

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: DO220721

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

Pages or sheets covered by this seal: I54580941 thru I54580962

My license renewal date for the state of North Carolina is December 31, 2022.

North Carolina COA: C-0844



October 6, 2022

Gilbert, Eric

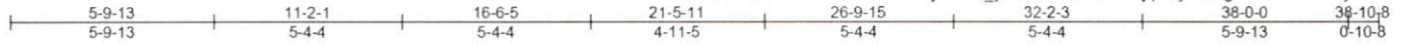
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

Job	Truss	Truss Type	Qty	Ply	154580941
DO220721	CT1	Piggyback Base	14	1	

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:02:59 2022 Page 1

ID: ARkWZsMr7hBo0uFk8hw2NPytwAU_yDS5LmZSP1z1QDjqQLyZdQgONBjre8tfVT6yWCmA



Scale = 1:65.6

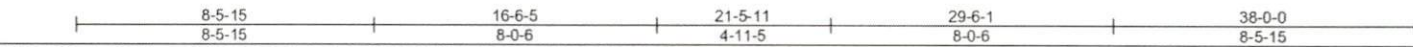
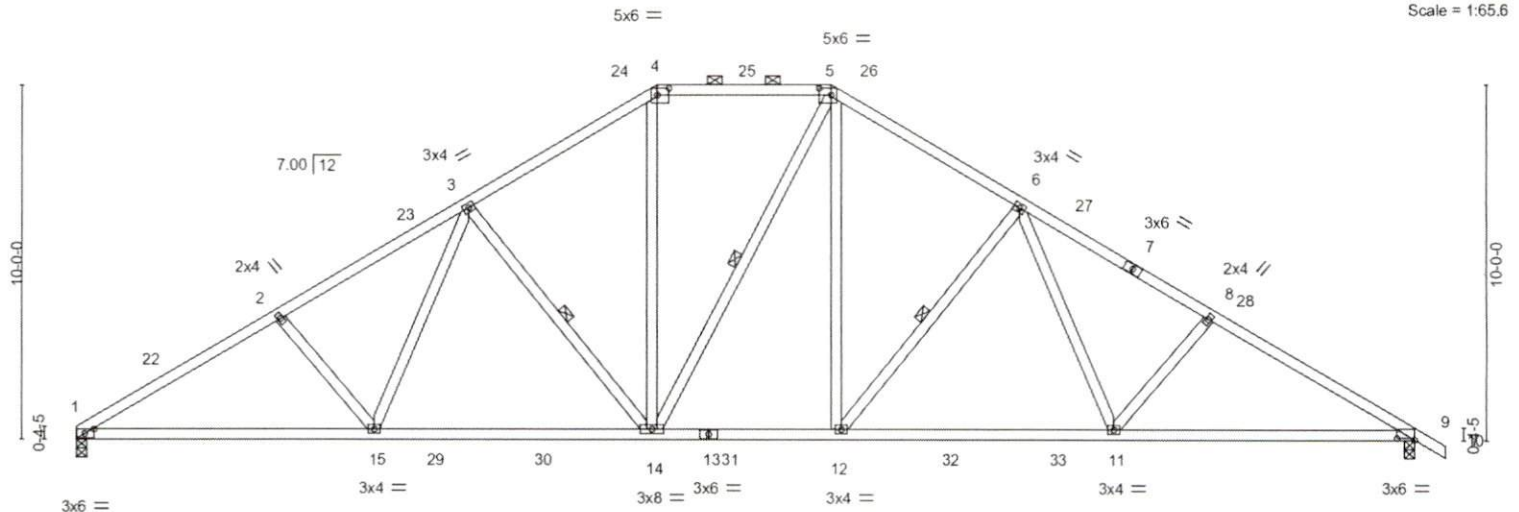


Plate Offsets (X,Y)-- [1:0-3-3,0-1-8], [4:0-4-0,0-2-4], [5:0-4-0,0-2-4], [9:0-6-0,0-0-10]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/def	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.59	Vert(LL) -0.25	11-12	>999	240	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.91	Vert(CT) -0.43	11-12	>999	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.32	Horz(CT) 0.14	9	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MR						
BCDL 10.0	Code IBC2015/TPI2014						Weight: 223 lb	FT = 6%

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

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 2-11-4 oc purlins, except
 2-0-0 oc purlins (4-2-0 max.); 4-5.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 3-14, 5-14, 6-12

REACTIONS. (size) 1=0-3-8, 9=0-3-8
 Max Horz 1=-194(LC 8)
 Max Uplift 1=-40(LC 12), 9=-53(LC 13)
 Max Grav 1=1734(LC 35), 9=1779(LC 35)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-3079/94, 2-3=-2896/106, 3-4=-2149/113, 4-5=-1726/130, 5-6=-2148/113,
 6-8=-2893/104, 8-9=-3075/93
 BOT CHORD 1-15=-134/2628, 14-15=-46/2214, 12-14=0/1724, 11-12=0/2213, 9-11=0/2624
 WEBS 2-15=-361/135, 3-15=-6/548, 3-14=-770/144, 4-14=-10/770, 5-12=-36/832,
 6-12=-770/143, 6-11=-5/544, 8-11=-357/134

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 1 and 53 lb uplift at joint 9.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



Job	Truss	Truss Type	Qty	Ply	154580942
DO220721	CT1GE	Piggyback Base Supported Gable	1	1	

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:02 2022 Page 1

ID: ARkWZsMr7hBo0uFk8hw2NPYtwAU-PXubjMoSik8YkU8oOzz2aIBEatb_Oh14qrnA4RyWcm7

Job Reference (optional)

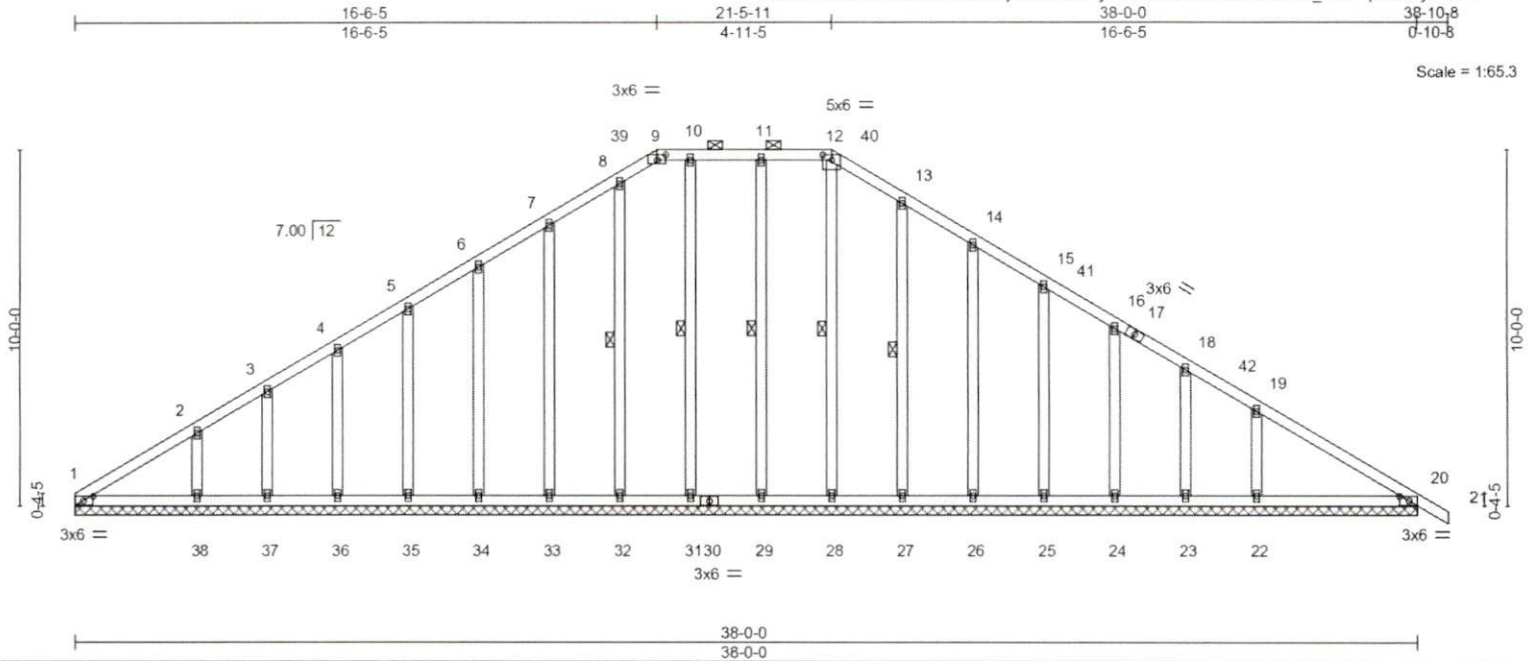


Plate Offsets (X,Y)-- [1:0-3-3,0-1-8], [9:0-3-0,0-1-12], [12:0-3-0,0-1-12], [20:0-3-3,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.21	in (loc) l/def L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.15	Vert(LL) 0.01 21 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.22	Vert(CT) 0.01 21 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.01 20 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 268 lb	FT = 6%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.); 9-12.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 12-28, 11-29, 10-31, 8-32, 13-27

REACTIONS. All bearings 38-0-0.
 (lb) - Max Horz 1--194(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 1, 29, 31, 33, 34, 35, 36, 37, 38, 27, 26, 25, 24, 23, 22
 Max Grav All reactions 250 lb or less at joint(s) 1, 28, 31, 37, 23, 20 except 29=254(LC 40), 32=258(LC 43), 33=272(LC 43), 34=267(LC 43), 35=269(LC 43), 36=253(LC 43), 38=288(LC 26), 27=273(LC 45), 26=270(LC 45), 25=262(LC 45), 24=294(LC 45), 22=365(LC 27)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 WEBS 19-22=-255/111

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10: Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load); Lumber DOL=1.15 Plate DOL=1.15; Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 15.0 psf on overhangs non-concurrent with other live loads.
 - 7) Provide adequate drainage to prevent water ponding.
 - 8) All plates are 2x4 MT20 unless otherwise indicated.
 - 9) Gable requires continuous bottom chord bearing.
 - 10) Gable studs spaced at 2-0-0 oc.
 - 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 20.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 29, 31, 33, 34, 35, 36, 37, 38, 27, 26, 25, 24, 23, 22.
 - 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



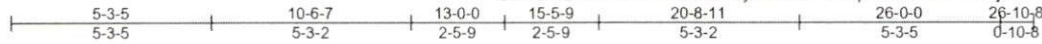
Job	Truss	Truss Type	Qty	Ply	
DO220721	CT1GT	Piggyback Base Girder	1	4	Job Reference (optional)

154580943

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:04 2022 Page 1

ID: ARkWZsMr7hBo0uFk8hw2NPYtwAU-Lv0L82qiGxOFzoiAVNOWfjGahh7hsVMNH9NG9JyWCm5



Scale = 1:60.7

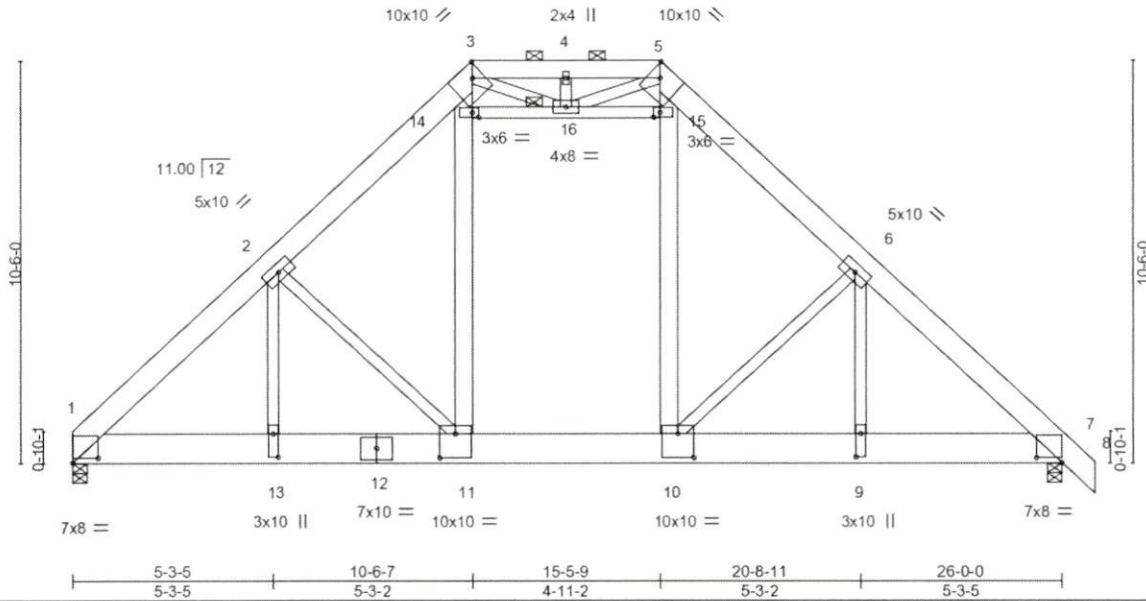


Plate Offsets (X,Y)-- [1:0-8-0-0-1-8], [3:0-3-4,0-4-0], [5:0-3-4,0-4-0], [7:0-8-0-0-1-8], [9:0-7-4,0-1-8], [10:0-5-0,0-7-8], [11:0-5-0,0-7-8], [13:0-7-4,0-1-8], [14:0-2-0,0-1-8], [15:0-2-0,0-1-8]

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	0.24	Vert(LL)	-0.05	11-13	>999	MT20	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.13	11-13	>999		
TCDL	15.0	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.05	7	n/a		
BCLL	0.0 *	Code IBC2015/TPI2014		Matrix-MR							
BCDL	15.0									Weight: 1189 lb	FT = 6%

LUMBER-
 TOP CHORD 2x8 SP No.2 *Except*
 3-5: 2x6 SP No.2
 BOT CHORD 2x10 SP No.2
 WEBS 2x4 SP No.3 *Except*
 3-11,5-10: 2x6 SP No.2, 14-15: 2x4 SP No.2

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-5.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 JOINTS 1 Brace at Jt(s): 16

REACTIONS. (size) 1=0-4-8, 7=0-4-8
 Max Horz 1=-201(LC 6)
 Max Uplift 1=-852(LC 10), 7=-865(LC 11)
 Max Grav 1=14732(LC 2), 7=14796(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-17392/1034, 2-3=-13521/881, 3-4=-7207/490, 4-5=-7207/490, 5-6=-13521/882, 6-7=-17391/1033
 BOT CHORD 1-13=-795/12797, 11-13=-795/12797, 10-11=-531/9800, 9-10=-672/12793, 7-9=-672/12793
 WEBS 2-13=-299/5129, 2-11=-4223/413, 11-14=-534/8787, 3-14=-550/8987, 10-15=-534/8785, 5-15=-549/8985, 6-10=-4219/412, 6-9=-300/5129, 14-16=-1835/131, 15-16=-1835/131, 4-16=-69/712, 5-16=-912/110, 3-16=-912/110

NOTES-

- 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
 Bottom chords connected as follows: 2x10 - 3 rows staggered at 0-5-0 oc.
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 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 7-10; Vult=115mph Vasd=91mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load); Lumber DOL=1.15 Plate DOL=1.15; Pf=15.0 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15; Category II; Exp B; Fully Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCCL = 15.0psf.

Continued on page 2



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

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

ENGINEERING BY
TRENCO
 A MiTek Affiliate

818 Soundside Road
 Eolenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	CT1GT	Piggyback Base Girder	1	4	

154580943

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:04 2022 Page 2
 ID:ARkWZsMr7hBo0uFk8hw2NPYtwAU-Lv0L82qiGxOFzoIAVN0WfjGahh7hsVMNH9NG9JyWCm5

NOTES-

- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=852, 7=865.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)
- Vert: 1-3=-60, 3-5=-60, 5-8=-60, 17-20=-960(F=-930)



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



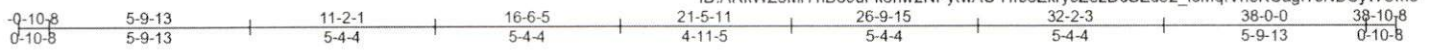
818 Soundside Road
 Edenton, NC 27932

Job DO220721	Truss CT2	Truss Type Piggyback Base	Qty 8	Ply 1	Job Reference (optional)	154580944
-----------------	--------------	------------------------------	----------	----------	--------------------------	-----------

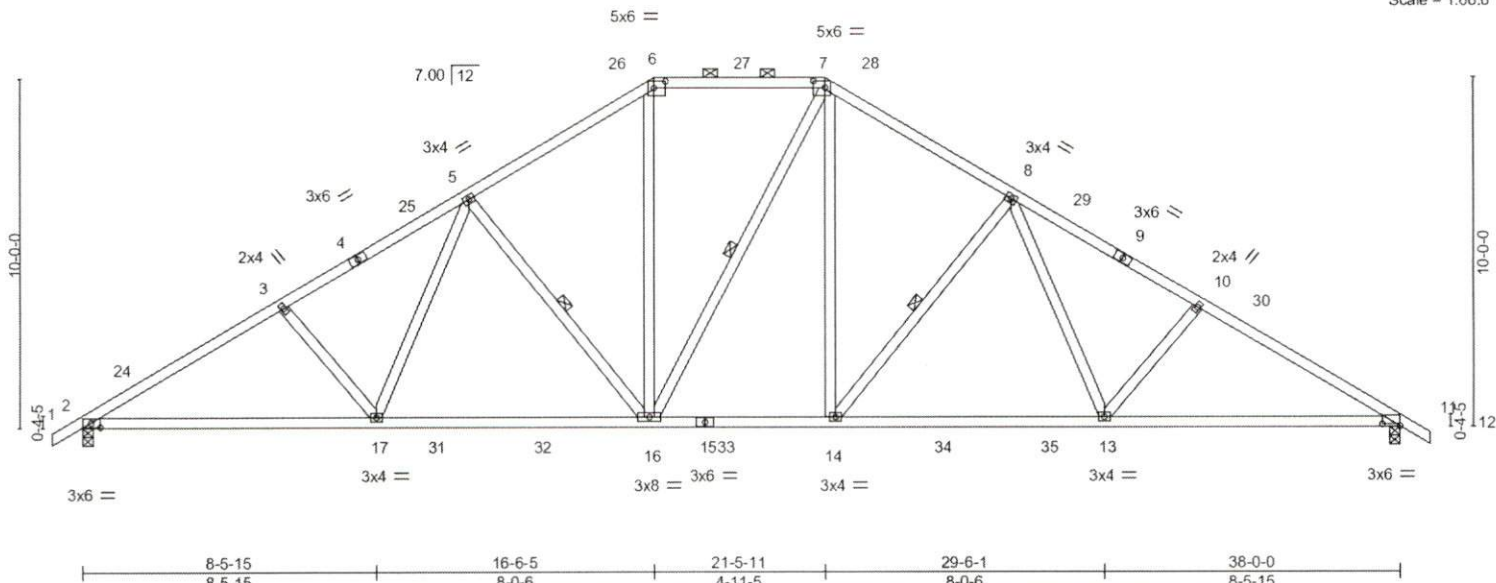
Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:06 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPYtwAU-HI86ZkryoZezD6SZdo2_I8MqfVn3KUagITsNDCyWCm3



Scale = 1:66.6



Job	Truss	Truss Type	Qty	Ply	154580945
DO220721	CT2GE	Piggyback Base Supported Gable	1	1	

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:09 2022 Page 1

ID:ARKWZsMr7hBoOuFk8hw2NPytwAU-iptEBItr5U0Y4ZA8lxbhMm_Rpi_dXsm6RR41qXyWcm0

0-10-8 16-6-5 21-5-11 38-0-0 38-10-8
 0-10-8 16-6-5 4-11-5 16-6-5 0-10-8

Scale = 1:67.7

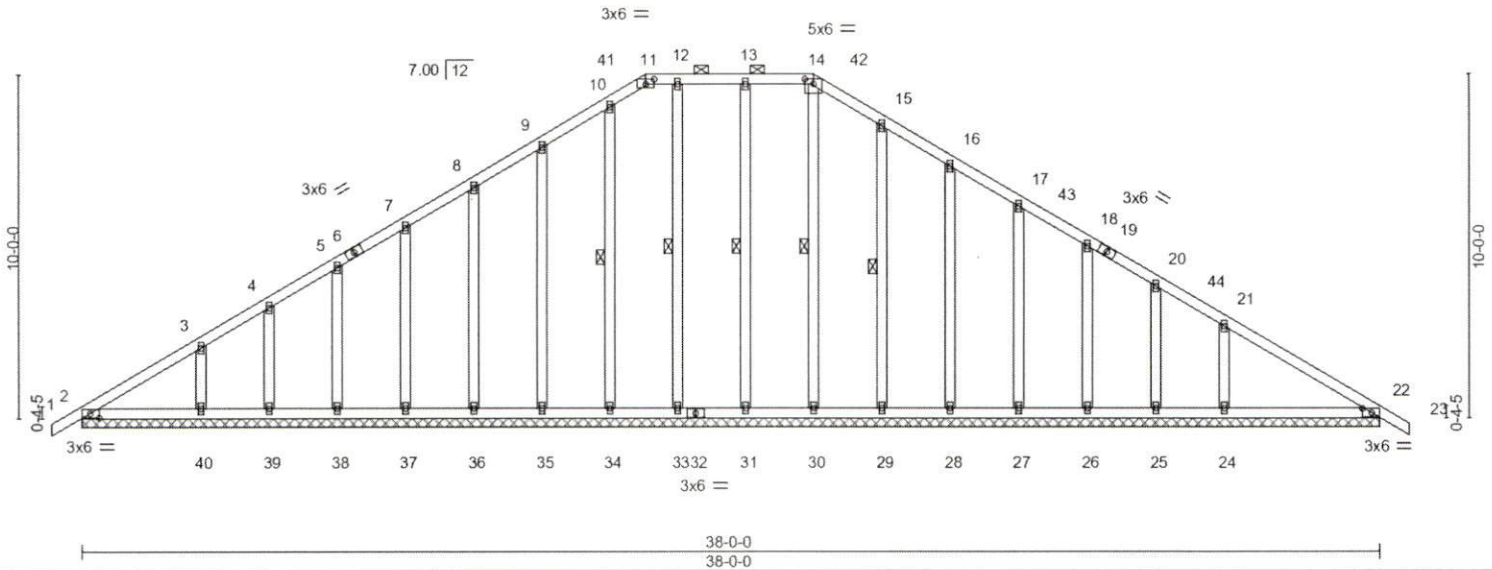


Plate Offsets (X,Y)-- [2:0-3-3,0-1-8], [11:0-3-0,0-1-12], [14:0-3-0,0-1-12], [22:0-3-3,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.21	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.15	Vert(LL) 0.01 23 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.22	Vert(CT) 0.01 23 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.01 22 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 270 lb	FT = 6%

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

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.); 11-14.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 14-30, 13-31, 12-33, 10-34, 15-29

REACTIONS. All bearings 38-0-0.
 (lb) - Max Horz 2=-197(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 2, 31, 33, 35, 36, 37, 38, 39, 40, 29, 28, 27, 26, 25, 24
 Max Grav All reactions 250 lb or less at joint(s) 2, 30, 33, 39, 25, 22 except 31=254(LC 40), 34=258(LC 43), 35=272(LC 43), 36=267(LC 43), 37=270(LC 43), 38=252(LC 43), 40=276(LC 26), 29=273(LC 45), 28=270(LC 45), 27=262(LC 45), 26=294(LC 45), 24=365(LC 27)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 WEBS 21-24=-255/111

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 15.0 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 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 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, 31, 33, 35, 36, 37, 38, 39, 40, 29, 28, 27, 26, 25, 24.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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

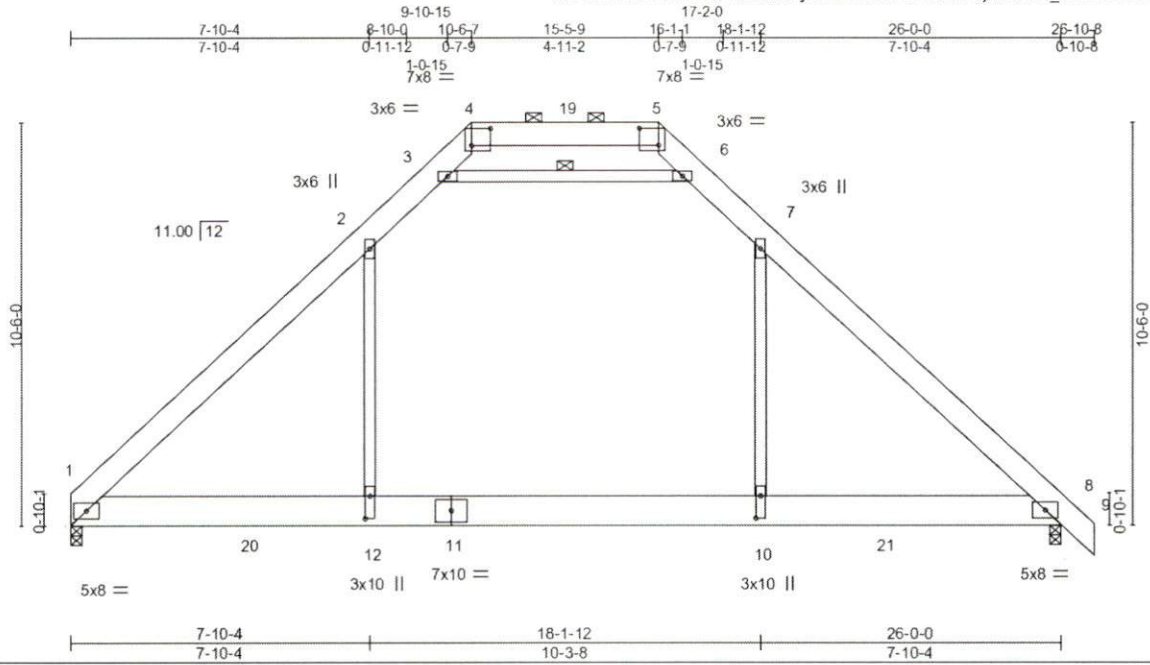
ENGINEERING BY
TRENCO
 A MiTek Alliance
 818 Soundside Road
 Edenton, NC 27932

Job DO220721	Truss CT3	Truss Type Attic	Qty 2	Ply 1	Job Reference (optional)	154580946
-----------------	--------------	---------------------	----------	----------	--------------------------	-----------

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:10 2022 Page 1

ID:ARKWZsrMr7hBo0uFk8hw2NPytwAU-A3NcP5uTsn8PhjIkse7wv_WVn6EHG8JGg5qbMzyWcm?



Scale = 1:60.7

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.64	Vert(LL)	-0.14	10-12	>999	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.57	Vert(CT)	-0.19	10-12	>999		
TCDL 10.0	Lumber DOL 1.15	WB 0.91	Horz(CT)	0.02	8	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MR	Attic	-0.07	10-12	1752		
BCDL 10.0	Code IBC2015/TPI2014						Weight: 242 lb	FT = 6%

LUMBER-
 TOP CHORD 2x8 SP No.2
 BOT CHORD 2x10 SP No.2
 WEBS 2x4 SP No.3

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 5-6-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.); 4-5.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 3-6

REACTIONS. (size) 1=0-3-8, 8=0-3-8
 Max Horz 1=-199(LC 6)
 Max Grav 1=1367(LC 3), 8=1412(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-1774/37, 2-3=-1073/82, 3-4=-22/443, 4-5=-38/703, 5-6=-22/443, 6-7=-1073/82, 7-8=-1775/38
 BOT CHORD 1-12=0/1203, 10-12=0/1209, 8-10=0/1203
 WEBS 2-12=0/814, 3-6=-1841/144, 7-10=0/814

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
 - 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 15.0 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 20.0psf 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) Ceiling dead load (5.0 psf) on member(s). 2-3, 6-7, 3-6
 - 9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 10-12
 - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
 - 11) Attic room checked for L/360 deflection.



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

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

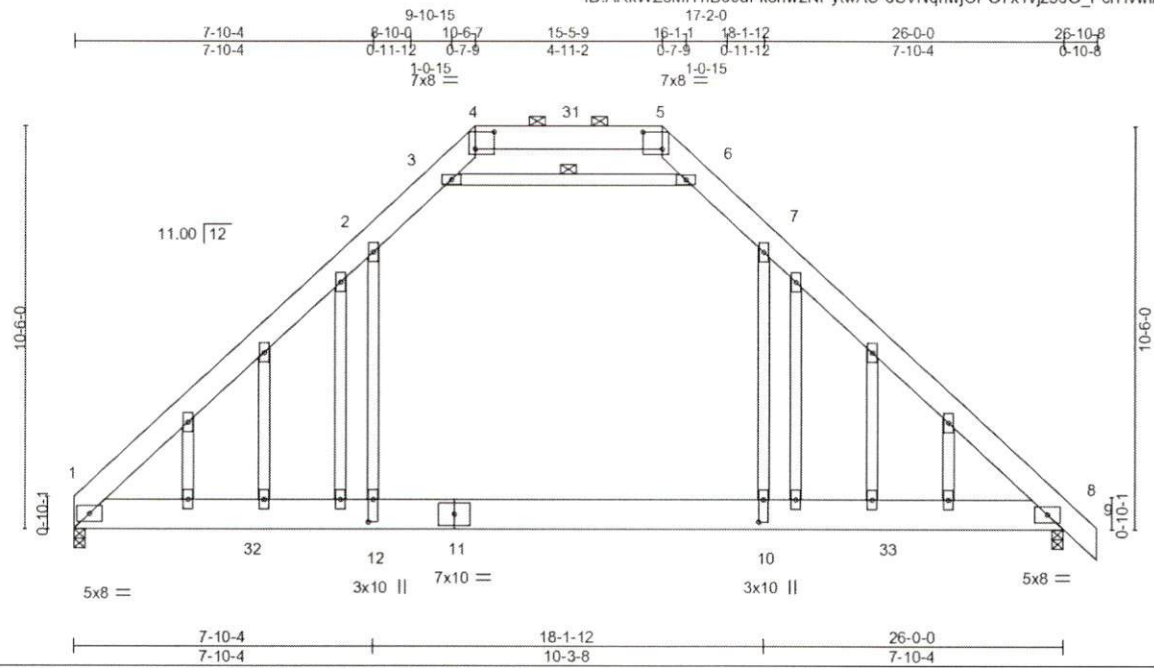
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	CT3GE	GABLE	1	1	

154580947

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:12 2022 Page 1

ID:ARkVZsMr7hBo0uFk8hw2NPytwAU-6SVNqwjOP07x1vjz39O_PcrHwWlk2oY7PjHqQsyWCiz



Scale = 1:60.7

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

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.64	in (loc) l/def L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.57	Vert(LL) -0.14 10-12 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.91	Vert(CT) -0.19 10-12 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MR	Horz(CT) 0.02 8 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014		Attic -0.07 10-12 1752 360	Weight: 277 lb	FT = 6%

LUMBER-
 TOP CHORD 2x8 SP No.2
 BOT CHORD 2x10 SP No.2
 WEBS 2x4 SP No.3
 OTHERS 2x4 SP No.3

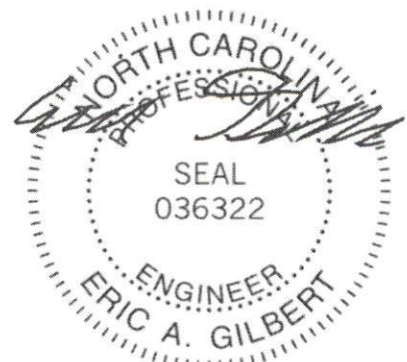
BRACING-
 TOP CHORD Structural wood sheathing directly applied or 5-6-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.); 4-5.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 3-6

REACTIONS. (size) 1=0-3-8, 8=0-3-8
 Max Horz 1=-199(LC 6)
 Max Grav 1=1367(LC 3), 8=1412(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-1774/37, 2-3=-1073/82, 3-4=-22/443, 4-5=-38/703, 5-6=-22/443, 6-7=-1073/82, 7-8=-1775/38
 BOT CHORD 1-12=0/1203, 10-12=0/1209, 8-10=0/1203
 WEBS 2-12=0/814, 3-6=-1841/144, 7-10=0/814

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf, BCDL=6.0psf, h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are 3x6 MT20 unless otherwise indicated.
- 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 20.0psf 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). 2-3, 6-7, 3-6
- 12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 10-12
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 14) Attic room checked for L/360 deflection.



October 6, 2022

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



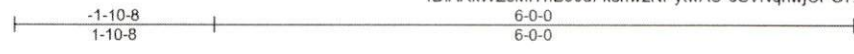
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	M1	Roof Special	10	1	

I54580948

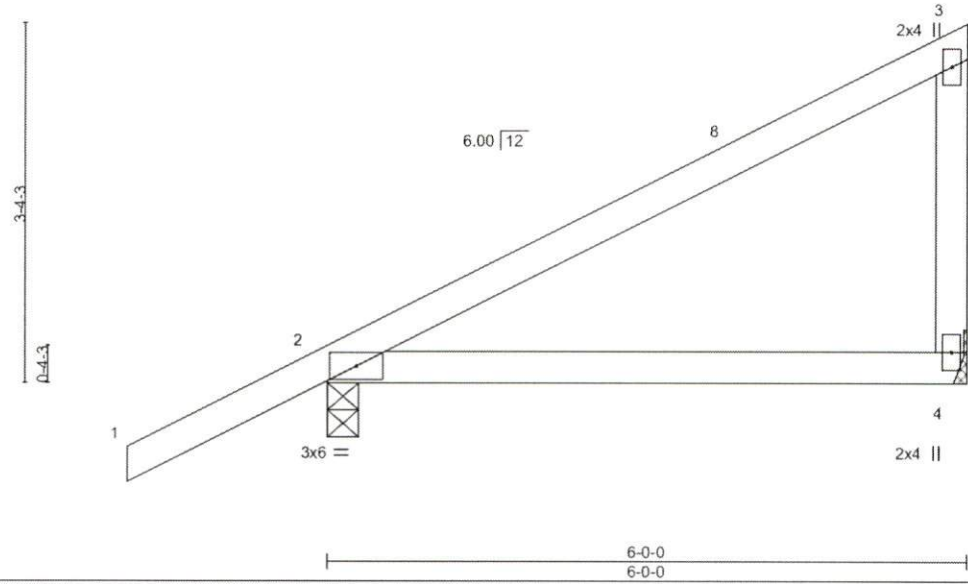
Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:12 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPYtWAU-6SVNqnrjOPO7x1vjz39O_Pcutvz6kG?Y7PJhQsyWClz



Scale = 1:21.7



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.48	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.36	Vert(LL) -0.05 4-7 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.11 4-7 >637 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-MP	Horz(CT) 0.00 2 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 26 lb	FT = 6%

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.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	

REACTIONS. (size) 4=Mechanical, 2=0-3-8
 Max Horz 2=104(LC 11)
 Max Uplift 4=-24(LC 12), 2=-39(LC 12)
 Max Grav 4=216(LC 2), 2=365(LC 2)

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

NOTES-

- 1) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 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 20.0psf 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) 4, 2.



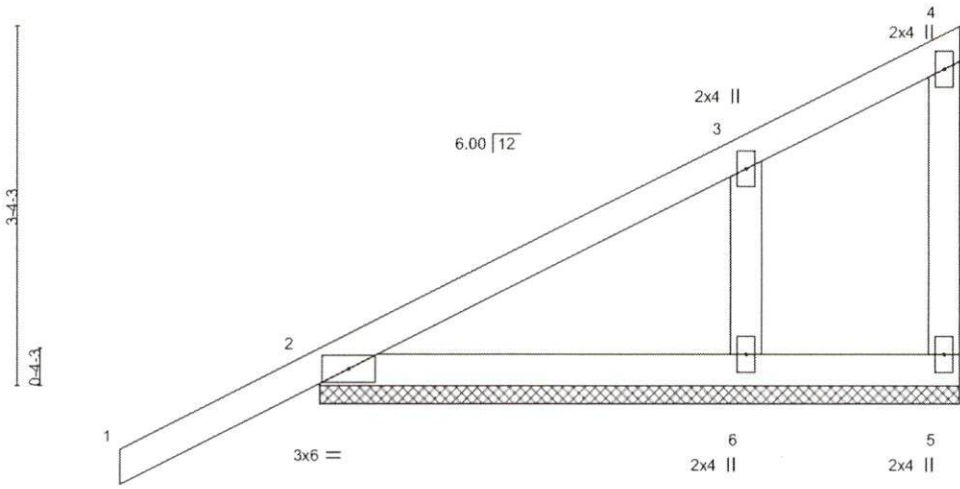
October 6, 2022

Job	Truss	Truss Type	Qty	Ply	154580949
DO220721	M1GE	Monopitch Supported Gable	1	1	Job Reference (optional)

Truss Builders, Inc., Morrisville, NC - 27560, 8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:13 2022 Page 1
 ID:ARkWZsMr7hBo0uFk8hw2NPYtwAU-ae3l17xL9IW_YBUvXmgdXc85yJNVtidiM32FylyWCly



Scale = 1:21.7



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.33	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.13	Vert(LL) 0.01 1 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.04	Vert(CT) -0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) -0.00 5 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 29 lb	FT = 6%

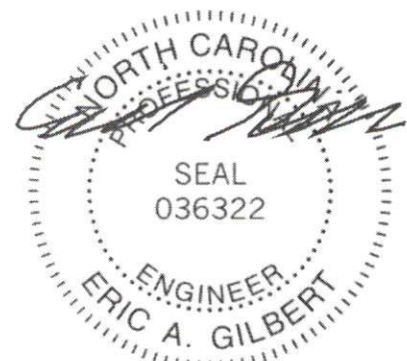
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	

REACTIONS. (size) 5=6-0-0, 2=6-0-0, 6=6-0-0
 Max Horz 2=104(LC 9)
 Max Uplift 5=-11(LC 11), 2=-26(LC 12), 6=-39(LC 12)
 Max Grav 5=35(LC 19), 2=278(LC 2), 6=274(LC 2)

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

NOTES-

- 1) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2, 6.



October 6, 2022

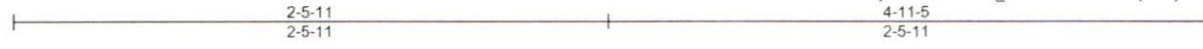
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	PB1	Piggyback	22	1	

154580950

Truss Builders, Inc. Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:14 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPYtwAU-2rd7ETx_w0erAK355UBs3qhKHj8C9VrbjooUkyWClx



Scale = 1:9.6

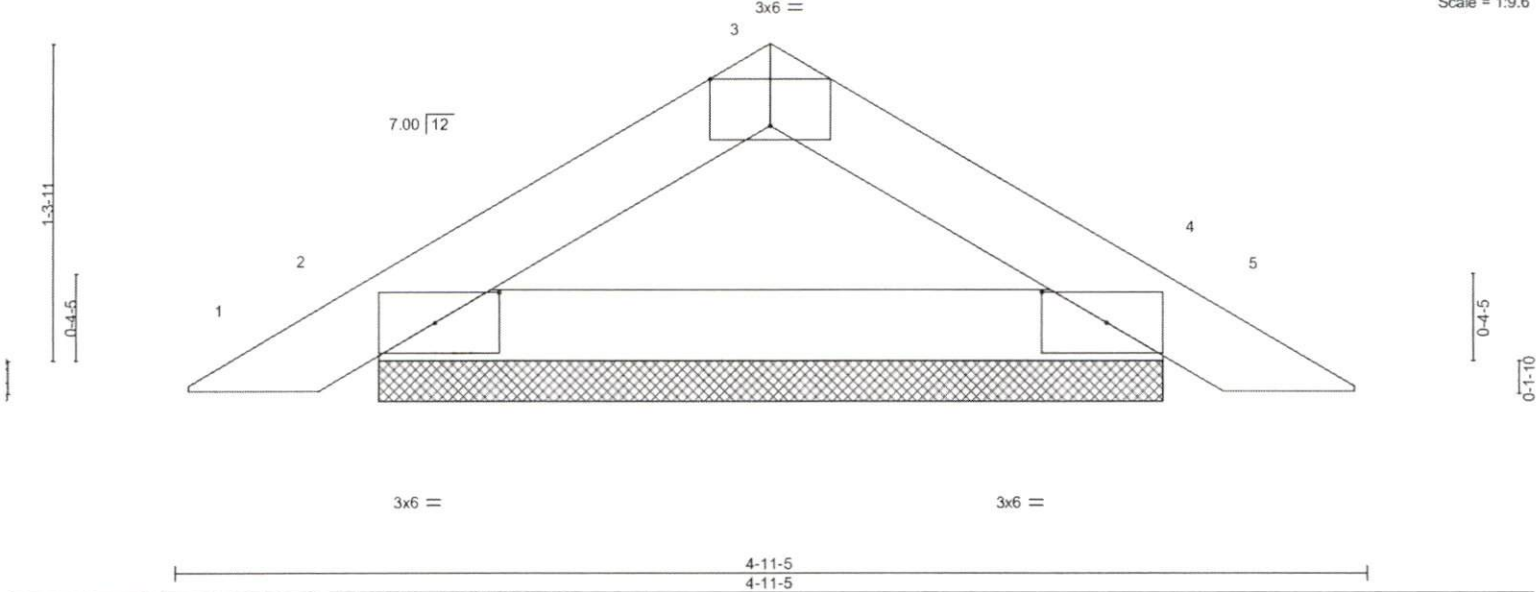


Plate Offsets (X,Y)-- [2:0-3-3-0-1-8], [3:0-3-0,Edge], [4:0-3-3-0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.04	Vert(LL)	0.00	4	n/r	120	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.13	Vert(CT)	0.00	4	n/r	120		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P						Weight: 13 lb	FT = 6%
BCDL 10.0	Code IBC2015/TPI2014								

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

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 4-11-5 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=3-3-0, 4=3-3-0
 Max Horz 2=24(LC 11)
 Max Uplift 2=-11(LC 12), 4=-11(LC 13)
 Max Grav 2=161(LC 2), 4=161(LC 2)

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

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load); Lumber DOL=1.15 Plate DOL=1.15; Pf=15.0 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15; Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 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 20.0psf 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.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- 10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



October 6, 2022

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	PB1GE	Piggyback	2	1	

I54580951

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:15 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPytwAU-W1BVSpychKmioUeHfBi5c1EV172NxcI?pNXM0AYWClw



Scale = 1:9.6

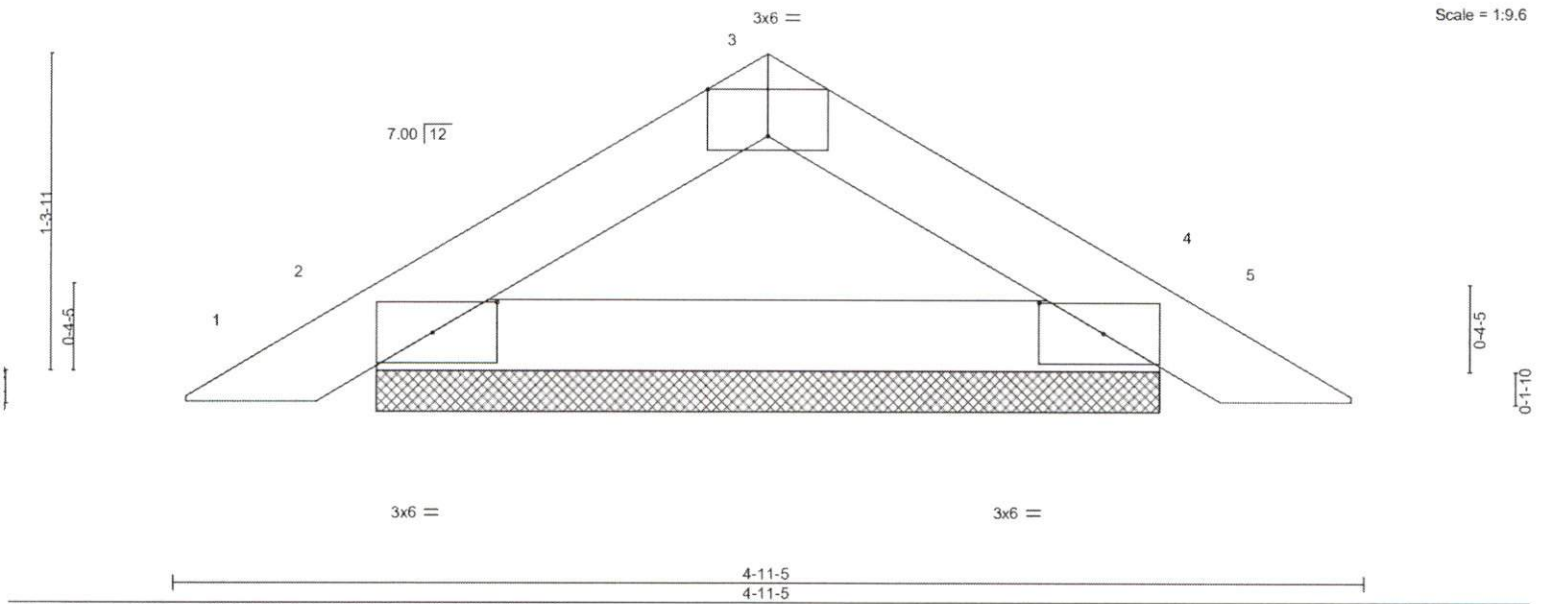


Plate Offsets (X,Y)--	[2:0-3-3,0-1-8], [3:0-3-0,Edge], [4:0-3-3,0-1-8]
-----------------------	--

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.04	Vert(LL)	0.00	4	n/r	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.13	Vert(CT)	0.00	4	n/r		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	4	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P					Weight: 13 lb	FT = 6%
BCDL 10.0	Code IBC2015/TPI2014							

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-11-5 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=3-3-0, 4=3-3-0
 Max Horz 2=24(LC 11)
 Max Uplift 2=-11(LC 12), 4=-11(LC 13)
 Max Grav 2=161(LC 2), 4=161(LC 2)

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

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 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 20.0psf 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.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- 10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



October 6, 2022

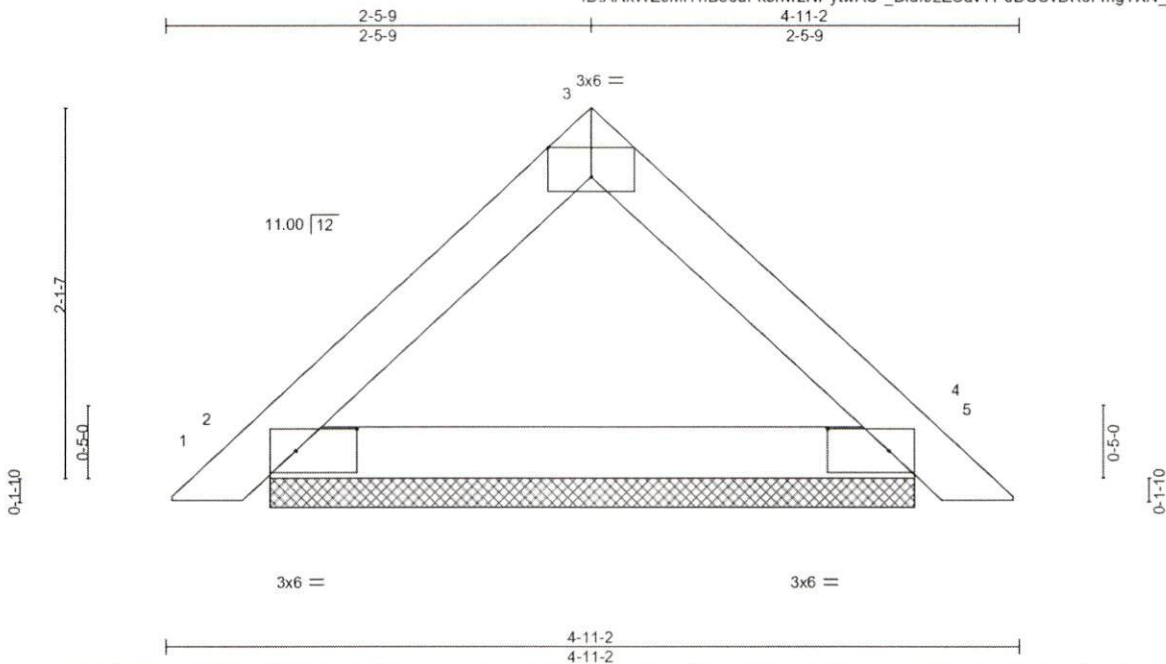
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	PB2	Piggyback	2	1	

154580952

Truss Builders, Inc. Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:16 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPYtW AU- _Dluf9zESdvYPeDUCvDK9FmgTXN_g3?821HvZdyWClv



Scale = 1:13.3

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.06	Vert(LL) 0.00	4	n/r	120		MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.17	Vert(CT) 0.00	5	n/r	120			
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT) 0.00	4	n/a	n/a			
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P							
BCDL 10.0	Code IBC2015/TPI2014							Weight: 15 lb	FT = 6%

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

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=3-8-10, 4=3-8-10
 Max Horz 2=-39(LC 8)
 Max Uplift 2=-5(LC 10), 4=-5(LC 11)
 Max Grav 2=171(LC 2), 4=171(LC 2)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
 - 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 15.0 psf on overhangs non-concurrent with other live loads.
 - 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 20.0psf 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.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
 - 9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria, DSB-69 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

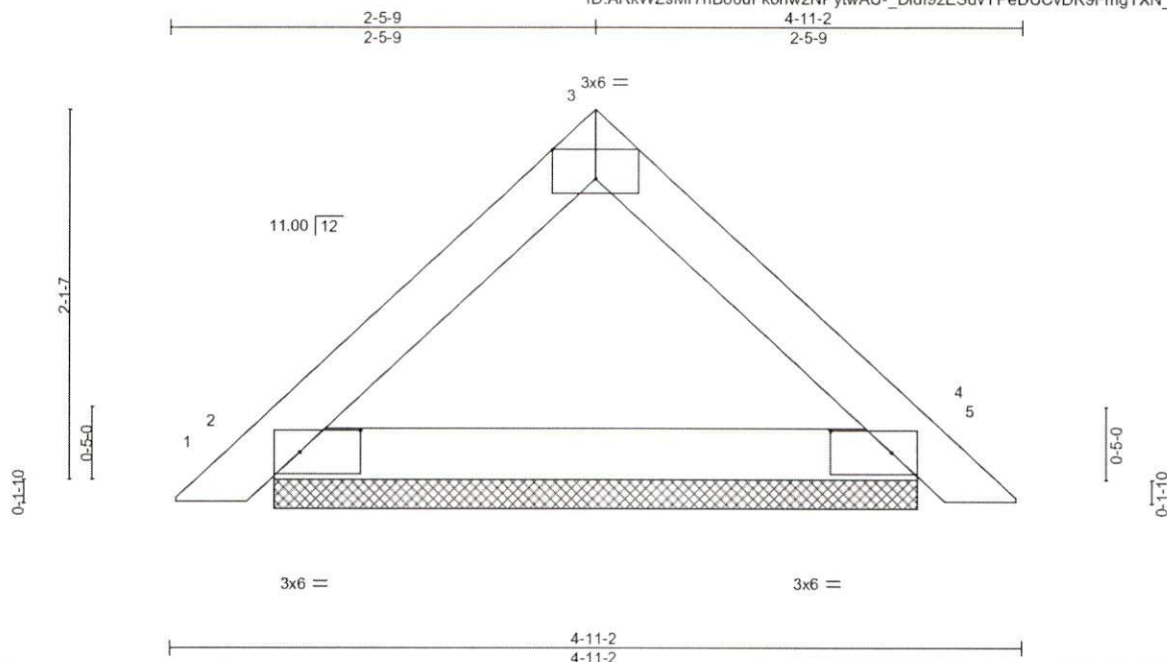
ENGINEERING BY
TRENCO
 A MI TEK AFFILIATE
 818 Soundside Road
 Edenton, NC 27932

Job DO220721	Truss PB2GE	Truss Type Piggyback	Qty 1	Ply 1	Job Reference (optional)	154580953
-----------------	----------------	-------------------------	----------	----------	--------------------------	-----------

Truss Builders, Inc., Morrisville, NC - 27560,

8,530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:16 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPYtwAU-_Dluf9zESdvYPeDUCvDK9FmgTXN_g3?821HvZdyWClv



Scale = 1:13.3

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.06	Vert(LL)	0.00	4	n/r	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.17	Vert(CT)	0.00	5	n/r		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	4	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P						
BCDL 10.0	Code IBC2015/TPI2014						Weight: 15 lb	FT = 6%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=3-8-10, 4=3-8-10
Max Horz 2=-39(LC 8)
Max Uplift 2=-5(LC 10), 4=-5(LC 11)
Max Grav 2=171(LC 2), 4=171(LC 2)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
 - 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 15.0 psf on overhangs non-concurrent with other live loads.
 - 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chords and any other members.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
 - 9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



October 6, 2022

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

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

ENGINEERING BY
TRENCO
A MiTek Affiliate

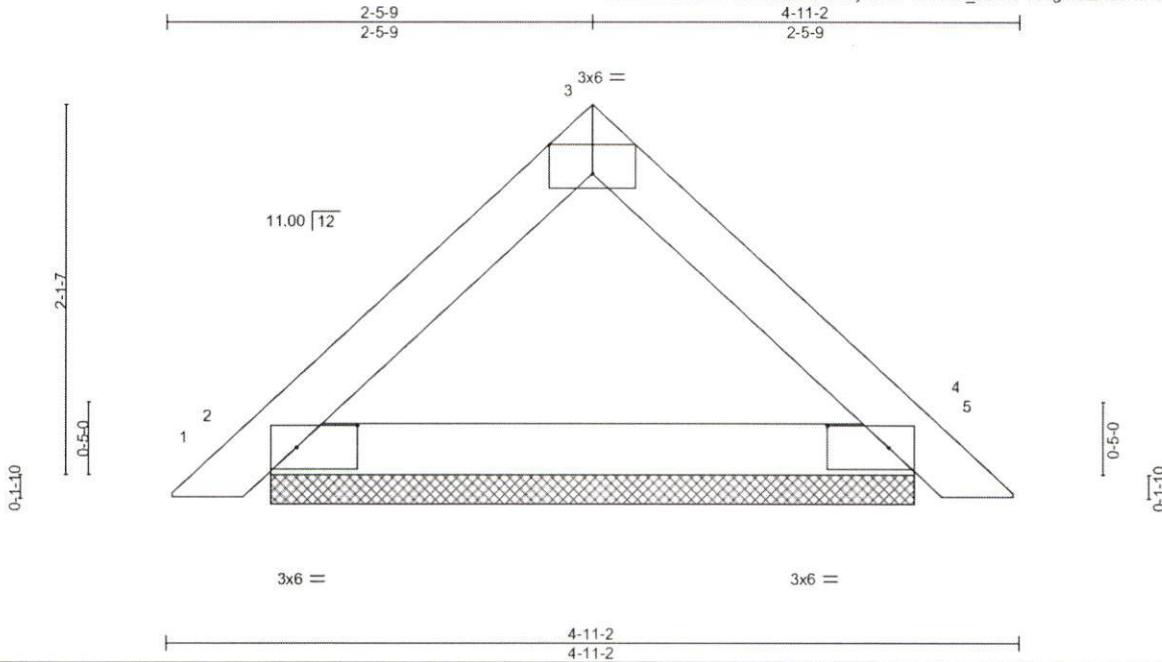
818 Soundside Road
Edenton, NC 27932

Job DO220721	Truss PB3	Truss Type Piggyback	Qty 1	Ply 4	Job Reference (optional)	154580954
-----------------	--------------	-------------------------	----------	----------	--------------------------	-----------

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:17 2022 Page 1

ID:ARKWZsMr7hBo0uFk8hw2NPytwAU-TPIGtU_sCx1P1oogmclZhSjrtwI9PWFHh0S53yWClu



Scale = 1:13.3

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.01	Vert(LL)	0.00	4	n/r	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.04	Vert(CT)	0.00	4	n/r		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	4	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P						
BCDL 10.0	Code IBC2015/TPI2014						Weight: 61 lb	FT = 6%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=3-8-10, 4=3-8-10
Max Horz 2=-39(LC 8)
Max Uplift 2=-5(LC 10), 4=-5(LC 11)
Max Grav 2=171(LC 2), 4=171(LC 2)

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

NOTES-

- 4-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 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 20.0psf 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



October 6, 2022

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

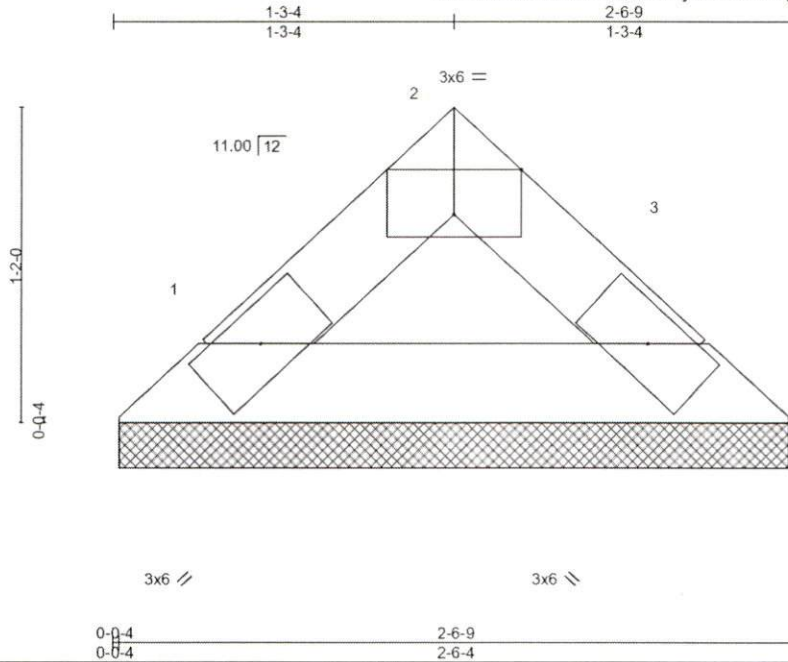
ENGINEERING BY
TRENCO
A MITEK COMPANY
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	154580955
DO220721	V1	Valley	1	1	

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:18 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPytwAU-xcse4q_UzE9GfyNsKKGoEgs0eK5V8zURVLM0dVyWClt



Scale = 1:8.6

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.01	Vert(LL)	n/a	-	n/a	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.04	Vert(CT)	n/a	-	n/a		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	3	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P						
BCDL 10.0	Code IBC2015/TPI2014						Weight: 7 lb	FT = 6%

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

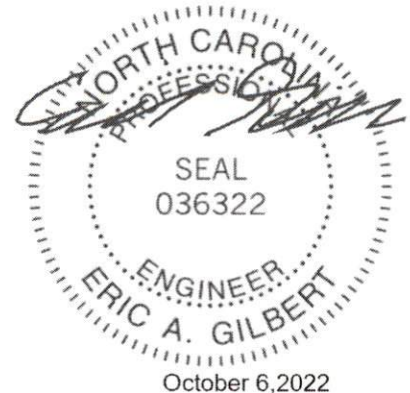
BRACING-
 TOP CHORD Structural wood sheathing directly applied or 2-6-9 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=2-6-0, 3=2-6-0
 Max Horz 1=16(LC 7)
 Max Grav 1=72(LC 2), 3=72(LC 2)

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

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 20.0psf 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 - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

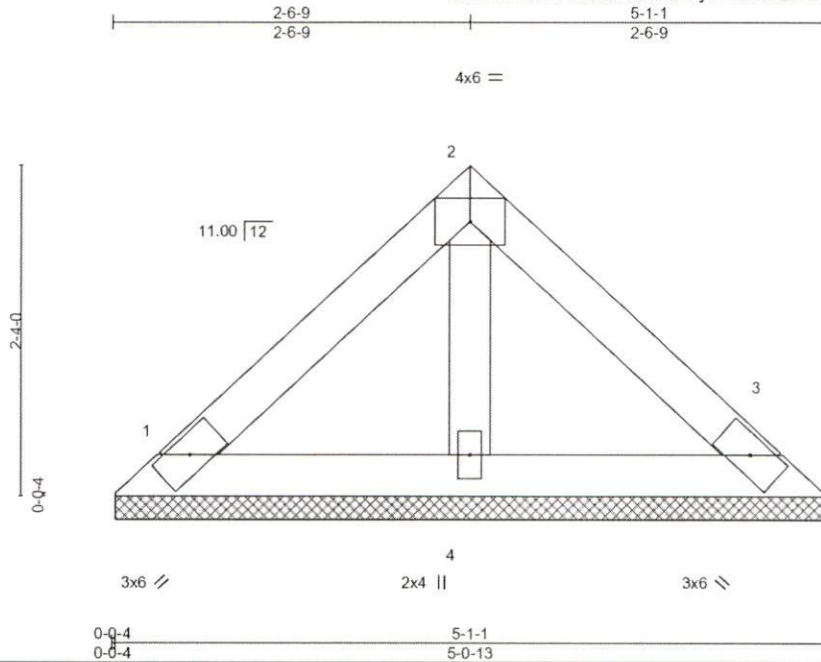
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job DO220721	Truss V2	Truss Type Valley	Qty 1	Ply 1	Job Reference (optional)	154580956
-----------------	-------------	----------------------	----------	----------	--------------------------	-----------

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:19 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPytwAU-PoQ0IA?6kYH7G6x3u1n1mtOAHkRXtQSak?VZ9yyWClS



Scale = 1:16.4

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.08	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.05	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 IBC2015/TPI2014			Weight: 19 lb	FT = 6%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-0-9, 3=5-0-9, 4=5-0-9
Max Horz 1=-39(LC 6)
Max Uplift 1=-12(LC 11), 3=-15(LC 11)
Max Grav 1=102(LC 2), 3=102(LC 2), 4=143(LC 2)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 20.0psf 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.



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

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

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	V3	Valley	1	1	

I54580957

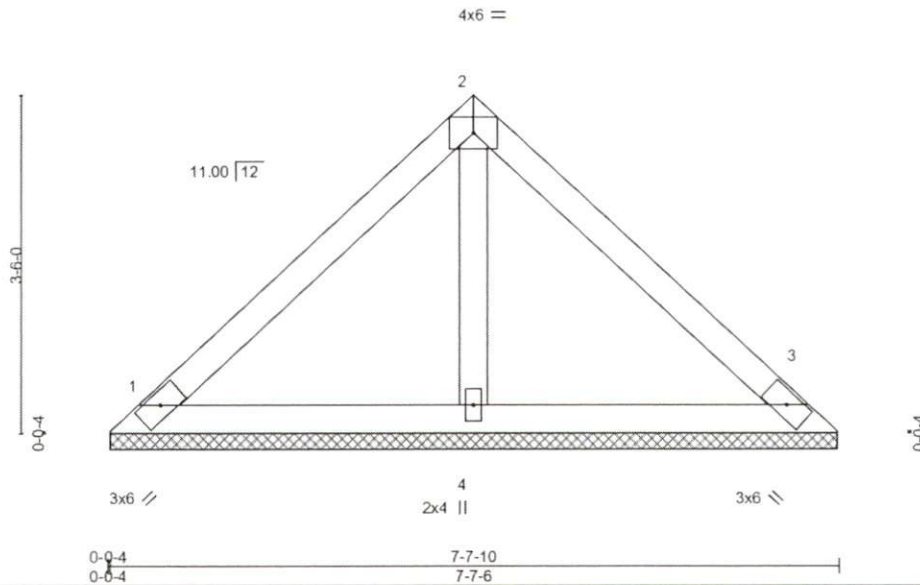
Truss Builders, Inc. Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:20 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPYtwAU-t_OVW0kVsP_uFWFRlIHJ5xJm8mectQkzfF6iOyWClr



Scale: 1/2"=1'



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.23	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.12	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 IBC2015/TPI2014			Weight: 30 lb	FT = 6%

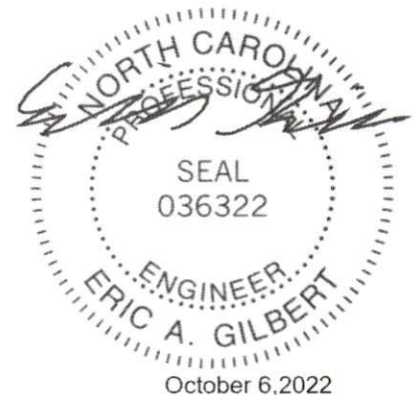
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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. (size) 1=7-7-1, 3=7-7-1, 4=7-7-1
Max Horz 1=61(LC 9)
Max Uplift 1=-20(LC 11), 3=-23(LC 11)
Max Grav 1=162(LC 2), 3=162(LC 2), 4=226(LC 2)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 20.0psf 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, 3.



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

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

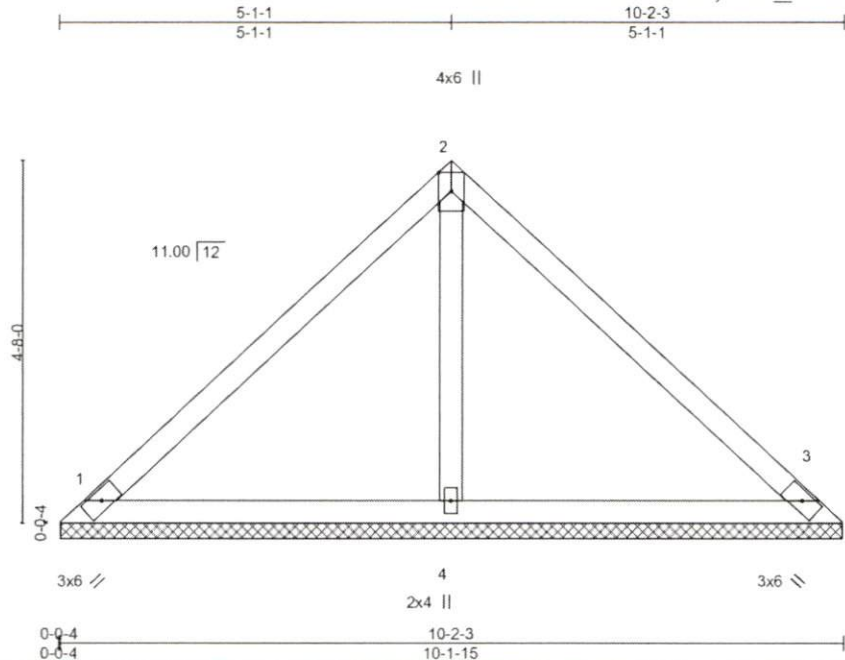
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	V4	Valley	1	1	

I54580958

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:20 2022 Page 1

ID:ARKWZsMr7hBo0uFk8hw2NPywAU-t_OVW0kVsP_uFWFRllHJ5xj8k8cskkzff6iOyWClr



Scale = 1:30.0

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.29	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.22	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.08	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 40 lb	FT = 6%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

REACTIONS. (size) 1=10-1-10, 3=10-1-10, 4=10-1-10
 Max Horz 1=84(LC 7)
 Max Uplift 1=-11(LC 11), 3=-16(LC 11)
 Max Grav 1=198(LC 2), 3=198(LC 2), 4=359(LC 2)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 20.0psf 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, 3.



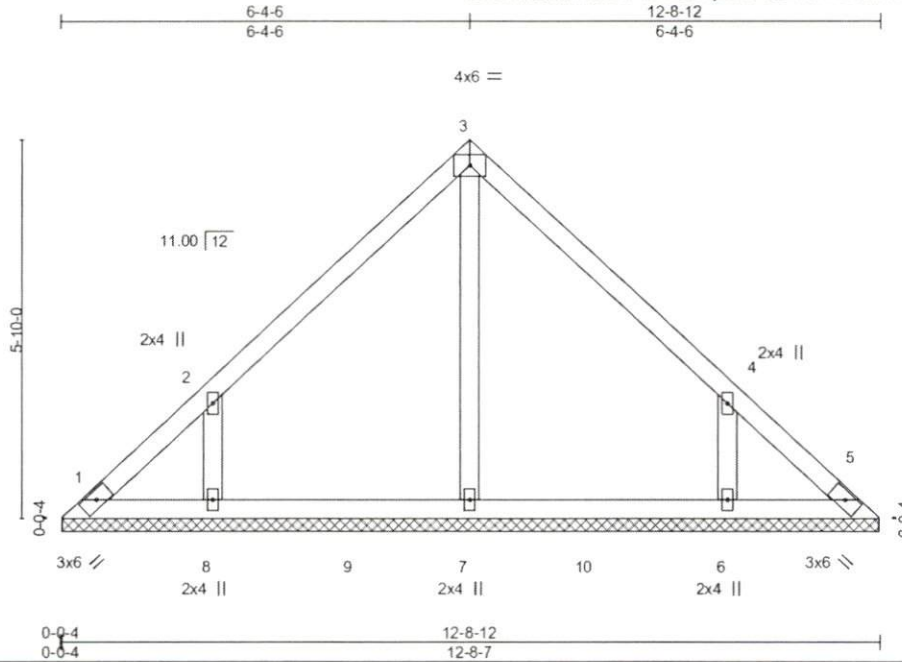
October 6, 2022

Job DO220721	Truss V5	Truss Type Valley	Qty 1	Ply 1	Job Reference (optional)	I54580959
-----------------	-------------	----------------------	----------	----------	--------------------------	-----------

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:21 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NPytwAU-LBYnis1NG9XrWP5R?SpWrtV9Y4hLJtCl_gEqyWClq



Scale = 1:35.9

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.13	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-R	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 56 lb	FT = 6%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
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 12-8-3.
(lb) - Max Horz 1=-106(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-115(LC 10), 6=-114(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=332(LC 21), 8=306(LC 21), 6=306(LC 22)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 20.0psf 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, 5 except (jt=lb) 8=115, 6=114.



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

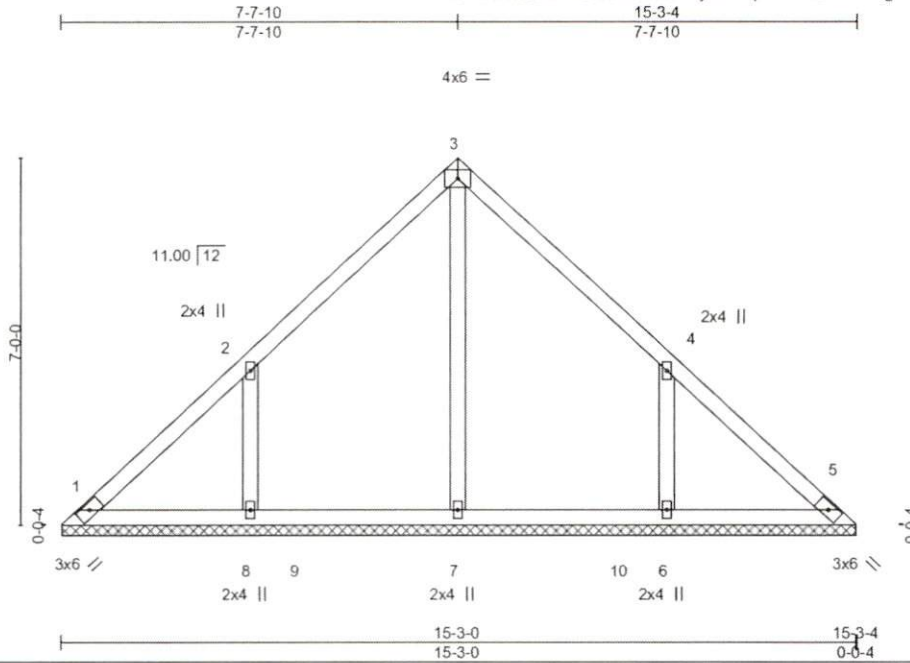
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	154580960
DO220721	V6	Valley	1	1	Job Reference (optional)

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:22 2022 Page 1

ID:ARkWZsMr7hBo0uFk8hw2NfPytWAU-pN69wC2?1Tfi7ZgeZ9KIOW0g8xQD4L1QykDmGyWClp



Scale = 1:44.3

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.17	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.18	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-R	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 70 lb	FT = 6%

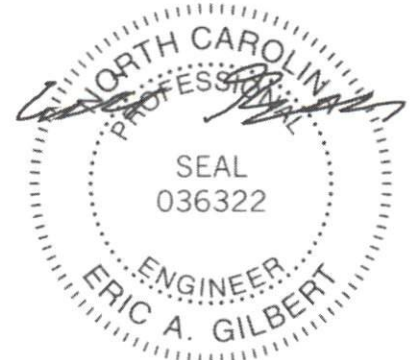
LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 OTHERS 2x4 SP No.3

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 15-2-12.
 (lb) - Max Horz 1=129(LC 6)
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-133(LC 10), 6=-133(LC 11)
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=357(LC 21), 8=382(LC 21), 6=382(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 WEBS 2-8=-258/171, 4-6=-257/171

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 20.0psf 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.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=133, 6=133.



October 6, 2022

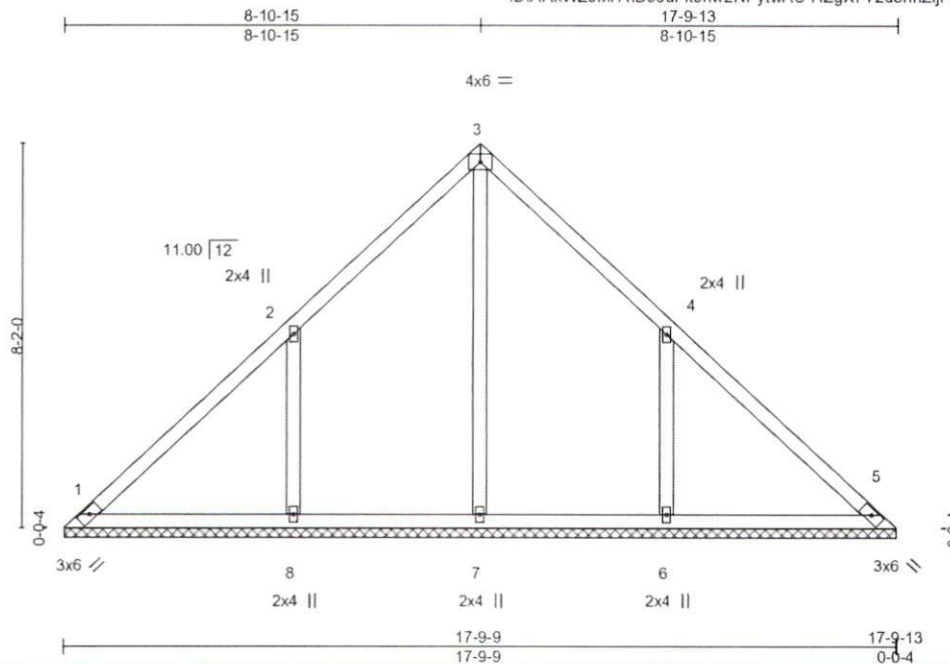
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/16/2020 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job DO220721	Truss V7	Truss Type Valley	Qty 1	Ply 1	Job Reference (optional) I54580961
-----------------	-------------	----------------------	----------	----------	---------------------------------------

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:23 2022 Page 1
ID:ARkWZsMr7hBo0uFk8hw2NPYtWAU-HZgX7Y2donnZlJFq7r_xjZqqLmUpCwAfcTrNjJyWClo



Scale = 1:49.4

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.24	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.18	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.18	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 84 lb	FT = 6%

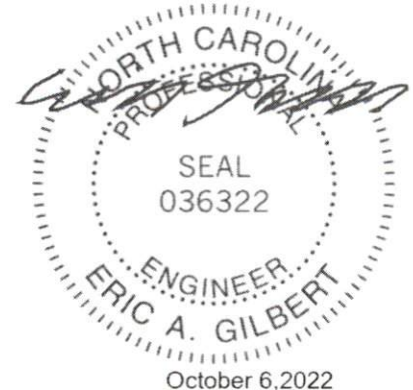
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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 17-9-4.
(lb) - Max Horz 1--151(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8--161(LC 10), 6--161(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=357(LC 24), 8=484(LC 21), 6=484(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8--308/200, 4-6--308/200

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 20.0psf 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.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=161, 6=161.



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

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

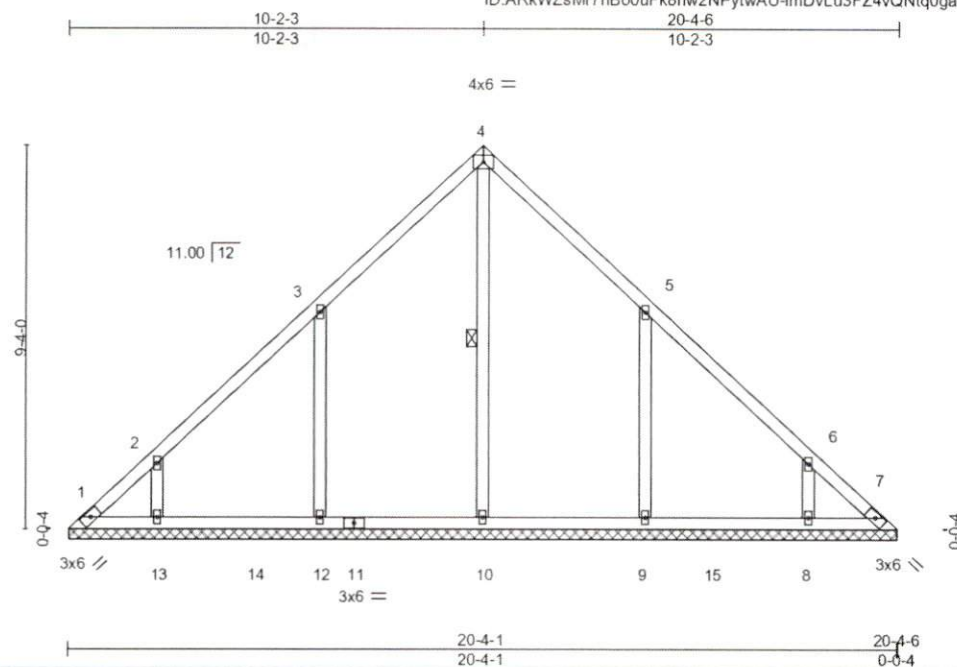
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
DO220721	V8GE	Valley	1	1	

I54580962

Truss Builders, Inc., Morrisville, NC - 27560,

8.530 s Aug 11 2022 MiTek Industries, Inc. Thu Oct 6 07:03:24 2022 Page 1

ID:ARKWZsMr7hBo0uFk8hw2NPytWAU-lmDvLu3FZ4vQNtq0gaNDT50Kl6mYfdKuGDKr9yWCln



Scale = 1:56.6

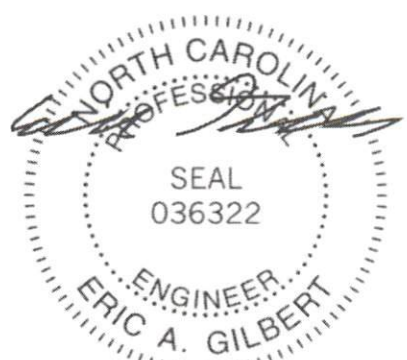
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 15.0	Plate Grip DOL 1.15	BC 0.17	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.15	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.00 7 n/a n/a		
BCDL 10.0	Code IBC2015/TPI2014			Weight: 102 lb	FT = 6%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 4-10

REACTIONS. All bearings 20-3-13.
 (lb) - Max Horz 1=-174(LC 6)
 Max Uplift All uplift 100 lb or less at joint(s) 1, 7 except 12=-135(LC 10), 13=-105(LC 10), 9=-135(LC 11), 8=-105(LC 11)
 Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=378(LC 24), 12=461(LC 21), 13=287(LC 21), 9=460(LC 22), 8=288(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 WEBS 3-12=-275/185, 5-9=-275/184

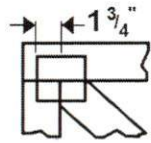
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 20.0psf 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, 7 except (jt=lb) 12=135, 13=105, 9=135, 8=105.



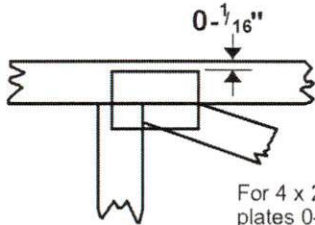
October 6, 2022

Symbols

PLATE LOCATION AND ORIENTATION



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



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.



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

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

PLATE SIZE

4 x 4

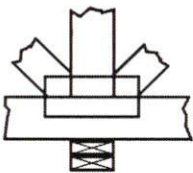
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

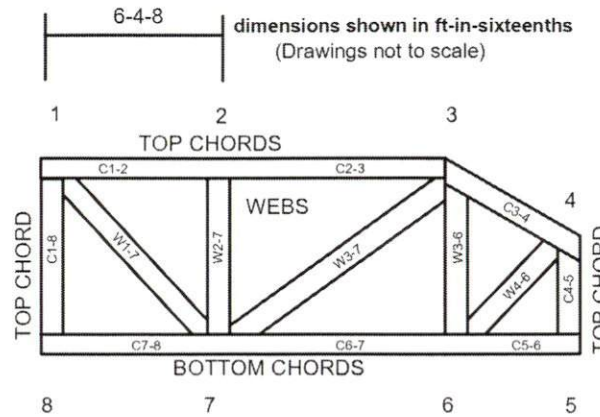


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
 DSB-89: Design Standard for Bracing.
 BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

© 2012 MiTek® All Rights Reserved



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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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