

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: J0422-2177  
Lot 55 Liberty Meadow

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

Pages or sheets covered by this seal: I52781612 thru I52781623

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

North Carolina COA: C-0844



June 27, 2022

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781612
J0422-2177	F01	Floor	9	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:34 2022 Page 1  
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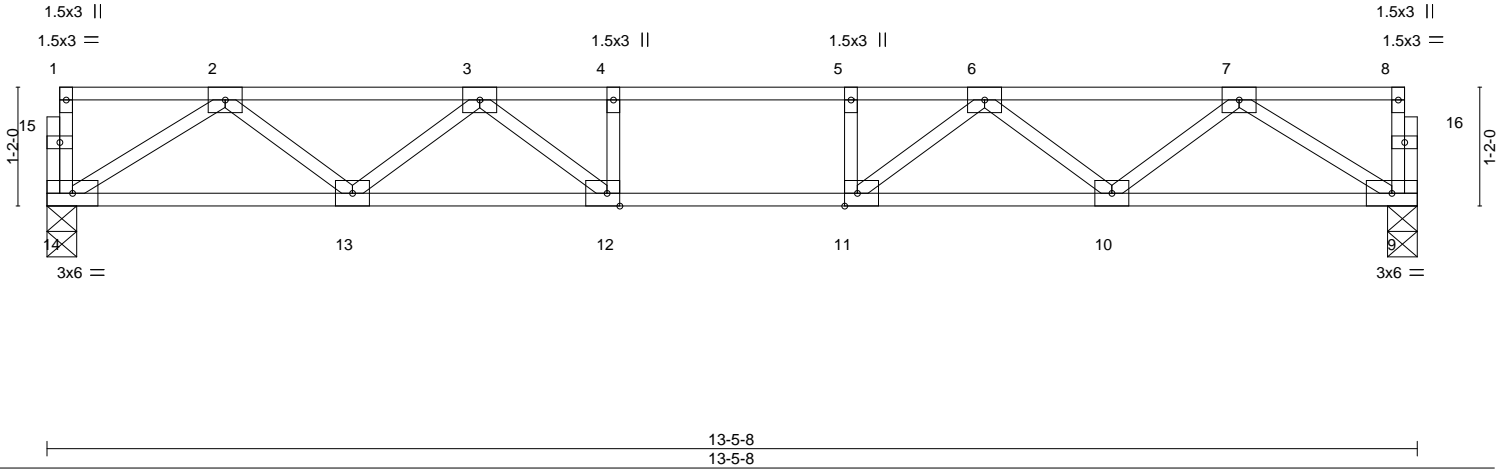
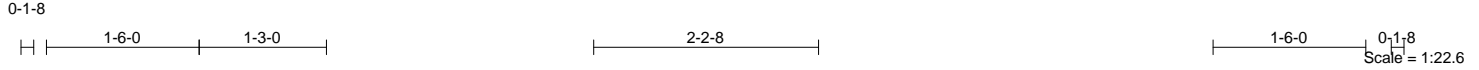


Plate Offsets (X,Y)-- [11:0-1-8,Edge], [12:0-1-8,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.42	Vert(LL)	-0.12 12-13	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.51	Vert(CT)	-0.15 12-13	>999	360		
BCLL 0.0	Rep Stress Incr	YES	WB 0.31	Horz(CT)	0.03 9	n/a	n/a		
BCDL 5.0	Code	IRC2018/TPI2014	Matrix-S						
								Weight: 66 lb	FT = 20%F, 11%E

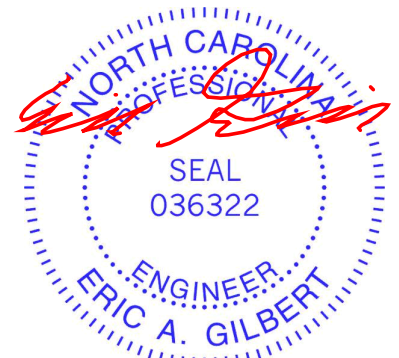
**LUMBER-**  
TOP CHORD 2x4 SP No.1 (flat)  
BOT CHORD 2x4 SP No.1 (flat)  
WEBS 2x4 SP No.3 (flat)

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

**REACTIONS.** (size) 14=0-3-8, 9=0-3-8  
Max Grav 14=720(LC 1), 9=720(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1533/0, 3-4=-2255/0, 4-5=-2255/0, 5-6=-2255/0, 6-7=-1533/0  
BOT CHORD 13-14=0/1028, 12-13=0/2002, 11-12=0/2255, 10-11=0/2002, 9-10=0/1028  
WEBS 2-14=-1217/0, 2-13=0/658, 3-13=-610/0, 3-12=0/546, 4-12=-260/0, 7-9=-1217/0, 7-10=0/658, 6-10=-610/0, 6-11=0/546, 5-11=-260/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



June 27, 2022

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



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781613
J0422-2177	F02	Floor	2	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:35 2022 Page 1  
ID:r?yi3DAbxRr?CsKd7DtDjMyglnZ-Zf1U3yhiuwojD0po7xAwzMhFgutsy1cXWceB3\_z22dY



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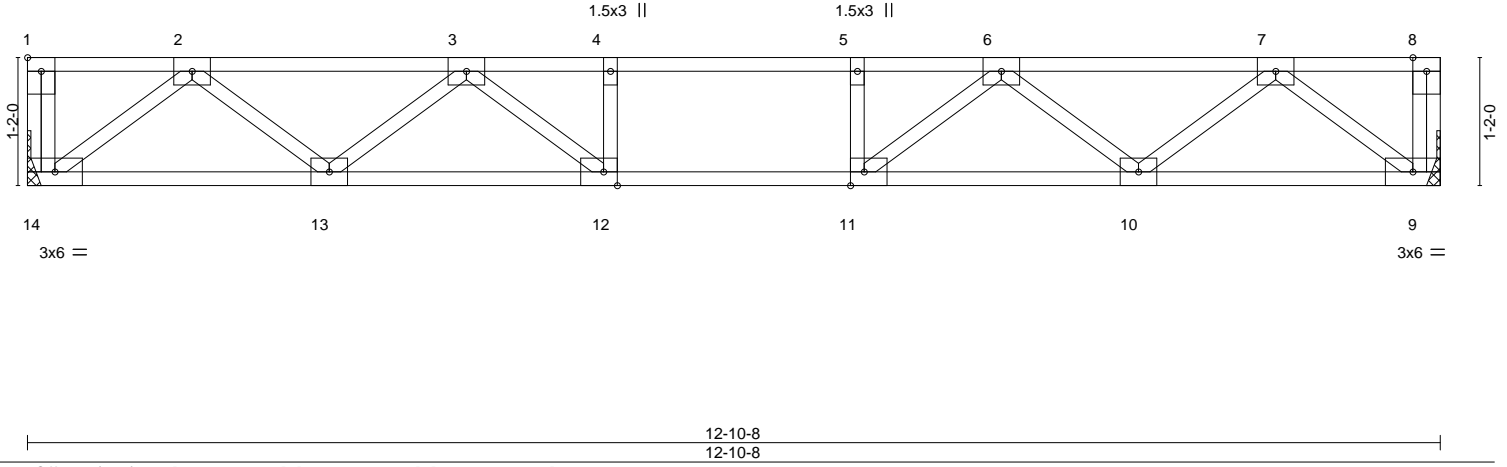


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [11:0-1-8,Edge], [12:0-1-8,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.38	Vert(LL)	-0.10 12-13	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.46	Vert(CT)	-0.13 12-13	>999	360		
BCLL 0.0	Rep Stress Incr	YES	WB 0.31	Horz(CT)	0.03 9	n/a	n/a		
BCDL 5.0	Code IRC2018/TPI2014		Matrix-S					Weight: 65 lb	FT = 20%F, 11%E

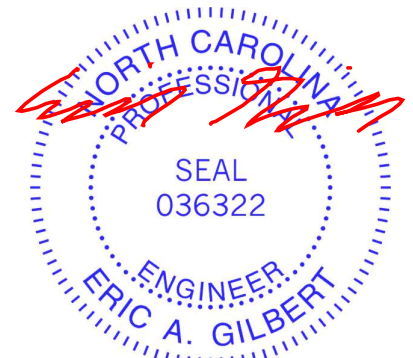
**LUMBER-**  
TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)

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

**REACTIONS.** (size) 14=Mechanical, 9=Mechanical  
Max Grav 14=694(LC 1), 9=694(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1351/0, 3-4=-2060/0, 4-5=-2060/0, 5-6=-2060/0, 6-7=-1351/0  
BOT CHORD 13-14=0/851, 12-13=0/1815, 11-12=0/2060, 10-11=0/1815, 9-10=0/851  
WEBS 2-14=-1068/0, 2-13=0/650, 3-13=-605/0, 3-12=0/519, 7-9=-1068/0, 7-10=0/650, 6-10=-605/0, 6-11=0/519

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



June 27, 2022

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

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781614
J0422-2177	F03	Floor	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:36 2022 Page 1  
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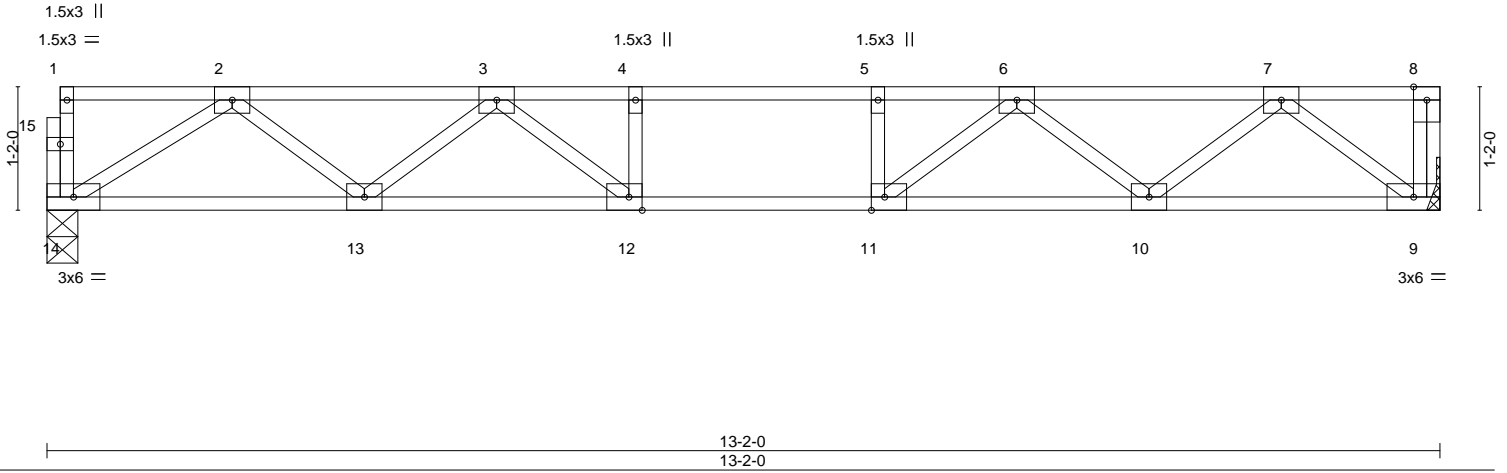


Plate Offsets (X,Y)-- [11:0-1-8,Edge], [12:0-1-8,Edge]

LOADING (psf)	SPACING-	CSL.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.43	Vert(LL) -0.12	12-13	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.51	Vert(CT) -0.15	12-13	>999	360		
BCLL 0.0	Rep Stress Incr YES	WB 0.32	Horz(CT) 0.03	9	n/a	n/a		
BCDL 5.0	Code IRC2018/TPI2014	Matrix-S					Weight: 66 lb	FT = 20%F, 11%E

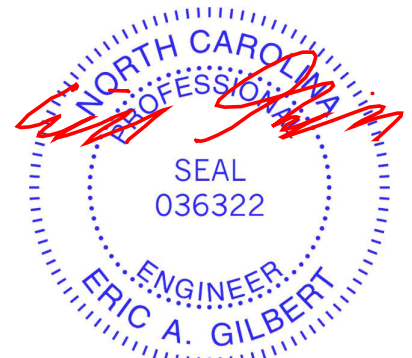
**LUMBER-**  
 TOP CHORD 2x4 SP No.1(flat)  
 BOT CHORD 2x4 SP No.1(flat)  
 WEBS 2x4 SP No.3(flat)

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

**REACTIONS.** (size) 14=0-3-8, 9=Mechanical  
 Max Grav 14=704(LC 1), 9=710(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1491/0, 3-4=-2156/0, 4-5=-2156/0, 5-6=-2156/0, 6-7=-1389/0  
 BOT CHORD 13-14=0/1003, 12-13=0/1938, 11-12=0/2156, 10-11=0/1875, 9-10=0/872  
 WEBS 2-14=-1188/0, 2-13=0/635, 3-13=-582/0, 3-12=0/504, 7-9=-1094/0, 7-10=0/672, 6-10=-633/0, 6-11=0/562, 5-11=-265/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 7) CAUTION, Do not erect truss backwards.



June 27, 2022

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818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781615
J0422-2177	F04	Floor	2	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:37 2022 Page 1  
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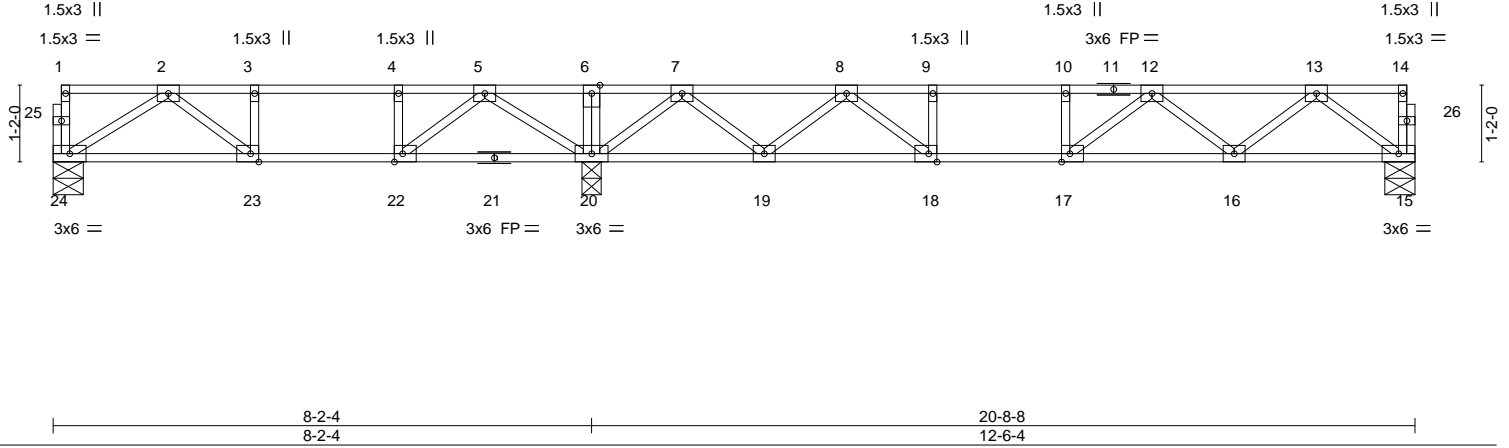


Plate Offsets (X,Y)-- [17:0-1-8,Edge], [18:0-1-8,Edge], [22:0-1-8,Edge], [23:0-1-8,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.42	Vert(LL)	-0.09	16-17	>999	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.46	Vert(CT)	-0.12	16-17	>999		
BCLL 0.0	Rep Stress Incr YES	WB 0.34	Horz(CT)	0.02	15	n/a		
BCDL 5.0	Code IRC2018/TPI2014	Matrix-S						
							Weight: 103 lb	FT = 20%F, 11%E

**LUMBER-**  
TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)

**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.** (size) 24=0-5-8, 20=0-3-8, 15=0-5-8  
Max Grav 24=403(LC 3), 20=1256(LC 1), 15=640(LC 7)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-694/30, 3-4=-694/30, 4-5=-694/30, 5-6=0/704, 6-7=0/703, 7-8=-977/0, 8-9=-1777/0, 9-10=-1777/0, 10-12=-1777/0, 12-13=-1233/0  
BOT CHORD 23-24=0/505, 22-23=-30/694, 20-22=-263/350, 19-20=-11/451, 18-19=0/1479, 17-18=0/1777, 16-17=0/1635, 15-16=0/787  
WEBS 2-24=-595/0, 5-20=-788/0, 5-22=0/589, 4-22=-297/0, 7-20=-1110/0, 7-19=0/717, 8-19=-700/0, 13-15=-985/0, 13-16=0/581, 12-16=-522/0, 12-17=-32/331, 8-18=0/554, 9-18=-254/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 3x4 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.



June 27, 2022

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781616
J0422-2177	F04A	Floor	3	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:38 2022 Page 1  
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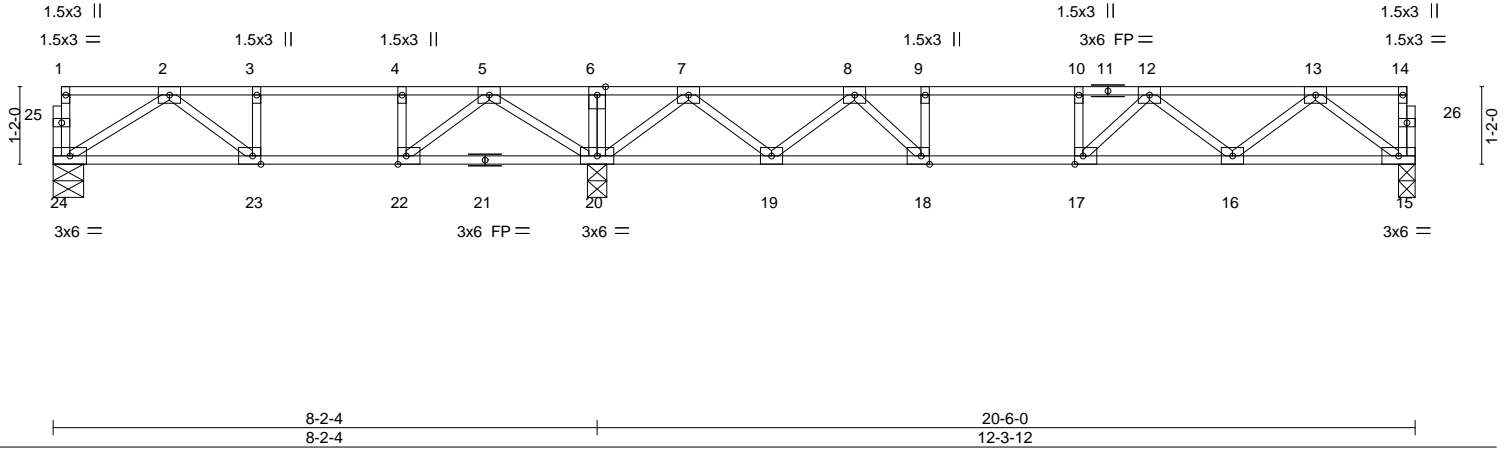


Plate Offsets (X,Y)-- [17:0-1-8,Edge], [18:0-1-8,Edge], [22:0-1-8,Edge], [23:0-1-8,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.43	Vert(LL) -0.09	16-17	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.46	Vert(CT) -0.12	16-17	>999	360		
BCLL 0.0	Rep Stress Incr YES	WB 0.33	Horz(CT) 0.02	15	n/a	n/a		
BCDL 5.0	Code IRC2018/TPI2014	Matrix-S						
							Weight: 101 lb	FT = 20%F, 11%E

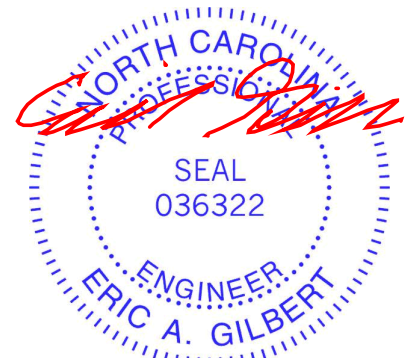
**LUMBER-**  
TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)

**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.** (size) 24=0-5-8, 20=0-3-8, 15=0-3-0  
Max Grav 24=405(LC 3), 20=1235(LC 1), 15=631(LC 7)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-703/9, 3-4=-703/9, 4-5=-703/9, 5-6=0/652, 6-7=0/651, 7-8=-980/0, 8-9=-1721/0, 9-10=-1721/0, 10-12=-1721/0, 12-13=-1210/0  
BOT CHORD 23-24=0/509, 22-23=-9/703, 20-22=-229/363, 19-20=-0/473, 18-19=0/1467, 17-18=0/1721, 16-17=0/1601, 15-16=0/776  
WEBS 2-24=-599/0, 5-20=-785/0, 5-22=0/583, 4-22=-295/0, 7-20=-1086/0, 7-19=0/691, 8-19=-682/0, 13-15=-971/0, 13-16=0/566, 12-16=-508/0, 12-17=-27/324, 8-18=0/541, 9-18=-291/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 3x4 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.



June 27, 2022

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



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781617
J0422-2177	F05	Floor	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:39 2022 Page 1  
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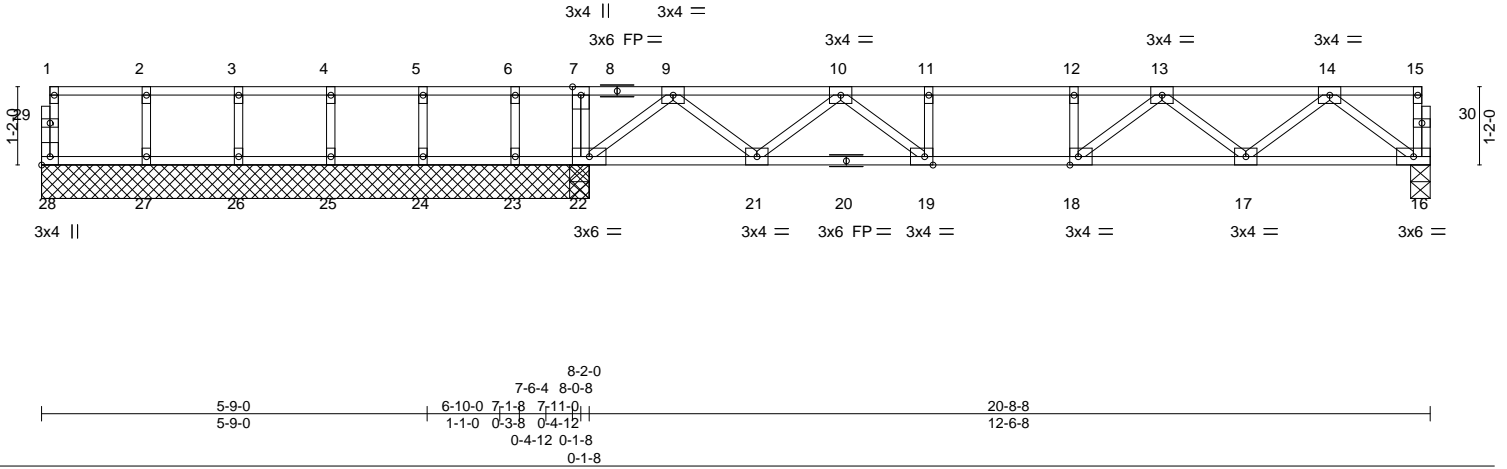


Plate Offsets (X,Y)-- [18:0-1-8,Edge], [19:0-1-8,Edge], [28:Edge,0-1-8]

LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 40.0	2-0-0	TC 0.37	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.45	Vert(LL) -0.10 17-18 >999 480		
BCLL 0.0	Lumber DOL 1.00	WB 0.30	Vert(CT) -0.12 17-18 >999 360		
BCDL 5.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.03 16 n/a n/a		
	Code IRC2018/TPI2014			Weight: 97 lb	FT = 20%F, 11%E

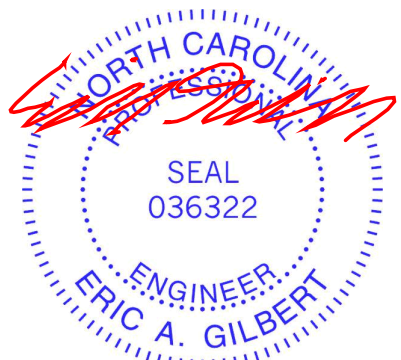
**LUMBER-**  
TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)

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

**REACTIONS.** All bearings 8-2-0 except (jt=length) 16=0-3-8.  
(lb) - Max Uplift All uplift 100 lb or less at joint(s) 23  
Max Grav All reactions 250 lb or less at joint(s) 28, 27, 26, 25, 24, 23 except 22=814(LC 1), 22=814(LC 1), 16=679(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 9-10=1283/0, 10-11=-2005/0, 11-12=-2005/0, 12-13=-2005/0, 13-14=-1327/0  
BOT CHORD 21-22=0/795, 19-21=0/1758, 18-19=0/2005, 17-18=0/1780, 16-17=0/838  
WEBS 9-22=-996/0, 9-21=0/636, 10-21=-618/0, 10-19=0/513, 14-16=-1049/0, 14-17=0/637, 13-17=-589/0, 13-18=0/492

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 1.5x3 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23.
  - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 7) CAUTION, Do not erect truss backwards.



June 27, 2022

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Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781618
J0422-2177	F06	Floor	2	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:40 2022 Page 1  
ID:r?yi3DAbxRr?CsKd7DtDjMyglnZ-wdrN6glrjTQ0KnhmwUm5gQO6TvoidETHguLykBz22dT

1-3-0

2-1-8

0-1-8

Scale = 1:30.4

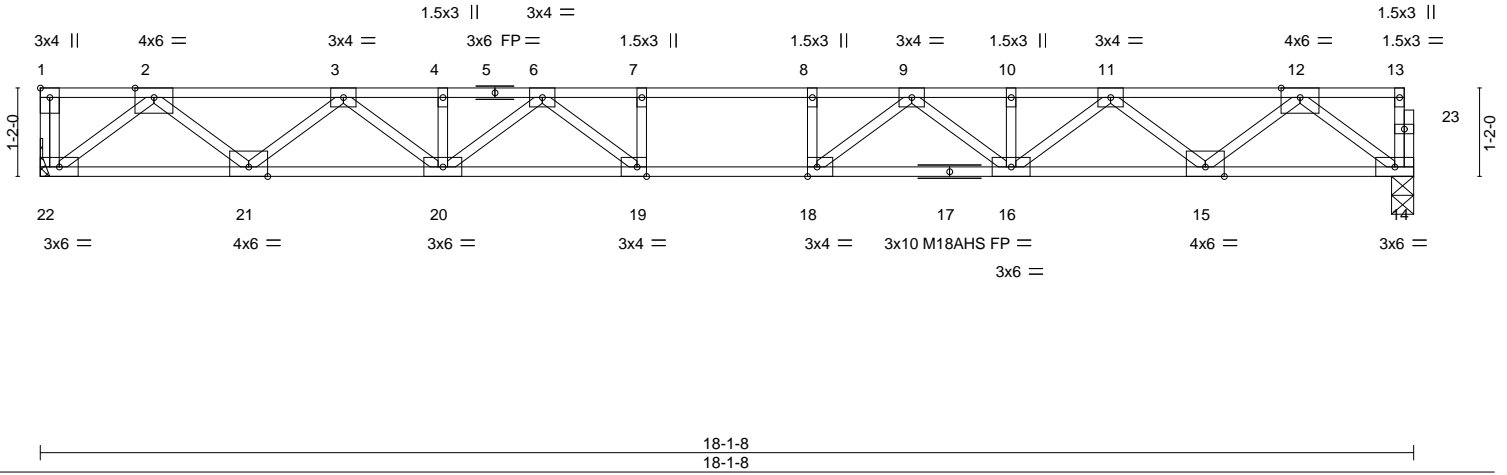


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [18:0-1-8,Edge], [19:0-1-8,Edge]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.38	Vert(LL)	-0.24 18-19	>881	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.48	Vert(CT)	-0.33 18-19	>641	360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr	YES	WB 0.53	Horz(CT)	0.06 14	n/a	n/a		
BCDL 5.0	Code IRC2018/TPI2014		Matrix-S						
								Weight: 92 lb	FT = 20%F, 11%E

**LUMBER-**

TOP CHORD 2x4 SP 2400F 2.0E(flat)  
BOT CHORD 2x4 SP 2400F 2.0E(flat)  
WEBS 2x4 SP No.3(flat)

**BRACING-**

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

**REACTIONS.**

(size) 22=Mechanical, 14=0-3-8  
Max Grav 22=983(LC 1), 14=977(LC 1)

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

TOP CHORD 2-3=-2075/0, 3-4=-3469/0, 4-6=-3469/0, 6-7=-4167/0, 7-8=-4167/0, 8-9=-4167/0, 9-10=-3469/0, 10-11=-3469/0, 11-12=-2075/0  
BOT CHORD 21-22=0/1229, 20-21=0/2888, 19-20=0/3892, 18-19=0/4167, 16-18=0/3892, 15-16=0/2889, 14-15=0/1228  
WEBS 2-22=-1541/0, 2-21=0/1102, 3-21=-1058/0, 3-20=0/742, 12-14=-1538/0, 12-15=0/1103, 11-15=-1059/0, 11-16=0/741, 9-16=-539/0, 9-18=-56/690, 6-20=-539/0, 6-19=-56/690, 7-19=-319/0, 8-18=-319/0

**NOTES-**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) Plates checked for a plus or minus 1 degree rotation about its center.
- 4) Refer to girder(s) for truss to truss connections.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 7) CAUTION, Do not erect truss backwards.



June 27, 2022

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

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



818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781619
J0422-2177	F06A	Floor	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:42 2022 Page 1  
ID:r?yi3DAbxRr?CsKd7DtDjMyglnZ-s?y8XLn5E4gkZ5r81voZlrUT2iBa51WZ7Cq3p4z22dR

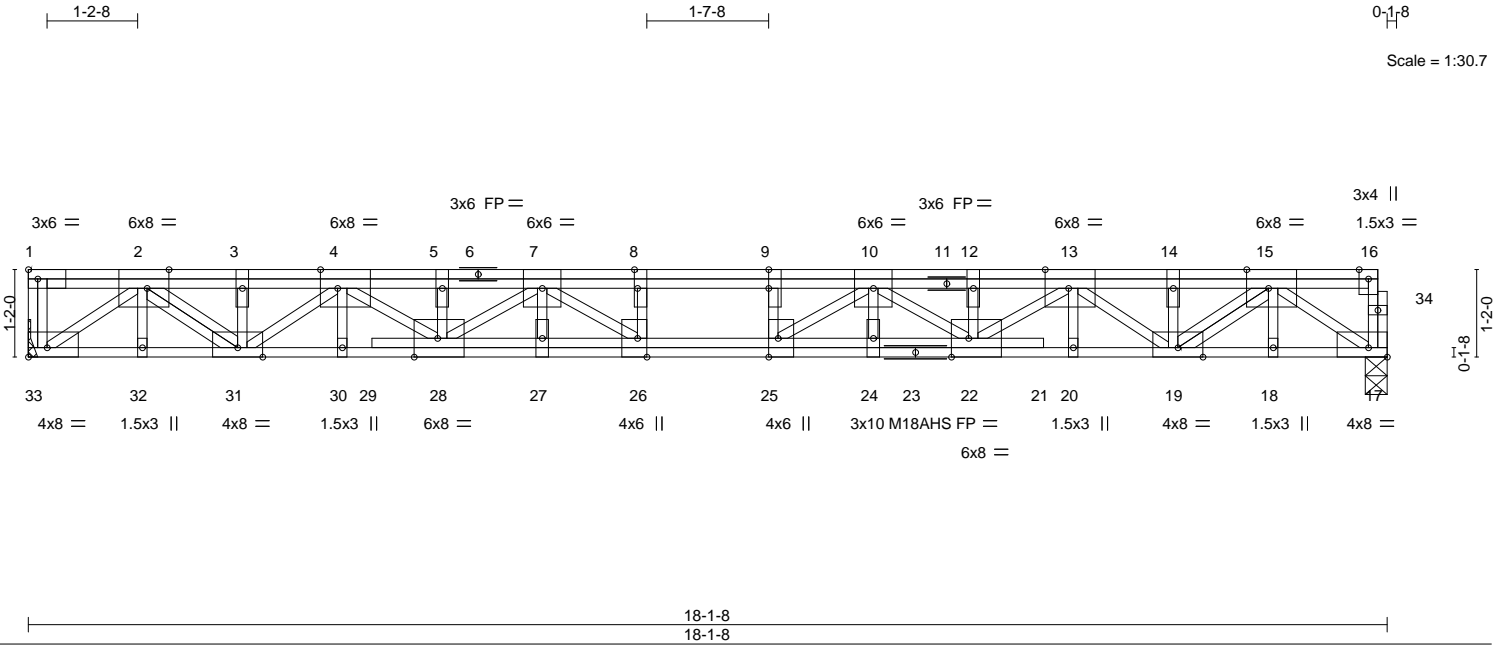


Plate Offsets (X,Y)-- [2:0-3-8,Edge], [4:0-2-12,Edge], [8:0-3-0,Edge], [9:0-3-0,Edge], [13:0-3-12,Edge], [15:0-3-8,Edge], [17:Edge,0-1-8], [22:0-2-12,Edge], [25:0-3-0,Edge], [26:0-3-0,Edge], [28:0-3-12,Edge], [33:Edge,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.31	Vert(LL)	-0.17	25-26	>999	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.71	Vert(CT)	-0.45	25-26	>475	M18AHS	186/179
BCLL 0.0	Rep Stress Incr NO	WB 0.94	Horz(CT)	0.09	17	n/a		
BCDL 5.0	Code IRC2018/TPI2014	Matrix-S						
							Weight: 141 lb	FT = 20%F, 11%E

**LUMBER-**

TOP CHORD 2x4 SP 2400F 2.0E(flat)  
BOT CHORD 2x4 SP 2400F 2.0E(flat)  
WEBS 2x4 SP No.3(flat)

**BRACING-**

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

**REACTIONS.**

(size) 33=Mechanical, 17=0-3-8  
Max Grav 33=1877(LC 1), 17=1864(LC 1)

**FORCES.**

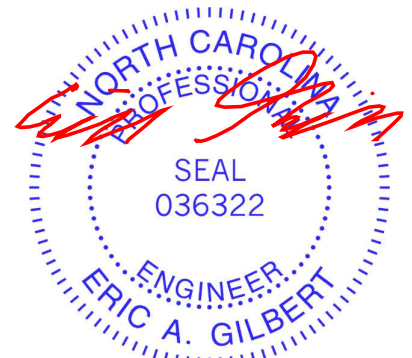
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-4395/0, 3-4=-4417/0, 4-5=-7551/0, 5-7=-7551/0, 7-8=-8958/0, 8-9=-8958/0, 9-10=-8958/0, 10-12=-7551/0, 12-13=-7551/0, 13-14=-4419/0, 14-15=-4395/0  
BOT CHORD 32-33=0/2488, 31-32=0/2490, 30-31=0/5928, 28-30=0/5930, 27-28=0/8493, 26-27=0/8493, 25-26=0/8958, 24-25=0/8493, 22-24=0/8493, 20-22=0/5930, 19-20=0/5927, 18-19=0/2482, 17-18=0/2481  
WEBS 2-33=3000/0, 2-31=0/2443, 3-31=-392/0, 4-31=-1847/0, 4-28=0/1970, 5-28=-277/0, 7-28=-1143/0, 7-26=0/928, 8-26=-390/0, 15-17=-2979/0, 15-19=0/2453, 14-19=-400/0, 13-19=-1846/0, 13-22=0/1970, 12-22=-277/0, 10-22=-1144/0, 10-25=0/928, 9-25=-390/0

**NOTES-**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 2x6 MT20 unless otherwise indicated.
- 4) Plates checked for a plus or minus 1 degree rotation about its center.
- 5) Refer to girder(s) for truss to truss connections.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) Load case(s) 1, 2, 3, 4, 5, 6 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 8) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 9) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-33=-10, 1-16=-200
- 2) Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-33=-10, 1-16=-200



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Continued on page 2

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

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818 Soundside Road  
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Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52781619
J0422-2177	F06A	Floor	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:42 2022 Page 2  
 ID:r?yi3DAbxRr?CsKd7DtDjMyglnZ-s?y8XLn5E4gkZ5r81voZlrUT2iBa51WZ7Cq3p4z22dR

**LOAD CASE(S)** Standard

- 3) 1st chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 17-33=-10, 1-9=-200, 9-16=-120
- 4) 2nd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 17-33=-10, 1-8=-120, 8-16=-200
- 5) 3rd chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 17-33=-10, 1-9=-200, 9-16=-120
- 6) 4th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 17-33=-10, 1-8=-120, 8-16=-200

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818 Soundside Road  
 Edenton, NC 27932

Job J0422-2177	Truss F07	Truss Type Floor	Qty 3	Ply 1	Lot 55 Liberty Meadow Job Reference (optional)	152781620
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Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:42 2022 Page 1  
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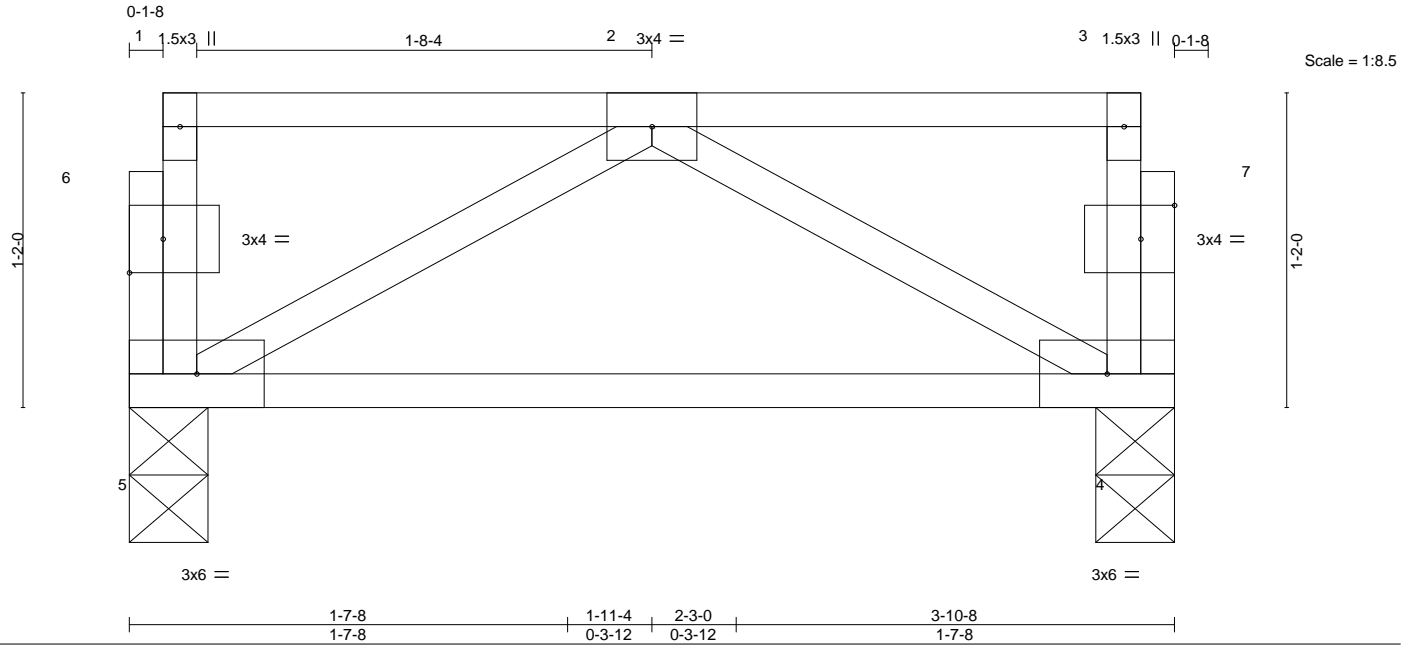


Plate Offsets (X,Y)-- [6:0-1-8,0-1-8], [7:0-1-8,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.13	Vert(LL)	0.00	5	****	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.12	Vert(CT)	-0.02	4-5	>999	360		
BCLL 0.0	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	4	n/a	n/a		
BCDL 5.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 22 lb	FT = 20%F, 11%E

**LUMBER-**  
TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-10-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 4=0-3-8  
Max Grav 5=193(LC 1), 4=193(LC 1)

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

- NOTES-**
- Plates checked for a plus or minus 1 degree rotation about its center.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



June 27, 2022

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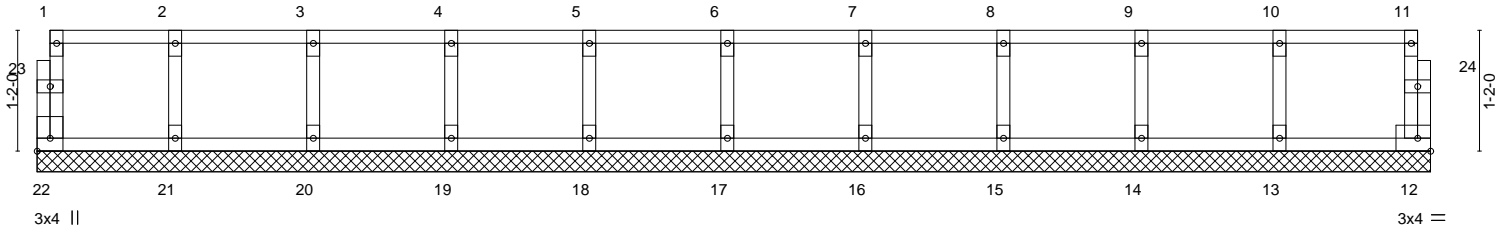
Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781621
J0422-2177	FKW1	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:43 2022 Page 1  
ID:r?yi3DAbxRr?CsKd7DtDjMyglnZ-KCWWWhnj?OobBEQLbcKoH20hT6imqixjMsacLWz22dQ

0.18

Scale = 1:22.3



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-5-8
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-5-8

Plate Offsets (X,Y)-- [22:Edge,0-1-8]										
<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 40.0	Plate Grip DOL	1.00	TC 0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.01	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	12	n/a	n/a		
BCDL 5.0	Code	IRC2018/TPI2014	Matrix-R						Weight: 57 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	
OTHERS 2x4 SP No.3(flat)	

**REACTIONS.** All bearings 13-5-8.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 22, 12, 21, 20, 19, 18, 17, 16, 15, 14, 13

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

- NOTES-**
- All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - 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 is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.



June 27, 2022

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781622
J0422-2177	FKW3	GABLE	1	1	Job Reference (optional)	

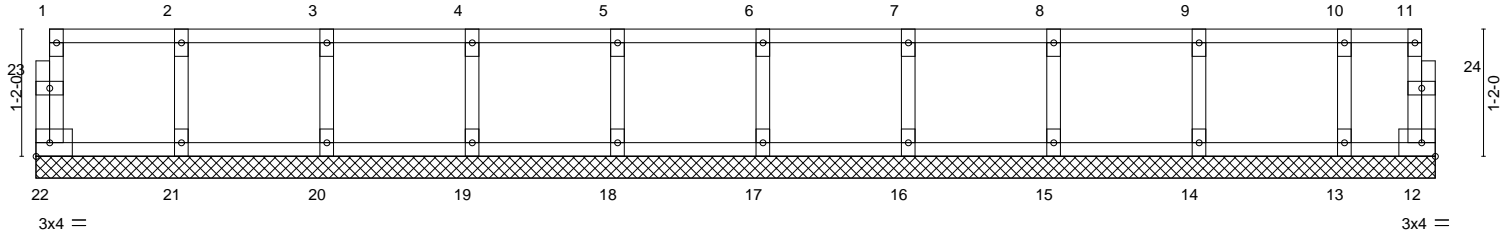
Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:43 2022 Page 1  
ID:r?yi3DAbxRr?CsKd7DtDjMyglnZ-KCWWlhj?OobBEQLbcKoH20ig6ikqixjMsacLWz22dQ

0<sub>1</sub>/8

0<sub>1</sub>/8

Scale = 1:21.1



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	12-10-0	
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-10-0	
<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 40.0	Plate Grip DOL 1.00		TC 0.06	Vert(LL) n/a	-	n/a	999		MT20	244/190
TCDL 10.0	Lumber DOL 1.00		BC 0.01	Vert(CT) n/a	-	n/a	999			
BCLL 0.0	Rep Stress Incr YES		WB 0.03	Horz(CT) 0.00	12	n/a	n/a			
BCDL 5.0	Code IRC2018/TPI2014		Matrix-R						Weight: 55 lb	FT = 20%F, 11%E

**LUMBER-**  
TOP CHORD 2x4 SP No.1 (flat)  
BOT CHORD 2x4 SP No.1 (flat)  
WEBS 2x4 SP No.3 (flat)  
OTHERS 2x4 SP No.3 (flat)

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

**REACTIONS.** All bearings 12-10-0.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 22, 12, 21, 20, 19, 18, 17, 16, 15, 14, 13

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

- NOTES-**
- 1) All plates are 1.5x3 MT20 unless otherwise indicated.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Gable requires continuous bottom chord bearing.
  - 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 5) Gable studs spaced at 1-4-0 oc.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



June 27, 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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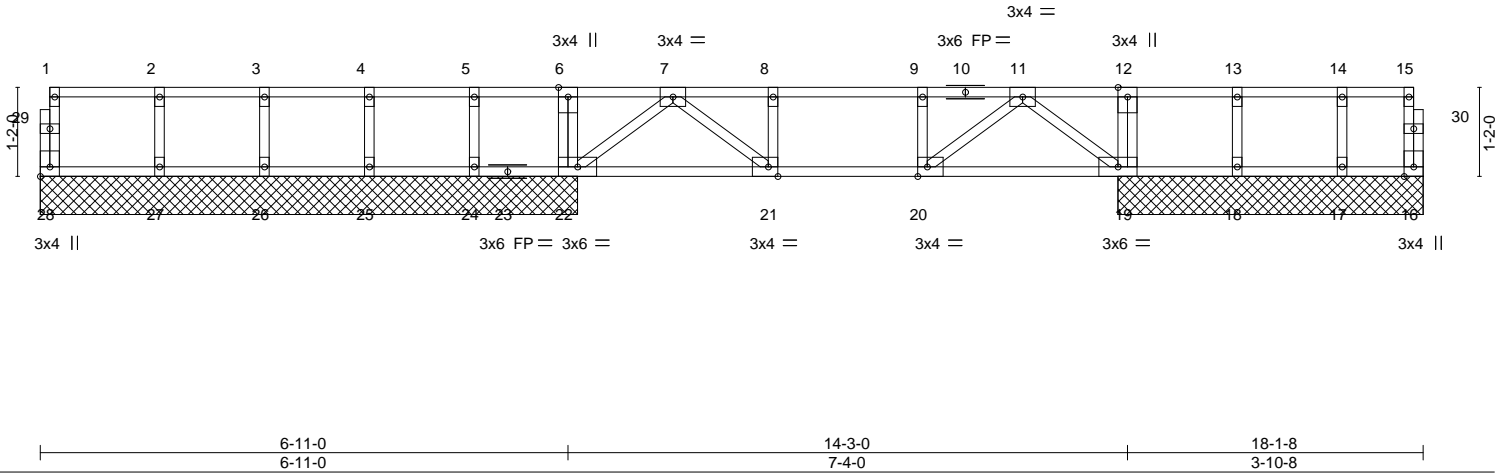
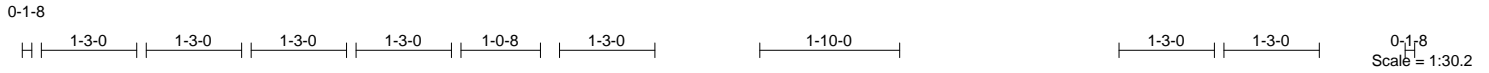


818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781623
J0422-2177	FKW6	Floor	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:45 2022 Page 1  
ID:r?yi3DAbxRr?CsKd7DtDjMyglNZ-HaeG9NpzX?2lQYaji1MGNT6\_QwKclYH0qA3jQPz22dO



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.30	Vert(LL)	-0.02	21	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.31	Vert(CT)	-0.04	21	>999		
BCLL 0.0	Rep Stress Incr	NO	WB 0.30	Horz(CT)	0.01	16	n/a		
BCDL 5.0	Code IRC2018/TPI2014		Matrix-S					Weight: 84 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** All bearings 7-0-8 except (jt=length) 16=4-0-0, 19=4-0-0, 18=4-0-0, 17=4-0-0.  
 (lb) - Max Uplift All uplift 100 lb or less at joint(s) 24  
 Max Grav All reactions 250 lb or less at joint(s) 28, 16, 27, 26, 25, 18, 17, 24 except 19=882(LC 4), 22=877(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 7-8=-1254/0, 8-9=-1254/0, 9-11=-1254/0  
 BOT CHORD 21-22=0/794, 20-21=0/1254, 19-20=0/791  
 WEBS 7-22=-996/0, 7-21=0/619, 8-21=-350/0, 11-19=-990/0, 11-20=0/622, 9-20=-351/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

- Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-120, 12-15=-20



Continued on page 2

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



Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	152781623
J0422-2177	FKW6	Floor	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:45 2022 Page 2  
ID:r?yi3DAbxRr?CsKd7DtDjMyglNz-HaeG9NpzX?2lQYaji1MGNT6\_QwKclYH0qA3jQPz22dO

**LOAD CASE(S)** Standard

- 4) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-20, 6-12=-200, 12-15=-100
- 5) 3rd unbalanced Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-120, 12-15=-20
- 6) 4th unbalanced Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-20, 6-12=-200, 12-15=-100
- 7) 1st chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 8) 2nd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 9) 3rd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 10) 4th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 11) 5th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 12) 6th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 13) 7th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 14) 8th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 15) 9th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 16) 10th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 17) 11th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-9=-200, 9-12=-120, 12-15=-100
- 18) 12th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-8=-120, 8-12=-200, 12-15=-100
- 19) 13th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 20) 14th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 21) 15th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 22) 16th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 23) 17th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 24) 18th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 25) 19th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 26) 20th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 27) 21st chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 28) 22nd chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100

Continued on page 3

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



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52781623
J0422-2177	FKW6	Floor	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jun 27 14:46:45 2022 Page 3  
 ID:r?yi3DAbxRr?CsKd7DtDjMyglNZ-HaeG9NpzX?2lQYaji1MGNT6\_QwKclYH0qA3jQPz22dO

**LOAD CASE(S)** Standard

- 29) 23rd chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 30) 24th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 31) 25th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 32) 26th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 33) 27th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 34) 28th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 35) 29th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-9=-200, 9-12=-120, 12-15=-100
- 36) 30th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-8=-120, 8-12=-200, 12-15=-100
- 37) 31st chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 38) 32nd chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 39) 33rd chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 40) 34th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 41) 35th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100
- 42) 36th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-28=-10, 1-6=-100, 6-12=-200, 12-15=-100

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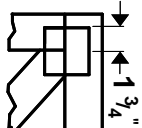
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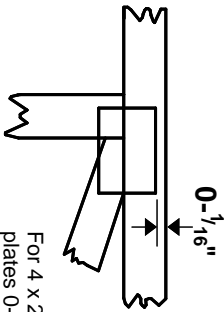
818 Soundside Road  
Edenton, NC 27932

# 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

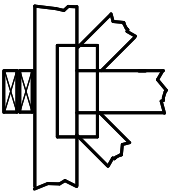
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



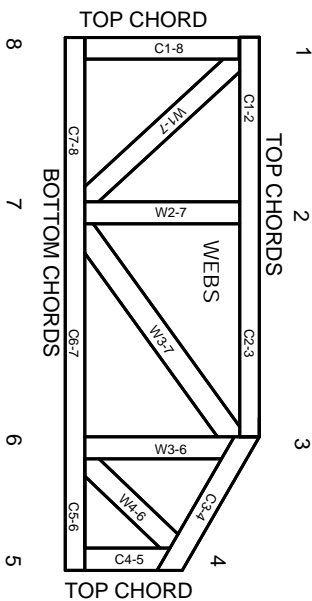
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate  
Connected Wood Trusses.

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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



# General Safety Notes

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

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

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: J0422-2176  
Lot 55 Liberty Meadow

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

Pages or sheets covered by this seal: I52879055 thru I52879083

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

North Carolina COA: C-0844



July 4, 2022

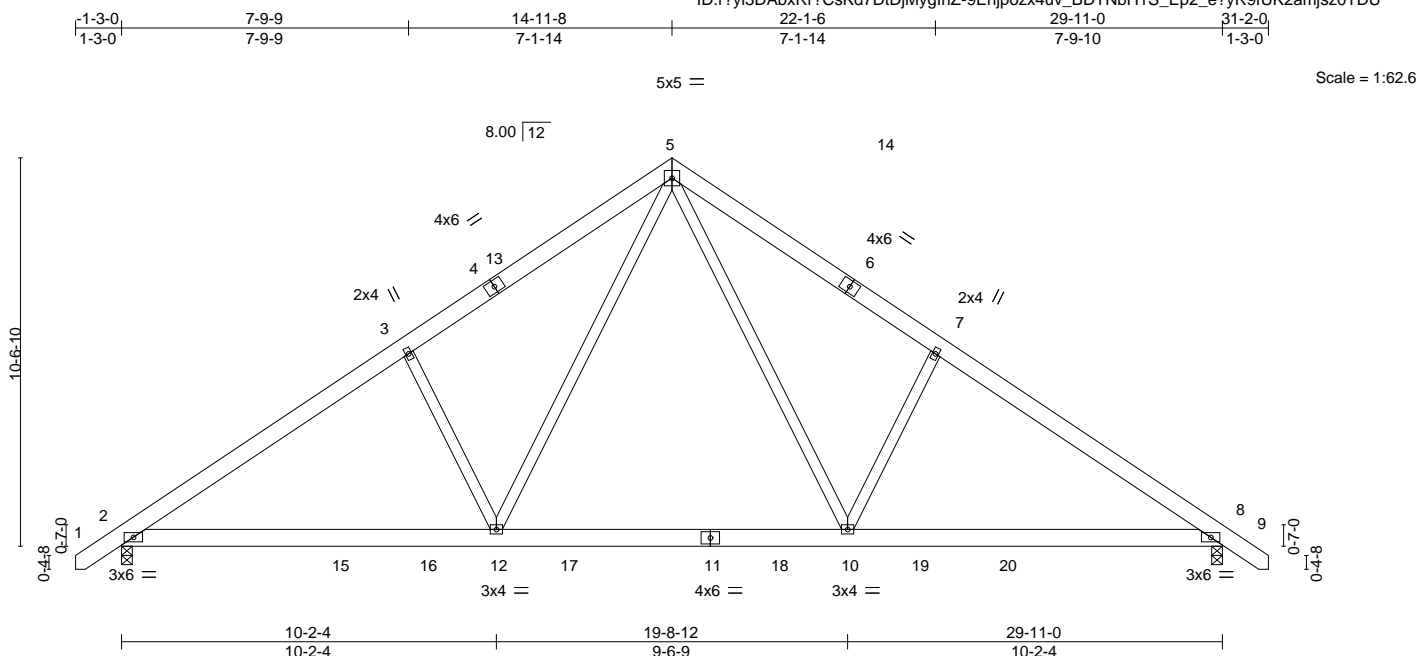
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Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879055
J0422-2176	A1	COMMON	3	1		

Comtech, Inc. Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:19 2022 Page 1  
 ID:r?yi3DAbxRr?CsKd7DtDjMyglnZ-9Enjpoz4uv\_BDTNbH1S\_Ep2\_e?yR9fUK2amjsz0TDU



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.24	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.51	Vert(LL) -0.11 10-12 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.35	Vert(CT) -0.18 8-10 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 8 n/a n/a		
	Code IRC2018/TPI2014		Wind(LL) 0.03 2-12 >999 240	Weight: 210 lb	FT = 20%

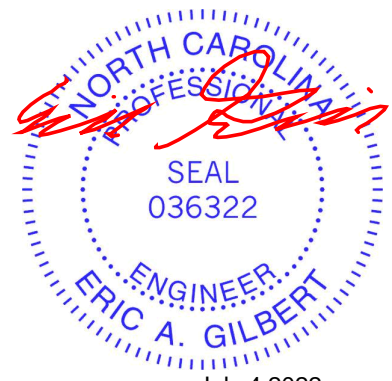
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-2-8 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=-257(LC 10)  
 Max Uplift 2=-80(LC 12), 8=-80(LC 13)  
 Max Grav 2=1553(LC 19), 8=1553(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2075/347, 3-5=-1949/436, 5-7=-1950/436, 7-8=-2075/347  
 BOT CHORD 2-12=-152/1820, 10-12=0/1188, 8-10=-150/1652  
 WEBS 5-10=-163/1025, 7-10=-448/294, 5-12=-163/1024, 3-12=-447/294

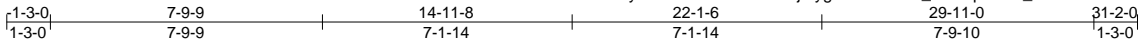
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-7 to 3-3-6, Interior(1) 3-3-6 to 14-11-8, Exterior(2R) 14-11-8 to 19-4-5, Interior(1) 19-4-5 to 31-0-7 zone;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 30.0psf 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 80 lb uplift at joint 2 and 80 lb uplift at joint 8.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879056
J0422-2176	A1GE	GABLE	1	1		

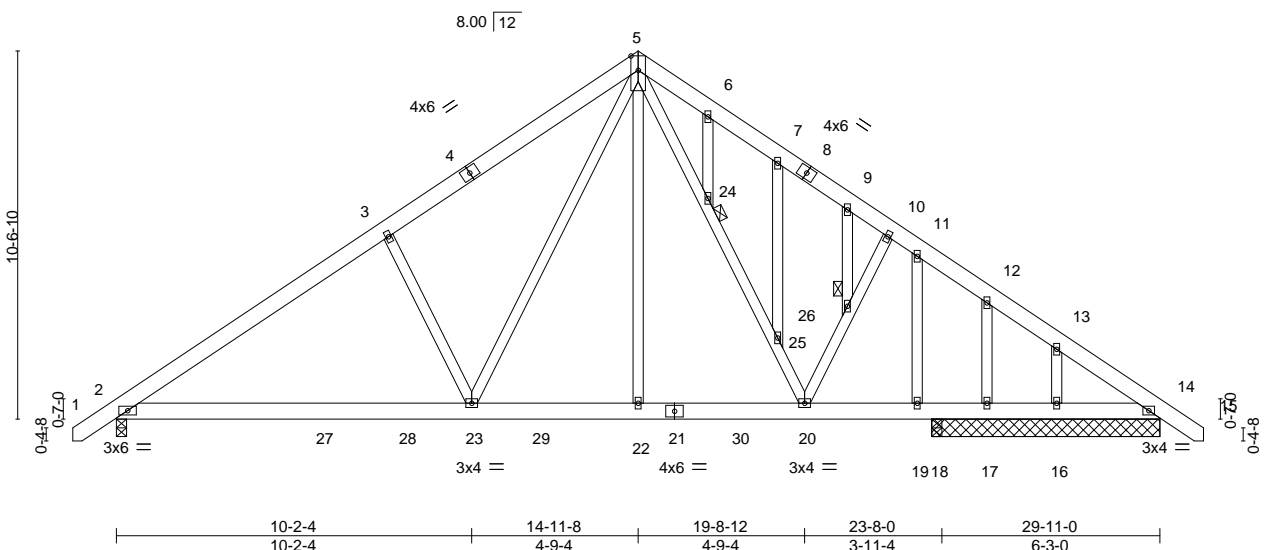
Comtech, Inc. Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:20 2022 Page 1

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5x12 ||

Scale = 1:66.1



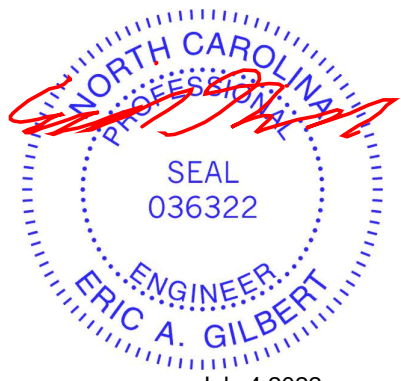
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.24	Vert(LL) -0.11	2-23	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.45	Vert(CT) -0.20	2-23	>999	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.57	Horz(CT) 0.02	14	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S	Wind(LL) 0.04	2-23	>999	240	Weight: 253 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-10-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	JOINTS 1 Brace at Jt(s): 24, 26
OTHERS 2x4 SP No.2	

**REACTIONS.** All bearings 6-6-8 except (jt=length) 2=0-3-8, 18=0-3-8.  
 (lb) - Max Horz 2=-321(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 14 except 2=-235(LC 12), 17=-450(LC 19), 16=-130(LC 13), 18=-173(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 17 except 2=1319(LC 19), 14=537(LC 20), 16=334(LC 20), 18=1291(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1634/282, 3-5=-1512/388, 5-6=-865/315, 6-7=-945/313, 7-9=-896/244, 9-10=-892/202, 10-11=-1001/202, 11-12=-583/125, 12-13=-681/96, 13-14=-726/45  
 BOT CHORD 2-23=-289/1502, 22-23=-7/892, 20-22=-7/892, 19-20=0/582, 18-19=0/582, 17-18=0/582, 16-17=0/582, 14-16=0/582  
 WEBS 20-25=-274/85, 20-26=-19/505, 10-26=-25/552, 5-23=-269/946, 3-23=-474/386, 11-19=-844/138, 5-22=0/278

- NOTES-**
- 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=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-1-7 to 3-3-6, Interior(1) 3-3-6 to 14-11-8, Exterior(2R) 14-11-8 to 19-4-5, Interior(1) 19-4-5 to 31-0-7 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf 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) 14 except (jt=lb) 2=235, 17=450, 16=130, 18=173.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

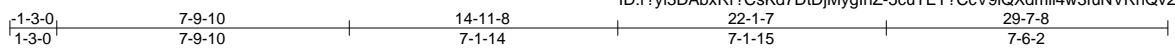


July 4, 2022

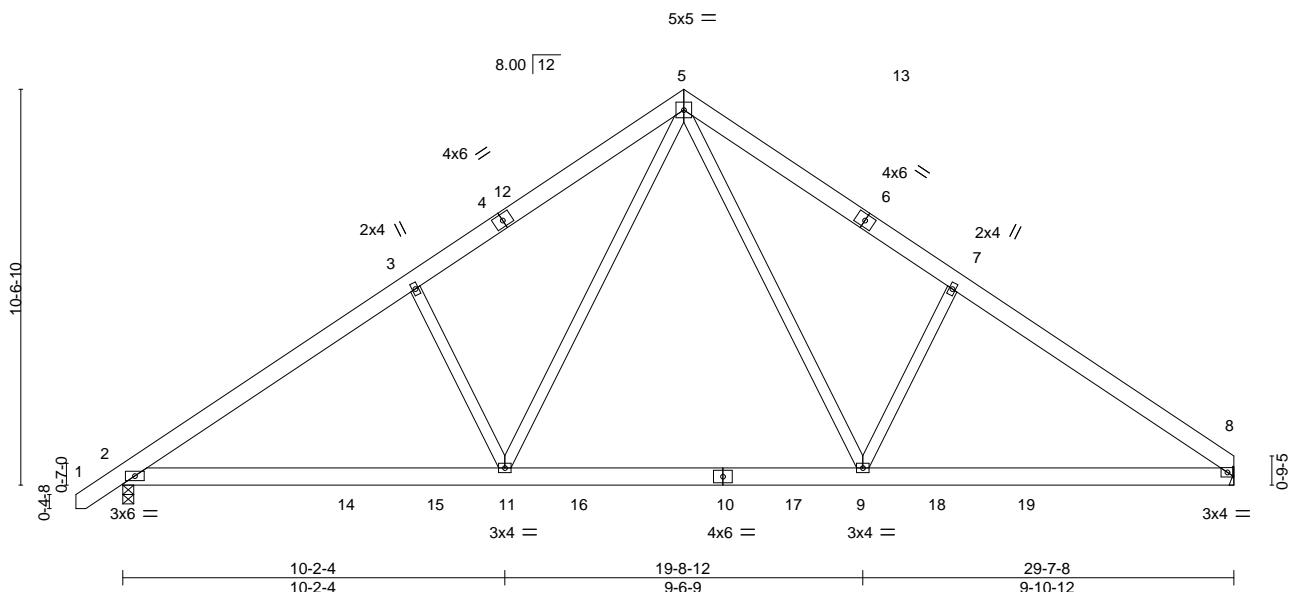
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before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







Scale = 1:61.4



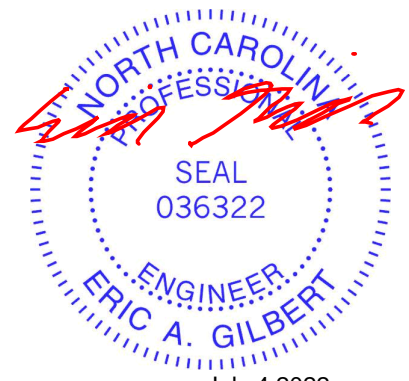
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.24	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.51	Vert(LL) -0.11 9-11 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.35	Vert(CT) -0.18 2-11 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 8 n/a n/a		
	Code IRC2018/TPI2014		Wind(LL) 0.03 2-11 >999 240	Weight: 205 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-2-12 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** (size) 2=0-3-8, 8=Mechanical  
 Max Horz 2=252(LC 9)  
 Max Uplift 2=-80(LC 12), 8=-61(LC 13)  
 Max Grav 2=1544(LC 19), 8=1471(LC 20)

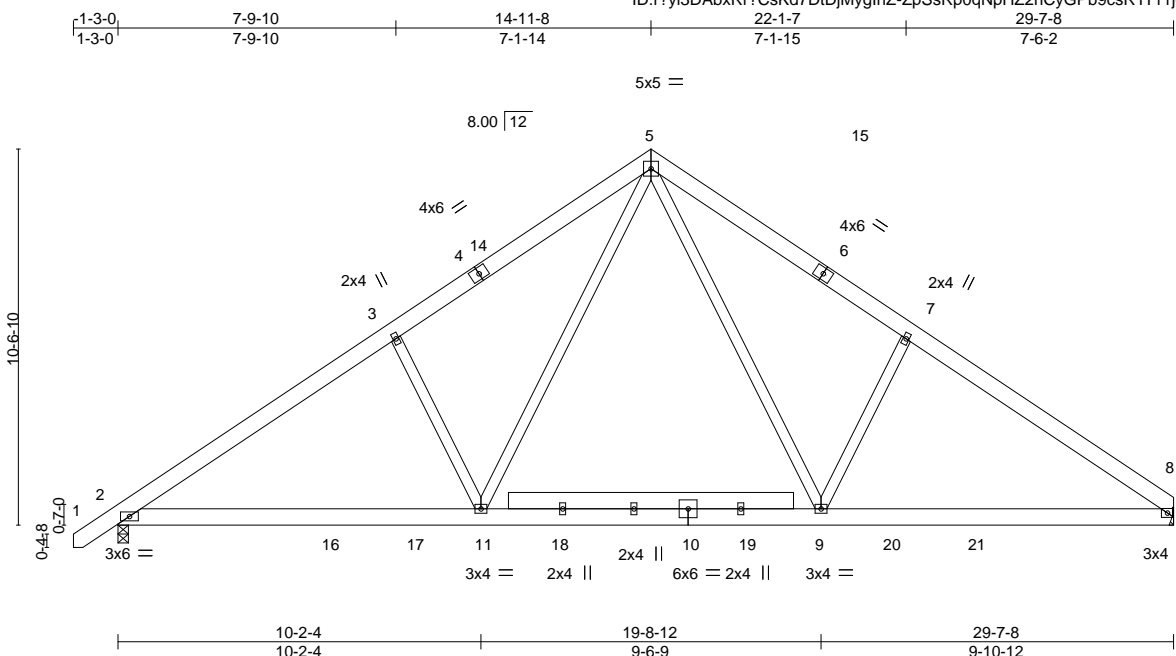
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2060/345, 3-5=-1934/435, 5-7=-1917/439, 7-8=-2043/347  
 BOT CHORD 2-11=-192/1799, 9-11=0/1166, 8-9=-177/1604  
 WEBS 5-9=-162/994, 7-9=-420/294, 5-11=-163/1025, 3-11=-448/295

- NOTES-**
- 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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-7 to 3-3-6, Interior(1) 3-3-6 to 14-11-8, Exterior(2R) 14-11-8 to 19-4-5, Interior(1) 19-4-5 to 29-6-12 zone; 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 30.0psf 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) 2, 8.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879058
J0422-2176	A2A	COMMON	6	1		

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Scale = 1:64.7

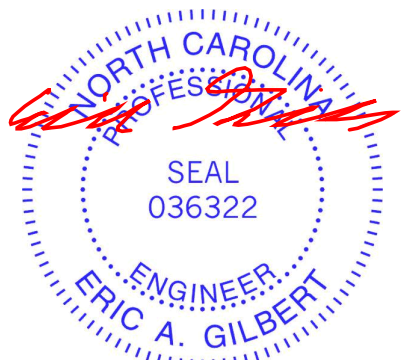
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.24	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.50	Vert(LL) -0.10 9-11 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.35	Vert(CT) -0.18 2-11 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 8 n/a n/a		
	Code IRC2018/TPI2014		Wind(LL) 0.03 2-11 >999 240	Weight: 223 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-2-15 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 12-13: 2x6 SP No.1	

**REACTIONS.** (size) 2=0-3-8, 8=Mechanical  
 Max Horz 2=252(LC 9)  
 Max Uplift 2=80(LC 12), 8=61(LC 13)  
 Max Grav 2=1537(LC 19), 8=1464(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2046/345, 3-5=-1921/435, 5-7=-1904/439, 7-8=-2030/347  
 BOT CHORD 2-11=-192/1789, 9-11=0/1159, 8-9=-177/1594  
 WEBS 5-9=-162/986, 7-9=-420/294, 5-11=-163/1017, 3-11=-448/295

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-7 to 3-3-6, Interior(1) 3-3-6 to 14-11-8, Exterior(2R) 14-11-8 to 19-4-5, Interior(1) 19-4-5 to 29-6-12 zone; 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 30.0psf 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) 2, 8.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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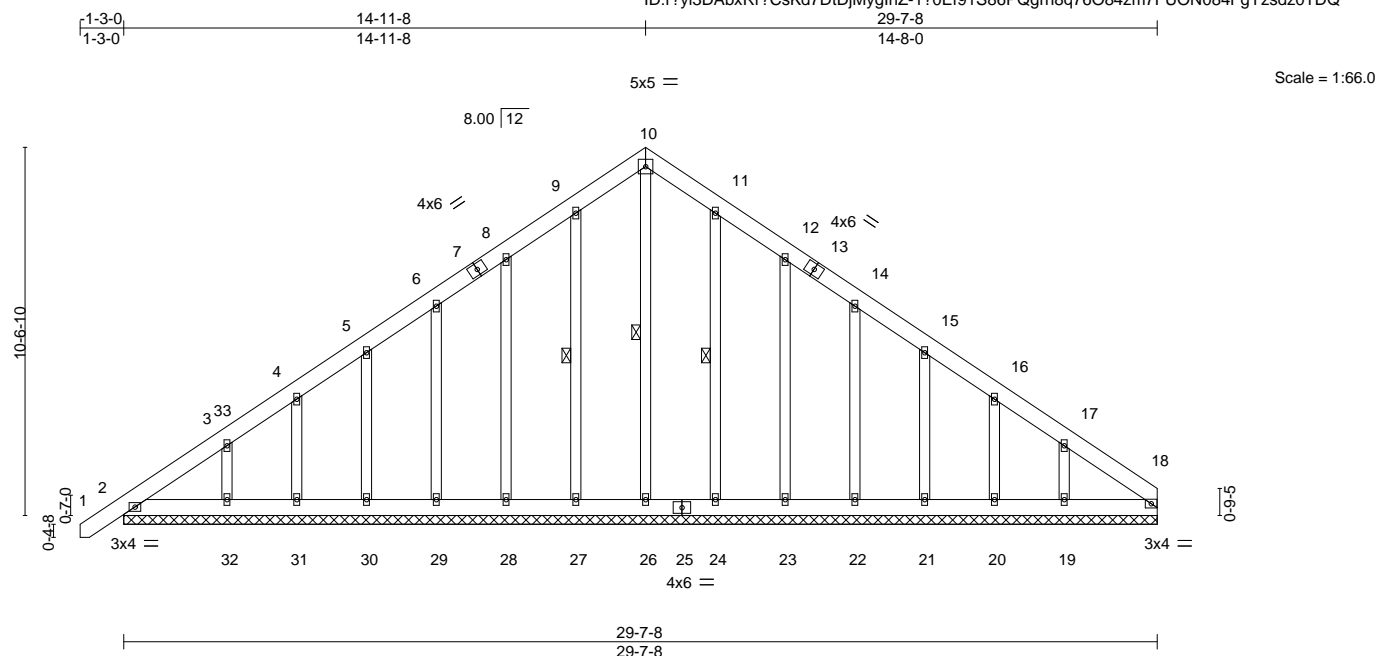
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879059
J0422-2176	A2GE	GABLE	1	1		

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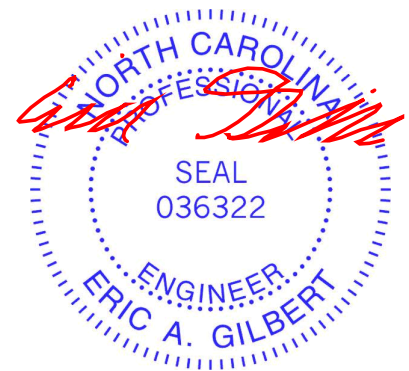
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.04	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.03	Vert(LL) -0.00 1 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.13	Vert(CT) 0.00 1 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 18 n/a n/a		
	Code IRC2018/TPI2014			Weight: 260 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS 1 Row at midpt 10-26, 9-27, 11-24

**REACTIONS.** All bearings 29-7-8.  
 (lb) - Max Horz 2=314(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 18, 27, 28, 29, 30, 31, 24, 22, 21, 20, 2 except 32=-122(LC 12), 23=-101(LC 13), 19=-145(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 18, 26, 27, 28, 29, 30, 31, 32, 24, 23, 22, 21, 20, 2 except 19=251(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-303/230, 9-10=-168/259, 10-11=-168/259

- NOTES-**
- 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=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-7 to 3-3-6, Exterior(2N) 3-3-6 to 14-11-8, Corner(3R) 14-11-8 to 19-4-5, Exterior(2N) 19-4-5 to 29-7-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf 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) 18, 27, 28, 29, 30, 31, 24, 22, 21, 20, 2 except (jt=lb) 32=122, 23=101, 19=145.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 4, 2022

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>818 Soundside Road Edenton, NC 27932</p>
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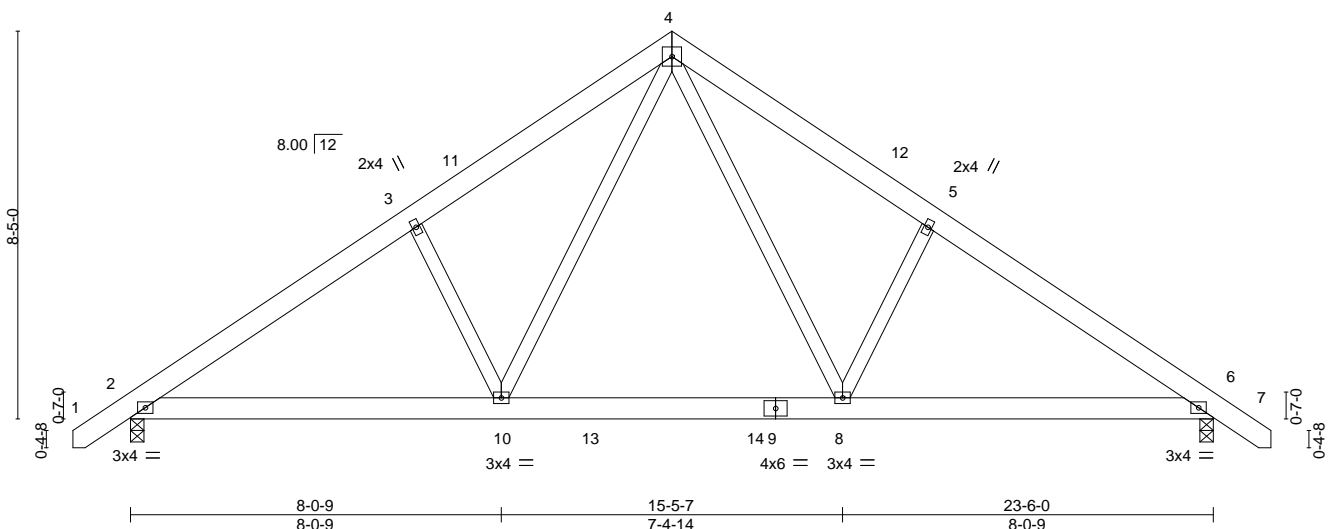
Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	52879060
J0422-2176	B1	COMMON	1	1		

Comtech, Inc. Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:24 2022 Page 1  
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5x5 =

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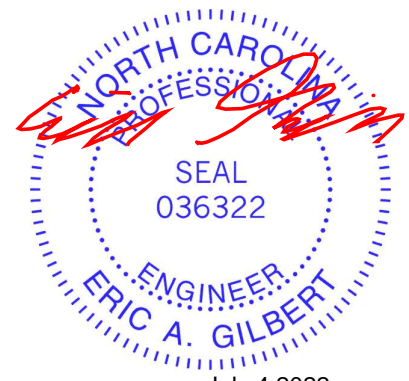
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.14	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.29	Vert(LL) -0.06 8-10 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.17	Vert(CT) -0.08 8-10 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.02 6 n/a n/a		
	Code IRC2018/TPI2014		Wind(LL) 0.02 10 >999 240	Weight: 166 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8  
 Max Horz 2=-206(LC 10)  
 Max Uplift 2=-67(LC 12), 6=-67(LC 13)  
 Max Grav 2=1162(LC 19), 6=1162(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1504/271, 3-4=-1403/341, 4-5=-1404/341, 5-6=-1504/271  
 BOT CHORD 2-10=-114/1319, 8-10=0/870, 6-8=-112/1191  
 WEBS 4-8=-132/722, 5-8=-335/235, 4-10=-132/722, 3-10=-335/235

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-7 to 3-3-6, Interior(1) 3-3-6 to 11-9-0, Exterior(2R) 11-9-0 to 16-1-13, Interior(1) 16-1-13 to 24-7-7 zone; 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 30.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 4, 2022

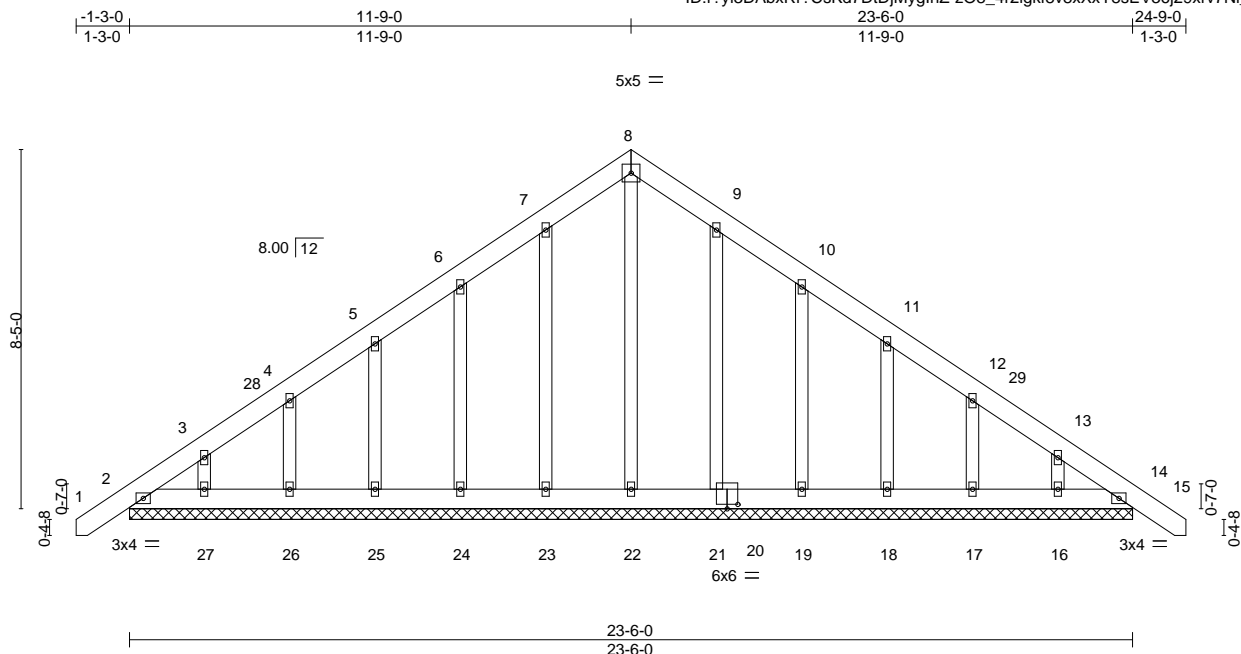
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Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879061
J0422-2176	B1GE	GABLE	1	1		

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:25 2022 Page 1  
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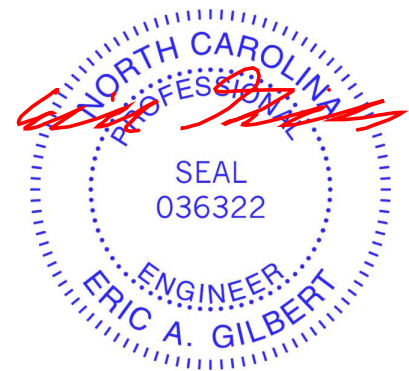
Plate Offsets (X,Y)-- [20:0-3-0,0-1-4]	
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0
TCLL 20.0	Plate Grip DOL 1.15
TCDL 10.0	Lumber DOL 1.15
BCLL 0.0 *	Rep Stress Incr YES
BCDL 10.0	Code IRC2018/TPI2014
<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d
TC 0.04	Vert(LL) -0.00 14 n/r 120
BC 0.02	Vert(CT) -0.00 14 n/r 120
WB 0.16	Horz(CT) 0.00 14 n/a n/a
Matrix-S	
<b>PLATES</b>	<b>GRIP</b>
MT20	244/190
	Weight: 192 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	

**REACTIONS.** All bearings 23-6-0.  
 (lb) - Max Horz 2=-257(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 14, 23, 24, 25, 26, 27, 21, 19, 18, 17, 16  
 Max Grav All reactions 250 lb or less at joint(s) 2, 14, 22, 23, 24, 25, 26, 27, 21, 19, 18, 17, 16

**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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCCL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-7 to 3-3-6, Exterior(2N) 3-3-6 to 11-9-0, Corner(3R) 11-9-0 to 16-1-13, Exterior(2N) 16-1-13 to 24-7-7 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 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 30.0psf 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.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 14, 23, 24, 25, 26, 27, 21, 19, 18, 17, 16.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 4, 2022

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road        Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879062
J0422-2176	C1	ROOF TRUSS	9	1		

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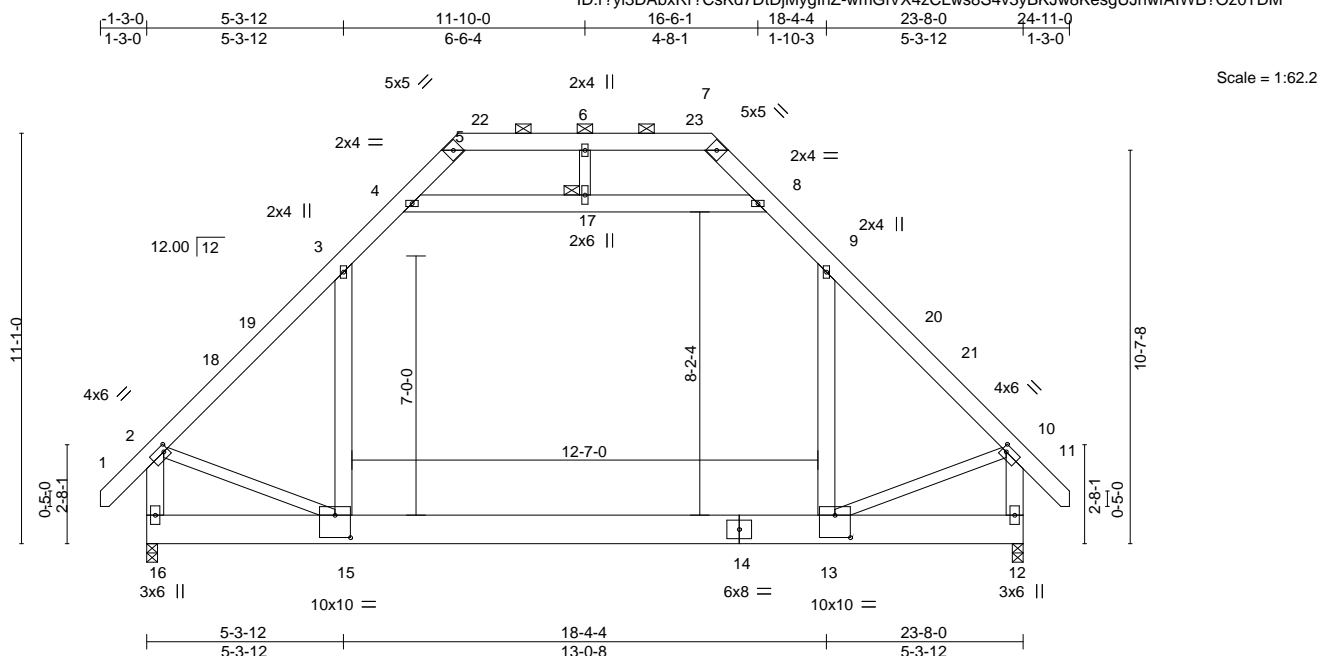


Plate Offsets (X,Y)-- [2:0-1-8,0-2-0], [10:0-1-8,0-2-0], [13:0-5-0,0-7-4], [15:0-5-0,0-7-4]

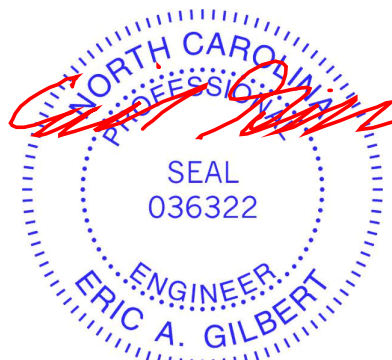
LOADING (psf)	SPACING-	CS.I.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.52	Vert(LL) -0.18	13-15	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.72	Vert(CT) -0.29	13-15	>948	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.27	Horz(CT) 0.01	12	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S	Wind(LL) 0.07	13-15	>999	240	Weight: 255 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-7-3 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD 2x10 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except* 2-15,10-13,6-17: 2x4 SP No.2	JOINTS 1 Brace at Jt(s): 17

**REACTIONS.** (size) 16=0-3-8, 12=0-3-8  
 Max Horz 16=307(LC 11)  
 Max Grav 16=1605(LC 2), 12=1605(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1663/3, 3-4=-1048/151, 4-5=-374/127, 7-8=-374/127, 8-9=-1048/151,  
 9-10=-1663/0, 2-16=-1768/40, 10-12=-1769/40  
 BOT CHORD 15-16=-280/372, 13-15=0/1100  
 WEBS 4-17=-1167/72, 8-17=-1167/72, 3-15=0/696, 9-13=0/696, 2-15=0/1102, 10-13=0/1104

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-10 to 3-3-3, Interior(1) 3-3-3 to 8-6-1, Exterior(2R) 8-6-1 to 14-8-12, Interior(1) 14-8-12 to 15-1-15, Exterior(2R) 15-1-15 to 21-4-10, Interior(1) 21-4-10 to 24-9-10 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf 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.
  - Ceiling dead load (10.0 psf) on member(s). 3-4, 8-9, 4-17, 8-17; Wall dead load (5.0psf) on member(s).3-15, 9-13
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 13-15
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Attic room checked for L/360 deflection.



July 4, 2022

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

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

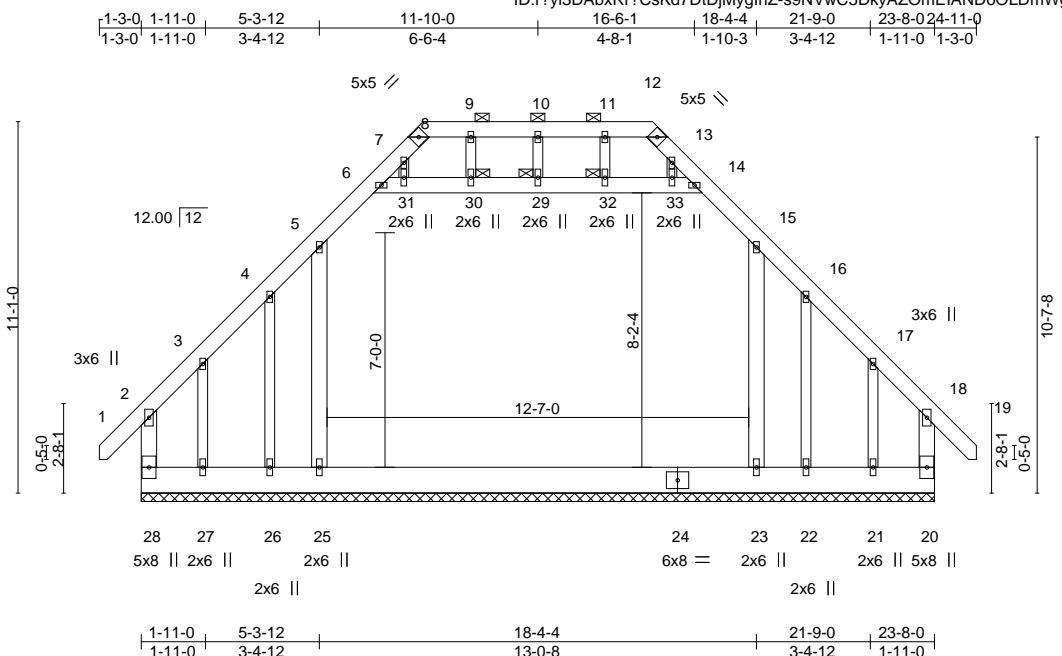


Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879063
J0422-2176	C1GE	GABLE	1	1		

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Scale = 1:68.7

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.18	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.32	Vert(LL) 0.00 18 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.31	Vert(CT) 0.00 18 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) -0.00 20 n/a n/a		
	Code IRC2018/TPI2014			Weight: 270 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12.
BOT CHORD 2x10 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	JOINTS 1 Brace at Jt(s): 29, 30, 32
OTHERS 2x4 SP No.2	

**REACTIONS.** All bearings 23-8-0.  
 (lb) - Max Horz 28=-385(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) except 28=-349(LC 8), 20=-329(LC 9), 26=-982(LC 18), 27=-367(LC 12), 22=-982(LC 18), 21=-363(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) except 28=636(LC 21), 25=1787(LC 23), 23=1784(LC 22), 20=619(LC 20), 27=427(LC 10), 21=411(LC 11)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-407/256, 3-4=-260/177, 4-5=-219/294, 5-6=-471/205, 6-7=-733/170, 7-8=-613/107, 12-13=-613/111, 13-14=-733/171, 14-15=-471/205, 15-16=-219/289, 16-17=-251/169, 17-18=-395/241, 2-28=-427/212, 18-20=-417/199, 8-9=-594/98, 9-10=-594/98, 10-11=-594/98, 11-12=-594/98  
 WEBS 6-31=-2/474, 30-31=-2/475, 29-30=-2/475, 29-32=-2/475, 32-33=-2/475, 14-33=-1/473, 5-25=-660/38, 15-23=-660/27

- NOTES-**
- 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=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Hip Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-1-10 to 3-3-3, Interior(1) 3-3-3 to 8-6-1, Exterior(2R) 8-6-1 to 12-10-14, Interior(1) 12-10-14 to 15-1-15, Exterior(2R) 15-1-15 to 19-10-3, Interior(1) 19-10-3 to 24-9-10 zone; end vertical 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf 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.
  - Ceiling dead load (10.0 psf) on member(s). 5-6, 14-15, 6-31, 30-31, 29-30, 29-32, 32-33, 14-33; Wall dead load (5.0psf) on member(s). 5-25, 15-23
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 349 lb uplift at joint 28, 329 lb uplift at joint 20, 982 lb uplift at joint 26, 367 lb uplift at joint 27, 982 lb uplift at joint 22 and 363 lb uplift at joint 21.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and conform to standard ANSI/TPI 1.



July 4, 2022

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



Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879063
J0422-2176	C1GE	GABLE	1	1	Job Reference (optional)	

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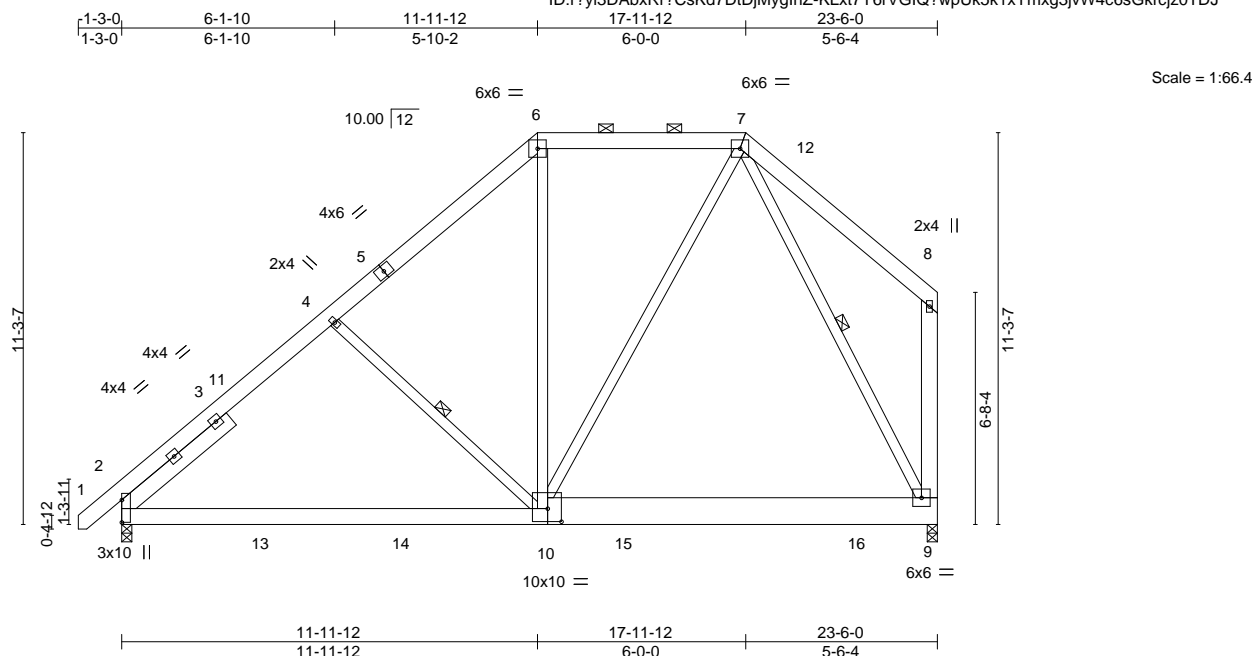
- NOTES-**
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 14) Attic room checked for L/360 deflection.

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

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

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879064
J0422-2176	D1	PIGGYBACK BASE	4	1		

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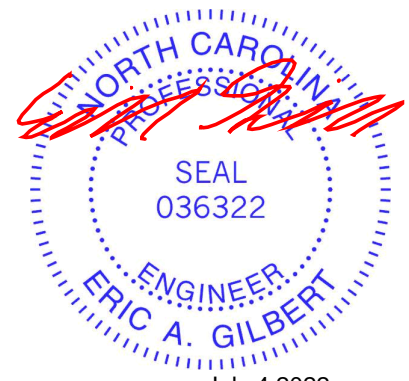
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.15	Vert(LL) -0.19	2-10	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.68	Horz(CT) -0.30	2-10	>940	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.53	Wind(LL) 0.01	9	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S		2-10	>999	240	Weight: 229 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD 2x6 SP No.1 *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except*	WEBS 1 Row at midpt 4-10, 7-9
SLIDER Left 2x6 SP No.1 4-0-15	

**REACTIONS.** (size) 2=0-3-8, 9=0-3-8  
 Max Horz 2=264(LC 12)  
 Max Uplift 2=-35(LC 12), 9=-45(LC 12)  
 Max Grav 2=1216(LC 19), 9=1172(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1223/224, 4-6=-998/238, 6-7=-706/270  
 BOT CHORD 2-10=-300/957, 9-10=-80/427  
 WEBS 4-10=-307/258, 6-10=0/356, 7-10=-67/665, 7-9=-877/160

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-9 to 3-3-4, Interior(1) 3-3-4 to 11-11-12, Exterior(2E) 11-11-12 to 23-3-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 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 30.0psf 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 35 lb uplift at joint 2 and 45 lb uplift at joint 9.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

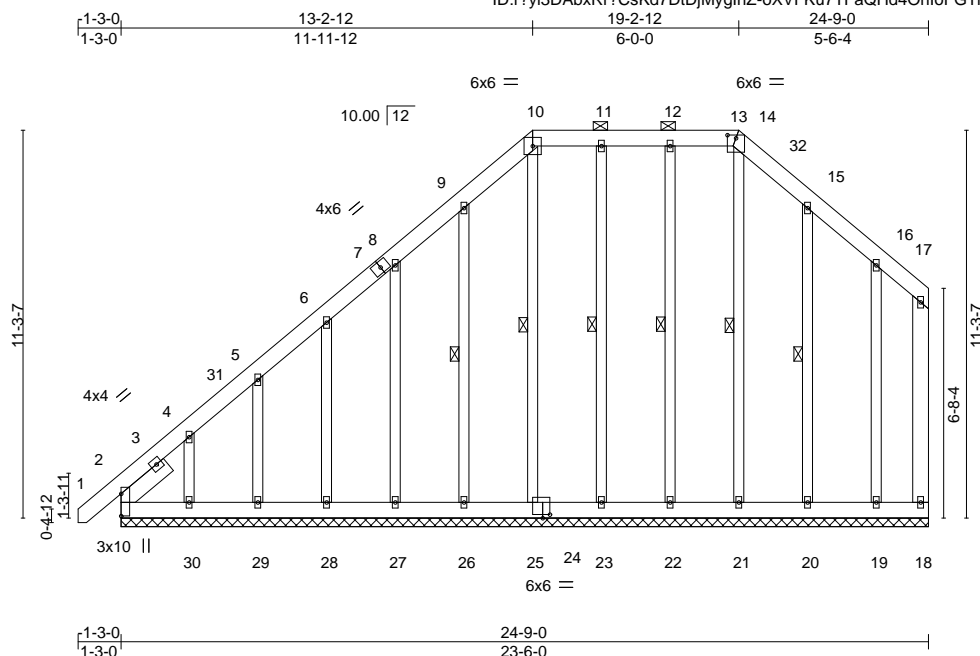


Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879065
J0422-2176	D1GE	PIGGYBACK BASE SUPPO	1	1		

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Scale = 1:67.1

Plate Offsets (X,Y)-- [2:Edge,0-0-0], [13:0-3-0,0-1-1], [24:0-2-8,0-1-4]

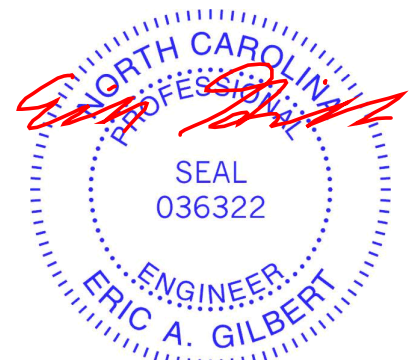
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.06	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	-0.00	18	n/a	n/a		
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 270 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 10-13.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	WEBS 1 Row at midpt 14-21, 12-22, 11-23, 10-25, 9-26, 15-20
OTHERS 2x4 SP No.2	
SLIDER Left 2x6 SP No.1 1-9-2	

**REACTIONS.** All bearings 23-6-0.  
 (lb) - Max Horz 2=394(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 18, 22, 23, 25, 29, 20 except 26=103(LC 12), 27=117(LC 12), 28=113(LC 12), 30=289(LC 12), 19=105(LC 13), 2=189(LC 10)  
 Max Grav All reactions 250 lb or less at joint(s) 18, 21, 22, 23, 25, 26, 27, 28, 29, 20, 19 except 30=261(LC 19), 2=366(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-513/342, 4-5=-304/246  
 WEBS 4-30=-203/282

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCdL=6.0psf; BCdL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-9 to 3-3-4, Exterior(2N) 3-3-4 to 11-11-12, Corner(3R) 11-11-12 to 16-4-9, Exterior(2N) 16-4-9 to 17-10-12, Corner(3R) 17-10-12 to 22-3-9, Exterior(2N) 22-3-9 to 23-3-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) Provide adequate drainage to prevent water ponding.
  - 5) All plates are 2x4 MT20 unless otherwise indicated.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Gable studs spaced at 2-0-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 30.0psf 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.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 22, 23, 25, 29, 20 except (jt=lb) 26=103, 27=117, 28=113, 30=289, 19=105, 2=189.
  - 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
  - 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



July 4, 2022

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879066
J0422-2176	G1	COMMON	2	1		

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:32 2022 Page 1  
 ID:r?yi3DAbxRr?CsKd7DtDjMyglnZ-Gk3eYE750tY8FDztrWmV0zrlotTO\_3BOJaDygbz0TDH



5x5 =

Scale = 1:47.4

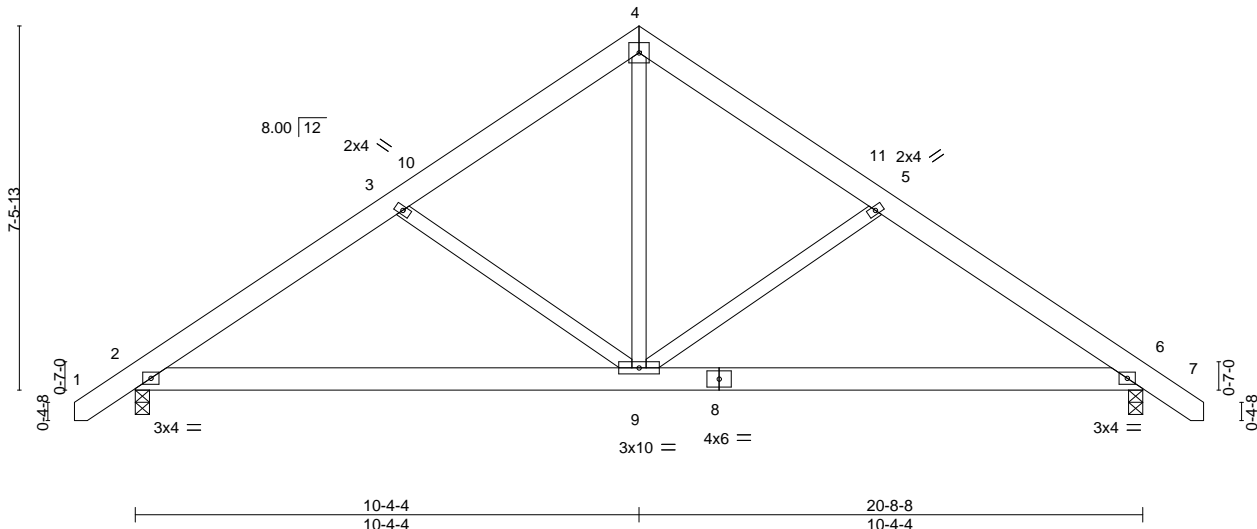


Plate Offsets (X,Y)--	[3:0-0-0,0-0-0]
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LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.11	Vert(LL)	-0.06	6-9	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.35	Vert(CT)	-0.12	6-9	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.20	Horz(CT)	0.02	6	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL)	0.01	9	>999	Weight: 141 lb	FT = 20%
	Code IRC2018/TPI2014							

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** (size) 6=0-3-8, 2=0-3-8  
 Max Horz 2=183(LC 11)  
 Max Uplift 6=-61(LC 13), 2=-61(LC 12)  
 Max Grav 6=893(LC 1), 2=893(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1109/258, 3-4=-852/228, 4-5=-852/228, 5-6=-1109/258  
 BOT CHORD 2-9=-114/899, 6-9=-112/863  
 WEBS 4-9=-95/599, 5-9=-322/216, 3-9=-321/216

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCCL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-7 to 3-3-6, Interior(1) 3-3-6 to 10-4-4, Exterior(2R) 10-4-4 to 14-9-1, Interior(1) 14-9-1 to 21-9-15 zone;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 30.0psf 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.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



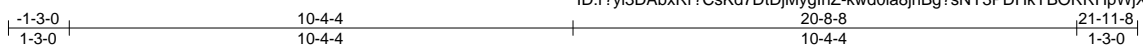
July 4, 2022

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879067
J0422-2176	G1GE	GABLE	1	1		

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:33 2022 Page 1

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5x5 =

Scale = 1:47.4

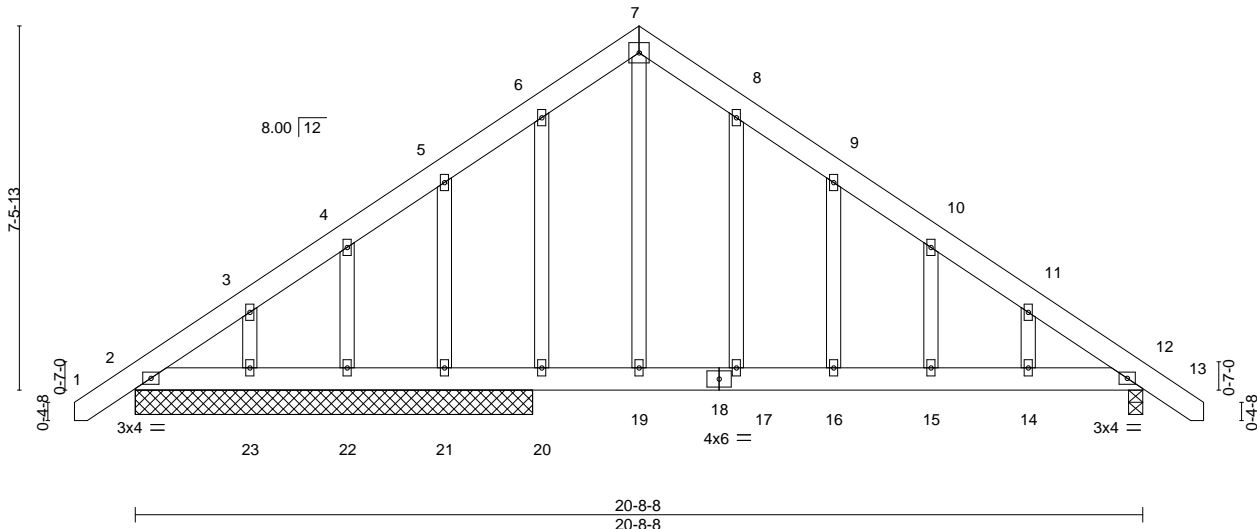


Plate Offsets (X,Y)--	[8:0-0-0,0-0-0], [9:0-0-0,0-0-0], [10:0-0-0,0-0-0], [11:0-0-0,0-0-0]
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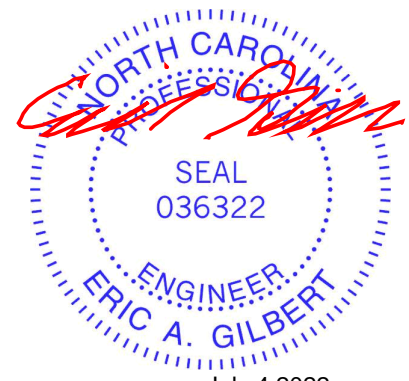
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.24	Vert(LL) -0.09	15-16	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.36	Vert(CT) -0.19	15-16	>920	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.16	Horz(CT) 0.01	12	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S	Wind(LL) 0.15	15-16	>999	240	Weight: 163 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	

**REACTIONS.** All bearings 8-2-0 except (jt=length) 12=0-3-8.  
 (lb) - Max Horz 2=229(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 23 except 2=-116(LC 13), 21=-163(LC 9), 22=-110(LC 13), 12=-216(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 21, 22, 23 except 2=582(LC 20), 12=828(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-858/184, 3-4=-823/226, 4-5=-820/284, 5-6=-758/288, 6-7=-720/329, 7-8=-669/296, 8-9=-688/232, 9-10=-719/177, 10-11=-762/126, 11-12=-835/71  
 BOT CHORD 2-23=0/589, 22-23=0/589, 21-22=0/589, 20-21=0/589, 19-20=0/589, 17-19=0/589, 16-17=0/589, 15-16=0/589, 14-15=0/589, 12-14=0/589  
 WEBS 7-19=-203/468

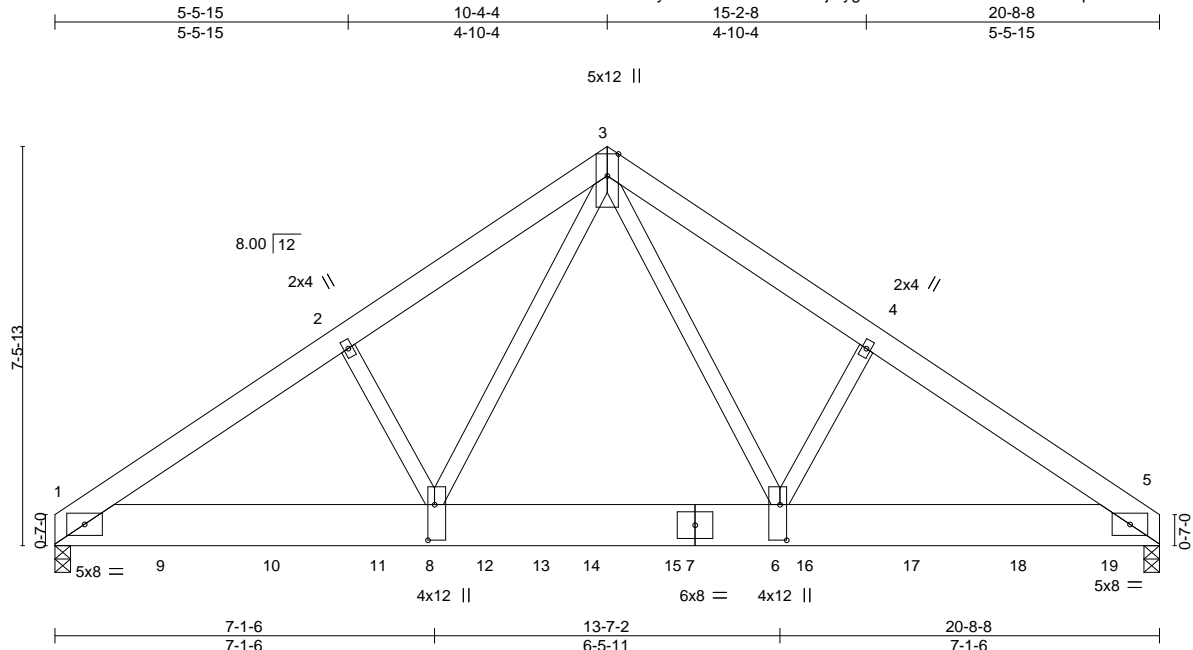
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-1-7 to 3-3-6, Interior(1) 3-3-6 to 10-4-4, Exterior(2R) 10-4-4 to 14-9-1, Interior(1) 14-9-1 to 21-9-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23 except (jt=lb) 2=-116, 21=163, 22=110, 12=216.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.





Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879068
J0422-2176	G1GRD	Common Girder	1	2		

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:34 2022 Page 1  
 ID:r?yi3DAbxRr?CsKd7DiDjMyglNz-D6BOzw9MYVosUX7Gzxpz5Owb5h8QSRPhnuI3Uz0TDF



Scale = 1:43.2

Plate Offsets (X,Y)--	[6:0-8-0,0-1-8], [8:0-8-0,0-1-8]
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LOADING (psf)	SPACING-	CS.I.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.31	Vert(LL) -0.11	6-8	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.45	Horz(CT) -0.18	6-8	>999	240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.73	Horz(CT) 0.03	5	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S	Wind(LL) 0.06	6-8	>999	240		
							Weight: 343 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-0-5 oc purlins.
BOT CHORD 2x10 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

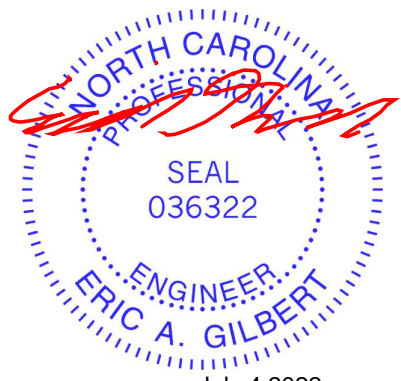
**REACTIONS.** (size) 1=0-3-8, 5=0-3-8  
 Max Horz 1=-164(LC 27)  
 Max Uplift 1=-384(LC 8), 5=-431(LC 9)  
 Max Grav 1=7268(LC 2), 5=8187(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-10016/549, 2-3=-9890/603, 3-4=-9974/608, 4-5=-10099/553  
 BOT CHORD 1-8=-470/8275, 6-8=-245/5726, 5-6=-399/8348  
 WEBS 3-6=-362/5960, 4-6=-305/206, 3-8=-355/5798, 2-8=-304/211

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-3-0 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; TCDD=6.0psf; BCDD=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); 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 30.0psf 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 BCDD = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=384, 5=431.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1365 lb down and 81 lb up at 2-0-12, 1365 lb down and 81 lb up at 4-0-12, 1365 lb down and 81 lb up at 6-0-12, 1365 lb down and 81 lb up at 8-0-12, 1336 lb down and 81 lb up at 10-0-12, 1357 lb down and 81 lb up at 12-0-12, 1372 lb down and 81 lb up at 14-0-12, 1372 lb down and 81 lb up at 16-0-12, and 1372 lb down and 81 lb up at 18-0-12, and 1374 lb down and 79 lb up at 19-9-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

Continued on page 2



July 4, 2022

<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>
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Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879068
J0422-2176	G1GRD	Common Girder	1	2	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:34 2022 Page 2  
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**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-3=-60, 3-5=-60, 1-5=-20

Concentrated Loads (lb)

Vert: 7=-1155(B) 9=-1155(B) 10=-1155(B) 11=-1155(B) 12=-1155(B) 14=-1155(B) 16=-1155(B) 17=-1155(B) 18=-1155(B) 19=-1157(B)

**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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818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879069
J0422-2176	H1GE	GABLE	1	1		

Comtech, Inc. Fayetteville, NC - 28314,

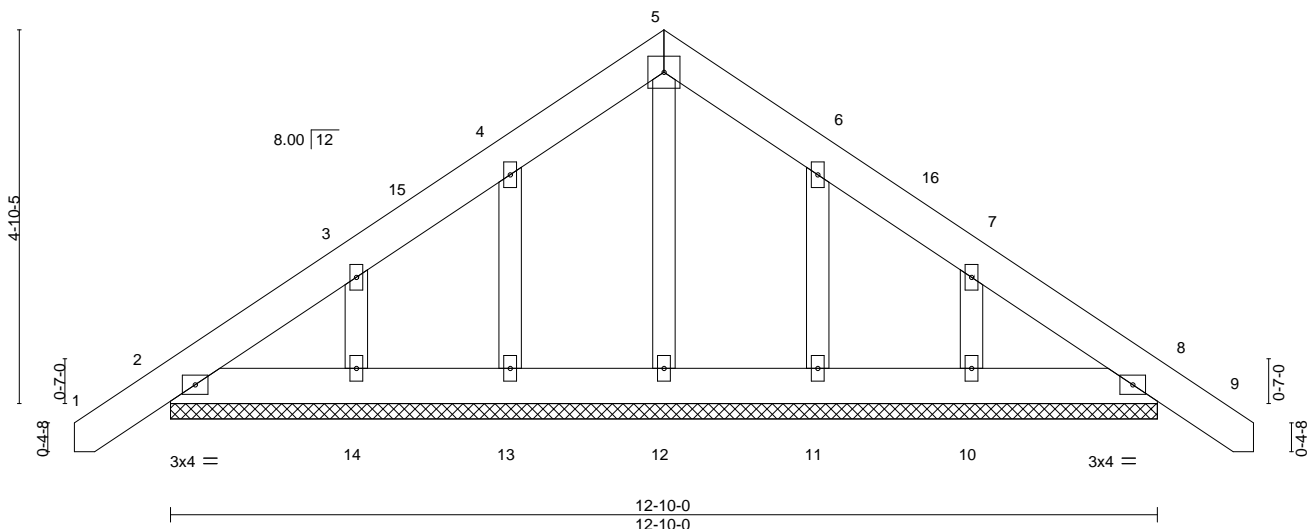
8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:35 2022 Page 1

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5x5 =

Scale = 1:30.0



<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 0.04	Vert(LL)	-0.00	8	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	8	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	8	n/a	n/a		
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 91 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
OTHERS 2x4 SP No.2

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

**REACTIONS.** All bearings 12-10-0.  
(lb) - Max Horz 2=151(LC 11)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 8, 13, 11 except 14=101(LC 12), 10=101(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 14, 11, 10

**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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-7 to 3-3-6, Exterior(2N) 3-3-6 to 6-5-0, Corner(3R) 6-5-0 to 10-9-13, Exterior(2N) 10-9-13 to 13-11-7 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf 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) 2, 8, 13, 11 except (jt=lb) 14=101, 10=101.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 4, 2022

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Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879070
J0422-2176	K1	SCISSORS	1	1		

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:36 2022 Page 1  
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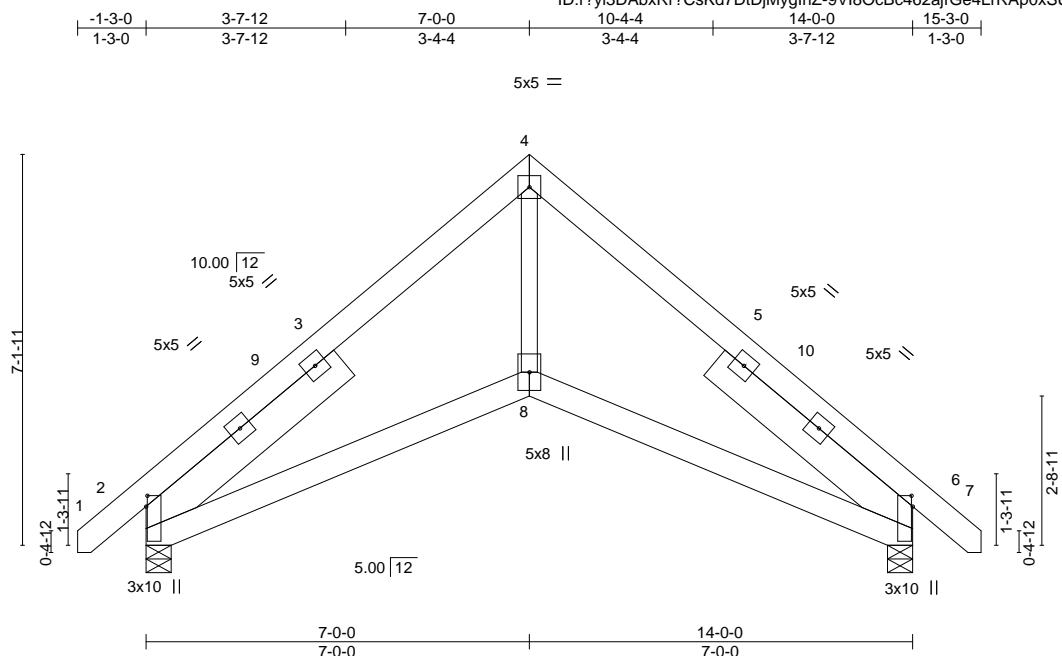


Plate Offsets (X,Y)-- [2:0-2-6,0-0-4], [6:0-2-6,0-0-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.20	Vert(LL)	-0.02	6-8	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.15	Vert(CT)	-0.04	6-8	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.14	Horz(CT)	0.02	6	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL)	-0.02	8	>999		
	Code IRC2018/TPI2014						Weight: 121 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2  
 SLIDER Left 2x8 SP No.1 4-8-10, Right 2x8 SP No.1 4-8-10

**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=0-5-8, 6=0-5-8  
 Max Horz 2=162(LC 11)  
 Max Uplift 2=-37(LC 12), 6=-37(LC 13)  
 Max Grav 2=624(LC 1), 6=624(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-817/132, 4-6=-823/159  
 BOT CHORD 2-8=-14/616, 6-8=-6/610  
 WEBS 4-8=0/589

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-9 to 3-3-4, Interior(1) 3-3-4 to 7-0-0, Exterior(2R) 7-0-0 to 11-4-13, Interior(1) 11-4-13 to 15-1-9 zone; 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 30.0psf 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.
  - 5) Bearing at joint(s) 2, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879071
J0422-2176	K1GE	GABLE	1	1		

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:37 2022 Page 1  
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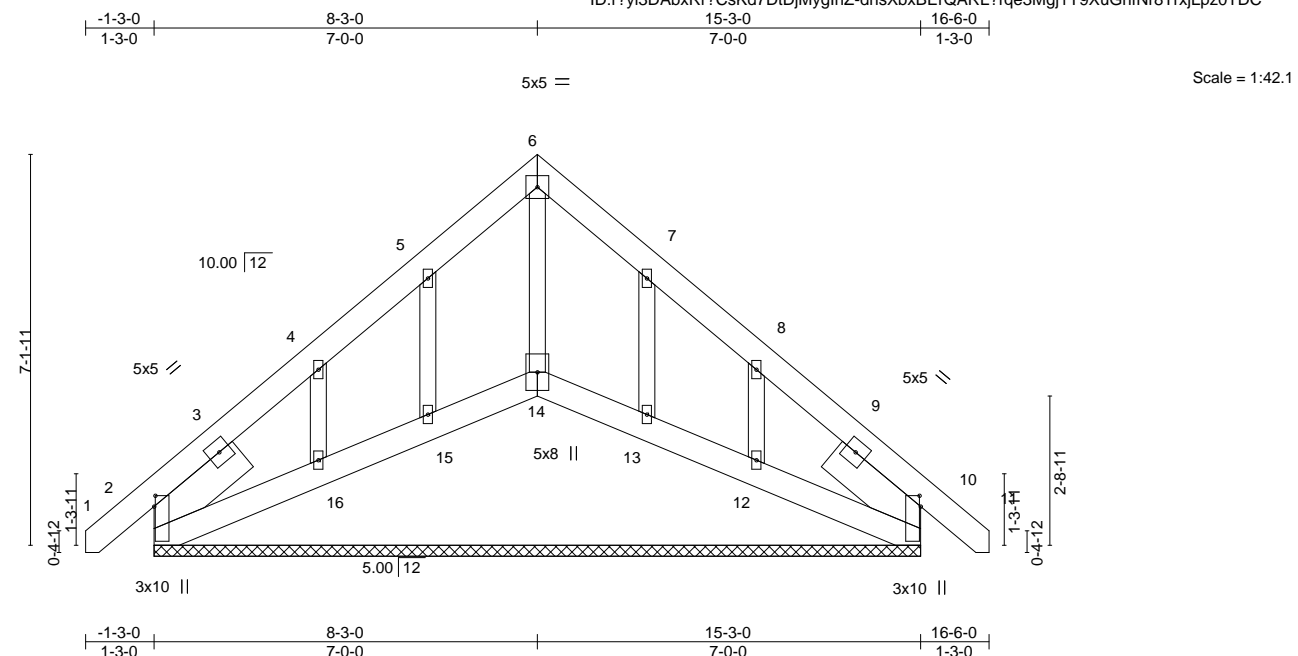


Plate Offsets (X,Y)-- [2:0-2-6,0-0-4], [10:0-2-6,0-0-4]

LOADING (psf)	SPACING-	CSL.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.05	Vert(LL) -0.00	10	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.03	Vert(CT) -0.00	10	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.05	Horz(CT) 0.00	10	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S					Weight: 119 lb	FT = 20%

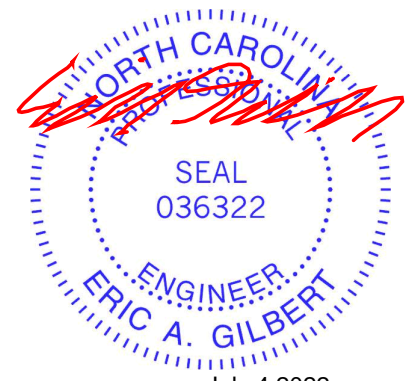
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 OTHERS 2x4 SP No.2  
 SLIDER Left 2x8 SP No.1 2-1-6, Right 2x8 SP No.1 2-1-6

**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 14-0-0.  
 (lb) - Max Horz 2=203(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 14, 10, 15, 13 except 2=-136(LC 13), 16=-219(LC 12), 12=-206(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 10, 15, 13, 12 except 2=272(LC 20), 14=319(LC 13), 16=265(LC 19)

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

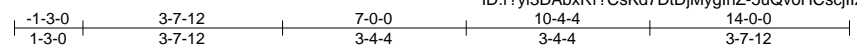
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCdL=6.0psf; BCdL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-1-9 to 3-0-0, Interior(1) 3-0-0 to 7-0-0, Exterior(2R) 7-0-0 to 11-4-13, Interior(1) 11-4-13 to 15-1-9 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf 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) 14, 10, 15, 13 except (jt=lb) 2=136, 16=219, 12=206.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



July 4, 2022

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879072
J0422-2176	K2	SCISSORS	2	1		

Comtech, Inc. Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:38 2022 Page 1  
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5x5 = Scale = 1:42.1

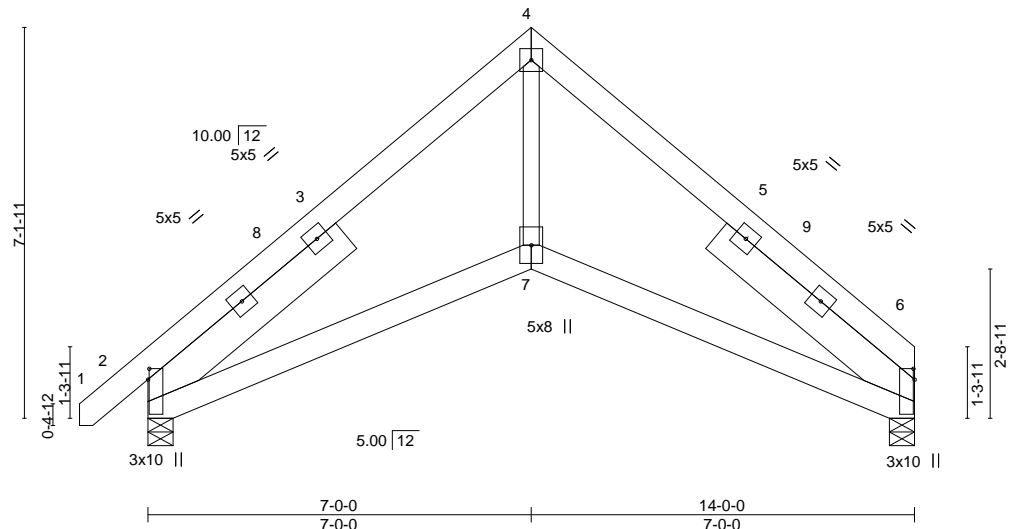


Plate Offsets (X,Y)-- [2:0-2-6,0-0-4], [6:0-2-6,0-0-4]

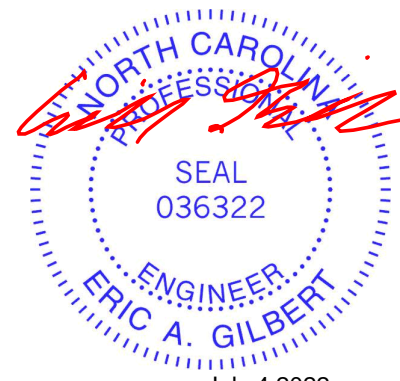
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.20	Vert(LL)	-0.02	6-7	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.15	Vert(CT)	-0.04	6-7	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.14	Horz(CT)	0.02	6	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL)	-0.02	7	>999		
	Code IRC2018/TPI2014						Weight: 118 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	
SLIDER Left 2x8 SP No.1 4-8-10, Right 2x8 SP No.1 4-8-10	

**REACTIONS.** (size) 6=0-5-8, 2=0-5-8  
 Max Horz 2=162(LC 9)  
 Max Uplift 6=18(LC 13), 2=37(LC 12)  
 Max Grav 6=542(LC 1), 2=628(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-827/144, 4-6=-831/168  
 BOT CHORD 2-7=-16/620, 6-7=-8/615  
 WEBS 4-7=0/593

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-9 to 3-3-4, Interior(1) 3-3-4 to 7-0-0, Exterior(2R) 7-0-0 to 11-4-13, Interior(1) 11-4-13 to 13-9-14 zone; 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 30.0psf 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) 6, 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.





Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879073
J0422-2176	K3	SCISSORS	4	1		

Comtech, Inc. Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:38 2022 Page 1  
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5x5 =

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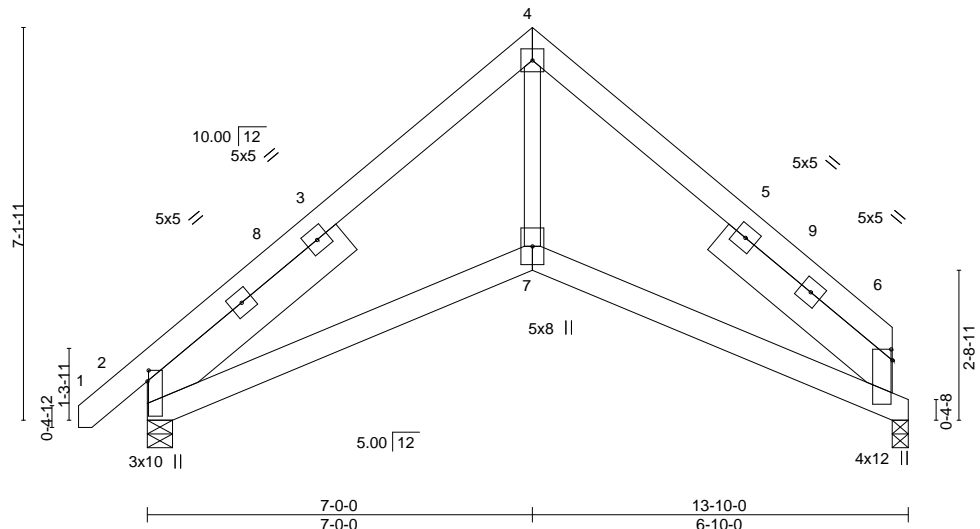


Plate Offsets (X,Y)--	[2:0-2-6,0-0-4], [6:0-2-6,0-0-4]
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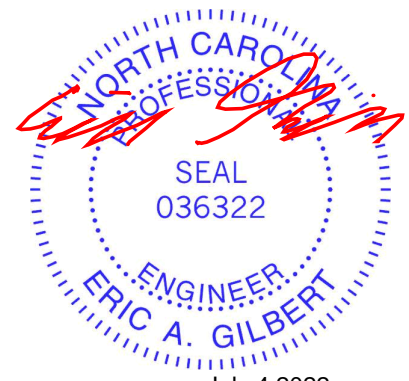
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.19	Vert(LL)	-0.02	2-7	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.15	Vert(CT)	-0.04	2-7	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.02	6	n/a		
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-S	Wind(LL)	-0.02	7	>999	Weight: 115 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	
SLIDER Left 2x8 SP No.1 4-8-10, Right 2x8 SP No.1 4-2-15	

**REACTIONS.** (size) 2=0-5-8, 6=0-3-8  
 Max Horz 2=162(LC 9)  
 Max Uplift 2=-37(LC 12), 6=-18(LC 12)  
 Max Grav 2=610(LC 1), 6=524(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-778/142, 4-6=-799/174  
 BOT CHORD 2-7=-22/581, 6-7=-14/573  
 WEBS 4-7=0/556

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-9 to 3-3-4, Interior(1) 3-3-4 to 7-0-0, Exterior(2R) 7-0-0 to 11-4-13, Interior(1) 11-4-13 to 13-4-6 zone; 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 30.0psf 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.
  - 5) Bearing at joint(s) 2, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



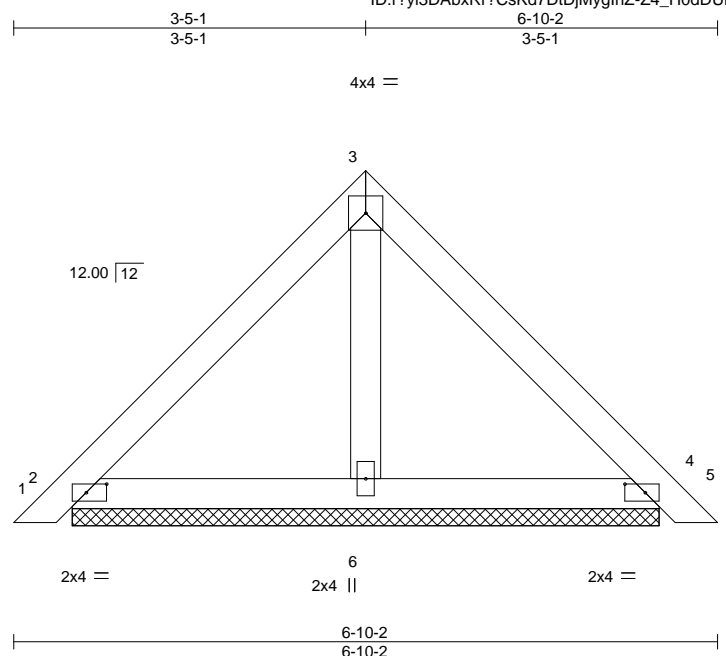
July 4, 2022

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879074
J0422-2176	PB1	Piggyback	9	1		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:39 2022 Page 1

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Plate Offsets (X,Y)-- [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.23	Vert(LL) 0.00	5	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.06	Vert(CT) 0.00	5	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.02	Horz(CT) 0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-P					Weight: 27 lb	FT = 20%

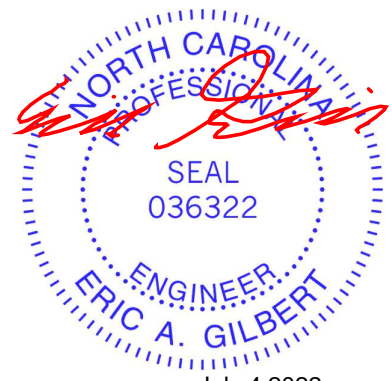
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** (size) 2=5-8-8, 4=5-8-8, 6=5-8-8  
 Max Horz 2=-77(LC 10)  
 Max Uplift 2=-27(LC 13), 4=-31(LC 13)  
 Max Grav 2=162(LC 1), 4=162(LC 1), 6=177(LC 3)

**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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCdL=6.0psf; BCdL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 30.0psf 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.
  - 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 is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



July 4, 2022

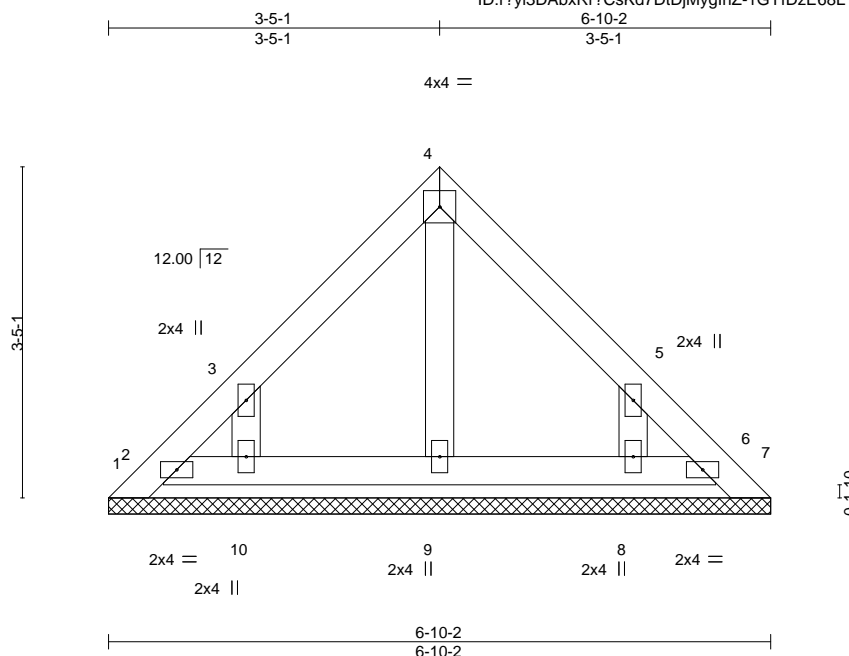
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before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

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

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879075
J0422-2176	PB1GE	GABLE	1	1		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:40 2022 Page 1  
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Scale: 1/2"=1'

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.07	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.05	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 7 n/a n/a		
	Code IRC2018/TPI2014			Weight: 29 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	

**REACTIONS.** All bearings 6-10-2.  
 (lb) - Max Horz 1=-96(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 2, 6 except 10=-152(LC 12), 8=-150(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7, 2, 6, 9, 10, 8

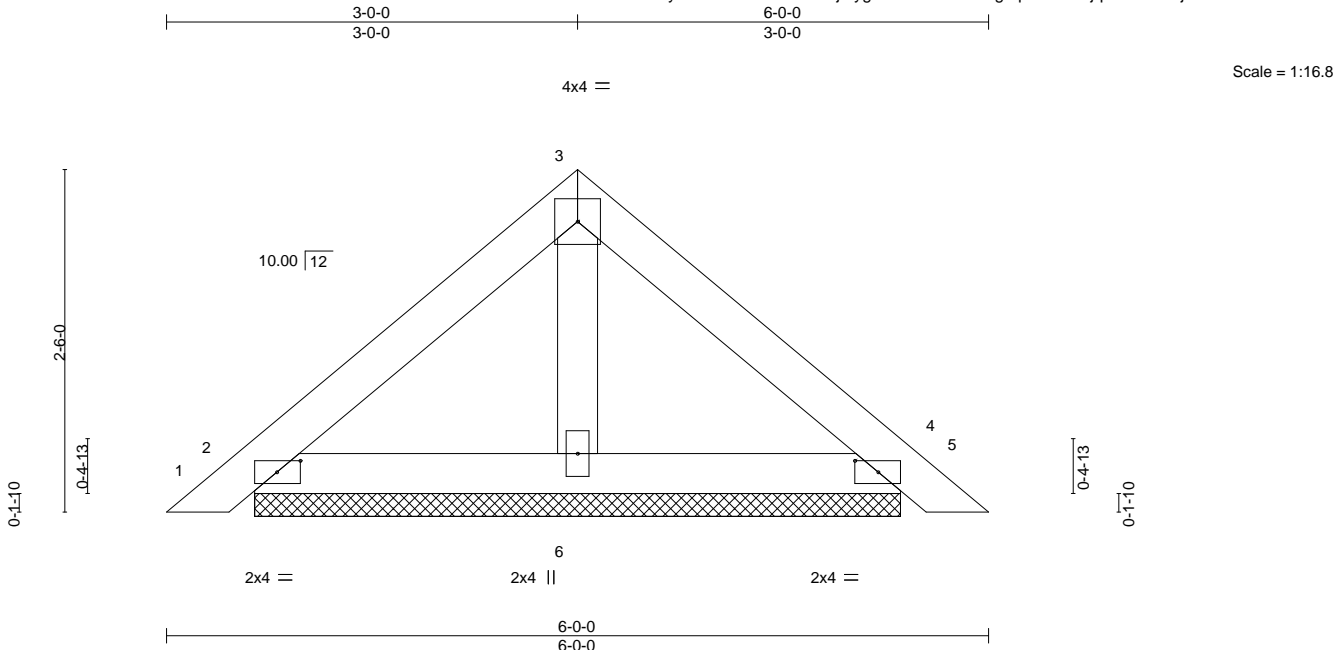
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 3-10=-205/273, 5-8=-205/273

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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) Gable requires continuous bottom chord bearing.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Bearing at joint(s) 7, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7, 2, 6 except (jt=lb) 10=152, 8=150.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879076
J0422-2176	PB2	PIGGYBACK	4	1		

Comtech, Inc. Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:41 2022 Page 1  
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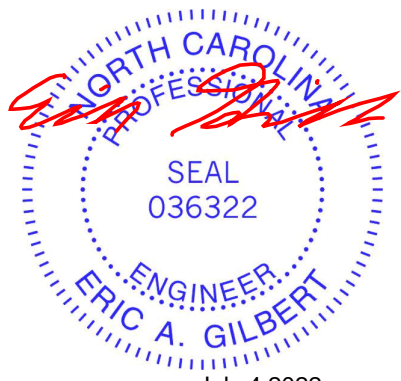
LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	0.00	5	n/r	120	MT20	244/190	
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	5	n/r	120	Weight: 21 lb FT = 20%		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a			
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P									

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 6'-0-0 oc purlins.
BOT CHORD	2x4 SP No.1	BOT CHORD	Rigid ceiling directly applied or 10'-0-0 oc bracing.
OTHERS	2x4 SP No.2		

**REACTIONS.** (size) 2=4-8-9, 4=4-8-9, 6=4-8-9  
 Max Horz 2=-55(LC 10)  
 Max Uplift 2=-23(LC 12), 4=-28(LC 13)  
 Max Grav 2=136(LC 1), 4=136(LC 1), 6=155(LC 1)

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

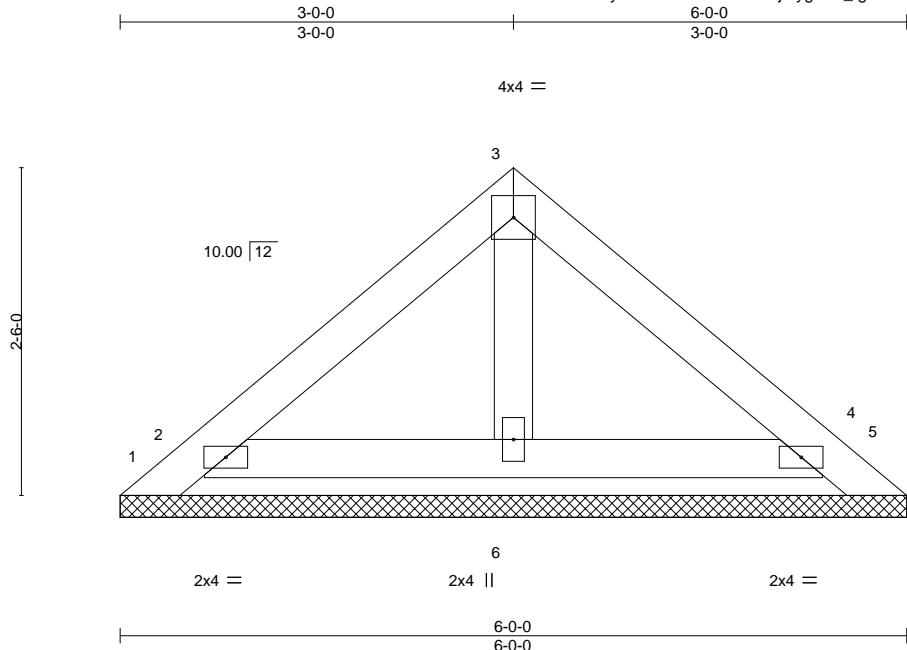
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCCL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 30.0psf 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.
  - 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 is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



July 4, 2022

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879077
J0422-2176	PB2GE	GABLE	1	1		

Comtech, Inc. Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:42 2022 Page 1  
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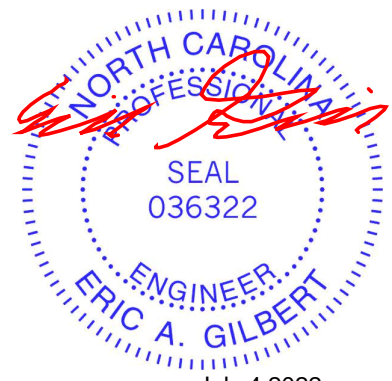
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.08	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.01	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 4 n/a n/a	Weight: 21 lb	FT = 20%
	Code IRC2018/TPI2014				

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	

**REACTIONS.** All bearings 6-0-0.  
 (lb) - Max Horz 1=-69(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 5 except 1=-120(LC 19), 2=-177(LC 12), 4=-154(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 4, 6 except 2=264(LC 19)

**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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf 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) 5 except (jt=lb) 1=120, 2=177, 4=154.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



July 4, 2022

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879078
J0422-2176	VC1	GABLE	1	1		

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:43 2022 Page 1  
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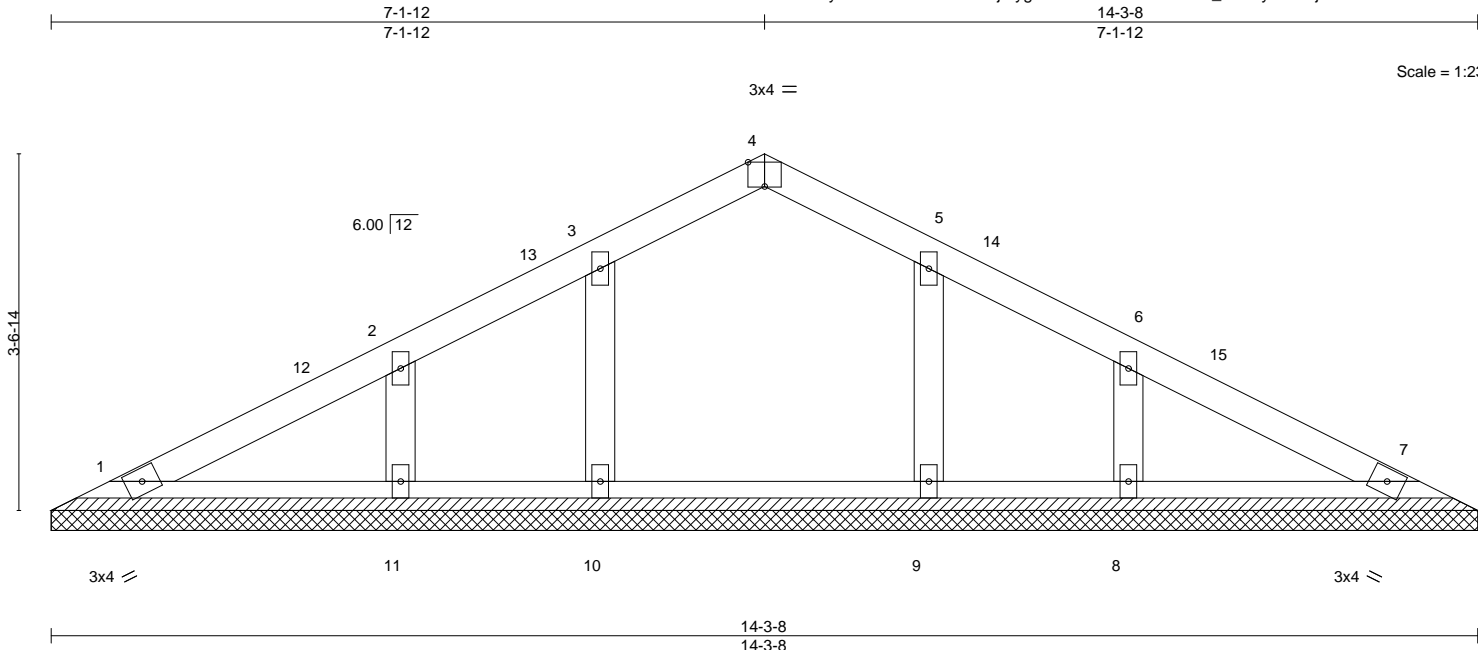


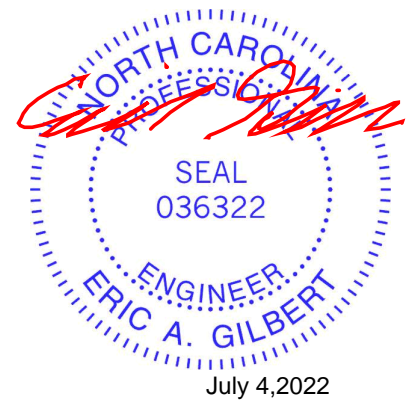
Plate Offsets (X,Y)--	[4:0-2-0,Edge]							
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.07	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.05	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.03	Horz(CT)	0.00	7	n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S					Weight: 53 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	

**REACTIONS.** All bearings 14-3-8.  
 (lb) - Max Horz 1=43(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 10, 11, 9, 8  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7, 10, 11, 9, 8

**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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-7-7 to 5-0-3, Interior(1) 5-0-3 to 7-1-12, Exterior(2R) 7-1-12 to 11-6-9, Interior(1) 11-6-9 to 13-8-1 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are 2x4 MT20 unless otherwise indicated.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 30.0psf 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.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10, 11, 9, 8.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



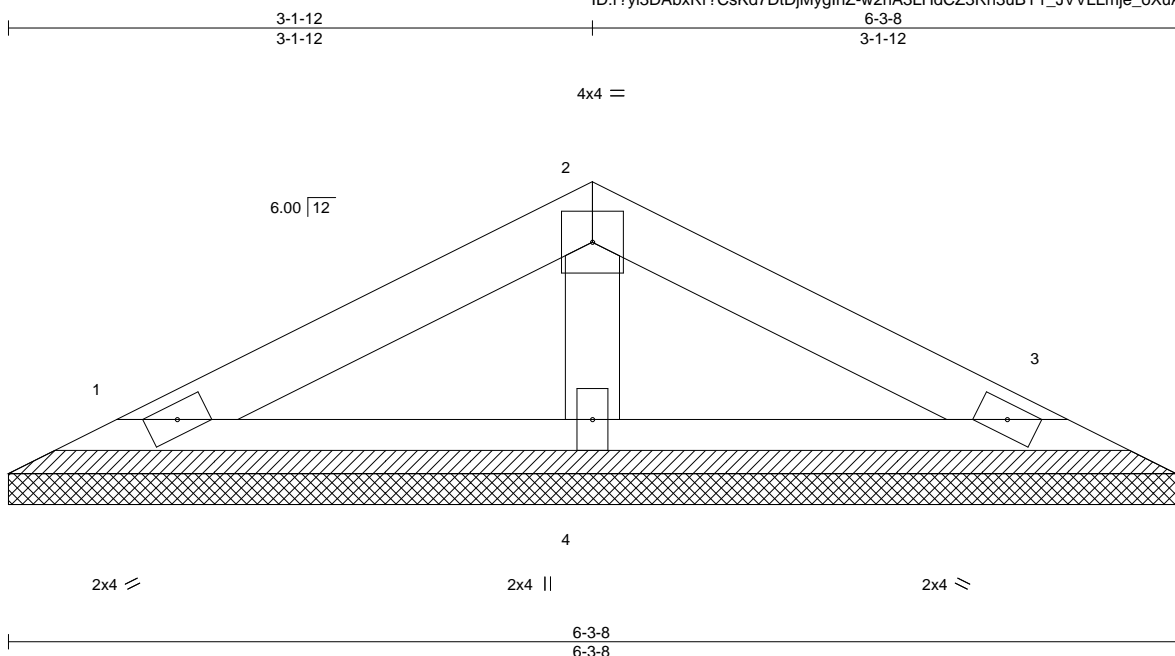


Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879079
J0422-2176	VC2	VALLEY	1	1		

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:44 2022 Page 1

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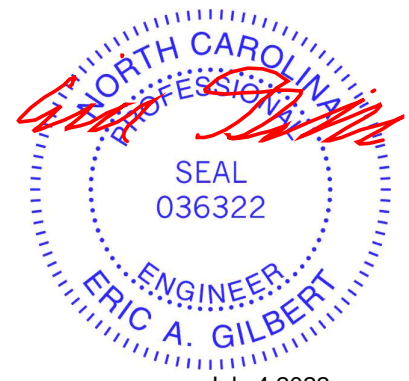
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.11	in (loc) l/def L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.03	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 19 lb	FT = 20%

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

**REACTIONS.** (size) 1=6-3-8, 3=6-3-8, 4=6-3-8  
 Max Horz 1=-16(LC 8)  
 Max Uplift 1=-16(LC 12), 3=-19(LC 13)  
 Max Grav 1=103(LC 1), 3=103(LC 1), 4=199(LC 1)

**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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 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) 1, 3.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 4, 2022

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



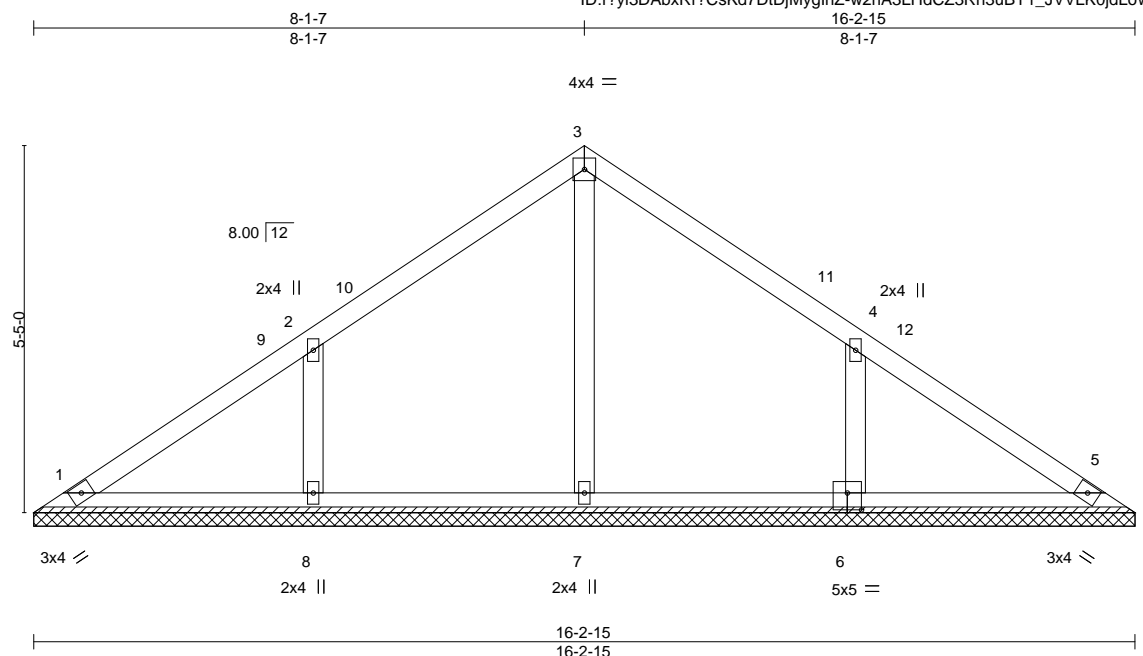
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879080
J0422-2176	VG1	GABLE	1	1		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:44 2022 Page 1

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

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.16	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.09	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.08	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-S					Weight: 65 lb	FT = 20%

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

**REACTIONS.** All bearings 16-2-15.  
 (lb) - Max Horz 1=-122(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-109(LC 12), 6=-104(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=388(LC 19), 6=378(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-295/219, 4-6=-286/212

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-5-12 to 4-10-9, Interior(1) 4-10-9 to 8-1-7, Exterior(2R) 8-1-7 to 12-6-4, Interior(1) 12-6-4 to 15-9-2 zone; 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 30.0psf 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.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=109, 6=104.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

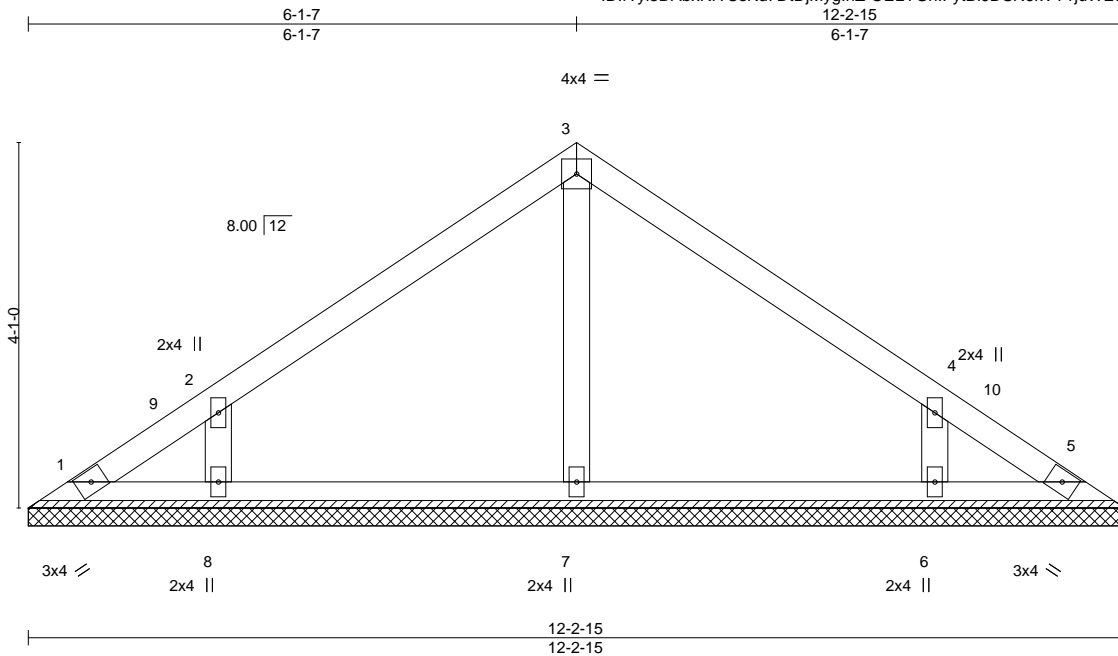


July 4, 2022

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879081
J0422-2176	VG2	GABLE	1	1		

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8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:45 2022 Page 1  
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.13	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.09	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S					Weight: 46 lb	FT = 20%

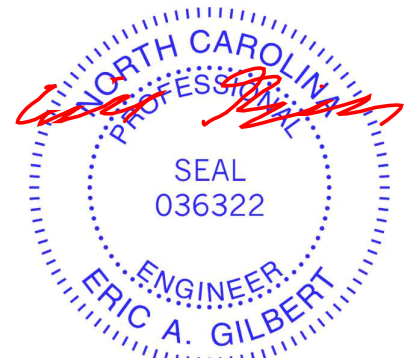
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** All bearings 12-2-15.  
 (lb) - Max Horz 1=90(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5, 8, 6  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=264(LC 1), 8=314(LC 19), 6=314(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-252/229, 4-6=-252/229

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-5-12 to 4-10-9, Interior(1) 4-10-9 to 6-1-7, Exterior(2R) 6-1-7 to 10-6-4, Interior(1) 10-6-4 to 11-9-2 zone; 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 30.0psf 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.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5, 8, 6.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 4, 2022

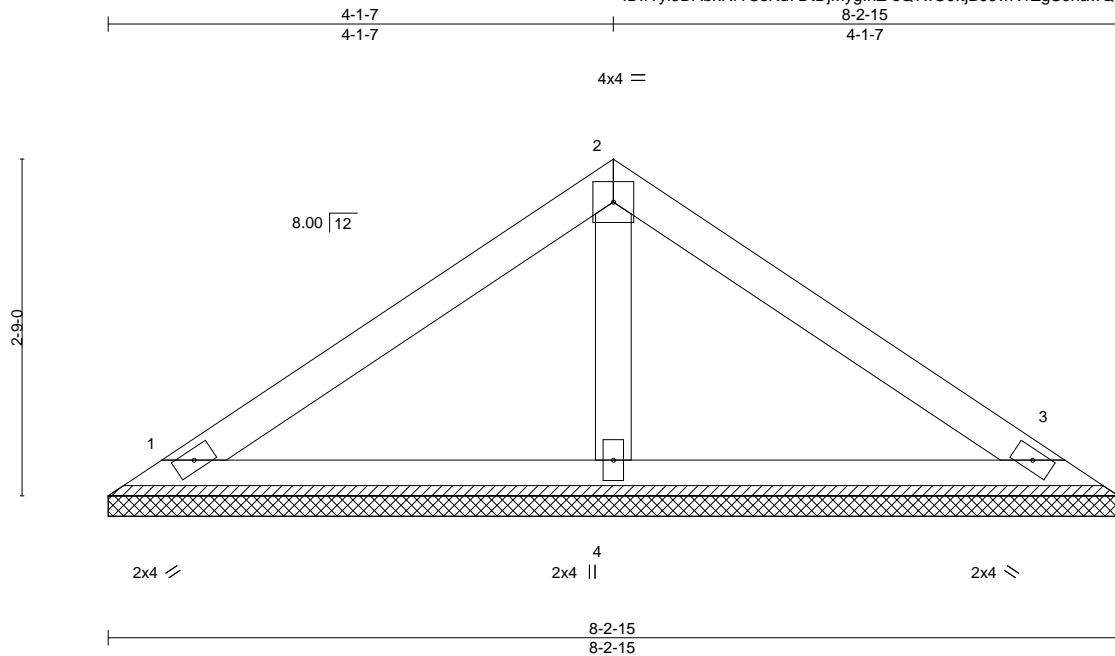
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before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

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

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879082
J0422-2176	VG3	Valley	1	1		

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:46 2022 Page 1  
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Scale = 1:18.8

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.18	in (loc) l/def L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.10	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.03	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 29 lb	FT = 20%

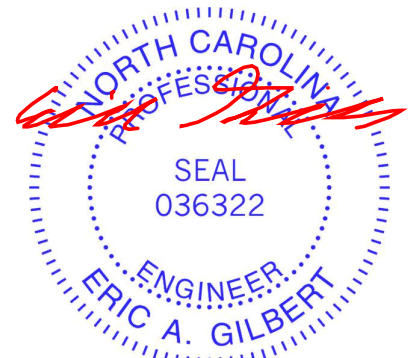
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** (size) 1=8-2-15, 3=8-2-15, 4=8-2-15  
 Max Horz 1=58(LC 8)  
 Max Uplift 1=25(LC 12), 3=31(LC 13)  
 Max Grav 1=158(LC 1), 3=158(LC 1), 4=266(LC 1)

**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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 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) 1, 3.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 4, 2022

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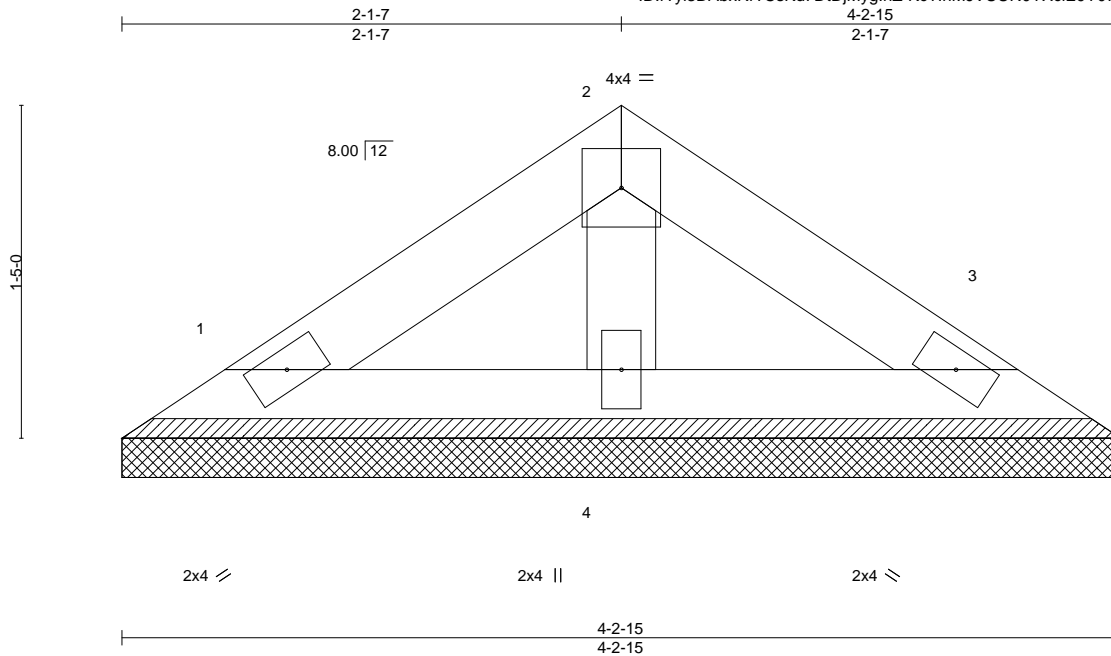


818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 55 Liberty Meadow	I52879083
J0422-2176	VG4	Valley	1	1		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Jul 1 10:09:47 2022 Page 1  
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Scale = 1:9.8

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.04	in (loc) l/def L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.01	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 13 lb	FT = 20%

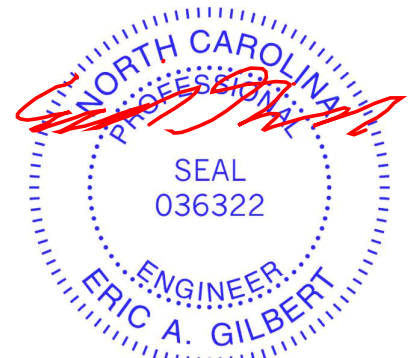
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-2-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-2-15, 3=4-2-15, 4=4-2-15  
 Max Horz 1=26(LC 9)  
 Max Uplift 1=11(LC 12), 3=14(LC 13)  
 Max Grav 1=71(LC 1), 3=71(LC 1), 4=120(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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 30.0psf 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.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



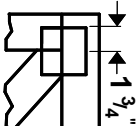
July 4, 2022

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

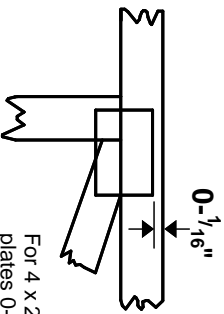
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

# 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**

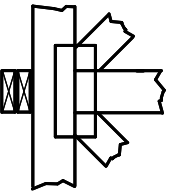
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



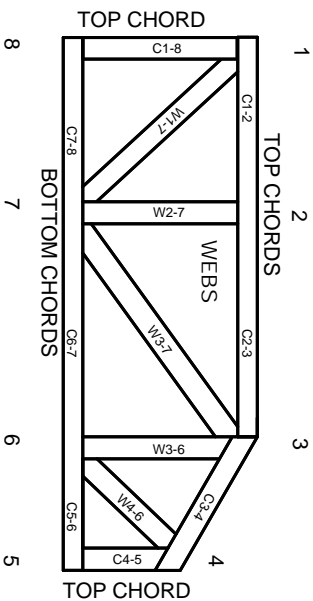
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### 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.

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



# General Safety Notes

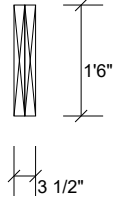
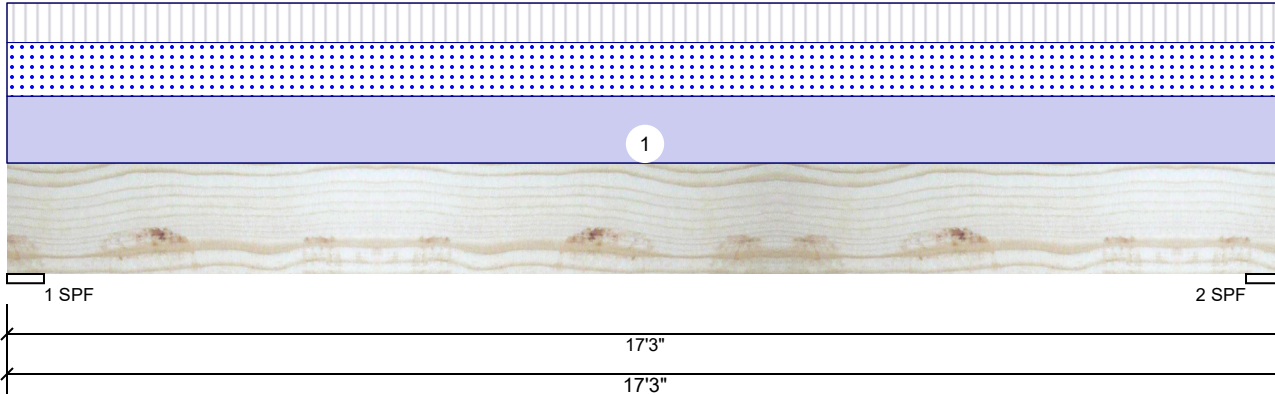
## Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/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. Reviewing 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.



**GDH Kerto-S LVL 1.750" X 18.000" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1708	3010	2320	0	0
2	Vertical	1708	3010	2320	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	Vert	68%	3010 / 3021	6031	L	D+0.75(L+S)
2 - SPF	6.000"	Vert	68%	3010 / 3021	6031	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	23497 ft-lb	8'7 1/2"	49428 ft-lb	0.475 (48%)	D+0.75(L+S)	L
Unbraced	23497 ft-lb	8'7 1/2"	23555 ft-lb	0.998 (100%)	D+0.75(L+S)	L
Shear	4654 lb	2'	15456 lb	0.301 (30%)	D+0.75(L+S)	L
LL Defl inch	0.189 (L/1041)	8'7 9/16"	0.410 (L/480)	0.461 (46%)	0.75(L+S)	L
TL Defl inch	0.377 (L/522)	8'7 9/16"	0.820 (L/240)	0.460 (46%)	D+0.75(L+S)	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 5'7 1/4" o.c.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	335 PLF	198 PLF	269 PLF	0 PLF	0 PLF	C1 Roof
	Self Weight				14 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

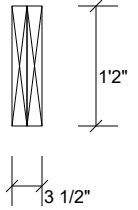
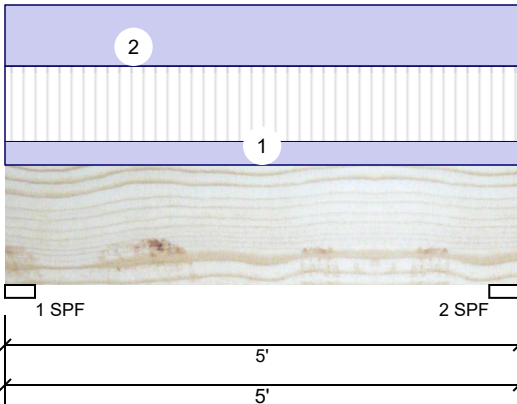
Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

Comtech, Inc.  
 1001 S. Reilly Road, Suite #639  
 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS



**BM4 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	650	755	0	0	0
2	Vertical	650	755	0	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	27%	755 / 650	1405	L	D+L
2 - SPF	3.500"	Vert	27%	755 / 650	1405	L	D+L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1449 ft-lb	2'6"	26999 ft-lb	0.054 (5%)	D+L	L
Unbraced	1449 ft-lb	2'6"	20546 ft-lb	0.071 (7%)	D+L	L
Shear	996 lb	3'6 1/2"	10453 lb	0.095 (10%)	D+L	L
LL Defl inch (L/17407)	0.003	2'6"	0.114 (L/480)	0.028 (3%)	L	L
TL Defl inch (L/8054)	0.007	2'6"	0.227 (L/240)	0.030 (3%)	D+L	L

**Design Notes**

- Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top must be laterally braced at end bearings.
- Bottom must be laterally braced at end bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Far Face	81 PLF	260 PLF	0 PLF	0 PLF	0 PLF	F02
2	Uniform			Top	210 PLF	0 PLF	0 PLF	0 PLF	0 PLF	wall
	Self Weight				11 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

- Dry service conditions, unless noted otherwise
- LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

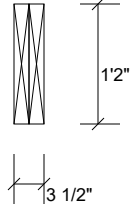
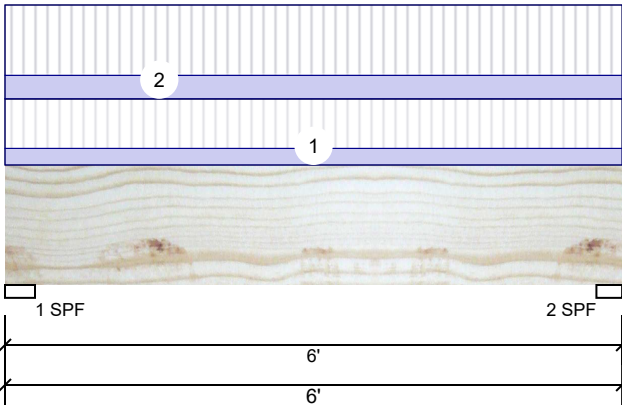
Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

Comtech, Inc.  
 1001 S. Reilly Road, Suite #639  
 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS



**BM3 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1900	667	0	0	0
2	Vertical	1874	658	0	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	49%	667 / 1900	2567	L	D+L
2 - SPF	3.000"	Vert	57%	658 / 1874	2532	L	D+L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3312 ft-lb	3' 1/4"	26999 ft-lb	0.123 (12%)	D+L	L
Unbraced	3312 ft-lb	3' 1/4"	17594 ft-lb	0.188 (19%)	D+L	L
Shear	1745 lb	1'5 1/2"	10453 lb	0.167 (17%)	D+L	L
LL Defl inch	0.014 (L/4667)	3' 1/4"	0.140 (L/480)	0.103 (10%)	L	L
TL Defl inch	0.019 (L/3454)	3' 1/4"	0.279 (L/240)	0.069 (7%)	D+L	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Near Face	87 PLF	260 PLF	0 PLF	0 PLF	0 PLF	F02
2	Uniform			Top	123 PLF	369 PLF	0 PLF	0 PLF	0 PLF	F06
	Self Weight				11 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
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