

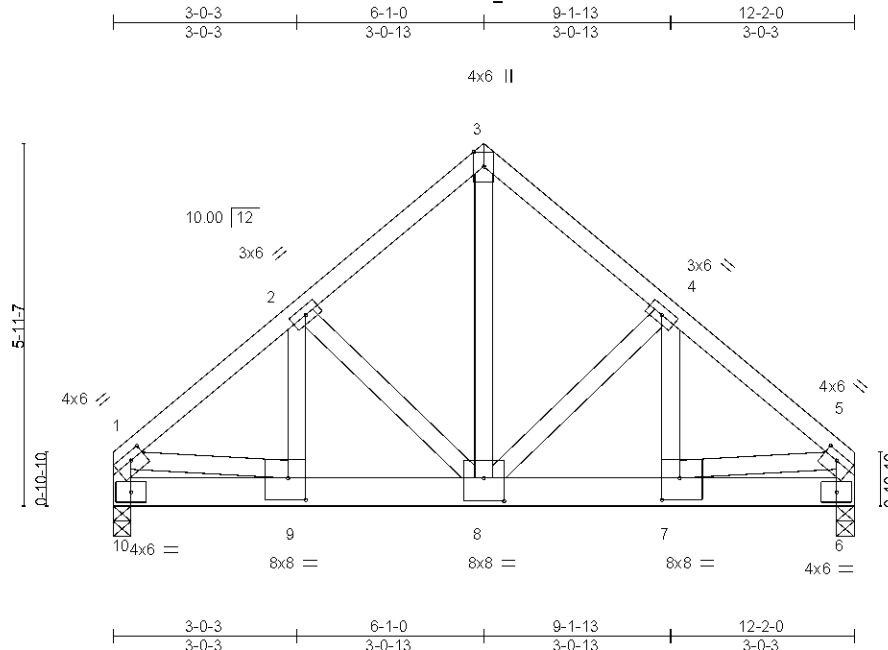
RLH-NM-1006B-PLR00-01

Job ORDERS	Truss SE-19086	Truss Type COMN	Qty 1	Ply 2	11_Southeast-Girder-Int Job Reference (optional)	I49194904
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NVR, Frederick, MD - 21703,

8.530 s Dec 6 2021 MiTek Industries, Inc. Thu Dec 9 21:57:59 2021 Page 1

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Scale = 1:37.8

Plate Offsets (X,Y)--		[1:0-2-12,0-1-8], [5:0-2-12,0-1-8], [7:0-3-8,0-4-4], [8:0-4-0,0-4-8], [9:0-3-8,0-4-4]	
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSL</b>	<b>DEFL.</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.81	in (loc) l/def L/d
TCDL 10.0	Lumber DOL 1.15	BC 0.63	Vert(LL) -0.04 8-9 >999 360
BCLL 0.0 *	Rep Stress Incr NO	WB 0.89	Vert(CT) -0.07 7-8 >999 240
BCDL 10.0	Code IBC2021/TPI2014	Matrix-S	Horz(CT) 0.01 6 n/a n/a
			Wind(LL) 0.02 8-9 >999 240
			<b>PLATES</b> MT20
			<b>GRIP</b> 197/144
			Weight: 177 lb FT = 5%

#### LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3 or 2x4 SPF Stud

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-9-6 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 10=0-3-8, 6=0-3-8  
Max Horz 10=101(LC 6)  
Max Uplift 10=185(LC 8), 6=185(LC 9)  
Max Grav 10=4748(LC 15), 6=4748(LC 16)

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

TOP CHORD 1-2=-4704/203, 2-3=-3503/197, 3-4=-3503/197, 4-5=-4703/203, 1-10=-3667/154, 5-6=-3667/154  
BOT CHORD 9-10=-118/768, 8-9=-163/3617, 7-8=-127/3563, 6-7=-37/696  
WEBS 2-9=-501/531, 3-8=-199/4221, 4-7=-51/1531, 2-8=-1274/118, 4-8=-1275/118, 1-9=-96/2931, 5-7=-98/2934

#### NOTES- (10-12)

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-8-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 10, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=185, 6=185.
- Girder carries tie-in span(s): 37-8-8 from 0-0-0 to 12-2-0
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.

Continued on page 2

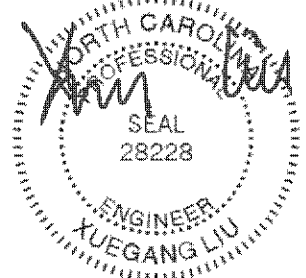
#### LOAD CASE(S) Standard

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



January 12, 2022

ENGINEERING BY  
**TRENCO**  
A MITTEK Affiliate

818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	11_Southeast-Girder-Int
ORDERS	SE-19086	COMN	1	2	I49194904
Job Reference (optional)					

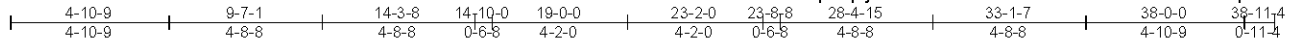
**LOAD CASE(S)** Standard  
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 6-10=-728(B=-708), 1-3=-60, 3-5=-60

Job ORDERS	Truss SE-19090- <b>Cond1</b>	Truss Type COMN	Qty 1	Ply 1	10_Southeast Job Reference (optional)	I49194898
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NVR, Frederick, MD - 21703,

8.530 s Dec 6 2021 MITek Industries, Inc. Thu Dec 9 21:57:17 2021 Page 1

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5x6 =

Scale = 1:71.0

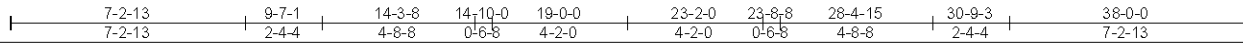
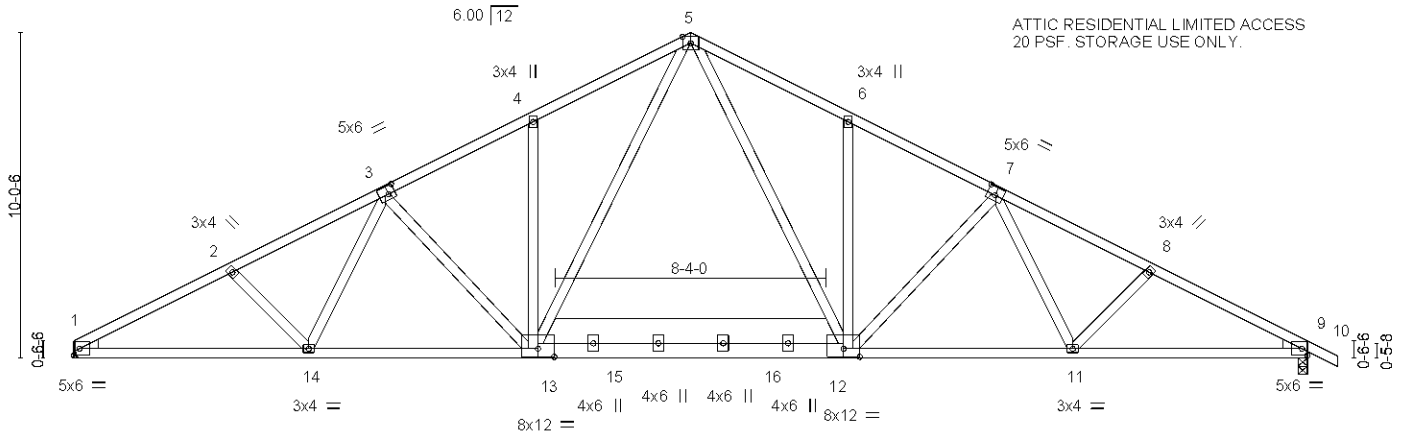


Plate Offsets (X,Y)-- [3:0-2-8,0-3-0], [7:0-3-0,0-3-0], [12:0-6-0,0-3-0], [13:0-6-0,0-3-0]

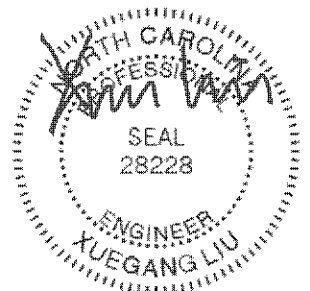
LOADING (psf)	SPACING-	CSL	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.50	Vert(LL) -0.15	13	>999	360		MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.79	Vert(CT) -0.32	13-14	>999	240			
BCLL 0.0 *	Rep Stress Incr YES	WB 0.56	Horz(CT) 0.12	9	n/a	n/a			
BCDL 10.0	Code IBC2021/TPI2014	Matrix-S	Wind(LL) 0.13	13	>999	240		Weight: 264 lb	FT = 5%

LUMBER-	BRACING-	
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 2-11-9 oc purlins.	
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:	
12-13: 2x10 SP No.2, 12-13: 2x6 SP No.2	8-10-12 oc bracing: 1-14.	
WEBS 2x4 SP No.3 or 2x4 SPF Stud		
WEDGE		
Left: 2x4 SP or SPF No.3 or Stud, Right: 2x4 SP or SPF No.3 or Stud		

**REACTIONS.** (size) 1=Mechanical, 9=0-3-8  
Max Horz 1=175(LC 11)  
Max Uplift 1=195(LC 10), 9=218(LC 11)  
Max Grav 1=1511(LC 1), 9=1577(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=2796/378, 2-3=2628/359, 3-4=2244/315, 4-5=2232/413, 5-6=2226/398,  
6-7=2238/300, 7-8=2596/352, 8-9=2769/368  
BOT CHORD 1-14=433/2408, 13-14=318/2234, 12-13=72/1537, 11-12=138/2218, 9-11=251/2360  
WEBS 5-13=246/924, 5-12=237/913, 4-13=291/185, 6-12=290/184, 3-13=393/169,  
7-12=380/176

- NOTES-** (7-9)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=195, 9=218.
  - Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
  - Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
  - Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.



January 12, 2022

**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

ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932

Job ORDERS	Truss SE-19090- <b>Cond2</b>	Truss Type COMN	Qty 1	Ply 1	10_Southeast	I49194898
Job Reference (optional)						

NVR, Frederick, MD - 21703,

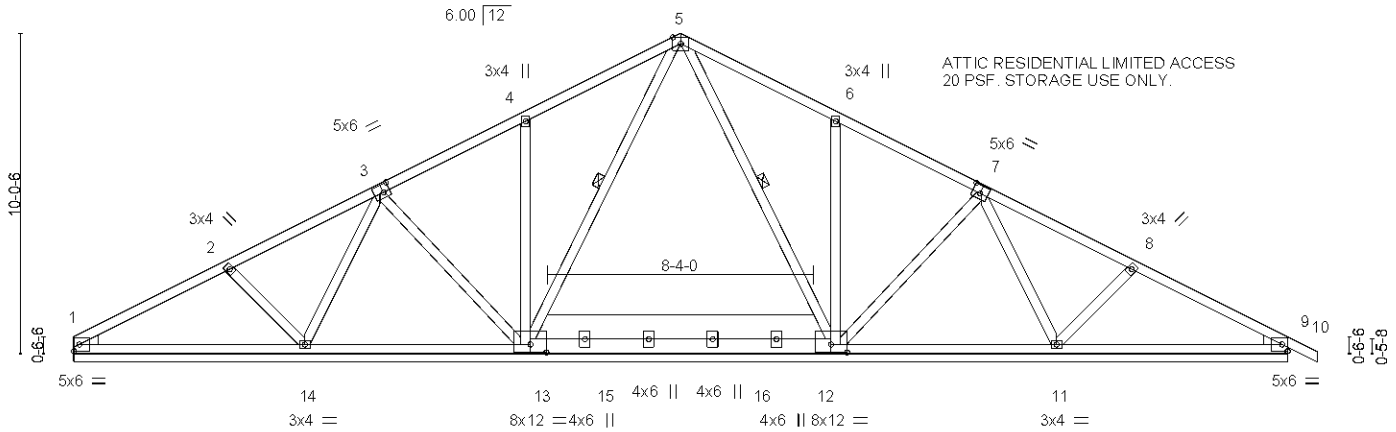
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4-10-9	9-7-1	14-3-8	14-10-0	19-0-0	23-2-0	23-8-8	28-4-15	33-1-7	38-0-0	38-11-4
4-10-9	4-8-8	4-8-8	0-6-8	4-2-0	4-2-0	0-6-8	4-8-8	4-8-8	4-10-9	0-11-4

5x6 =

Scale = 1:72.1



7-2-13	9-7-1	14-3-8	14-10-0	19-0-0	23-2-0	23-8-8	28-4-15	30-9-3	38-0-0
7-2-13	2-4-4	4-8-8	0-6-8	4-2-0	4-2-0	0-6-8	4-8-8	2-4-4	7-2-13

Plate Offsets (X,Y)-- [3:0-2-8,0-3-0], [7:0-3-0,0-3-0], [12:0-6-0,0-3-0], [13:0-6-0,0-3-0]

LOADING (psf)	SPACING-	CSL	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.31	Vert(LL) 0.01	10	n/r	120		MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.45	Vert(CT) 0.03	10	n/r	120			
BCLL 0.0 *	Rep Stress Incr YES	WB 0.33	Horz(CT) 0.01	9	n/a	n/a			
BCDL 10.0	Code IBC2021/TPI2014	Matrix-S							
Weight: 264 lb									FT = 5%

LUMBER-	BRACING-	[MCT]
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.	
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.	
12-13: 2x10 SP No.2, 12-13: 2x6 SP No.2	WEBS 1 Row at midpt 5-13, 5-12	
WEBS 2x4 SP No.3 or 2x4 SPF Stud		
WEDGE		
Left: 2x4 SP or SPF No.3 or Stud, Right: 2x4 SP or SPF No.3 or Stud		

**REACTIONS.** All bearings 38-0-0.  
 (lb) - Max Horz 1=175(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 11 except 13=169(LC 10), 12=151(LC 11), 14=108(LC 10)  
 Max Grav All reactions 250 lb or less at joint(s) 1 except 13=660(LC 1), 12=661(LC 1), 9=304(LC 24), 14=621(LC 23), 11=615(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 4-13=300/186, 6-12=299/186, 2-14=302/187, 3-14=264/68, 8-11=296/179, 7-11=264/44

- NOTES-** (7-9)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 11 except (jt=lb) 13=169, 12=151, 14=108.
  - Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
  - Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
  - Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

ENGINEERING BY  
**TRENCO**  
 A MITEK Affiliate

818 Soundside Road  
 Edenton, NC 27932

Job ORDERS	Truss SE-19091- <b>Cond1</b>	Truss Type COMN	Qty 1	Ply 1	10_Southeast	I49194899
Job Reference (optional)						

NVR, Frederick, MD - 21703,

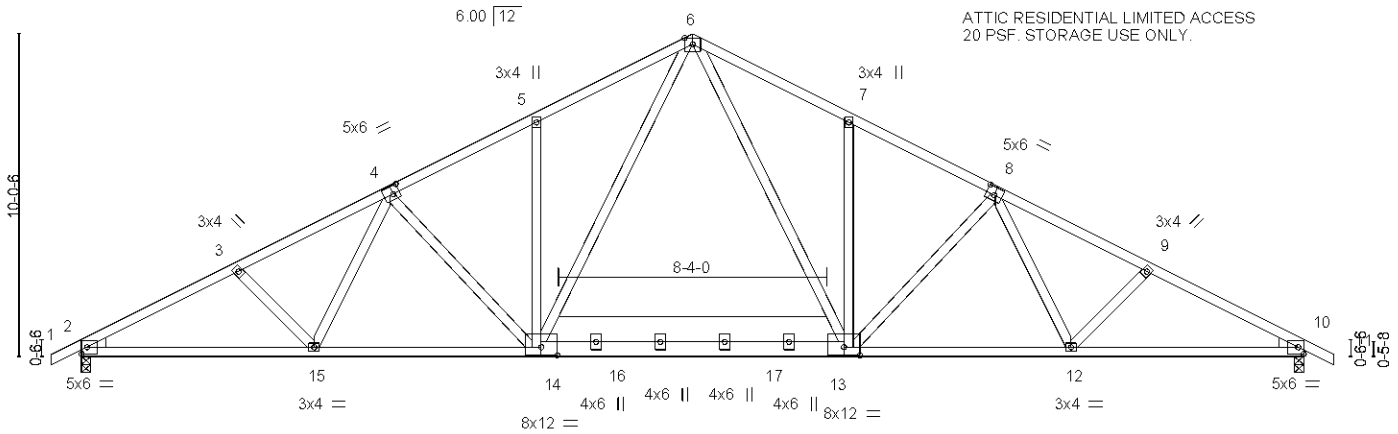
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0-11-4 4-10-9 9-7-1 14-3-8 14-10-0 19-0-0 23-2-0 23-8-8 28-4-15 33-1-7 38-0-0 38-11-4  
0-11-4 4-10-9 4-8-8 4-8-8 0-6-8 4-2-0 0-6-8 4-8-8 4-8-8 4-10-9 0-11-4

5x6 =

Scale = 1:71.6



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#### LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 \*Except\*  
13-14: 2x10 SP No.2, 13-14: 2x6 SP No.2  
WEBS 2x4 SP No.3 or 2x4 SPF Stud

#### WEDGE

Left: 2x4 SP or SPF No.3 or Stud, Right: 2x4 SP or SPF No.3 or Stud

#### REACTIONS.

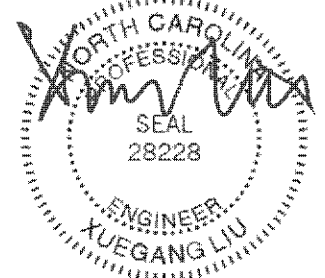
(size) 2=0-3-8, 10=0-3-8  
Max Horz 2=171(LC 11)  
Max Uplift 2=218(LC 10), 10=218(LC 11)  
Max Grav 2=1573(LC 1), 10=1573(LC 1)

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

TOP CHORD 2-3=2761/367, 3-4=2587/351, 4-5=2229/312, 5-6=2217/410, 6-7=2217/397,  
7-8=2229/299, 8-9=2587/352, 9-10=2761/367  
BOT CHORD 2-15=421/2353, 14-15=314/2210, 13-14=71/1528, 12-13=138/2210, 10-12=250/2353  
WEBS 6-14=243/913, 6-13=237/913, 5-14=290/184, 7-13=290/184, 4-14=380/168,  
8-13=380/176

#### NOTES- (6-8)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=218, 10=218.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.



January 12, 2022

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

ENGINEERING BY  
**TRENCO**  
A MITTEK Affiliate

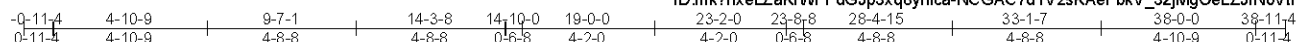
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	10_Southeast
ORDERS	SE-19091- <b>Cond2</b>	COMN	1	1	149194899
Job Reference (optional)					

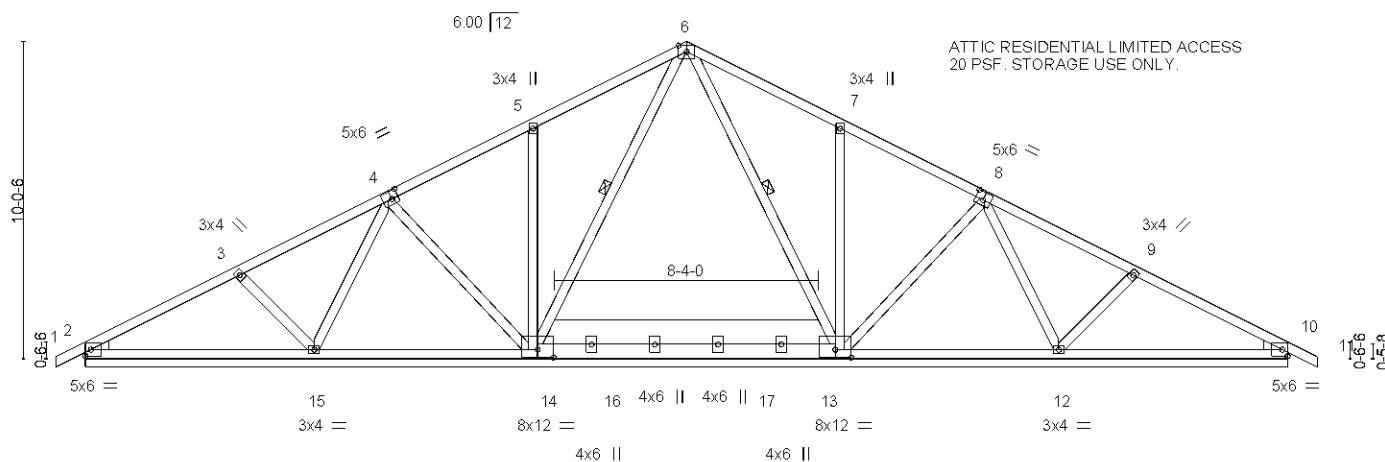
NVR. Frederick, MD - 21703.

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8:550 3 Dec 8 2021 Miltek Industries, Inc. Thu Dec 9 21:57:20 2021 Page 1  
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 $5 \times 6 =$ 

Scale = 1:72.8



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Plate Offsets (X,Y)-- [4:0-2-8,0-3-0], [8:0-3-0,0-3-0], [13:0-6-0,0-3-0], [14:0-6-0,0-3-0]												
<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	0.30	Vert(LL)	0.01	11	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	0.03	11	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code IBC2021/TPI2014		Matrix-S							Weight: 265 lb	FT = 5%

**LUMBER-**

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2 *Except* 13-14: 2x10 SP No.2, 13-14: 2x6 SP No.2
WEBS	2x4 SP No.3 or 2x4 SPF Stud

Left: 2x4 SP or SPF No.3 or Stud. Right: 2x4 SP or SPF No.3 or Stud

**BRACING-**

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt                      6-14, 6-13

[MCT]

### REACTIONS.

**ONS.** All bearings 38-0-0.  
(lb) - Max Horz 2=171(LC 11)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 12 except 14=170(LC 10),  
13=151(LC 11), 15=105(LC 10)  
Max Grav All reactions 250 lb or less at joint(s) except 2=304(LC 23), 14=661(LC 1),  
13=661(LC 1), 10=304(LC 24), 15=615(LC 23), 12=615(LC 24)

**FORCES.**

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 5-14=-299/186, 7-13=-299/186, 3-15=-296/182, 4-15=-264/68, 9-12=-296/179,  
 8-12=264/44

**NOTES-** (7-9)

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDF=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
- 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 12 except (jt=lb) 14=170, 13=151, 15=105.
- 7) Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- 8) Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- 9) Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.

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

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

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ENGINEERING BY  
TRENCO**  
A BAKER GROUP

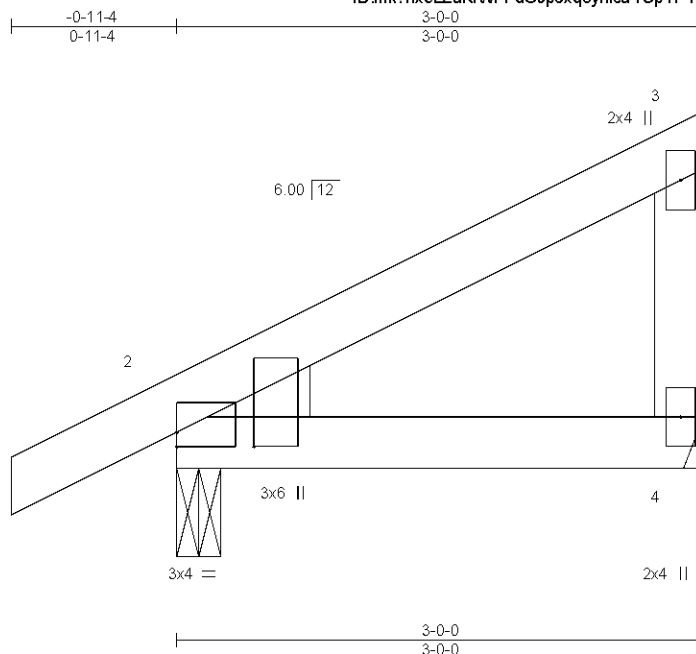
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	10_Southeast	I49194900
ORDERS	SE-19092	MONO	1	1	Job Reference (optional)	

NVR, Frederick, MD - 21703,

8.530 s Dec 6 2021 MITek Industries, Inc. Thu Dec 9 21:57:21 2021 Page 1

ID:mk?hxeLZaKrWFFdGJp3xq8yhica-rOpYPtdfGL\_BnoqniDVIWwvuE2mJ2BnAkX?ESEyAZhS



Scale = 1:13.0

Plate Offsets (X,Y)-- [2:0-0-0,0-1-0], [2:0-0-15,0-5-4]

LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.10	Vert(LL) -0.00	2-4	>999	360	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.08	Vert(CT) -0.01	2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.00		n/a	n/a		
BCDL 10.0	Code IBC2021/TPI2014	Matrix-P	Wind(LL) 0.00	2	****	240	Weight: 14 lb	FT = 5%

#### LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
 BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2  
 WEBS 2x4 SP No.3 or 2x4 SPF Stud  
 WEDGE  
 Left: 2x4 SP or SPF No.3 or Stud

#### BRACING-

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

#### REACTIONS.

(size) 2=0-3-0, 4=Mechanical  
 Max Horz 2=74(LC 10)  
 Max Uplift 2=-30(LC 10), 4=-36(LC 10)  
 Max Grav 2=185(LC 1), 4=97(LC 1)

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

#### NOTES- (6-8)

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
- 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- 6) Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- 7) Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- 8) Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.



January 12, 2022

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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

ENGINEERING BY  
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818 Soundside Road  
 Edenton, NC 27932

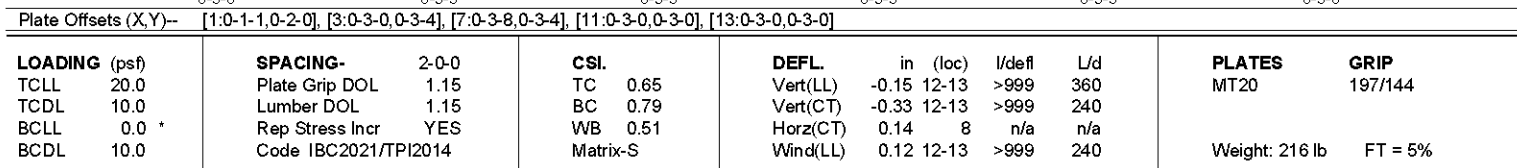


NVR, Frederick, MD - 21703, 8.530 s Dec 6 2021 MiTek Industries, Inc. Thu Dec 9 21:57:24 2021 Page 1

ID:mk?hxeLZaKrWFFdGJp3xqyhcica-FzVh2UgYZGMleFZMzL2?8ZX GxGd1FRZcQcVDu3ZyAZhp

6-5-6	12-8-11	19-0-0	25-3-5	31-6-10	38-0-0
6-5-6	6-3-5	6-3-5	6-3-5	6-3-5	6-5-6
					38-11-4
					0-11-4

Scale = 1:65



<b>BRACING-</b>	
TOP CHORD	Structural wood sheathing directly applied or 2-7-7 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 9-5-11 oc bracing.
WEBS	1 Row at midpt                      6-12, 4-12

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

**TOP CHORD** 1-3=-2761/347, 3-4=-2288/314, 4-5=-1754/293, 5-6=-1752/294, 6-7=-2279/311,  
7-8=-2786/344

**BOT CHORD** 1-14=-386/2373, 13-14=-385/2375, 12-13=-231/1974, 11-12=-85/1963, 10-11=-213/2376,  
8-10=-214/2374

**WEBS** 5-12=-130/1145, 6-12=-708/244, 6-11=-94/16, 7-11=-487/178, 7-10=-0/273,  
4-12=-273/248, 4-13=-9/413, 3-13=-472/175, 3-14=-0/260

**NOTES-** (7-9)

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDF=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
- 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=b)  
1=195, 8=218.
- 7) Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- 8) Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- 9) Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.

Professional Engineer Seal for North Carolina, No. 28228, signed by Xuegang Liu.

January 12, 2022

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**ENGINEERING BY  
TRENCO**  
A Mitek Affiliat

818 Soundside Road  
Edenton, NC 27932

Job ORDERS	Truss SE-19093-	Truss Type COND2	Qty 1	Ply 1	10_Southeast	I49194901
Job Reference (optional)						

NVR, Frederick, MD - 21703,

8.530 s Dec 6 2021 MiTek Industries, Inc. Thu Dec 9 21:57:24 2021 Page 1

ID.mk?hxeLZaKrWFFdGJp3xq8yhica-FzVh2UgYZGMleFZMzL2?8ZXIyGksFUBcQVDu3ZyAZhP

6-5-6	12-8-11	19-0-0	25-3-5	31-6-10	38-0-0	38-11-4
6-5-6	6-3-5	6-3-5	6-3-5	6-3-5	6-5-6	0-11-4

5x6 =

Scale = 1:67.5

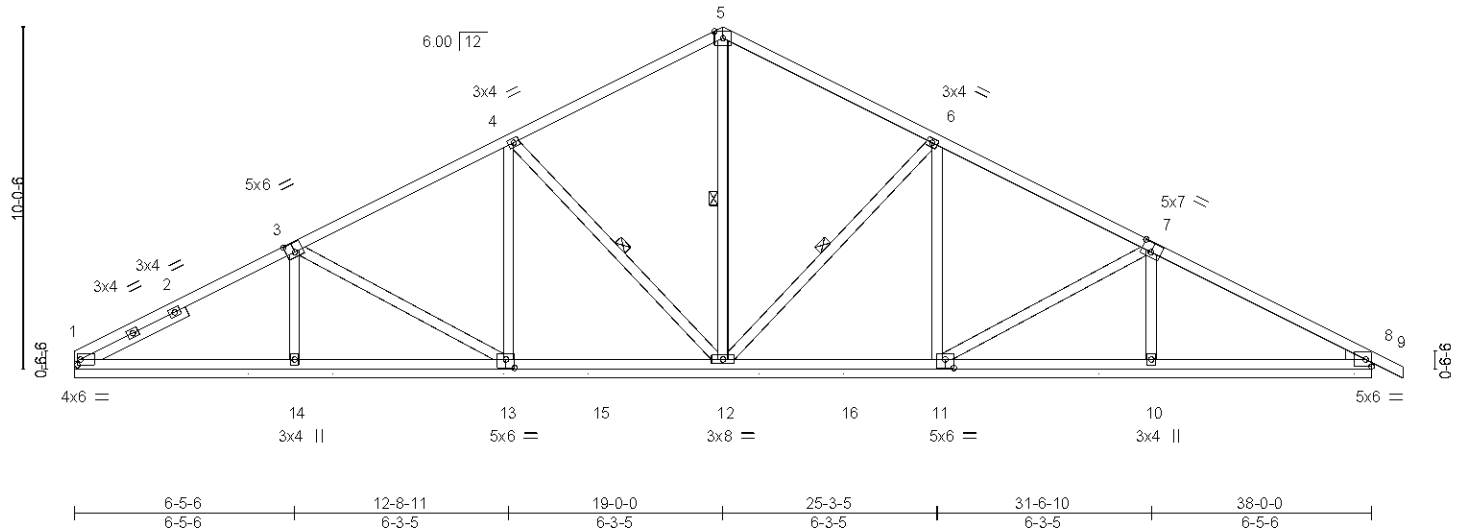


Plate Offsets (X,Y)-- [1:0-1-1,0-2-0], [3:0-3-0,0-3-4], [7:0-3-8,0-3-4], [11:0-3-0,0-3-0], [13:0-3-0,0-3-0]											
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc)		l/defl L/d		PLATES GRIP	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	0.03	9	n/r	120	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	0.05	9	n/r	120	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.01	8	n/a	n/a	
BCDL	10.0	Code IBC2021/TPI2014		Matrix-S							
										Weight: 216 lb	FT = 5%

#### LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
 BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2  
 WEBS 2x4 SP No.3 or 2x4 SPF Stud  
 WEDGE  
 Right: 2x4 SP or SPF No.3 or Stud  
 SLIDER Left 2x4 SP or SPF No.3 or Stud 3-5-3

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-12, 6-12, 4-12

[MCT]

#### REACTIONS.

All bearings 38-0-0.  
 (lb) - Max Horz 1=175(LC 15)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 12, 11, 10, 14, 8 except  
 13=103(LC 10)  
 Max Grav All reactions 250 lb or less at joint(s) except 1=318(LC 23), 12=617(LC 1),  
 11=445(LC 26), 10=548(LC 1), 13=466(LC 25), 14=434(LC 23), 8=306(LC 1)

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

TOP CHORD 1-3=291/157  
 WEBS 5-12=339/34, 6-11=308/107, 7-10=392/151, 4-13=275/111, 3-14=288/125

#### NOTES- (7-9)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 12, 11, 10, 14, 8 except (jt=lb) 13=103.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

ENGINEERING BY  
**TRENCO**  
 A MITEK AFFILIATE

818 Soundside Road  
 Edenton, NC 27932

Job ORDERS	Truss SE-19094	Truss Type COMN	Qty 1	Ply 1	10_Southeast Job Reference (optional)	I49194902
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NVR, Frederick, MD - 21703,

8.530 s Dec 6 2021 MITek Industries, Inc. Thu Dec 9 21:57:25 2021 Page 1

ID:mk?hxeLZaKWFFdGJp3xq8yhica-k933FqgAKaUcGP8YX3aEgm4X4fxT\_wSIf9zRb?yAZhO

0-11-4 0-11-4	4-10-9 4-10-9	9-7-1 4-8-8	14-3-8 4-8-8	14-10-0 0-6-8	19-0-0 4-2-0	23-2-0 4-2-0	23-8-8 0-6-8	28-4-15 4-8-8	33-1-7 4-8-8	38-0-0 4-10-9	38-11-4 0-11-4
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Scale = 1:66.3

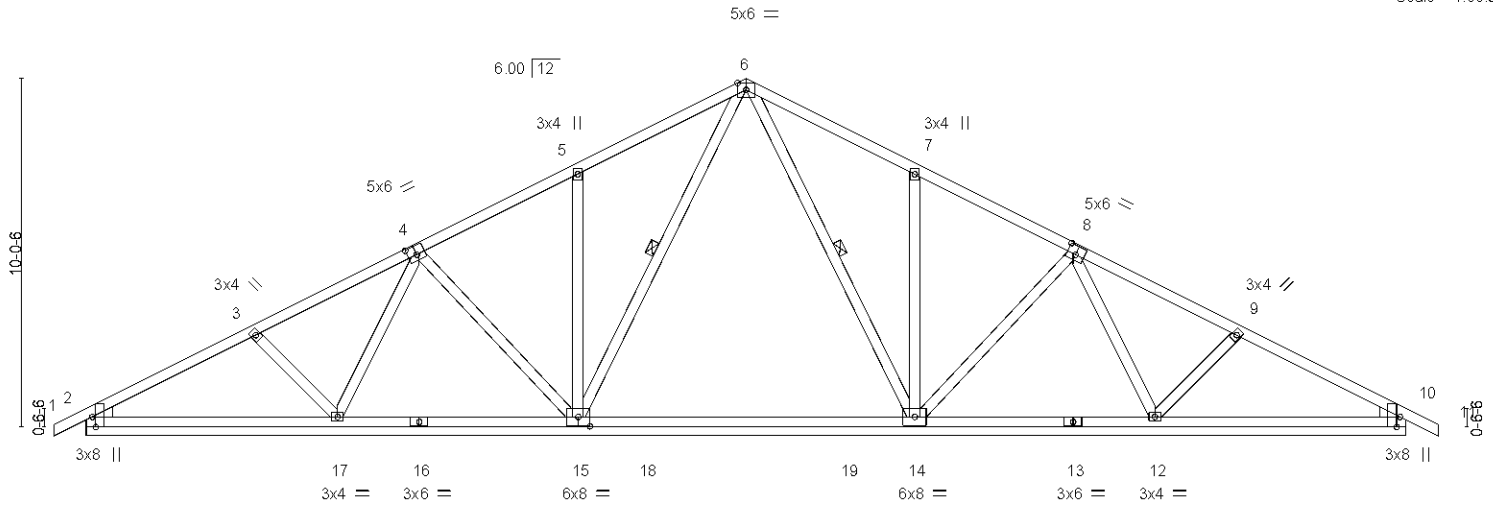


Plate Offsets (X,Y)-- [2:0-3-8,Edge], [4:0-3-0,0-3-0], [8:0-3-0,0-3-0], [10:0-3-8,Edge], [15:0-4-0,0-3-4]																																																																							
<table> <tr> <td colspan="2"><b>LOADING</b> (psf)</td><td colspan="2"><b>SPACING-</b></td><td colspan="2"><b>CSL</b></td><td colspan="2"><b>DEFL.</b></td><td colspan="2"><b>PLATES</b></td><td colspan="2"><b>GRIP</b></td></tr> <tr> <td>TCLL</td><td>20.0</td><td>Plate Grip DOL</td><td>1.15</td><td>TC</td><td>0.30</td><td>Vert(LL)</td><td>0.01</td><td>MT20</td><td></td><td>197/144</td><td></td></tr> <tr> <td>TCDL</td><td>10.0</td><td>Lumber DOL</td><td>1.15</td><td>BC</td><td>0.90</td><td>Vert(CT)</td><td>0.03</td><td></td><td></td><td></td><td></td></tr> <tr> <td>BCLL</td><td>0.0 *</td><td>Rep Stress Incr</td><td>YES</td><td>WB</td><td>0.34</td><td>Horz(CT)</td><td>0.01</td><td></td><td></td><td></td><td></td></tr> <tr> <td>BCDL</td><td>10.0</td><td>Code IBC2021/TPI2014</td><td></td><td>Matrix-S</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>												<b>LOADING</b> (psf)		<b>SPACING-</b>		<b>CSL</b>		<b>DEFL.</b>		<b>PLATES</b>		<b>GRIP</b>		TCLL	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	0.01	MT20		197/144		TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	0.03					BCLL	0.0 *	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.01					BCDL	10.0	Code IBC2021/TPI2014		Matrix-S							
<b>LOADING</b> (psf)		<b>SPACING-</b>		<b>CSL</b>		<b>DEFL.</b>		<b>PLATES</b>		<b>GRIP</b>																																																													
TCLL	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	0.01	MT20		197/144																																																													
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	0.03																																																																
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.01																																																																
BCDL	10.0	Code IBC2021/TPI2014		Matrix-S																																																																			
Weight: 222 lb										FT = 5%																																																													

#### LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
 BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2  
 WEBS 2x4 SP No.3 or 2x4 SPF Stud  
 WEDGE  
 Left: 2x4 SP or SPF No.3 or Stud, Right: 2x4 SP or SPF No.3 or Stud

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
 3-2-14 oc bracing: 14-15.  
 WEBS 1 Row at midpt 6-15, 6-14

#### REACTIONS.

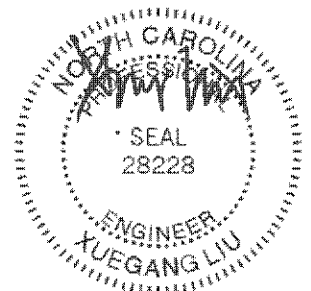
All bearings 38-0-0.  
 (lb) - Max Horz 2=171(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 12 except 15=164(LC 10), 17=111(LC 10), 14=143(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) except 2=305(LC 23), 15=714(LC 17), 10=305(LC 24), 17=586(LC 23), 12=585(LC 24), 14=712(LC 2)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 5-15=308/191, 7-14=308/190, 3-17=297/181, 9-12=297/178

#### NOTES-

- (7-9) Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 12 except (jt=lb) 15=164, 17=111, 14=143.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.



January 12, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

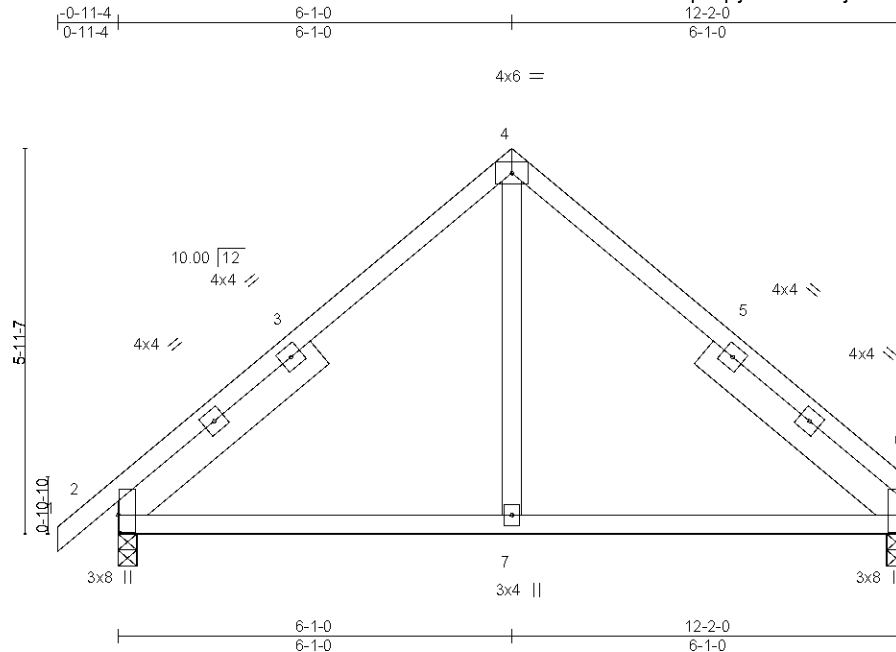
ENGINEERING BY  
**TRENCO**  
 A MITEK AFFILIATE

818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	10_Southeast
ORDERS	SE-19243	COMN	1	1	
					Job Reference (optional)

NVR, Frederick, MD - 21703,

8.530 s Dec 6 2021 MiTek Industries, Inc. Thu Dec 9 22:05:05 2021 Page 1  
ID:mk?hxeLZaKrWFFdGJp3xq8yhica-Gfszo7Fj?wRLS6izTgg6Kn74X53Rm1wTQjOnLyAZaC



Scale = 1:35.6

Plate Offsets (X,Y)-- [2:0-3-4,0-0-4], [6:0-5-13,0-0-4]

LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.52	Vert(LL)	-0.03	6-7	>999	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.37	Vert(CT)	-0.06	6-7	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.11	Horz(CT)	0.01	6	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL)	0.02	2-7	>999		
	Code IBC2021/TPI2014						Weight: 71 lb	FT = 5%

#### LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2  
WEBS 2x4 SP No.3 or 2x4 SPF Stud  
SLIDER Left 2x6 SP No.2 4-0-0, Right 2x6 SP No.2 4-0-0

#### 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.

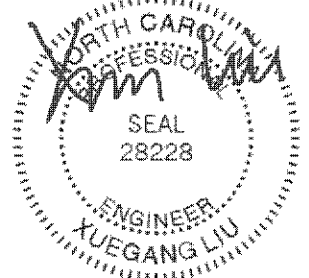
(size) 2=0-3-8, 6=0-3-8  
Max Horz 2=147(LC 7)  
Max Uplift 2=-69(LC 10), 6=-47(LC 11)  
Max Grav 2=545(LC 1), 6=484(LC 1)

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

TOP CHORD 2-4=-527/103, 4-6=-499/102  
BOT CHORD 2-7=0/315, 6-7=0/315  
WEBS 4-7=0/281

#### NOTES- (6-8)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 2 and 47 lb uplift at joint 6.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.



January 12, 2022

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

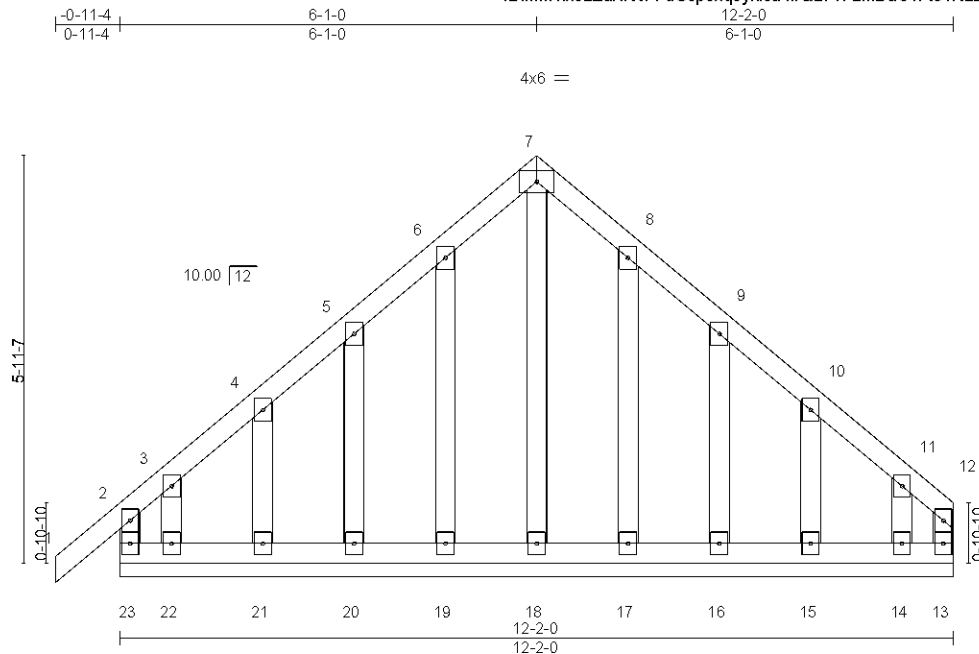
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**TRENCO**  
A MITTEK Affiliate

818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	10_Southeast	I49194944
ORDERS	SE-19244	COMN	1	1	Job Reference (optional)	

NVR, Frederick, MD - 21703,

8.530 s Dec 6 2021 MiTek Industries, Inc. Thu Dec 9 22:05:06 2021 Page 1  
ID:mk?hxeLZaKrWFFdGJp3xq8yhica-krQL?TFLmDaC4F191NLLs\_gMfVUZVUZcfN8LHnyAZaB



LOADING (psf)	SPACING-		CSL	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.11	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	-0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.09	Horz(CT)	0.00	13	n/a	n/a		
BCDL 10.0	Code IBC2021/TPI2014		Matrix-R						Weight: 85 lb	FT = 5%

#### LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2  
WEBS 2x4 SP No.3 or 2x4 SPF Stud  
OTHERS 2x4 SP No.3 or 2x4 SPF Stud

#### 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.

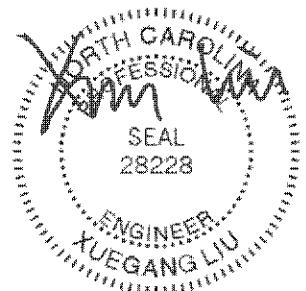
#### REACTIONS.

All bearings 12-2-0.  
(lb) - Max Horz 23=141(LC 7)  
Max Uplift All uplift 100 lb or less at joint(s) 19, 20, 21, 17, 16, 15 except 23=113(LC 6), 13=107(LC 9), 22=149(LC 10), 14=143(LC 11)  
Max Grav All reactions 250 lb or less at joint(s) 23, 13, 18, 19, 20, 21, 22, 17, 16, 15, 14

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

#### NOTES- (11-13)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; 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=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 3x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed on 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19, 20, 21, 17, 16, 15 except (jt=lb) 23=113, 13=107, 22=149, 14=143.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust), wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 115 mph.
- Design checked for ASCE 7-16 ultimate wind speed at 130 mph (3-second gust) meets or exceeds IRC2012 nominal wind speed of 100 mph, wind reaction x 0.78 will adjust wind uplift reaction to a wind speed of 90 mph.
- Metal hangers, of any seat size, can be used in place of wood bearing, of any seat size, provided the hanger has been sized for the required maximum reaction.



January 12, 2022

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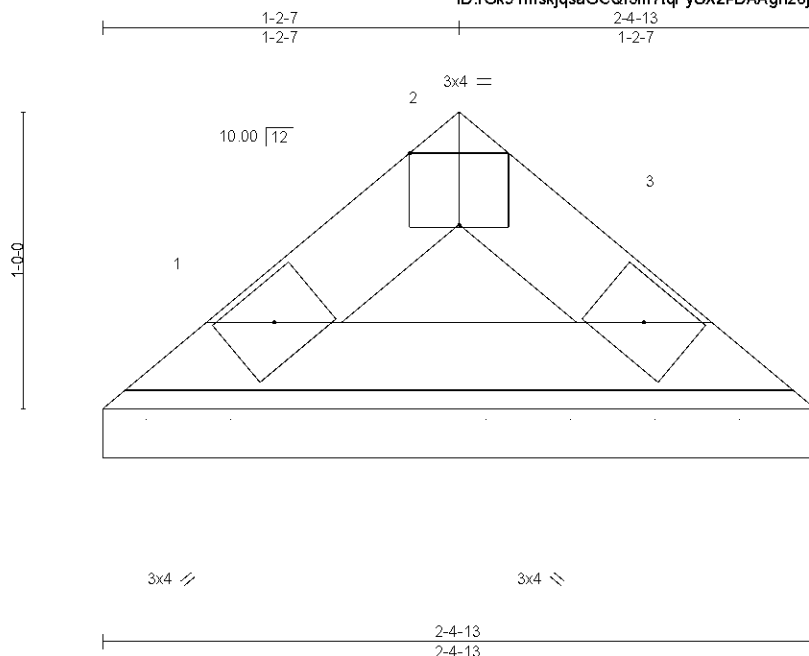
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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Edenton, NC 27932

8.530 s Aug 2 2023 MiTek Industries, Inc. Fri Dec 22 08:12:50 2023 Page 1

[illegible]

**LUMBER-**

TOP CHORD 2x4 SP No.3 or 2x4 SPF Stud  
BOT CHORD 2x4 SP No.3 or 2x4 SPF Stud

**BRACING-**

TOP CHORD	Structural wood sheathing directly applied or 2-4-13 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

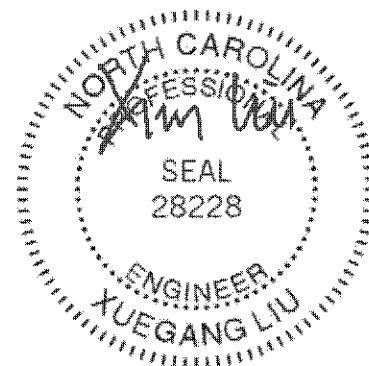
(size) 1=2-4-13, 3=2-4-13  
 Max Horz 1=23(LC 9)  
 Max Uplift 1=-16(LC 12), 3=-16(LC 13)  
 Max Grav 1=85(LC 18), 3=85(LC 19)

**FORCES.**

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

**NOTES-**

- NOTES-** (7)
- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCdL=6.0psf; BCDL=6.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) zone; cantilever left and right exposed ; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



December 27, 2023

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**ENGINEERING BY**  
**TRENCO**  
A MILLER ASSOCIATE

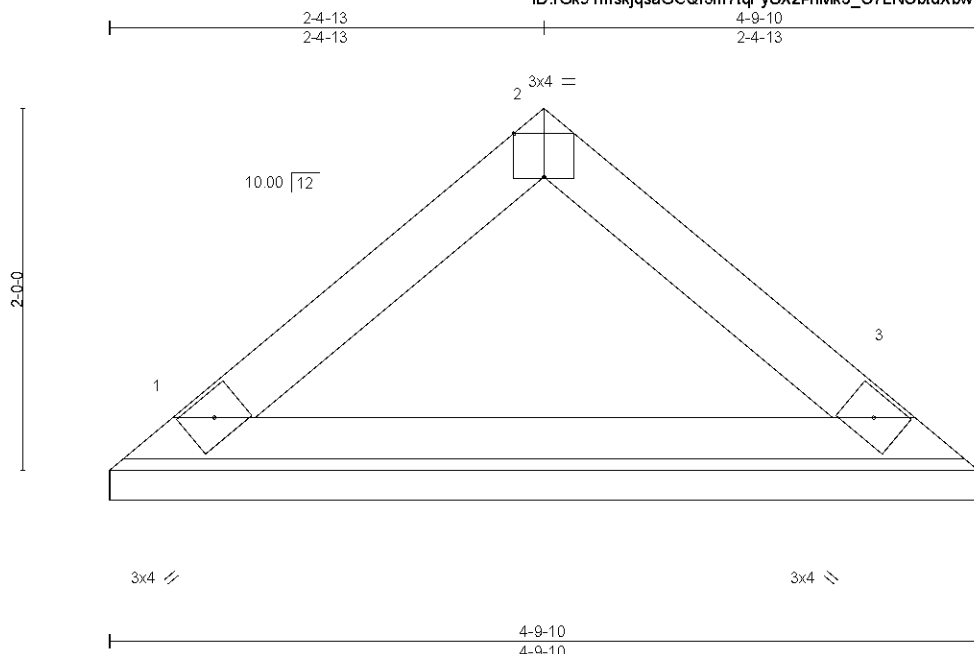
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	02_Valley	162714985
ORDERS	VT-01062	VCOM	1	1	Job Reference (optional)	

NVR, Frederick, MD - 21703,

8.530 s Aug 2 2023 MiTek Industries, Inc. Fri Dec 22 08:12:51 2023 Page 1

ID:rGk9TmskjsaGCQl5m7tqFyUXzhMk3\_O7LNObtXbwVEXNCNYfS8DDofpqZgPI4Dy6TYQ



Scale = 1:12.7

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/def	L/d
TCLL 30.0		Plate Grip DOL	1.15	TC 0.31		Vert(LL)	n/a	-	n/a
(Roof Snow=30.0)		Lumber DOL	1.15	BC 0.33		Vert(CT)	n/a	-	999
TCDL 10.0		Rep Stress Incr	YES	WB 0.00		Horz(CT)	0.00	3	n/a
BCLL 0.0		Code IBC2021/TPI2014		Matrix-P					
BCDL 10.0									
								Weight: 15 lb FT = 5%	

#### LUMBER-

TOP CHORD 2x4 SP No.3 or 2x4 SPF Stud  
BOT CHORD 2x4 SP No.3 or 2x4 SPF Stud

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-9-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

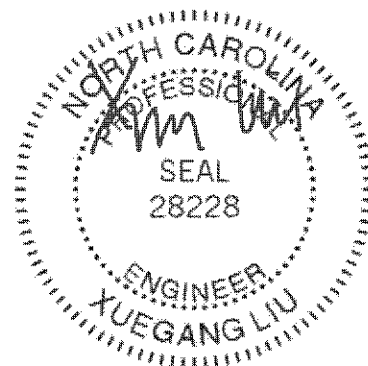
#### REACTIONS.

(size) 1=4-9-10, 3=4-9-10  
Max Horz 1=57(LC 9)  
Max Uplift 1=40(LC 12), 3=40(LC 13)  
Max Grav 1=232(LC 18), 3=232(LC 19)

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

#### NOTES- (7)

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



December 27, 2023

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MIT 7473 rev. 1/22/2023 BEFORE USE.

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	02_Valley	162714986
ORDERS	VT-01063	VCOM	1	1	Job Reference (optional)	

NVR, Frederick, MD - 21703,

8.530 s Aug 2 2023

MiTek Industries, Inc.

Fri Dec 22 08:12:51 2023

Page 1

ID:neswtSu\_FS7HVWahDBALvgyUXzg-hMk3\_O7LNObtXbwVEXNCNYZf8Ggof1qZgPi4Dy6TYQ

3-7-3

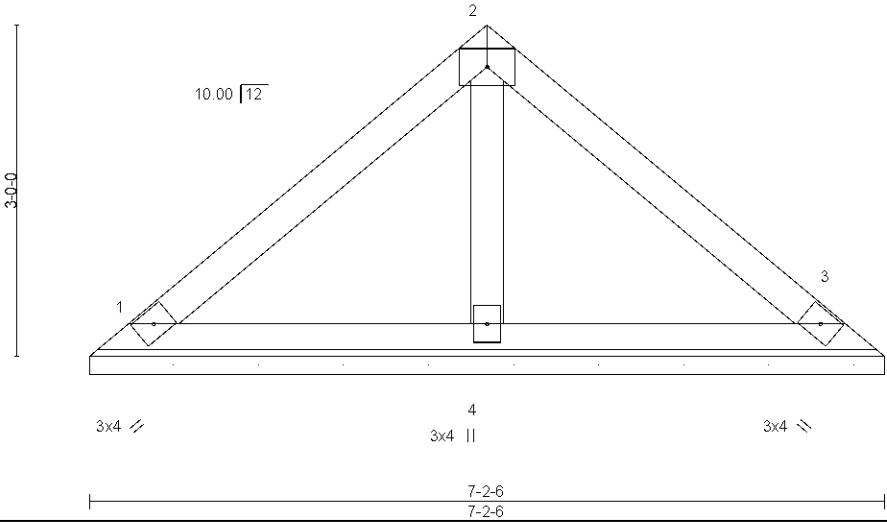
3-7-3

7-2-6

3-7-3

4x6 =

Scale = 1:20.9



LOADING (psf)	SPACING-		CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 30.0	Plate Grip DOL	2-0-0	TC 0.68	Vert(LL)	n/a	-	n/a	999	MT20	197/144
(Roof Snow=30.0)	Lumber DOL	1.15	BC 0.18	Vert(CT)	n/a	-	n/a	999		
TCDL 10.0	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	3	n/a	n/a		
BCLL 0.0	Code IBC2021/TPI2014		Matrix-P						Weight: 27 lb	FT = 5%
BCDL 10.0										

LUMBER-

TOP CHORD 2x4 SP No.3 or 2x4 SPF Stud

BOT CHORD 2x4 SP No.3 or 2x4 SPF Stud

OTHERS 2x4 SP No.3 or 2x4 SPF Stud

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=7-2-6, 3=7-2-6, 4=7-2-6

Max Horz 1=-92(LC 8)

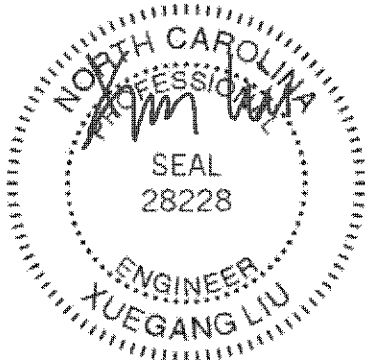
Max Uplift 1=-58(LC 13), 3=-69(LC 13), 4=-13(LC 12)

Max Grav 1=257(LC 18), 3=257(LC 19), 4=271(LC 18)

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

NOTES- (7)

- Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.



December 27,2023

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**TRENCO**

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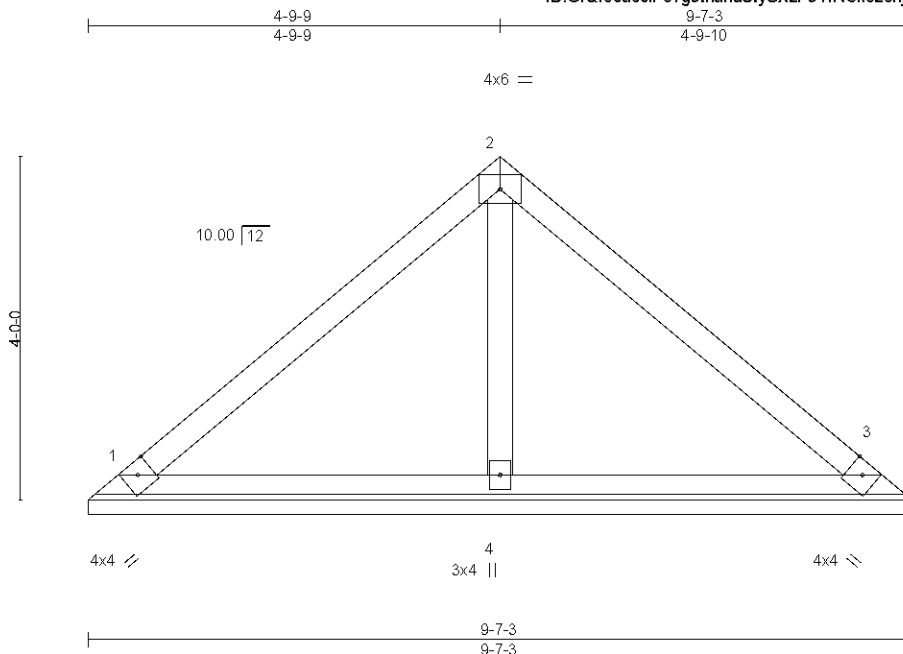
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	02_Valley	162714987
ORDERS	VT-01064	VCOM	1	1	Job Reference (optional)	

NVR, Frederick, MD - 21703,

8.530 s Aug 2 2023 MiTek Industries, Inc. Fri Dec 22 08:12:52 2023 Page 1  
ID:GrQl5ouc0lF87g9tnuhaStyUXzf-9YlRCk8z8hjkEhA63x2clb5lUYcX5bzoK8Gcfy6TYP



Scale = 1:26.8

LOADING (psf)	SPACING-	CSL	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 30.0 (Roof Snow=30.0)	2-0-0 Plate Grip DOL 1.15	TC 0.61	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.39	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr YES	WB 0.09	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IBC2021/TPI2014	Matrix-S						Weight: 36 lb	FT = 5%

#### LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
BOT CHORD 2x4 SP No.3 or 2x4 SPF Stud  
OTHERS 2x4 SP No.3 or 2x4 SPF Stud

#### 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.

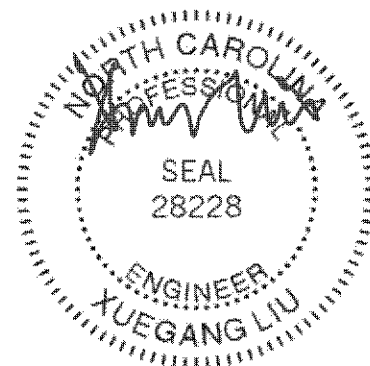
(size) 1=9-7-3, 3=9-7-3, 4=9-7-3  
Max Horz 1=-126(LC 8)  
Max Uplift 1=-65(LC 13), 3=-81(LC 13), 4=-49(LC 12)  
Max Grav 1=355(LC 18), 3=355(LC 19), 4=421(LC 18)

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

TOP CHORD 1-2=-276/155, 2-3=-276/155  
WEBS 2-4=-282/207

#### NOTES- (7)

- 1) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) zone; cantilever left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.



December 27, 2023

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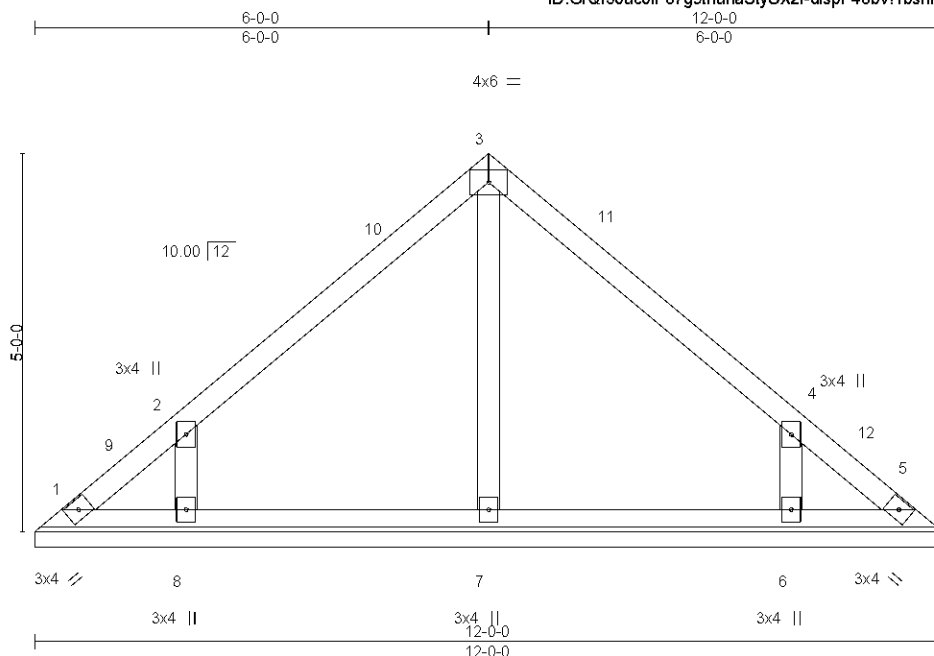
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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	02_Valley	162714988
ORDERS	VT-01065	VCOM	1	1	Job Reference (optional)	

NVR, Frederick, MD - 21703,

8.530 s Aug 2 2023 MiTek Industries, Inc. Fri Dec 22 08:12:53 2023 Page 1  
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Scale = 1:30.5

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 30.0	2-0-0	TC 0.68	in (loc) l/def L/d	MT20	197/144
(Roof Snow=30.0)	Plate Grip DOL 1.15	BC 0.21	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.15	Vert(CT) n/a - n/a 999		
BCLL 0.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IBC2021/TP12014			Weight: 49 lb	FT = 5%

#### LUMBER-

TOP CHORD 2x4 SP No.3 or 2x4 SPF Stud  
BOT CHORD 2x4 SP No.3 or 2x4 SPF Stud  
OTHERS 2x4 SP No.3 or 2x4 SPF Stud

#### BRACING-

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

#### REACTIONS.

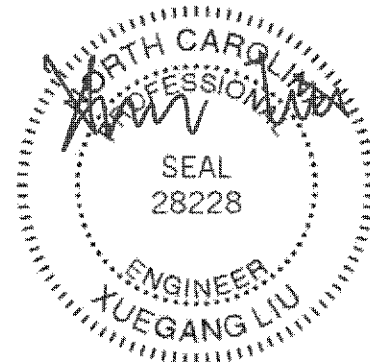
All bearings 12'-0".  
(lb) - Max Horz 1=161(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=259(LC 12), 6=259(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=321(LC 19), 8=566(LC 18), 6=566(LC 19)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-263/193, 3-4=-263/193  
WEBS 2-8=-514/488, 4-6=-514/488

#### NOTES-

- Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-4-13 to 4-9-9, Corner(3R) 4-9-9 to 7-2-7, Corner(3E) 7-2-7 to 11-7-3 zone; cantilever left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 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=259, 6=259.



December 27, 2023

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE M11-7473 rev. 1/22/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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