

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 21031265  
WAG-1

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: I45480301 thru I45480322

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

North Carolina COA: C-0844



April 5, 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 21031265	Truss A	Truss Type COMMON	Qty 1	Ply 1	WAG-1	145480301
-----------------	------------	----------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:02 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-cEOjVjQYc3KDB7aM0ALNjd5rZQwZrnWiiUgox0zUo3p

-0-10-8	7-1-14	14-0-15	21-0-0	27-11-1	34-10-2	42-0-0	42-10-8
0-10-8	7-1-14	6-11-1	6-11-1	6-11-1	6-11-1	7-1-14	0-10-8

Scale = 1:73.4

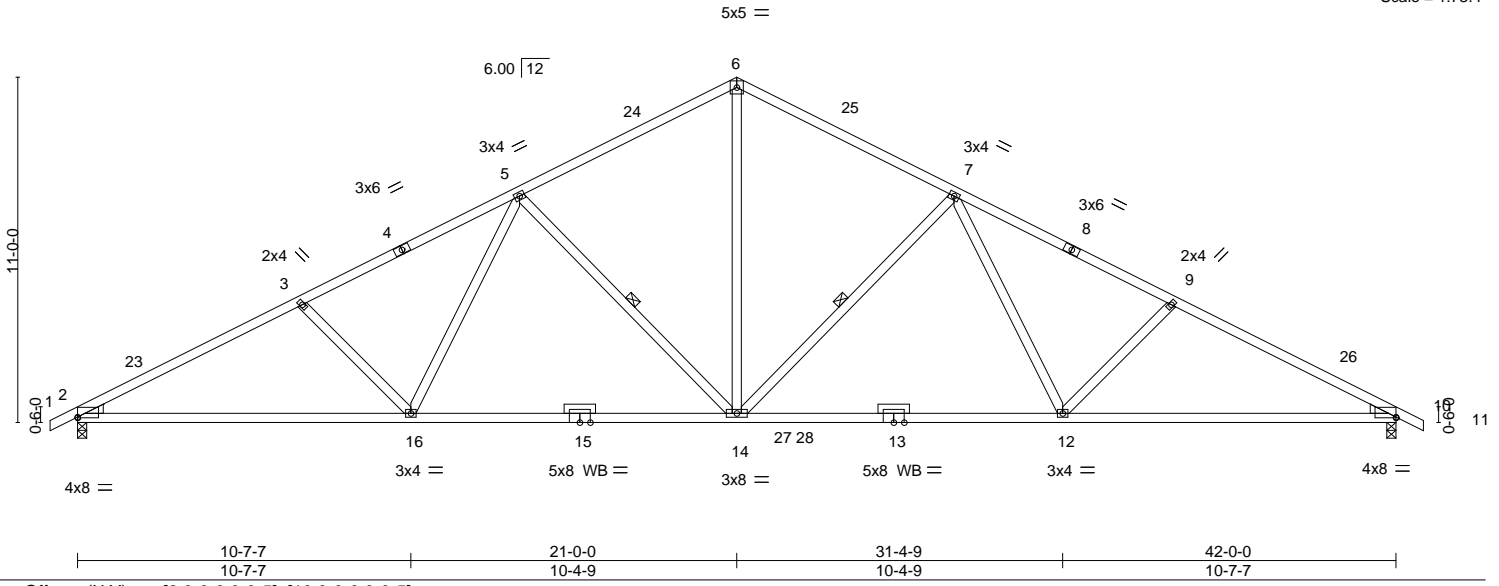


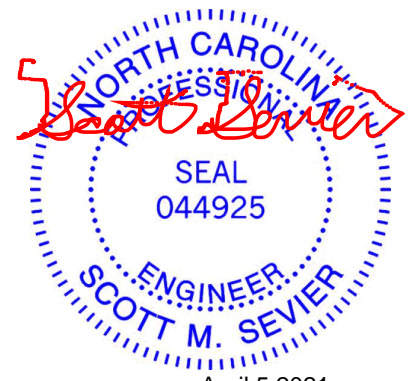
Plate Offsets (X,Y)--	[2:0-0-0,0-0-5], [10:0-0-0,0-0-5]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.63	Vert(LL) -0.52 12-14 >961 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.83	Vert(CT) -0.81 12-14 >621 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.67	Horz(CT) 0.15 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-AS			
				Weight: 222 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* 13-15: 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=149(LC 10)  
 Max Uplift 2=168(LC 10), 10=168(LC 11)  
 Max Grav 2=1815(LC 2), 10=1815(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3352/300, 3-5=-3115/291, 5-6=-2259/292, 6-7=-2259/292, 7-9=-3115/291,  
 9-10=-3352/301  
 BOT CHORD 2-16=-334/2918, 14-16=-191/2459, 12-14=-88/2459, 10-12=-185/2918  
 WEBS 6-14=-103/1625, 7-14=-763/228, 7-12=-33/617, 9-12=-380/187, 5-14=-763/228,  
 5-16=-33/617, 3-16=-380/187

- 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 18-0-0, Exterior(2) 18-0-0 to 24-0-0, Interior(1) 24-0-0 to 39-10-8, Exterior(2) 39-10-8 to 42-10-8 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* 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.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=168, 10=168.
  - 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 5, 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>          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>ENGINEERING BY  <b>TRENCO</b>          A MiTek Affiliate</p> <p>818 Soundside Road          Edenton, NC 27932</p>
--	--

Job 21031265	Truss A2	Truss Type COMMON	Qty 17	Ply 1	WAG-1	145480302
-----------------	-------------	----------------------	-----------	----------	-------	-----------

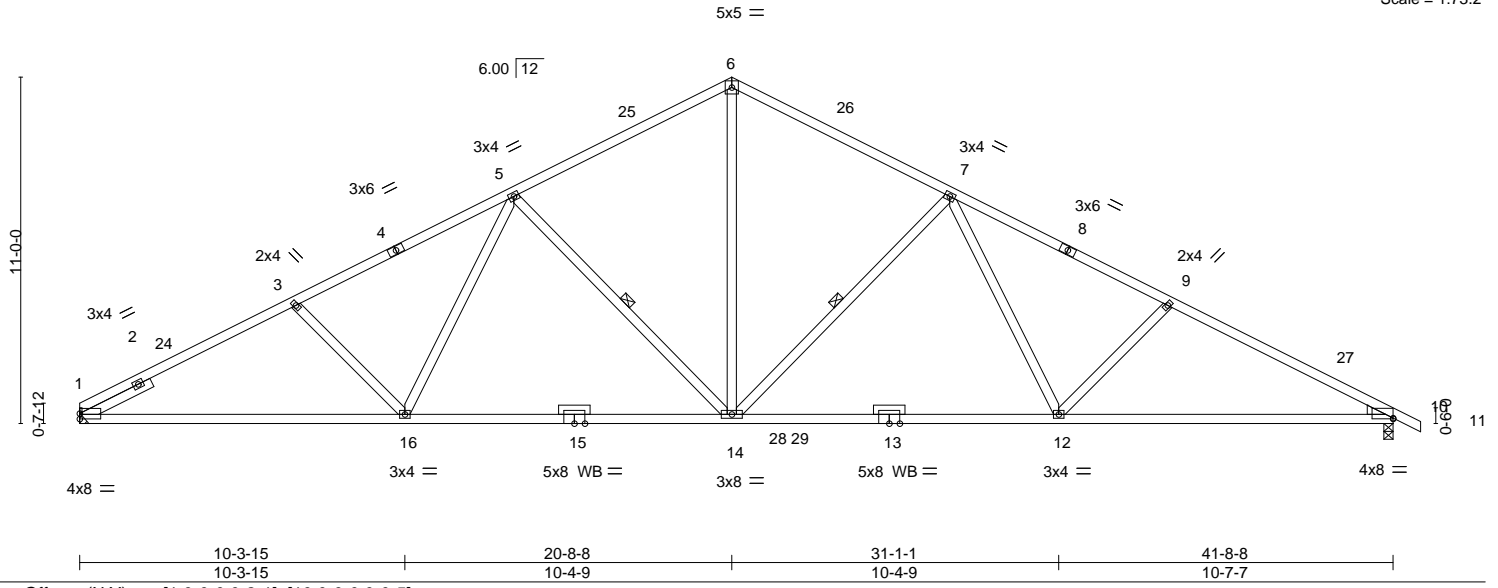
The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:05 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-Op3r7kTQv\_jn2aJxhIv4LgJlvdyK2HO8PSuSYLzUo3m



Scale = 1:73.2



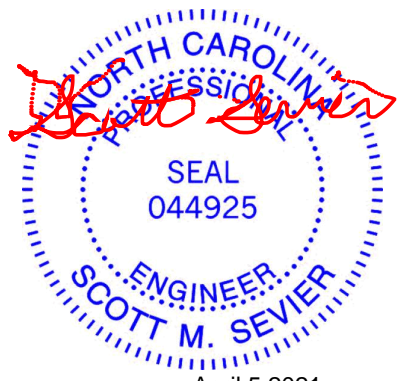
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.88	Vert(LL)	-0.52	12-14	>965	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.82	Vert(CT)	-0.81	14-16	>617		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.66	Horz(CT)	0.15	10	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-AS						
								Weight: 223 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* 13-15: 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	
Right: 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 -t 2-6-0	

**REACTIONS.** (size) 1=Mechanical, 10=0-3-8  
 Max Horz 1=-158(LC 11)  
 Max Uplift 1=-151(LC 10), 10=-168(LC 11)  
 Max Grav 1=1762(LC 2), 10=1803(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-3=-3191/300, 3-5=-3008/294, 5-6=-2235/292, 6-7=-2233/292, 7-9=-3089/292,  
 9-10=-3326/300  
 BOT CHORD 1-16=-322/2789, 14-16=-188/2415, 12-14=-89/2436, 10-12=-185/2896  
 WEBS 6-14=-103/1606, 7-14=-763/229, 7-12=-33/616, 9-12=-380/187, 5-14=-737/227,  
 5-16=-28/550, 3-16=-319/175

- 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) 0-3-8 to 3-3-8, Interior(1) 3-3-8 to 18-0-0, Exterior(2) 18-0-0 to 24-0-0, Interior(1) 24-0-0 to 39-10-8, Exterior(2) 39-10-8 to 42-10-8 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
  - 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.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=151, 10=168.
  - 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.



Job 21031265	Truss A2GE	Truss Type COMMON SUPPORTED GAB	Qty 2	Ply 1	WAG-1	145480303
-----------------	---------------	------------------------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:11 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-rzR7OoXBVqTxmVm51Z0UaWzVV2AES7f1nOLnl\_zUo3g



Scale = 1:72.7

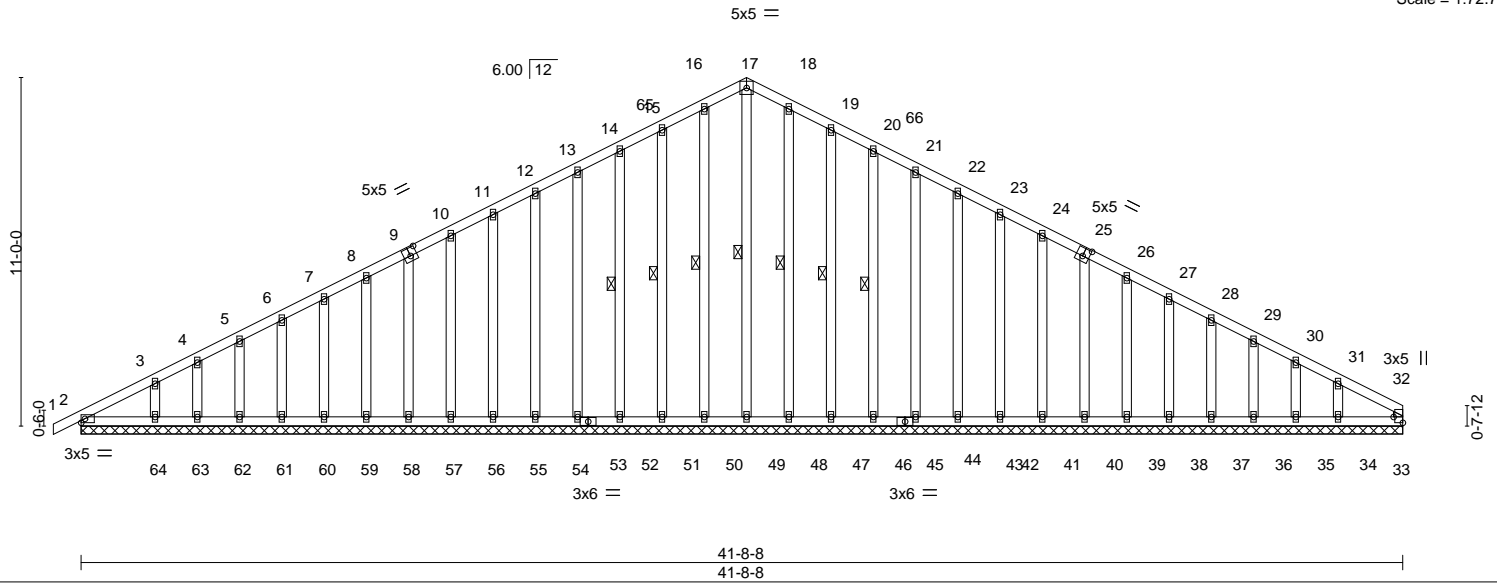


Plate Offsets (X,Y)--	[9:0-2-8,0-3-0], [25:0-2-8,0-3-0], [32:Edge,0-3-8]
-----------------------	--

<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 0.11	Vert(LL) -0.00 1 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.09	Vert(CT) 0.00 1 n/r 90		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.10	Horz(CT) 0.01 33 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 376 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, 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	WEBS 1 Row at midpt 17-49, 16-50, 15-51, 14-52, 18-48, 19-47, 20-46
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 41-8-8.  
 (lb) - Max Horz 2=160(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 50, 51, 52, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 47, 46, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 2  
 Max Grav All reactions 250 lb or less at joint(s) 33, 49, 50, 51, 52, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 48, 47, 46, 44, 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=-98/282, 16-17=-101/308, 17-18=-101/308, 18-19=-98/282

- 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 2-4-0, Exterior(2) 2-4-0 to 18-0-0, Corner(3) 18-0-0 to 24-0-0, Exterior(2) 24-0-0 to 38-4-0, Corner(3) 38-4-0 to 41-6-12 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) 50, 51, 52, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 47, 46, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 2.

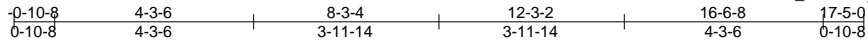


Job 21031265	Truss BGE	Truss Type COMMON STRUCTURAL GA	Qty 1	Ply 1	WAG-1	145480304
-----------------	--------------	------------------------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:18 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-8JMmsBdar\_Mx6aoRyXe7M?lgmsXJbGA3O\_YeV5zUo3Z



4x4 =

Scale = 1:49.6

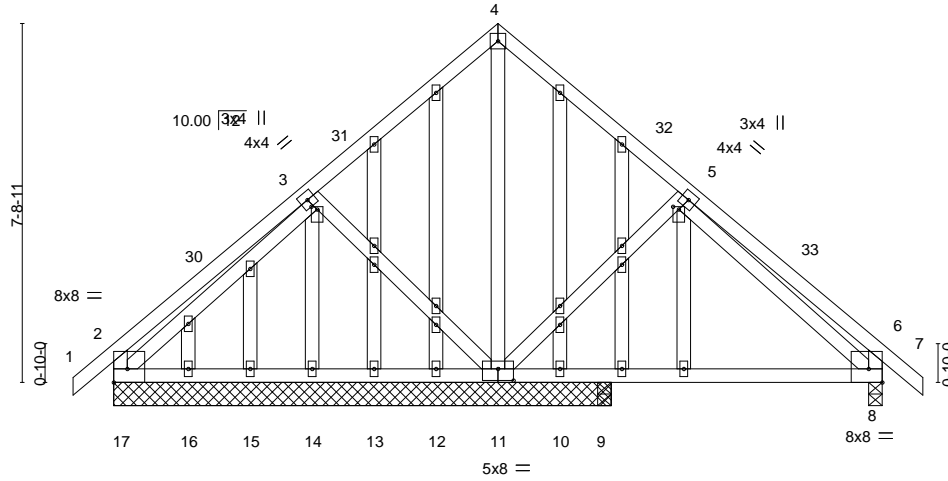


Plate Offsets (X,Y)-- [2:Edge,0-3-8], [3:0-0-11,0-1-8], [5:0-0-11,0-1-8], [8:Edge,0-3-8], [11:0-4-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.23	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.25	Vert(LL) -0.02 8-9 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.24	Vert(CT) -0.05 8-9 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.00 8 n/a n/a		
	Code IRC2015/TPI2014			Weight: 152 lb	FT = 20%

**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, excepting end verticals.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** All bearings 10-8-8 except (jt=length) 8=0-3-8, 9=0-3-8.  
 (lb) - Max Horz 17=154(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 17, 8, 16 except 11=139(LC 10), 10=127(LC 3)  
 Max Grav All reactions 250 lb or less at joint(s) 12, 13, 14, 15, 16 except 11=542(LC 1), 17=322(LC 21), 8=356(LC 22), 9=291(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 6-8=267/115

- 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 5-3-4, Exterior(2) 5-3-4 to 11-3-4, Interior(1) 11-3-4 to 14-5-0, Exterior(2) 14-5-0 to 17-5-0 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 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) 17, 8, 16 except (jt=lb) 11=139, 10=127.
  - 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 5, 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 21031265	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply 2	WAG-1	145480305
-----------------	--------------	-----------------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:21 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-Yu1vUCfS8vkWz2X0dfBq\_dN5g4UuoVEV4ymI6PzUo3W



Scale: 1/4"=1'

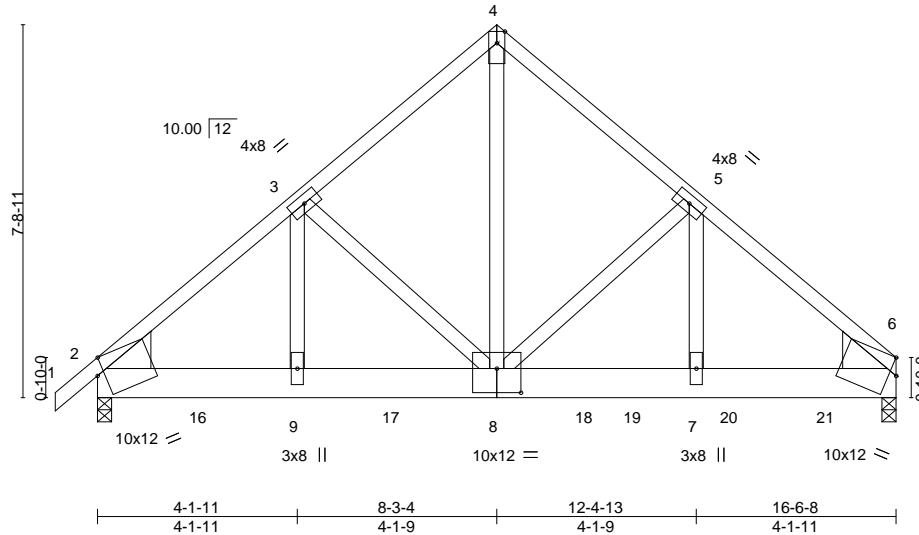


Plate Offsets (X, Y)--	[2:0-1-12,Edge], [6:0-1-12,Edge], [8:0-6-0,0-6-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.64	Vert(LL) -0.10 7-8 >999 360	MT20	137/130
TCDL 10.0	Lumber DOL 1.15	BC 0.45	Vert(CT) -0.19 7-8 >999 240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.74	Horz(CT) 0.03 6 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MSH		Weight: 274 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\*  
4-8: 2x4 SP No.1

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-6-3 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**WEDGE**  
Left: 2x10 SP No.2 , Right: 2x10 SP No.2

**REACTIONS.** (size) 6=0-3-8, 2=0-3-8  
Max Horz 2=149(LC 7)  
Max Uplift 6=971(LC 9), 2=737(LC 8)  
Max Grav 6=9869(LC 2), 2=7385(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-8884/895, 3-4=-6796/749, 4-5=-6796/749, 5-6=-9580/963  
BOT CHORD 2-9=-709/6740, 8-9=-709/6740, 7-8=-695/7277, 6-7=-695/7277  
WEBS 4-8=-868/8382, 5-8=-2832/395, 5-7=-332/3553, 3-8=-2103/319, 3-9=-237/2622

- NOTES-**
- 2-ply truss to be connected together with 10d (0.148"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 1-1/2x7-1/4 - 2 rows staggered at 0-5-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; 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) 6=971, 2=737.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1783 lb down and 188 lb up at 2-0-12, 1783 lb down and 188 lb up at 4-0-12, 1783 lb down and 188 lb up at 6-0-12, 1783 lb down and 188 lb up at 8-0-12, 1783 lb down and 188 lb up at 10-0-12, 1783 lb down and 188 lb up at 11-0-12, 1783 lb down and 188 lb up at 13-0-12, and 1783 lb down and 188 lb up at 15-0-12, and 1789 lb down and 182 lb up at 16-2-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

Continued on page 2



**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 21031265	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply <b>2</b>	WAG-1 Job Reference (optional)	I45480305
-----------------	--------------	-----------------------------	----------	-----------------	-----------------------------------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:21 2021 Page 2  
ID:V014ezS7ueHw4TfvJfXVPZz1m7N-Yu1vUCfS8vkWz2X0dfBq\_dN5g4UuoVEV4ymI6PzUo3W

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-4=-60, 4-6=-60, 10-13=-20

Concentrated Loads (lb)

Vert: 8=-1701(B) 9=-1701(B) 12=-1708(B) 16=-1701(B) 17=-1701(B) 18=-1701(B) 19=-1701(B) 20=-1701(B) 21=-1701(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



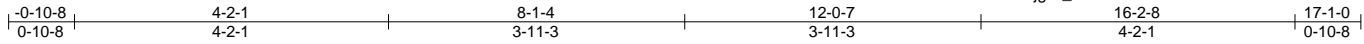
818 Soundside Road  
Edenton, NC 27932

Job 21031265	Truss C	Truss Type COMMON	Qty 1	Ply 1	WAG-1	145480306
-----------------	------------	----------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:23 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-VH9fvuhjgW\_EDLhPk4DI32SYct9QGYXoYGFBlzUo3U



Scale = 1:30.6

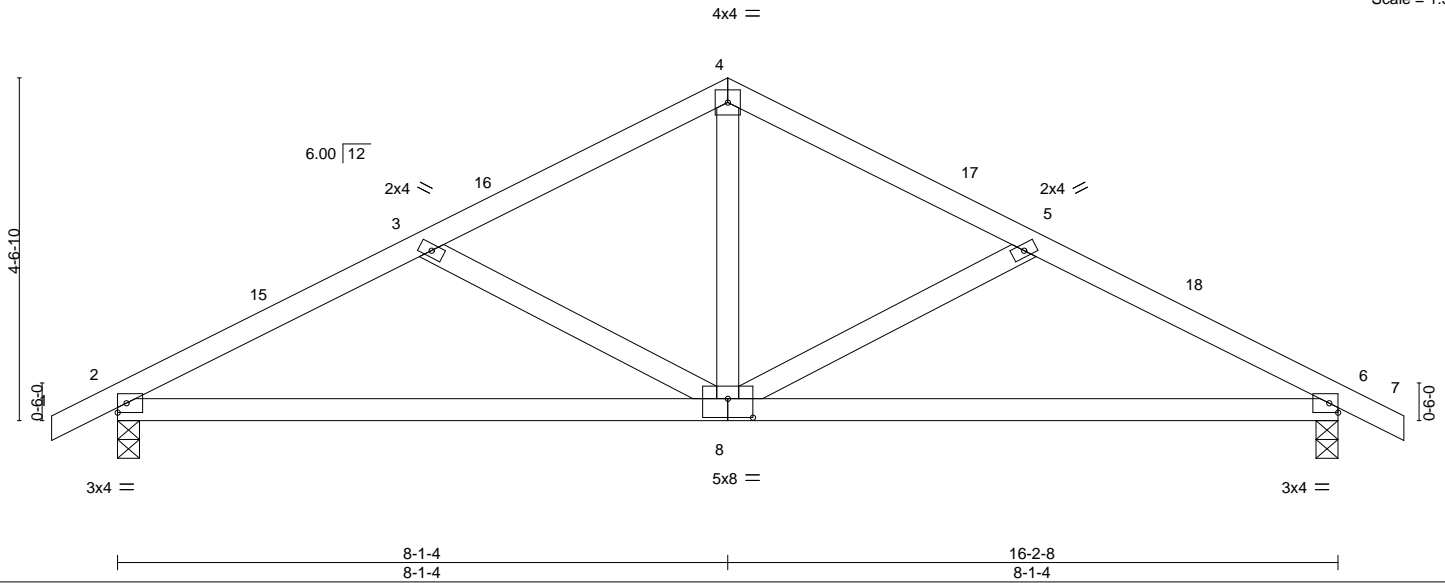


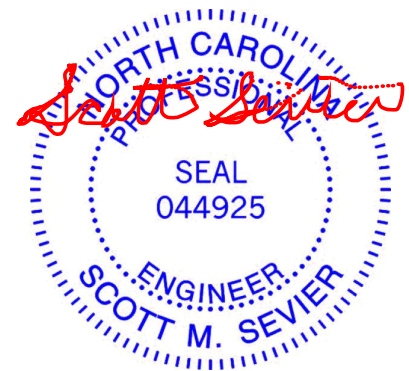
Plate Offsets (X,Y)--	[8:0-4-0,0-3-0]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.16	Vert(LL)	-0.07	8-11	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.57	Vert(CT)	-0.14	8-11	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.17	Horz(CT)	0.02	6	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-AS						Weight: 73 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.2	BOT CHORD	Rigid ceiling directly applied.
WEBS	2x4 SP No.3		

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8  
 Max Horz 2=61(LC 10)  
 Max Uplift 2=-74(LC 10), 6=-74(LC 11)  
 Max Grav 2=701(LC 1), 6=701(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1038/177, 3-4=-785/138, 4-5=-785/138, 5-6=-1038/177  
 BOT CHORD 2-8=-111/885, 6-8=-87/885  
 WEBS 4-8=-8/452, 5-8=-282/125, 3-8=-282/124

- 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 5-1-4, Exterior(2) 5-1-4 to 11-1-4, Interior(1) 11-1-4 to 14-1-0, Exterior(2) 14-1-0 to 17-1-0 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 5, 2021

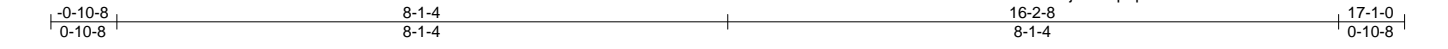


Job 21031265	Truss CGE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	WAG-1	145480307
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:26 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-vsroXwjbzRmp4pPzQDn?hh44a5IITwWEEDU3ndzUo3R



Scale = 1:30.6

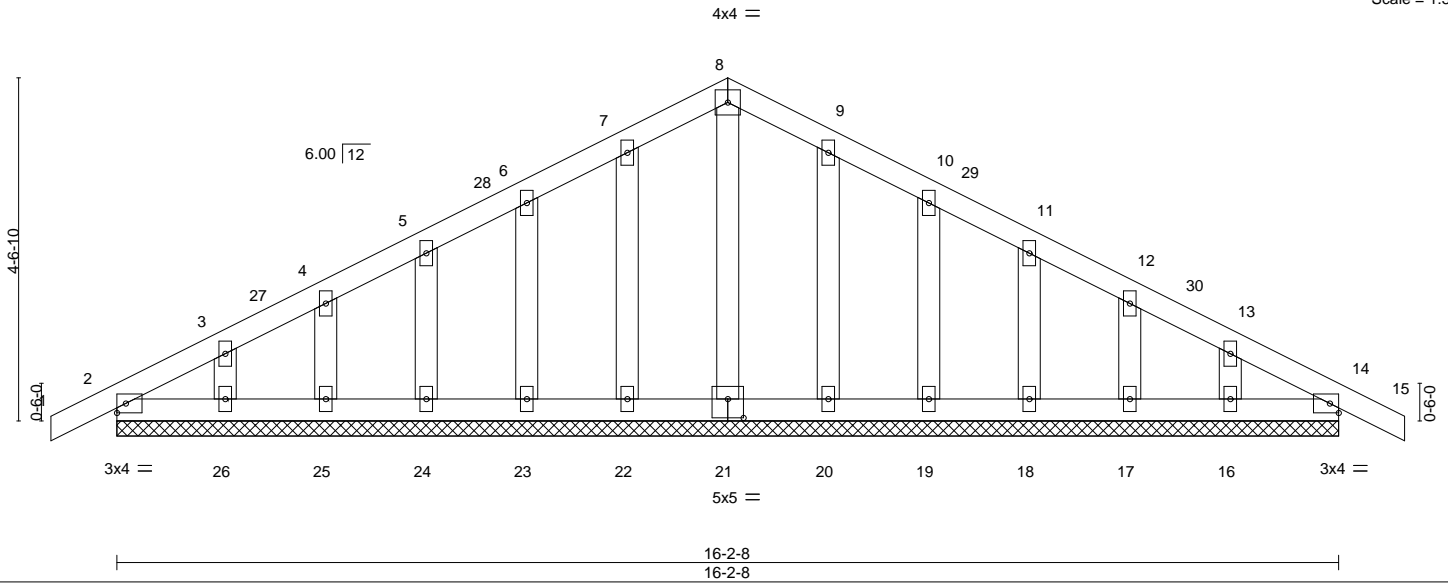


Plate Offsets (X,Y)--	[21:0-2-8,0-3-0]
-----------------------	------------------

<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 0.02	Vert(CT)	-0.00	15	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: 90 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 16-2-8.  
 (lb) - Max Horz 2=61(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 22, 23, 24, 25, 26, 20, 19, 18, 17, 16, 14  
 Max Grav All reactions 250 lb or less at joint(s) 2, 21, 22, 23, 24, 25, 26, 20, 19, 18, 17, 16, 14

**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 2-1-8, Exterior(2) 2-1-8 to 5-1-4, Corner(3) 5-1-4 to 11-1-4, Exterior(2) 11-1-4 to 14-1-0, Corner(3) 14-1-0 to 17-1-0 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, 22, 23, 24, 25, 26, 20, 19, 18, 17, 16, 14.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.



Job 21031265	Truss CGR	Truss Type COMMON GIRDER	Qty 1	Ply 3	WAG-1	145480308
-----------------	--------------	-----------------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:28 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-rEyYckrV2cXJ7ZMXdpTm6AIDur0xeUXhXzAsVzUo3P



4x10 =

Scale = 1:30.3

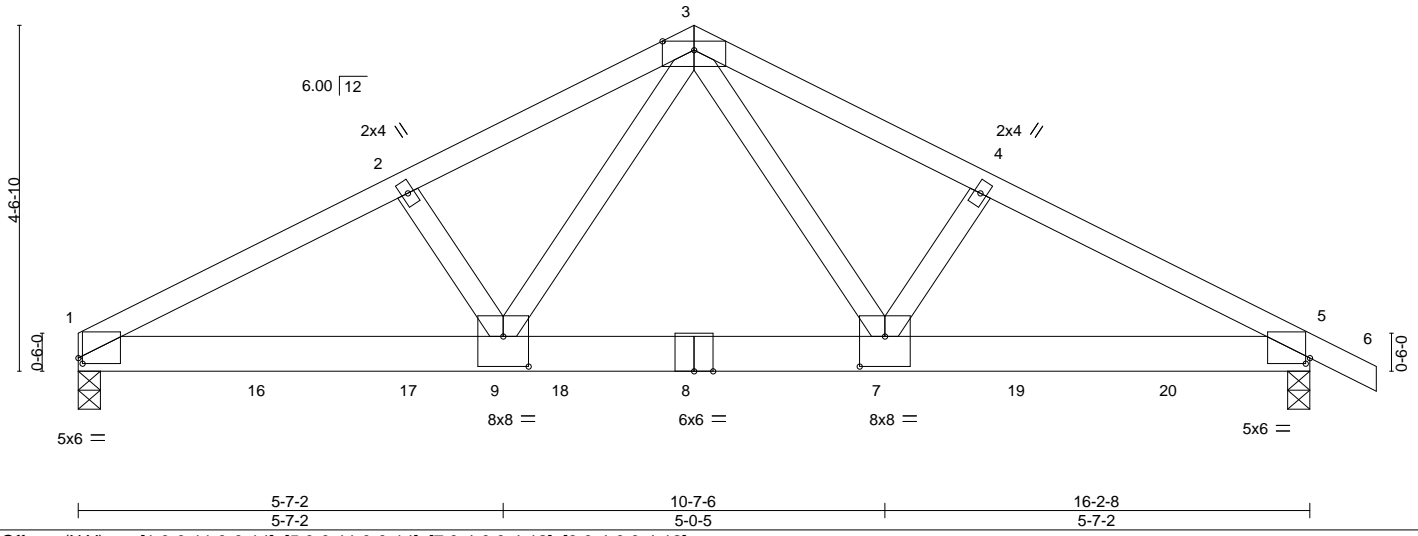


Plate Offsets (X, Y)-- [1:0-0-11,0-0-14], [5:0-0-11,0-0-14], [7:0-4-0,0-4-12], [9:0-4-0,0-4-12]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.55	Vert(LL)	-0.10	7-9	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.61	Vert(CT)	-0.19	7-9	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.83	Horz(CT)	0.03	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MSH						
								Weight: 261 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 5-9-15 oc purlins.
BOT CHORD 2x6 SP DSS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 1=0-3-8, 5=0-3-8  
 Max Horz 1=-67(LC 13)  
 Max Uplift 1=-756(LC 8), 5=-663(LC 9)  
 Max Grav 1=8140(LC 2), 5=6984(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-11656/1097, 2-3=-11553/1106, 3-4=-11355/1086, 4-5=-11454/1077  
 BOT CHORD 1-9=-990/10426, 7-9=-630/7201, 5-7=-910/10241  
 WEBS 3-7=-549/5678, 4-7=-254/113, 3-9=-582/6018, 2-9=-270/115

- 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 0-5-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; 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) 1=756, 5=663.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1748 lb down and 165 lb up at 0-4-12, 1742 lb down and 171 lb up at 2-4-12, 1742 lb down and 171 lb up at 4-4-12, 1742 lb down and 171 lb up at 6-4-12, 1742 lb down and 171 lb up at 8-4-12, 1742 lb down and 171 lb up at 10-4-12, and 1742 lb down and 171 lb up at 12-4-12, and 1742 lb down and 171 lb up at 14-4-12 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  
 Uniform Loads (plf)  
 Vert: 1-3=-60, 3-6=-60, 10-13=-20



April 5, 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.**  
 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 21031265	Truss CGR	Truss Type COMMON GIRDER	Qty 1	Ply <b>3</b>	WAG-1 Job Reference (optional)	145480308
-----------------	--------------	-----------------------------	----------	-----------------	-----------------------------------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:28 2021 Page 2  
ID:V014ezS7ueHw4TfvJfXVPZz1m7N-rEyYyckrV2cXJ7ZMXdpTm6AIDur0xeUXhXzAsVzUo3P

**LOAD CASE(S)** Standard

Concentrated Loads (lb)

Vert: 8=-1648(F) 7=-1648(F) 12=-1654(F) 16=-1648(F) 17=-1648(F) 18=-1648(F) 19=-1648(F) 20=-1648(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 21031265	Truss DGE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	WAG-1	I45480309
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

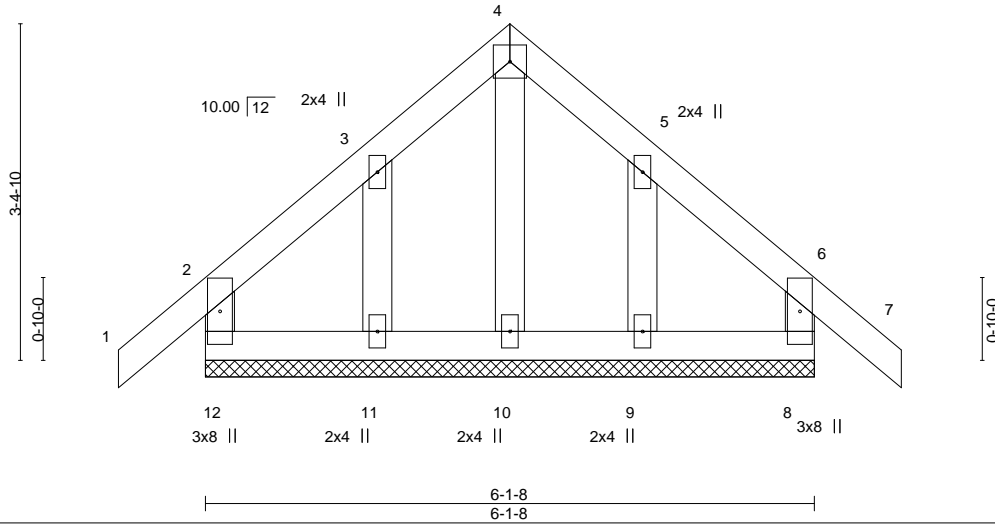
8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:29 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-JRWwAyIUGMkNxG8Y5LKjJia7IKPgHKgwBikOyzUo3O



4x4 =

Scale = 1:23.2



<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 0.10	Vert(LL)	-0.00	7	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	7	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R					Weight: 35 lb	FT = 20%

**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 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** All bearings 6-1-8.  
(lb) - Max Horz 12=66(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 12, 8, 11, 9  
Max Grav All reactions 250 lb or less at joint(s) 12, 8, 10, 11, 9

**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) 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.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 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) 12, 8, 11, 9.



April 5, 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

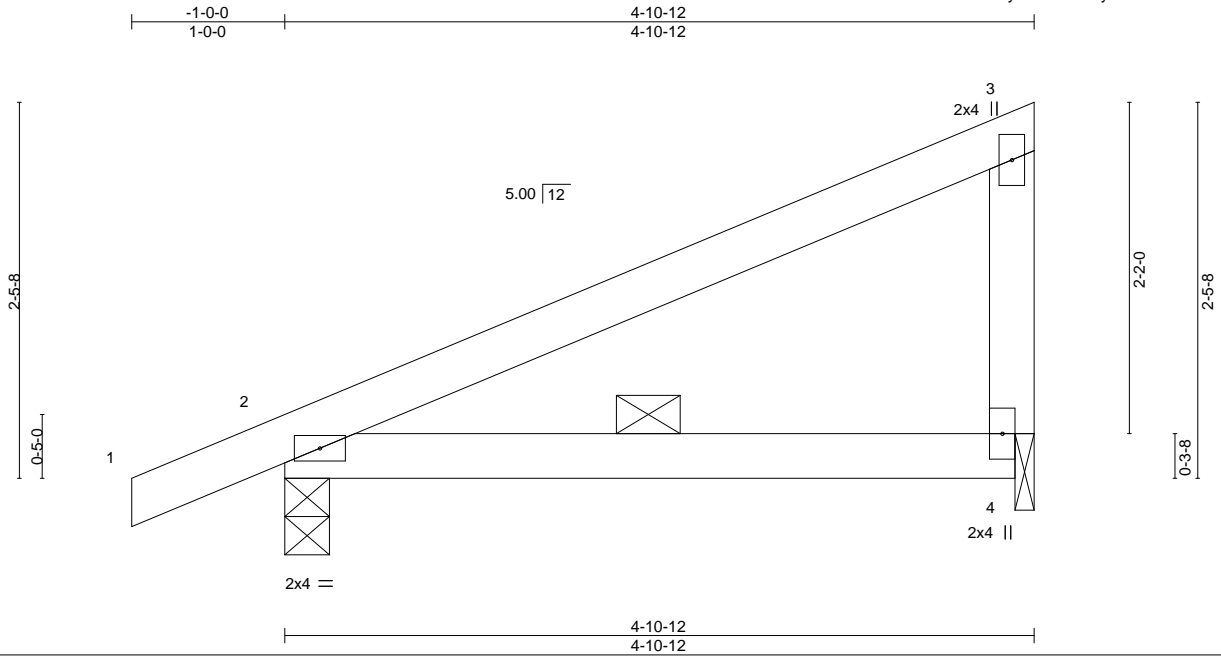
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 21031265	Truss H	Truss Type Monopitch	Qty 5	Ply 1	WAG-1	145480310
-----------------	------------	-------------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:32 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-k?C3ozoMYH6yokt7mTuPxyK28WIYteR6c9xO?HzUo3L



Scale = 1:15.1

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 0.30	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-**  
 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, except end verticals.  
 BOT CHORD 3-0-0 oc bracing.

**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 5, 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

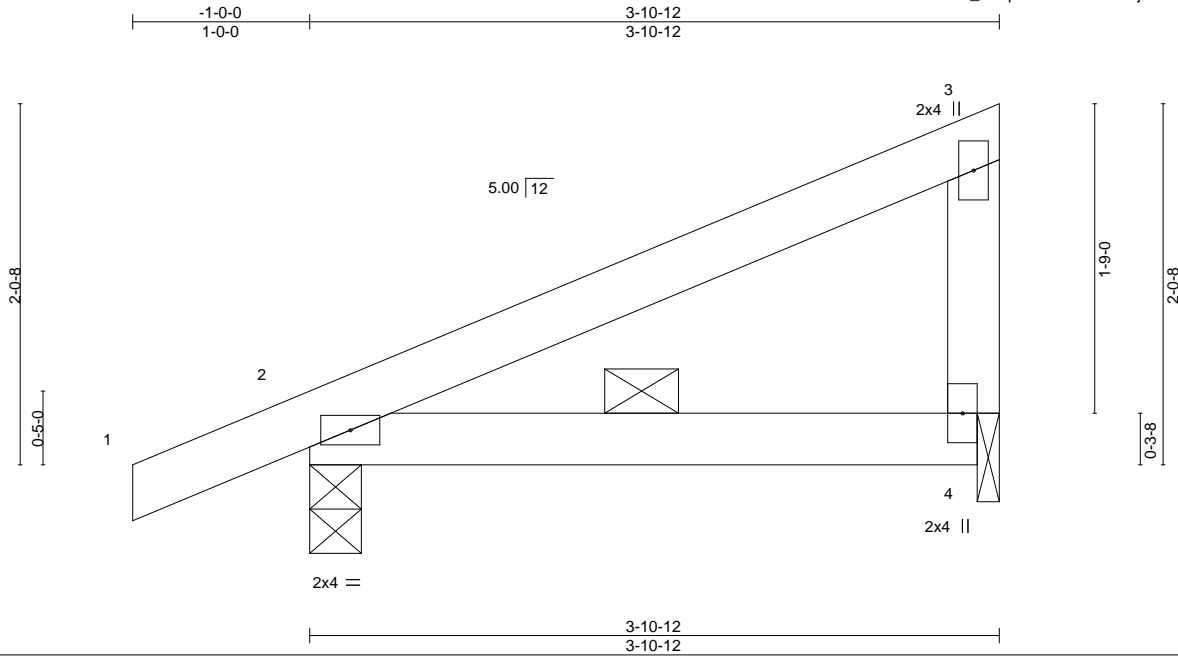


818 Soundside Road  
 Edenton, NC 27932

Job 21031265	Truss H1	Truss Type Monopitch	Qty 3	Ply 1	WAG-1	I45480311
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:33 2021 Page 1  
ID:V014ezS7ueHw4TfvJfXVPZz1m7N-CCmR?Jo\_JbEpPuSKKBPeT9tFjvfc5hGrpgxXjzUo3K



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	4-7	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.15	Vert(CT)	-0.02	4-7	>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: 16 lb	FT = 20%
	Code IRC2015/TPI2014							

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-10-12 oc purlins, 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=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) 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.



April 5, 2021



Job 21031265	Truss H2GE	Truss Type GABLE	Qty 1	Ply 1	WAG-1	145480312
-----------------	---------------	---------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:34 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-gOKpDfpc4uNg121Wuuwt0NQLTJxJULYxP3TQU39zUo3J



Scale = 1:17.1

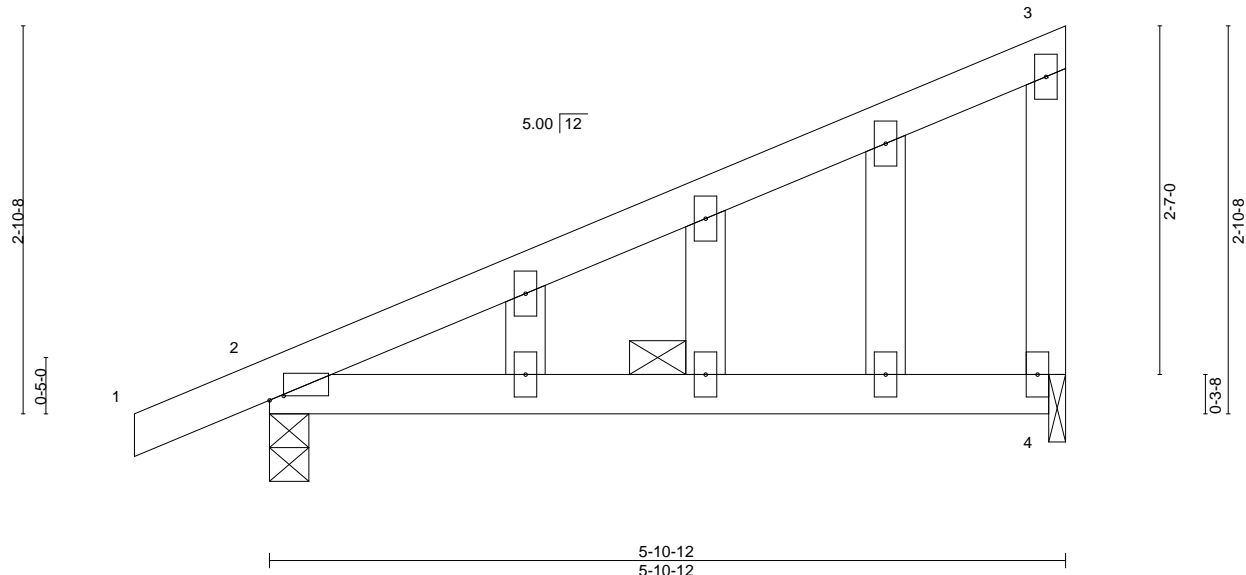


Plate Offsets (X,Y)--	[2:0-1-4,0-0-6]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.50	Vert(LL) -0.04 4-13 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.41	Vert(CT) -0.11 4-13 >632 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.01 2 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MP		Weight: 29 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 5-10-12 oc purlins, 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=87(LC 10)  
 Max Uplift 2=-35(LC 10), 4=-49(LC 10)  
 Max Grav 2=295(LC 1), 4=225(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) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable studs spaced at 1-4-0 oc.
- 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) 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.
- 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



Job 21031265	Truss HGE	Truss Type GABLE	Qty 1	Ply 1	WAG-1	145480313
-----------------	--------------	---------------------	----------	----------	-------	-----------

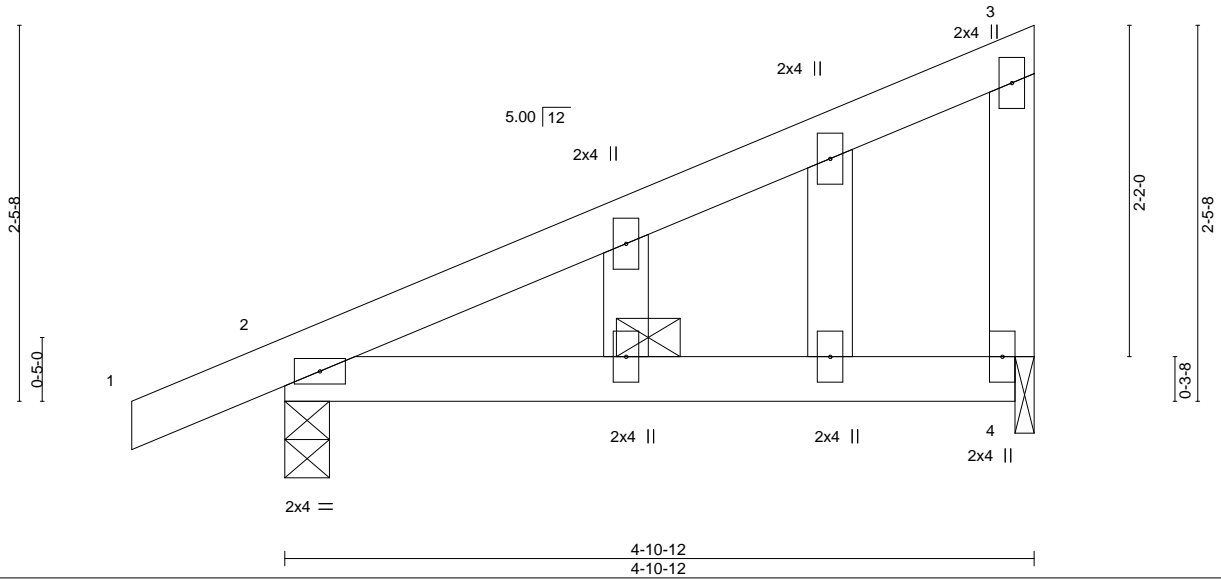
The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:42 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-RxpruOvdCMNX\_Ge2Ma3IK3lldYjuDAwbvjMwMhzUo3B



Scale = 1:15.1



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 0.30	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-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 OTHERS 2x4 SP No.3

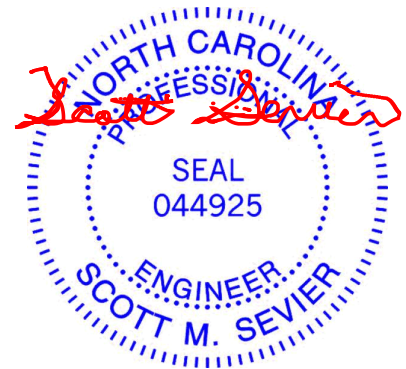
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD 3-0-0 oc bracing.

**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 5, 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



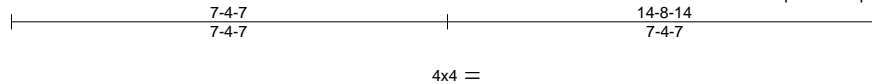
818 Soundside Road  
 Edenton, NC 27932

Job 21031265	Truss V01	Truss Type Valley	Qty 1	Ply 1	WAG-1 Job Reference (optional)	145480314
-----------------	--------------	----------------------	----------	----------	-----------------------------------	-----------

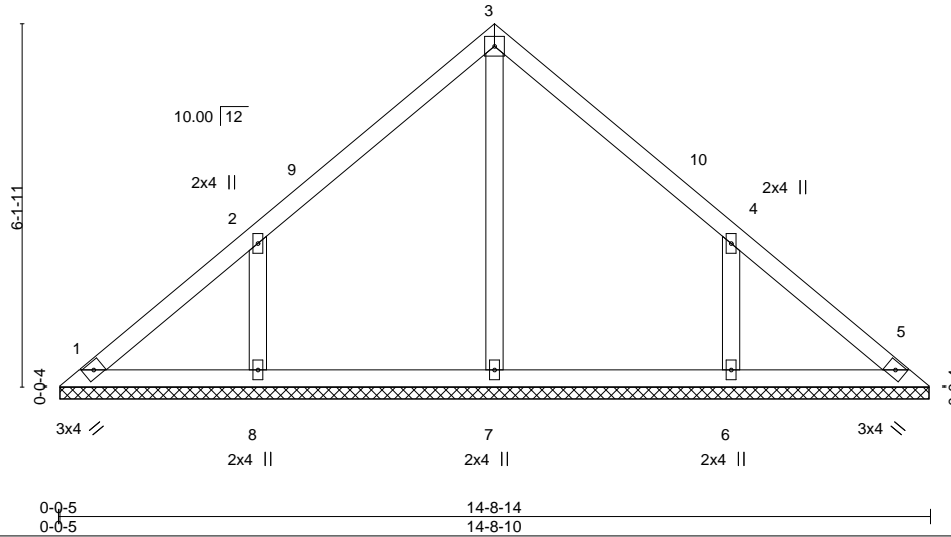
The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:54:52 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-8sPd?p1vrQe7BpPzxf5kA9VzZ9NZgo3CGnRi6zUo31



Scale = 1:38.9



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.18	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 0.10	Horz(CT)	0.00	5	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 64 lb	FT = 20%

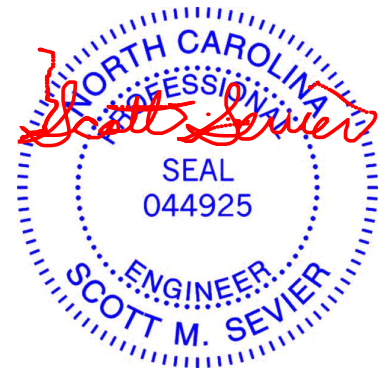
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**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 14-8-5.  
(lb) - Max Horz 1=117(LC 7)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=144(LC 10), 6=144(LC 11)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=347(LC 17), 6=346(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-8=-266/179, 4-6=-266/179

- 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) 0-4-13 to 3-4-7, Interior(1) 3-4-7 to 4-4-7, Exterior(2) 4-4-7 to 10-4-7, Interior(1) 10-4-7 to 11-4-1, Exterior(2) 11-4-1 to 14-4-1 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=144, 6=144.



April 5, 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 21031265	Truss V02	Truss Type Valley	Qty 1	Ply 1	WAG-1	145480315
-----------------	--------------	----------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

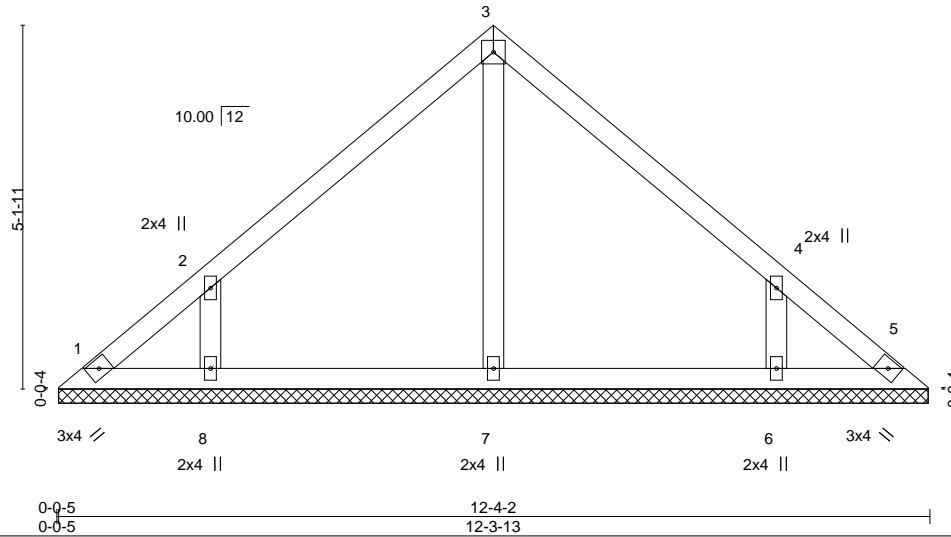
8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:55:03 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-KzanlaApFp0Z0VvK54UxghU6NH?wpeeZgkUxXa\_zUo2s



4x4 =

Scale = 1:32.6



<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 0.18	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 0.07	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-S					Weight: 51 lb	FT = 20%

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

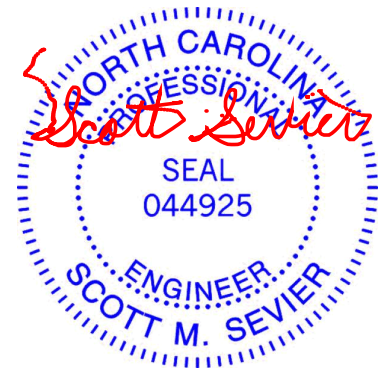
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 12-3-8.  
(lb) - Max Horz 1=97(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=132(LC 10), 6=131(LC 11)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=309(LC 17), 6=309(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=132, 6=131.



April 5, 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 21031265	Truss V03	Truss Type Valley	Qty 1	Ply 1	WAG-1	145480316
-----------------	--------------	----------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

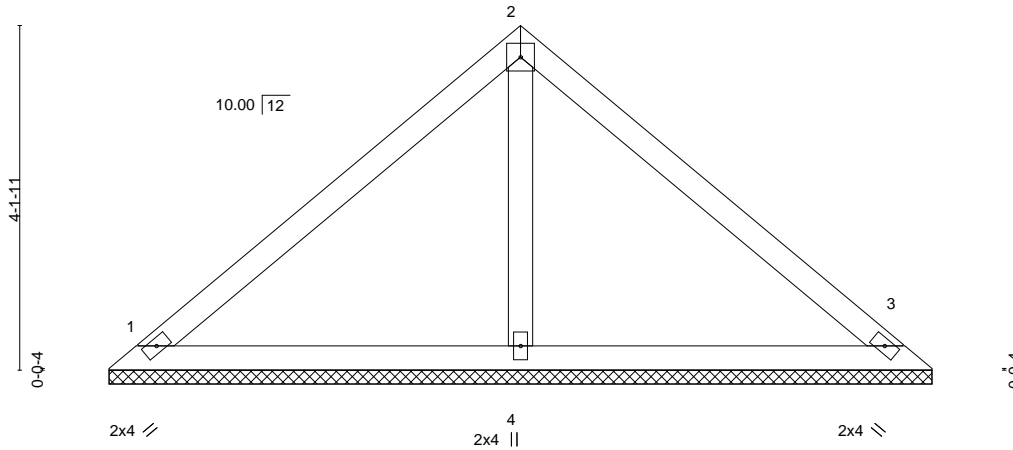
8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:55:05 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-GMIXjFB3nQGHFouTCv\_8mVChpZw6YazCoQdfsUo2q



4x4 =

Scale = 1:27.7



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.30	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.21	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.07	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S					Weight: 38 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=9-10-11, 3=9-10-11, 4=9-10-11  
 Max Horz 1=77(LC 7)  
 Max Uplift 1=25(LC 11), 3=35(LC 11), 4=-4(LC 10)  
 Max Grav 1=193(LC 1), 3=193(LC 1), 4=344(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 5, 2021

Job 21031265	Truss V04	Truss Type Valley	Qty 1	Ply 1	WAG-1 Job Reference (optional)	145480317
-----------------	--------------	----------------------	----------	----------	-----------------------------------	-----------

The Building Center, Gastonia, NC - 28052,

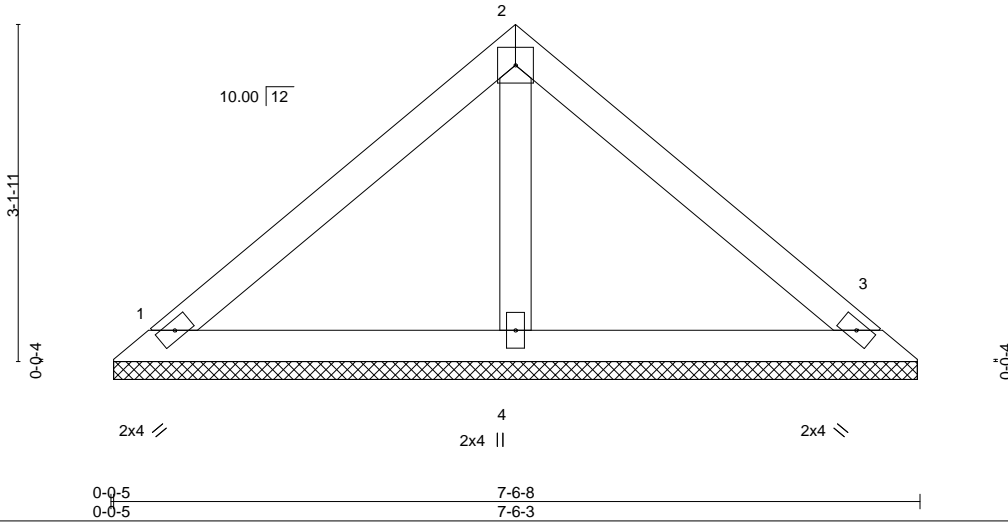
8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:55:08 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-gxNgLHDx4Lfr6Gd2t1XrOYqDP0d5JwqQumflFBzUo2n



4x4 =

Scale = 1:21.5



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.22	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 0.03	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P					Weight: 28 lb	FT = 20%
	Code IRC2015/TPI2014							

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

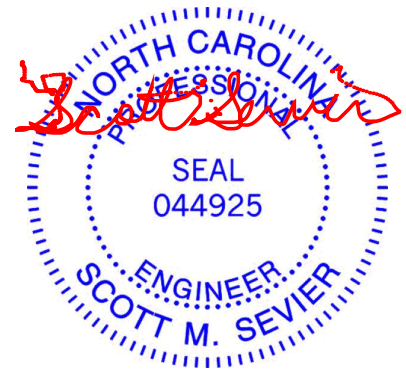
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=7-5-14, 3=7-5-14, 4=7-5-14  
 Max Horz 1=57(LC 6)  
 Max Uplift 1=26(LC 11), 3=33(LC 11)  
 Max Grav 1=155(LC 1), 3=155(LC 1), 4=230(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.



April 5, 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



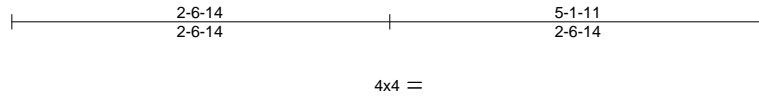
818 Soundside Road  
 Edenton, NC 27932



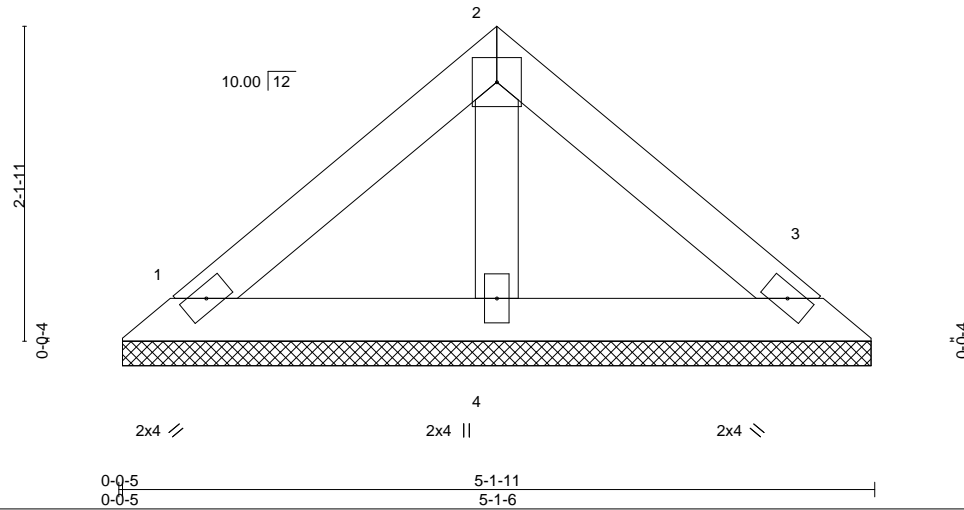
Job 21031265	Truss V05	Truss Type Valley	Qty 1	Ply 1	WAG-1	145480318
-----------------	--------------	----------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:55:12 2021 Page 1  
ID:V014ezS7ueHw4TfvJfXVPZz1m7N-ZidABfHS7a9Hbtwp6tcnYO\_xSd?4Fk2?pNdVOyzUo2j



Scale = 1:15.7



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.08	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.05	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.02	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P						
	Code IRC2015/TPI2014						Weight: 18 lb	FT = 20%

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

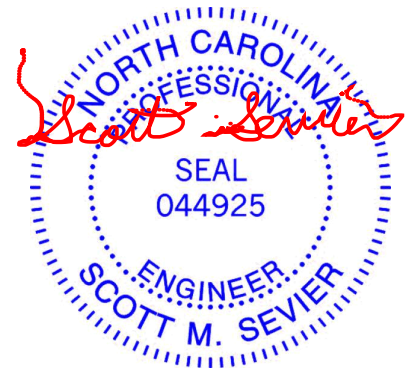
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-1-11 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=5-1-2, 3=5-1-2, 4=5-1-2  
Max Horz 1=-37(LC 8)  
Max Uplift 1=-17(LC 11), 3=-21(LC 11)  
Max Grav 1=100(LC 1), 3=100(LC 1), 4=148(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 5, 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



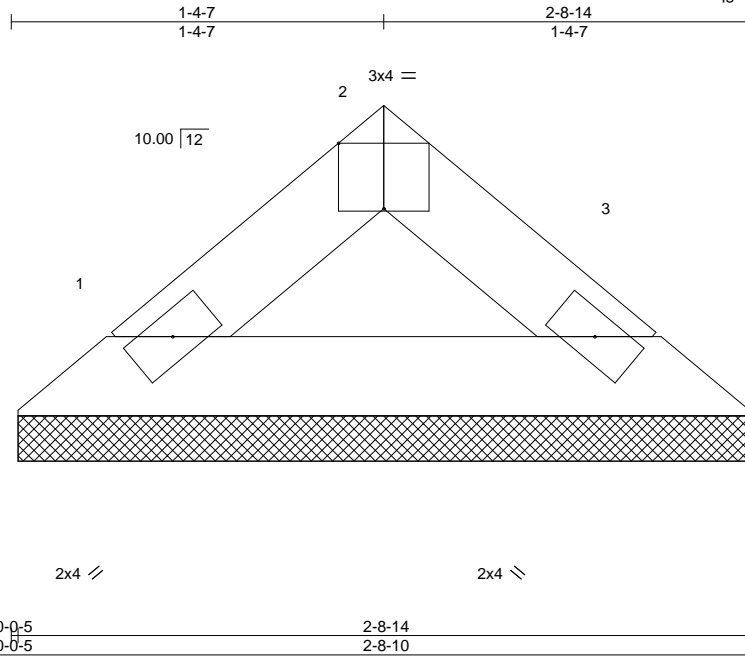
818 Soundside Road  
Edenton, NC 27932

Job 21031265	Truss V06	Truss Type Valley	Qty 1	Ply 1	WAG-1	145480319
-----------------	--------------	----------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:55:15 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-zHlJqgJKQVXsSLfOn?9UA0cSnr1tS55RVLr9?HzUo2g



Scale = 1:8.5

Plate Offsets (X,Y)-- [2:0-2-0,Edge]		CSI.				DEFL.				PLATES	GRIP		
LOADING (psf)	SPACING- 2-0-0	TC	0.01	in (loc)	l/defl	L/d	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCLL 20.0	Plate Grip DOL 1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999	Horz(CT)	0.00	3	n/a	n/a
TCDL 10.0	Lumber DOL 1.15	WB	0.00	Weight: 8 lb	FT = 20%								
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P											
BCDL 10.0	Code IRC2015/TPI2014												

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-8-14 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=2-8-5, 3=2-8-5  
 Max Horz 1=-16(LC 6)  
 Max Uplift 1=-6(LC 10), 3=-6(LC 11)  
 Max Grav 1=77(LC 1), 3=77(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 5, 2021

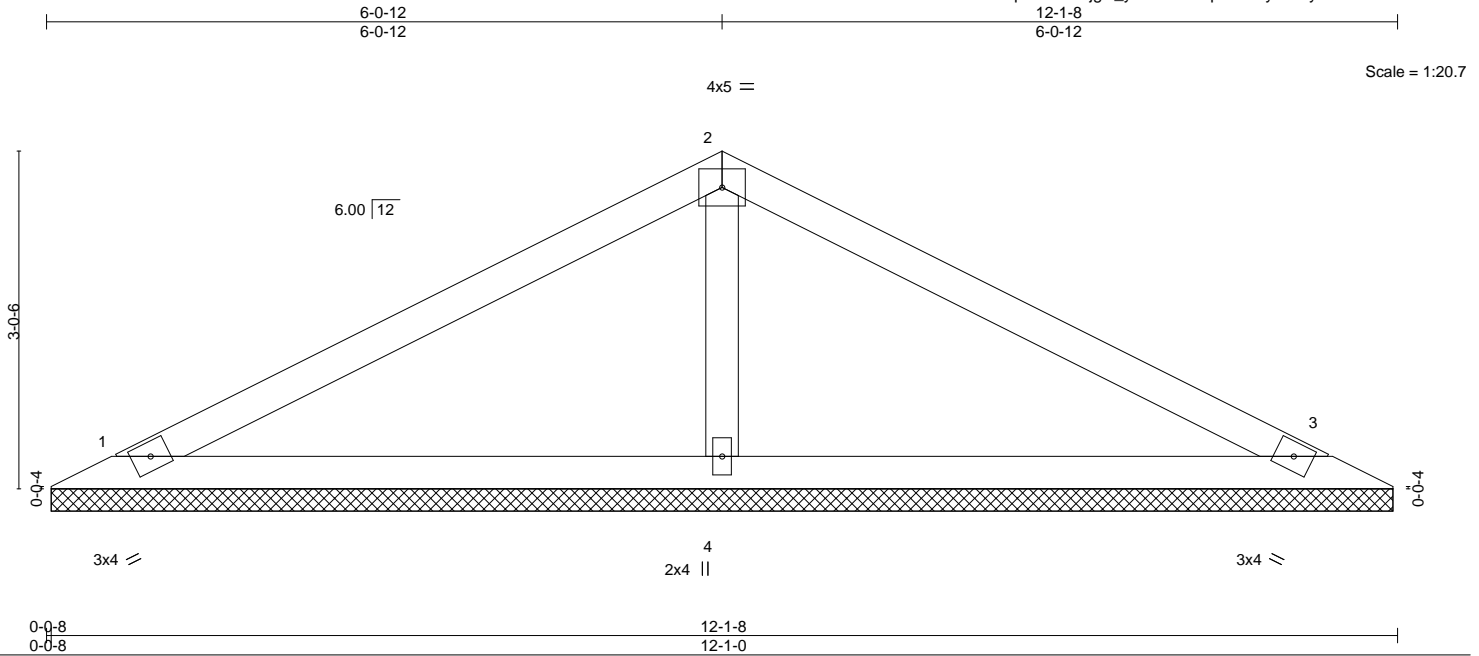
Job 21031265	Truss V07	Truss Type Valley	Qty 1	Ply 1	WAG-1	145480320
-----------------	--------------	----------------------	----------	----------	-------	-----------

The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:55:32 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-zYqkOUW?QjgR\_ySfH4zTMcpG1hmywm9yPVTZ6ozUo2P

Job Reference (optional)



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.43	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.29	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.07	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S						
	Code IRC2015/TPI2014						Weight: 40 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=12-0-8, 3=12-0-8, 4=12-0-8  
 Max Horz 1=37(LC 11)  
 Max Uplift 1=32(LC 10), 3=39(LC 11), 4=16(LC 10)  
 Max Grav 1=200(LC 21), 3=200(LC 22), 4=473(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-314/130

- 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) 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, 3, 4.



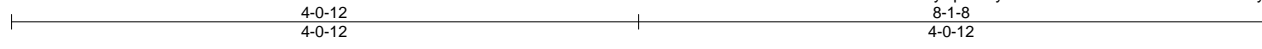
April 5, 2021

Job 21031265	Truss V08	Truss Type Valley	Qty 1	Ply 1	WAG-1	145480321
-----------------	--------------	----------------------	----------	----------	-------	-----------

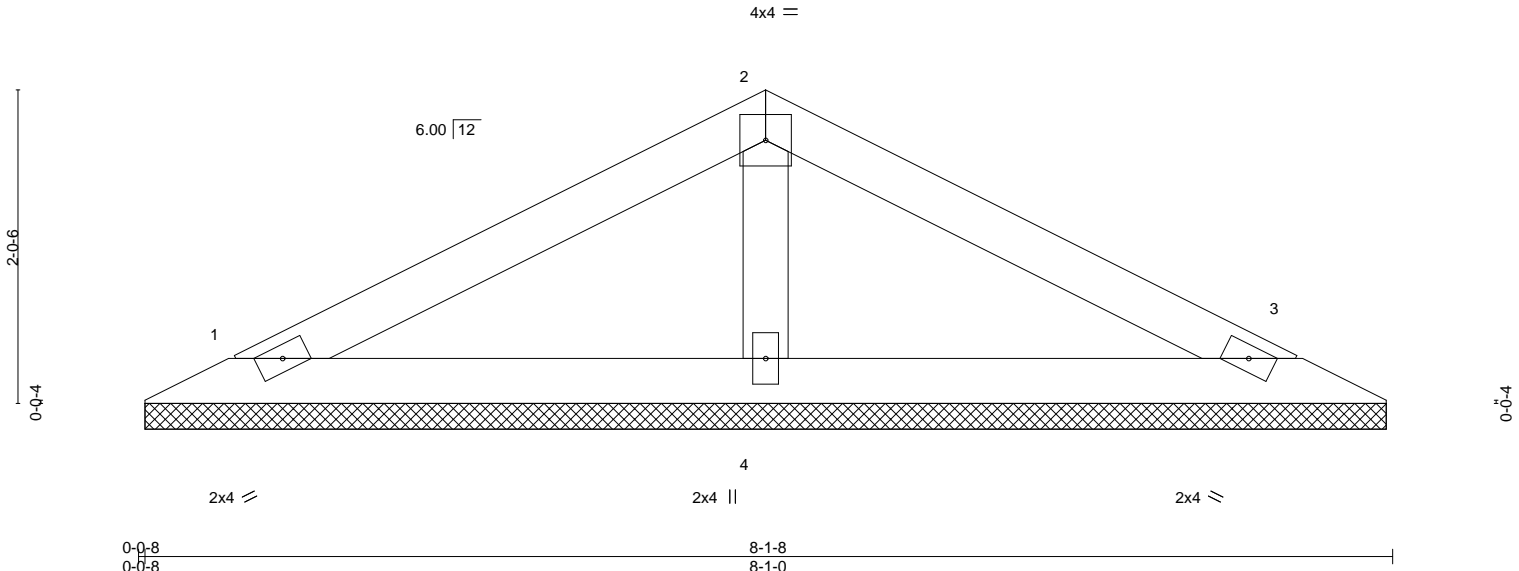
The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:55:34 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-vxyVpAYFyKw9EGc2PV?xR1vfnVV8OhDEsoygAhzUo2N



Scale = 1:14.9



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.22	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 0.04	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P						
	Code IRC2015/TPI2014						Weight: 26 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=8-0-8, 3=8-0-8, 4=8-0-8  
 Max Horz 1=24(LC 14)  
 Max Uplift 1=26(LC 10), 3=30(LC 11)  
 Max Grav 1=139(LC 1), 3=139(LC 1), 4=271(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.

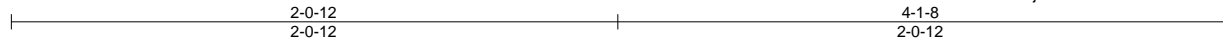


Job 21031265	Truss V09	Truss Type Valley	Qty 1	Ply 1	WAG-1	145480322
-----------------	--------------	----------------------	----------	----------	-------	-----------

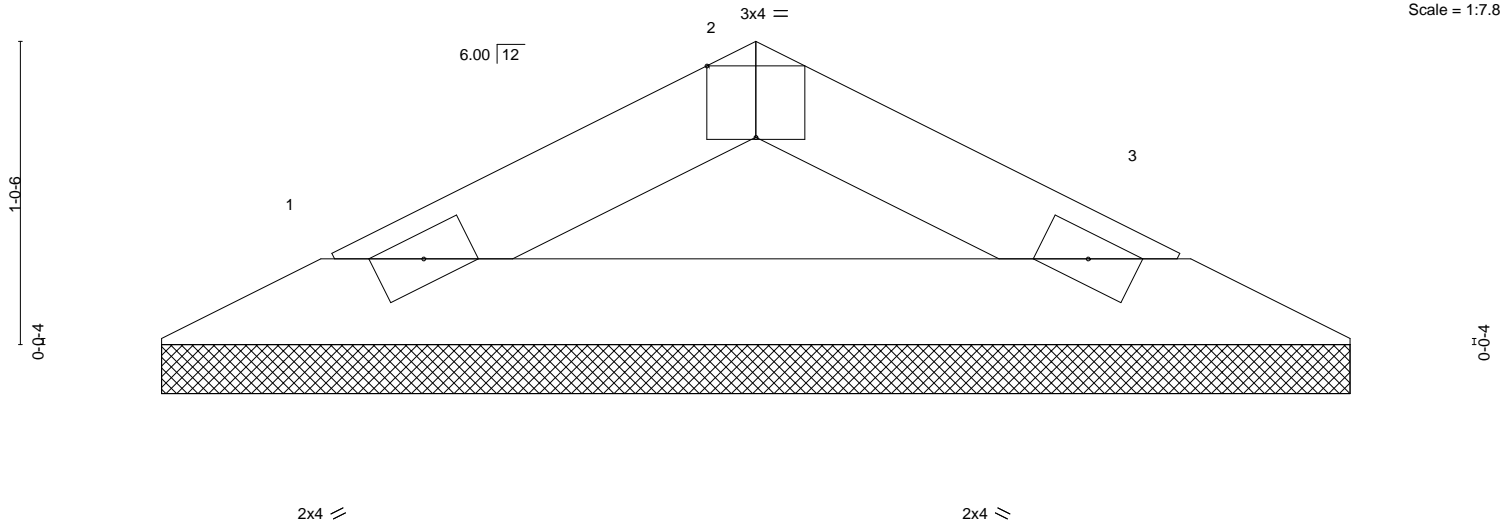
The Building Center, Gastonia, NC - 28052,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 2 09:55:37 2021 Page 1

ID:V014ezS7ueHw4TfvJfXVPZz1m7N-KWddRCa7FFJk5jLd4dYe3fXDuiW8b2XhZmBKn?zUo2K



Scale = 1:7.8



0'-0.8	4'-1-8
0'-0.8	4'-1-0

LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP			
TCLL	20.0	Plate Grip DOL	2-0-0	TC	0.04	Vert(LL)	n/a	(loc)	-	l/defl	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	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%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 4-1-8 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-0-8, 3=4-0-8  
 Max Horz 1=10(LC 14)  
 Max Uplift 1=-10(LC 10), 3=-10(LC 11)  
 Max Grav 1=115(LC 1), 3=115(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 5, 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- 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/TFP 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 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/TFP 1 section 6.3 These truss designs rely on lumber values established by others.

© 2012 MITteK® 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

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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 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/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.