

# Mark Morris, P.E.

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The truss drawing(s) listed below have been prepared by **Atlantic Building Components** under my direct supervision based on the parameters provided by the truss designers.

AST #: 28928

JOB: 21-6088-R01

JOB NAME: 49786-0218 WOODGROVE

Wind Code: 37

Wind Speed: Vult= 115mph

Exposure Category: B

Mean Roof Height (feet): 23

These truss designs comply with IRC 2015 as well as IRC 2018.

*29 Truss Design(s)*

Trusses:

PB01, PB02, PB03, PB04, PB05, R01, R02, R03, R04, R05, R06, R07, R08, R09, R10, R11, R12, R13, R14, VT01, VT02, VT03, VT04, VT05, VT06, VT07, VT08, VT09, VT10

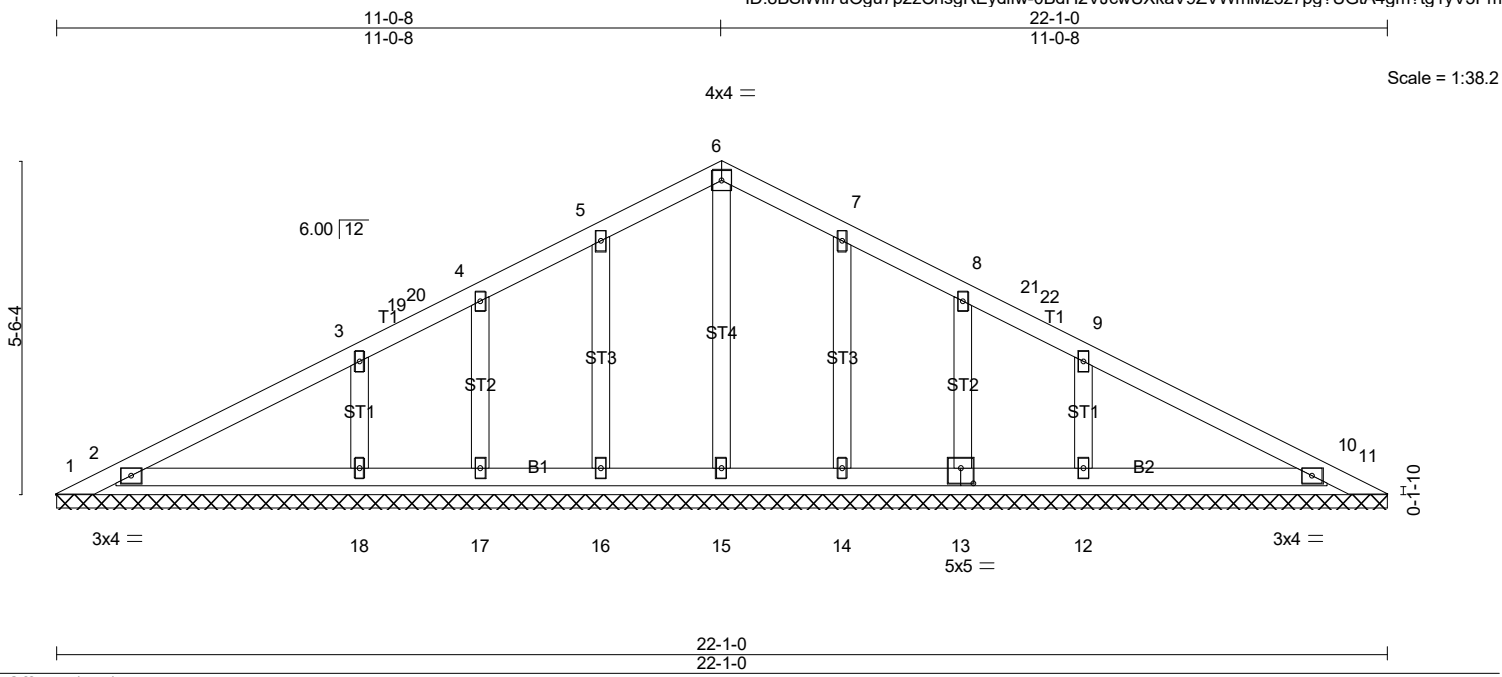


**10/9/2021**

**Mark Morris**

***Warning !—Verify design parameters and read notes before use.***

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LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP
TCLL (roof)	20.0	2-0-0		TC	0.20	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf)	20.0	Plate Grip DOL	1.15	BC	0.16	Vert(LL)	n/a	-	n/a		
TCDL	10.0	Lumber DOL	1.15	WB	0.07	Vert(CT)	n/a	-	n/a		
BCLL	0.0 *	Rep Stress Incr	YES	Matrix-SH		Horz(CT)	0.00	10	n/a		
BCDL	10.0	Code IRC2018/TPI2014								Weight: 99 lb	FT = 20%

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

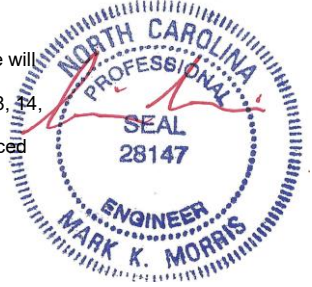
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 22-1-0.  
 (lb) - Max Horz 1=65(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 16, 10, 17, 18, 14, 13, 12 except 1=-105(LC 28), 11=-105(LC 35)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 11, 15, 17, 13 except 2=326(LC 1), 16=256(LC 5), 10=327(LC 1), 18=288(LC 21), 14=255(LC 6), 12=288(LC 22)

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

- NOTES-** (14-17)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 5-0-8, Interior(1) 5-0-8 to 6-2-14, Exterior(2R) 6-2-14 to 15-10-2, Interior(1) 15-10-2 to 16-11-8, Exterior(2E) 16-11-8 to 21-9-1 zone; 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.00; Cs=1.00; Ct=1.10
  - 5) Unbalanced snow loads have been considered for this design.
  - 6) All plates are 2x4 MT20 unless otherwise indicated.
  - 7) Gable requires continuous bottom chord bearing.
  - 8) Gable studs spaced at 2-0-0 oc.
  - 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 10) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 16, 10, 17, 18, 14, 13, 12 except (jt=lb) 1=105, 11=105.
  - 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



10/9/2021

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	PB01	GABLE	2	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:22 2021 Page 2  
 ID:8BSIWll7uOgu7p2zCnsgREydfiw-UNBgGrJFhofbBekI3EHbWGVIZ3Lj?KQDvQkRDTyV3PI

- 14) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 15) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 16) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 17) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

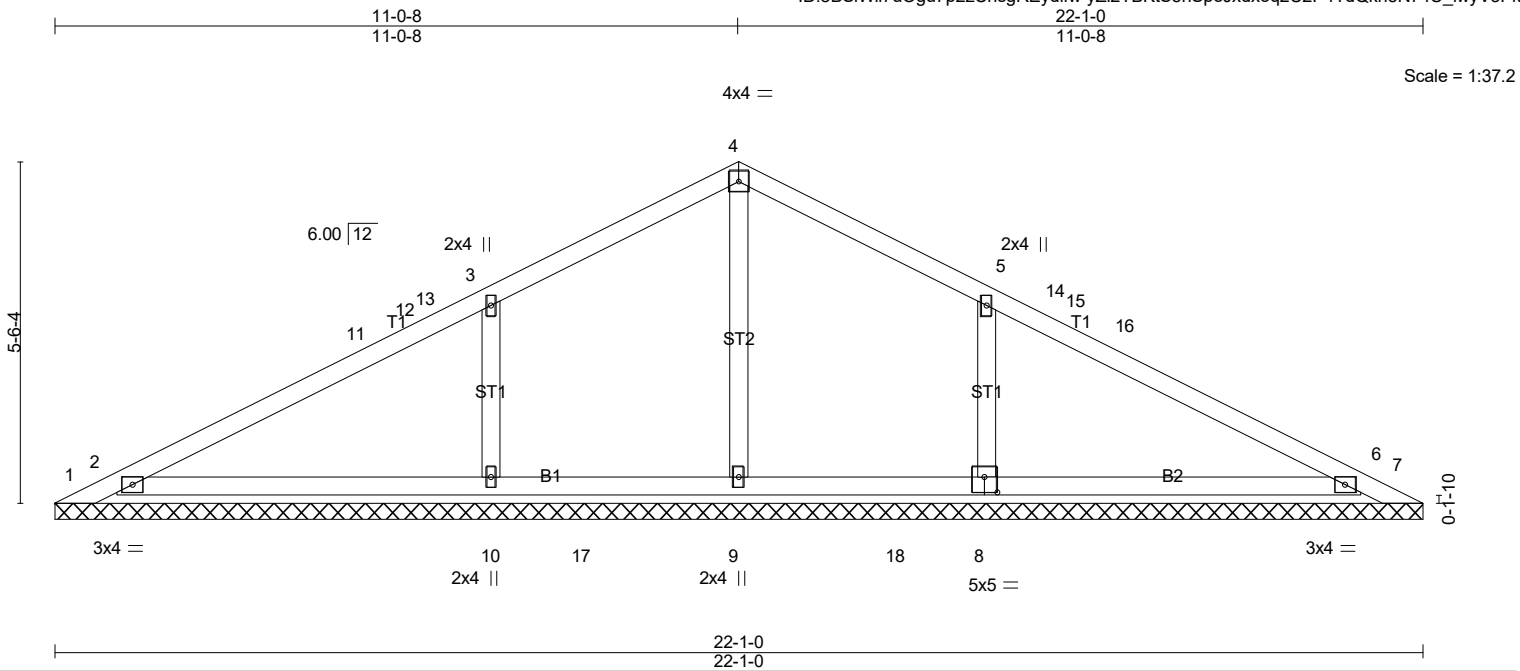


10/9/2021

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Job 21-6088-R01	Truss PB02	Truss Type GABLE	Qty 9	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC	# 28928
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LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP
TCLL (roof)	20.0	2-0-0		TC	0.47	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf)	20.0	Plate Grip DOL	1.15	BC	0.39	Vert(LL)	n/a	-	n/a		
TCDL	10.0	Lumber DOL	1.15	WB	0.11	Vert(CT)	n/a	-	n/a		
BCLL	0.0 *	Rep Stress Incr	YES	Matrix-SH		Horz(CT)	0.00	6	n/a		
BCDL	10.0	Code IRC2018/TPI2014								Weight: 82 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 22-1-0.  
 (lb) - Max Horz 1=65(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 8, 6 except 1=-285(LC 1), 7=-286(LC 1)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 2=589(LC 1), 9=389(LC 6), 10=560(LC 21), 8=557(LC 22), 6=593(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-10=-446/152, 5-8=-443/151

- NOTES-** (13-16)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCCL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 5-1-8, Interior(1) 5-1-8 to 6-2-14, Exterior(2R) 6-2-14 to 15-10-2, Interior(1) 15-10-2 to 16-11-8, Exterior(2E) 16-11-8 to 21-9-1 zone; 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.
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 4-0-0 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCCL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 8, 6 except (jt=lb) 1=285, 7=286.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



10/9/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	PB02	GABLE	9	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MITek Industries, Inc. Sat Oct 9 19:30:23 2021 Page 2  
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- 13) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 14) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 15) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 16) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



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Job 21-6088-R01	Truss PB03	Truss Type GABLE	Qty 2	Ply 2	49786-0218 WOODGROVE   FUQUAY VARINA, NC	# 28928
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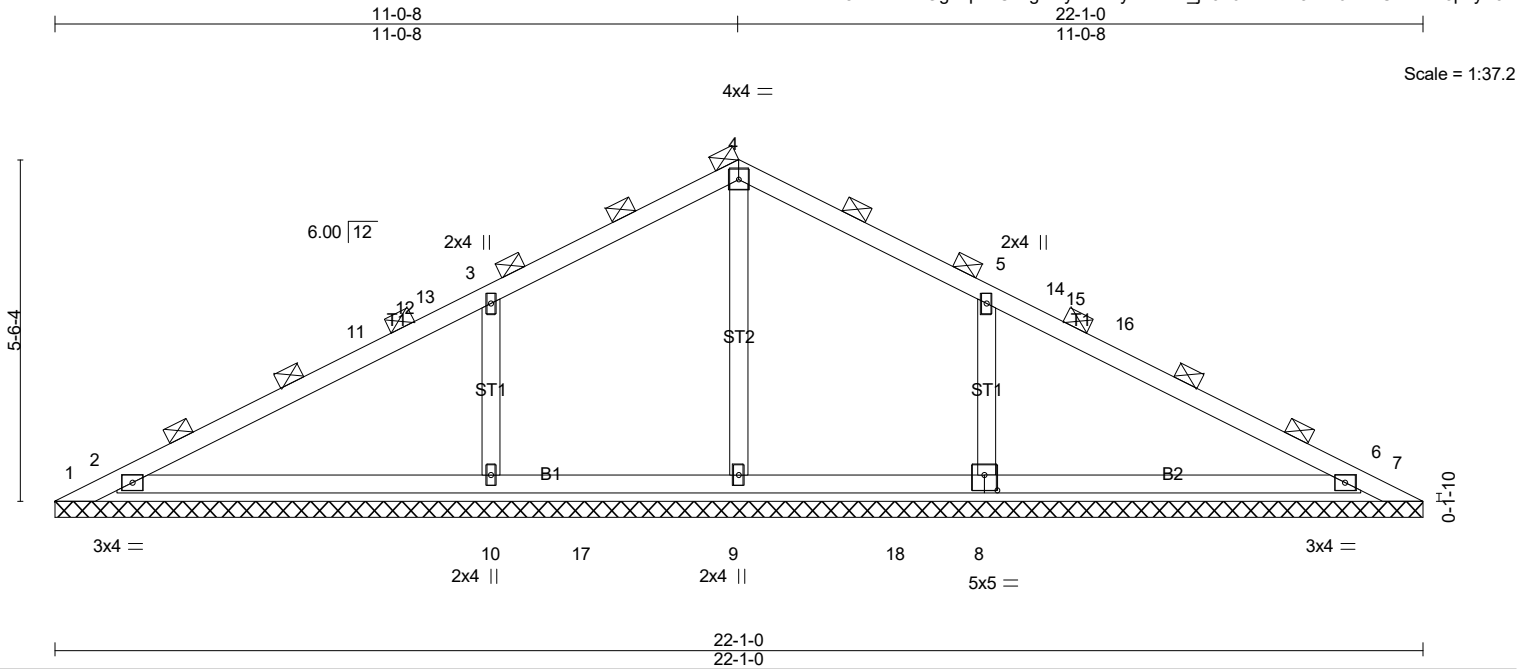


Plate Offsets (X,Y)-- [8:0-2-8,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-3-8	TC 0.31	Vert(LL)	n/a	-	n/a	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.25	Vert(CT)	n/a	-	n/a		
TCDL 10.0	Lumber DOL 1.15	WB 0.05	Horz(CT)	0.00	6	n/a		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-SH						
BCDL 10.0	Code IRC2018/TPI2014						Weight: 164 lb	FT = 20%

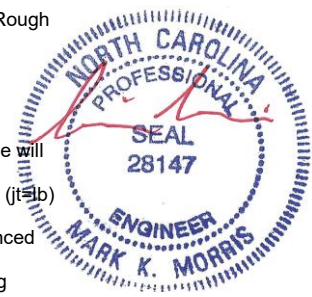
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.3  
OTHERS 2x4 SP No.3

**BRACING-**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.)  
(Switched from sheeted: Spacing > 2-0-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 22-1-0.  
(lb) - Max Horz 1=74(LC 14)  
Max Uplift All uplift 100 lb or less at joint(s) 10, 8, 6 except 1=-326(LC 1), 7=-328(LC 1), 2=-108(LC 14)  
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 2=675(LC 1), 9=446(LC 6), 10=641(LC 21), 8=638(LC 22), 6=679(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-10=-511/174, 5-8=-508/173

- NOTES-** (16-19)
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - 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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 5-1-8, Interior(1) 5-1-8 to 6-2-14, Exterior(2R) 6-2-14 to 15-10-2, Interior(1) 15-10-2 to 16-11-8, Exterior(2E) 16-11-8 to 21-9-1 zone; 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.
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 4-0-0 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 10, 8, 6 except (j=1) 1=326, 7=328, 2=108.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
  - 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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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	PB03	GABLE	2	2	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:25 2021 Page 2  
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- 16) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
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- 18) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 19) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



10/9/2021

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Job 21-6088-R01	Truss PB04	Truss Type GABLE	Qty 2	Ply 4	49786-0218 WOODGROVE   FUQUAY VARINA, NC	# 28928
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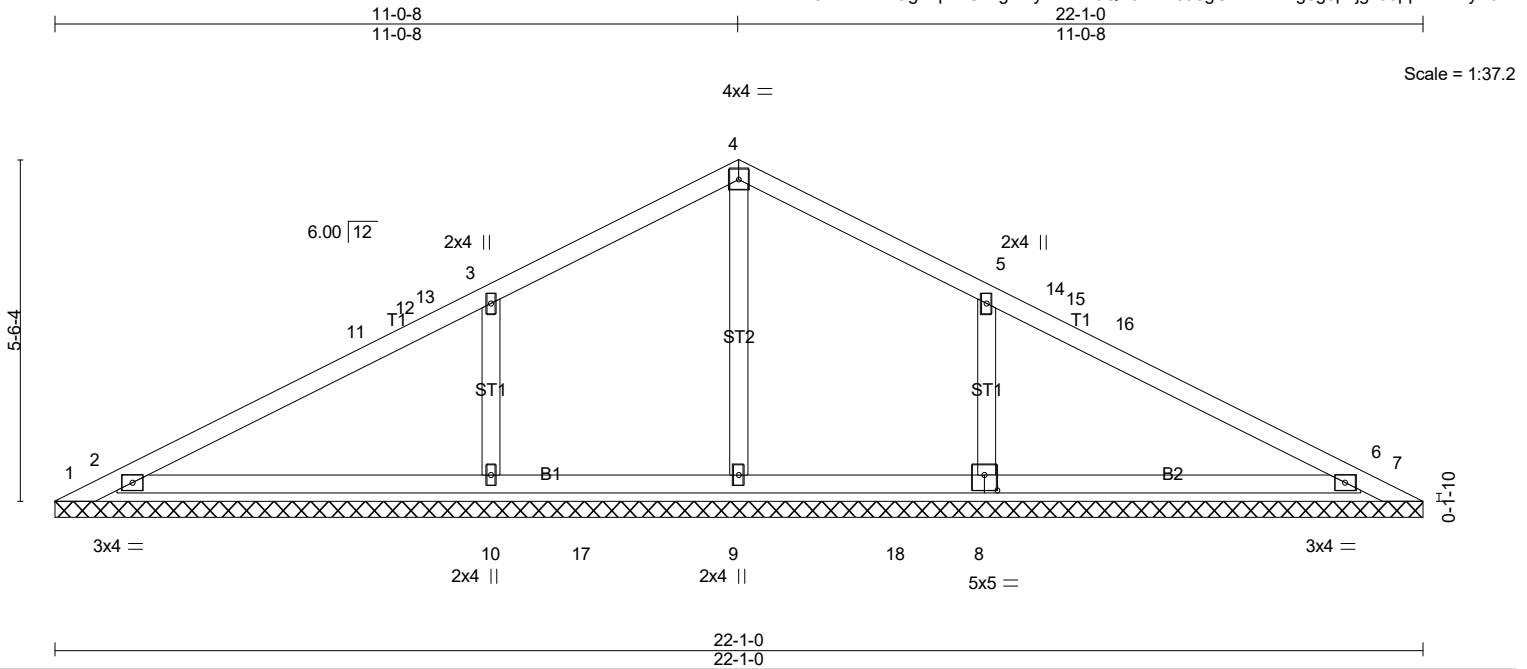


Plate Offsets (X,Y)-- [8:0-2-8,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.12	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.10	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.03	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 328 lb	FT = 20%

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

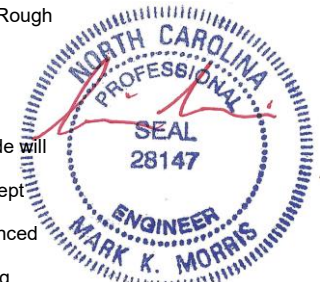
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 22-1-0.  
 (lb) - Max Horz 1=65(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 8, 6 except 1=-285(LC 1), 7=-286(LC 1)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 2=589(LC 1), 9=389(LC 6), 10=560(LC 21), 8=557(LC 22), 6=593(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 3-10=-446/152, 5-8=-443/151

**NOTES-** (15-18)

- 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 5-1-8, Interior(1) 5-1-8 to 6-2-14, Exterior(2R) 6-2-14 to 15-10-2, Interior(1) 15-10-2 to 16-11-8, Exterior(2E) 16-11-8 to 21-9-1 zone; 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.
- TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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, 10, 8, 6 except (jt=lb) 1=285, 7=286.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	PB04	GABLE	2	4	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:26 2021 Page 2  
 ID:8BSIWII7uOgu7p2zCnsgREydfiw-M8QA5DMII090gG1WI4MXg6g0phjgx99pp1ieMEyV3Ph

- 15) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 16) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 17) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 18) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

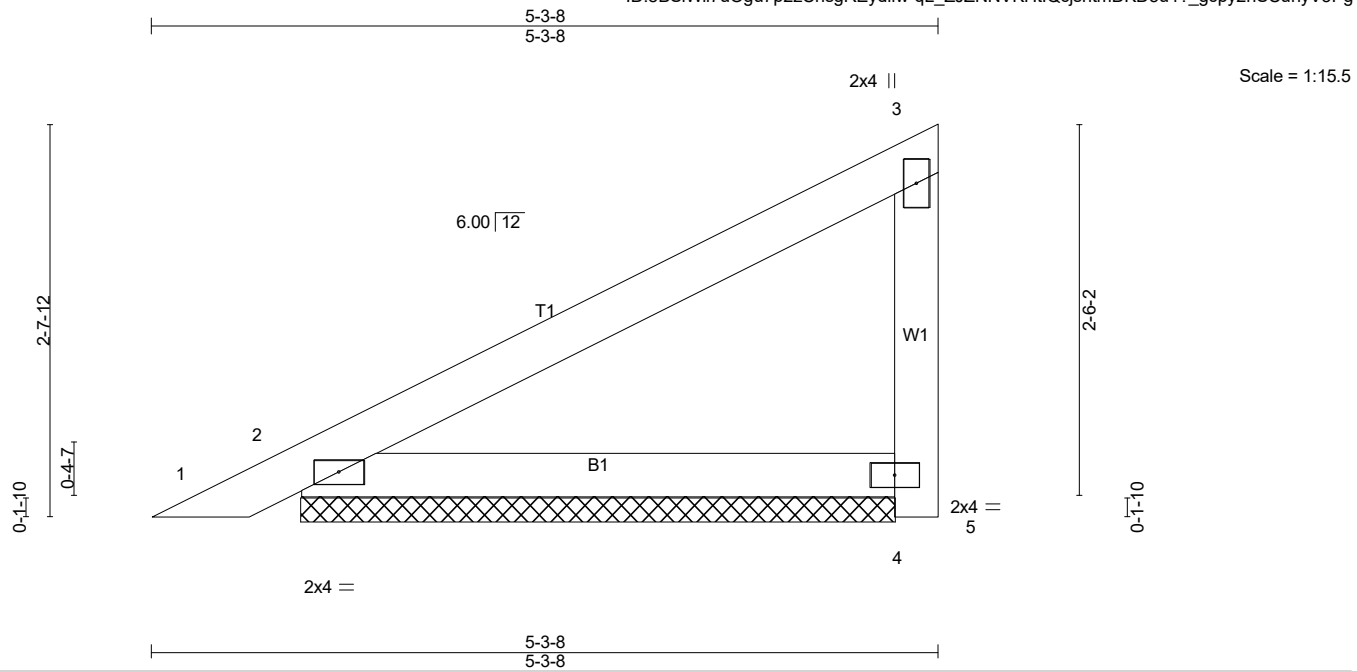


10/9/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 21-6088-R01	Truss PB05	Truss Type Piggyback	Qty 7	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC	Job Reference (optional) <b># 28928</b>
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8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:27 2021 Page 1  
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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.48	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.35	Vert(LL) -0.00 1 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) 0.01 1 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 18 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-3-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

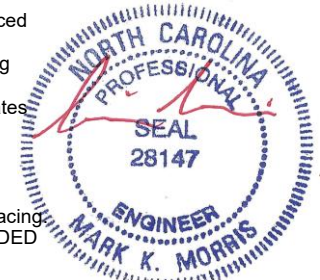
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 5=0/3-11-15 (min. 0-1-8), 2=210/3-11-15 (min. 0-1-8), 4=162/3-11-15 (min. 0-1-8)  
Max Horz 2=66(LC 14)  
Max Uplift 2=12(LC 14), 4=31(LC 14)  
Max Grav 2=302(LC 21), 4=229(LC 21)

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

**NOTES-** (11-14)

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.



10/9/2021

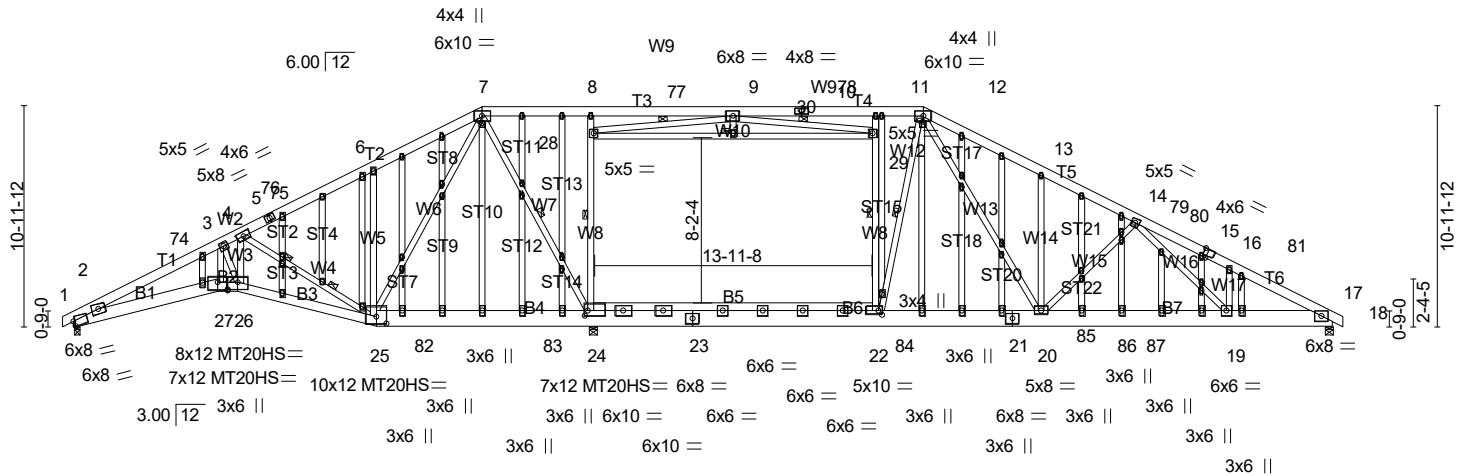
**LOADING CASE(S) Standard parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R01	GABLE	1	1	
					<b># 28928</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:31 2021 Page 1  
 ID:8BSIWI7uOgu7p2zCnsgREydfiw-j6E38wQuZZoJn1wU5dyiN9NfZiClcBCyZJQP1SyV3Pc

-0-6-8	7-2-12	8-2-12	15-2-0	20-5-8	25-10-12	33-0-4	40-1-12	42-6-8	48-3-8	53-1-12	57-10-4	63-0-0	63-6-8
0-6-8	7-2-12	1-0-0	6-11-4	5-3-8	5-5-4	7-1-8	7-1-8	2-4-12	5-9-0	4-10-4	4-8-8	5-1-12	0-6-8

Scale = 1:11.53



0-3-8	7-2-12	8-2-12	15-2-0	25-10-12	26-0-4	40-1-12	48-3-8	57-10-4	63-0-0
0-3-8	6-11-4	1-0-0	6-11-4	10-8-12	0-1-8	14-1-8	8-1-12	9-6-12	5-1-12

Plate Offsets (X,Y)-- [2:0-0-12,Edge], [7:0-1-5,0-2-0], [12:0-0-9,0-2-0], [15:0-2-3,Edge], [22:0-2-4,0-2-8], [24:0-1-12,0-3-0], [25:0-6-0,0-4-3], [26:0-6-0,0-5-0], [27:0-6-0,0-5-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.95	Vert(LL) -0.71	20-22	>621	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.97	Vert(CT) -1.26	20-22	>351	180	MT20HS	187/143
TCDL 10.0	Rep Stress Incr YES		WB 0.93	Horz(CT) 0.33	17	n/a	n/a		
BCLL 0.0 *	Code IRC2018/TPI2014		Matrix-SH	Attic -0.36	22-24	474	360		
BCDL 10.0								Weight: 791 lb	FT = 20%

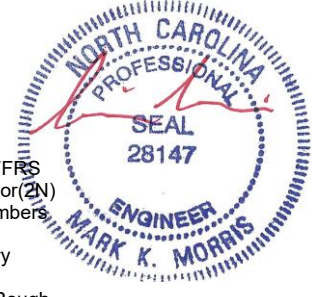
LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins.
BOT CHORD 2x10 SP 2400F 2.0E *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
B5: 1-8/16x4-12/16 SP No.2, B1: 2x8 SP No.1, B2: 2x6 SP DSS	7-10-10 oc bracing: 24-25
B3: 2x6 SP No.1	2-2-0 oc bracing: 22-24.
WEBS 2x4 SP No.3 *Except*	WEBS 1 Row at midpt 24-28, 22-29, 9-28, 9-29, 12-22, 7-24
W8: 2x4 SP No.1, W10, W3: 2x4 SP No.2	2 Rows at 1/3 pts 4-25
OTHERS 2x4 SP No.3	JOINTS 1 Brace at Jt(s): 30
	This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 24=1357/0-5-8 (min. 0-1-8), 17=2213/0-3-8 (min. 0-2-4), 2=1951/0-3-8 (min. 0-2-10)  
 Max Horz 2=-128(LC 19)  
 Max Uplift 24=-28(LC 11), 17=-29(LC 15)  
 Max Grav 24=1760(LC 36), 17=2687(LC 46), 2=2313(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-74=-7553/533, 3-74=-7420/550, 3-75=-6711/535, 4-75=-6684/538, 4-76=-3803/270,  
 5-76=-3789/273, 5-6=-3695/299, 6-7=-3824/409, 7-8=-3553/230, 8-77=-3239/195,  
 9-77=-3239/195, 9-78=-3710/228, 10-78=-3710/228, 10-11=-3710/228, 11-12=-3611/236,  
 12-13=-4777/433, 13-14=-4756/333, 14-79=-4792/462, 79-80=-4851/453, 15-80=-4867/452,  
 15-81=-4884/444, 16-81=-4899/443, 16-17=-5008/359  
 BOT CHORD 25-82=0/2941, 82-83=0/2946, 24-83=0/2946, 23-24=0/3596, 22-23=0/3599, 22-84=0/3434,  
 84-85=0/3433, 21-85=0/3424, 20-21=0/3437, 20-86=-158/4408, 86-87=-158/4408,  
 19-87=-158/4408, 17-19=-235/4353, 2-27=-401/6745, 26-27=-371/6438, 25-26=-287/6173  
 WEBS 24-28=-1343/192, 8-28=-963/166, 22-29=-767/255, 11-29=-410/364, 28-30=-210/1793,  
 29-30=-210/1793, 4-25=-3205/298, 7-25=-228/1087, 9-28=-2163/253, 9-29=-1759/219,  
 13-20=-548/164, 12-22=-351/774, 12-20=-296/1741, 14-20=-459/160, 4-26=-245/2588,  
 6-25=-712/190, 3-26=-949/243, 3-27=-84/1499, 7-24=-100/1410

- NOTES-** (20-23)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-6-8 to 5-9-2, Exterior(2N) 5-9-2 to 14-1-14, Corner(3R) 14-1-14 to 26-9-2, Exterior(2N) 26-9-2 to 36-2-14, Corner(3R) 36-2-14 to 48-10-2, Exterior(2N) 48-10-2 to 57-2-14, Corner(3E) 57-2-14 to 63-6-8 zone; 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.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10



5) Wind bracing of individual members has not been considered for this design. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI I-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R01	GABLE	1	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:31 2021 Page 2  
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**NOTES-** (20-23)

- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 8) Provide adequate drainage to prevent water ponding.
- 9) All plates are MT20 plates unless otherwise indicated.
- 10) All plates are 2x4 MT20 unless otherwise indicated.
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 14) Ceiling dead load (5.0 psf) on member(s). 28-30, 29-30
- 15) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 22-24
- 16) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 17.
- 18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 19) Attic room checked for L/360 deflection.
- 20) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 21) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 22) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 23) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

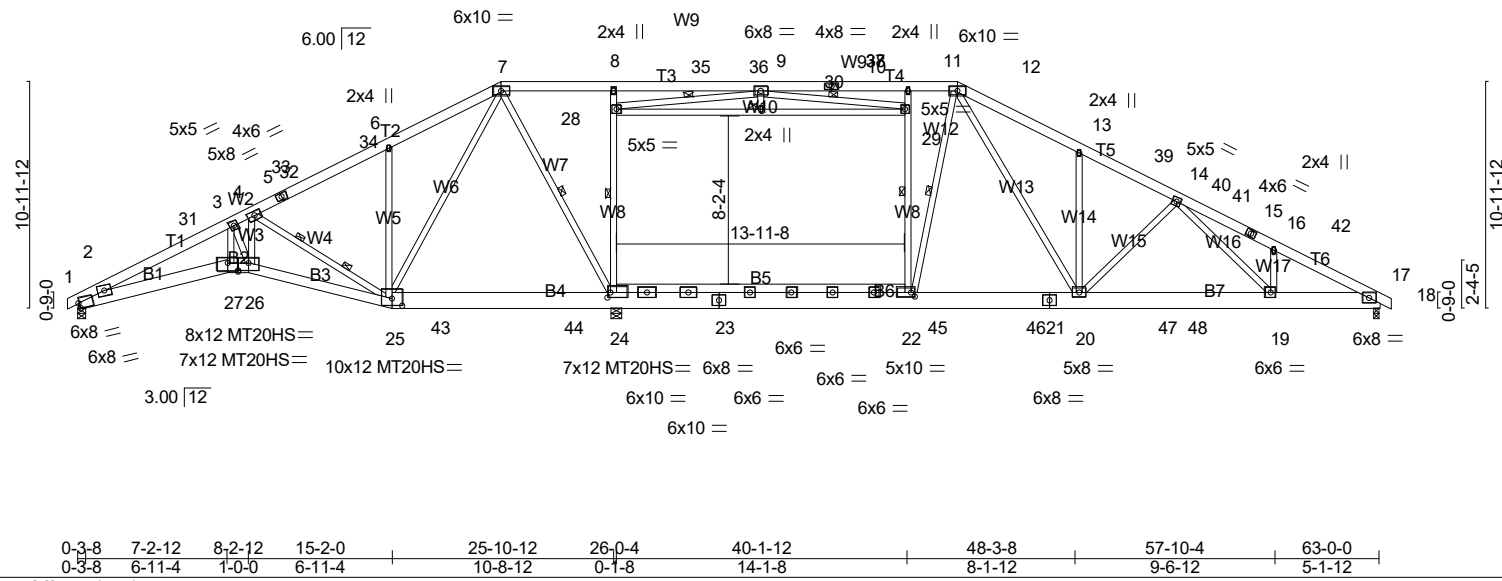


10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

0-6-8	7-2-12	8-2-12	15-2-0	20-5-8	25-10-12	33-0-4	40-1-12	42-6-8	48-3-8	53-1-12	57-10-4	63-0-0	63-6-8
0-6-8	7-2-12	1-0-0	6-11-4	5-3-8	5-5-4	7-1-8	7-1-8	2-4-12	5-9-0	4-10-4	4-8-8	5-1-12	0-6-8

Scale = 1:111.5



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES		GRIP
TCLL (roof) 20.0	2-0-0	TC 0.95	in (loc) l/defl L/d	MT20	244/190	
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.97	Vert(LL) -0.71 20-22 >621 240	MT20HS	187/143	
TCDL 10.0	Lumber DOL 1.15	WB 0.93	Vert(CT) -1.26 20-22 >351 180			
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.33 17 n/a n/a			
BCDL 10.0	Code IRC2018/TPI2014		Attic -0.36 22-24 474 360			Weight: 621 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins.
BOT CHORD 2x10 SP 2400F 2.0E *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
B5: 1-8/16x4-12/16 SP No.2, B1: 2x8 SP No.1, B2: 2x6 SP DSS	7-10-10 oc bracing: 24-25
B3: 2x6 SP No.1	2-2-0 oc bracing: 22-24.
WEBS 2x4 SP No.3 *Except*	WEBS 1 Row at midpt 24-28, 22-29, 9-28, 9-29, 12-22, 7-24
W8: 2x4 SP No.1, W10, W3: 2x4 SP No.2	2 Rows at 1/3 pts 4-25
	1 Brace at Jt(s): 30
	JOINTS This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 24=1357/0-5-8 (min. 0-1-8), 17=2213/0-3-8 (min. 0-2-4), 2=1951/0-3-8 (min. 0-2-10)  
 Max Horz 2=-128(LC 19)  
 Max Uplift 24=-28(LC 11), 17=-29(LC 15)  
 Max Grav 24=1760(LC 36), 17=2687(LC 46), 2=2313(LC 46)

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

**TOP CHORD**  
 2-31=-7553/51, 3-31=-7420/68, 3-32=-6711/87, 4-32=-6684/91, 4-33=-3803/56,  
 5-33=-3789/59, 5-34=-3695/70, 6-34=-3688/86, 6-7=-3824/176, 7-8=-3553/51,  
 8-35=-3239/35, 35-36=-3239/35, 9-36=-3239/35, 9-37=-3710/38, 37-38=-3710/38,  
 10-38=-3710/38, 10-11=-3710/38, 11-12=-3611/53, 12-13=-4777/150, 13-39=-4671/63,  
 14-39=-4756/44, 14-40=-4792/94, 40-41=-4850/85, 15-41=-4867/84, 15-42=-4884/76,  
 16-42=-4899/75, 16-17=-5008/26

**BOT CHORD**  
 25-43=0/2941, 43-44=0/2946, 24-44=0/2946, 23-24=0/3596, 22-23=0/3599, 22-45=0/3434,  
 45-46=0/3433, 21-46=0/3424, 20-21=0/3437, 20-47=0/4408, 47-48=0/4408, 19-48=0/4408,  
 17-19=0/4353, 2-27=0/6745, 26-27=0/6438, 25-26=0/6173

**WEBS**  
 24-28=-1343/140, 8-28=-963/126, 22-29=-767/255, 11-29=-410/364, 28-30=-155/1793,  
 29-30=-155/1793, 4-25=-3205/60, 7-25=-210/1087, 9-28=-2163/167, 9-29=-1759/188,  
 13-20=-548/145, 12-22=-351/774, 12-20=-175/1741, 14-20=-459/129, 4-26=-10/2588,  
 6-25=-712/163, 3-26=-949/92, 3-27=0/1499, 7-24=-100/1410

- NOTES-** (17-20)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 57-2-14, Exterior(2E) 57-2-14 to 63-6-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.



10/9/2021

**Warning!** Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI I-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R02	ATTIC	3	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:33 2021 Page 2  
 ID:8BSIWII7uOgu7p2zCnsgREYdfw-fULqZcS85A210L4sC2\_ASaS?2Vum45irQdvW5KyV3Pa

**NOTES-** (17-20)

- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are MT20 plates unless otherwise indicated.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 11) Ceiling dead load (5.0 psf) on member(s). 28-30, 29-30
- 12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 22-24
- 13) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 17.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Attic room checked for L/360 deflection.
- 17) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 18) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 19) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 20) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



10/9/2021

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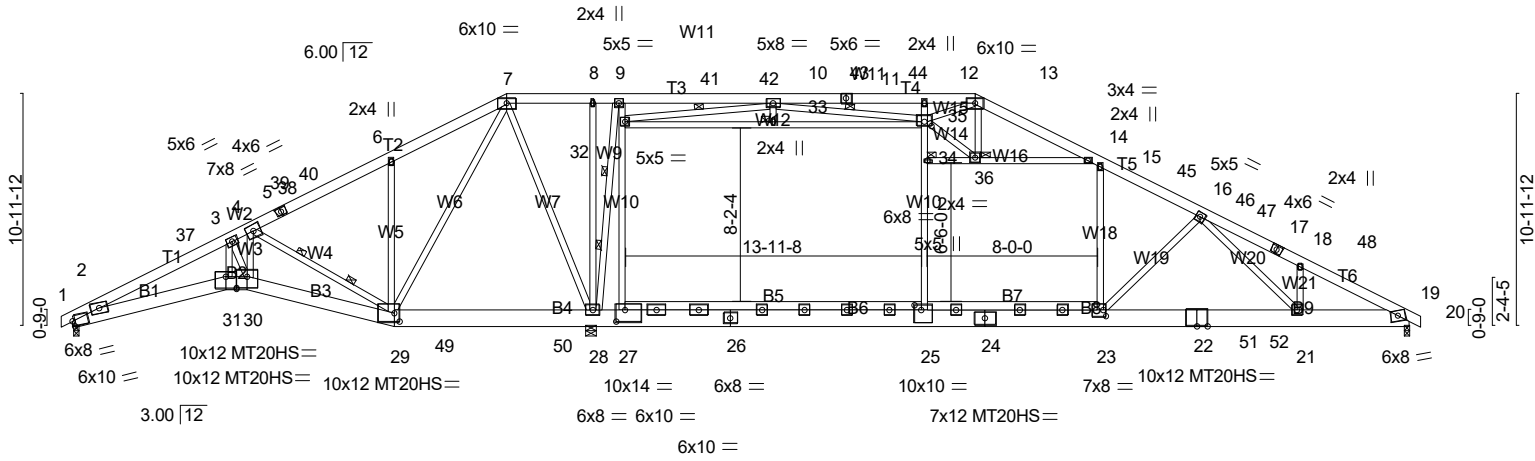


Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R03	ATTIC	2	1	
					<b># 28928</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:38 2021 Page 1  
 ID:8BSIWII7uOgu7p2zCnsgREydfiw-0S9jcJWHwigJ66yq?baL9eAskWbLkMnaavcHnYyV3PV

-0-6-8	7-2-12	8-2-12	15-2-0	20-5-8	24-8-025-10-12	33-0-4	40-1-12	42-6-8	48-3-8	53-1-12	57-10-4	63-0-0	63-6-8	
0-6-8	7-2-12	1-0-0	6-11-4	5-3-8	4-2-8	1-2-12	7-1-8	7-1-8	2-4-12	5-9-0	4-10-4	4-8-8	5-1-12	0-6-8

Scale = 1:108.6



0-3-8	7-2-12	8-2-12	15-2-0	24-2-8	25-10-12	40-1-12	48-3-8	57-10-4	63-0-0
0-3-8	6-11-4	1-0-0	6-11-4	9-0-8	1-8-4	14-3-0	8-1-12	9-6-12	5-1-12

Plate Offsets (X,Y)-- [2:0-0-12,Edge], [23:0-1-8,0-3-8], [25:0-3-12,0-2-12], [27:0-5-0,0-6-8], [29:0-3-0,0-4-12], [30:0-6-0,0-6-4], [31:0-6-0,0-7-0], [35:0-4-0,0-2-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.96	Vert(LL) -0.97	23-25	>473	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 1.00	Vert(CT) -1.68	23-25	>274	180	MT20HS	187/143
TCDL 10.0	Rep Stress Incr YES		WB 0.94	Horz(CT) 0.39	19	n/a	n/a		
BCLL 0.0 *	Code IRC2018/TPI2014		Matrix-SH	Attic -0.37	25-27	458	360		
BCDL 10.0									Weight: 662 lb FT = 20%

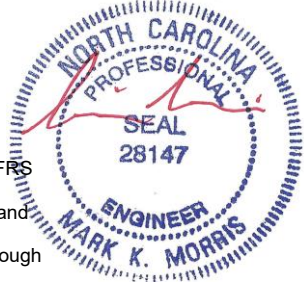
LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2 *Except* T3,T1: 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 1-5-5 oc purlins.
BOT CHORD 2x10 SP 2400F 2.0E *Except* B5,B7: 1-8/16x4-12/16 SP No.2, B1,B2: 2x8 SP DSS, B3: 2x8 SP No.1	BOT CHORD Rigid ceiling directly applied or 1-4-12 oc bracing.
WEBS 2x4 SP No.3 *Except* W10,W9: 2x4 SP No.1, W12,W4,W18,W3,W16: 2x4 SP No.2	WEBS 1 Row at midpt 10-32, 10-35 2 Rows at 1/3 pts 4-29, 9-28
	JOINTS 1 Brace at Jt(s): 33, 34, 36 This truss requires both edges of the bottom chord to be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=2375/0-3-8 (min. 0-2-15), 28=737/0-5-8 (min. 0-1-8), 19=2662/0-3-8 (min. 0-2-14)  
 Max Horz 2=128(LC 14)  
 Max Uplift 28=-177(LC 11)  
 Max Grav 2=3014(LC 46), 28=1190(LC 53), 19=3476(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-37=-10205/0, 3-37=-10071/0, 3-38=-9196/0, 4-38=-9187/0, 4-39=-5335/0, 5-39=-5321/0,  
 5-40=-5226/0, 6-40=-5220/0, 6-7=-5338/65, 7-8=-4838/0, 8-9=-4838/0, 9-41=-5323/0,  
 41-42=-5323/0, 10-42=-5323/0, 10-43=-5770/0, 43-44=-5770/0, 11-44=-5770/0,  
 11-12=-5770/0, 12-13=-5706/0, 13-14=-4446/0, 14-15=-5566/0, 15-45=-5768/0,  
 16-45=-5917/0, 16-46=-6699/0, 46-47=-6721/0, 17-47=-6792/0, 17-48=-6802/0,  
 18-48=-6806/0, 18-19=-6994/0  
 BOT CHORD 29-49=0/4276, 49-50=0/4279, 28-50=0/4279, 27-28=0/5125, 26-27=0/5129, 25-26=0/5136,  
 24-25=0/5195, 23-24=0/5159, 23-51=0/5686, 22-51=0/5686, 22-52=0/5686, 21-52=0/5686,  
 19-21=0/6084, 2-31=0/9143, 30-31=0/8749, 29-30=0/8456  
 WEBS 27-32=0/1667, 9-32=0/1808, 25-34=0/1359, 34-35=0/1365, 12-35=-616/152,  
 32-33=-166/1932, 33-35=-166/1932, 4-29=-4194/0, 7-29=-214/1087, 10-32=-1870/225,  
 10-35=-1428/295, 15-23=0/525, 16-23=-914/154, 16-21=-126/737, 4-30=0/3413,  
 6-29=-689/160, 3-30=-976/68, 3-31=0/1808, 7-28=0/1899, 8-28=-6/454, 9-28=-3003/0,  
 14-36=-1238/84, 13-35=0/2136, 35-36=-1340/95, 13-36=-24/873

- NOTES-** (18-21)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCCL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 57-2-14, Exterior(2E) 57-2-14 to 63-6-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs



10/9/2021

Warning: Verify with manufacturer and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R03	ATTIC	2	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:38 2021 Page 2  
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**NOTES-** (18-21)

- 6) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are MT20 plates unless otherwise indicated.
- 9) All plates are 6x6 MT20 unless otherwise indicated.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 12) Ceiling dead load (5.0 psf) on member(s). 14-15, 32-33, 33-35, 34-36, 14-36
- 13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 25-27, 23-25
- 14) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 28=177.
- 16) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 17) Attic room checked for L/360 deflection.
- 18) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 19) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 20) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 21) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 21-6088-R01	Truss R04	Truss Type ATTIC	Qty 1	Ply 2	49786-0218 WOODGROVE   FUQUAY VARINA, NC	Job Reference (optional) <b># 28928</b>
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8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:46 2021 Page 1  
ID:8BSIWII7uOgu7p2ZCnsgREydfw-n\_ekI2cl1AhB4LZMTGjDUKvH4IKmc02IQ9Yi34yV3PN

0-6-8	7-2-12	8-2-12	15-2-0	20-5-8	24-8-025-10-12	33-0-4	40-1-12	42-6-8	48-3-8	53-1-12	57-10-4	63-0-0	63-6-8	
0-6-8	7-2-12	1-0-0	6-11-4	5-3-8	4-2-8	1-2-12	7-1-8	7-1-8	2-4-12	5-9-0	4-10-4	4-8-8	5-1-12	0-6-8

Scale = 1:109.7

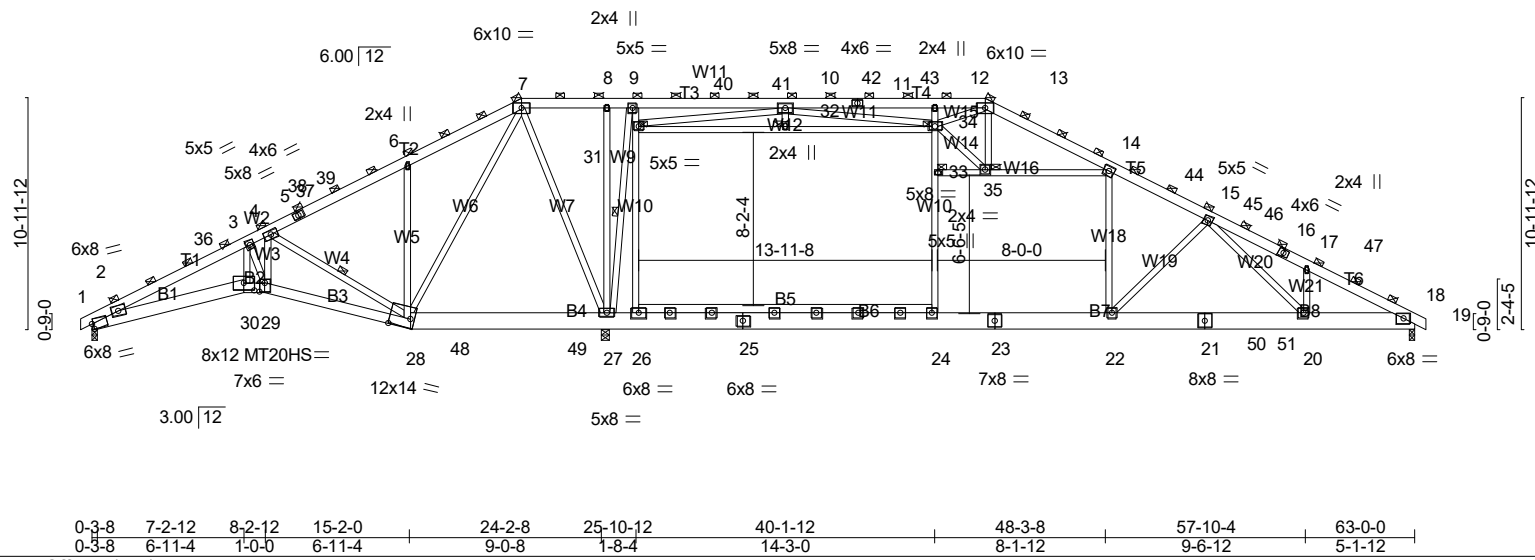


Plate Offsets (X,Y)-- [2:0-0-12,Edge], [28:0-11-12,0.5-4], [29:0-3-0,0.5-0], [30:0-6-0,0.4-4]					
<b>LOADING</b> (psf)	<b>SPACING</b>	<b>CSI</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.74	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.97	Vert(LL) -0.62 22-24 >737 240	MT20HS	187/143
TCDL 10.0	Rep Stress Incr NO	WB 0.80	Vert(CT) -1.08 22-24 >427 180		
BCLL 0.0 *	Code IRC2018/TPI2014	Matrix-SH	Horz(CT) 0.25 18 n/a n/a		
BCDL 10.0			Attic -0.23 24-26 749 360		Weight: 1283 lb FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x10 SP 2400F 2.0E \*Except\*  
B5: 1-8/16x4-12/16 SP No.2, B1: 2x8 SP No.1, B2: 2x6 SP No.1  
B3: 2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
W10,W12,W18,W16: 2x4 SP No.2

**BRACING-**  
TOP CHORD 2-0-0 oc purlins (3-10-7 max.)  
(Switched from sheathed: Spacing > 2-0-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 4-28, 9-27  
JOINTS 1 Brace at Jt(s): 7, 31, 32, 33, 13, 34, 35  
This truss requires both edges of the bottom chord be sheathed in the room area.

**REACTIONS.** (lb/size) 2=2739/0-3-8 (min. 0-1-15), 27=817/0-5-8 (min. 0-1-8), 18=3061/0-3-8 (min. 0-1-10)  
Max Horz2=146(LC 14)  
Max Uplift27=-204(LC 11)  
Max Grav2=3473(LC 46), 27=1330(LC 53), 18=3995(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-36=-11641/0, 3-36=-11488/0, 3-37=-10404/0, 4-37=-10394/0, 4-38=-6111/0, 5-38=-6083/0, 5-39=-5990/0, 6-39=-5979/0, 6-7=-6121/79, 7-8=-5613/0, 8-9=-5613/0, 9-40=-6104/0, 40-41=-6104/0, 10-41=-6104/0, 10-42=-6475/0, 42-43=-6475/0, 11-43=-6475/0, 11-12=-6475/0, 12-13=-6437/0, 13-14=-5249/0, 14-44=-6669/0, 15-44=-6840/0, 15-45=-7669/0, 45-46=-7695/0, 16-46=-7775/0, 16-47=-7788/0, 17-47=-7791/0, 17-18=-8008/0  
BOT CHORD 28-48=0/4941, 48-49=0/4948, 27-49=0/4948, 26-27=0/5916, 25-26=0/5922, 24-25=0/5922, 23-24=0/5957, 22-23=0/5957, 22-50=0/6561, 21-50=0/6561, 21-51=0/6561, 20-51=0/6561, 18-20=0/6967, 2-30=0/10417, 29-30=0/9951, 28-29=0/9565  
WEBS 26-31=0/1729, 9-31=0/1879, 24-33=0/1517, 33-34=0/1522, 12-34=-685/174, 17-20=-15/251, 31-32=-215/2216, 32-34=-215/2216, 4-28=-4680/0, 7-28=-255/1207, 10-31=-2176/278, 10-34=-1737/330, 14-22=0/653, 15-22=-1044/174, 15-20=-144/777, 4-29=0/3858, 6-28=-804/184, 3-29=-1357/70, 3-30=0/2306, 7-27=0/2257, 8-27=-9/487, 9-27=-3162/0, 14-35=-1322/86, 13-34=0/2229, 34-35=-1544/108, 13-35=-36/1174

- NOTES-** (21-24)
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 1-8/16x4-12/16 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc, 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.
  - Design: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDD=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 57-2-14, Exterior(2E) 57-2-14 to 63-6-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R04	ATTIC	1	2	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:46 2021 Page 2  
ID:8BSIWII7uOgu7p2zCnsgREydfw-n\_ekl2cl1AhB4LZMTGjDUKVH4IKmc02IQ9Yi34yV3PN

**NOTES-** (21-24)

- 5) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 6) Unbalanced snow loads have been considered for this design.
- 7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 8) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 9) Provide adequate drainage to prevent water ponding.
- 10) All plates are MT20 plates unless otherwise indicated.
- 11) All plates are 6x6 MT20 unless otherwise indicated.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 14) Ceiling dead load (5.0 psf) on member(s). 31-32, 32-34, 33-35, 14-35
- 15) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 24-26, 22-24
- 16) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 27=204.
- 18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 20) Attic room checked for L/360 deflection.
- 21) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 22) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 23) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 24) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

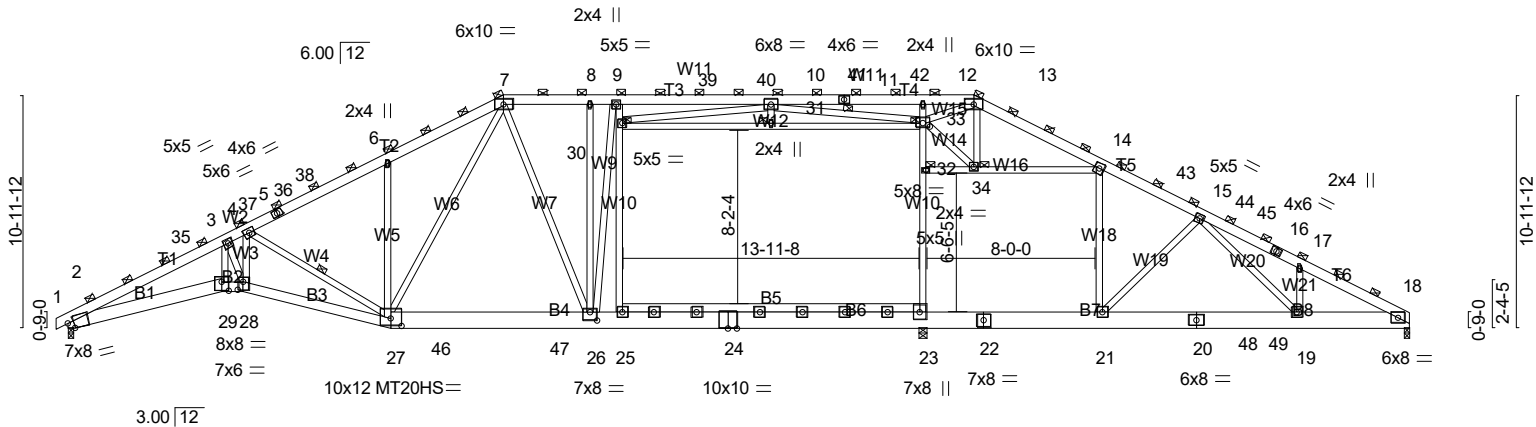


Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R05	ATTIC	1	2	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:49 2021 Page 1  
 ID:8BSIWI7uOgu7p2zCnsgREydfiw-BZJtw4eBK53lx8PGw6y7ruyOApOIC66nMgPyV3PK

0-6-8	7-2-12	8-2-12	15-2-0	20-5-8	24-8-0	25-10-12	33-0-4	40-1-12	42-6-8	48-3-8	53-1-12	57-10-4	63-0-0
0-6-8	7-2-12	1-0-0	6-11-4	5-3-8	4-2-8	1-2-12	7-1-8	7-1-8	2-4-12	5-9-0	4-10-4	4-8-8	5-1-12

Scale = 1:108.2



0-3-8	7-2-12	8-2-12	15-2-0	24-8-0	25-10-12	40-1-12	48-3-8	57-10-4	63-0-0
0-3-8	6-11-4	1-0-0	6-11-4	9-6-0	1-2-12	14-3-0	8-1-12	9-6-12	5-1-12

Plate Offsets (X,Y)-- [2:0-3-7,0-3-7], [26:0-4-0,0-4-12], [27:0-6-0,0-4-3], [28:0-3-0,0-4-8], [29:0-4-0,0-5-0], [33:0-4-0,0-2-0]

LOADING (psf)	SPACING-	2-3-8	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.51	Vert(LL) -0.54	26	>895	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.86	Vert(CT) -0.90	26-27	>536	180	MT20HS	187/143
TCDL 10.0	Rep Stress Incr NO		WB 0.67	Horz(CT) 0.21	18	n/a	n/a		
BCLL 0.0 *	Code IRC2018/TPI2014		Matrix-SH	Attic -0.27	23-25	641	360		
BCDL 10.0									Weight: 1280 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD 2-0-0 oc purlins (4-5-2 max.)
BOT CHORD 2x10 SP 2400F 2.0E *Except*	(Switched from sheathed: Spacing > 2-0-0).
B5: 1-8/16x4-12/16 SP No.2, B1: 2x8 SP No.2, B2: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
B3: 2x6 SP No.2	WEBS 1 Row at midpt 4-27, 10-33
WEBS 2x4 SP No.3 *Except*	JOINTS 1 Brace at Jt(s): 7, 30, 31, 32, 13, 33, 34
W10,W12,W18,W16: 2x4 SP No.2	This truss requires both edges of the bottom chord to be sheathed in the room area.

**REACTIONS.** (lb/size) 23=1820/0-3-8 (min. 0-1-8), 18=2170/0-3-8 (min. 0-1-8), 2=2579/0-3-8 (min. 0-1-11)  
 Max Horz 2=149(LC 14)  
 Max Uplift 2=-29(LC 14)  
 Max Grav 23=2841(LC 38), 18=2534(LC 45), 2=2973(LC 36)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-35=-9842/65, 3-35=-9689/85, 3-36=-8722/106, 4-36=-8712/110, 4-37=-5130/64, 5-37=-5127/68, 5-38=-5097/81, 6-38=-5090/99, 6-7=-5139/199, 7-8=-4661/79, 8-9=-4660/79, 9-39=-4467/33, 39-40=-4467/33, 10-40=-4467/33, 10-41=-344/2469, 41-42=-344/2469, 11-42=-344/2469, 11-12=-344/2469, 12-13=-330/2368, 13-14=-2579/119, 14-43=-4983/36, 15-43=-5046/14, 15-44=-4524/63, 44-45=-4557/52, 16-45=-4564/50, 16-17=-4612/41, 17-18=-4706/0  
**BOT CHORD** 27-46=0/4181, 46-47=0/4186, 26-47=0/4187, 25-26=0/4579, 24-25=0/4577, 23-24=0/4577, 22-23=0/4553, 21-22=0/4553, 21-48=0/4393, 20-48=0/4393, 20-49=0/4393, 19-49=0/4393, 18-19=0/4082, 2-29=-157/8799, 28-29=-139/8397, 27-28=-96/8025  
**WEBS** 25-30=-1309/227, 9-30=-1140/241, 23-32=-1024/181, 32-33=-1019/180, 12-33=-1019/131, 30-31=-1593/616, 31-33=-1593/616, 4-27=-3976/180, 7-27=-211/1614, 10-30=-824/1508, 10-33=-4929/213, 14-21=0/789, 15-21=-768/425, 15-19=-712/736, 4-28=-85/3252, 6-27=-779/188, 3-28=-1316/138, 3-29=-22/2058, 7-26=-38/1337, 8-26=-331/0, 9-26=-109/1090, 14-34=-2352/55, 13-33=-3574/166, 33-34=-3423/64, 13-34=-5/2492

- NOTES-** (21-24)
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 1-8/16x4-12/16 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc, 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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDD=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-6-10, Exterior(2E) 56-6-10 to 62-10-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



**Warning!** - Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI 1-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R05	ATTIC	1	2	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:49 2021 Page 2  
ID:8BSIWII7uOgu7p2zCnsgREydfiw-BZJtw4eBK53lx8PGw6y7ruyOApOIC66nMgPyV3PK

**NOTES-** (21-24)

- 5) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 6) Unbalanced snow loads have been considered for this design.
- 7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 8) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 9) Provide adequate drainage to prevent water ponding.
- 10) All plates are MT20 plates unless otherwise indicated.
- 11) All plates are 6x6 MT20 unless otherwise indicated.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 14) Ceiling dead load (5.0 psf) on member(s). 30-31, 31-33, 32-34, 14-34
- 15) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 23-25, 21-23
- 16) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2.
- 18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 20) Attic room checked for L/360 deflection.
- 21) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 22) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 23) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 24) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

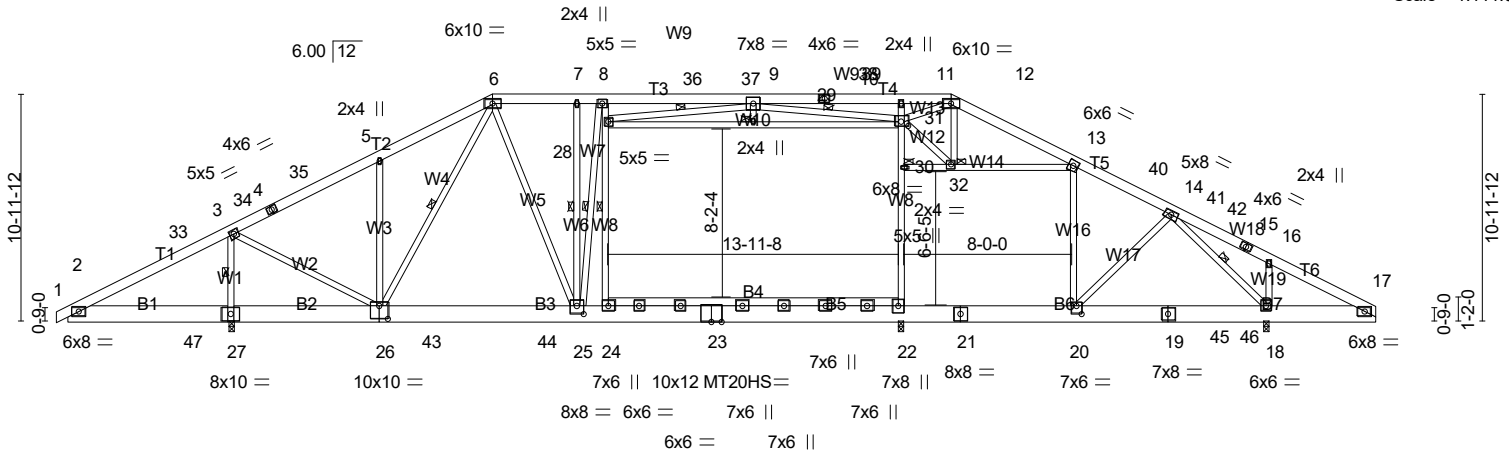


Job 21-6088-R01	Truss R06	Truss Type ATTIC	Qty 2	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC	# 28928
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8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:51 2021 Page 1  
 ID:8BSIWII7uOgu7p2zCnsgREydfiw-7yRdLmgRsiJTA6SKGqJOBNC5pm4HDDIUZQGTklyV3PI

0-6-8	7-8-8	15-2-0	20-5-8	24-8-025,10,12	33-0-4	40-1-12	42-6-8	48-3-8	53-1-12	57-10-4	63-0-0	
0-6-8	7-8-8	7-5-8	5-3-8	4-2-8	1-2-12	7-1-8	7-1-8	2-4-12	5-9-0	4-10-4	4-8-8	5-1-12

Scale = 1:111.0



0-3-8	7-8-8	15-2-0	24-8-0	25,10,12	40-1-12	48-3-8	57-10-4	63-0-0
0-3-8	7-5-0	7-5-8	9-6-0	1-2-12	14-3-0	8-1-12	9-6-12	5-1-12

Plate Offsets (X,Y)-- [20:0-3-0,0-4-12], [25:0-4-0,0-4-12], [26:0-5-0,0-7-8], [31:0-4-0,0-2-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.87	Vert(LL) -0.61	22-24	>637	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.82	Vert(CT) -0.89	22-24	>437	180	MT20HS	187/143
TCDL 10.0	Rep Stress Incr YES		WB 0.96	Horz(CT) 0.05	18	n/a	n/a		
BCLL 0.0 *	Code IRC2018/TPI2014		Matrix-SH	Attic 0.43	20-22	462	360		
BCDL 10.0								Weight: 653 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD 2x10 SP 2400F 2.0E *Except*	BOT CHORD Rigid ceiling directly applied or 5-11-10 oc bracing.
B4: 1-8/16x4-12/16 SP No.1, B5,B3: 2x10 SP No.1	WEBS 1 Row at midpt 24-28, 6-26, 9-28, 9-31, 14-18, 7-25, 8-25, 3-27
B1,B2: 2x10 SP No.2	WEBS 1 Row at midpt 24-28, 6-26, 9-28, 9-31, 14-18, 7-25, 8-25, 3-27
WEBS 2x4 SP No.3 *Except*	JOINTS 1 Brace at Jt(s): 29, 30, 32
W8,W10,W16,W14,W2: 2x4 SP No.2	This truss requires both edges of the bottom chord be sheathed in the room area.

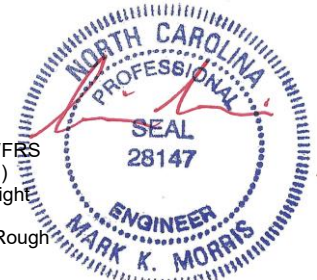
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 22=880/0-3-8 (min. 0-1-14), 18=2206/0-3-8 (min. 0-2-3), 27=2662/0-3-8 (min. 0-2-1)  
 Max Horz 27=129(LC 14)  
 Max Uplift 27=-18(LC 14)  
 Max Grav 22=1580(LC 38), 18=2614(LC 6), 27=3042(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-33=-434/595, 3-33=-402/708, 3-34=-2266/9, 4-34=-2253/10, 4-35=-2218/22, 5-35=-2211/38, 5-6=-2247/96, 6-7=-2999/49, 7-8=-2998/49, 8-36=-3094/0, 36-37=-3094/0, 9-37=-3094/0, 9-38=-1631/303, 38-39=-1631/303, 10-39=-1631/303, 10-11=-1631/303, 11-12=-1544/278, 12-13=-2200/45, 13-40=-3229/8, 14-40=-3284/0, 14-41=-145/310, 41-42=-152/291, 15-42=-159/267, 16-17=-240/383  
 BOT CHORD 26-27=-529/421, 26-43=0/2442, 43-44=0/2442, 25-44=0/2442, 24-25=0/3047, 23-24=0/3040, 22-23=0/3040, 21-22=0/3009, 20-21=0/3009, 20-45=0/2052, 19-45=0/2052, 19-46=0/2052, 18-46=0/2052, 17-18=-269/237, 2-47=-529/427, 27-47=-529/427  
 WEBS 24-28=-677/278, 8-28=-350/357, 22-30=-499/221, 30-31=-496/220, 11-31=-808/122, 16-18=-409/114, 28-29=-234/1576, 29-31=-234/1576, 6-26=-919/36, 9-28=-1627/285, 9-31=-2872/145, 13-20=-286/138, 14-20=-27/1434, 14-18=-3351/12, 5-26=-678/165, 6-25=0/1633, 8-25=-277/28, 13-32=-1124/6, 12-31=-1086/171, 31-32=-1773/35, 12-32=0/1309, 3-27=-2821/278, 3-26=-118/2621

**NOTES-** (17-20)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-8-6, Exterior(2E) 56-8-6 to 63-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.



10/9/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R06	ATTIC	2	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:30:51 2021 Page 2  
 ID:8BSIWII7uOgu7p2zCnsgREydfw-7yRdLmgRsiJTA6SKGqJOBNC5pm4HDDIUZQGtKlyV3PI

**NOTES-** (17-20)

- 6) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are MT20 plates unless otherwise indicated.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 11) Ceiling dead load (5.0 psf) on member(s). 28-29, 29-31, 30-32, 13-32
- 12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 22-24, 20-22
- 13) Bearing at joint(s) 27 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Attic room checked for L/360 deflection.
- 17) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 18) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 19) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 20) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

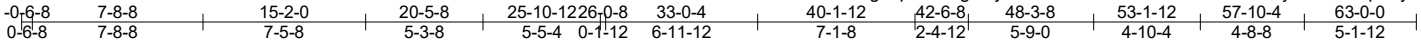


10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 21-6088-R01	Truss R07	Truss Type ATTIC	Qty 1	Ply 4	49786-0218 WOODGROVE   FUQUAY VARINA, NC	# 28928
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8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:00 2021 Page 1  
 ID:8BSIWII7uOgu7p2zCnsgREydfw-NhU1Ern4kTSCIUe2HDzV2H4jSOA1uJmpeKyRYGyV3P9



Scale = 1:104.9

Plate Offsets (X,Y)--	[6:0-4-8,0-3-0], [11:0-8-0,0-4-8], [22:0-2-4,0-6-0], [23:0-4-12,0-7-8], [25:0-2-8,0-3-0], [26:0-2-0,0-2-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.55	Vert(LL) -0.40 22-23	>959	240		MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.71	Vert(CT) -0.59 22-23	>655	180			
TCDL 10.0	Rep Stress Incr YES		WB 0.91	Horz(CT) 0.05 17	n/a	n/a			
BCLL 0.0 *	Code IRC2018/TPI2014		Matrix-SH	Attic -0.20 20-22	850	360			
BCDL 10.0									Weight: 2603 lb FT = 20%

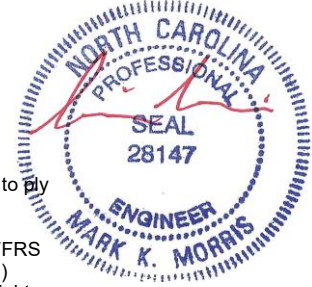
**LUMBER-**  
 TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x10 SP 2400F 2.0E \*Except\*  
 B4: 1-8/16x4-12/16 SP No.2  
 WEBS 2x4 SP No.3 \*Except\*  
 W9,W2,W4,W5: 2x4 SP No.2, W11: 2x4 SP SS, W7: 2x6 SP No.2  
 W13: 2x4 SP No.1

**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, Except:  
 6-0-0 oc bracing: 2-24,23-24.  
 JOINTS 1 Brace at Jt(s): 27  
 This truss requires both edges of the bottom chord be sheathed in the room area.

**REACTIONS.** (lb/size) 17=6886/0-3-8 (min. 0-2-2), 20=-1555/0-3-8 (min. 0-1-8), 24=8284/0-3-8 (min. 0-2-2)  
 Max Horz 24=129(LC 14)  
 Max Uplift 17=-429(LC 15), 20=-3065(LC 53), 24=-581(LC 14)  
 Max Grav 17=10313(LC 46), 20=368(LC 11), 24=12343(LC 54)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-28=-423/384, 3-28=-390/578, 3-29=-12211/593, 4-29=-12198/594, 4-30=-12185/606,  
 5-30=-12134/622, 5-6=-12149/679, 6-7=-19560/958, 7-31=-19819/968, 31-32=-19819/968,  
 8-32=-19819/968, 8-33=-8041/428, 33-34=-8041/428, 9-34=-8041/428, 9-10=-8041/428,  
 10-11=-8334/444, 11-12=-13325/652, 12-35=-13317/624, 13-35=-13338/605,  
 13-36=-1021/101, 36-37=-1029/94, 14-37=-1062/92, 14-15=-1076/82, 15-16=-996/54  
 BOT CHORD 2-38=-412/418, 24-38=-412/418, 23-24=-412/412, 23-39=-645/13723, 39-40=-645/13723,  
 22-40=-645/13723, 21-22=-876/18822, 21-41=-876/18826, 20-41=-877/18909,  
 20-42=-671/14990, 42-43=-671/14989, 19-43=-672/14981, 18-19=-670/14940,  
 18-44=-362/8989, 44-45=-362/8989, 17-45=-362/8989, 16-17=-17/910  
 WEBS 15-17=-482/136, 25-27=-2648/164, 26-27=-2648/164, 3-24=-12098/732, 3-23=-610/12582,  
 6-23=-5903/315, 8-25=-195/4025, 8-26=-8863/532, 12-18=-618/146, 11-18=-5911/349,  
 13-18=-198/4435, 13-17=-11859/529, 20-26=-6581/423, 10-26=-704/117, 22-25=-263/1274,  
 7-25=-456/425, 11-20=-867/16293, 11-26=-11443/575, 5-23=-649/162, 6-22=-526/11192,  
 6-25=-15/1048

- NOTES-** (21-24)
- 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x10 - 3 rows staggered at 0-5-0 oc, 1-8/16x4-12/16 - 2 rows staggered at 0-7-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 3 rows staggered at 0-5-0 oc.  
 Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDD=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-8-6, Exterior(2E) 56-8-6 to 63-0-0 zone; cantilever left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



10/9/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R07	ATTIC	1	4	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:01 2021 Page 2  
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**NOTES-** (21-24)

- 5) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 6) Unbalanced snow loads have been considered for this design.
- 7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 8) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 9) Provide adequate drainage to prevent water ponding.
- 10) All plates are 6x8 MT20 unless otherwise indicated.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 13) Ceiling dead load (5.0 psf) on member(s). 25-27, 26-27
- 14) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22
- 15) Bearing at joint(s) 24 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 16) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 17=429, 20=3065, 24=581.
- 17) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 18) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
- 19) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 10665 lb down and 639 lb up at 25-11-8, and 2932 lb down and 176 lb up at 36-7-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 20) Attic room checked for L/360 deflection.
- 21) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 22) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 23) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 24) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-6=-60, 6-11=-60, 11-16=-60, 2-22=-20, 25-26=-10, 20-22=-40, 16-20=-20  
Concentrated Loads (lb)  
Vert: 22=-6365(F) 41=-1750(F)



10/9/2021

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Job 21-6088-R01	Truss R08	Truss Type PIGGYBACK BASE	Qty 5	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC
					<b># 28928</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:01 2021 Page 1  
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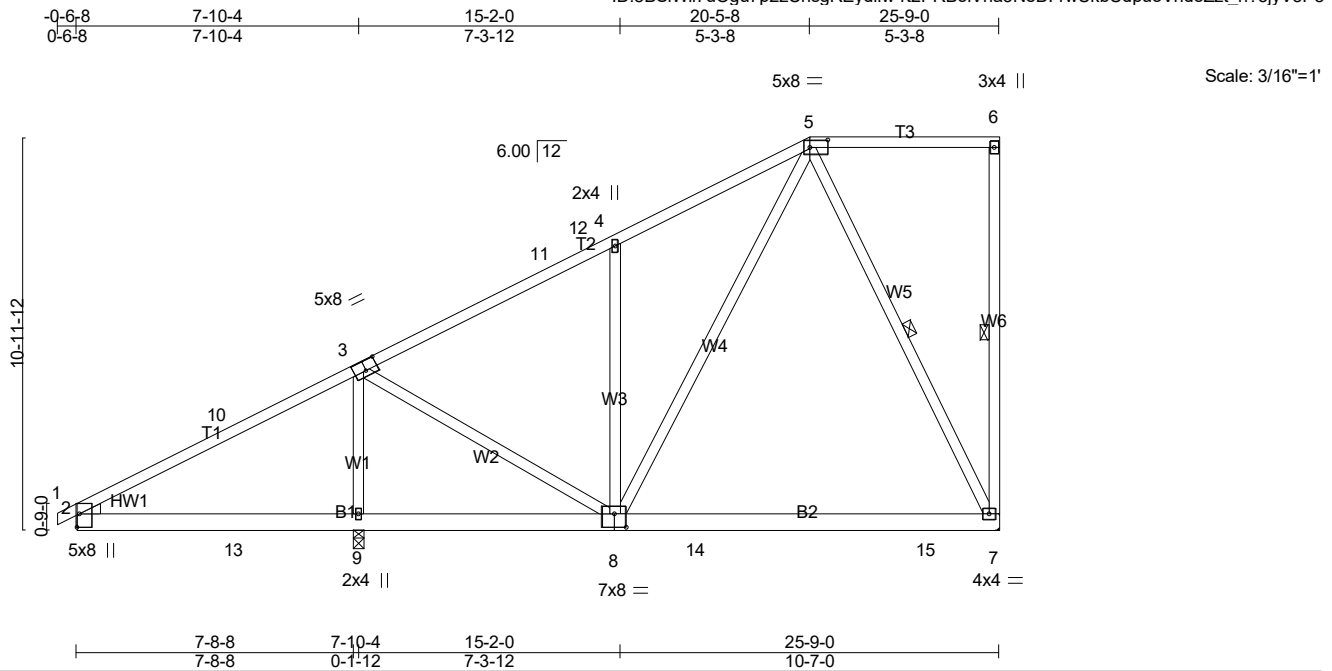


Plate Offsets (X,Y)-- [2:Edge,0-0-13], [3:0-4-0,0-3-4], [5:0-6-0,0-2-8], [8:0-4-0,0-4-8]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.89	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.81	Vert(LL) -0.30 7-8 >715 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.81	Vert(CT) -0.42 7-8 >513 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) -0.00 7 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014				Weight: 182 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* T1: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-7, 5-7
WEDGE Left: 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

<b>REACTIONS.</b> (lb/size) 7=556/Mechanical, 9=1525/0-3-8 (min. 0-2-3)
Max Horz 9=295(LC 14)
Max Uplift 7=-89(LC 14), 9=-62(LC 14)
Max Grav 7=776(LC 37), 9=1840(LC 36)
<b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-10=-396/589, 3-10=-376/707, 3-11=-646/0, 11-12=-452/0, 4-12=-413/1, 4-5=-635/100, 6-7=-252/45
BOT CHORD 2-13=-517/379, 9-13=-517/379, 8-9=-517/124
WEBS 3-9=-1636/284, 3-8=-122/1042, 4-8=-691/165, 5-8=-116/516, 5-7=-506/135

- NOTES-** (11-14)
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 4-3-2, Interior(1) 4-3-2 to 13-8-1, Exterior(2R) 13-8-1 to 20-9-10, Exterior(2E) 20-9-10 to 25-7-4 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) Provide adequate drainage to prevent water ponding.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 9.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



10/9/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R08	PIGGYBACK BASE	5	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:01 2021 Page 2  
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- 11) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 13) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 14) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



10/9/2021

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Job 21-6088-R01	Truss R09	Truss Type PIGGYBACK BASE	Qty 2	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC
					<b># 28928</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:02 2021 Page 1  
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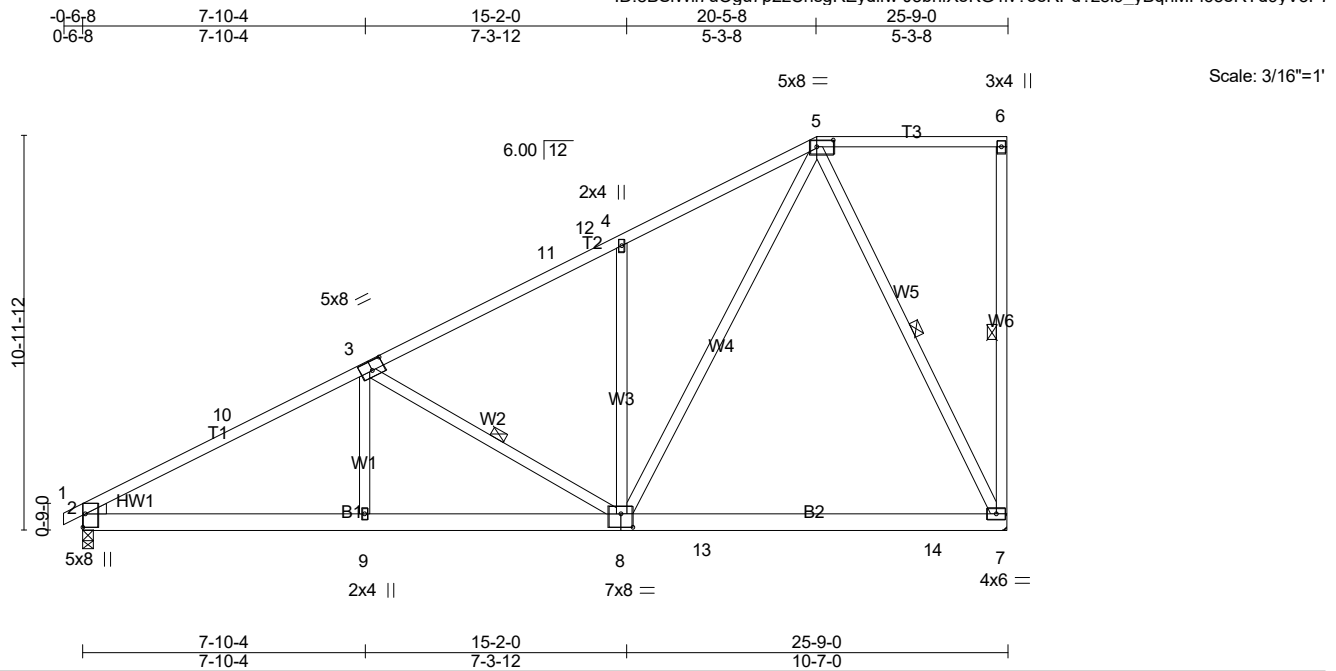


Plate Offsets (X,Y)-- [2:Edge,0-0-13], [3:0-4-0,0-3-0], [5:0-5-8,0-2-4], [8:0-4-0,0-4-8]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.87	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.83	Vert(LL) -0.30 7-8 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.82	Vert(CT) -0.43 7-8 >708 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.03 7 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014				Weight: 182 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 8-8-5 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-7, 3-8, 5-7
WEDGE	
Left: 2x4 SP No.3	

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

<b>REACTIONS.</b> (lb/size)	7=1018/Mechanical, 2=1060/0-3-8 (min. 0-1-8)
	Max Horz 2=295(LC 14)
	Max Uplift 7=-108(LC 14), 2=-44(LC 14)
	Max Grav 7=1239(LC 38), 2=1280(LC 36)
<b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	2-10=-2137/34, 3-10=-1935/53, 3-11=-1450/0, 11-12=-1207/21, 4-12=-1158/29, 4-5=-1439/128, 6-7=-252/45
BOT CHORD	2-9=-267/1781, 8-9=-267/1781, 8-13=-67/496, 13-14=-67/496, 7-14=-67/496
WEBS	3-9=0/292, 3-8=-734/153, 4-8=-698/166, 5-8=-151/1436, 5-7=-1125/156

- NOTES-** (11-14)
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 4-3-2, Interior(1) 4-3-2 to 13-8-1, Exterior(2R) 13-8-1 to 20-9-10, Exterior(2E) 20-9-10 to 25-7-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) Provide adequate drainage to prevent water ponding.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 7=108.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R09	PIGGYBACK BASE	2	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:02 2021 Page 2  
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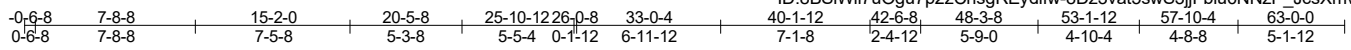
- 11) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 13) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 14) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



10/9/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Scale = 1:111.0

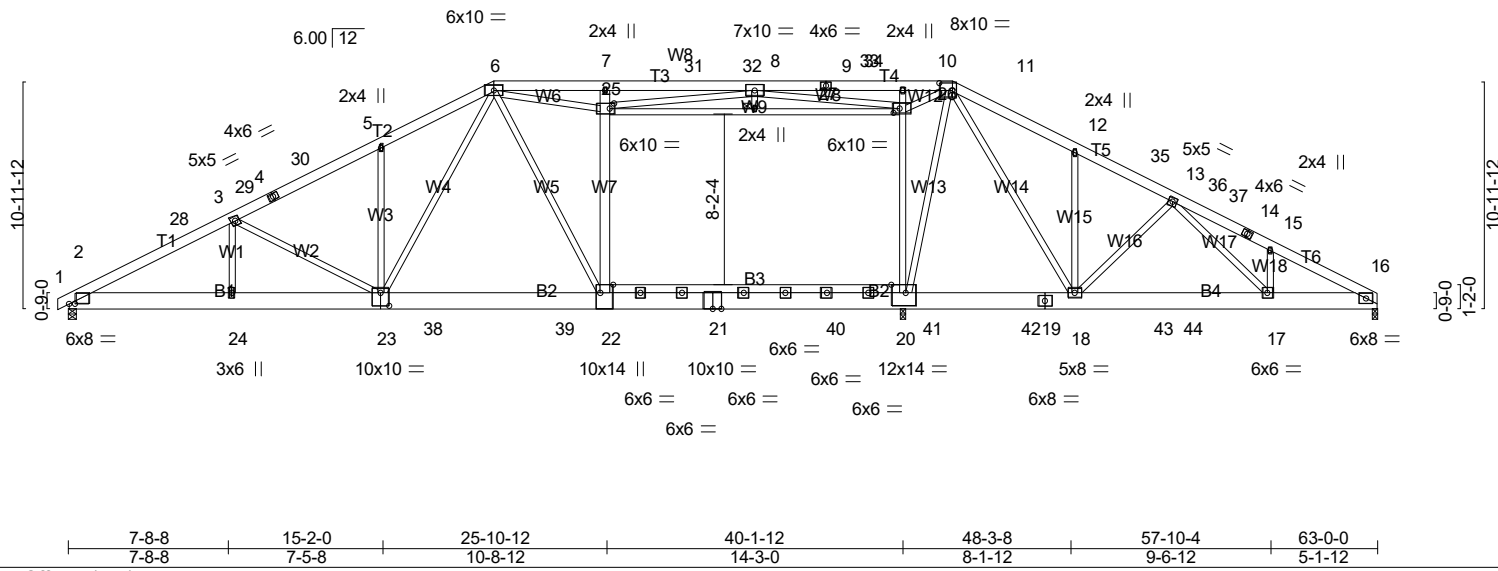


Plate Offsets (X,Y)-- [2:0-3-6,0-0-2], [11:0-7-8,0-4-4], [20:0-8-4,Edge], [22:0-4-12,Edge], [23:0-5-0,0-7-8], [25:0-2-8,0-3-0], [26:0-3-8,0-2-8]					
<b>LOADING</b> (psf)	<b>SPACING</b>	<b>CSI</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.95	Vert(LL) -0.78 22-23 >613 240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.93	Vert(CT) -1.16 22-23 >411 180		
TCDL 10.0	Rep Stress Incr YES	WB 0.99	Horz(CT) 0.11 16 n/a n/a		
BCLL 0.0 *	Code IRC2018/TPI2014	Matrix-SH	Attic -0.38 20-22 453 360		
BCDL 10.0					Weight: 2604 lb FT = 20%

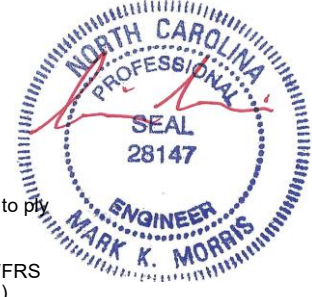
**LUMBER-**  
 TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x10 SP 2400F 2.0E \*Except\*  
 B1: 2x10 SP No.2, B3: 1-8/16x4-12/16 SP No.2  
 WEBS 2x4 SP No.3 \*Except\*  
 W9,W8,W12: 2x4 SP No.2, W13: 2x4 SP No.1, W11: 2x4 SP SS  
 W7: 2x6 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 2-2-0 oc bracing: 23-24.  
 1 Brace at Jt(s): 27  
**JOINTS** This truss requires both edges of the bottom chord be sheathed in the room area.

**REACTIONS.** (lb/size) 2=6991/0-3-8 (min. 0-3-1), 20=-680/0-3-8 (min. 0-1-8), 16=6089/0-3-8 (min. 0-1-14)  
 Max Horz 2=129(LC 14)  
 Max Uplift 2=-489(LC 14), 20=-1960(LC 36), 16=-342(LC 15)  
 Max Grav 2=10378(LC 48), 20=364(LC 14), 16=9056(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-28=-21283/960, 3-28=-21171/978, 3-29=-21907/988, 4-29=-21835/989, 4-30=-21794/1001, 5-30=-21785/1016, 5-6=-21840/1115, 6-7=-26066/1204, 7-31=-26695/1229, 31-32=-26695/1229, 8-32=-26695/1229, 8-33=-4379/274, 33-34=-4379/274, 9-34=-4379/274, 9-10=-4379/274, 10-11=-4792/294, 11-12=-18252/876, 12-35=-18288/803, 13-35=-18343/789, 13-36=-17673/776, 36-37=-17732/767, 14-37=-17766/765, 14-15=-17785/760, 15-16=-18154/720  
**BOT CHORD** 2-24=-920/18904, 23-24=-920/18904, 23-38=-836/18731, 38-39=-836/18731, 22-39=-836/18731, 21-22=-991/22033, 21-40=-991/22058, 20-40=-991/22098, 20-41=-764/17665, 41-42=-764/17664, 19-42=-766/17655, 18-19=-764/17607, 18-43=-622/16455, 43-44=-622/16455, 17-44=-622/16455, 16-17=-587/15907  
**WEBS** 15-17=-217/19, 25-27=-3962/223, 26-27=-3962/223, 3-24=-773/115, 3-23=-134/1199, 5-23=-674/164, 6-23=-236/2531, 6-22=-390/7406, 8-25=-417/9103, 8-27=0/260, 8-26=-14518/756, 12-18=-501/140, 11-20=-963/18755, 11-18=-2352/217, 13-18=-422/140, 13-17=-968/154, 20-26=-10795/588, 10-26=-841/125, 22-25=-118/3030, 7-25=-263/706, 6-25=-160/4402, 11-26=-18947/869

**NOTES-** (19-22)  
 1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 1-8/16x4-12/16 - 2 rows staggered at 0-9-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 3 rows staggered at 0-5-0 oc.  
 Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.  
 2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.  
 3) Unbalanced roof live loads have been considered for this design.  
 4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCCL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-6-10, Exterior(2E) 56-6-10 to 62-10-4 zone; C-C for members and



10/9/2021

Vertical. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI I-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R10	ATTIC	1	4	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:08 2021 Page 2  
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**NOTES-** (19-22)

- 5) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 6) Unbalanced snow loads have been considered for this design.
- 7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 8) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 9) Provide adequate drainage to prevent water ponding.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 12) Ceiling dead load (5.0 psf) on member(s). 25-27, 26-27
- 13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=489, 20=1960, 16=342.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
- 17) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 10665 lb down and 639 lb up at 25-10-12, and 922 lb down and 55 lb up at 36-7-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 18) Attic room checked for L/360 deflection.
- 19) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 20) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 21) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 22) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

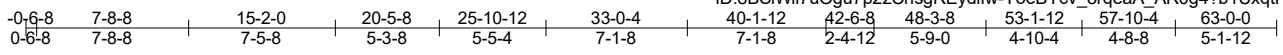
**LOAD CASE(S)** Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-6=-60, 6-11=-60, 11-16=-60, 2-22=-20, 20-22=-40, 16-20=-20, 25-26=-10
  - Concentrated Loads (lb)
    - Vert: 22=-6365(F) 40=-550(F)

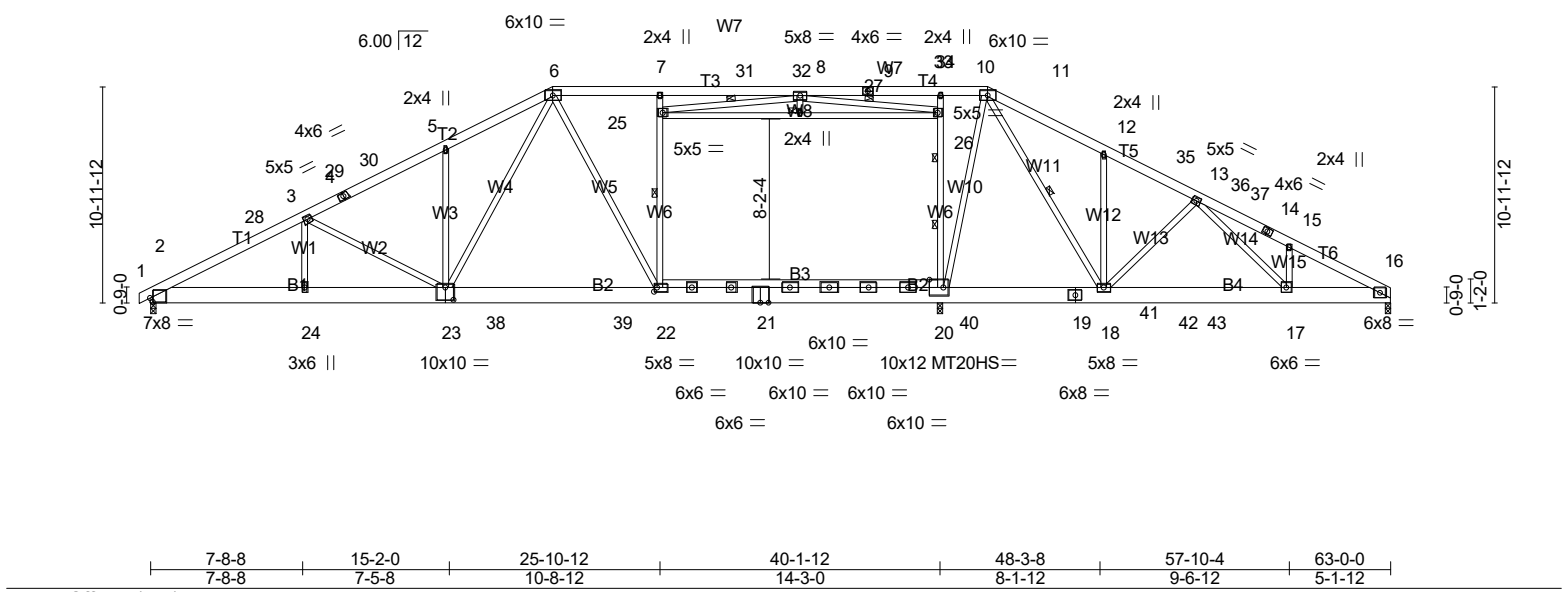


10/9/2021

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Scale = 1:117.0



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.99	Vert(LL) -0.65 22-23 >735 240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.93	Vert(CT) -1.14 22-23 >421 180	MT20HS	187/143
TCDL 10.0	Rep Stress Incr YES	WB 0.98	Horz(CT) 0.11 16 n/a n/a		
BCLL 0.0 *	Code IRC2018/TPI2014	Matrix-SH	Attic -0.63 20-22 537 360		
BCDL 10.0				Weight: 632 lb	FT = 20%

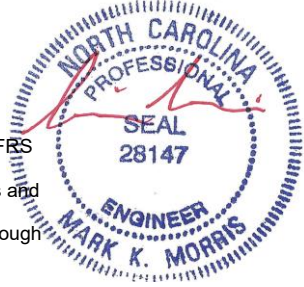
LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x10 SP 2400F 2.0E *Except* B1: 2x10 SP No.2, B3: 1-8/16x4-12/16 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 23-24, 20-22.
WEBS 2x4 SP No.3 *Except* W6,W8: 2x4 SP No.2	WEBS 1 Row at midpt 22-25, 8-25, 8-26, 11-18 2 Rows at 1/3 pts 20-26
	JOINTS 1 Brace at Jt(s): 27 This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=2481/0-3-8 (min. 0-3-7), 20=739/0-3-8 (min. 0-1-8), 16=2259/0-3-8 (min. 0-2-3)  
 Max Horz 2=129(LC 18)  
 Max Uplift 2=-13(LC 14), 20=-55(LC 15)  
 Max Grav 2=2896(LC 46), 20=1188(LC 38), 16=2674(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-28=-5625/69, 3-28=-5464/87, 3-29=-5258/70, 4-29=-5186/71, 4-30=-5152/83, 5-30=-5149/99, 5-6=-5238/189, 6-7=-4700/69, 7-31=-4712/54, 31-32=-4712/54, 8-32=-4712/54, 8-33=-4393/56, 33-34=-4393/56, 9-34=-4393/56, 9-10=-4393/56, 10-11=-4682/71, 11-12=-4648/167, 12-35=-4602/80, 13-35=-4636/62, 13-36=-4989/116, 36-37=-5048/107, 14-37=-5066/106, 14-15=-5096/97, 15-16=-5215/47  
 BOT CHORD 2-24=-38/4912, 23-24=-38/4912, 23-38=0/4137, 38-39=0/4137, 22-39=0/4137, 21-22=0/4703, 20-21=0/4727, 20-40=0/4138, 40-41=0/4137, 19-41=0/4129, 18-19=0/4117, 18-42=0/4354, 42-43=0/4354, 17-43=0/4354, 16-17=0/4531  
 WEBS 22-25=-1000/163, 7-25=-656/146, 20-26=-1371/135, 10-26=-1016/119, 25-27=-164/1681, 26-27=-164/1681, 3-23=-574/147, 5-23=-679/166, 6-23=-170/1625, 6-22=0/1232, 8-25=-1738/193, 8-26=-2005/180, 12-18=-582/144, 11-20=-44/2363, 11-18=-246/899, 13-18=-558/130, 13-17=-77/357

**NOTES-** (17-20)  
 1) Unbalanced roof live loads have been considered for this design.  
 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-6-10, Exterior(2E) 56-6-10 to 62-10-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10  
 4) Unbalanced snow loads have been considered for this design.  
 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.



10/9/2021

**Warning!** Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI I-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R11	ATTIC	2	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:12 2021 Page 2  
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**NOTES-** (17-20)

- 6) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are MT20 plates unless otherwise indicated.
- 9) The Fabrication Tolerance at joint 20 = 16%
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 12) Ceiling dead load (5.0 psf) on member(s). 25-27, 26-27
- 13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20.
- 15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 16) Attic room checked for L/360 deflection.
- 17) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 18) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 19) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 20) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

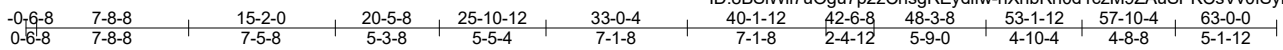
**LOAD CASE(S)** Standard



10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.





Scale = 1:117.0

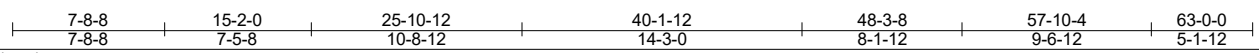
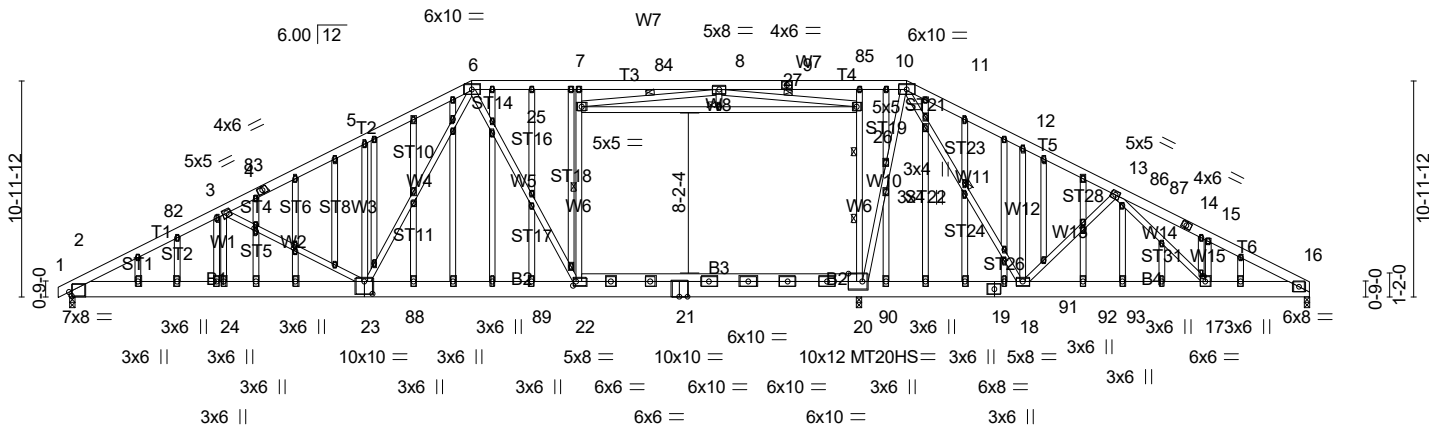


Plate Offsets (X,Y)-- [2:0-1-10,0-2-6], [20:0-8-8,Edge], [22:0-1-12,0-2-8], [23:0-5-0,0-7-8], [46:0-1-15,0-1-0], [49:0-1-15,0-1-0], [78:0-0-1,0-1-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.99	Vert(LL) -0.65	22-23	>735	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.93	Vert(CT) -1.14	22-23	>421	180	MT20HS	187/143
TCDL 10.0	Rep Stress Incr YES		WB 0.98	Horz(CT) 0.11	16	n/a	n/a		
BCLL 0.0 *	Code IRC2018/TPI2014		Matrix-SH	Attic -0.63	20-22	537	360		
BCDL 10.0								Weight: 823 lb	FT = 20%

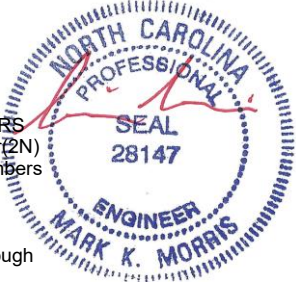
LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x10 SP 2400F 2.0E *Except* B1: 2x10 SP No.2, B3: 1-8/16x4-12/16 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 23-24,20-22.
WEBS 2x4 SP No.3 *Except* W6,W8: 2x4 SP No.2	WEBS 1 Row at midpt 22-25, 8-25, 8-26, 11-18 2 Rows at 1/3 pts 20-26
OTHERS 2x4 SP No.3	JOINTS 1 Brace at Jt(s): 27 This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=2481/0-3-8 (min. 0-3-7), 20=739/0-3-8 (min. 0-1-8), 16=2259/0-3-8 (min. 0-2-3)  
 Max Horz 2=129(LC 18)  
 Max Uplift 2=-13(LC 14), 20=-55(LC 15)  
 Max Grav 2=2896(LC 46), 20=1188(LC 38), 16=2674(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-82=-5625/445, 3-82=-5464/463, 3-83=-5258/382, 4-83=-5186/383, 4-5=-5149/410,  
 5-6=-5238/516, 6-7=-4700/316, 7-84=-4712/300, 8-84=-4712/300, 8-85=-4393/285,  
 9-85=-4393/285, 9-10=-4393/285, 10-11=-4682/317, 11-12=-4648/461, 12-13=-4636/360,  
 13-86=-4989/520, 86-87=-5048/510, 14-87=-5066/509, 14-15=-5096/501, 15-16=-5215/414  
**BOT CHORD** 2-24=-300/4912, 23-24=-300/4912, 23-88=-5/4137, 88-89=-5/4137, 22-89=-5/4137,  
 21-22=0/4703, 20-21=0/4727, 20-90=0/4138, 90-91=0/4137, 19-91=0/4129, 18-19=0/4117,  
 18-92=-196/4354, 92-93=-196/4354, 17-93=-196/4354, 16-17=-292/4531  
**WEBS** 22-25=-1000/167, 7-25=-656/146, 20-26=-1371/177, 10-26=-1016/153, 25-27=-202/1681,  
 26-27=-202/1681, 3-23=-574/202, 5-23=-679/179, 6-23=-257/1625, 6-22=0/1232,  
 8-25=-1738/222, 8-26=-2005/237, 12-18=-582/165, 11-20=-44/2363, 11-18=-246/899,  
 13-18=-558/172, 13-17=-141/357

- NOTES-** (20-23)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-6-8 to 5-9-2, Exterior(2N) 5-9-2 to 14-1-14, Corner(3R) 14-1-14 to 26-9-2, Exterior(2N) 26-9-2 to 36-2-14, Corner(3R) 36-2-14 to 48-10-2, Exterior(2N) 48-10-2 to 56-6-10, Corner(3E) 56-6-10 to 62-10-4 zone;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.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs



10/9/2021

Warning: Verify with manufacturer and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI I-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R12	GABLE	1	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:20 2021 Page 2  
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**NOTES-** (20-23)

- 7) **WARNING:** This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
- 8) Provide adequate drainage to prevent water ponding.
- 9) All plates are MT20 plates unless otherwise indicated.
- 10) All plates are 2x4 MT20 unless otherwise indicated.
- 11) The Fabrication Tolerance at joint 20 = 16%
- 12) Gable studs spaced at 2-0-0 oc.
- 13) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 14) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 15) Ceiling dead load (5.0 psf) on member(s). 25-27, 26-27
- 16) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22
- 17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20.
- 18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 19) Attic room checked for L/360 deflection.
- 20) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 21) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 22) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 23) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

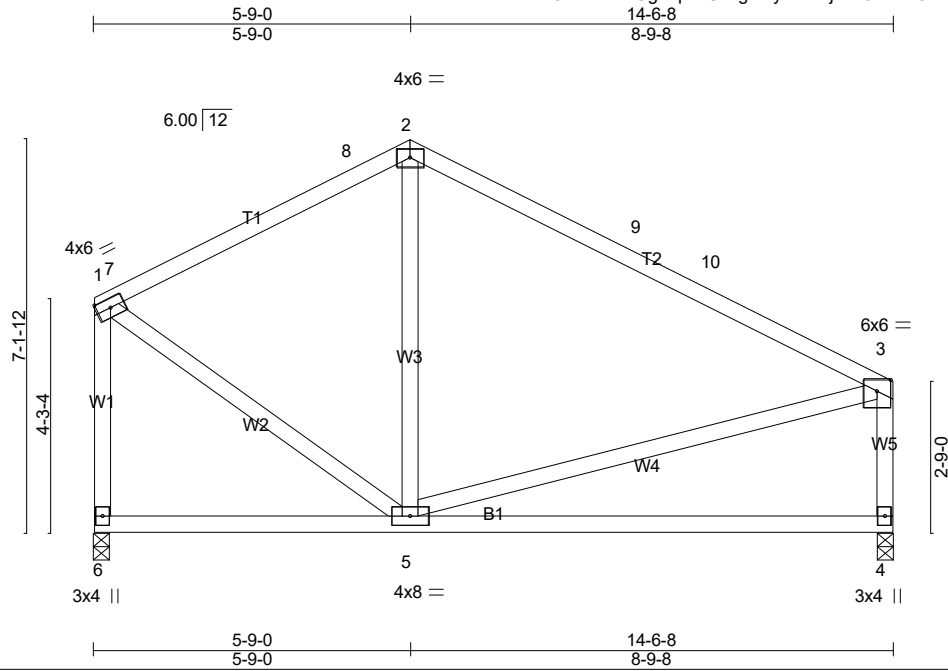


10/9/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R13	Common	7	1	
					<b># 28928</b>

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8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:21 2021 Page 1



Scale = 1:42.0

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.78	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.57	Vert(LL) -0.14 4-5 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.18	Vert(CT) -0.28 4-5 >600 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 4 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 88 lb	FT = 20%

**LUMBER-**  
**TOP CHORD** 2x4 SP No.2 \*Except\*  
T2: 2x4 SP SS  
**BOT CHORD** 2x4 SP No.2  
**WEBS** 2x4 SP No.3 \*Except\*  
W5: 2x4 SP No.2

**BRACING-**  
**TOP CHORD** Structural wood sheathing directly applied or 4-9-13 oc purlins, except end verticals.  
**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing.  
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 6=570/0-3-8 (min. 0-1-8), 4=570/0-3-8 (min. 0-1-8)  
Max Horz 6=-77(LC 15)  
Max Uplift 6=-25(LC 15), 4=-21(LC 15)  
Max Grav 6=631(LC 20), 4=637(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 1-7=-452/100, 7-8=-436/111, 2-8=-347/125, 2-9=-390/104, 9-10=-397/85, 3-10=-538/81,  
1-6=-592/143, 3-4=-555/136  
**WEBS** 1-5=-65/433, 3-5=0/255

- NOTES-** (9-12)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-11-6, Exterior(2R) 4-11-6 to 9-7-2, Exterior(2E) 9-7-2 to 14-4-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 6, 4.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
  - Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
  - Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
  - SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.



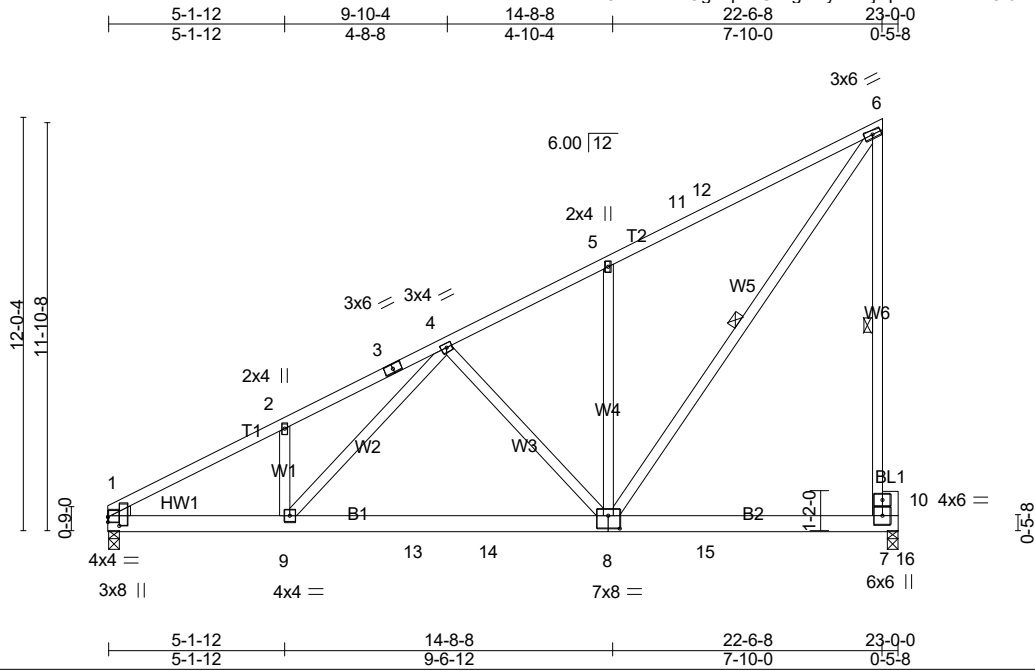
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**LOAD CASE(S)** Standard

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 21-6088-R01	Truss R14	Truss Type Half Hip	Qty 7	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC
					Job Reference (optional) <b># 28928</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:22 2021 Page 1  
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Scale = 1:67.0

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.95	Vert(LL) -0.10	7-8	>999	240	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.48	Vert(CT) -0.16	8-9	>999	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.62	Horz(CT) 0.02	7	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH						
BCDL 10.0	Code IRC2018/TPI2014							
							Weight: 165 lb	FT = 20%

**LUMBER-**  
**TOP CHORD** 2x4 SP SS \*Except\*  
T1: 2x4 SP No.2  
**BOT CHORD** 2x6 SP No.2  
**WEBS** 2x4 SP No.3 \*Except\*  
W6: 2x4 SP No.1  
**OTHERS** 2x6 SP No.2  
**WEDGE**  
Left: 2x4 SP No.3

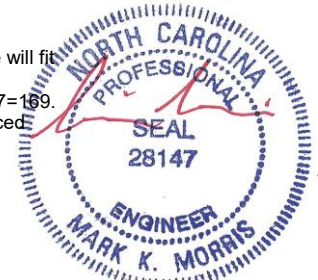
**BRACING-**  
**TOP CHORD** Structural wood sheathing directly applied or 4-5-7 oc purlins, except end verticals.  
**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing.  
**WEBS** 1 Row at midpt 6-7, 6-8

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=899/0-3-8 (min. 0-1-8), 7=885/0-3-8 (min. 0-1-8)  
Max Horz 1=324(LC 14)  
Max Uplift 1=-7(LC 14), 7=-169(LC 14)  
Max Grav 1=925(LC 20), 7=1143(LC 5)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 1-2=-1586/0, 2-3=-1531/55, 3-4=-1446/74, 4-5=-870/0, 5-11=-971/78, 11-12=-892/82,  
6-12=-845/103, 7-10=-982/197, 6-10=-1004/202  
**BOT CHORD** 1-9=-262/1306, 9-13=-204/978, 13-14=-204/978, 8-14=-204/978  
**WEBS** 4-9=-88/498, 4-8=-397/116, 5-8=-560/191, 6-8=-217/1300

- NOTES-** (8-11)  
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior(1) 5-1-12 to 17-7-2, Exterior(2E) 17-7-2 to 22-4-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
2) TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10  
3) Unbalanced snow loads have been considered for this design.  
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.  
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 7=169.  
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



10/9/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	R14	Half Hip	7	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:23 2021 Page 2  
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- 8) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 9) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 10) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 11) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

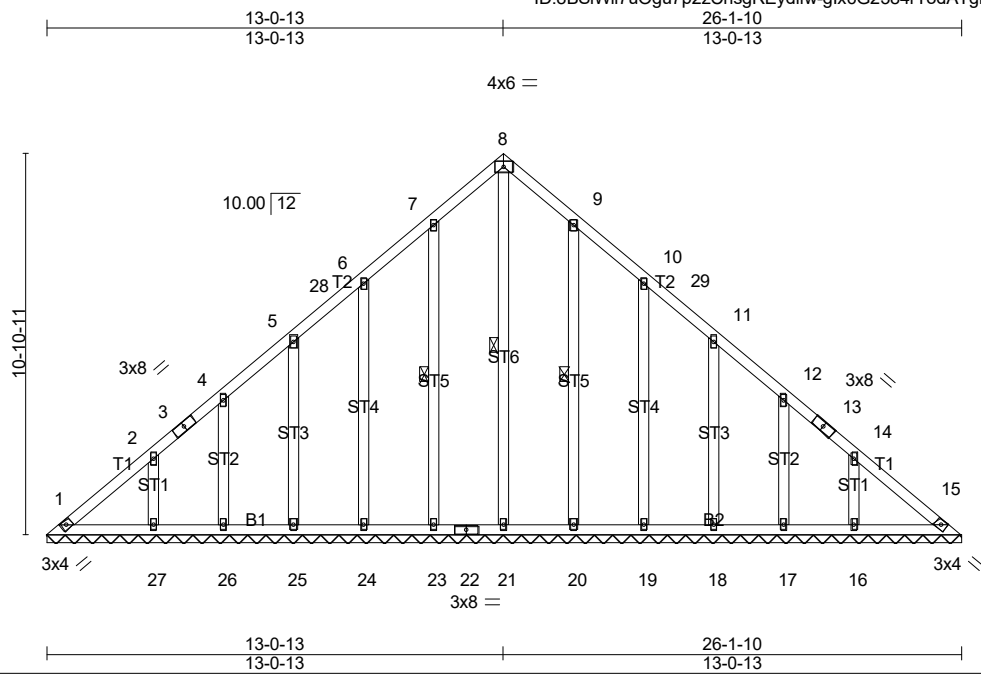
**LOAD CASE(S)** Standard



10/9/2021

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.





Scale = 1:65.8

<b>LOADING</b> (psf)	TCLL (roof) 20.0 Snow (Pf) 20.0 TCDL 10.0 BCLL 0.0 * BCDL 10.0	<b>SPACING-</b>	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	<b>CSI.</b>	TC 0.08 BC 0.10 WB 0.12 Matrix-SH	<b>DEFL.</b>	in (loc) l/defl L/d Vert(LL) n/a - n/a 999 Vert(CT) n/a - n/a 999 Horz(CT) 0.01 15 n/a n/a	<b>PLATES</b>	<b>GRIP</b>
								MT20	244/190
									Weight: 183 lb FT = 20%

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

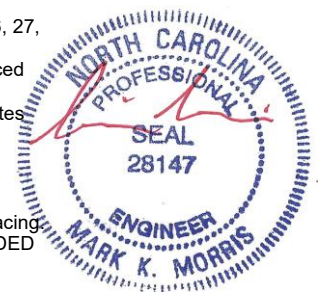
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 8-21, 7-23, 9-20

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 26-1-10.  
(lb) - Max Horz 1=-189(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 23, 24, 25, 26, 27, 20, 19, 18, 17, 16, 15  
Max Grav All reactions 250 lb or less at joint(s) 1, 26, 27, 17, 16, 15 except 21=275(LC 22), 23=264(LC 19), 24=252(LC 19), 25=267(LC 19), 20=261(LC 20), 19=253(LC 20), 18=267(LC 20)

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

- NOTES-** (10-13)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-0-13, Interior(1) 5-0-13 to 8-3-3, Exterior(2R) 8-3-3 to 17-10-6, Interior(1) 17-10-6 to 20-11-3, Exterior(2E) 20-11-3 to 25-8-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 23, 24, 25, 26, 27, 20, 19, 18, 17, 16, 15.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 10) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
  - 11) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
  - 12) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
  - 13) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

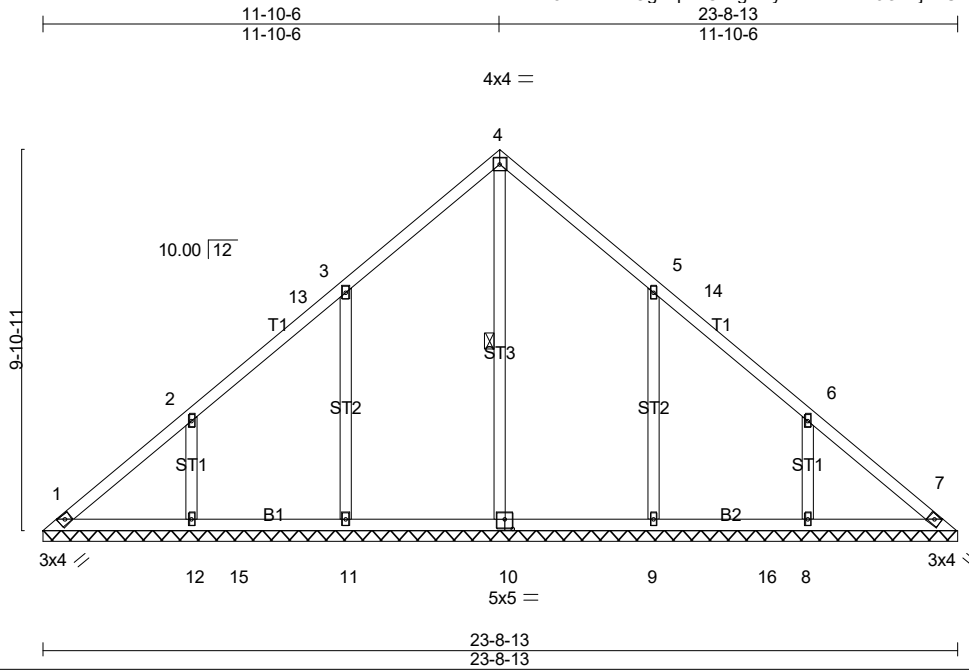


10/9/2021

**LOAD CASE(S) Standard parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI I-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 21-6088-R01	Truss VT02	Truss Type Valley	Qty 1	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC
					Job Reference (optional) <b># 28928</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:26 2021 Page 1  
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23-8-13



Scale = 1:59.8

Plate Offsets (X,Y)-- [10:0-2-8-0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.20	Vert(LL) n/a	-	n/a	999	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.40	Vert(CT) n/a	-	n/a	999		
TCDL 10.0	Lumber DOL 1.15	WB 0.20	Horz(CT) 0.01	7	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH						
BCDL 10.0	Code IRC2018/TPI2014							
							Weight: 119 lb	FT = 20%

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

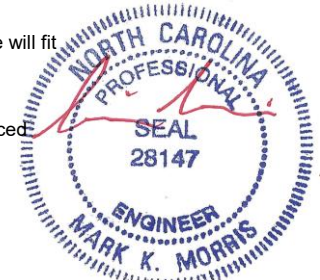
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 4-10

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 23-8-13.  
(lb) - Max Horz 1=171(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 11=-119(LC 12), 12=-112(LC 12), 9=-121(LC 13), 8=-112(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=440(LC 22), 11=539(LC 19), 12=379(LC 19), 9=524(LC 20), 8=383(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 3-11=-271/162, 5-9=-270/162

- NOTES-** (10-13)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCCL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Interior(1) 5-2-7 to 7-0-13, Exterior(2R) 7-0-13 to 16-8-0, Interior(1) 16-8-0 to 18-6-6, Exterior(2E) 18-6-6 to 23-3-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCCL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 11=119, 12=112, 9=121, 8=112.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



10/9/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	VT02	Valley	1	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:26 2021 Page 2  
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- 10) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 11) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 12) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 13) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

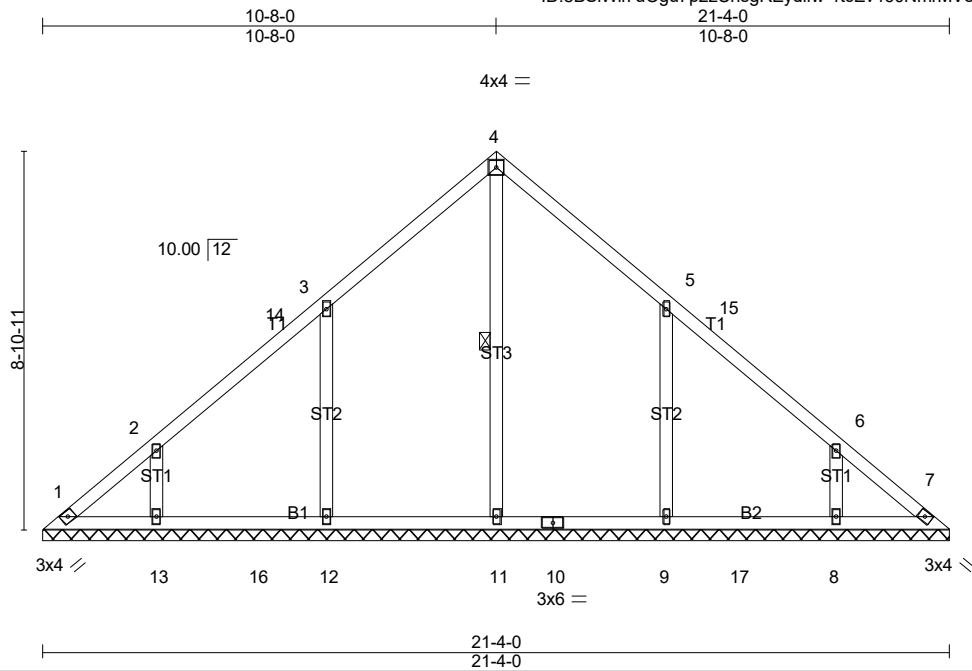


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**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 21-6088-R01	Truss VT03	Truss Type Valley	Qty 1	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC	Job Reference (optional) <b># 28928</b>
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Scale = 1:54.2

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.21	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.39	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.14	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 7 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 104 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 4-11

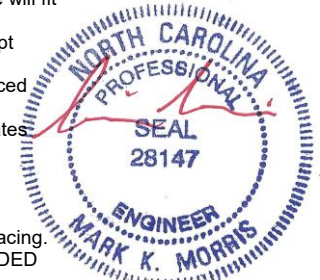
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 21-4-0.  
(lb) - Max Horz 1=-153(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 13, 8 except 12=-124(LC 12), 9=-124(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 11=438(LC 22), 12=514(LC 19), 13=291(LC 19), 9=514(LC 20), 8=292(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-12=-277/166, 5-9=-277/165

**NOTES-** (10-13)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Interior(1) 5-2-7 to 5-10-6, Exterior(2R) 5-10-6 to 15-5-10, Interior(1) 15-5-10 to 16-1-9, Exterior(2E) 16-1-9 to 20-11-3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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, 13, 8 except (jt=lb) 12=124, 9=124.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

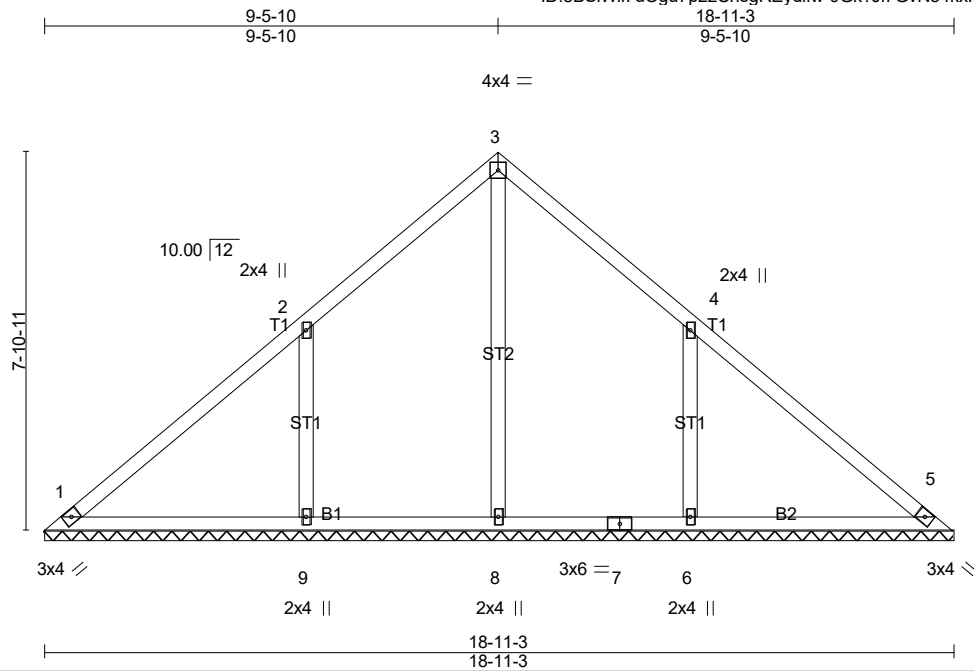


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**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded in accordance with design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 21-6088-R01	Truss VT04	Truss Type Valley	Qty 1	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC
					Job Reference (optional) <b># 28928</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:29 2021 Page 1  
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Scale: 1/4"=1'

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.30	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.40	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.16	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 86 lb	FT = 20%

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

**BRACING-**  
TOP CHORD  
BOT CHORD

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

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 18-11-3.

(lb) - Max Horz 1=-136(LC 8)

Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-157(LC 12), 6=-156(LC 13)

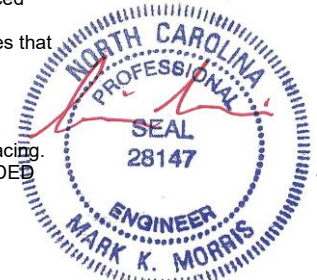
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=413(LC 22), 9=543(LC 19), 6=543(LC 20)

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

**WEBS** 2-9--330/190, 4-6--330/190

**NOTES-** (9-12)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-5-10, Exterior(2R) 5-5-10 to 13-5-10, Exterior(2E) 13-5-10 to 18-6-6 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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 except (jt=lb) 9=157, 6=156.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.



**LOAD CASE(S)** Standard

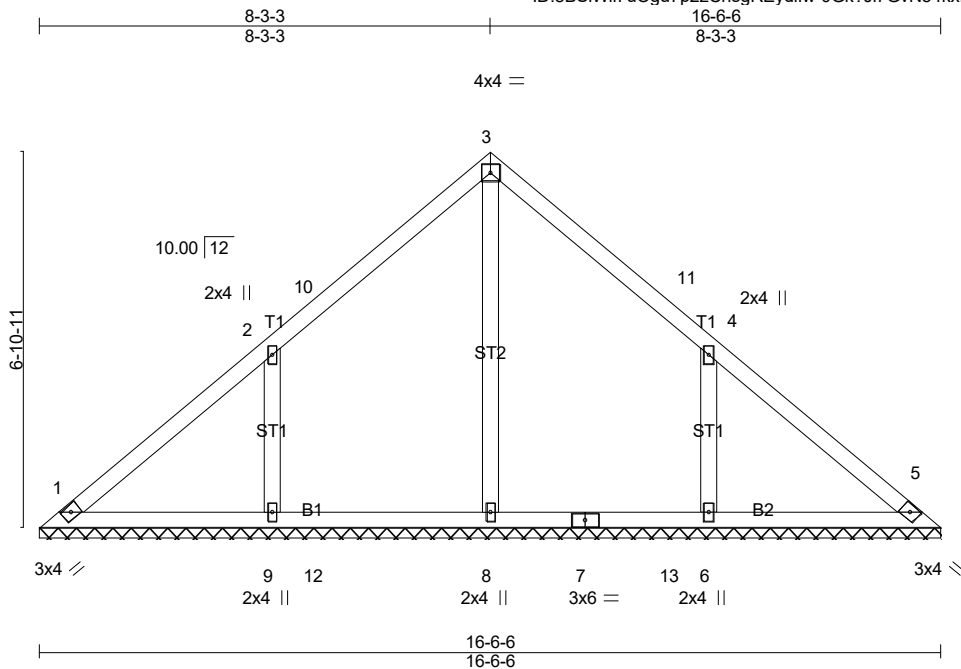
10/9/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0218 WOODGROVE   FUQUAY VARINA, NC
21-6088-R01	VT05	Valley	1	1	Job Reference (optional) # 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:29 2021 Page 1  
 ID:8BSIWl7uOgu7p2zCnsgREydfw-0Gk?Jl7GvN54kxMdUo\_JkOnlU48bBd4JLTU35yV30i



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.21	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.41	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.13	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 73 lb	FT = 20%

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

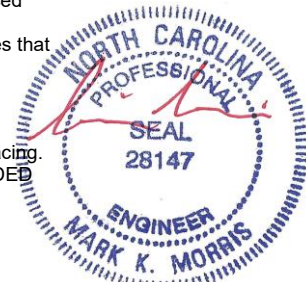
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 16-6-6.  
 (lb) - Max Horz 1=-118(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-133(LC 12), 6=-133(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=420(LC 22), 9=439(LC 19), 6=439(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-9=-282/165, 4-6=-282/165

- NOTES-** (9-12)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Exterior(2R) 5-2-7 to 11-3-15, Exterior(2E) 11-3-15 to 16-1-9 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Gable requires continuous bottom chord bearing.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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 except (jt=lb) 9=133, 6=133.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
  - Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
  - Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
  - SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

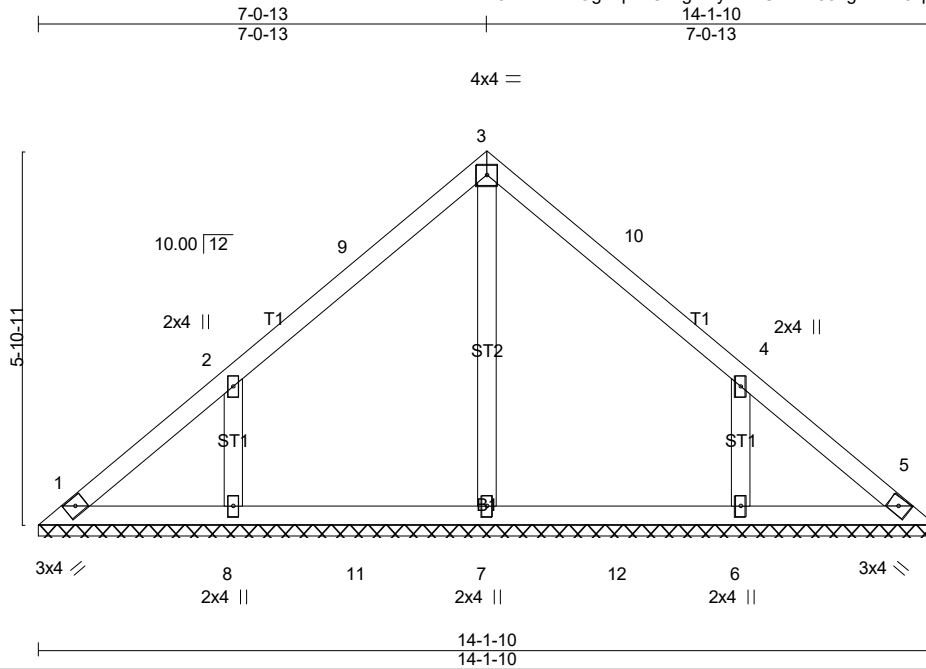


10/9/2021

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Job 21-6088-R01	Truss VT06	Truss Type Valley	Qty 1	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC
					Job Reference (optional) <b># 28928</b>

ID:8BSIWl7uOgu7p2zCnsgREYdfiw-USINX58ughDxM5xp2WVY GcKxmUWJw4vEX?D1bXyV3Oh  
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Scale = 1:36.3

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.18	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.31	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.10	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 61 lb	FT = 20%

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

**BRACING-**  
TOP CHORD  
BOT CHORD

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

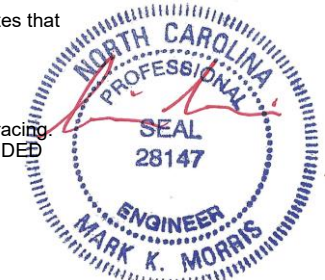
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 14-1-10.  
(lb) - Max Horz 1=100(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=115(LC 12), 6=115(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=386(LC 19), 8=345(LC 19), 6=345(LC 20)

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

**NOTES-** (9-12)

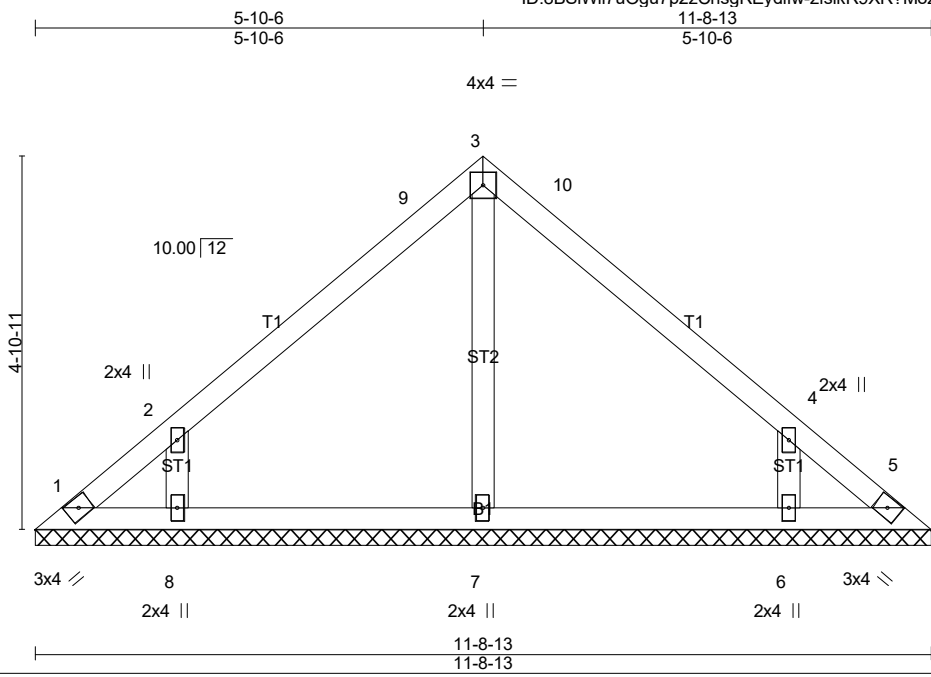
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Exterior(2R) 5-2-7 to 8-11-3, Exterior(2E) 8-11-3 to 13-8-12 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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 except (jt=lb) 8=115, 6=115.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.



**LOAD CASE(S)** Standard

10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI I-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Scale = 1:30.1

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.21	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.07	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 48 lb	FT = 20%

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

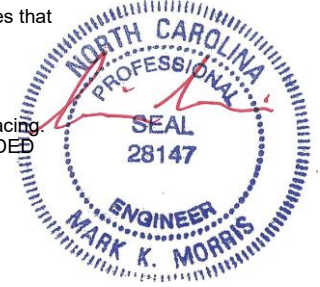
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 11-8-13.  
(lb) - Max Horz 1=82(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-110(LC 12), 6=-110(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=303(LC 19), 6=302(LC 20)

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

- NOTES-** (9-12)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCCL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Exterior(2R) 5-2-7 to 6-6-6, Exterior(2E) 6-6-6 to 11-3-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Gable requires continuous bottom chord bearing.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 1, 5 except (jt=lb) 8=110, 6=110.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
  - 10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
  - 11) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
  - 12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

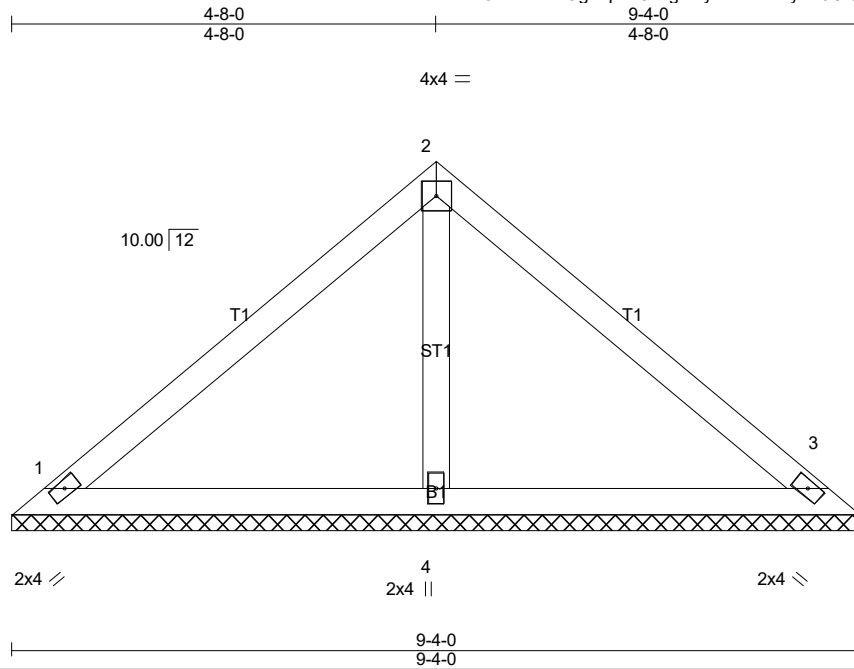


10/9/2021

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Job 21-6088-R01	Truss VT08	Truss Type Valley	Qty 1	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC	Job Reference (optional) <b># 28928</b>
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8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:32 2021 Page 1  
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Scale = 1:25.4

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.23	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.31	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.05	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 35 lb	FT = 20%

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

**BRACING-**  
TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 6'-0" oc purlins.  
Rigid ceiling directly applied or 10'-0" oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

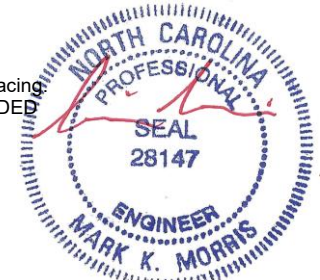
**REACTIONS.** (lb/size) 1=175/9-4-0 (min. 0-1-8), 3=175/9-4-0 (min. 0-1-8), 4=332/9-4-0 (min. 0-1-8)  
Max Horz 1=-64(LC 8)  
Max Uplift1=-13(LC 13), 3=-21(LC 13)

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

**NOTES-** (9-12)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 1'-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.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

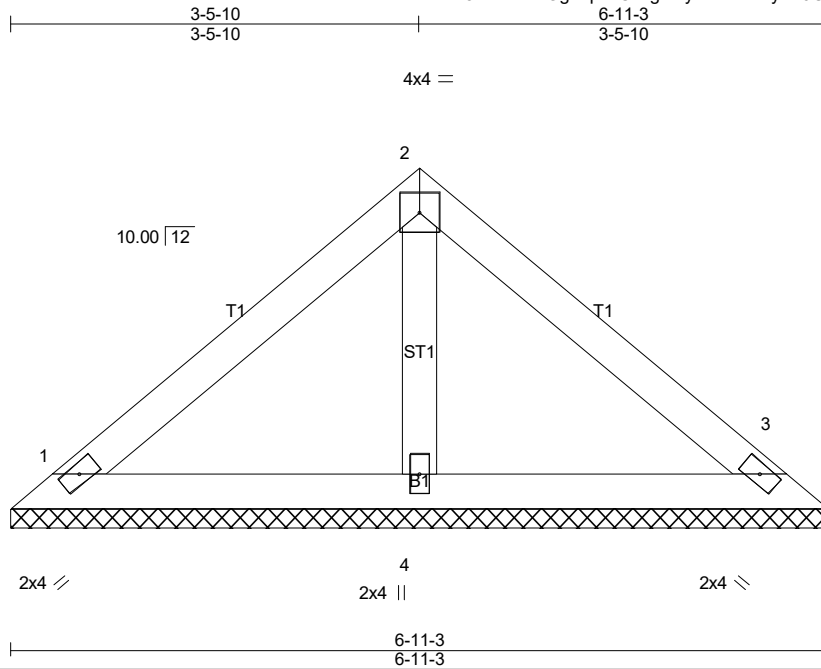


10/9/2021

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Job 21-6088-R01	Truss VT09	Truss Type Valley	Qty 1	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC
Job Reference (optional)					# 28928

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:32 2021 Page 1  
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Scale = 1:19.6

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.18	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.16	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.03	Vert(CT) n/a - n/a 999		
BCDL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 26 lb	FT = 20%

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

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

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

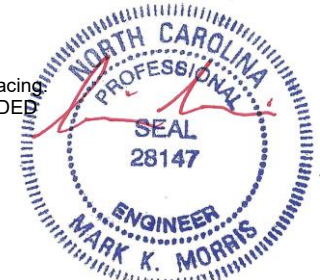
**REACTIONS.** (lb/size) 1=140/6-11-3 (min. 0-1-8), 3=140/6-11-3 (min. 0-1-8), 4=210/6-11-3 (min. 0-1-8)  
 Max Horz 1=46(LC 11)  
 Max Uplift1=18(LC 13), 3=23(LC 13)

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

**NOTES-** (9-12)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



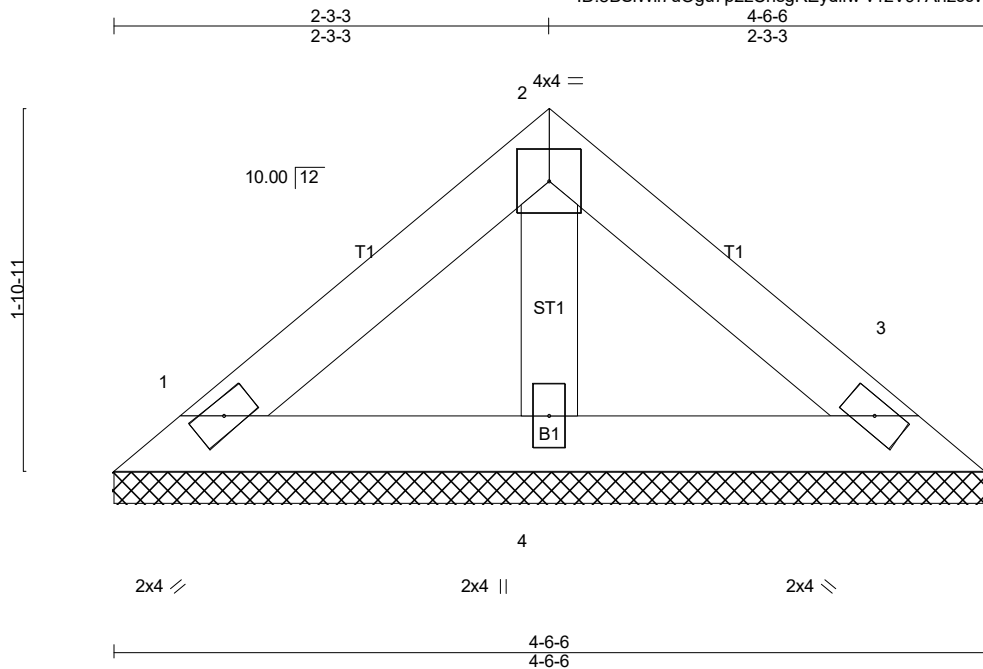
10/9/2021

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Job 21-6088-R01	Truss VT10	Truss Type Valley	Qty 1	Ply 1	49786-0218 WOODGROVE   FUQUAY VARINA, NC
					Job Reference (optional) <b># 28928</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Sat Oct 9 19:31:33 2021 Page 1  
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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.06	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.06	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.02	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 16 lb	FT = 20%

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

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

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=85/4-6-6 (min. 0-1-8), 3=85/4-6-6 (min. 0-1-8), 4=128/4-6-6 (min. 0-1-8)  
Max Horz 1=28(LC 9)  
Max Uplift 1=-11(LC 13), 3=-14(LC 13)

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

- NOTES-** (9-12)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Gable requires continuous bottom chord bearing.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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.
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