

# Mark Morris, P.E.

#126, 1317-M, Summerville, SC 29483

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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 #: 28832

JOB: 21-6092-R01

JOB NAME: 49786-0204 WOODGROVE

Wind Code: 37

Wind Speed: Vult= 115mph

Exposure Category: B

Mean Roof Height (feet): 24

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

*14 Truss Design(s)*

Trusses:

M01, R01, R02, R02B, R03, R04, R05, R06, R07, VT01, VT02, VT03, VT04, VT05



**10/4/2021**

**Mark Morris**

***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

Job 21-6092-R01	Truss M01	Truss Type Monopitch	Qty 10	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC	# 28832
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ID:MPR2P9H?n?aoDn?Cktxvnlzouw4-2SSAOkxYpJovWGez?v2dO5n3pJta2Em2UT2LAmyWO5N  
3-10-0  
3-10-0

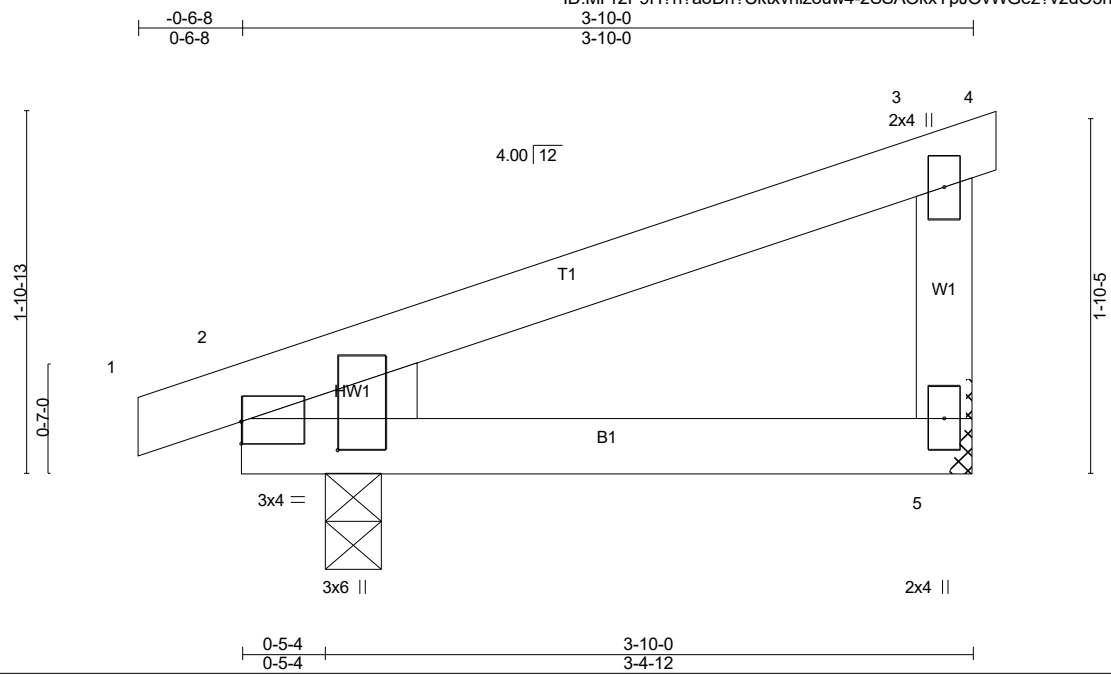


Plate Offsets (X,Y)-- [2:0-0-0,0-1-6], [2:0-1-13,0-6-1]								
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.31	Vert(LL) -0.01	2-5	>999	240	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.23	Vert(CT) -0.02	2-5	>999	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT) 0.00	n/a	n/a			
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P						
BCDL 10.0	Code IRC2018/TPI2014						Weight: 16 lb	FT = 20%

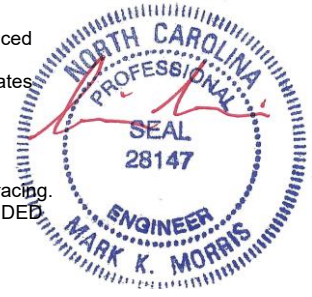
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
WEDGE  
Left: 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-10-0 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=155/Mechanical, 2=186/0-3-8 (min. 0-1-8)  
Max Horz 2=37(LC 14)  
Max Uplift 5=-20(LC 14), 2=-17(LC 10)  
Max Grav 5=206(LC 21), 2=252(LC 21)

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

- NOTES-** (10-13)
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=9ft; 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
  - 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) 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) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.
  - 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.



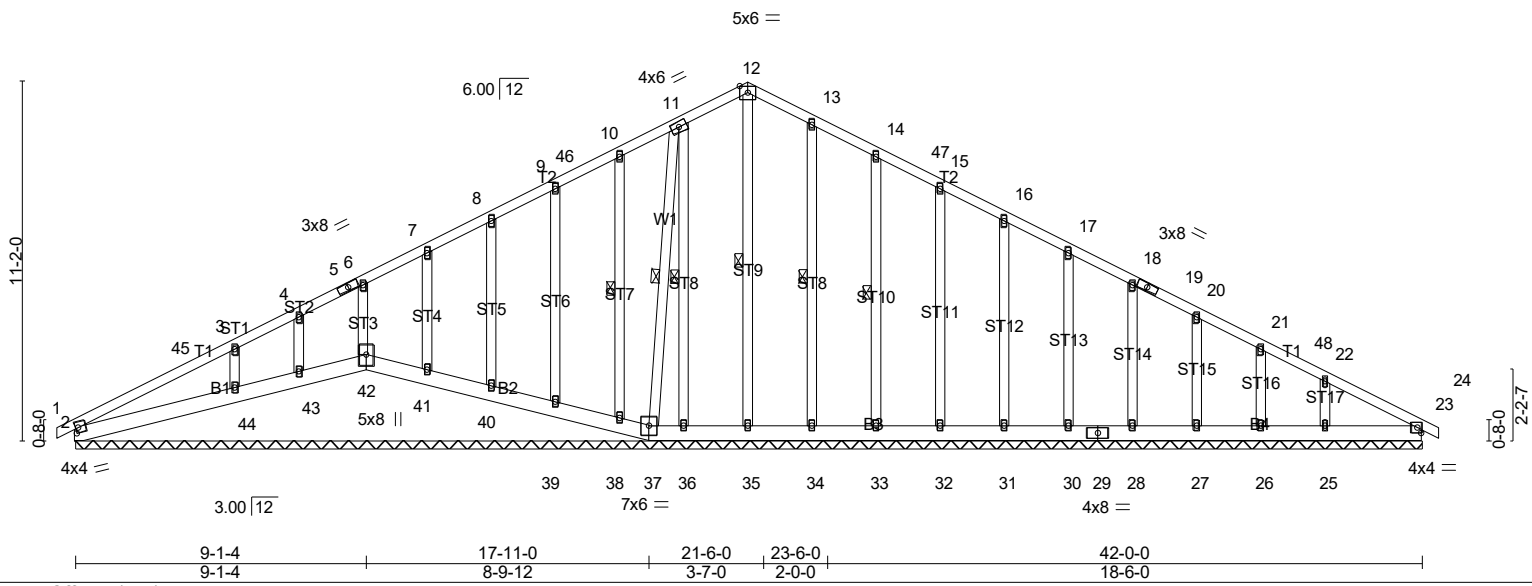
10/4/2021

**LOAD CASE(S)** Standard

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-0-6-8  
0-6-8
21-0-0  
21-0-0
42-0-0  
21-0-0
42-6-8  
0-6-8

Scale = 1:71.8



<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 0.24	in (loc) l/defl L/d	MT20	244/190
Snow (Pf)	20.0	Plate Grip DOL 1.15	BC 0.12	Vert(LL) 0.00 23 n/r 180		
TCDL	10.0	Lumber DOL 1.15	WB 0.16	Vert(CT) 0.00 24 n/r 80		
BCLL	0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.01 23 n/a n/a		
BCDL	10.0	Code IRC2018/TPI2014				Weight: 332 lb FT = 20%

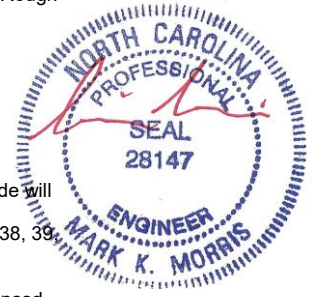
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
WEBS 2x4 SP No.3	6-0-0 oc bracing: 43-44.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 12-35, 11-36, 10-38, 13-34, 14-33, 11-37

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

**REACTIONS.** All bearings 42-0-0.  
 (lb) - Max Horz 2=-131(LC 19)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 42, 37, 36, 38, 39, 40, 41, 43, 44, 34, 33, 32, 31, 30, 28, 27, 26, 25  
 Max Grav All reactions 250 lb or less at joint(s) 2, 42, 37, 23, 36, 38, 39, 40, 41, 43, 32, 31, 30, 28, 27, 26, 25 except 35=268(LC 27), 44=417(LC 34), 34=291(LC 6), 33=282(LC 6)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 3-44=-261/165

- NOTES-** (15-18)
- 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 Corner(3E) -0-6-8 to 3-7-14, Exterior(2N) 3-7-14 to 16-9-10, Corner(3R) 16-9-10 to 25-0-0, Exterior(2N) 25-0-0 to 38-4-2, Corner(3E) 38-4-2 to 42-6-8 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=1.0; Cs=1.00; Ct=1.10
  - 5) Unbalanced snow loads have been considered for this design.
  - 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 7) All plates are 2x4 MT20 unless otherwise indicated.
  - 8) Gable requires continuous bottom chord bearing.
  - 9) Gable studs spaced at 2-0-0 oc.
  - 10) This truss has been designed for a 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 42, 37, 36, 38, 39, 40, 41, 43, 44, 34, 33, 32, 31, 30, 28, 27, 26, 25.
  - 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 42, 38, 39, 40, 41, 43, 44.
  - 14) 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.



10/4/2021

**Continued on Page 2** 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	49786-0204 WOODGROVE   FUQUAY VARINA, NC
21-6092-R01	R01	GABLE	1	1	Job Reference (optional) # 28832

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:30 2021 Page 2  
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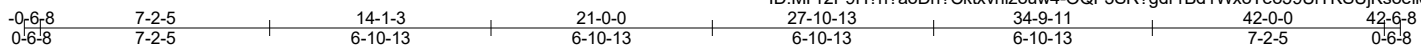
- 15) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 16) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the 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



10/4/2021

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Scale = 1:72.1

LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	2.0-0	TC	0.95	Vert(LL)	-0.36	14-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.64	14-15	>777	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.29	10	n/a	n/a		
BCLL	0.0 *	Code IRC2018/TPI2014		Matrix-SH								
BCDL	10.0											Weight: 280 lb FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.2 \*Except\*  
 T3: 2x4 SP No.1, T4: 2x4 SP No.2  
 BOT CHORD 2x6 SP No.2 \*Except\*  
 B1: 2x6 SP No.1  
 WEBS 2x4 SP No.3 \*Except\*  
 W2: 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied or 9-8-11 oc bracing.  
 WEBS 1 Row at midpt 5-15, 9-14

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

**WEDGE**  
 Right: 2x4 SP No.3

**REACTIONS.** (lb/size) 2=1710/0-3-8 (min. 0-1-15), 10=1710/0-3-8 (min. 0-2-0)  
 Max Horz 2=133(LC 14)  
 Max Uplift 2=-99(LC 14), 10=-98(LC 15)

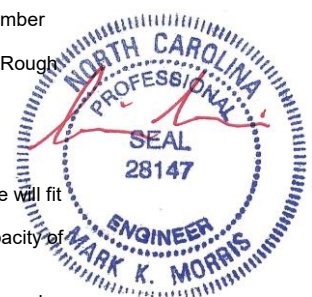
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**TOP CHORD** 2-17=-5455/781, 3-17=-5355/798, 3-4=-5155/714, 4-5=-5095/742, 5-18=-2179/426, 6-18=-2092/454, 6-19=-2402/537, 7-19=-2485/509, 7-8=-2425/428, 8-9=-2501/400, 9-20=-2959/471, 10-20=-3061/453

**BOT CHORD** 2-16=-642/4872, 15-16=-248/2609, 15-21=-50/1629, 21-22=-50/1629, 14-22=-50/1629, 13-14=-316/2596, 12-13=-316/2596, 10-12=-316/2596

**WEBS** 5-16=-323/2908, 5-15=-1454/301, 6-15=-124/927, 7-14=-510/199, 9-14=-533/167, 9-12=0/292, 6-14=-209/1082

- NOTES-** (11-14)
- 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 Corner(3E) 0-6-8 to 3-7-14, Exterior(2N) 3-7-14 to 16-10-1, Corner(3R) 16-10-1 to 25-2-14, Exterior(2N) 25-2-14 to 38-4-2, Corner(3E) 38-4-2 to 42-6-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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
  - 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.
  - 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) 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.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.
  - 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.



10/4/2021

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Job	Truss	Truss Type	Qty	Ply	49786-0204 WOODGROVE   FUQUAY VARINA, NC
21-6092-R01	R02	Roof Special	8	1	Job Reference (optional) # 28832

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:32 2021 Page 2  
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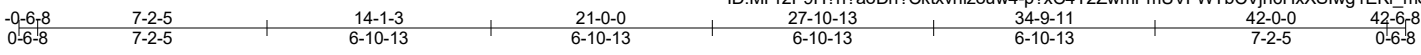
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- 12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
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- 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



10/4/2021

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Scale = 1:71.7

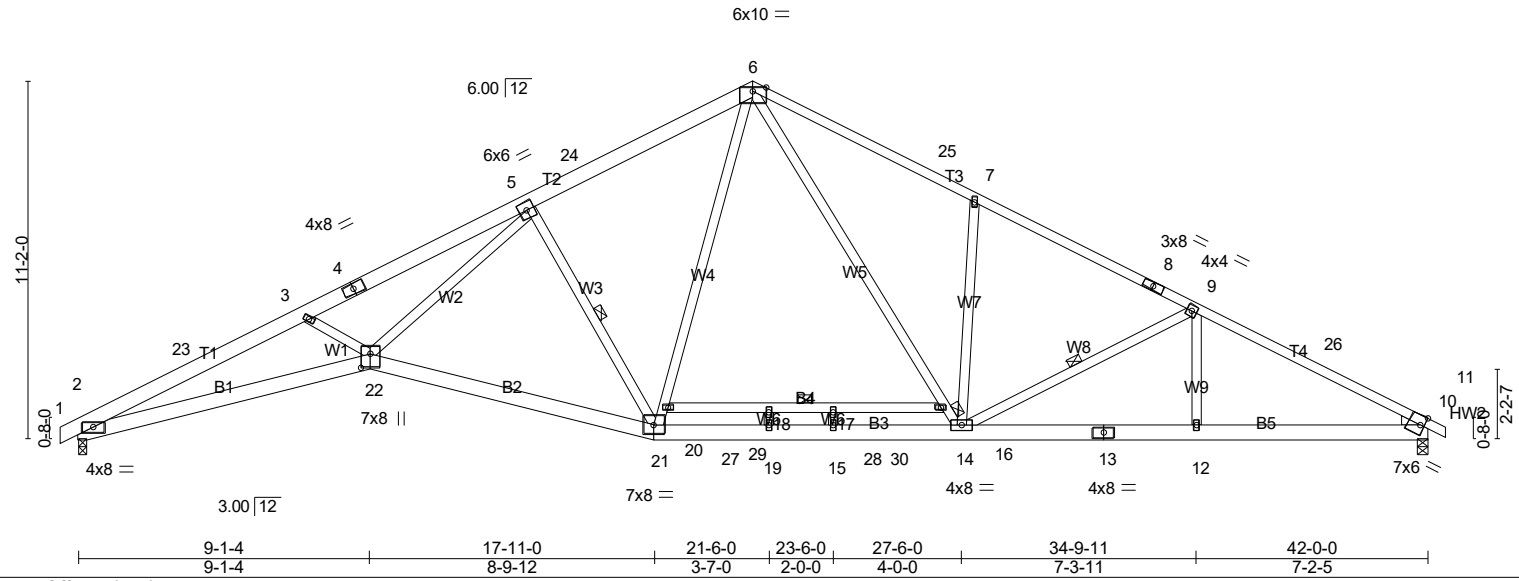


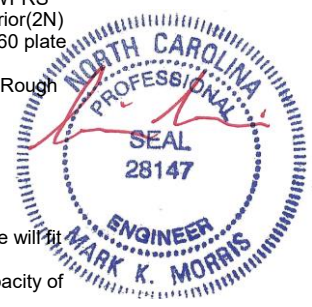
Plate Offsets (X,Y)-- [10:0-1-7,Edge], [22:0-5-4,0-3-8]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.87	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.81	Vert(LL) -0.44 15-19 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.75	Vert(CT) -0.79 15-19 >636 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.31 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014				Weight: 294 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.2 *Except* T3: 2x4 SP SS, T4: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD 2x6 SP No.2 *Except* B1,B3: 2x6 SP No.1, B4: 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 6-0-0 oc bracing: 16-20
WEBS 2x4 SP No.3 *Except* W2: 2x4 SP No.2	WEBS 1 Row at midpt 5-21, 9-14
WEDGE Right: 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1791/0-3-8 (min. 0-2-1), 10=1804/0-3-8 (min. 0-2-3)  
 Max Horz 2=133(LC 14)  
 Max Uplift 2=-59(LC 14), 10=-52(LC 15)  
 Max Grav 2=1801(LC 3), 10=1837(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-23=-5906/631, 3-23=-5819/648, 3-4=-5687/560, 4-5=-5640/588, 5-24=-2589/335,  
 6-24=-2502/364, 6-25=-2862/431, 7-25=-2944/404, 7-8=-2885/322, 8-9=-2961/294,  
 9-26=-3269/376, 10-26=-3353/358  
 BOT CHORD 2-22=-506/5291, 21-22=-155/2996, 21-27=0/1958, 19-27=0/1958, 15-19=0/1958,  
 15-28=0/1958, 14-28=0/1958, 13-14=-234/2868, 12-13=-234/2868, 10-12=-234/2868  
 WEBS 5-22=-258/3058, 5-21=-1498/279, 20-21=-101/1048, 6-20=-78/1146, 7-14=-510/199,  
 9-14=-506/181, 9-12=0/260, 6-16=-157/1290, 14-16=-180/1215

- NOTES-** (12-15)
- 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 Corner(3E) 0-6-8 to 3-7-9, Exterior(2N) 3-7-9 to 16-10-6, Corner(3R) 16-10-6 to 25-2-8, Exterior(2N) 25-2-8 to 38-4-7, Corner(3E) 38-4-7 to 42-6-8 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 non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.



10/4/2021

**Continued on Page 2** 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	49786-0204 WOODGROVE   FUQUAY VARINA, NC
21-6092-R01	R02B	Roof Special	1	1	Job Reference (optional) # 28832

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:34 2021 Page 2  
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**NOTES-** (12-15)

- 11) 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.
- 12) 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.
- 13) 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.
- 14) 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.
- 15) 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



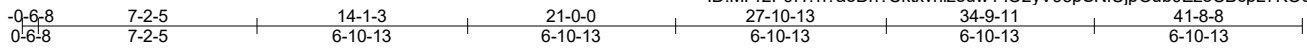
10/4/2021

**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 21-6092-R01	Truss R03	Truss Type Common	Qty 4	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC	# 28832
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8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:36 2021 Page 1  
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Scale = 1:76.0

Plate Offsets (X,Y)-- [2:Edge,0-2-13], [11:0-3-5,0-0-9], [21:0-3-0,0-4-4]
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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 0.91	Vert(LL) -0.31	17-19	>999	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.84	Vert(CT) -0.54	17-19	>930	180		
TCDL 10.0	Rep Stress Incr YES		WB 0.63	Horz(CT) 0.11	11	n/a	n/a		
BCLL 0.0 *	Code IRC2018/TPI2014		Matrix-SH						
BCDL 10.0								Weight: 280 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP SS *Except* T1,T3: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x6 SP No.2 *Except* B3: 2x4 SP No.3, B2: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 6-0-0 oc bracing: 15-20
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 5-21, 9-13
WEDGE Left: 2x4 SP No.3	
SLIDER Right 2x4 SP No.3 - 3-9-8	

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

**REACTIONS.** (lb/size) 2=1784/0-3-8 (min. 0-2-4), 11=1756/Mechanical  
 Max Horz 2=-131(LC 19)  
 Max Uplift 2=-60(LC 14), 11=-42(LC 15)  
 Max Grav 2=1925(LC 3), 11=1861(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-24=-3552/95, 3-24=-3468/112, 3-4=-3408/130, 4-5=-3332/158, 5-25=-2756/132,  
 25-26=-2695/141, 6-26=-2672/160, 6-27=-2962/195, 27-28=-2986/176, 7-28=-3048/167,  
 7-8=-2987/108, 8-9=-3035/81, 9-29=-3245/101, 10-29=-3264/86, 10-11=-3349/84  
 BOT CHORD 2-23=-138/3041, 23-30=-33/2660, 22-30=-33/2660, 21-22=-33/2660, 21-31=0/2076,  
 19-31=0/2076, 17-19=0/2076, 17-32=0/2076, 14-32=0/2076, 14-33=0/2076, 13-33=0/2076,  
 12-13=-18/2865, 11-12=-18/2865  
 WEBS 20-21=-53/1250, 6-20=-34/1325, 6-15=-128/1219, 13-15=-148/1154, 3-23=-273/155,  
 5-23=-86/578, 5-21=-717/207, 7-13=-552/184, 9-13=-412/135

- NOTES-** (12-15)
- 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) -0-6-8 to 3-7-9, Interior(1) 3-7-9 to 16-9-15, Exterior(2R) 16-9-15 to 25-2-1, Interior(1) 25-2-1 to 37-6-7, Exterior(2E) 37-6-7 to 41-8-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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
  - 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.
  - 6) All plates are 2x4 MT20 unless otherwise indicated.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* 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.
  - 9) Refer to girder(s) for truss to truss connections.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 11.



10/4/2021

**Continued on Page 2** 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 21-6092-R01	Truss R03	Truss Type Common	Qty 4	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC Job Reference (optional) # 28832
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8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:37 2021 Page 2  
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**NOTES-** (12-15)

- 11) 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.
- 12) 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.
- 13) 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.
- 14) 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.
- 15) 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

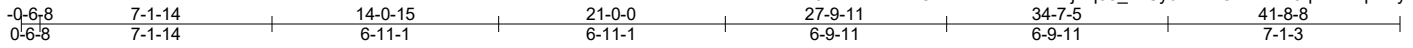


10/4/2021

**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 21-6092-R01	Truss R04	Truss Type Common	Qty 5	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC
					Job Reference (optional) <b># 28832</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:38 2021 Page 1  
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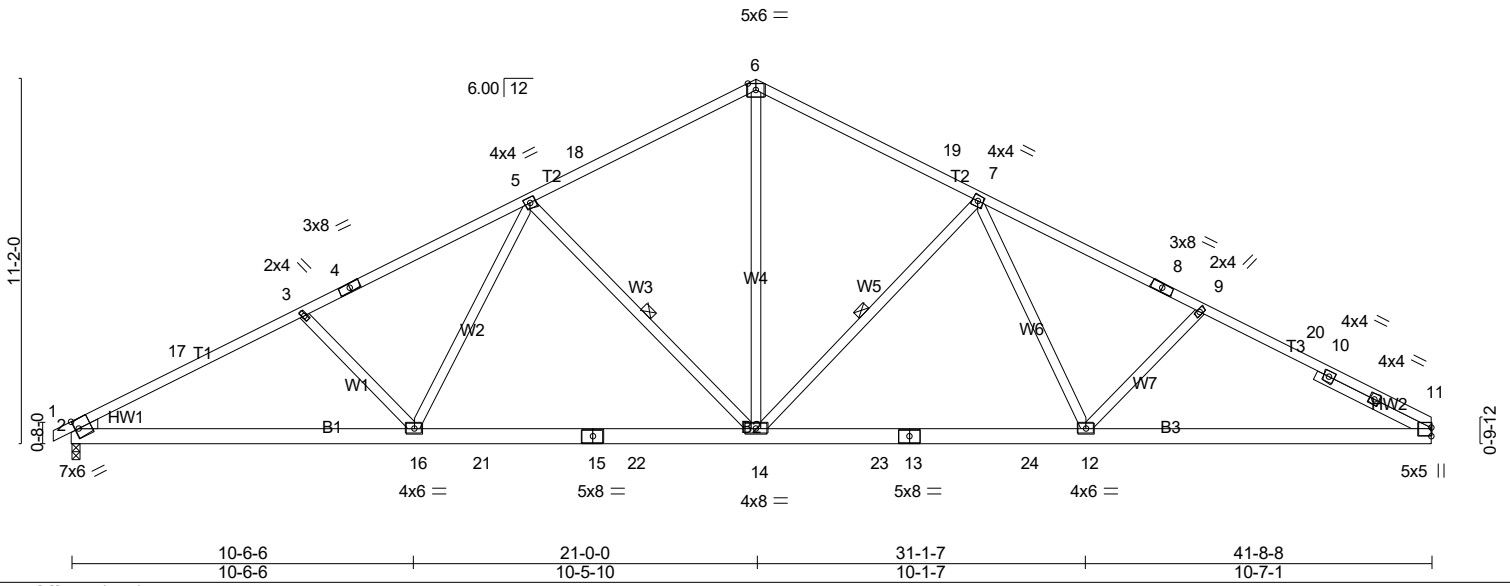


Plate Offsets (X,Y)-- [2:0-1-7,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.85	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.81	Vert(LL) -0.25 14-16 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.59	Vert(CT) -0.43 14-16 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.10 11 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 257 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1 \*Except\*  
 T1,T3: 2x4 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3  
 WEDGE  
 Left: 2x4 SP No.3  
 SLIDER Right 2x4 SP No.3 - 3-10-13

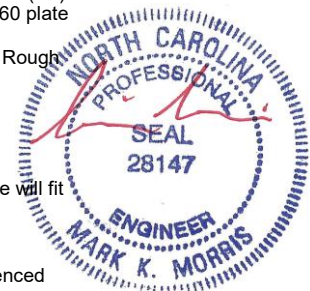
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-14, 7-14

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

**REACTIONS.** (lb/size) 2=1704/0-3-8 (min. 0-2-0), 11=1662/Mechanical  
 Max Horz 2=-131(LC 15)  
 Max Uplift 2=-99(LC 14), 11=-89(LC 15)  
 Max Grav 2=1704(LC 1), 11=1664(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-17=-3069/466, 3-17=-2985/484, 3-4=-2850/441, 4-5=-2708/470, 5-18=-2032/377,  
 6-18=-1947/405, 6-19=-1947/406, 7-19=-2032/378, 7-8=-2697/467, 8-9=-2763/439,  
 9-20=-2878/486, 10-20=-2895/472, 10-11=-2982/466  
 BOT CHORD 2-16=-321/2619, 16-21=-182/2230, 15-21=-182/2230, 15-22=-182/2230, 14-22=-182/2230,  
 14-23=-180/2209, 13-23=-180/2209, 13-24=-180/2209, 12-24=-180/2209, 11-12=-318/2540  
 WEBS 3-16=-296/180, 5-16=-40/585, 5-14=-812/222, 6-14=-219/1435, 7-14=-801/222,  
 7-12=-39/513, 9-12=-285/180

- NOTES-** (11-14)
- 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 3-7-9, Exterior(2N) 3-7-9 to 16-9-15, Corner(3R) 16-9-15 to 25-2-1, Exterior(2N) 25-2-1 to 37-6-7, Corner(3E) 37-6-7 to 41-8-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TC LL: 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.
  - 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.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 11.
  - 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.



10/4/2021

Continued on Page 2  
 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	49786-0204 WOODGROVE   FUQUAY VARINA, NC
21-6092-R01	R04	Common	5	1	Job Reference (optional) # 28832

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:39 2021 Page 2  
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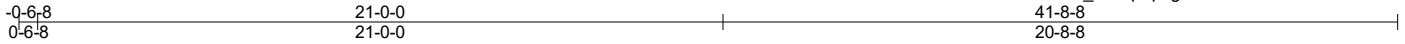
- 11) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the 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



10/4/2021

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Scale = 1:70.6

Plate Offsets (X,Y)-- [2:0-2-1,0-0-5], [56:0-3-0,0-1-8]

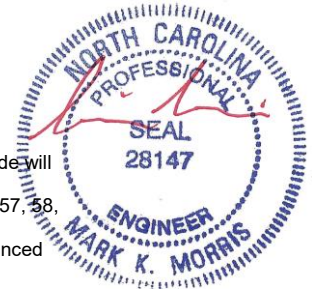
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.08	Vert(LL) -0.00	1	n/r	180	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.11	Vert(CT) 0.00	1	n/r	80		
TCDL 10.0	Rep Stress Incr YES		WB 0.10	Horz(CT) 0.01	36	n/a	n/a		
BCLL 0.0 *	Code IRC2018/TPI2014		Matrix-SH						
BCDL 10.0								Weight: 385 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 19-52, 18-53, 17-54, 16-55, 15-57, 20-51, 21-50, 22-49, 23-47
OTHERS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 - 1-6-7	

**REACTIONS.** All bearings 41-8-8.  
 (lb) - Max Horz 2=139(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 53, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 50, 49, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37  
 Max Grav All reactions 250 lb or less at joint(s) 36, 2, 52, 53, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 51, 50, 49, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 17-18=-133/261, 18-19=-137/270, 19-20=-137/270, 20-21=-133/261

- 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; 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 3-8-0, Exterior(2N) 3-8-0 to 16-9-15, Corner(3R) 16-9-15 to 25-0-0, Exterior(2N) 25-0-0 to 37-4-11, Corner(3E) 37-4-11 to 41-6-12 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=1.0; Cs=1.00; Ct=1.10
  - 5) Unbalanced snow loads have been considered for this design.
  - 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 7) All plates are 2x4 MT20 unless otherwise indicated.
  - 8) Gable requires continuous bottom chord bearing.
  - 9) Gable studs spaced at 1-4-0 oc.
  - 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 53, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 50, 49, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37.
  - 13) 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.



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**Continued on Page 2** 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	49786-0204 WOODGROVE   FUQUAY VARINA, NC
21-6092-R01	R05	GABLE	1	1	Job Reference (optional) # 28832

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:46 2021 Page 2  
 ID:MPPr2P9H?n?aoDn?Cktxvnlzouw4-SJfkbZB55Sw3wL9pA6PJcJcWINj7kG5?4auPtcyWO53

- 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

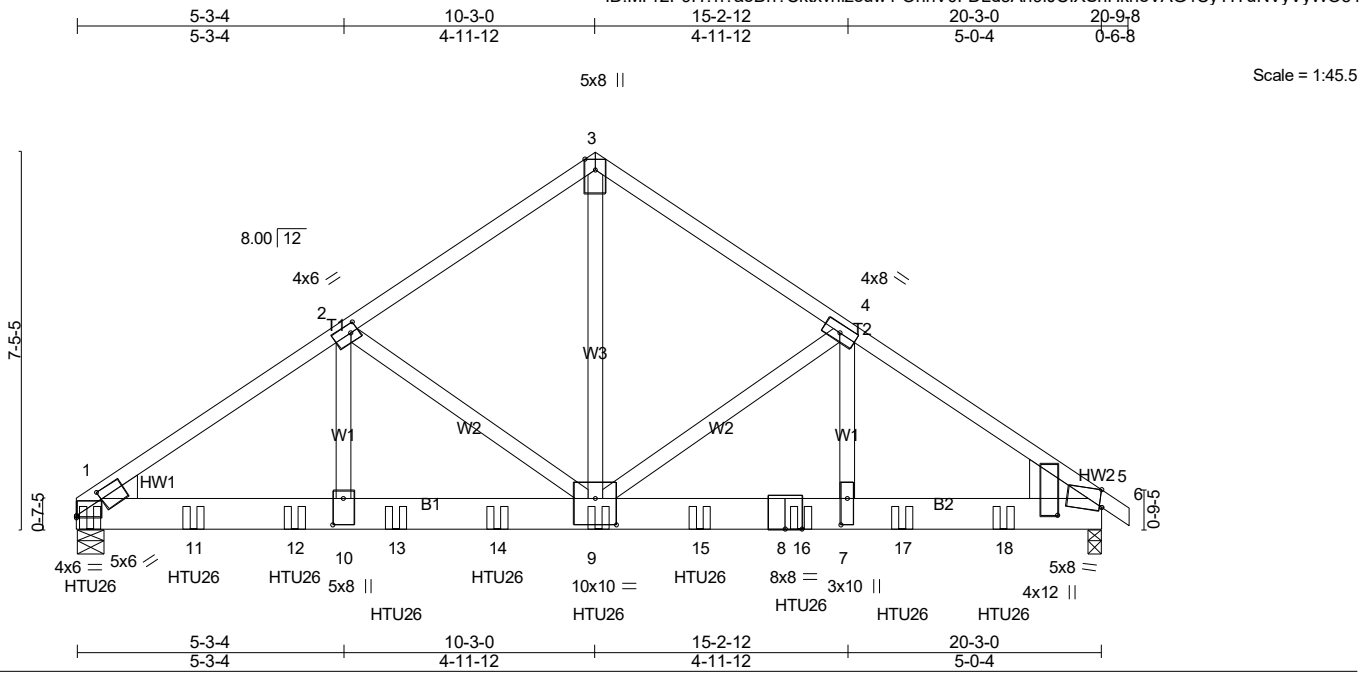


10/4/2021

**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 21-6092-R01	Truss R06	Truss Type COMMON GIRDER	Qty 1	Ply 2	49786-0204 WOODGROVE   FUQUAY VARINA, NC	# 28832
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ID:MPR2P9H?n?aoDn?Cktvnlzouw4-OhnV0FDLd3An9fJCIXSnHkheVAG4CyYIYUNVYVYWO51  
8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:48 2021 Page 1



Scale = 1:45.5

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

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.99	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.65	Vert(LL) -0.13 9-10 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 1.00	Vert(CT) -0.26 9-10 >919 180		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-SH	Horz(CT) 0.06 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 285 lb	FT = 20%

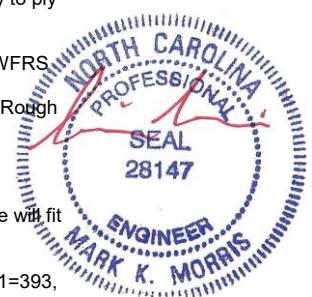
**LUMBER-**  
TOP CHORD 2x4 SP No.1 \*Except\*  
T2: 2x4 SP No.2  
BOT CHORD 2x8 SP DSS  
WEBS 2x4 SP No.3 \*Except\*  
W3: 2x4 SP No.1  
WEDGE  
Left: 2x6 SP No.2, Right: 2x10 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-7-11 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=10087/0-6-8 (min. 0-5-7), 5=8400/0-3-8 (req. 0-4-5)  
Max Horz 1=-123(LC 34)  
Max Uplift1=-393(LC 10), 5=-445(LC 11)  
Max Grav 1=10731(LC 3), 5=8489(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-12609/513, 2-3=-8424/443, 3-4=-8425/444, 4-5=-11846/609  
BOT CHORD 1-11=-436/10151, 11-12=-436/10151, 10-12=-436/10151, 10-13=-436/10151,  
13-14=-436/10151, 9-14=-436/10151, 9-15=-436/9449, 8-15=-436/9449, 8-16=-436/9449,  
7-16=-436/9449, 7-17=-436/9449, 17-18=-436/9449, 5-18=-436/9449  
WEBS 3-9=-416/9012, 4-9=-3198/293, 4-7=-206/4035, 2-9=-3976/201, 2-10=-88/4846

- NOTES-** (15-18)
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.  
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-5-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCCL=5.0psf; h=21ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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
  - 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.
  - 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.
  - WARNING: Required bearing size at joint(s) 5 greater than input bearing size.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=393, 5=445.
  - 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.



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Continued on Page 2 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 21-6092-R01	Truss R06	Truss Type COMMON GIRDER	Qty 1	Ply 2	49786-0204 WOODGROVE   FUQUAY VARINA, NC Job Reference (optional) # 28832
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8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:49 2021 Page 2  
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**NOTES-** (15-18)

- 12) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss) or equivalent spaced at 2-0-8 oc max. starting at 0-3-4 from the left end to 8-3-12 to connect truss(es) R03 (1 ply 2x6 SP) to back face of bottom chord.
- 13) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 10-3-12 from the left end to 18-3-12 to connect truss(es) R04 (1 ply 2x6 SP) to back face of bottom chord.
- 14) Fill all nail holes where hanger is in contact with lumber.
- 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

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-60, 3-6=-60, 1-5=-20  
Concentrated Loads (lb)  
Vert: 1=-1737(B) 9=-1642(B) 11=-1728(B) 12=-1728(B) 13=-1728(B) 14=-1728(B) 15=-1642(B) 16=-1642(B) 17=-1642(B) 18=-1642(B)



10/4/2021

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Job 21-6092-R01	Truss R07	Truss Type GABLE	Qty 1	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC
					Job Reference (optional) <b># 28832</b>

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:50 2021 Page 1  
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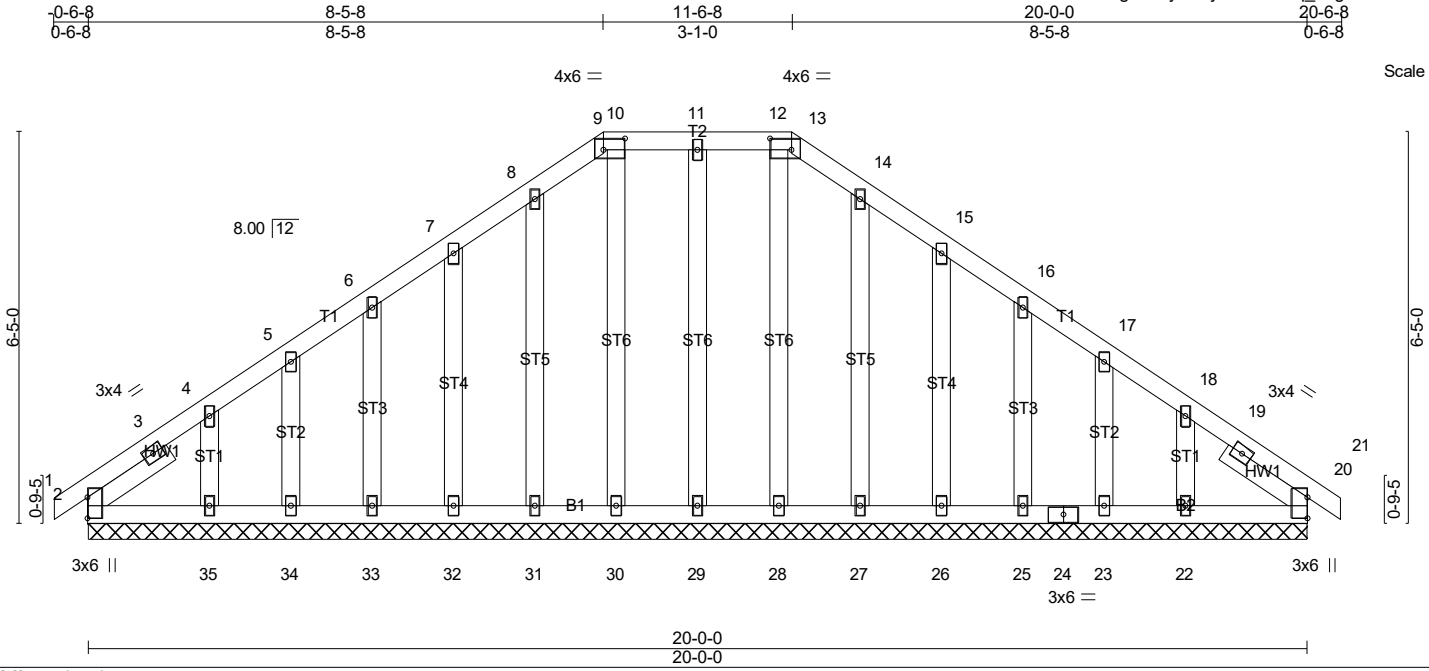


Plate Offsets (X,Y)-- [9:0-4-4,0-2-4], [13:0-4-4,0-2-4]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.04	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) 0.00 20 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.06	Vert(CT) 0.00 20 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 20 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 148 lb	FT = 20%

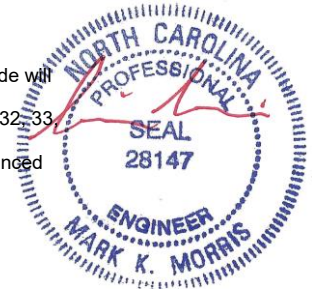
**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.3  
 OTHERS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 - 1-7-8, Right 2x4 SP No.3 - 1-7-8

**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 20-0-0.  
 (lb) - Max Horz 2=108(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 29, 30, 31, 32, 33, 34, 35, 27, 26, 25, 23, 22  
 Max Grav All reactions 250 lb or less at joint(s) 2, 29, 30, 31, 32, 33, 34, 35, 28, 27, 26, 25, 23, 22, 20

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

- NOTES-** (14-17)
- 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=22ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-6-8 to 3-4-0, Exterior(2N) 3-4-0 to 4-6-14, Corner(3R) 4-6-14 to 15-4-0, Exterior(2N) 15-4-0 to 16-7-14, Corner(3E) 16-7-14 to 20-6-8 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 1-4-0 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, 29, 30, 31, 32, 33, 34, 35, 27, 26, 25, 23, 22.
  - 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.



10/4/2021

**Continued on Page 2** 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	49786-0204 WOODGROVE   FUQUAY VARINA, NC
21-6092-R01	R07	GABLE	1	1	Job Reference (optional) # 28832

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:51 2021 Page 2  
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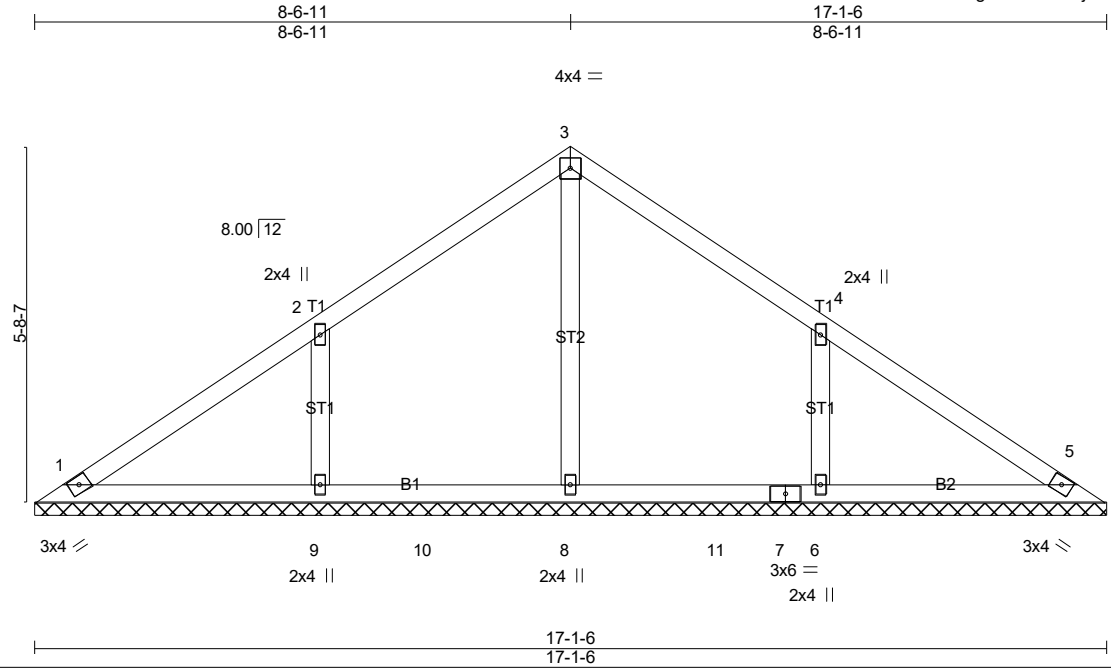
- 14) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 15) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the 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



10/4/2021

**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 = 1:36.8

<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 0.22 BC 0.33 WB 0.10 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) 0.00 5 n/a n/a	<b>PLATES</b>	<b>GRIP</b>
								MT20	244/190
								Weight: 69 lb	FT = 20%

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

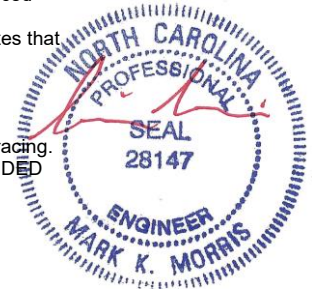
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

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

**REACTIONS.** All bearings 17-1-6.  
 (lb) - Max Horz 1=-95(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-100(LC 12), 6=-100(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=395(LC 19), 9=411(LC 19), 6=411(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-9=-283/135, 4-6=-283/135

- 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=22ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 4-6-11, Exterior(2R) 4-6-11 to 12-6-11, Exterior(2E) 12-6-11 to 16-7-10 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, with BCCL = 10.0psf.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=100, 6=100.
  - 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.



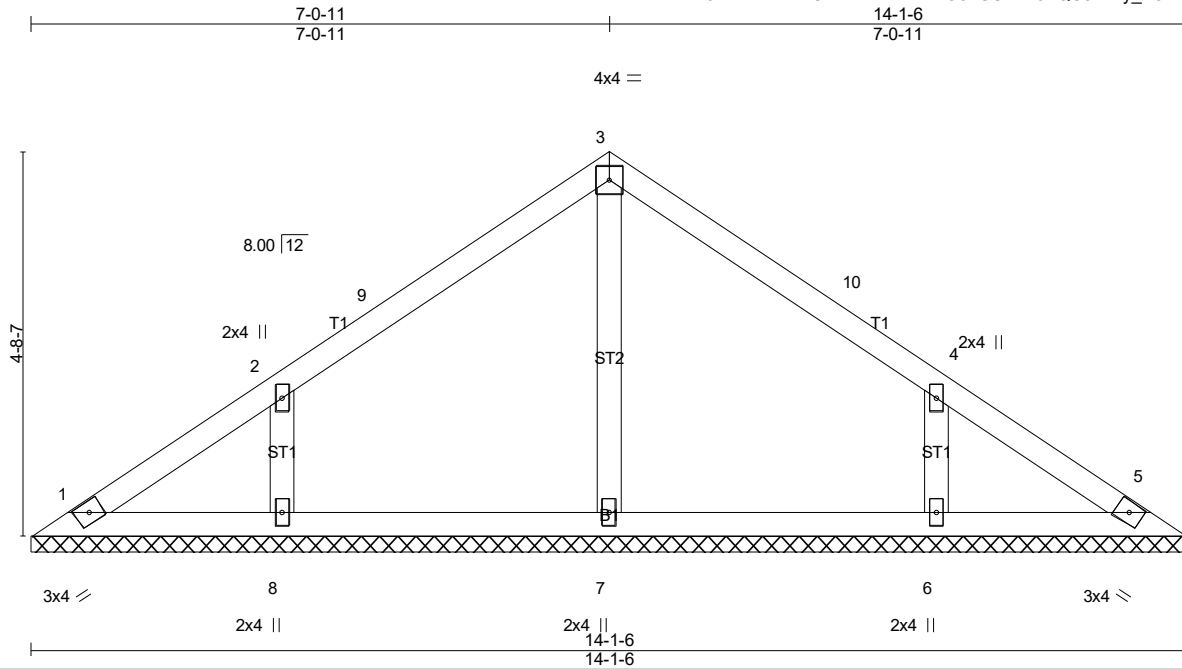
10/4/2021

**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 21-6092-R01	Truss VT02	Truss Type Valley	Qty 1	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC	Job Reference (optional) <b># 28832</b>
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8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:53 2021 Page 1  
ID:MPPr2P9H?n?aoDn?Cktxvnlzouw4-lfaO3zGUSbo3FQC9441y\_oO1B4KtQL1ha4GciyWO4y



Scale = 1:28.2

<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 0.18	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.20	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: 55 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.

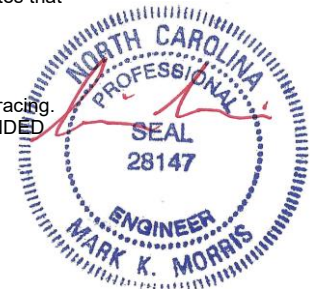
**REACTIONS.** All bearings 14-1-6.  
(lb) - Max Horz 1=-78(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 6  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=264(LC 1), 8=315(LC 23), 6=315(LC 30)

**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) 0-5-12 to 4-4-6, Exterior(2R) 4-4-6 to 9-9-0, Exterior(2E) 9-9-0 to 13-7-10 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, 8, 6.
- 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

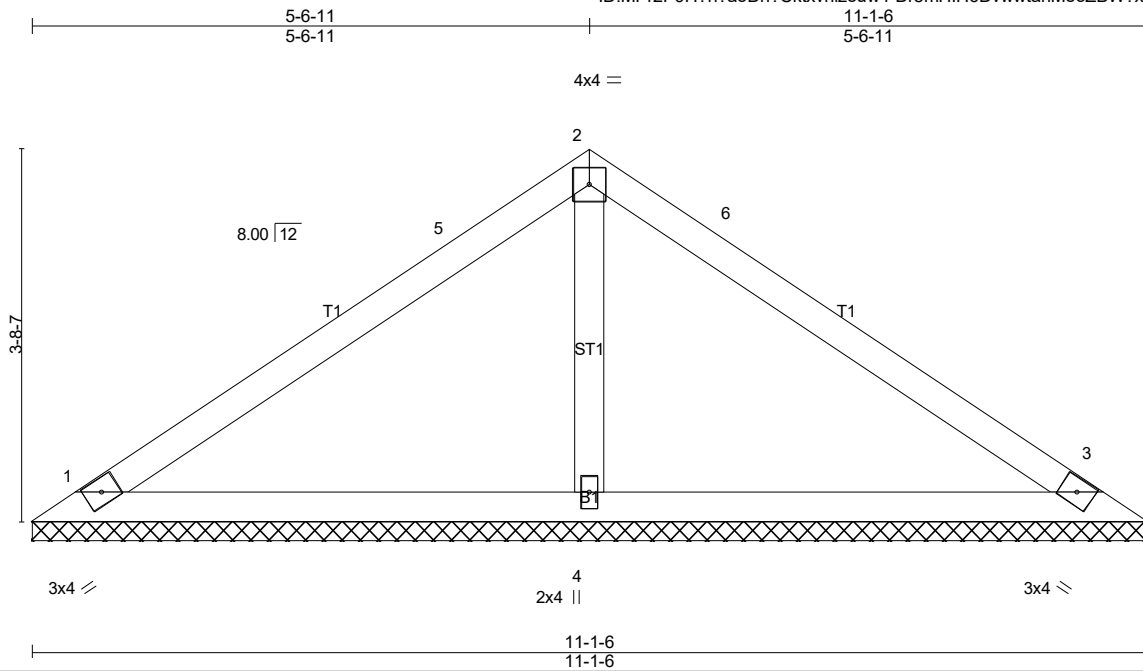


10/4/2021

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Job 21-6092-R01	Truss VT03	Truss Type Valley	Qty 1	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC	# 28832
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8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Oct 5 19:09:54 2021 Page 1  
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Scale = 1:22.9

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.33	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.43	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 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 39 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.

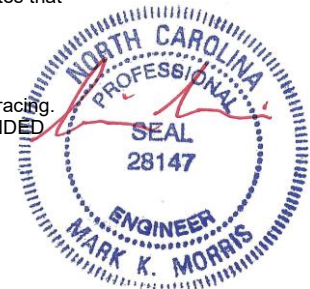
**REACTIONS.** (lb/size) 1=195/11-1-6 (min. 0-1-8), 3=195/11-1-6 (min. 0-1-8), 4=422/11-1-6 (min. 0-1-8)  
 Max Horz 1=-61(LC 8)  
 Max Uplift 1=-18(LC 12), 3=-27(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-253/61

**NOTES-** (9-12)

- 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) 0-5-12 to 4-4-6, Exterior(2R) 4-4-6 to 6-9-0, Exterior(2E) 6-9-0 to 10-7-10 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

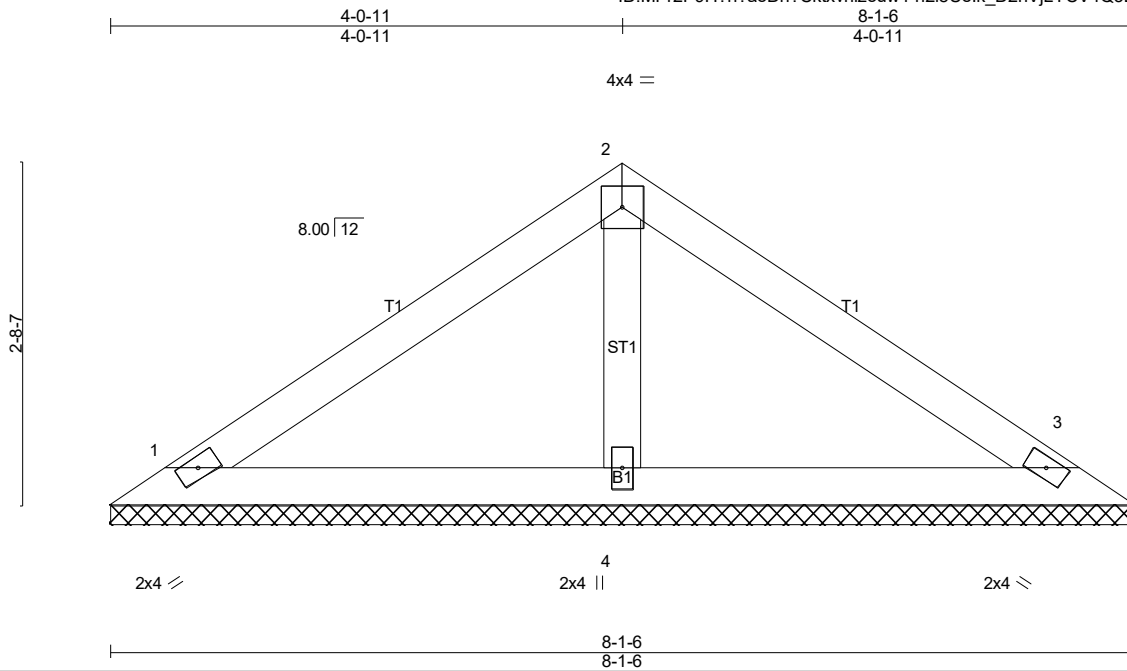


10/4/2021

**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 21-6092-R01	Truss VT04	Truss Type Valley	Qty 1	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC
					Job Reference (optional) <b># 28832</b>

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Scale = 1:18.2

<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 0.24	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.22	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.04	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: 28 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.

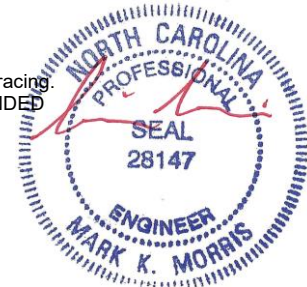
**REACTIONS.** (lb/size) 1=154/8-1-6 (min. 0-1-8), 3=154/8-1-6 (min. 0-1-8), 4=264/8-1-6 (min. 0-1-8)  
Max Horz 1=-43(LC 8)  
Max Uplift1=-21(LC 12), 3=-27(LC 13)

**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=24ft; 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

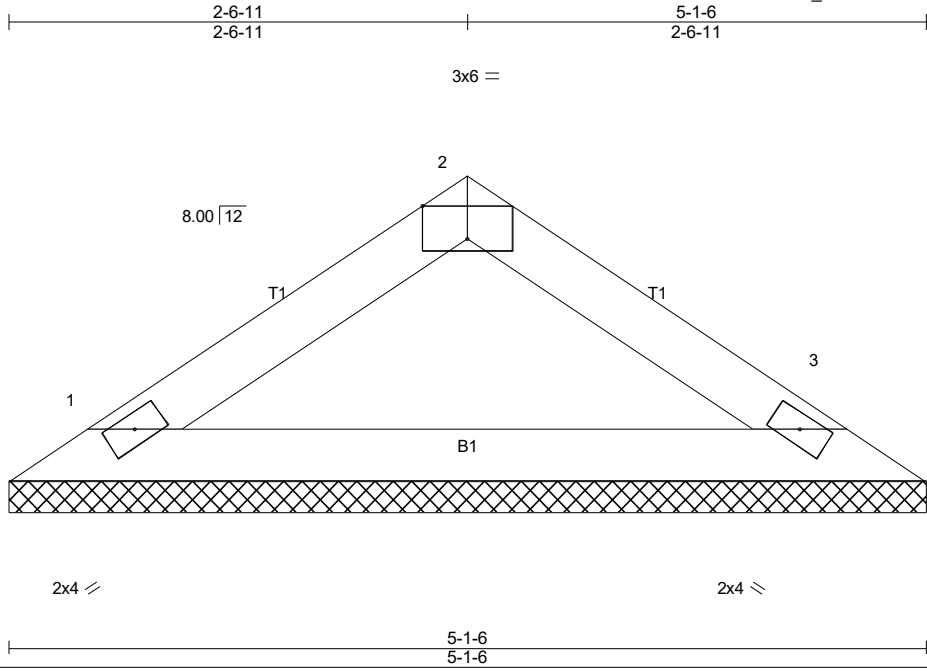


10/4/2021

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Job 21-6092-R01	Truss VT05	Truss Type Valley	Qty 1	Ply 1	49786-0204 WOODGROVE   FUQUAY VARINA, NC	# 28832
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Scale = 1:12.9

LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP	
TCLL (roof)	20.0	2-0-0	Plate Grip DOL	1.15	TC	0.07	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.36	Vert(LL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Code IRC2018/TPI2014		Matrix-P		Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0										Weight: 15 lb	FT = 20%

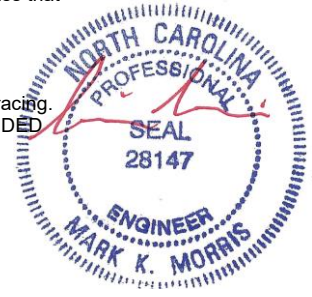
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-1-6 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=166/5-1-6 (min. 0-1-8), 3=166/5-1-6 (min. 0-1-8)  
Max Horz 1=25(LC 11)  
Max Uplift 1=8(LC 12), 3=8(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=24ft; 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.
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  - 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.



10/4/2021

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