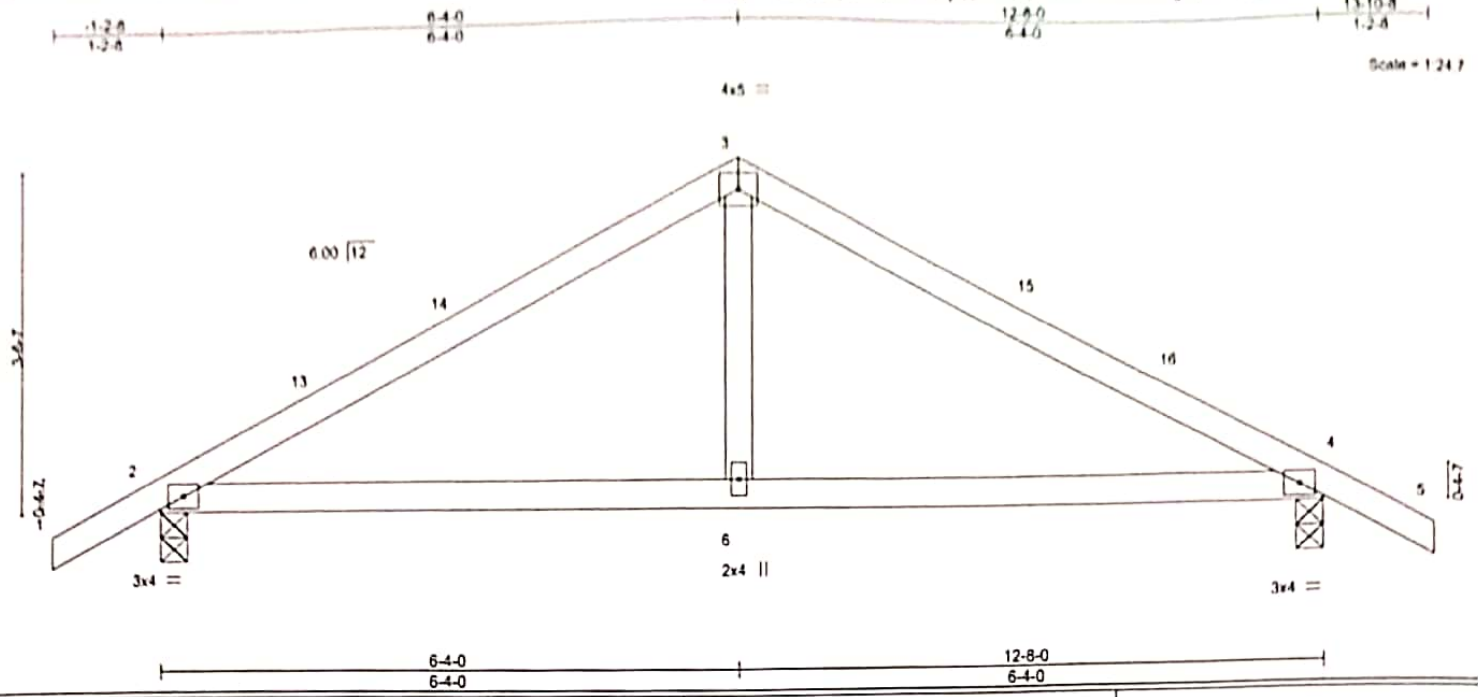
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) -1-2-8 to 1-9-8, Exterior(2) 1-9-8 to 5-10-0, Corner(3) 5-10-0 to 8-10-0, Exterior(2) 8-10-0 to 12-10-8 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 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) 19, 12, 17, 18, 14, 13.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI1-7473 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 ANSITPH 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  
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 818 Soundside Road  
 Edenton, NC 27932





<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSL.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.00	TC 0.36	Vert(LL) -0.04 6-9 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.32	Vert(CT) -0.09 6-9 >999 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.05	Horz(CT) 0.01 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS		Weight: 49 lb	FT = 20%

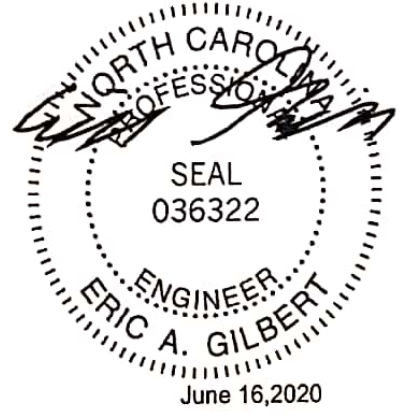
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2

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

**REACTIONS.** (size) 2=0-3-8, 4=0-3-8  
 Max Horz 2=-53(LC 9)  
 Max Uplift 2=-34(LC 11), 4=-34(LC 11)  
 Max Grav 2=579(LC 1), 4=579(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-707/86, 3-4=-707/86  
 BOT CHORD 2-6=0/566, 4-6=0/566

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 6-4-0, Exterior(2) 6-4-0 to 9-4-0, Interior(1) 9-4-0 to 13-10-8 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
  - \* 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, 4.



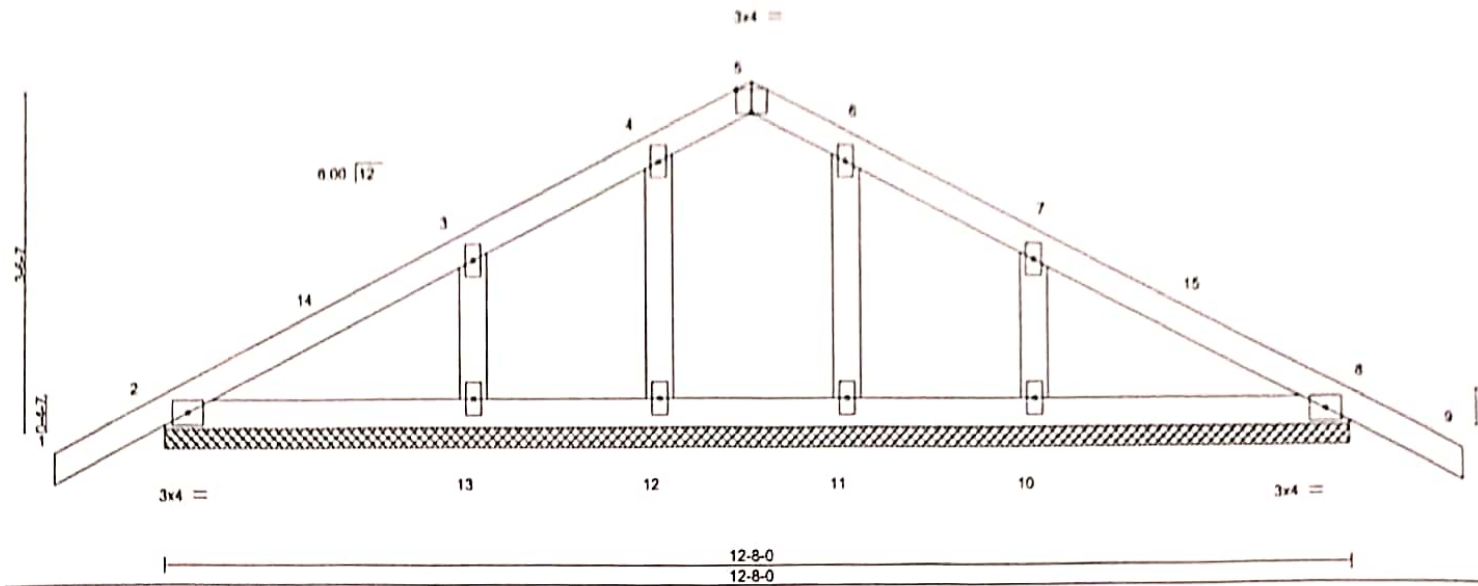


Plate Offsets (X,Y)-- [5.0-2.0,Edge]		12-8-0		12-8-0					
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.00	TC 0.08	Vert(LL)	0.00	8	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	0.00	9	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 56 lb	FT = 20%

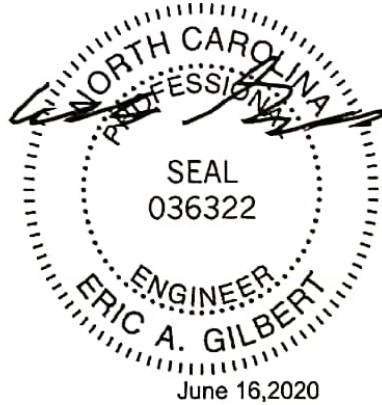
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** All bearings 12-8-0.  
 (lb) - Max Horz 2=53(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 8, 13, 10  
 Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 11, 10

**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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Comer(3) -1-2-8 to 1-9-8, Exterior(2) 1-9-8 to 6-4-0, Comer(3) 6-4-0 to 9-4-0, Exterior(2) 9-4-0 to 13-10-8 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 2x4 MT20 unless otherwise indicated.
  - 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) 2, 8, 13, 10.





Job	Truss	Truss Type	Qty	Ply	FFH PERO	E14513094
200003RT1	E03	Common Girder	1	2		

Carolina Structural Systems, LLC. Ether, NC - 27247. ID ng1sARAtyWRgmLmP2hZLLXyQUtkiQCqM9NdMpbAJu0oo7FEvmmcUWhshjOdSQ2rsz5yzb  
 6.330 a May 6 2020 MiTek Industries, Inc. Mon Jun 15 17:56:24 2020 Page 1  
 Scale = 1:22.3

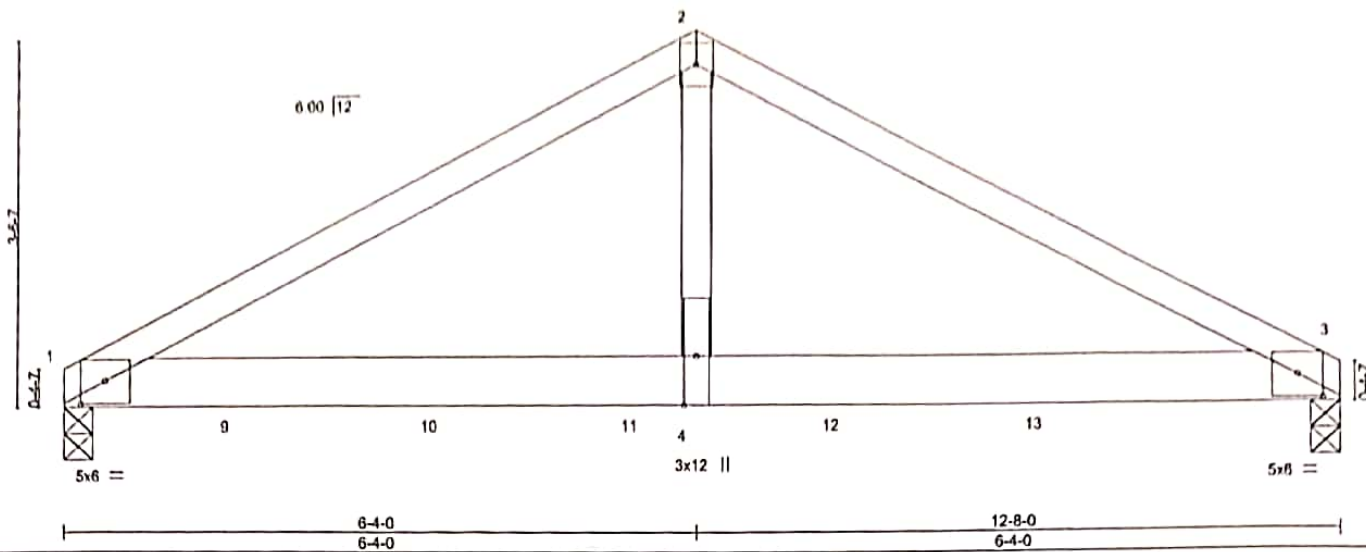


Plate Offsets (X,Y) - [1:0-3-0,0-2-9], [3:0-3-0,0-2-9]					
<b>LOADING</b> (psf)	<b>SPACING</b> - 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.00	TC 0.55	Vert(LL) -0.08 4-8 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.64	Vert(CT) -0.16 4-8 >947 180		
BCLL 0.0	Rep Stress Incr NO	WB 0.48	Horz(CT) 0.03 3 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS			
				Weight: 110 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP DSS  
 WEBS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-2-13 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

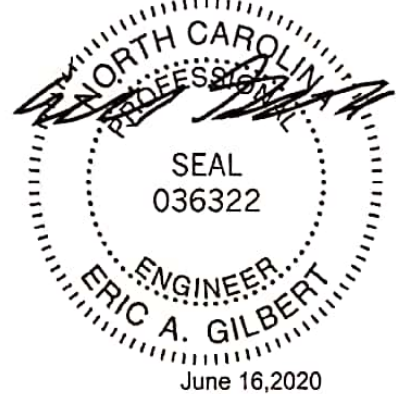
**REACTIONS.** (size) 1=0-3-8, 3=0-3-8  
 Max Horz 1=45(LC 23)  
 Max Grav 1=3212(LC 1), 3=3667(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-4956/0, 2-3=-4953/0  
 BOT CHORD 1-4=0/4406, 3-4=0/4406  
 WEBS 2-4=0/3951

- 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 0-9-0 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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - \* 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.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 950 lb down at 1-9-4, 994 lb down at 3-9-4, 994 lb down at 5-9-4, 994 lb down at 7-9-4, and 994 lb down at 9-9-4, and 995 lb down at 11-9-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 1-2=-60, 2-3=-60, 1-3=-20  
 Concentrated Loads (lb)  
 Vert: 8=-987(B) 9=-936(B) 10=-986(B) 11=-986(B) 12=-986(B) 13=-986(B)



**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 ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

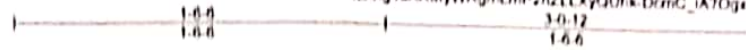
**ENGINEERING BY TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job 200803011	Truss V01	Truss Type Valley	Qty 1	Qty 1	FILE PERIOD E14513005
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Job Reference (optional)

h 330 x May 6 2020 MiTek Industries, Inc. Mon Jun 15 17:56:25 2020 Page 1  
ID:ng1sAHatyWfignLmP2hZLLXyGUk.DcmC\_A70GqfsmTTCM/WaUn713w0PgF09s6Ac.Otubya



Scale = 1/8"

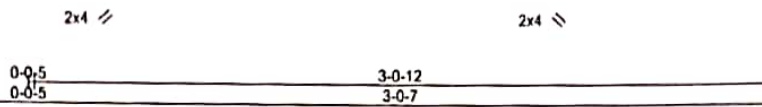
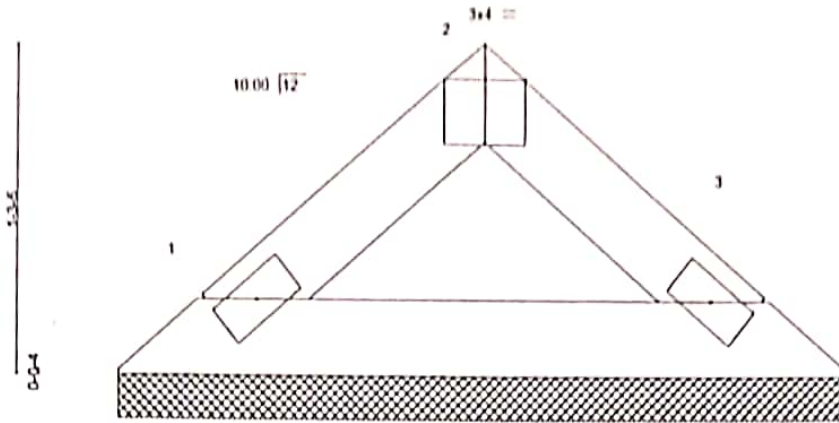


Plate Offsets (X,Y) - [2-0-2-0,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.00	TC 0.01	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.03	Vert(LL) n/a - n/a 999		
BCLL 0.0	Rep Stress Incr YES	WB 0.00	Vert(CT) n/a - n/a 999		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
				Weight: 9 lb	FT = 20%

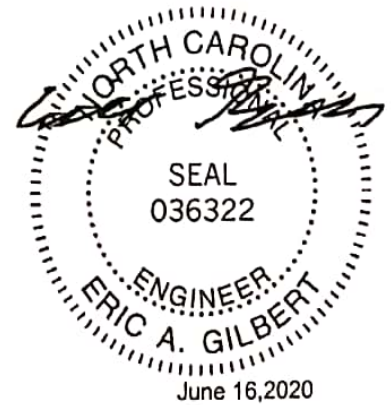
**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-0-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=3-0-3, 3=3-0-3  
Max Horz 1=-17(LC 9)  
Max Uplift 1=-1(LC 11), 3=-1(LC 11)  
Max Grav 1=90(LC 1), 3=90(LC 1)

**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=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) 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
  - Gable requires continuous bottom chord bearing.
  - \* 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) 1, 3.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-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 ANS/TPH Quality Criteria, DSB-89 and CSI 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

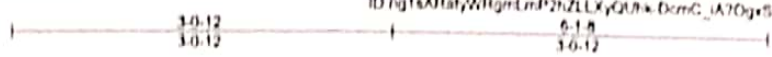


Job 200803HT1	Truss V02	Truss Type Valley	Qty 1	Ply 1	FFH-FERO	E14513096
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Carolina Structural Systems, LLC, Ether, NC - 27247,

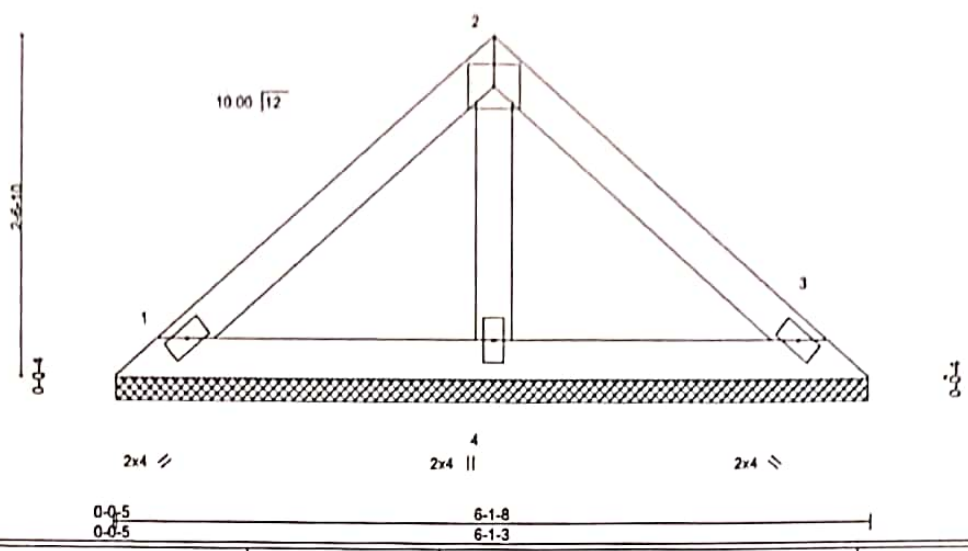
Job Reference (optional)

B.330 4 May 6 2020 MITek Industries, Inc. Mon Jun 15 17:56:25 2020 Page 1  
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4x5

Scale = 1/16"



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.09	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-P					Weight: 22 lb	FT = 20%

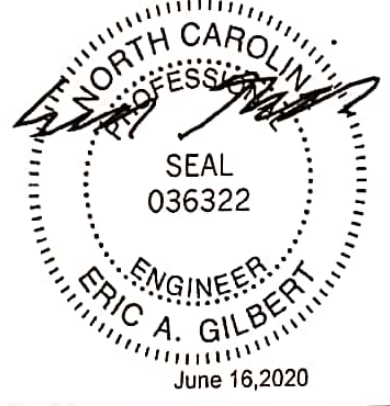
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** (size) 1=6-0-14, 3=6-0-14, 4=6-0-14  
 Max Horz 1=40(LC 9)  
 Max Uplift 1=15(LC 11), 3=15(LC 11)  
 Max Grav 1=123(LC 1), 3=123(LC 1), 4=179(LC 1)

**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=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) 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) Gable requires continuous bottom chord bearing.
  - 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.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



**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 ANSUTPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

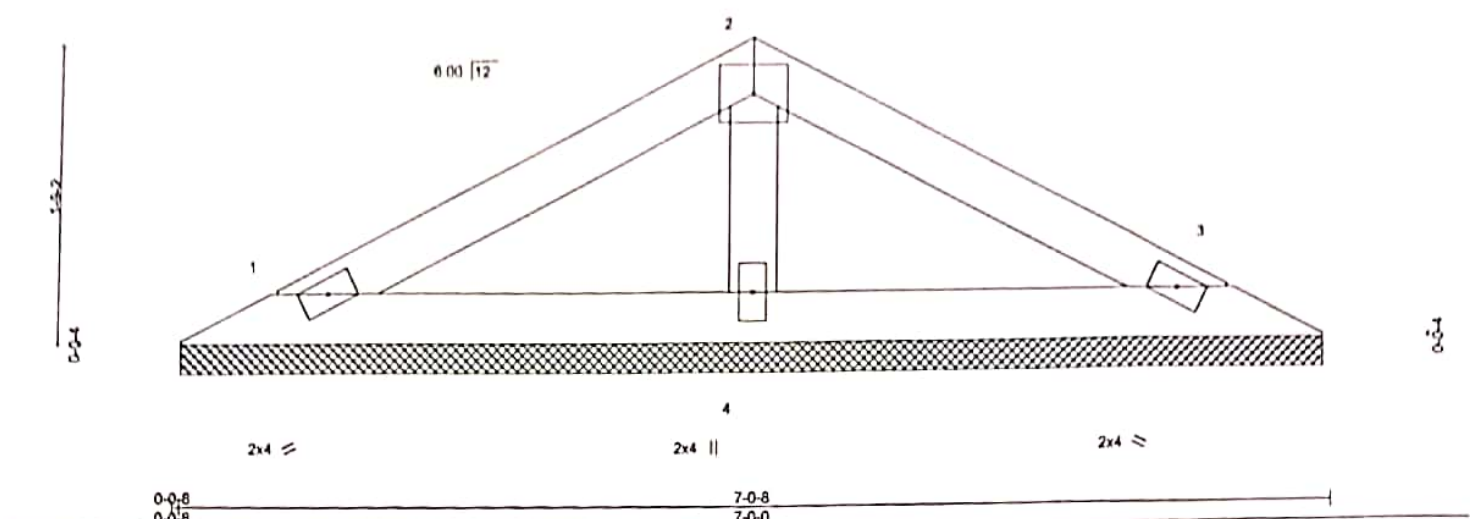
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 A MITek Affiliate  
 B18 Soundside Road  
 Edenton, NC 27932







Scale = 1/16"



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.11	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.04	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.02	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2015/TP12014			Weight: 22 lb	FT = 20%

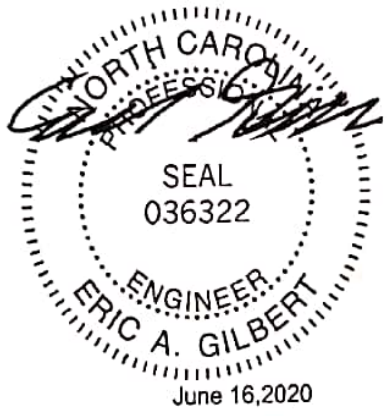
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** (size) 1=6-11-8, 3=6-11-8, 4=6-11-8  
 Max Horz 1=-20(LC 9)  
 Max Uplift 1=-10(LC 11), 3=-10(LC 11)  
 Max Grav 1=118(LC 1), 3=118(LC 1), 4=227(LC 1)

**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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCCL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) 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
  - Gable requires continuous bottom chord bearing.
  - \* 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) 1, 3.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MH-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 ANS/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

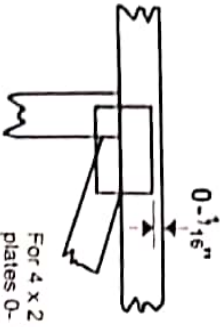
ENGINEERING BY  
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 A Mitek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



Center plate on joint unless X, Y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- $\frac{1}{16}$ " from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

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

## PLATE SIZE

4 X 4

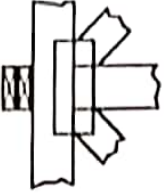
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

## BEARING



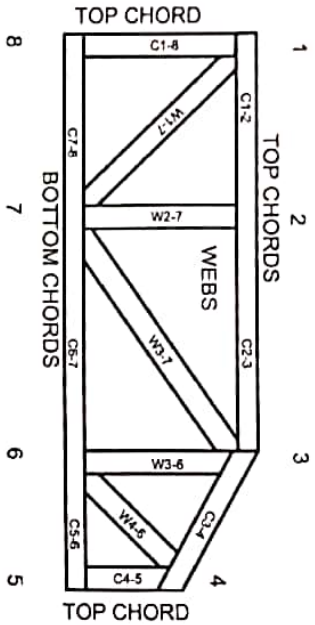
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
 DSS-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/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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# General Safety Notes

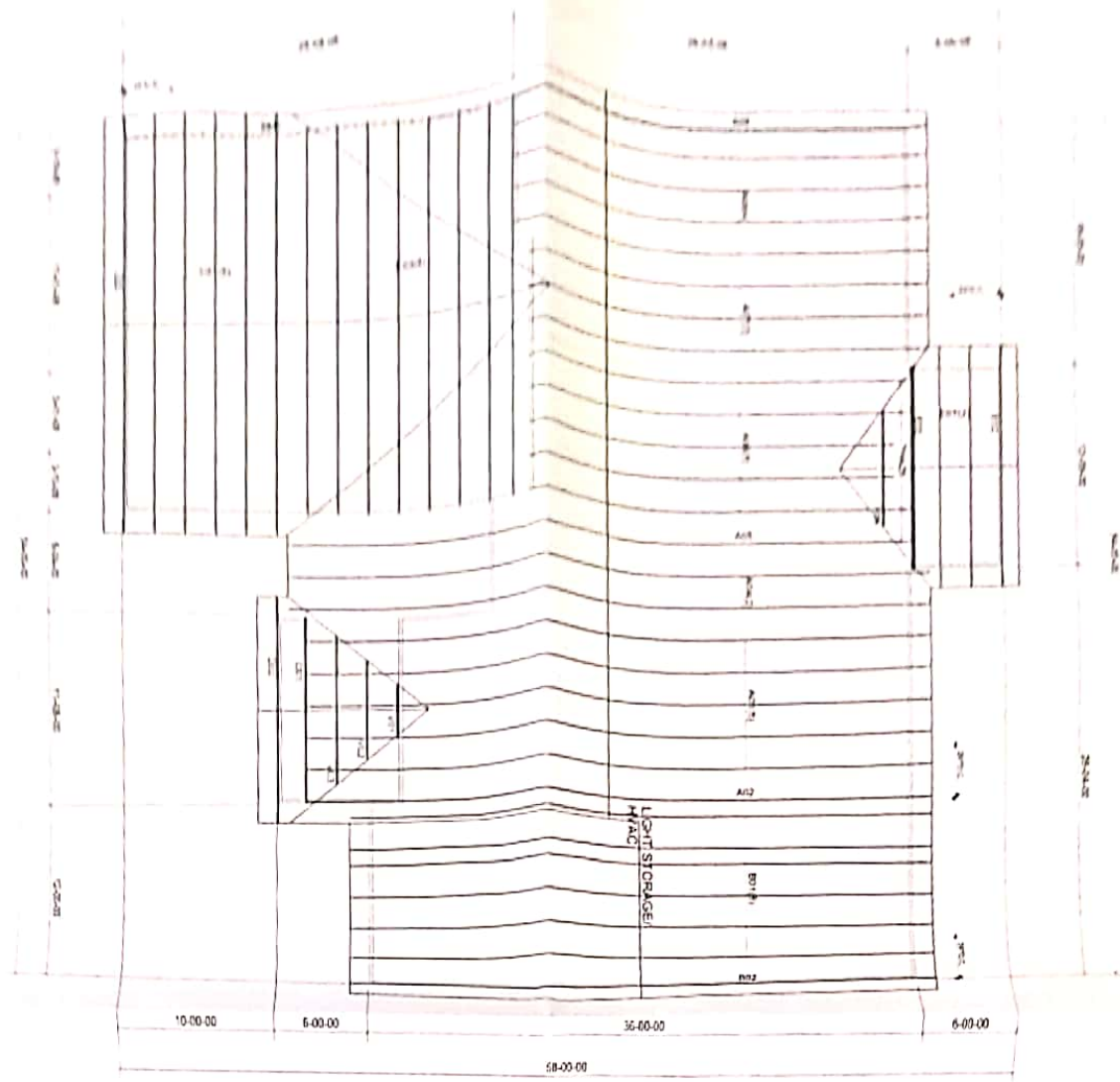
## Failure to Follow Could Cause Property Damage or Personal Injury

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 warps 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.



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





Product	Plies	Net Qty	Fab Type
BM1	2	2	MFD
BM1	26-00-00	1	3/4" x 14" x 20E Microlam® LVL

Truss Connector Total List	Manufacturer	Product	Qty
6	Simpson	THA29	6

QUALITY AUDITED BY:



ANSI Z399.2  
ANSI Z399.3  
ANSI Z399.4  
ANSI Z399.5  
ANSI Z399.6  
ANSI Z399.7  
ANSI Z399.8  
ANSI Z399.9  
ANSI Z399.10  
ANSI Z399.11  
ANSI Z399.12  
ANSI Z399.13  
ANSI Z399.14  
ANSI Z399.15  
ANSI Z399.16  
ANSI Z399.17  
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ANSI Z399.40  
ANSI Z399.41  
ANSI Z399.42  
ANSI Z399.43  
ANSI Z399.44  
ANSI Z399.45  
ANSI Z399.46  
ANSI Z399.47  
ANSI Z399.48  
ANSI Z399.49  
ANSI Z399.50

CAROLINA STRUCTURAL SYSTEMS, LLC  
Simp. No. 1700 (2017)  
Simp. No. 1700 (2017)

**ROOF DATA**


Roof Area: 341,07 sq SF  
 Overhang Length: 96.15 LF  
 Eave Length: 215.5 LF  
 Hip Length: 0 LF  
 Valley Length: 95.6 LF  
 Ridge Length: 108.22 LF

**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY**

These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 563 D'Onofrio Drive, Madison, WI 53179.

**SHOP DRAWING APPROVAL**

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

Job #: 200883RT1	Plan: FFH - WILSON - PERO	DATE:
Customer: GARRIS EVANS LUMBER CO	Date: 6/12/2020	 <p>Carolina Structural Systems Roof Trusses • Floor Trusses • EWP Carolina Structural Systems P.O. Box 157, Ether, NC 27247 225 Frame Shop Rd., Star, NC 27356 910-491-9004</p>
Site Address:	Sales Rep: JSL	
City, ST, ZIP:	Designer: ET	