

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 21041612  
WAG-17

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

Pages or sheets covered by this seal: I45778822 thru I45778846

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844



April 23, 2021

Sevier, Scott

**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 21041612	Truss A	Truss Type COMMON TRUSS	Qty 5	Ply 1	WAG-17	145778822
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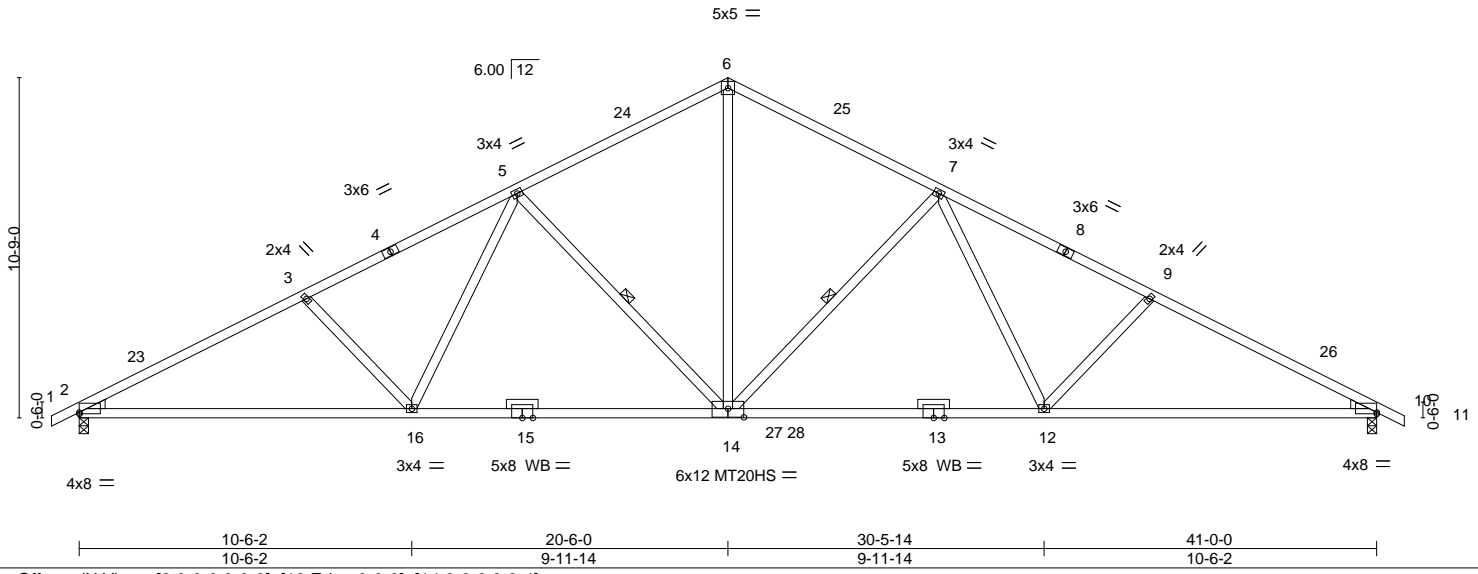
The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:08:56 2021 Page 1

ID:XEve6LlIGZ5TvI4fwDfbuAzh?np-I6YXx7PwSLaW69W7uFJ48FYJlvII8OGtSBnnMzOCs5

-0-10-8	7-2-2	13-10-1	20-6-0	27-1-15	33-9-14	41-0-0	41-10-8
0-10-8	7-2-2	6-7-15	6-7-15	6-7-15	6-7-15	7-2-2	0-10-8

Scale = 1:72.8



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.60	Vert(LL)	-0.46 14-16	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.78	Vert(CT)	-0.71 14-16	>691	240	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.65	Horz(CT)	0.14 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-AS						
								Weight: 217 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.1 *Except* 13-14,14-15: 2x4 SP DSS	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 7-14, 5-14
OTHERS 2x4 SP No.3	
WEDGE Left: 2x4 SP No.3 , Right: 2x4 SP No.3	

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
 Max Horz 2=146(LC 10)  
 Max Uplift 2=165(LC 10), 10=165(LC 11)  
 Max Grav 2=1768(LC 2), 10=1768(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3249/292, 3-5=-3018/287, 5-6=-2195/287, 6-7=-2195/287, 7-9=-3018/287,  
 9-10=-3249/292  
 BOT CHORD 2-16=-322/2827, 14-16=-183/2384, 12-14=-85/2384, 10-12=-177/2827  
 WEBS 6-14=-103/1581, 7-14=-742/221, 7-12=-36/604, 9-12=-373/183, 5-14=-742/221,  
 5-16=-36/604, 3-16=-373/183

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 17-6-0, Exterior(2) 17-6-0 to 23-6-0, Interior(1) 23-6-0 to 38-10-8, Exterior(2) 38-10-8 to 41-10-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) All plates are MT20 plates unless otherwise indicated.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=165, 10=165.
  - 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 23, 2021

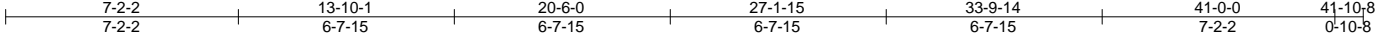
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>818 Soundside Road Edenton, NC 27932</p>
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Job 21041612	Truss A1	Truss Type COMMON TRUSS	Qty 3	Ply 1	WAG-17	145778823
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:08:59 2021 Page 1

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Scale = 1:71.1

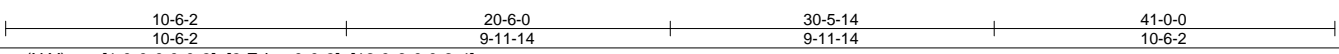
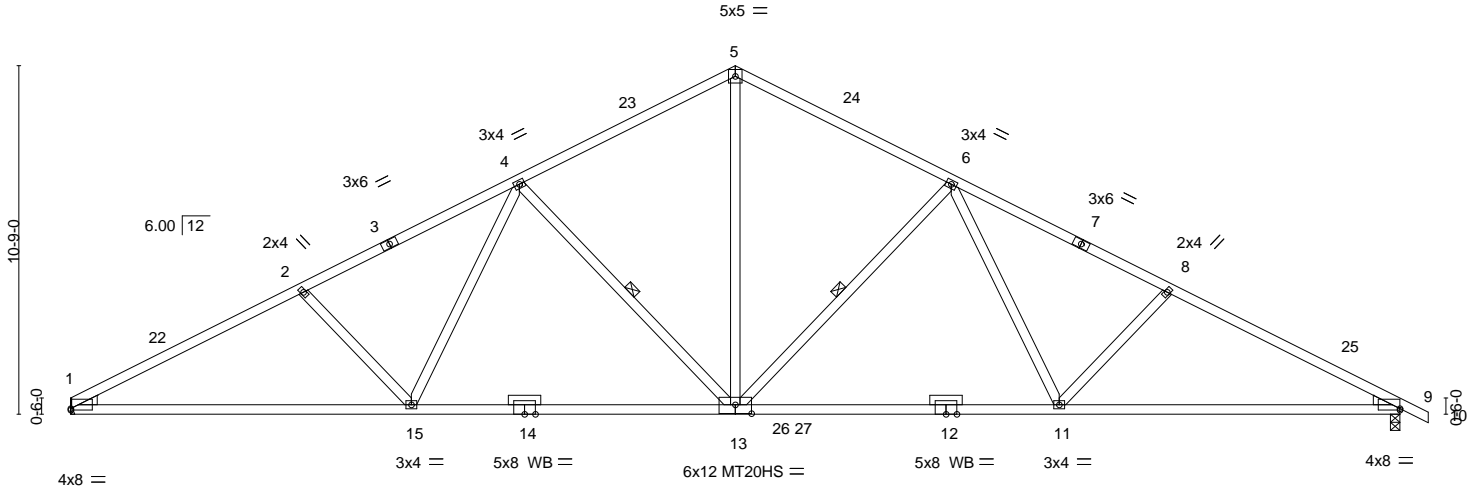


Plate Offsets (X, Y)-- [1:0-0,0-0-9], [9:Edge,0-0-9], [13:0-6-0,0-3-4]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.60	Vert(LL)	-0.46	11-13	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.78	Vert(CT)	-0.71	11-13	>691	240	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.65	Horz(CT)	0.14	9	n/a	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-AS							
									Weight: 216 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.1 *Except* 12-13,13-14: 2x4 SP DSS	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-13, 4-13
OTHERS 2x4 SP No.3	
WEDGE Left: 2x4 SP No.3 , Right: 2x4 SP No.3	

**REACTIONS.** (size) 1=Mechanical, 9=0-3-8  
 Max Horz 1=-152(LC 15)  
 Max Uplift 1=-150(LC 10), 9=-165(LC 11)  
 Max Grav 1=1724(LC 2), 9=1769(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-3253/303, 2-4=-3022/296, 4-5=-2196/289, 5-6=-2196/290, 6-8=-3019/290, 8-9=-3250/294  
 BOT CHORD 1-15=-324/2832, 13-15=-184/2385, 11-13=-87/2385, 9-11=-177/2828  
 WEBS 6-13=-742/221, 6-11=-36/604, 5-13=-104/1581, 8-11=-373/183, 4-13=-743/221, 4-15=-37/607, 2-15=-376/184

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 17-6-0, Exterior(2) 17-6-0 to 23-6-0, Interior(1) 23-6-0 to 38-10-8, Exterior(2) 38-10-8 to 41-10-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) All plates are MT20 plates unless otherwise indicated.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=150, 9=165.
  - 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

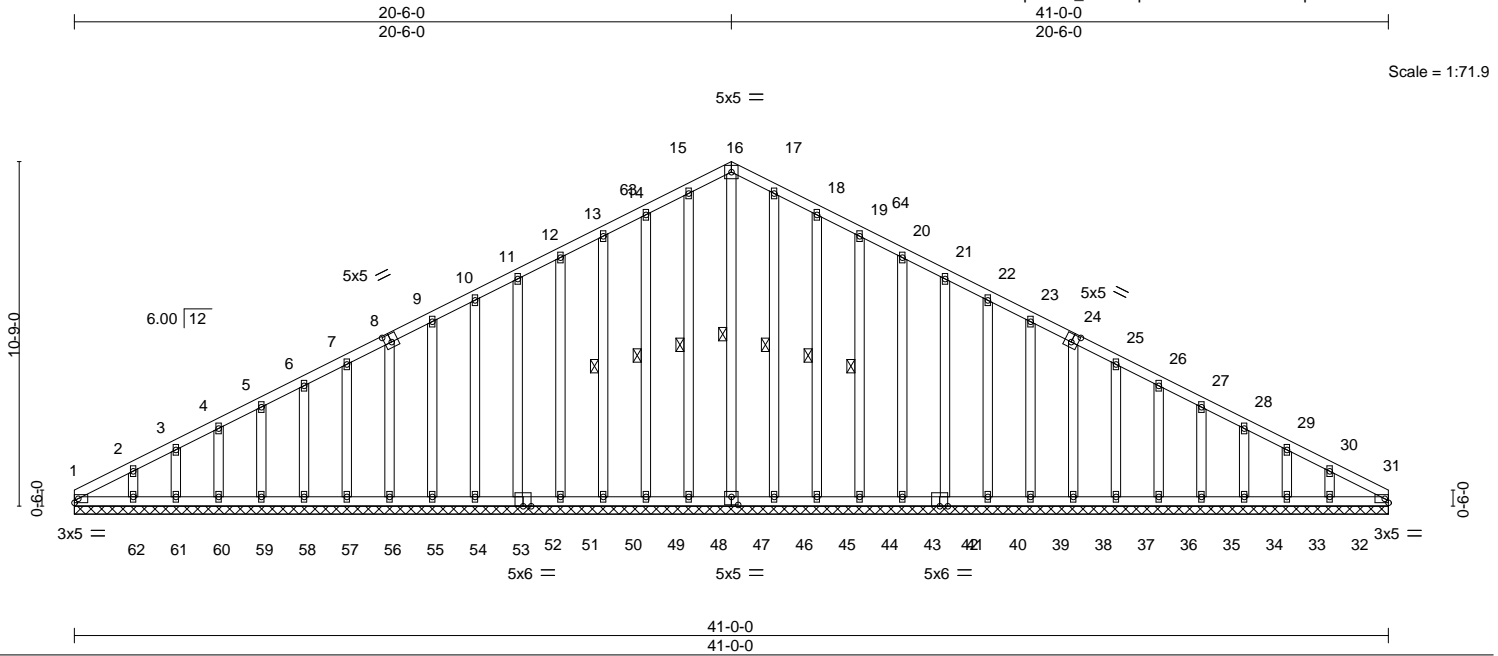


April 23, 2021

Job 21041612	Truss A1GE	Truss Type GABLE	Qty 1	Ply 1	WAG-17	145778824
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:01 2021 Page 1  
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.09	Horz(CT)	0.01	31	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 361 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 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 16-47, 15-48, 14-49, 13-50, 17-46, 18-45, 19-44

**REACTIONS.** All bearings 41-0-0.  
 (lb) - Max Horz 1=143(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 46, 45, 44, 43, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32  
 Max Grav All reactions 250 lb or less at joint(s) 1, 31, 47, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 46, 45, 44, 43, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 14-15=-91/263, 15-16=-94/291, 16-17=-94/291, 17-18=-91/263

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-0-0 to 3-2-0, Exterior(2) 3-2-0 to 17-6-0, Corner(3) 17-6-0 to 23-6-0, Exterior(2) 23-6-0 to 37-10-0, Corner(3) 37-10-0 to 41-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; 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.
  - 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 46, 45, 44, 43, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32.



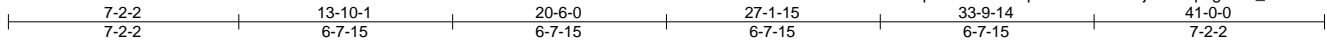
April 23, 2021

Job 21041612	Truss A2	Truss Type COMMON TRUSS	Qty 9	Ply 1	WAG-17	145778825
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:03 2021 Page 1

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Scale = 1:71.8

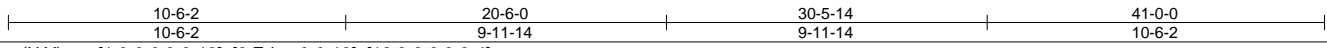
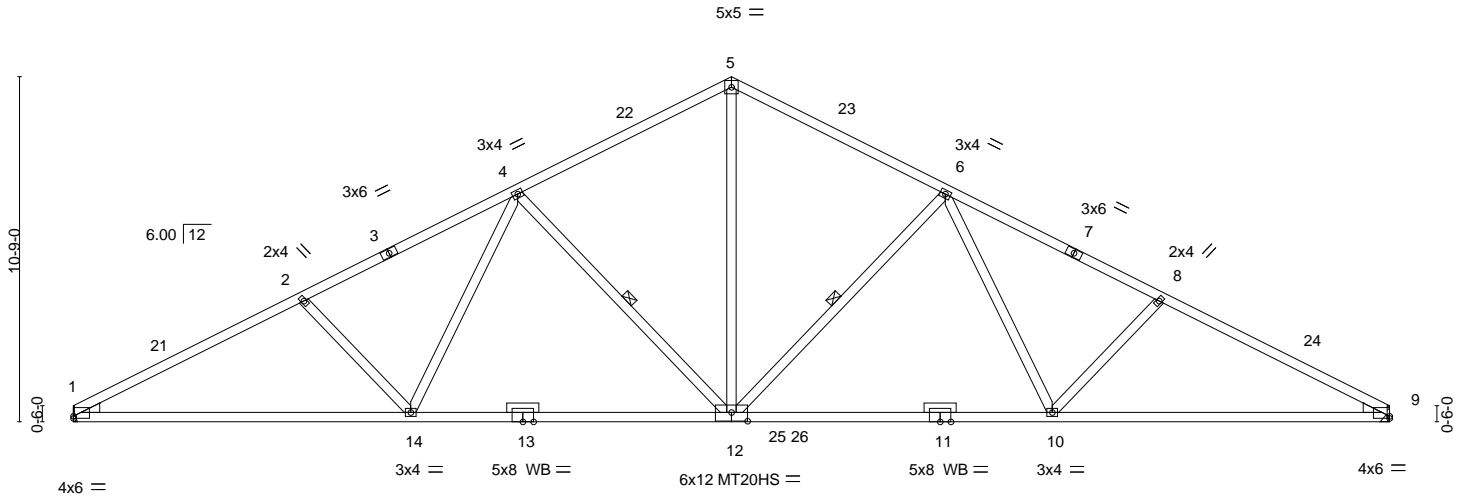


Plate Offsets (X, Y)-- [1:0-0-0,0-0-13], [9:Edge,0-0-13], [12:0-6-0,0-3-4]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.58	Vert(LL)	-0.46	12-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.78	Vert(CT)	-0.71	12-14	>693	240	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.66	Horz(CT)	0.14	9	n/a	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-AS							
									Weight: 214 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.1 *Except*	BOT CHORD Rigid ceiling directly applied.
11-12,12-13: 2x4 SP DSS	WEBS 1 Row at midpt 6-12, 4-12
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	
WEDGE	
Left: 2x4 SP No.3 , Right: 2x4 SP No.3	

**REACTIONS.** (size) 1=Mechanical, 9=Mechanical  
 Max Horz 1=140(LC 10)  
 Max Uplift 1=150(LC 10), 9=150(LC 11)  
 Max Grav 1=1724(LC 2), 9=1724(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-3254/305, 2-4=-3023/299, 4-5=-2197/292, 5-6=-2197/292, 6-8=-3023/299, 8-9=-3254/305  
 BOT CHORD 1-14=-330/2833, 12-14=-190/2386, 10-12=-112/2386, 9-10=-200/2833  
 WEBS 6-12=-743/221, 6-10=-37/608, 5-12=-106/1582, 8-10=-376/184, 4-12=-743/221, 4-14=-37/608, 2-14=-376/184

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 17-6-0, Exterior(2) 17-6-0 to 23-6-0, Interior(1) 23-6-0 to 38-0-0, Exterior(2) 38-0-0 to 41-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) All plates are MT20 plates unless otherwise indicated.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=150, 9=150.
  - 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

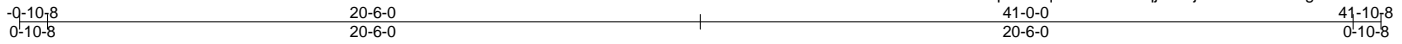


April 23, 2021

Job 21041612	Truss AGE	Truss Type GABLE	Qty 1	Ply 1	WAG-17	145778826
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:10 2021 Page 1  
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Scale = 1:72.4

Plate Offsets (X,Y)-- [9:0-2-8,0-3-0], [25:0-2-8,0-3-0], [49:0-2-8,0-3-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	-0.00	32	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	-0.00	32	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.09	Horz(CT)	0.01	32	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 364 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 17-49, 16-50, 15-51, 14-52, 18-48, 19-47, 20-46

**REACTIONS.** All bearings 41-0-0.  
 (lb) - Max Horz 2=146(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 50, 51, 52, 53, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 48, 47, 46, 45, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 2  
 Max Grav All reactions 250 lb or less at joint(s) 32, 49, 50, 51, 52, 53, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 48, 47, 46, 45, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 2

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 15-16=-90/263, 16-17=-93/290, 17-18=-93/290, 18-19=-90/263

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 1-10-0, Exterior(2) 1-10-0 to 17-6-0, Corner(3) 17-6-0 to 23-6-0, Exterior(2) 23-6-0 to 38-10-8, Corner(3) 38-10-8 to 41-10-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; 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.
  - 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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) 50, 51, 52, 53, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 48, 47, 46, 45, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 2.



April 23, 2021

**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



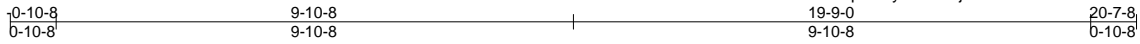
818 Soundside Road  
Edenton, NC 27932



Job 21041612	Truss BGE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	WAG-17	145778827
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:13 2021 Page 1  
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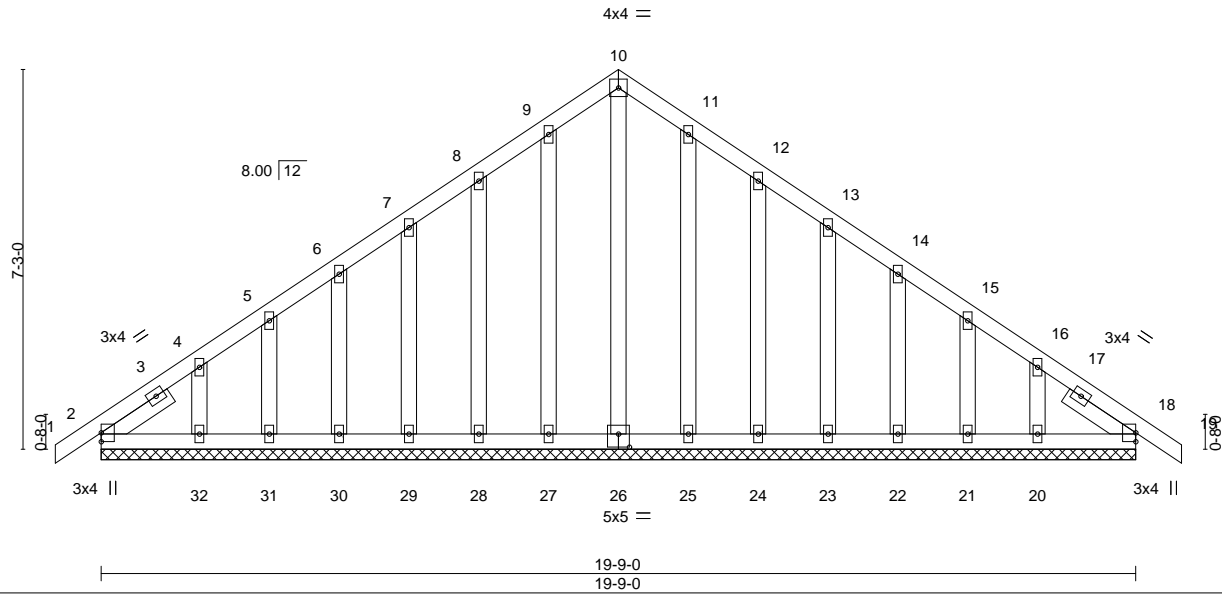


Plate Offsets (X, Y)--	[26:0-2-8,0-3-0]								
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.05	Vert(LL)	-0.00	18	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	-0.00	18	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.10	Horz(CT)	0.00	18	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 147 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -t 1-6-4, Right 2x4 SP No.3 -t 1-6-4

**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 19-9-0.  
(lb) - Max Horz 2=145(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 27, 28, 29, 30, 31, 32, 25, 24, 23, 22, 21, 20, 18  
Max Grav All reactions 250 lb or less at joint(s) 2, 26, 27, 28, 29, 30, 31, 32, 25, 24, 23, 22, 21, 20, 18

**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=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-10-8 to 1-10-8, Exterior(2) 1-10-8 to 6-10-8, Corner(3) 6-10-8 to 12-10-8, Exterior(2) 12-10-8 to 17-7-8, Corner(3) 17-7-8 to 20-7-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; 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) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 1-4-0 oc.
  - 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 with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 27, 28, 29, 30, 31, 32, 25, 24, 23, 22, 21, 20, 18.
  - 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 18.

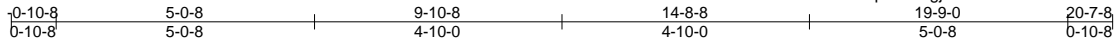


April 23, 2021

Job 21041612	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply 3	WAG-17	145778828
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:18 2021 Page 1  
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4x6 ||

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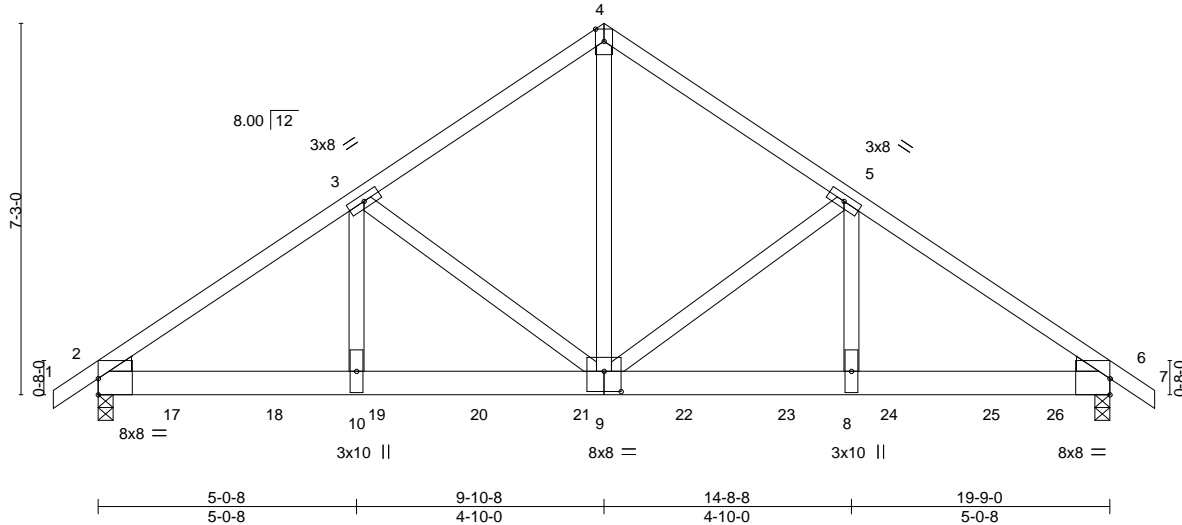


Plate Offsets (X,Y)-- [2:0-0-0,0-3-13], [6:Edge,0-3-13], [9:0-4-0,0-4-12]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.49	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.51	Vert(LL) -0.11 9-10 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.73	Vert(CT) -0.20 9-10 >999 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-MSH	Horz(CT) 0.04 6 n/a n/a		
	Code IRC2015/TPI2014			Weight: 368 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x6 SP DSS  
 WEBS 2x4 SP No.3 \*Except\*  
 4-9: 2x4 SP No.2

**BRACING-**

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

**WEDGE**

Left: 2x4 SP No.3 , Right: 2x4 SP No.3

**REACTIONS.**

(size) 2=0-3-8, 6=0-3-8  
 Max Horz 2=145(LC 26)  
 Max Uplift 2=-839(LC 8), 6=-918(LC 9)  
 Max Grav 2=8835(LC 2), 6=9677(LC 2)

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

TOP CHORD 2-3=-11884/1122, 3-4=-8375/844, 4-5=-8377/844, 5-6=-12144/1147  
 BOT CHORD 2-10=-950/9806, 9-10=-950/9806, 8-9=-887/10032, 6-8=-887/10032  
 WEBS 4-9=-843/8951, 5-9=-3882/471, 5-8=-354/4214, 3-9=-3599/444, 3-10=-325/3920

**NOTES-**

- 3-ply truss to be connected together with 10d (0.148"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-4-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; Lumber DOL=1.33 plate grip DOL=1.33
- 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 with a clearance greater than 6-0-0 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) except (jt=lb) 2=839, 6=918.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1704 lb down and 170 lb up at 1-5-4, 1704 lb down and 170 lb up at 3-5-4, 1704 lb down and 170 lb up at 5-5-4, 1704 lb down and 170 lb up at 7-5-4, 1704 lb down and 170 lb up at 9-5-4, 1704 lb down and 170 lb up at 11-5-4, 1704 lb down and 170 lb up at 13-5-4, 1704 lb down and 170 lb up at 15-5-4, and 1704 lb down and 170 lb up at 17-5-4, and 1704 lb down and 170 lb up at 18-8-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

Continued on page 2



April 23, 2021

**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 ANSIT/PTI 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 21041612	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply <b>3</b>	WAG-17 Job Reference (optional)	I45778828
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:18 2021 Page 2  
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**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-4=-60, 4-7=-60, 11-14=-20

Concentrated Loads (lb)

Vert: 17=-1619(F) 18=-1620(F) 19=-1620(F) 20=-1620(F) 21=-1620(F) 22=-1620(F) 23=-1620(F) 24=-1620(F) 25=-1620(F) 26=-1620(F)

**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

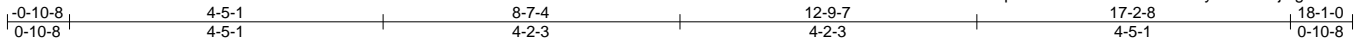


818 Soundside Road  
Edenton, NC 27932

Job 21041612	Truss C	Truss Type COMMON	Qty 1	Ply 1	WAG-17	145778829
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:23 2021 Page 1  
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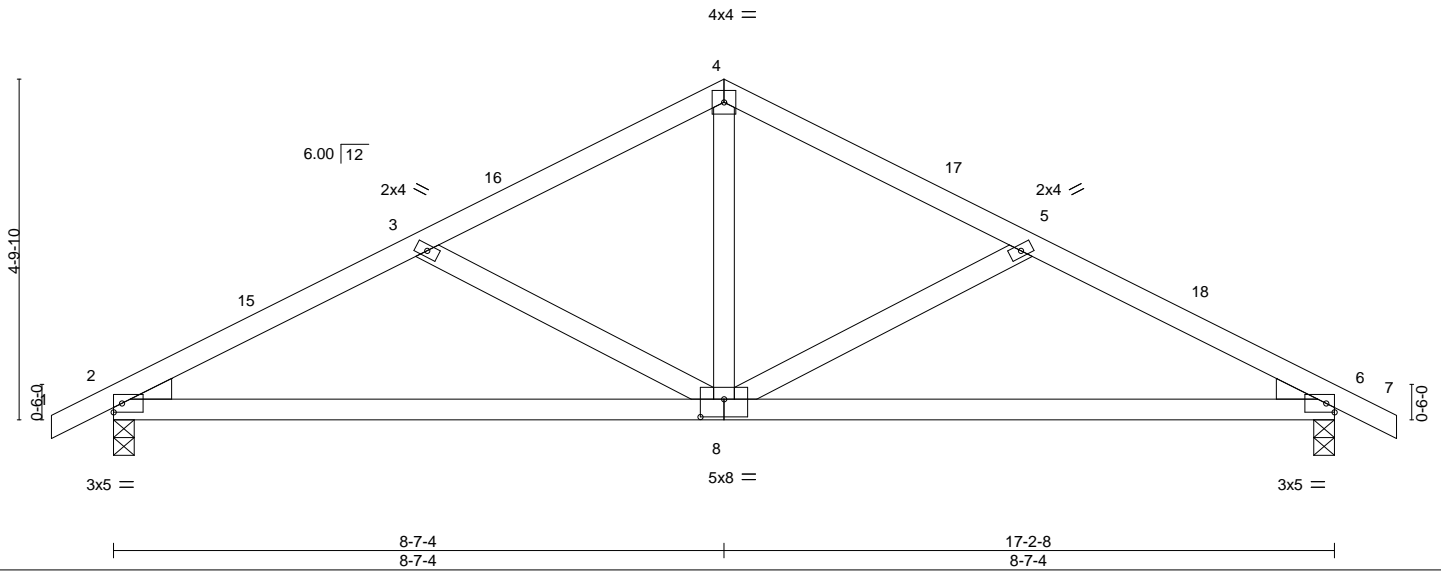


Plate Offsets (X, Y)--	[8:0-4-0,0-3-0]						
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d
TCLL 20.0	Plate Grip DOL	1.15	TC 0.19	Vert(LL)	-0.08	8-11	>999
TCDL 10.0	Lumber DOL	1.15	BC 0.65	Vert(CT)	-0.17	8-11	>999
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.18	Horz(CT)	0.02	6	n/a
BCDL 10.0	Code IRC2015/TPI2014		Matrix-AS				
							<b>PLATES</b>
							MT20
							<b>GRIP</b>
							244/190
							Weight: 79 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 , Right: 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8  
Max Horz 2=65(LC 10)  
Max Uplift 2=-78(LC 10), 6=-78(LC 11)  
Max Grav 2=741(LC 1), 6=741(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1110/178, 3-4=-838/138, 4-5=-838/138, 5-6=-1110/178  
BOT CHORD 2-8=-119/947, 6-8=-86/947  
WEBS 4-8=-5/483, 5-8=-304/133, 3-8=-304/133

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-7-4, Exterior(2) 5-7-4 to 11-7-4, Interior(1) 11-7-4 to 15-1-0, Exterior(2) 15-1-0 to 18-1-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 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 with a clearance greater than 6-0-0 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, 6.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

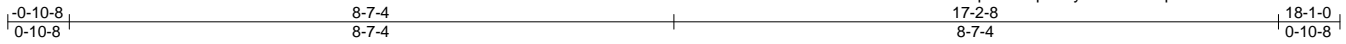


April 23, 2021

Job 21041612	Truss CGE	Truss Type GABLE	Qty 1	Ply 1	WAG-17	145778830
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:24 2021 Page 1  
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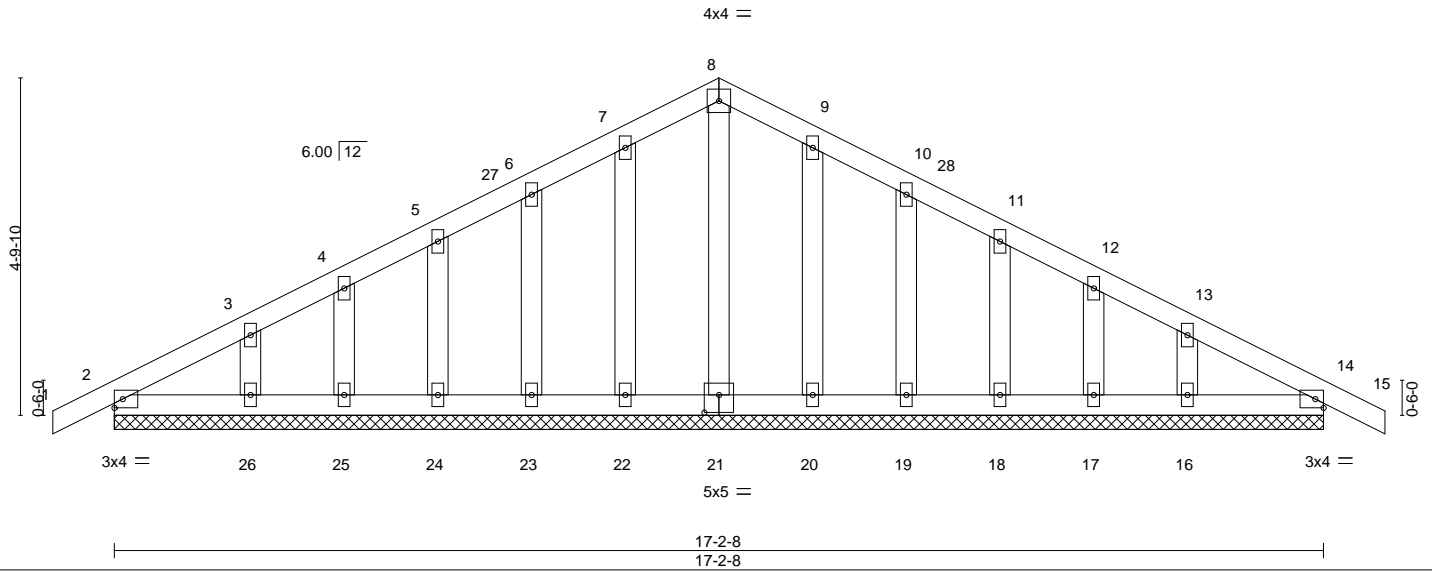


Plate Offsets (X,Y)--	[21:0-2-8,0-3-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.05	Vert(LL) -0.00 14 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.03	Vert(CT) -0.00 14 n/r 90		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.03	Horz(CT) 0.00 14 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 97 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 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 17-2-8.  
 (lb) - Max Horz 2=65(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 14, 22, 23, 24, 25, 26, 20, 19, 18, 17, 16  
 Max Grav All reactions 250 lb or less at joint(s) 2, 14, 21, 22, 23, 24, 25, 26, 20, 19, 18, 17, 16

**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=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-10-8 to 1-11-4, Exterior(2) 1-11-4 to 5-7-4, Corner(3) 5-7-4 to 11-7-4, Exterior(2) 11-7-4 to 15-1-0, Corner(3) 15-1-0 to 18-1-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; 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.
  - 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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, 14, 22, 23, 24, 25, 26, 20, 19, 18, 17, 16.

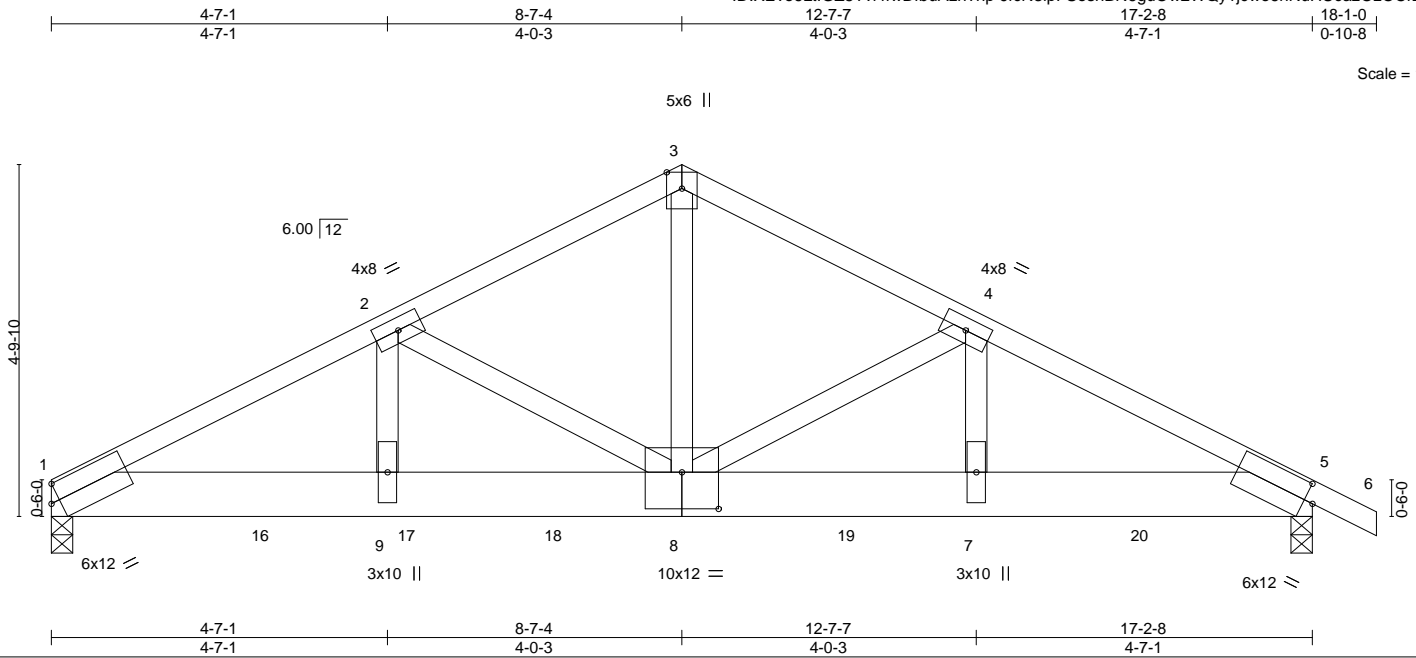


April 23, 2021

Job 21041612	Truss CGR	Truss Type COMMON GIRDER	Qty 1	Ply 2	WAG-17	145778831
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:30 2021 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.99	in (loc) l/defl L/d	MT20	137/130
TCDL 10.0	Plate Grip DOL 1.15	BC 0.65	Vert(LL) -0.15 8-9 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.99	Vert(CT) -0.28 8-9 >735 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-MSH	Horz(CT) 0.06 5 n/a n/a		
	Code IRC2015/TPI2014			Weight: 234 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 1-1/2x7-1/4 LP-LSL TC 1.75E  
WEBS 2x4 SP No.3 \*Except\*  
3-8: 2x4 SP No.2

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

**REACTIONS.** (size) 1=0-3-8, 5=0-3-8  
Max Horz 1=-71(LC 28)  
Max Uplift 1=-768(LC 8), 5=-811(LC 9)  
Max Grav 1=8125(LC 2), 5=8463(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-13133/1244, 2-3=-9370/904, 3-4=-9372/905, 4-5=-13200/1249  
BOT CHORD 1-9=-1118/11724, 8-9=-1118/11724, 7-8=-1058/11788, 5-7=-1058/11788  
WEBS 3-8=-738/8108, 4-8=-3976/446, 4-7=-290/3509, 2-8=-3901/439, 2-9=-285/3453

**NOTES-**  
1) 2-ply truss to be connected together with 10d (0.148"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.  
Bottom chords connected as follows: 1-1/2x7-1/4 - 2 rows staggered at 0-6-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 2-9 2x4 - 1 row at 0-7-0 oc.  
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.  
3) Unbalanced roof live loads have been considered for this design.  
4) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33  
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 with a clearance greater than 6-0-0 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) except (jt=lb) 1=768, 5=811.  
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1705 lb down and 169 lb up at 0-10-12, 1704 lb down and 170 lb up at 2-10-12, 1704 lb down and 170 lb up at 4-10-12, 1704 lb down and 170 lb up at 6-10-12, 1704 lb down and 170 lb up at 8-10-12, 1704 lb down and 170 lb up at 10-10-12, 1704 lb down and 170 lb up at 12-10-12, and 1704 lb down and 170 lb up at 14-10-12, and 1704 lb down and 170 lb up at 16-1-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard  
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15



April 23, 2021

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 21041612	Truss CGR	Truss Type COMMON GIRDER	Qty 1	Ply <b>2</b>	WAG-17 Job Reference (optional)	145778831
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:30 2021 Page 2  
ID:XEve6LlIGZ5Tv14fwDfbuAzh?np-JfcN3lpFSoshBN6guOw2WQy1jcw6hNuHUcazOzOCrZ

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-3=-60, 3-6=-60, 10-13=-20

Concentrated Loads (lb)

Vert: 8=-1620(B) 7=-1620(B) 12=-1621(B) 15=-1620(B) 16=-1620(B) 17=-1620(B) 18=-1620(B) 19=-1620(B) 20=-1620(B)

**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

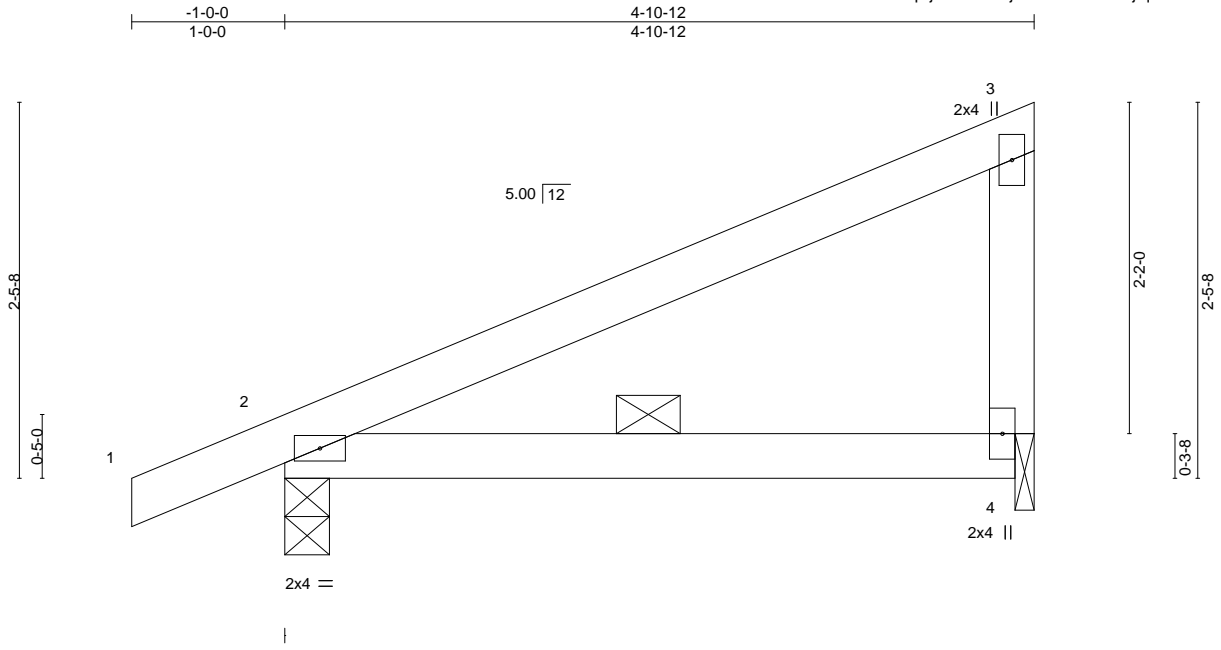


Job 21041612	Truss H	Truss Type MONOPICH	Qty 7	Ply 1	WAG-17	145778832
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:33 2021 Page 1

ID:XEve6LtlIGZ5Tv14fwDfbuAzh?np-jDHWInr7kjEG2rrEZXTI83ajfq3cJHeKzSqEajzOCrW



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.30	Vert(LL)	-0.02 4-7	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.25	Vert(CT)	-0.05 4-7	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00 2	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-AS					Weight: 20 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD 3-0-0 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 2=0-3-8, 4=0-1-8  
 Max Horz 2=74(LC 10)  
 Max Uplift 2=32(LC 10), 4=40(LC 10)  
 Max Grav 2=256(LC 1), 4=184(LC 1)

**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=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
  - 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
  - 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.



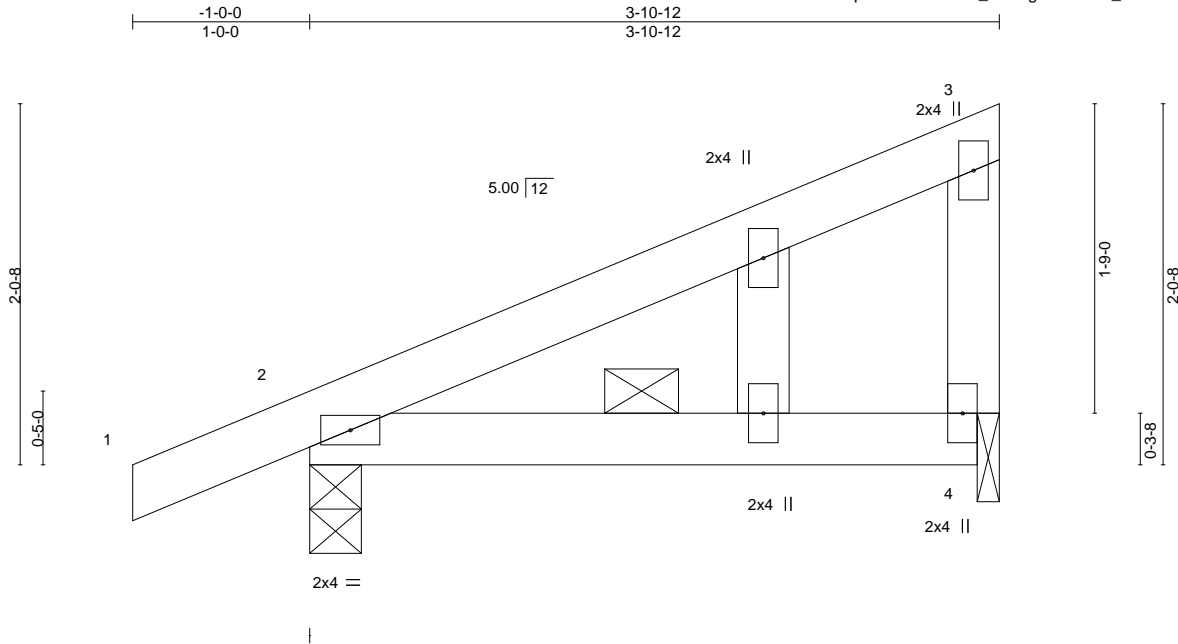
April 23, 2021

Job 21041612	Truss H2GE	Truss Type MONOPITCH STRUCTURAL	Qty 1	Ply 1	WAG-17	145778833
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:35 2021 Page 1

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Scale = 1:13.0

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.18	Vert(LL)	-0.01	4-9	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.15	Vert(CT)	-0.02	4-9	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	2	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP					Weight: 17 lb	FT = 20%
	Code IRC2015/TPI2014							

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-10-12 oc purlins, except end verticals.  
 BOT CHORD 3-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 4=0-1-8  
 Max Horz 2=61(LC 10)  
 Max Uplift 2=-30(LC 10), 4=-31(LC 10)  
 Max Grav 2=218(LC 1), 4=142(LC 1)

**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=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; 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) Gable studs spaced at 1-4-0 oc.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 6) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



April 23, 2021

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

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**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



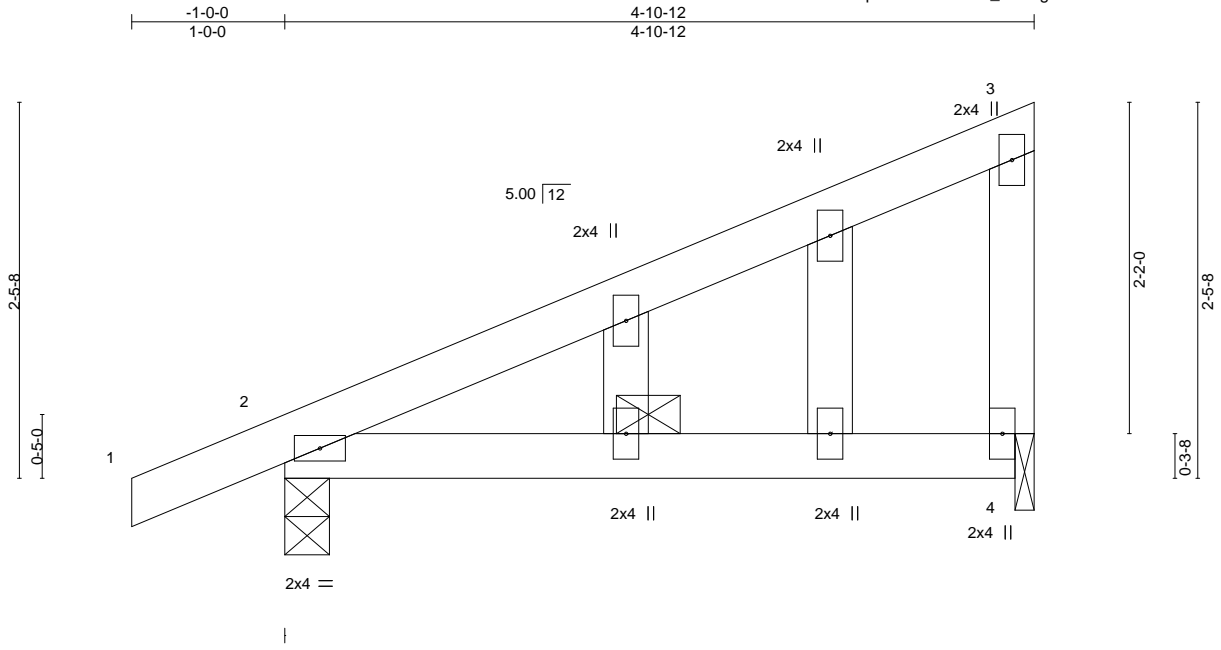
818 Soundside Road  
 Edenton, NC 27932

Job 21041612	Truss HGE	Truss Type GABLE	Qty 1	Ply 1	WAG-17	145778834
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:35 2021 Page 1

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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.30	Vert(LL)	-0.02 4-11	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.25	Vert(CT)	-0.05 4-11	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00 2	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-AS					Weight: 23 lb	FT = 20%

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

**REACTIONS.** (size) 2=0-3-8, 4=0-1-8  
 Max Horz 2=74(LC 10)  
 Max Uplift 2=-32(LC 10), 4=-40(LC 10)  
 Max Grav 2=256(LC 1), 4=184(LC 1)

**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=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; 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) Gable studs spaced at 1-4-0 oc.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 6) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.

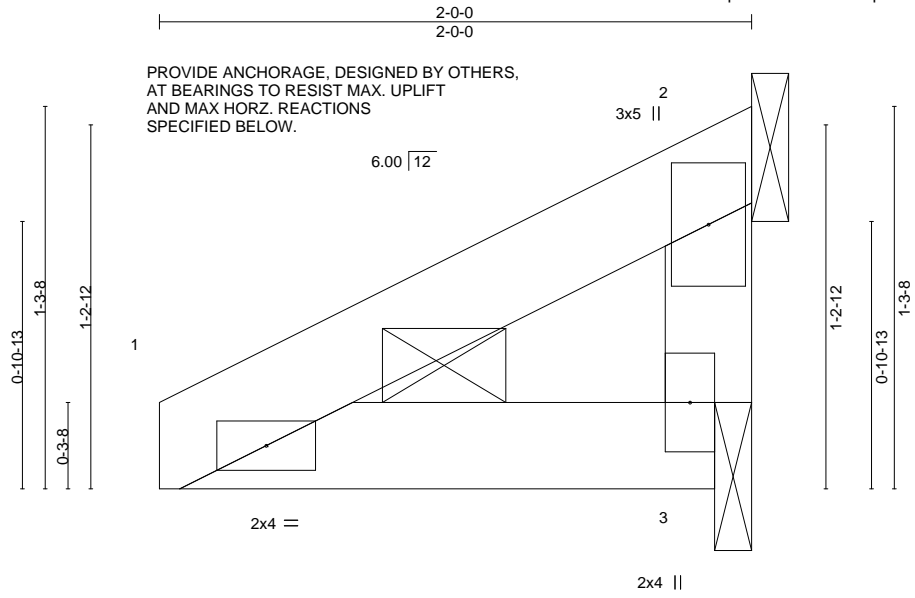


April 23, 2021

Job 21041612	Truss M	Truss Type Monopitch	Qty 11	Ply 1	WAG-17	145778835
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:36 2021 Page 1  
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PROVIDE ANCHORAGE, DESIGNED BY OTHERS,  
AT BEARINGS TO RESIST MAX. UPLIFT  
AND MAX HORZ. REACTIONS  
SPECIFIED BELOW.

Scale = 1:7.8

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	0.00	6	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(CT)	-0.00	6	n/r	90		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00		n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP						Weight: 7 lb	FT = 20%

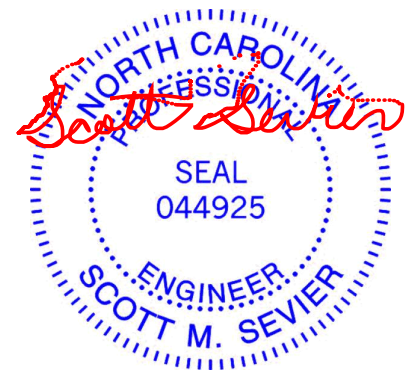
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD 1-6-0 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 2=Mechanical, 3=0-1-8  
Max Horz 2=140(LC 1), 3=-140(LC 1)  
Max Uplift 3=-21(LC 10)  
Max Grav 3=143(LC 1)

**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=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 3 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 3.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3.
- 8) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

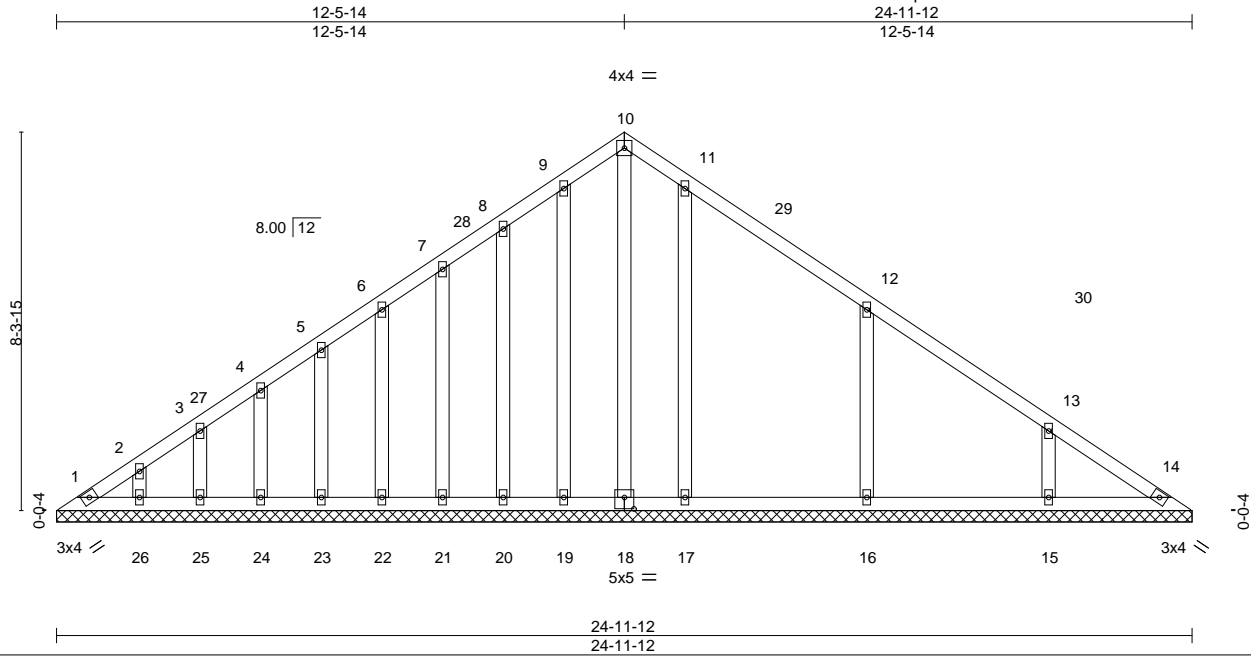


April 23, 2021

Job 21041612	Truss V01	Truss Type GABLE	Qty 1	Ply 1	WAG-17 Job Reference (optional)	145778836
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:37 2021 Page 1  
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Scale = 1:50.7

Plate Offsets (X,Y)--	[18:0-2-8,0-3-0]						
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d
TCLL 20.0	Plate Grip DOL	1.15	TC 0.20	Vert(LL)	n/a	-	n/a 999
TCDL 10.0	Lumber DOL	1.15	BC 0.15	Vert(CT)	n/a	-	n/a 999
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.19	Horz(CT)	0.00	14	n/a n/a
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S				
							<b>PLATES</b>
							MT20
							<b>GRIP</b>
							244/190
							Weight: 155 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 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 24-11-12.  
 (lb) - Max Horz 1=-162(LC 6)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 18, 19, 20, 21, 22, 23, 24, 25, 26, 17, 15 except 16=-111(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 14, 18, 19, 20, 21, 22, 23, 24, 25, 26 except 17=383(LC 18), 16=411(LC 18), 15=293(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 12-16=-264/153

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 9-5-14, Exterior(2) 9-5-14 to 15-5-14, Interior(1) 15-5-14 to 21-6-0, Exterior(2) 21-6-0 to 24-6-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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, 18, 19, 20, 21, 22, 23, 24, 25, 26, 17, 15 except (jt=lb) 16=111.



April 23, 2021

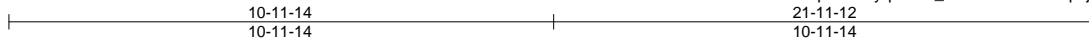


Job 21041612	Truss V02	Truss Type Valley	Qty 1	Ply 1	WAG-17	145778837
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:39 2021 Page 1

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4x4 =

Scale = 1:46.5

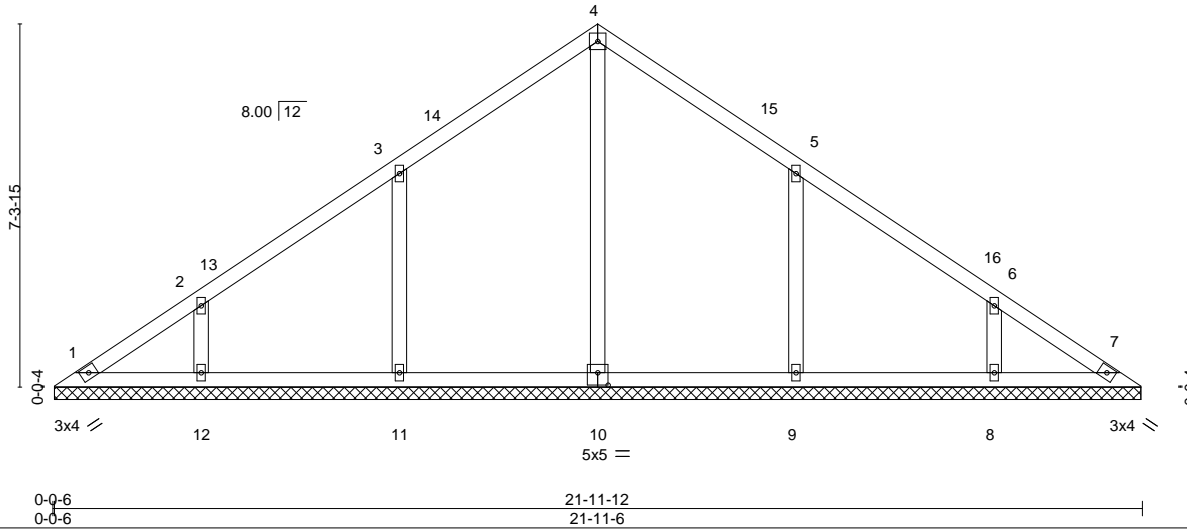


Plate Offsets (X,Y)--	[10:0-2-8,0-3-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.20	Vert(LL) n/a - n/a 999	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.19	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.16	Horz(CT) 0.00 7 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 97 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 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 21-11-0.  
 (lb) - Max Horz 1=-142(LC 6)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 12, 8 except 11=-116(LC 10), 9=-115(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=384(LC 20), 11=414(LC 17), 12=285(LC 1), 9=413(LC 18), 8=285(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 3-11=-274/157, 5-9=-274/157

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 7-11-14, Exterior(2) 7-11-14 to 13-11-14, Interior(1) 13-11-14 to 18-6-0, Exterior(2) 18-6-0 to 21-6-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) All plates are 2x4 MT20 unless otherwise indicated.
  - 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 with a clearance greater than 6-0-0 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, 12, 8 except (jt=lb) 11=116, 9=115.



April 23, 2021

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>818 Soundside Road Edenton, NC 27932</p>
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Job 21041612	Truss V03	Truss Type Valley	Qty 1	Ply 1	WAG-17	145778838
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8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:41 2021 Page 1

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4x4 =

Scale = 1:40.1

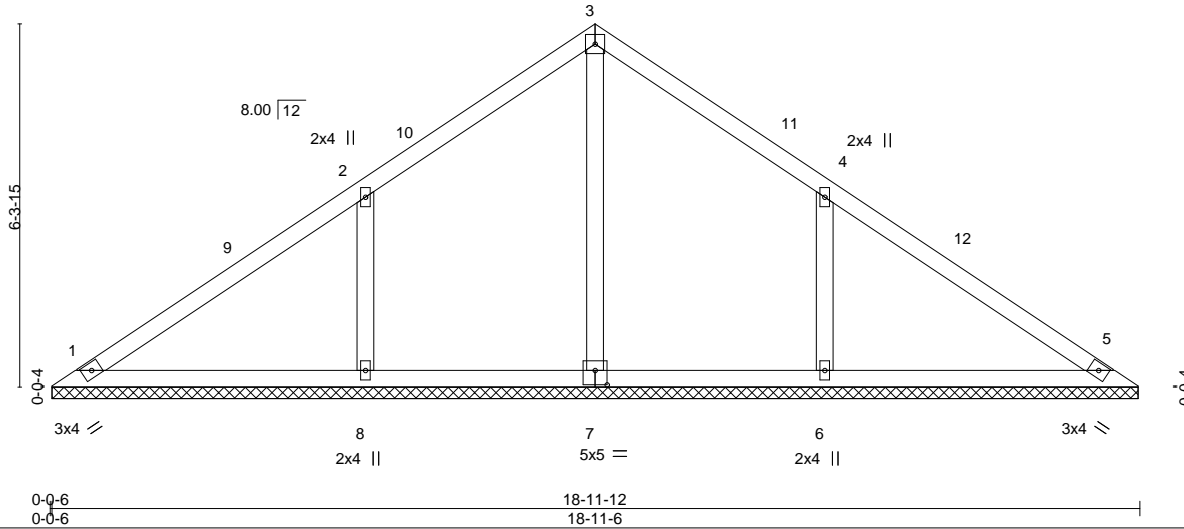


Plate Offsets (X,Y)--	[7:0-2-8,0-3-0]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.33	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.20	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.10	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 78 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 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 18-11-0.  
 (lb) - Max Horz 1=-121(LC 6)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-145(LC 10), 6=-145(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=455(LC 17), 6=455(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-336/188, 4-6=-336/188

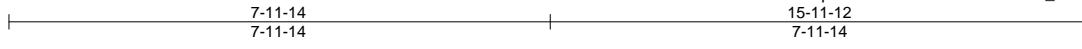
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 6-5-14, Exterior(2) 6-5-14 to 12-5-14, Interior(1) 12-5-14 to 15-6-0, Exterior(2) 15-6-0 to 18-6-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 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 with a clearance greater than 6-0-0 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 except (jt=lb) 8=145, 6=145.



Job 21041612	Truss V04	Truss Type Valley	Qty 1	Ply 1	WAG-17	145778839
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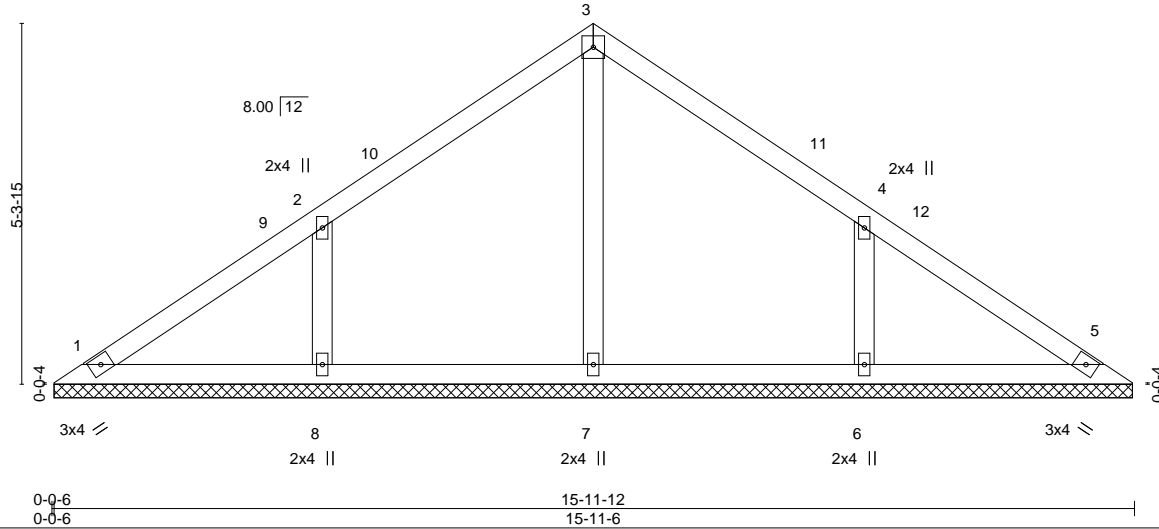
The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:43 2021 Page 1  
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4x4 =

Scale = 1:34.0



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.21	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.09	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 64 lb	FT = 20%

**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 15-11-0.  
(lb) - Max Horz 1=-101(LC 6)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-119(LC 10), 6=-118(LC 11)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=364(LC 17), 6=364(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-8=-275/156, 4-6=-275/155

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TC DL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 4-11-14, Exterior(2) 4-11-14 to 10-11-14, Interior(1) 10-11-14 to 12-6-0, Exterior(2) 12-6-0 to 15-6-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 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 with a clearance greater than 6-0-0 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 except (jt=lb) 8=119, 6=118.



April 23, 2021

**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

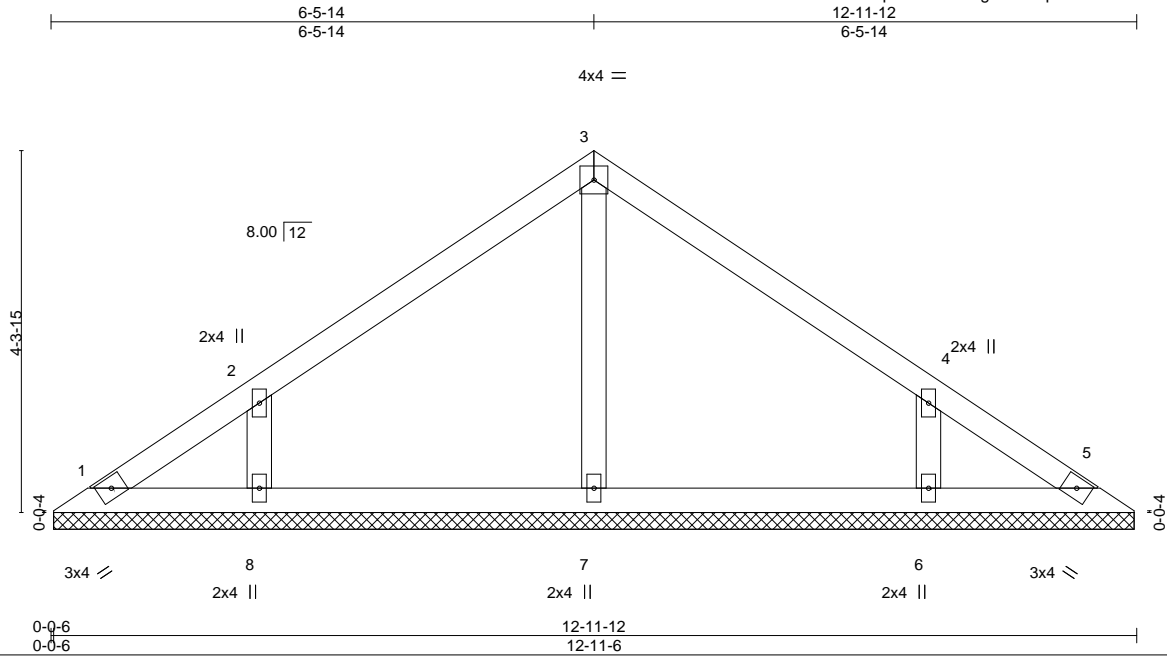


818 Soundside Road  
Edenton, NC 27932

Job 21041612	Truss V05	Truss Type Valley	Qty 1	Ply 1	WAG-17	145778840
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:46 2021 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.17	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.12	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.06	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S					Weight: 50 lb	FT = 20%
	Code IRC2015/TPI2014							

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

**REACTIONS.** All bearings 12-11-0.  
 (lb) - Max Horz 1=81(LC 6)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=103(LC 10), 6=102(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=266(LC 1), 8=304(LC 17), 6=304(LC 18)

**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=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
  - 6) 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=103, 6=102.

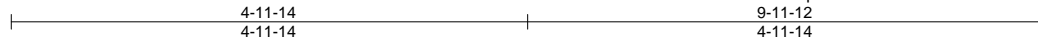


April 23, 2021

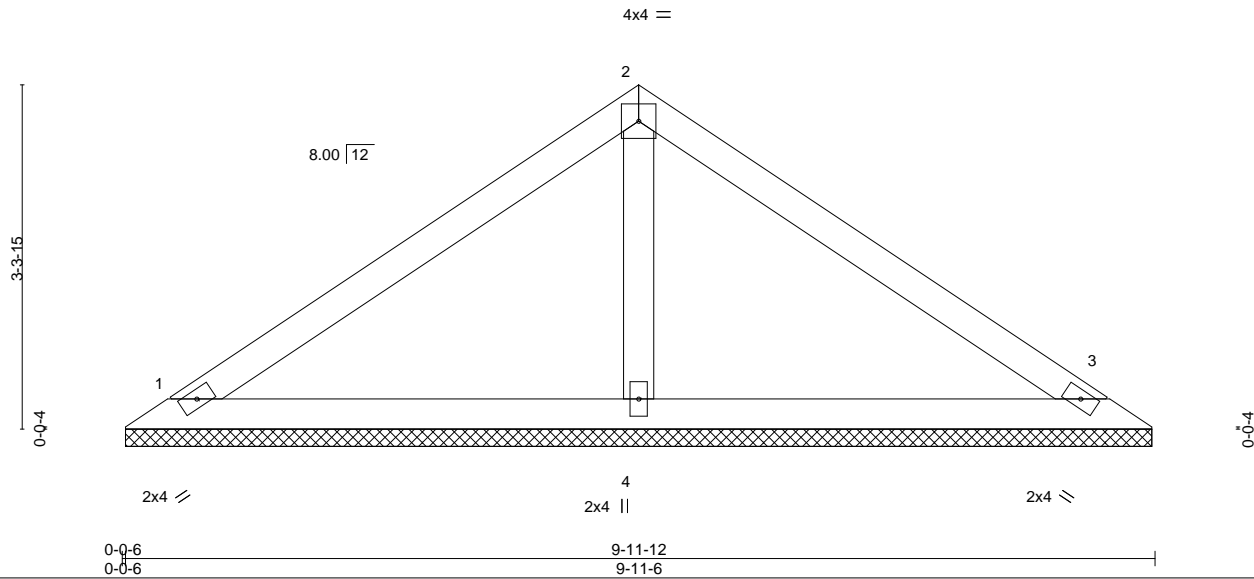
Job 21041612	Truss V06	Truss Type Valley	Qty 1	Ply 1	WAG-17 Job Reference (optional)	145778841
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:48 2021 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.29	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.20	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.06	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S					Weight: 35 lb	FT = 20%
	Code IRC2015/TPI2014							

**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=9-11-0, 3=9-11-0, 4=9-11-0  
 Max Horz 1=61(LC 6)  
 Max Uplift 1=26(LC 10), 3=34(LC 11), 4=8(LC 10)  
 Max Grav 1=178(LC 1), 3=178(LC 1), 4=366(LC 1)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.



April 23, 2021

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 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



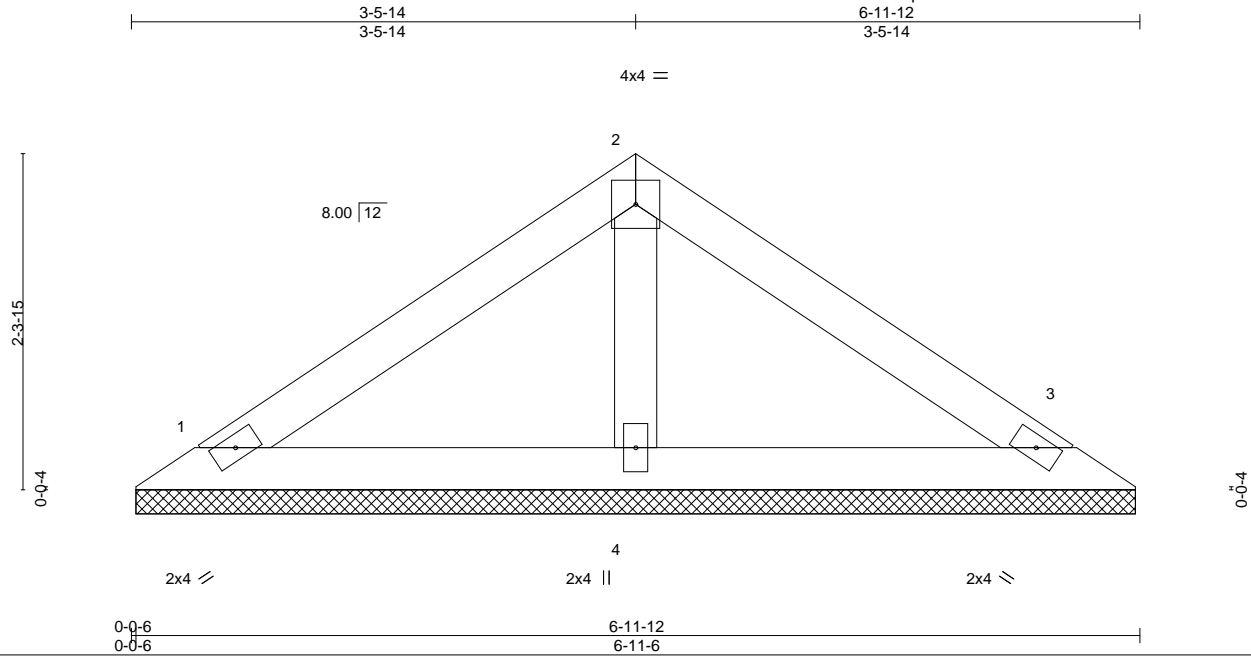
818 Soundside Road  
 Edenton, NC 27932



Job 21041612	Truss V07	Truss Type Valley	Qty 1	Ply 1	WAG-17	145778842
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:49 2021 Page 1  
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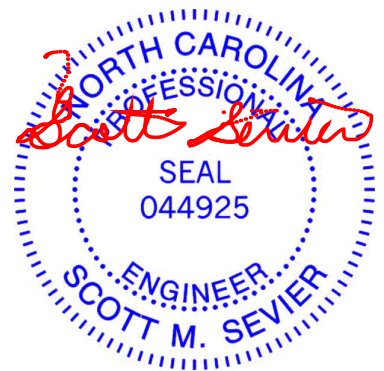
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.17	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.09	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.03	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P					Weight: 24 lb	FT = 20%
	Code IRC2015/TPI2014							

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=6-11-0, 3=6-11-0, 4=6-11-0  
 Max Horz 1=41(LC 8)  
 Max Uplift 1=23(LC 10), 3=28(LC 11)  
 Max Grav 1=130(LC 1), 3=130(LC 1), 4=222(LC 1)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

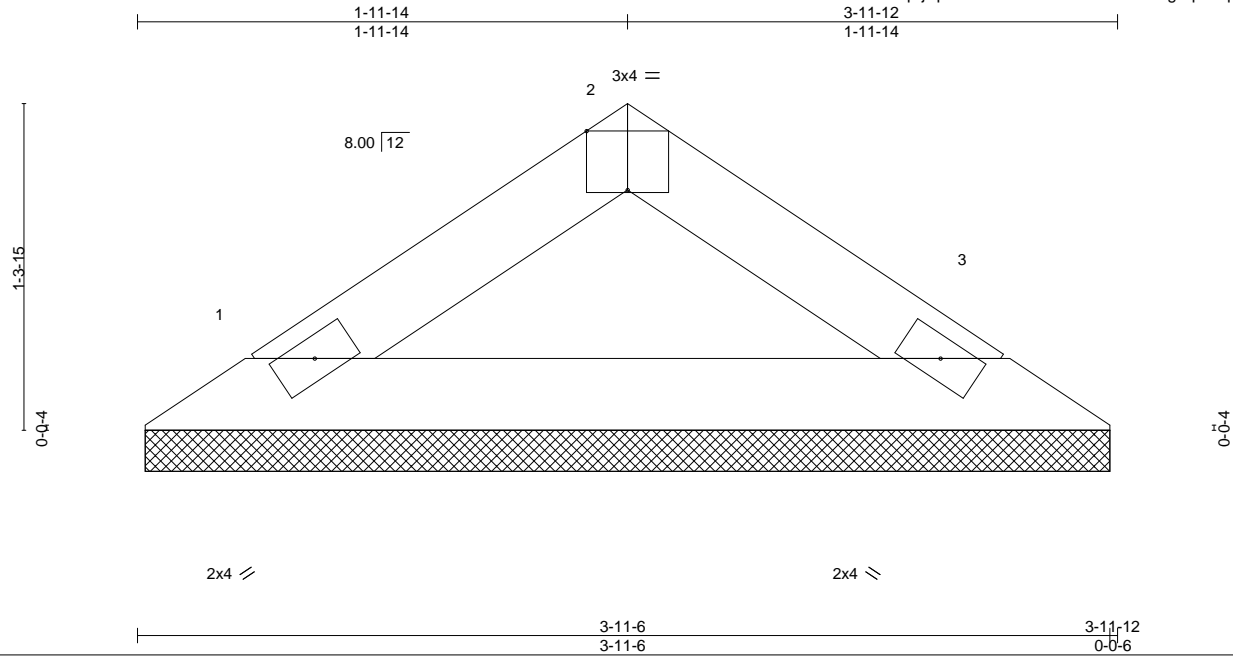


April 23, 2021

Job 21041612	Truss V08	Truss Type Valley	Qty 1	Ply 1	WAG-17	145778843
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:50 2021 Page 1  
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Plate Offsets (X, Y)--	[2:0-2-0,Edge]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.11	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P							
									Weight: 11 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 3-11-12 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=3-11-0, 3=3-11-0  
 Max Horz 1=-20(LC 6)  
 Max Uplift 1=-10(LC 10), 3=-10(LC 11)  
 Max Grav 1=121(LC 1), 3=121(LC 1)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



April 23, 2021

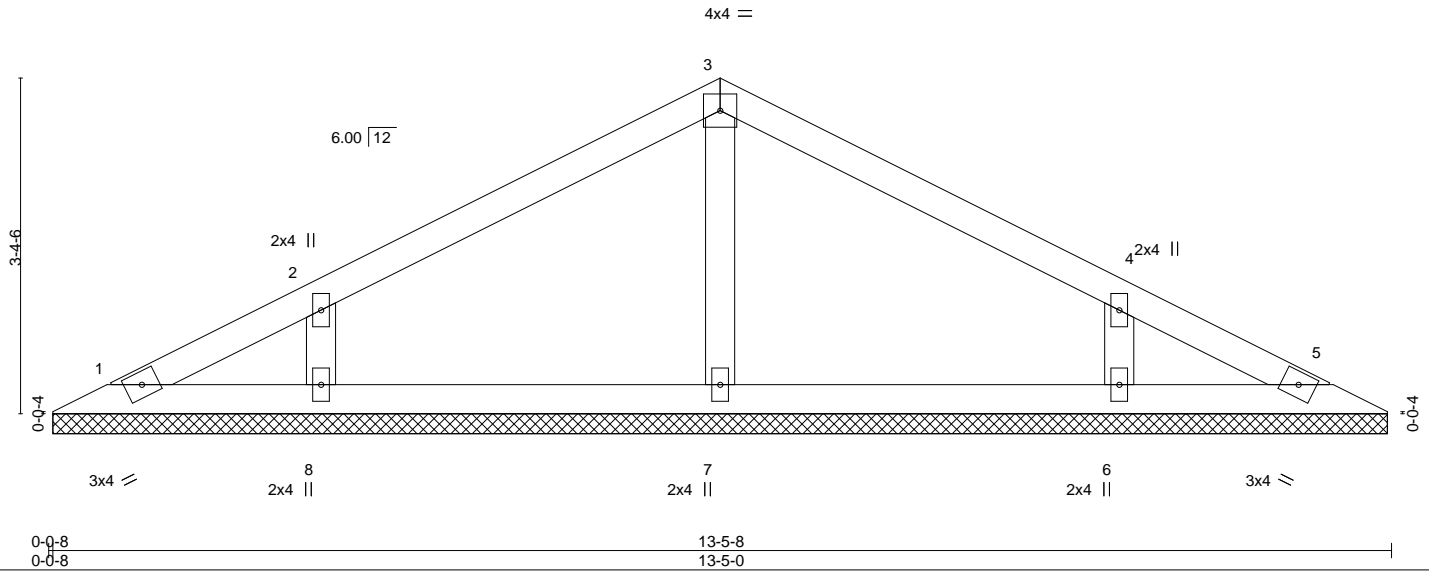
Job 21041612	Truss V09	Truss Type Valley	Qty 1	Ply 1	WAG-17 Job Reference (optional)	145778844
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:51 2021 Page 1  
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Scale = 1:23.1



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	5	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 47 lb	FT = 20%

**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 13-4-8.  
 (lb) - Max Horz 1=42(LC 15)  
 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=287(LC 1), 8=301(LC 21), 6=301(LC 22)

**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=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 8, 6.



April 23, 2021

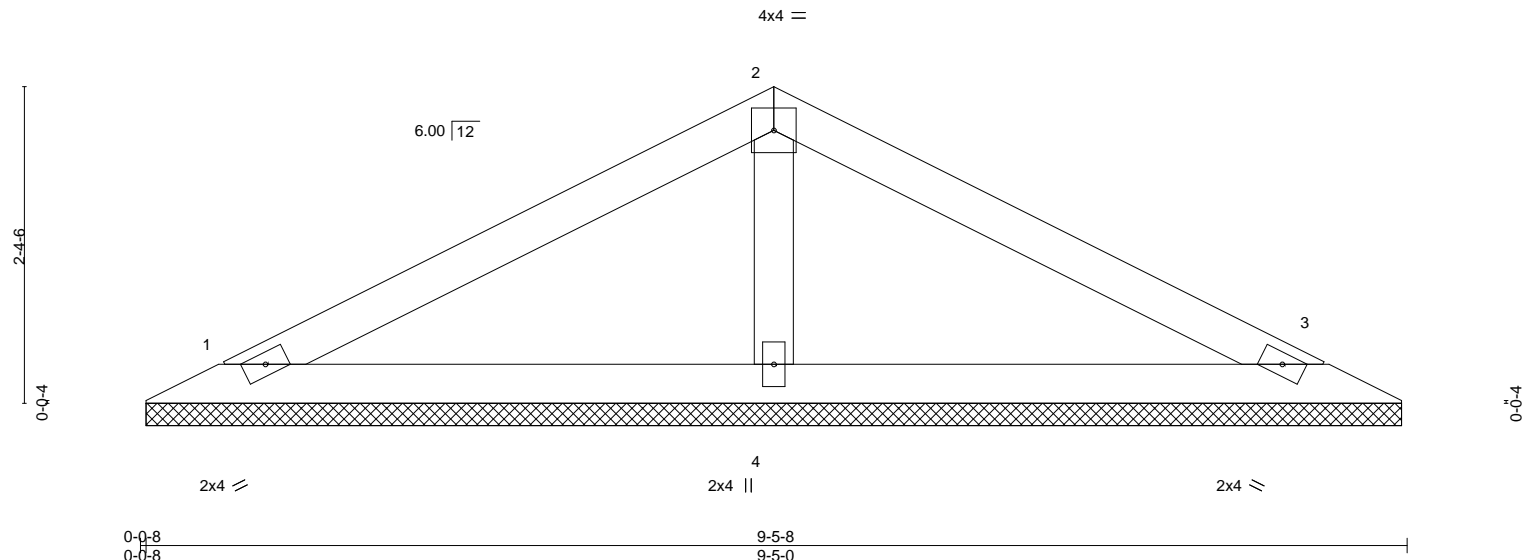
Job 21041612	Truss V10	Truss Type Valley	Qty 1	Ply 1	WAG-17	145778845
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:53 2021 Page 1  
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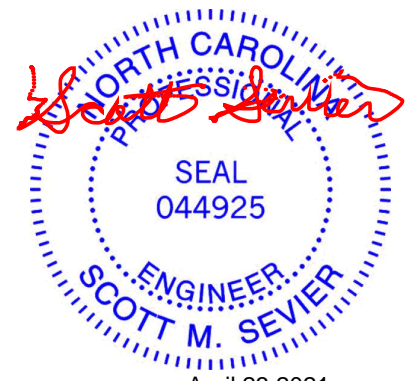
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.23	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.17	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.05	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S						
	Code IRC2015/TPI2014						Weight: 30 lb	FT = 20%

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

**REACTIONS.** (size) 1=9-4-8, 3=9-4-8, 4=9-4-8  
 Max Horz 1=28(LC 15)  
 Max Uplift 1=24(LC 10), 3=29(LC 11), 4=12(LC 10)  
 Max Grav 1=151(LC 21), 3=151(LC 22), 4=357(LC 1)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TC DL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.

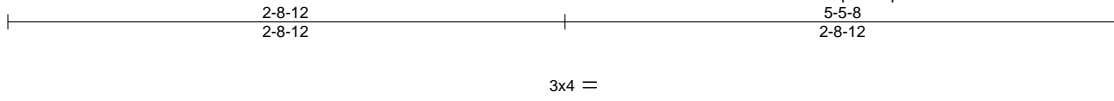


April 23, 2021

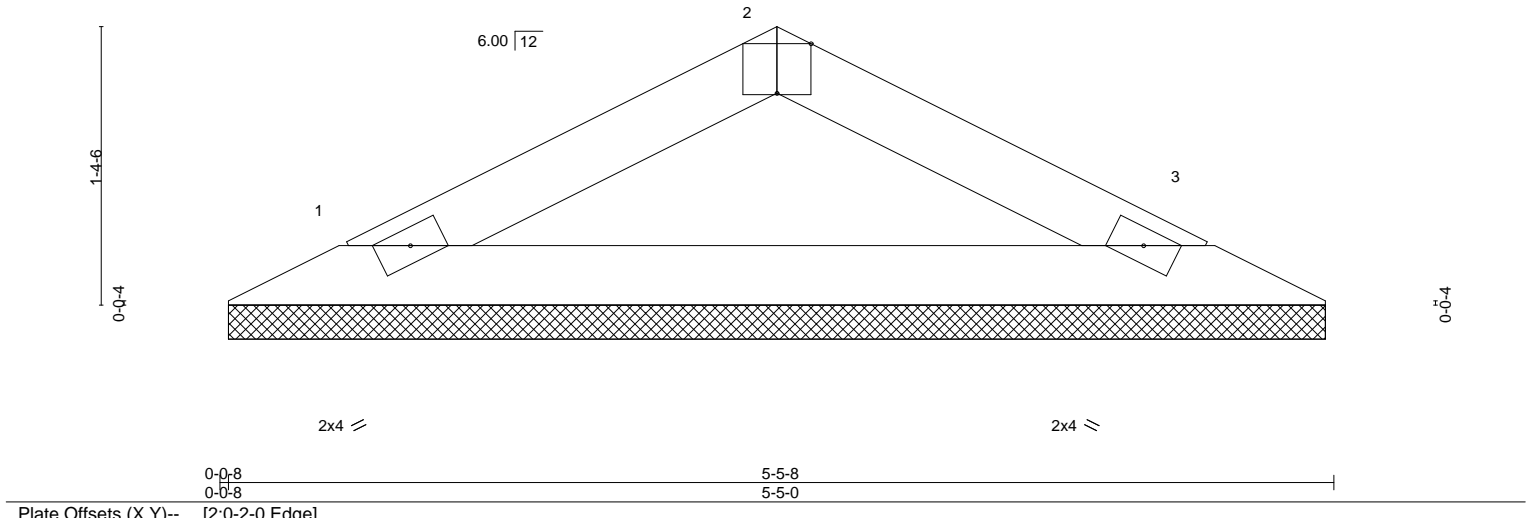
Job 21041612	Truss V11	Truss Type Valley	Qty 1	Ply 1	WAG-17	145778846
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The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Thu Apr 22 09:09:55 2021 Page 1  
ID:XEve6LtlGZ5Tvl4fwDfbuAzh?np-4ScqJl7wZT?8hDWTr8tv1hUXehZDSE5Z1t9PLRzOCrA



Scale = 1:11.3



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.08	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.22	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2015/TPI2014			Weight: 15 lb	FT = 20%

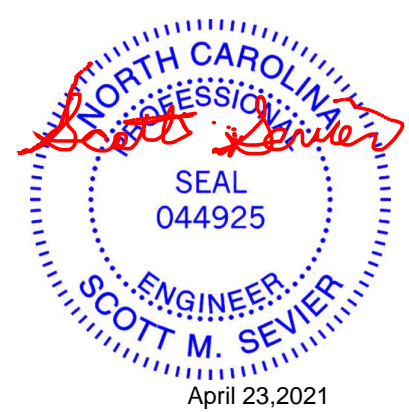
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2

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

**REACTIONS.** (size) 1=5-4-8, 3=5-4-8  
Max Horz 1=14(LC 10)  
Max Uplift 1=-15(LC 10), 3=-15(LC 11)  
Max Grav 1=168(LC 1), 3=168(LC 1)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



April 23, 2021

# 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-<sup>1</sup>/<sub>16</sub>" 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/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate  
BCSI: Connected Wood Trusses.

# Numbering System

6-4-8  
dimensions shown in ft-in-sixteenths  
(Drawings not to scale)



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



# General Safety Notes

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

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