

RE: J0823-4324  
 Precision/Lot 35 Liberty Meadows/Harnett

**Trenco**  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Customer: Project Name: J0823-4324  
 Lot/Block: Model:  
 Address: Subdivision:  
 City: State:

**General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):**

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.4  
 Wind Code: ASCE 7-10 Wind Speed: 130 mph  
 Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 18 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I57763285	A1-GE	4/13/2023
2	I57763286	A2	4/13/2023
3	I57763287	A3	4/13/2023
4	I57763288	A4-GE	4/13/2023
5	I57763289	A5	4/13/2023
6	I57763290	A6-GE	4/13/2023
7	I57763291	B1-GE	4/13/2023
8	I57763292	B2	4/13/2023
9	I57763293	B3	4/13/2023
10	I57763294	C1-GE	4/13/2023
11	I57763295	C2	4/13/2023
12	I57763296	C3	4/13/2023
13	I57763297	D1-GE	4/13/2023
14	I57763298	D2	4/13/2023
15	I57763299	P1SG	4/13/2023
16	I57763300	P2	4/13/2023
17	I57763301	VB1	4/13/2023
18	I57763302	VB2	4/13/2023

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.  
 Truss Design Engineer's Name: Gilbert, Eric  
 My license renewal date for the state of North Carolina is December 31, 2023.  
 North Carolina COA: C-0844

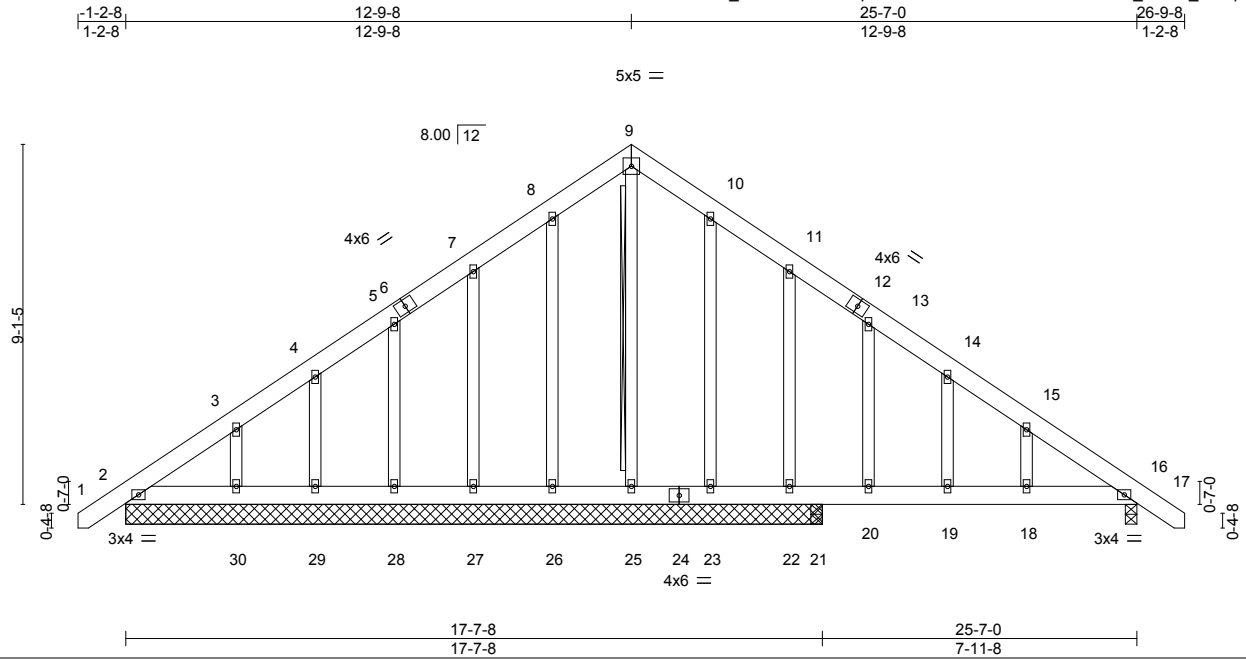
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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 J0823-4324	Truss A1-GE	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett	157763285
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:40 2023 Page 1  
ID:9fna8k\_aSfLEICIAbt3H8pzSXOz-oC7LnZswbxusOTYLhOK6\_QINhr\_S48qoSvV\_ZzR79T



Scale = 1:58.3

<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 0.14	Vert(LL)	-0.03 18-19	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.32	Vert(CT)	-0.06 18-19	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.00 16	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.05 18-19	>999	240		
								Weight: 214 lb	FT = 20%

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

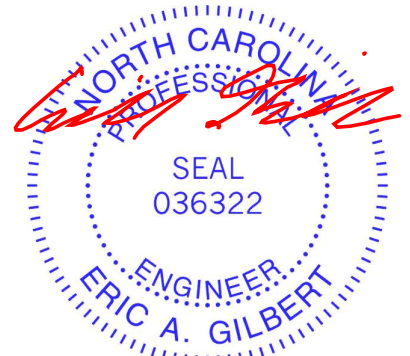
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS T-Brace: 2x4 SPF No.2 - 9-25  
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
Brace must cover 90% of web length.

**REACTIONS.** All bearings 17-7-8 except (jt=length) 16=0-3-8, 21=0-3-8.  
(lb) - Max Horz 2=-277(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 16, 25, 26, 27, 28, 29, 23 except 30=-116(LC 12), 22=-615(LC 20), 21=-603(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 2, 25, 26, 27, 28, 29, 30, 23 except 16=378(LC 1), 22=299(LC 13), 21=1201(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-254/185, 8-9=-265/257, 9-10=-262/256, 10-11=-262/220  
WEBS 13-20=-286/174

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 16, 25, 26, 27, 28, 29, 23 except (jt=lb) 30=116, 22=615, 21=603.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

**LOAD CASE(S)** Standard



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbccomponents.com)

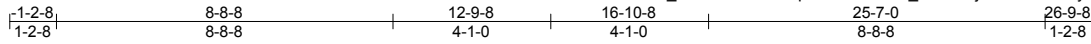


818 Soundside Road  
Edenton, NC 27932

Job J0823-4324	Truss A2	Truss Type COMMON	Qty 5	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett Job Reference (optional)	157763286
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8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:41 2023 Page 1  
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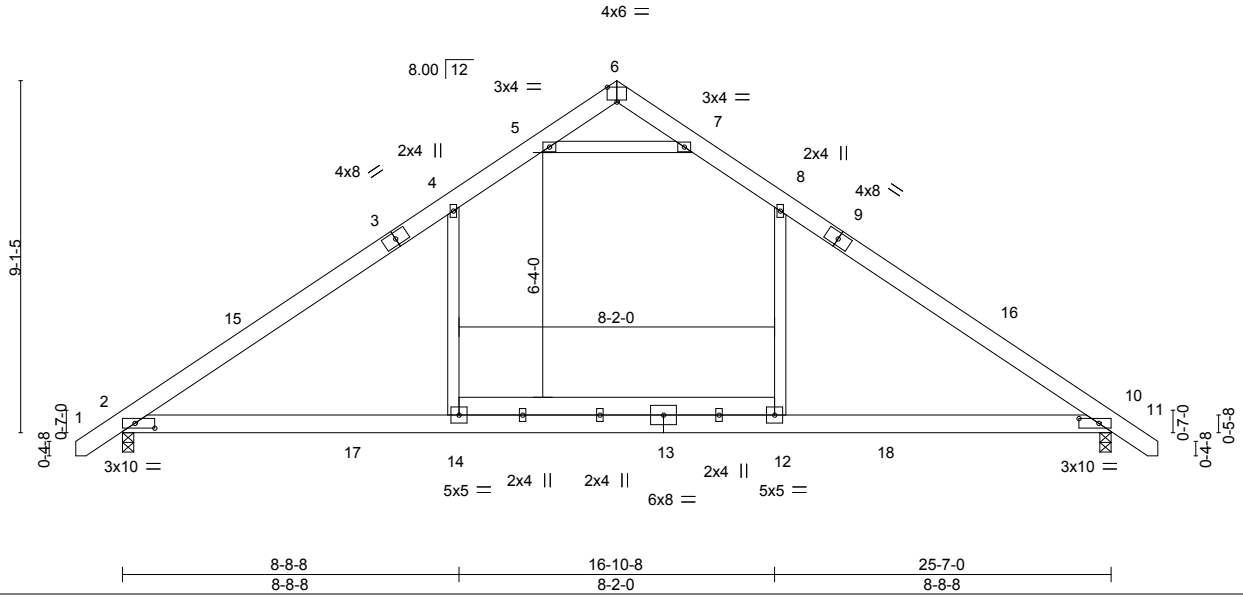


Plate Offsets (X,Y)-- [2:0-6-2,0-1-8], [6:0-3-0,Edge], [10:0-6-3,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.84	Vert(LL)	-0.23 12-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.47	Vert(CT)	-0.33 12-14	>921	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.55	Horz(CT)	0.03 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.19 2-14	>999	240	Weight: 180 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 4-10-5 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=1085/0-3-8 (min. 0-1-9), 10=1085/0-3-8 (min. 0-1-9)  
 Max Horz 2=222(LC 11)  
 Max Uplift 2=-71(LC 12), 10=-71(LC 13)  
 Max Grav 2=1320(LC 19), 10=1320(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-15=-1781/223, 3-15=-1622/232, 3-4=-1585/260, 4-5=-1224/322, 5-6=-171/751,  
 6-7=-171/752, 7-8=-1223/322, 8-9=-1585/260, 9-16=-1621/232, 10-16=-1781/224  
 BOT CHORD 2-17=-38/1368, 14-17=-38/1368, 13-14=-38/1368, 12-13=-38/1368, 12-18=-38/1368,  
 10-18=-38/1368  
 WEBS 8-12=0/616, 4-14=0/616, 5-7=-2174/573

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 12-9-8, Exterior(2) 12-9-8 to 17-0-4, Interior(1) 17-0-4 to 26-7-15 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 100 lb uplift at joint(s) 2, 10.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



April 13, 2023

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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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



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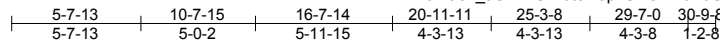




Job J0823-4324	Truss A5	Truss Type ROOF SPECIAL	Qty 6	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett	157763289
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8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:42 2023 Page 1  
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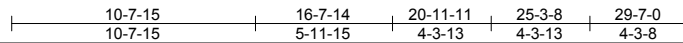
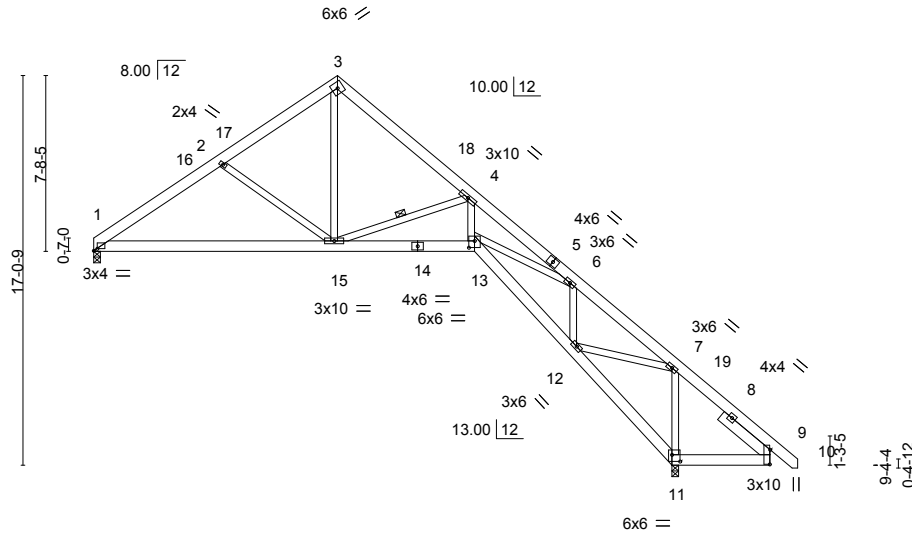


Plate Offsets (X,Y)-- [1:0-1-14,0-1-1], [9:0-7-11,0-0-3], [11:0-4-4,0-3-8], [13:0-3-0,0-3-8]

LOADING (psf)	SPACING-	2-0-0	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.17	Vert(LL)	-0.11	13	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.40	Vert(CT)	-0.22	13	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.37	Horz(CT)	0.27	11	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	-0.04	13	>999	240		
									Weight: 232 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2  
 SLIDER Right 2x6 SP No.1 2-8-15

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-5-1 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 4-15

**REACTIONS.** (lb/size) 1=964/0-3-8 (min. 0-1-8), 11=1456/0-3-8 (min. 0-1-11)  
 Max Horz 1=-395(LC 13)  
 Max Uplift 1=-9(LC 12), 11=-186(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-16=-1361/204, 2-16=-1215/224, 2-17=-1103/153, 3-17=-1013/185, 3-18=-1075/152,  
 4-18=-1156/112, 4-5=-3039/0, 5-6=-3127/0, 6-7=-1278/145, 7-19=-98/373,  
 8-19=-112/285, 8-9=-131/286  
 BOT CHORD 1-15=0/1165, 14-15=0/2237, 13-14=0/2237, 9-11=-251/186, 12-13=0/1320,  
 11-12=-460/312  
 WEBS 2-15=-361/228, 3-15=-35/911, 4-15=-1511/53, 4-13=0/1507, 6-13=0/1517, 6-12=-949/52,  
 7-12=0/1154, 7-11=-1100/236

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 10-7-15, Exterior(2) 10-7-15 to 15-0-12, Interior(1) 15-0-12 to 30-8-1 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 11=186.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



April 13, 2023

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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/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

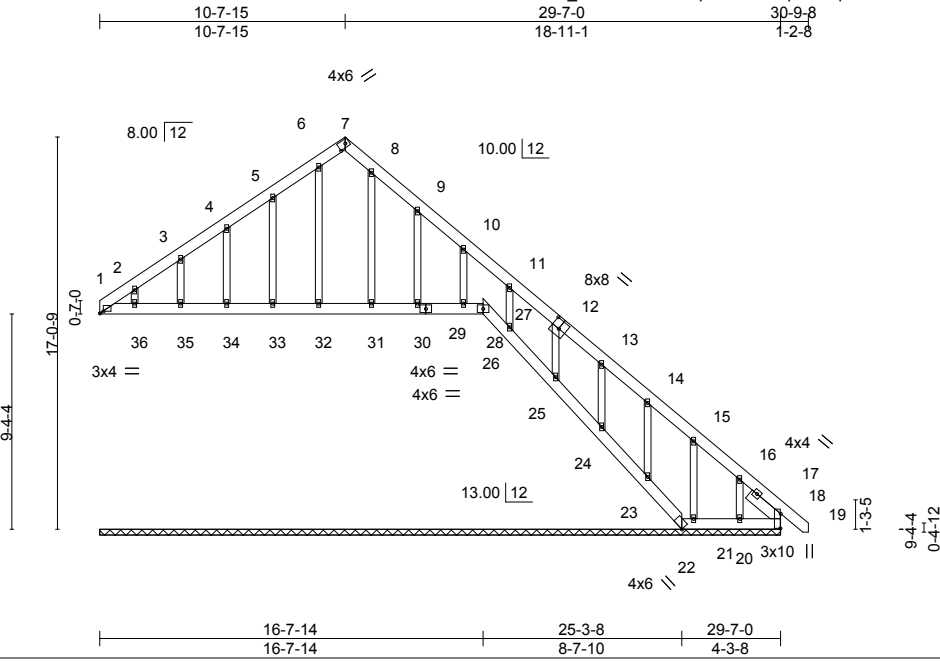


818 Soundside Road  
 Edenton, NC 27932

Job J0823-4324	Truss A6-GE	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett	157763290
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8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:43 2023 Page 1  
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Scale = 1:100.1

Plate Offsets (X,Y)-- [1:0-1-14,0-1-1], [7:0-3-15,0-2-0], [12:0-4-0,0-4-8], [18:0-7-11,0-0-3]

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 0.12	Vert(LL)	-0.00	18	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	-0.00	18	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.17	Horz(CT)	0.02	18	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 244 lb	FT = 20%

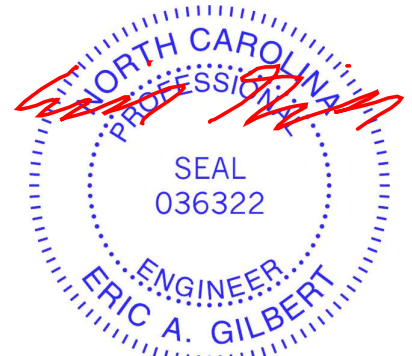
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 OTHERS 2x4 SP No.2  
 SLIDER Right 2x6 SP No.1 1-8-15

**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 29-7-0.  
 (lb) - Max Horz 1=590(LC 13)  
 Max Uplift All uplift 100 lb or less at joint(s) 18, 32, 34, 35, 36, 26, 24 except 1=138(LC 8), 27=141(LC 11),  
 22=-440(LC 13), 33=-123(LC 12), 30=-171(LC 13), 28=-106(LC 13), 25=-145(LC 13), 23=-102(LC 13),  
 21=-110(LC 13), 20=-290(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 22, 33, 34, 35, 36, 31, 30, 28, 26, 25, 24, 23, 21, 20  
 except 27=404(LC 13), 18=391(LC 13), 32=285(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-264/269, 2-3=-243/267, 3-4=-221/308, 4-5=-252/352, 5-6=-335/423, 6-7=-249/287,  
 7-8=-261/289, 8-9=-348/403, 9-10=-239/268, 15-16=-328/232, 16-17=-515/387,  
 17-18=-540/392  
 BOT CHORD 1-36=-311/420, 35-36=-311/420, 34-35=-311/420, 33-34=-311/420, 32-33=-311/420,  
 31-32=-311/420, 30-31=-311/420, 29-30=-311/420, 28-29=-311/420, 27-28=-310/420,  
 21-22=-287/400, 20-21=-287/400, 18-20=-287/400, 26-27=-444/588, 25-26=-471/626,  
 24-25=-441/601, 23-24=-440/601, 22-23=-442/614  
 WEBS 6-32=-259/114, 16-20=-282/283

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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, 32, 34, 35, 36, 26, 24 except (jt=lb) 1=138, 27=141, 22=440, 33=123, 30=171, 28=106, 25=145, 23=102, 21=110, 20=290.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 27, 32, 33, 34, 35, 36, 31, 30, 28, 26, 25, 24, 23.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and refer to page 2 standard ANSI/TPI 1.



April 13, 2023

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818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 35 Liberty Meadows/Harnett	157763290
J0823-4324	A6-GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:43 2023 Page 2  
 ID:9fna8k\_aSfLEiCIAbt3H8pzSXOz-DnpUPbuptsGRFxHwQqy1jc2HxUxtfRAGUQ09buzR79Q

**LOAD CASE(S)** Standard

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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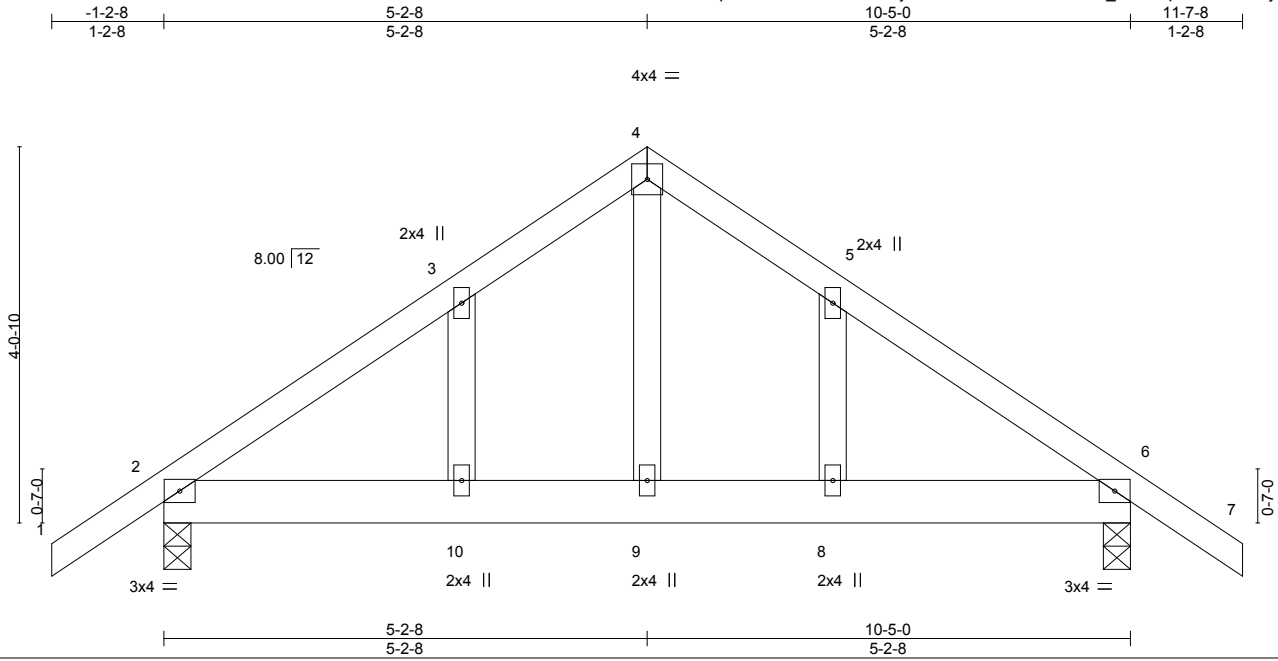
818 Soundside Road  
 Edenton, NC 27932



Job J0823-4324	Truss B1-GE	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett 157763291
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:44 2023 Page 1  
 ID:hxY3pmLvDCe?dFTuxKh62hywvcV-hzNsdXvRe9PHt5s6\_XTGGqaS4uEIov2Qj4li7KzR79P



Scale = 1:24.8

<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.09	Vert(LL) -0.01 8 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.14	Vert(CT) -0.02 8 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.07	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.01 10 >999 240	Weight: 59 lb	FT = 20%

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

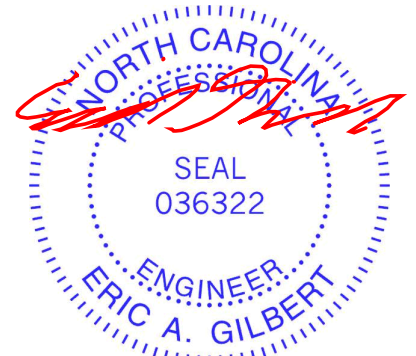
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=486/0-3-8 (min. 0-1-8), 6=486/0-3-8 (min. 0-1-8)  
 Max Horz 2=-128(LC 10)  
 Max Uplift 2=-117(LC 12), 6=-117(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-455/102, 3-4=-465/192, 4-5=-465/192, 5-6=-455/102  
 BOT CHORD 2-10=-17/331, 9-10=-17/331, 8-9=-17/331, 6-8=-17/331  
 WEBS 4-9=-137/374

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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 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) except (jt=lb) 2=117, 6=117.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



April 13, 2023

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818 Soundside Road  
 Edenton, NC 27932

Job J0823-4324	Truss B2	Truss Type COMMON	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett 157763292
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:44 2023 Page 1  
ID:hxY3pmLvDCe?dFTuxKh62hywwcV-hzNsdxyRe9PHt5s6\_XTGQqaQ6uF5OwEQj4li7KzR79P

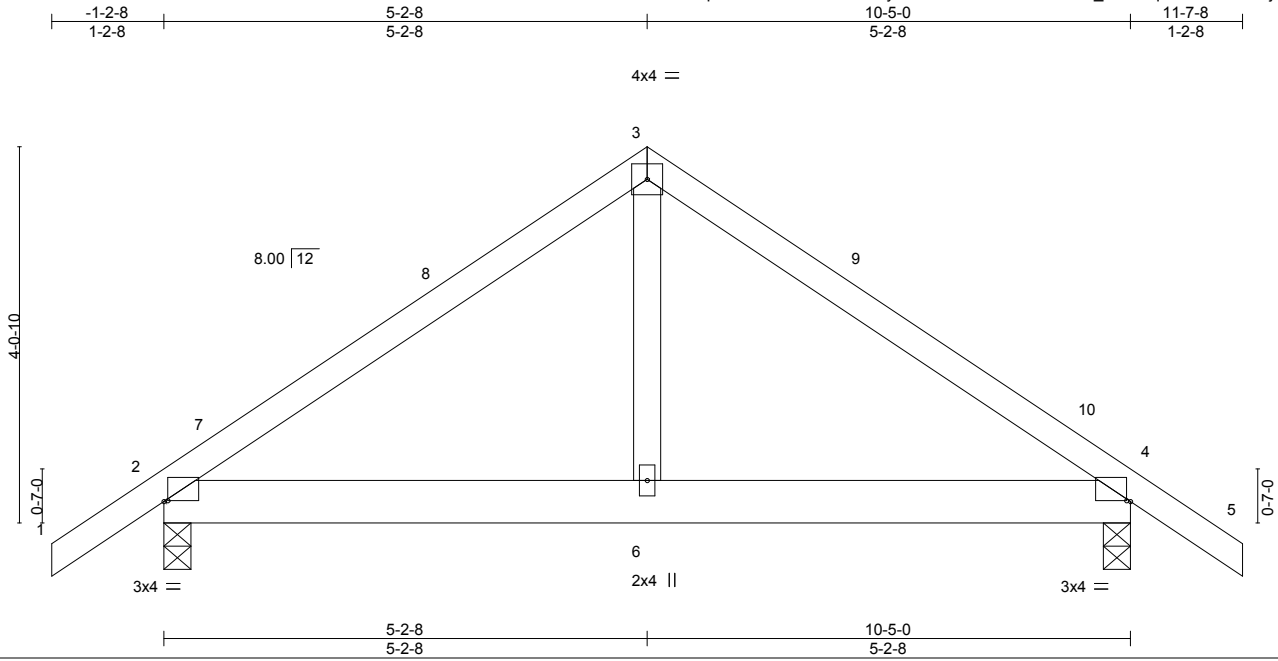


Plate Offsets (X,Y)-- [2:0-0-8,0-0-2], [4:0-0-8,0-0-2]

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 0.22	Vert(LL)	-0.01 4-6	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	-0.01 4-6	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.00 4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	-0.01 4-6	>999	240	Weight: 53 lb	FT = 20%

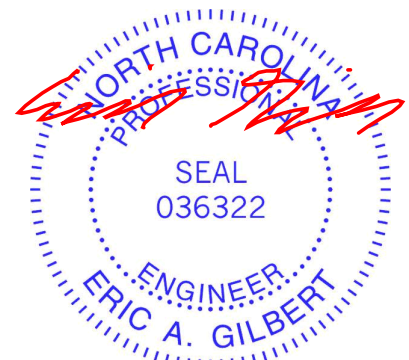
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** (lb/size) 2=486/0-3-8 (min. 0-1-8), 4=486/0-3-8 (min. 0-1-8)  
 Max Horz 2=-103(LC 10)  
 Max Uplift 2=-41(LC 12), 4=-41(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-7=-474/97, 7-8=-408/112, 3-8=-404/129, 3-9=-404/129, 9-10=-409/112, 4-10=-474/97  
 BOT CHORD 2-6=0/317, 4-6=0/317  
 WEBS 3-6=0/253

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-2-8, Exterior(2) 5-2-8 to 9-7-5, Interior(1) 9-7-5 to 11-7-8 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



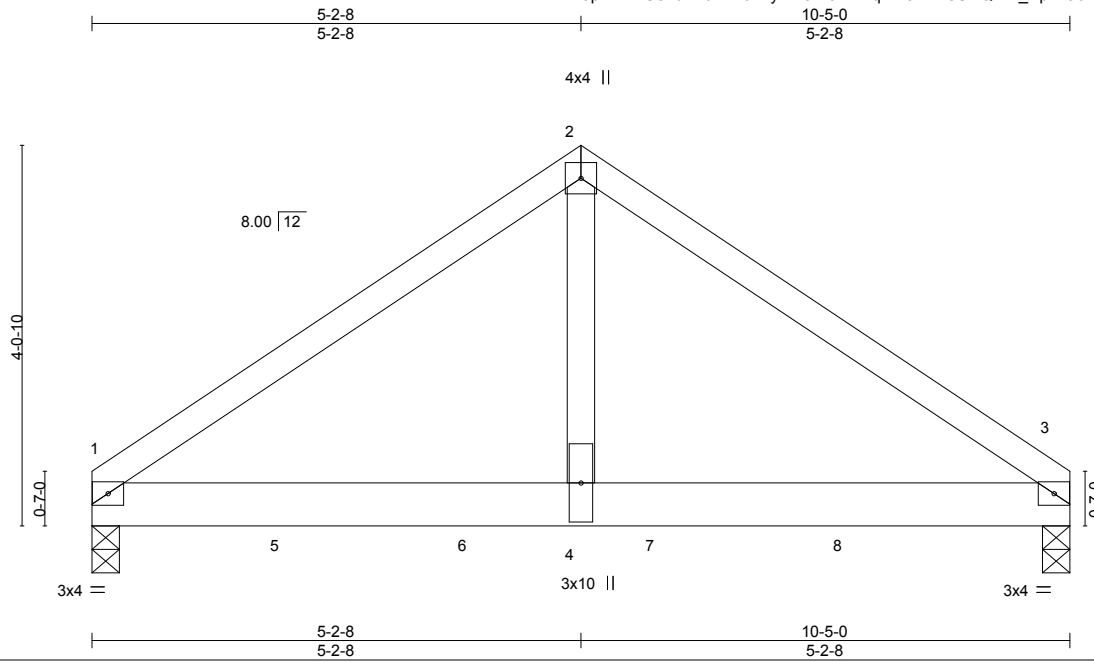
April 13, 2023

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</p>	<p>818 Soundside Road Edenton, NC 27932</p>
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Job J0823-4324	Truss B3	Truss Type COMMON GIRDER	Qty 1	Ply 2	Precision/Lot 35 Liberty Meadows/Harnett 157763293
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:45 2023 Page 1  
ID:hxY3pmLvDCe?dFTuxKh62hywvcV-9AwEqHw3PTX8UEQIYF\_Vp17a61QC7HVZykVGgmzR790



Scale = 1:24.5

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.26	Vert(LL)	-0.05 1-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.83	Vert(CT)	-0.08 1-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.44	Horz(CT)	0.01 3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.03 1-4	>999	240		
								Weight: 97 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 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.** (lb/size) 1=2442/0-3-8 (min. 0-1-10), 3=3326/0-3-8 (min. 0-2-4)  
Max Horz 1=-88(LC 23)  
Max Uplift 1=-154(LC 8), 3=-207(LC 9)  
Max Grav 1=2770(LC 2), 3=3818(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-3377/212, 2-3=-3378/212  
BOT CHORD 1-5=-122/2704, 5-6=-122/2704, 4-6=-122/2704, 4-7=-122/2704, 7-8=-122/2704,  
3-8=-122/2704  
WEBS 2-4=-136/3593

**NOTES-**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BC DL=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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=154, 3=207.
- This truss is designed in accordance with the 2015 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) 1174 lb down and 73 lb up at 2-0-12, 1174 lb down and 73 lb up at 4-0-12, 1174 lb down and 73 lb up at 6-0-12, and 1174 lb down and 73 lb up at 8-0-12, and 1182 lb down and 65 lb up at 10-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-60, 2-3=-60, 1-3=-20



April 13, 2023

Continued on page 2

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818 Soundside Road  
Edenton, NC 27932

Job J0823-4324	Truss B3	Truss Type COMMON GIRDER	Qty 1	Ply 2	Precision/Lot 35 Liberty Meadows/Harnett 157763293
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:45 2023 Page 2  
ID:hxY3pmLvDCe?dFTuxKh62hywvcV-9AwEqHw3PTX8UEQIYF\_Vp17a6lQC7HVZykVGgmzR790

**LOAD CASE(S)** Standard  
Concentrated Loads (lb)

Vert: 3=-998(B) 5=-990(B) 6=-990(B) 7=-990(B) 8=-990(B)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Job J0823-4324	Truss C1-GE	Truss Type ATTIC	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett Job Reference (optional)	157763294
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:46 2023 Page 1  
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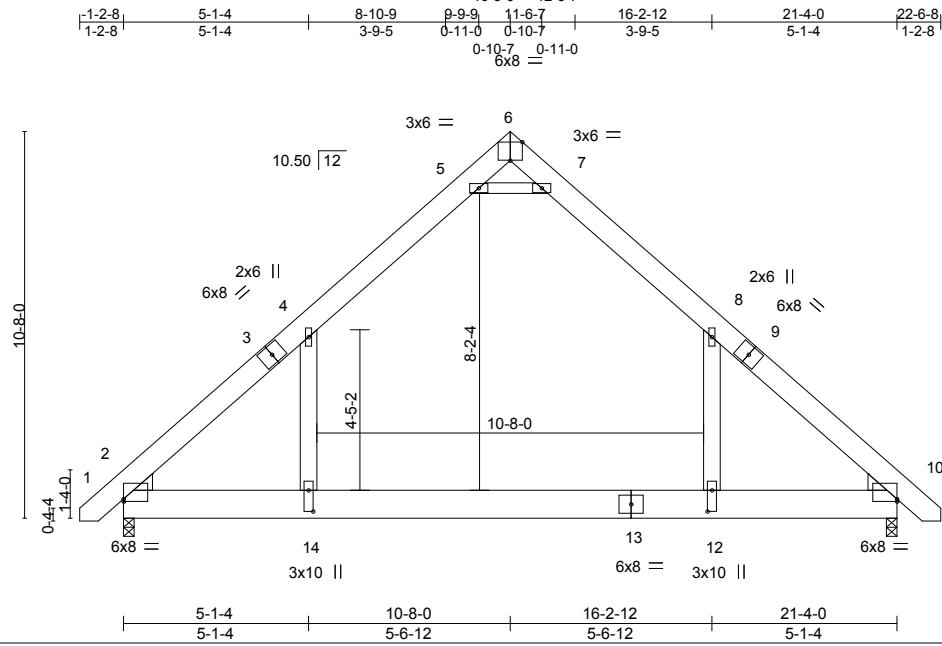


Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [6:0-4-0,Edge], [10:Edge,0-0-13], [12:0-7-0,0-1-8], [14:0-7-0,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.78	Vert(LL)	-0.21 12-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.69	Vert(CT)	-0.37 12-14	>677	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.01 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.10 12-14	>999	240	Weight: 209 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x8 SP No.1  
 BOT CHORD 2x10 SP No.1  
 WEBS 2x6 SP No.1 \*Except\*  
 5-7: 2x4 SP No.1  
 WEDGE  
 Left: 2x6 SP No.1, Right: 2x6 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-1-14 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=1180/0-3-8 (min. 0-1-11), 10=1180/0-3-8 (min. 0-1-11)  
 Max Horz 2=305(LC 10)  
 Max Grav 2=1429(LC 20), 10=1429(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1840/0, 3-4=-1660/0, 4-5=-1041/173, 5-6=-112/1126, 6-7=-112/1128,  
 7-8=-1041/173, 8-9=-1659/0, 9-10=-1840/0  
 BOT CHORD 2-14=0/1091, 13-14=0/1091, 12-13=0/1091, 10-12=0/1091  
 WEBS 8-12=0/904, 4-14=0/904, 5-7=-2435/392

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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.
  - Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).8-12, 4-14
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
  - This truss is designed in accordance with the 2015 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.
  - Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard



April 13, 2023

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818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 35 Liberty Meadows/Harnett	157763295
J0823-4324	C2	ATTIC	4	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:47 2023 Page 1

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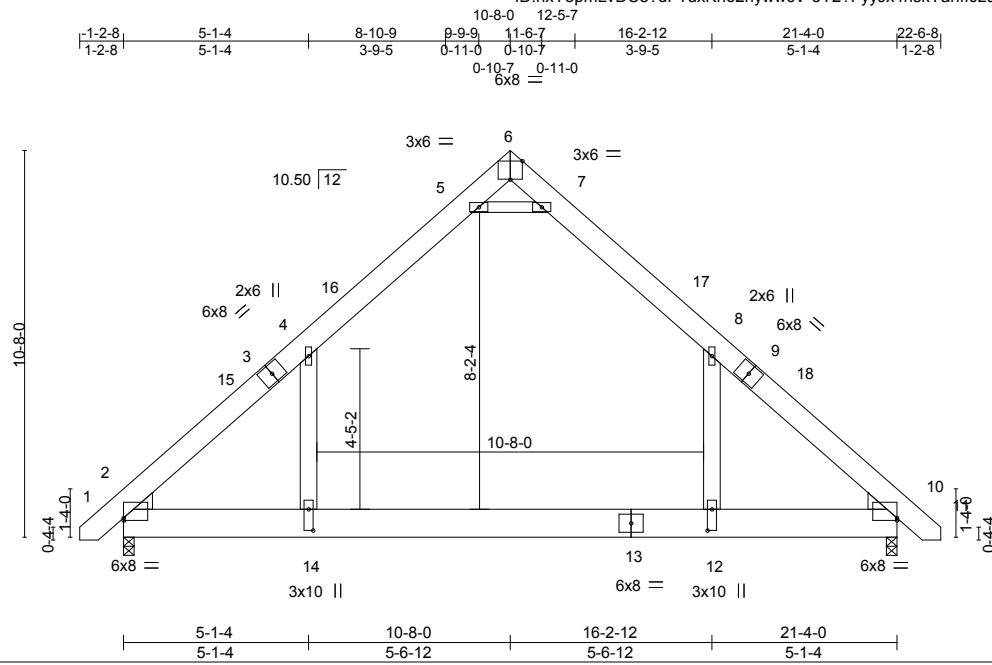


Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [6:0-4-0,Edge], [10:Edge,0-0-13], [12:0-7-0,0-1-8], [14:0-7-0,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.78	Vert(LL)	-0.21 12-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.69	Vert(CT)	-0.37 12-14	>677	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.01 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.07 12-14	>999	240	Weight: 209 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x8 SP No.1  
 BOT CHORD 2x10 SP No.1  
 WEBS 2x6 SP No.1 \*Except\*  
 5-7: 2x4 SP No.1

WEDGE  
 Left: 2x6 SP No.1, Right: 2x6 SP No.1

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 5-1-14 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=1180/0-3-8 (min. 0-1-11), 10=1180/0-3-8 (min. 0-1-11)  
 Max Horz 2=-244(LC 10)  
 Max Grav 2=1431(LC 20), 10=1431(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-15=-1824/0, 3-15=-1682/0, 3-4=-1644/0, 4-16=-1039/77, 5-16=-859/139, 5-6=-67/1124,  
 6-7=-67/1125, 7-17=-859/139, 8-17=-1038/77, 8-9=-1643/0, 9-18=-1681/0,  
 10-18=-1824/0  
 BOT CHORD 2-14=0/1069, 13-14=0/1069, 12-13=0/1069, 10-12=0/1069  
 WEBS 8-12=0/904, 4-14=0/904, 5-7=-2449/256

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-7 to 3-5-6, Interior(1) 3-5-6 to 10-8-0, Exterior(2) 10-8-0 to 15-0-13, Interior(1) 15-0-13 to 22-3-7 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.
- 5) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).8-12, 4-14
- 6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
- 7) This truss is designed in accordance with the 2015 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) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



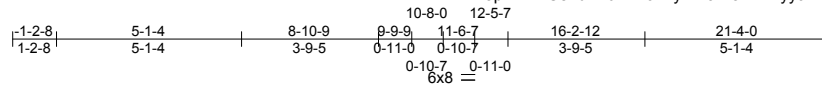
818 Soundside Road  
 Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Precision/Lot 35 Liberty Meadows/Harnett	157763296
J0823-4324	C3	ATTIC	2	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:47 2023 Page 1  
 ID:hxY3pmLvDCe?dFTuxKh6ZhywvcV-5Y2?FyyJx4nskYahff0zuSc0458?bGvsP1\_MkfzR79M



Scale: 3/16"=1'

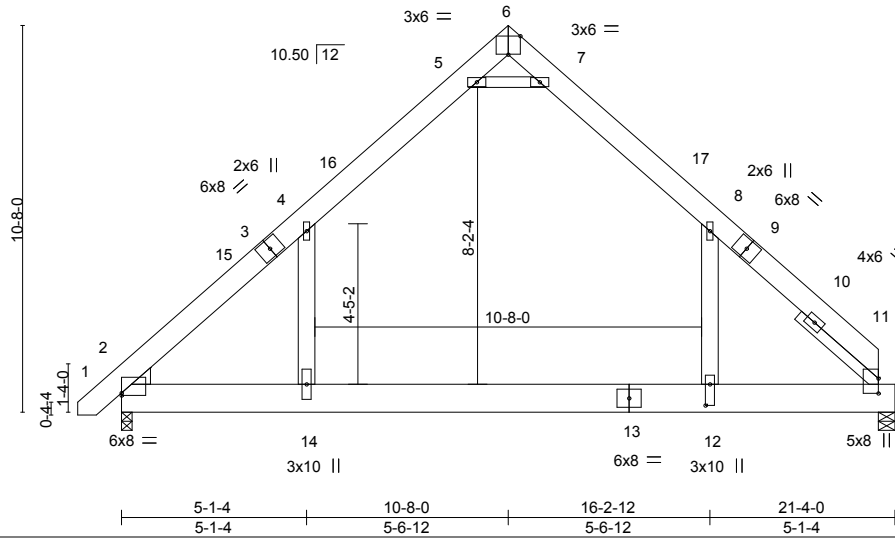


Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [6:0-4-0,Edge], [11:0-4-15,0-0-0], [12:0-7-0,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.75	Vert(LL)	-0.20 12-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.68	Vert(CT)	-0.35 12-14	>713	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.01 11	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.07 12-14	>999	240	Weight: 206 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x8 SP No.1  
 BOT CHORD 2x10 SP No.1  
 WEBS 2x6 SP No.1 \*Except\*  
 5-7: 2x4 SP No.1  
 WEDGE  
 Left: 2x6 SP No.1  
 SLIDER Right 2x4 SP No.2 2-11-0

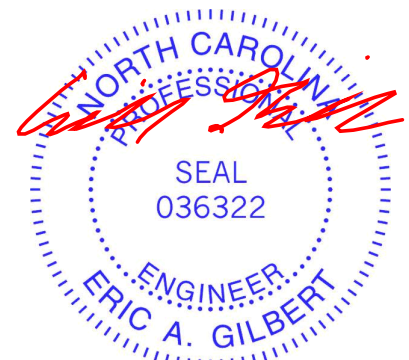
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-3-4 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=1165/0-3-8 (min. 0-1-11), 11=1104/0-5-8 (min. 0-1-10)  
 Max Horz 2=241(LC 9)  
 Max Grav 2=1412(LC 20), 11=1363(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-15=-1777/0, 3-15=-1634/0, 3-4=-1597/0, 4-16=-1019/79, 5-16=-839/140, 5-6=-83/1062,  
 6-7=-71/1068, 7-17=-837/145, 8-17=-1016/84, 8-9=-1627/0, 9-10=-1643/0,  
 10-11=-1823/0  
 BOT CHORD 2-14=0/1038, 13-14=0/1038, 12-13=0/1038, 11-12=0/1038  
 WEBS 8-12=0/912, 4-14=0/867, 5-7=-2344/288

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-11-7 to 3-5-6, Interior(1) 3-5-6 to 10-8-0, Exterior(2) 10-8-0 to 15-0-13, Interior(1) 15-0-13 to 20-10-8 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.
  - Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).8-12, 4-14
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
  - This truss is designed in accordance with the 2015 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.
  - Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard



April 13, 2023

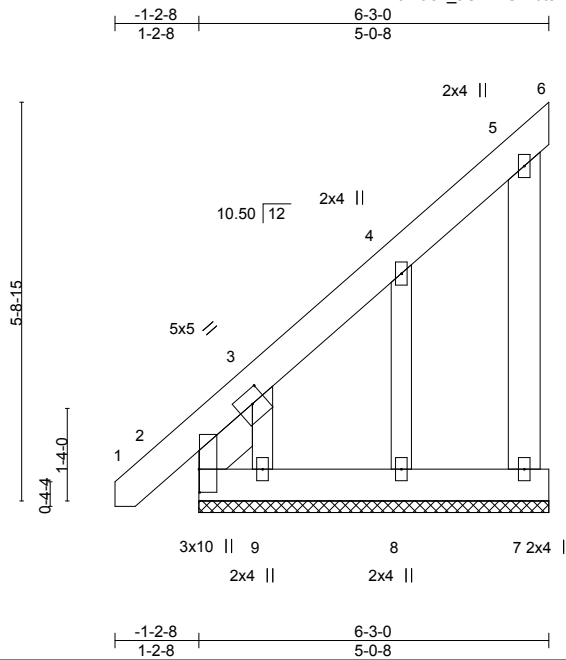
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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 35 Liberty Meadows/Harnett
J0823-4324	D1-GE	GABLE	1	1	157763297

Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:47 2023 Page 1  
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Scale = 1:33.2

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

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 0.03	Vert(LL)	-0.00	1	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.01	Vert(CT)	-0.00	1	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	-0.00	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						
								Weight: 51 lb	FT = 20%

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

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

**REACTIONS.** All bearings 5-0-8.  
 (lb) - Max Horz 2=249(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 6, 7, 2 except 8=130(LC 12), 9=256(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 6, 7, 8, 9 except 2=304(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=449/384  
 WEBS 3-9=314/305

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) Gable requires continuous bottom chord bearing.
  - 4) Gable studs spaced at 2-0-0 oc.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 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) 6, 7, 2 except (jt=lb) 8=130, 9=256.
  - 8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

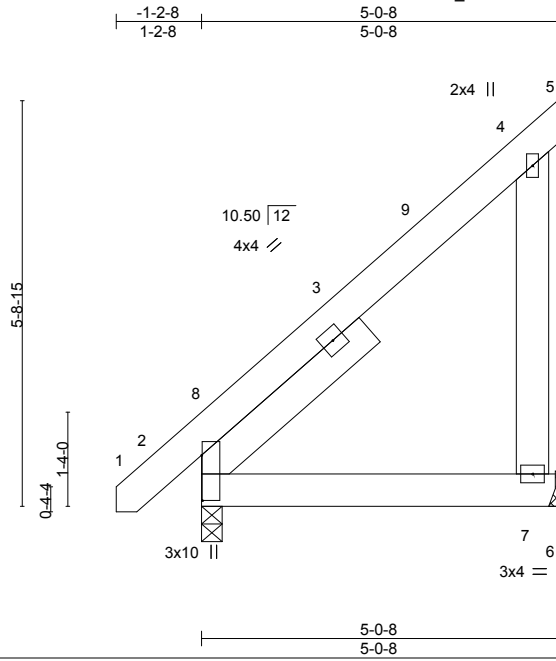


818 Soundside Road  
 Edenton, NC 27932

Job J0823-4324	Truss D2	Truss Type MONOPITCH	Qty 4	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett Job Reference (optional)	157763298
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Comtech, Inc., Fayetteville, NC 28309

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8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:48 2023 Page 1



Scale = 1:32.6

Plate Offsets (X,Y)-- [2:0-7-11,0-0-2]

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 0.21	Vert(LL)	-0.01 2-7	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	-0.01 2-7	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.00 2	****	240	Weight: 50 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x6 SP No.1  
 SLIDER Left 2x6 SP No.1 3-1-10

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

**REACTIONS.** (lb/size) 7=210/Mechanical, 2=257/0-3-8 (min. 0-1-8)  
 Max Horz 2=171(LC 12)  
 Max Uplift 7=111(LC 12)  
 Max Grav 7=241(LC 19), 2=257(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 4-7=-270/249

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-12 to 3-4-1, Interior(1) 3-4-1 to 5-0-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* This truss has been designed for a live load of 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.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=111.
  - 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
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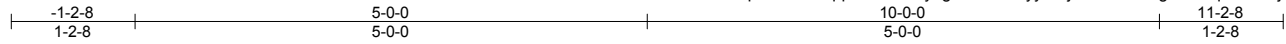


818 Soundside Road  
 Edenton, NC 27932

Job J0823-4324	Truss P1SG	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett 157763299
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:48 2023 Page 1  
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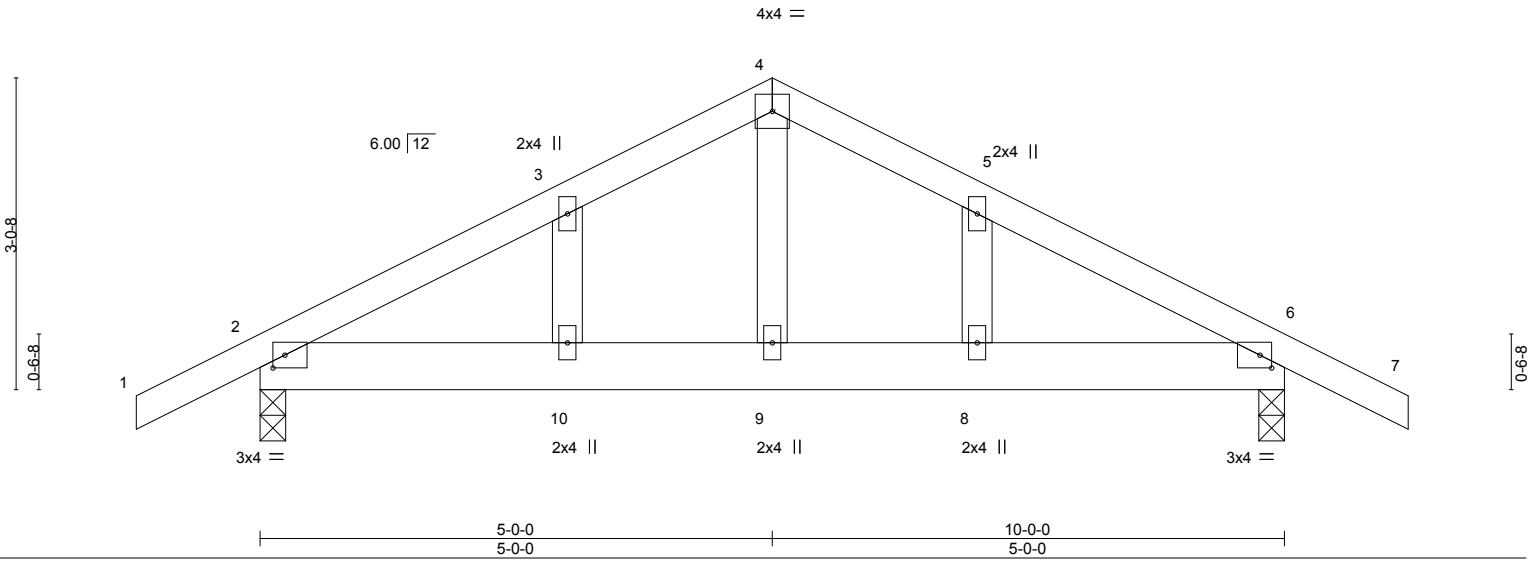


Plate Offsets (X,Y)-- [2:0-1-6,0-1-8], [6:0-1-6,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.12	Vert(LL)	-0.01	8	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.13	Vert(CT)	-0.02	8	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.02	8	>999		
								Weight: 52 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2  
 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.** (lb/size) 2=470/0-3-0 (min. 0-1-8), 6=470/0-3-0 (min. 0-1-8)  
 Max Horz 2=63(LC 16)  
 Max Uplift 2=-121(LC 9), 6=-121(LC 8)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-503/565, 3-4=-463/621, 4-5=-463/621, 5-6=-503/565  
 BOT CHORD 2-10=-402/393, 9-10=-402/393, 8-9=-402/393, 6-8=-402/393  
 WEBS 4-9=-425/256

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch 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.
- 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) except (jt=lb) 2=121, 6=121.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



April 13, 2023

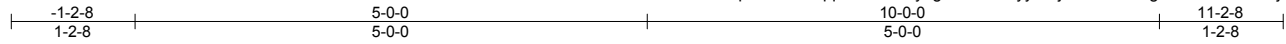
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Job J0823-4324	Truss P2	Truss Type COMMON	Qty 4	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett 157763300
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:48 2023 Page 1  
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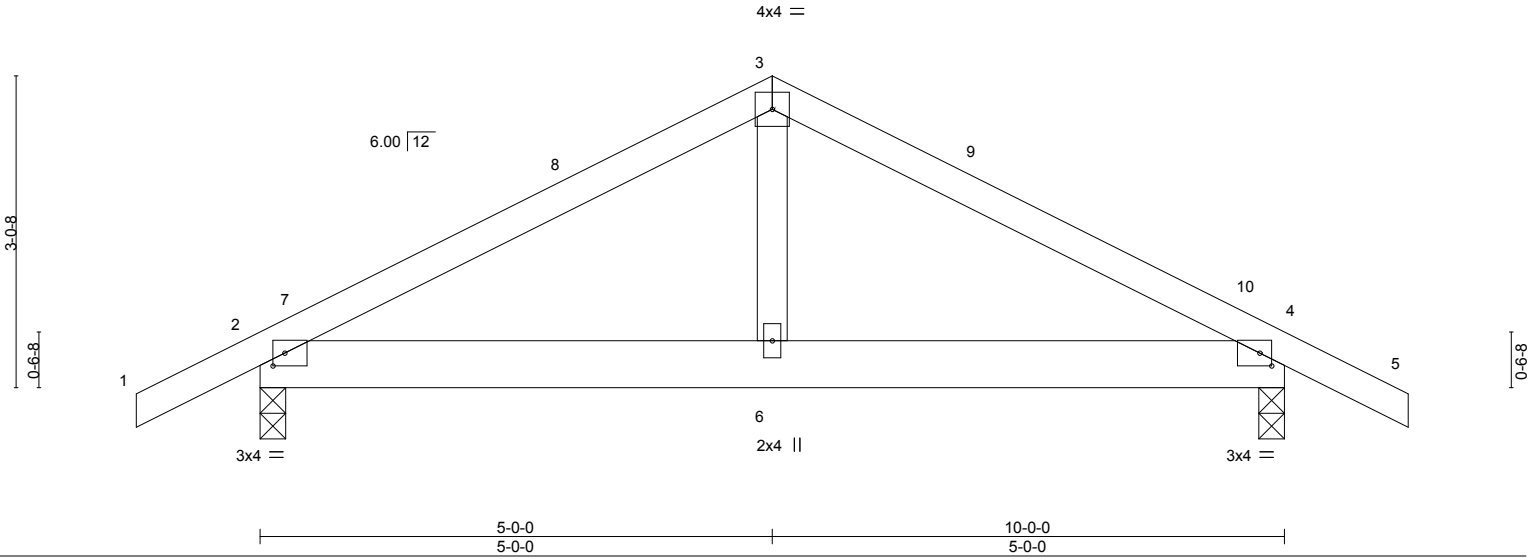


Plate Offsets (X,Y)-- [2:0-1-6,0-1-8], [4:0-1-6,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.21	Vert(LL)	-0.01	6	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	-0.01	4-6	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.02	4-6	>999	Weight: 48 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 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.** (lb/size) 2=470/0-3-0 (min. 0-1-8), 4=470/0-3-0 (min. 0-1-8)  
Max Horz 2=40(LC 11)  
Max Uplift 2=-91(LC 9), 4=-91(LC 8)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-7=-515/540, 7-8=-501/553, 3-8=-427/568, 3-9=-427/568, 9-10=-501/553,  
4-10=-515/540  
BOT CHORD 2-6=-376/387, 4-6=-376/387  
WEBS 3-6=-327/240

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-0-0, Exterior(2) 5-0-0 to 9-4-13, Interior(1) 9-4-13 to 11-2-8 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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, 4.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

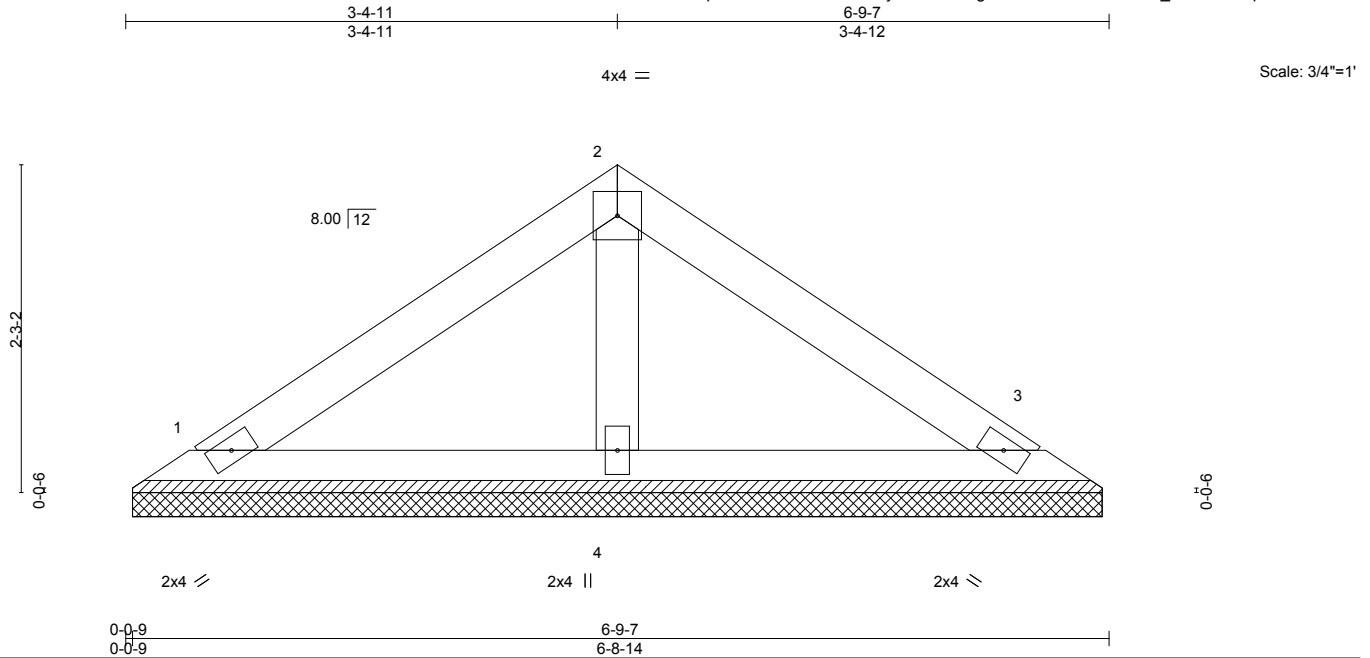


818 Soundside Road  
Edenton, NC 27932

Job J0823-4324	Truss VB1	Truss Type VALLEY	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett 157763301
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:49 2023 Page 1  
ID:hxY3pmLvDCe?dFTuxKh62hywvcV-1xAlgezaTi1azsk3n43RztlITv\_53B59tLTTpXzR79K



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.11	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.06	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.02	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2015/TPI2014			Weight: 23 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.** (lb/size) 1=126/6-8-5 (min. 0-1-8), 3=126/6-8-5 (min. 0-1-8), 4=212/6-8-5 (min. 0-1-8)  
Max Horz 1=47(LC 11)  
Max Uplift 1=20(LC 12), 3=24(LC 13)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- Non Standard bearing condition. Review required.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

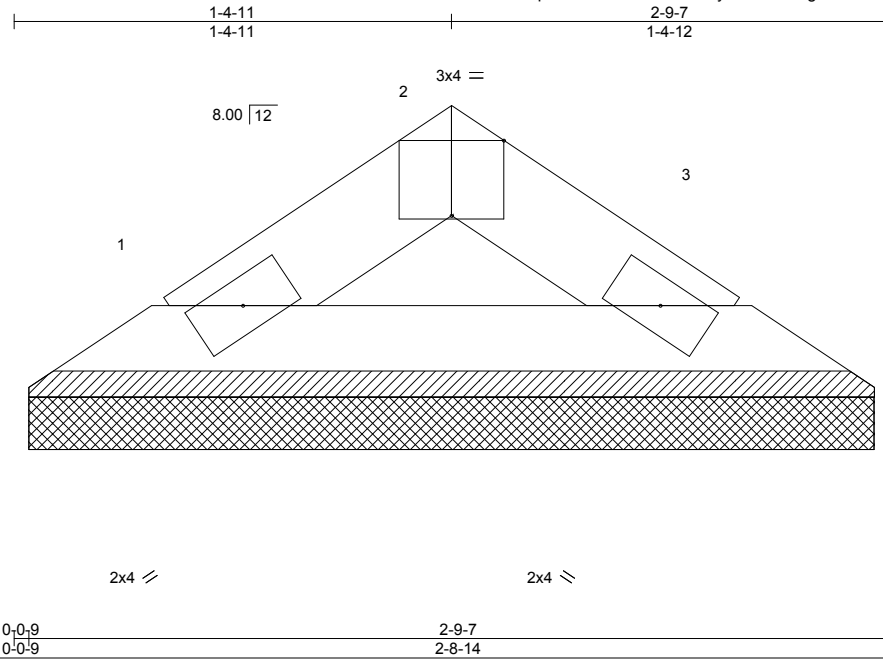


818 Soundside Road  
Edenton, NC 27932



Job J0823-4324	Truss VB2	Truss Type VALLEY	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett 157763302
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Comtech, Inc., Fayetteville, NC 28309  
 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:49 2023 Page 1  
 ID:hxY3pmLvDCe?dFTuxKh62hywvcV-1xAlgezaT1azsk3n43RztlJ3v\_f3BM9tLTTPxZr79K



Scale = 1:7.3

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 0.01	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-P					Weight: 7 lb	FT = 20%

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

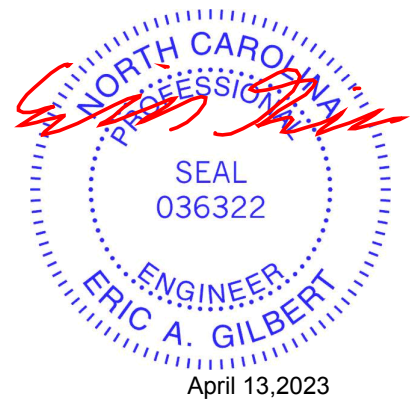
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-9-7 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=72/2-8-5 (min. 0-1-8), 3=72/2-8-5 (min. 0-1-8)  
 Max Horz 1=15(LC 9)  
 Max Uplift 1=4(LC 12), 3=4(LC 13)

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

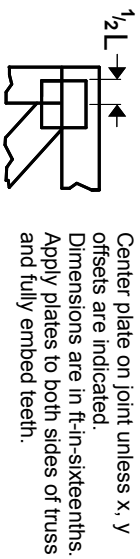
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
  - Non Standard bearing condition. Review required.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

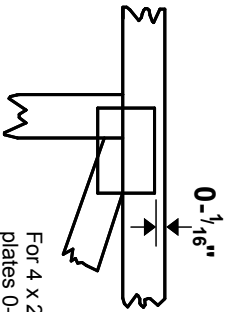


# Symbols

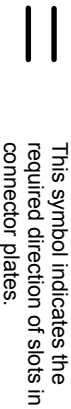
## PLATE LOCATION AND ORIENTATION



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-  $\frac{1}{16}$ \"/>



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

\* Plate location details available in MITek 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/letter where bearings occur. Min size shown is for crushing only.

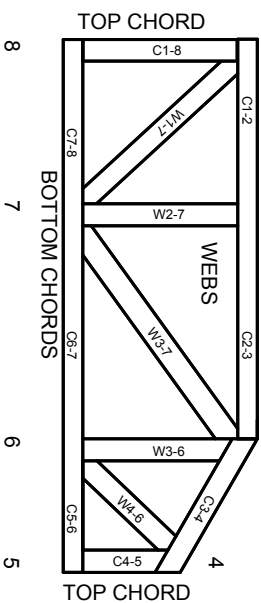
## Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



1 TOP CHORDS  
2 Joint ID  
3 typ.



**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-1988, ESR-2362, ESR-2685, ESR-3282  
ESR-4722, ESL-1388

# Design General Notes

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

Lumber design values are in accordance with ANSI/TP1 section 6.3. These truss designs rely on Lumber values established by others.

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# 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 Tor1 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

MITek Engineering Reference Sheet: MI1-7473 rev. 1/2/2023

RE: J0823-4325  
Precision/Lot 35 Liberty Meadows/Harnett

**Trenco**  
818 Soundside Rd  
Edenton, NC 27932

**Site Information:**

Customer: Project Name: J0823-4325  
Lot/Block: Model:  
Address: Subdivision:  
City: State:

**General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):**

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.4  
Wind Code: N/A Wind Speed: N/A mph  
Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 12 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I57763303	ET1	4/13/2023
2	I57763304	ET2	4/13/2023
3	I57763305	ET3	4/13/2023
4	I57763306	F1	4/13/2023
5	I57763307	F2	4/13/2023
6	I57763308	F3	4/13/2023
7	I57763309	F4	4/13/2023
8	I57763310	F5	4/13/2023
9	I57763311	F6	4/13/2023
10	I57763312	F7	4/13/2023
11	I57763313	F8	4/13/2023
12	I57763314	F9	4/13/2023

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

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.



April 13, 2023

Job	Truss	Truss Type	Qty	Ply	Precision/Lot	35 Liberty Meadows/Harnett
J0823-4325	ET1	GABLE	1	1		I57763303
						Job Reference (optional)

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:19 2023 Page 1

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0-1-8



Scale = 1:42.9

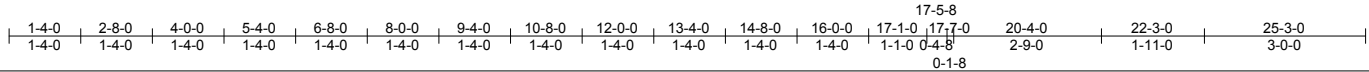
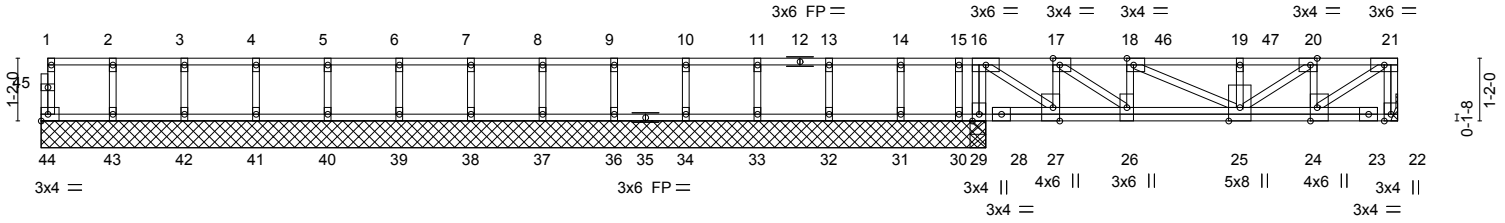


Plate Offsets (X,Y)--	[17:0-1-8,Edge], [18:0-1-8,Edge], [20:0-1-8,Edge], [24:0-3-0,Edge], [27:0-3-0,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.20	Vert(LL) -0.01 25 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.13	Vert(CT) -0.03 25-26 >999 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.39	Horz(CT) 0.00 22 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 128 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, Except: 6-0-0 oc bracing: 27-29,22-24.
WEBS 2x4 SP No.3(flat)	
OTHERS 2x4 SP No.3(flat)	

**REACTIONS.** All bearings 17-7-0 except (jt=length) 22=Mechanical.  
 (lb) - Max Uplift All uplift 100 lb or less at joint(s) except 30=-145(LC 4)  
 Max Grav All reactions 250 lb or less at joint(s) 44, 30, 43, 42, 41, 40, 39, 38, 37, 36, 34, 33, 32, 31 except 22=624(LC 1), 29=741(LC 1), 29=741(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 21-22=-611/0, 16-17=-651/0, 17-18=-1053/0, 18-19=-1048/0, 19-20=-1048/0, 20-21=-676/0  
 BOT CHORD 26-27=0/651, 25-26=0/1053, 24-25=0/676  
 WEBS 16-29=-620/0, 16-27=0/785, 17-27=-466/0, 17-26=0/494, 18-26=-257/0, 21-24=0/818, 20-24=-442/0, 20-25=0/457, 19-25=-262/0

- 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) Gable studs spaced at 1-4-0 oc.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 145 lb uplift at joint 30.
  - 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.
  - 8) CAUTION, Do not erect truss backwards.
  - 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 86 lb down at 18-10-12, 86 lb down at 20-10-12, and 86 lb down at 22-10-12, and 94 lb down at 25-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 22-44=-10, 1-21=-100  
 Concentrated Loads (lb)  
 Vert: 17=-86(F) 21=-94(F) 46=-86(F) 47=-86(F)



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 35 Liberty Meadows/Harnett
J0823-4325	ET2	GABLE	1	1	I57763304
					Job Reference (optional)

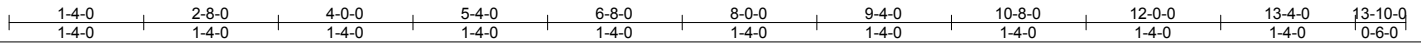
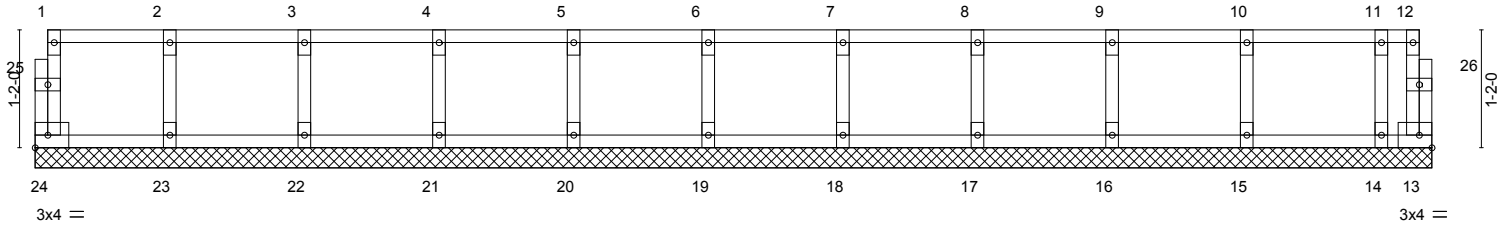
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:20 2023 Page 1  
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0<sub>1</sub>8

0<sub>1</sub>8

Scale = 1:22.8



<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 0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.02	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	13	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R						Weight: 59 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 13-10-0.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 24, 13, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14

**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) 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.



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
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818 Soundside Road  
Edenton, NC 27932

Job J0823-4325	Truss ET3	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett I57763305
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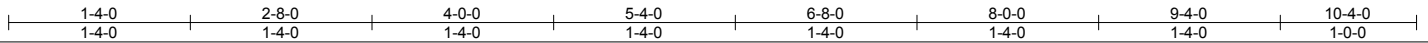
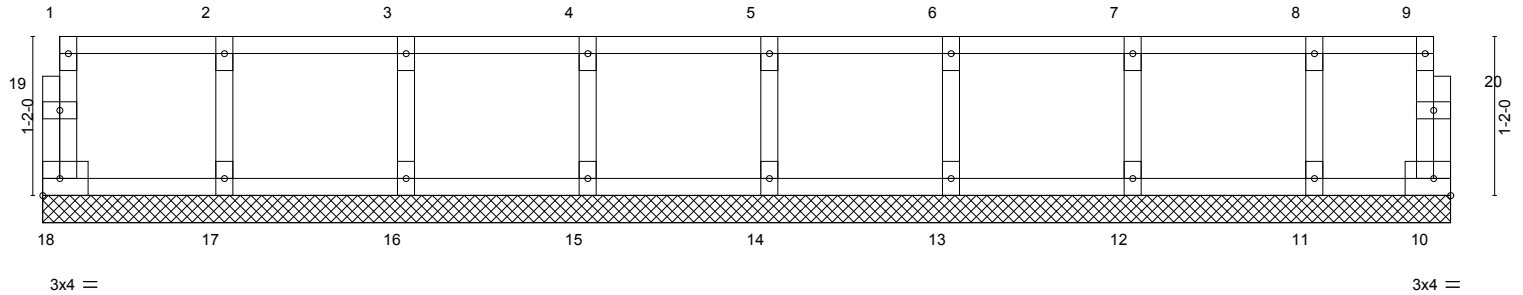
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:21 2023 Page 1  
ID:hxY3pmLvDCe?dFTuxKh62hywwcV-u?3wQPfRRBqole7aRBTXtC5iShr\_npJpQZUo2kzR85m

0r1-8

0r1-8

Scale = 1:16.9



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 0.06	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	10	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R							
									Weight: 45 lb	FT = 20%F, 11%E

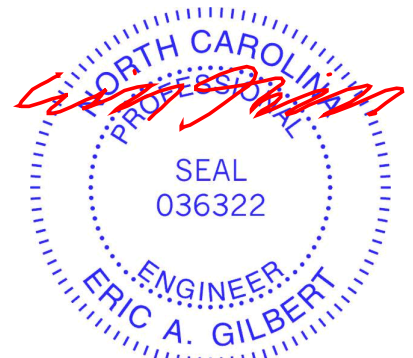
**LUMBER-**  
TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

**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 10-4-0.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 18, 10, 17, 16, 15, 14, 13, 12, 11

**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) 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.



April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road  
Edenton, NC 27932



Job J0823-4325	Truss F1	Truss Type Floor	Qty 8	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett I57763306
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8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:23 2023 Page 1  
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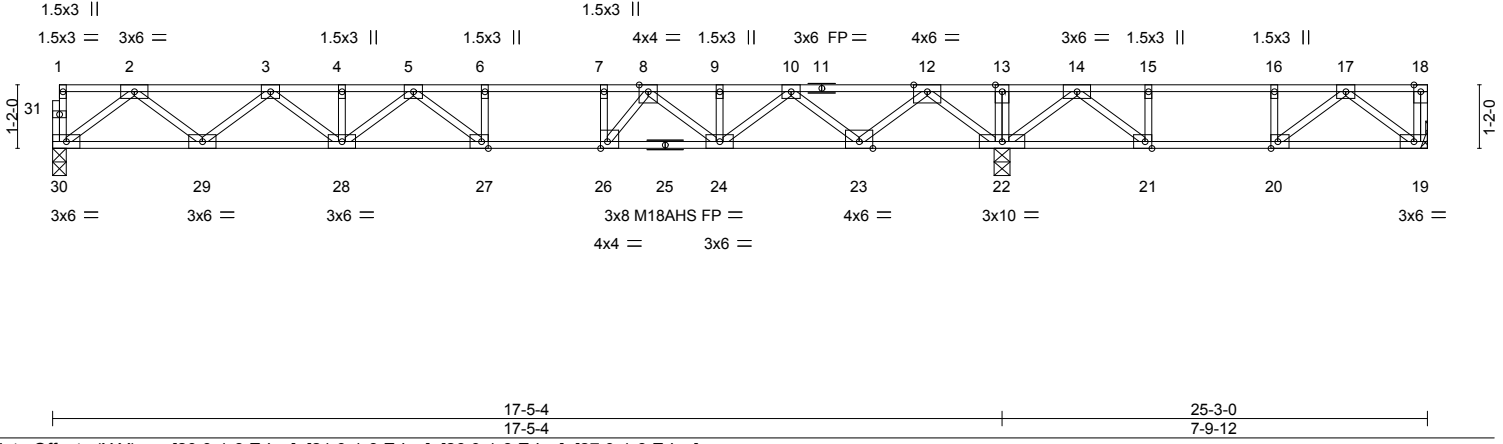


Plate Offsets (X, Y)--	[20:0-1-8,Edge], [21:0-1-8,Edge], [26:0-1-8,Edge], [27:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.86	Vert(LL) -0.26 27-28 >801 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.88	Vert(CT) -0.36 27-28 >582 360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr YES	WB 0.57	Horz(CT) 0.05 22 n/a n/a		
BCDL 5.0	Code IRC2015/TP12014	Matrix-S		Weight: 127 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 2-2-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 30=0-3-0, 19=Mechanical, 22=0-3-8  
 Max Uplift 19=44(LC 3)  
 Max Grav 30=880(LC 10), 19=367(LC 4), 22=1620(LC 1)

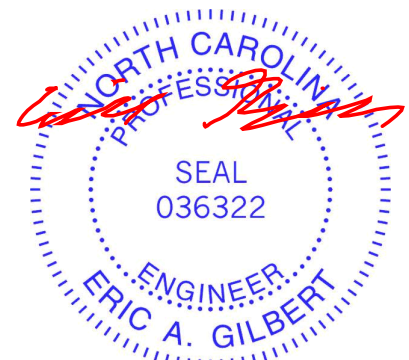
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-1831/0, 3-4=-2998/0, 4-5=-2998/0, 5-6=-3353/0, 6-7=-3353/0, 7-8=-3353/0, 8-9=-2550/0, 9-10=-2550/0, 10-12=-1084/0, 12-13=0/1342, 13-14=0/1342, 14-15=-539/378, 15-16=-539/378, 16-17=-539/378

BOT CHORD 29-30=0/1100, 28-29=0/2536, 27-28=0/3294, 26-27=0/3353, 24-26=0/3031, 23-24=0/1932, 21-22=-838/124, 20-21=-378/539, 19-20=-96/387

WEBS 2-30=-1378/0, 2-29=0/952, 3-29=-917/0, 3-28=0/589, 12-22=-1594/0, 12-23=0/1193, 10-23=-1131/0, 17-19=-485/120, 17-20=-360/195, 14-22=-835/0, 10-24=0/817, 5-28=-379/0, 8-24=-644/0, 5-27=-219/410, 8-26=0/790, 7-26=-476/0, 14-21=0/875, 15-21=-421/0

- 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 3x4 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 19.
  - 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.
  - 8) CAUTION, Do not erect truss backwards.



April 13, 2023

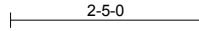
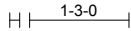
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. 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/TP1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</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	Precision/Lot 35 Liberty Meadows/Harnett	157763307
J0823-4325	F2	Floor	5	1	Job Reference (optional)	

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ID:hxY3pmLvDCe?dFTuxKh62hywwcV-lak32RiKk6CNc6s96J1FVqjhLuh\_\_2rF6XjSe3zR85j

0-1-8



Scale = 1:29.0

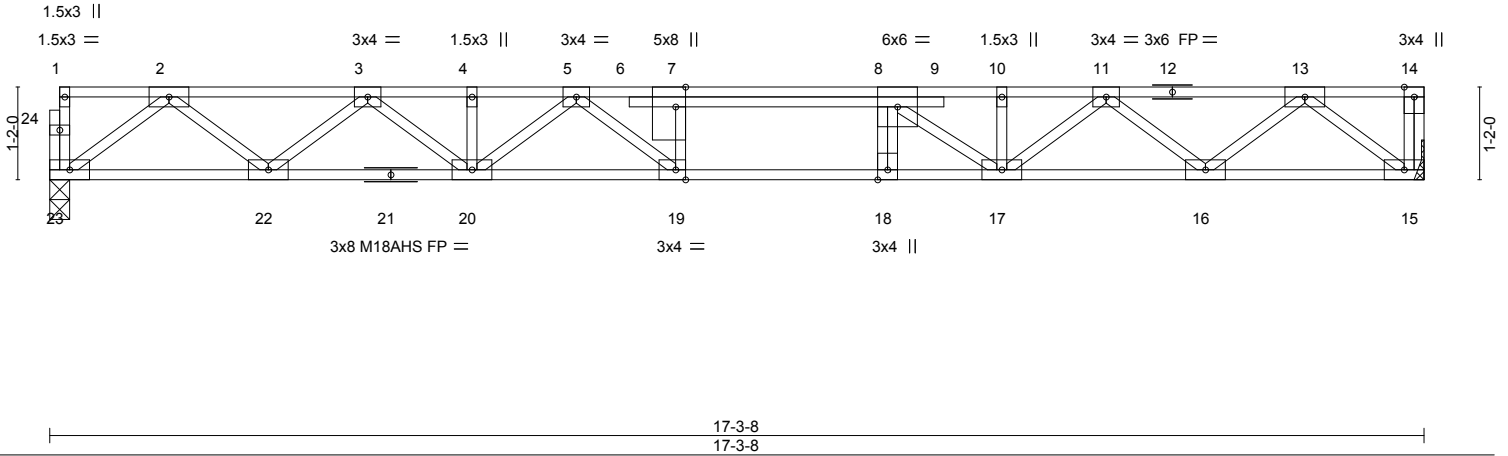


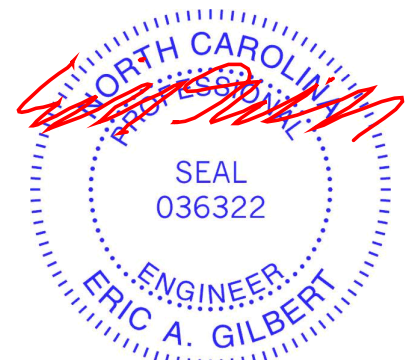
Plate Offsets (X,Y)--	[7:0-3-0,Edge], [19:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.53	Vert(LL) -0.25 19 >826 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.76	Vert(CT) -0.34 19 >600 360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr YES	WB 0.49	Horz(CT) 0.06 15 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 94 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.** (size) 23=0-3-0, 15=Mechanical  
Max Grav 23=931(LC 1), 15=937(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1960/0, 3-4=-3249/0, 4-5=-3249/0, 5-7=-3924/0, 7-8=-3924/0, 8-10=-3215/0, 10-11=-3205/0, 11-13=-1964/0  
 BOT CHORD 22-23=0/1168, 20-22=0/2719, 19-20=0/3589, 18-19=0/3924, 17-18=0/3924, 16-17=0/2724, 15-16=0/1167  
 WEBS 2-23=-1463/0, 2-22=0/1030, 3-22=-989/0, 3-20=0/676, 5-20=-435/0, 5-19=0/755, 7-19=-419/0, 13-15=-1464/0, 13-16=0/1037, 11-16=-990/0, 11-17=0/614, 10-17=-57/264, 8-17=-1077/0

- 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 3x6 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) 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.



April 13, 2023

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TPH Quality Criteria and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</p>	<p>ENGINEERING BY</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 35 Liberty Meadows/Harnett	157763308
J0823-4325	F3	Floor	1	1		
Job Reference (optional)						

Comtech, Inc. Fayetteville, NC - 28314,

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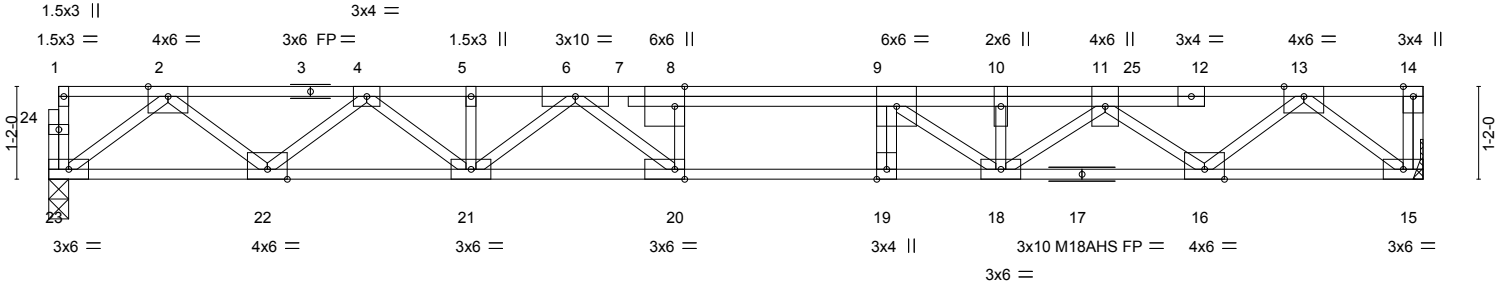
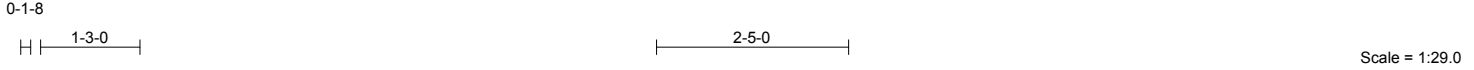


Plate Offsets (X, Y)--	[8:0-3-0,Edge], [20:0-1-8,Edge]
	17-3-8 17-3-8

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 0.96	Vert(LL)	-0.27	19-20	>761	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.99	Vert(CT)	-0.37	19-20	>547	360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr	NO	WB 0.72	Horz(CT)	0.08	15	n/a	n/a		
BCDL 5.0	Code IRC2015/TP12014		Matrix-S							
									Weight: 98 lb	FT = 20%F, 11%E

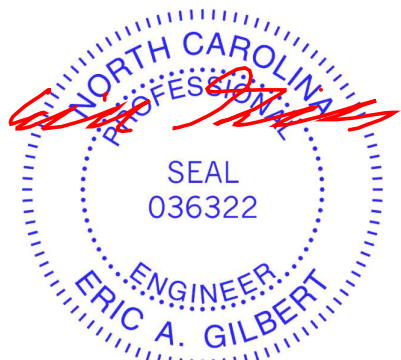
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 3-8-11 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 23=0-3-0, 15=Mechanical  
Max Grav 23=1009(LC 1), 15=1242(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-4=-2156/0, 4-5=-3636/0, 5-6=-3636/0, 6-8=-4658/0, 8-9=-4651/0, 9-10=-4375/0, 10-11=-4375/0, 11-13=-2753/0  
**BOT CHORD** 22-23=0/1271, 21-22=0/3006, 20-21=0/4062, 19-20=0/4651, 18-19=0/4651, 16-18=0/3943, 15-16=0/1562  
**WEBS** 2-23=-1593/0, 2-22=0/1152, 4-22=-1106/0, 4-21=0/804, 6-21=-545/0, 6-20=0/1067, 8-20=-590/0, 13-15=-1960/0, 13-16=0/1522, 11-16=-1538/0, 11-18=0/539, 9-18=-582/188

- 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) 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.
  - 6) CAUTION, Do not erect truss backwards.
  - 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 463 lb down at 13-8-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 15-23=-10, 1-14=-100  
 Concentrated Loads (lb)  
 Vert: 25=-383(B)



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Job J0823-4325	Truss F4	Truss Type Floor	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett 157763309
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8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:26 2023 Page 1  
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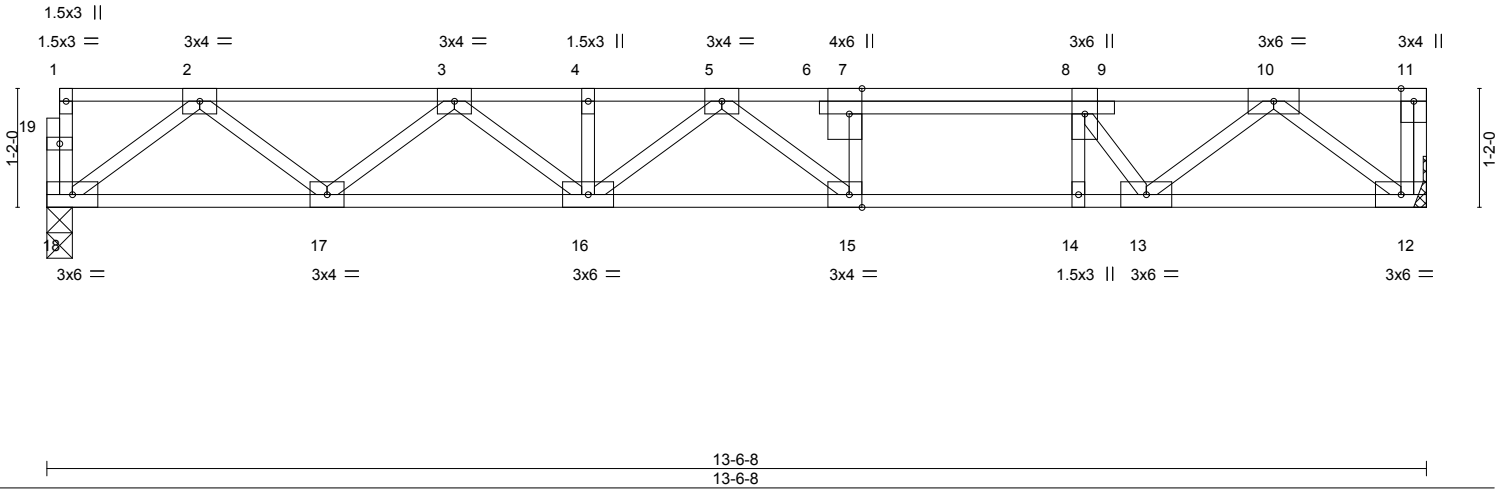


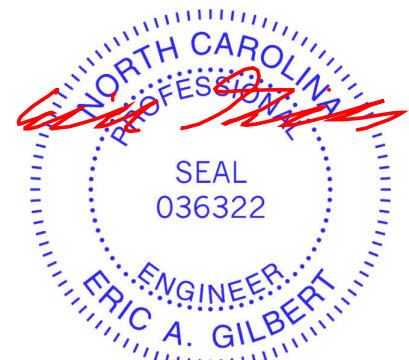
Plate Offsets (X,Y)--	[7:0-3-0,Edge], [15:0-1-8,Edge]							
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>			
TCLL 40.0	Plate Grip DOL 1.00	TC 0.86	Vert(LL) -0.17 15-16 >929 480	MT20	244/190			
TCDL 10.0	Lumber DOL 1.00	BC 0.82	Vert(CT) -0.24 15-16 >675 360					
BCLL 0.0	Rep Stress Incr YES	WB 0.46	Horz(CT) 0.03 12 n/a n/a					
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S						
								Weight: 73 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 4-6-8 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.** (size) 18=0-3-0, 12=Mechanical  
Max Grav 18=725(LC 1), 12=731(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1440/0, 3-4=-2227/0, 4-5=-2227/0, 5-7=-2080/0, 7-8=-2080/0, 8-10=-1581/0  
BOT CHORD 17-18=0/895, 16-17=0/1963, 15-16=0/2338, 14-15=0/2080, 13-14=0/2080, 12-13=0/821  
WEBS 2-18=-1120/0, 2-17=0/710, 3-17=-680/0, 3-16=0/338, 5-15=-457/131, 8-14=0/269, 10-12=-1030/0, 10-13=0/971, 8-13=-912/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.



April 13, 2023

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Job J0823-4325	Truss F5	Truss Type Floor	Qty 4	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett I57763310
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8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:27 2023 Page 1  
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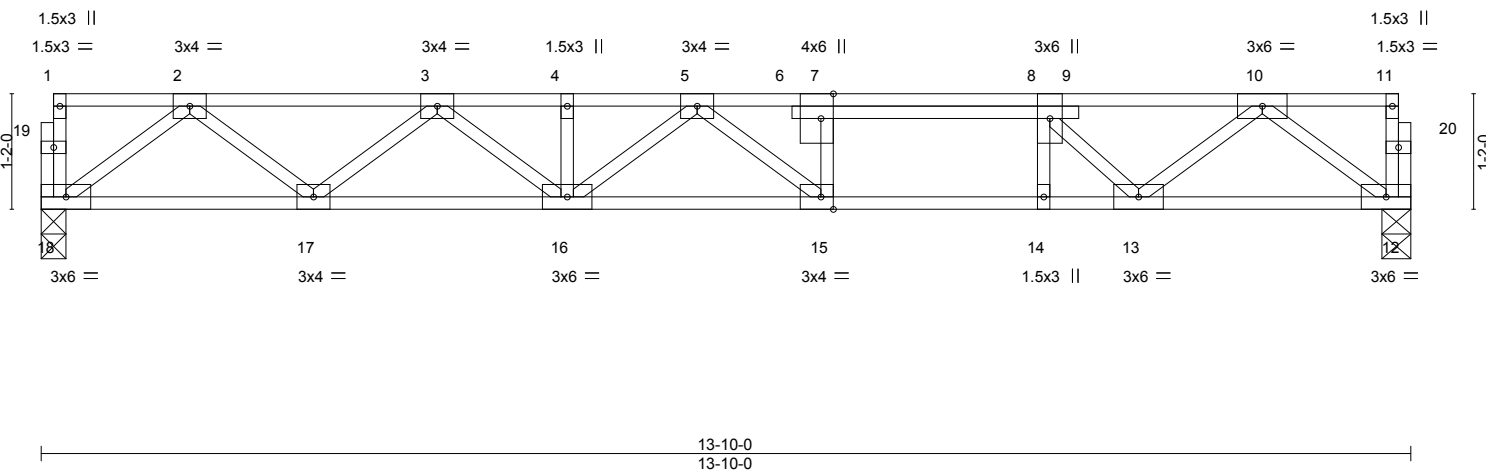


Plate Offsets (X,Y)--	[7:0-3-0,Edge], [15:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.82	Vert(LL) -0.18 15-16 >915 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.80	Vert(CT) -0.24 15-16 >667 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.44	Horz(CT) 0.03 12 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 74 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.** (size) 18=0-3-0, 12=0-3-8  
Max Grav 18=741(LC 1), 12=741(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1480/0, 3-4=-2306/0, 4-5=-2306/0, 5-7=-2216/0, 7-8=-2216/0, 8-10=-1571/0  
BOT CHORD 17-18=0/916, 16-17=0/2021, 15-16=0/2436, 14-15=0/2216, 13-14=0/2216, 12-13=0/848  
WEBS 2-18=-1147/0, 2-17=0/735, 3-17=-704/0, 3-16=0/364, 5-15=-438/177, 10-12=-1058/0, 10-13=0/926, 8-13=-938/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) 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.



April 13, 2023

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22</b> available from Truss Plate Institute (<a href="http://www.tpinst.org">www.tpinst.org</a>) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (<a href="http://www.sbcacomponents.com">www.sbcacomponents.com</a>)</p>	<p>ENGINEERING BY</p>  <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0823-4325	Truss F6	Truss Type Floor	Qty 2	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett I57763311
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:28 2023 Page 1  
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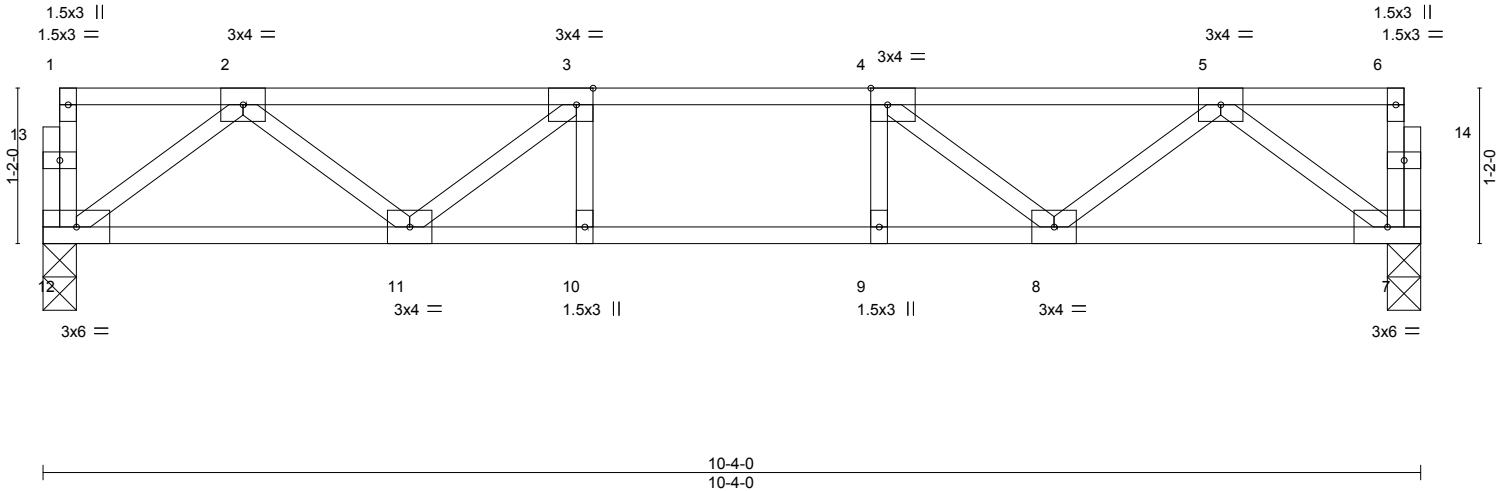
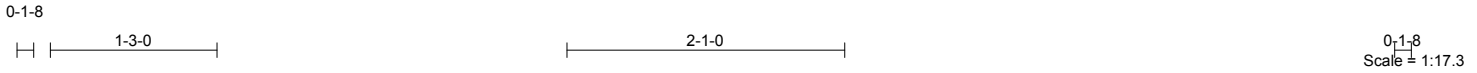


Plate Offsets (X,Y)--	[3:0-1-8,Edge], [4:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.24	Vert(LL) -0.06 10-11 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.42	Vert(CT) -0.07 10 >999 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.21	Horz(CT) 0.01 7 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 52 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.** (size) 12=0-3-0, 7=0-3-0  
Max Grav 12=548(LC 1), 7=548(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-999/0, 3-4=-1319/0, 4-5=-999/0  
BOT CHORD 11-12=0/666, 10-11=0/1319, 9-10=0/1319, 8-9=0/1319, 7-8=0/666  
WEBS 2-12=-833/0, 2-11=0/434, 3-11=-449/0, 5-7=-833/0, 5-8=0/434, 4-8=-449/0

**NOTES-**  
1) Unbalanced floor live loads have been considered for this design.  
2) Plates checked for a plus or minus 1 degree rotation about its center.  
3) 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.





Job	Truss	Truss Type	Qty	Ply	Precision/Lot 35 Liberty Meadows/Harnett
J0823-4325	F7	Floor	4	1	I57763312
					Job Reference (optional)

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:29 2023 Page 1  
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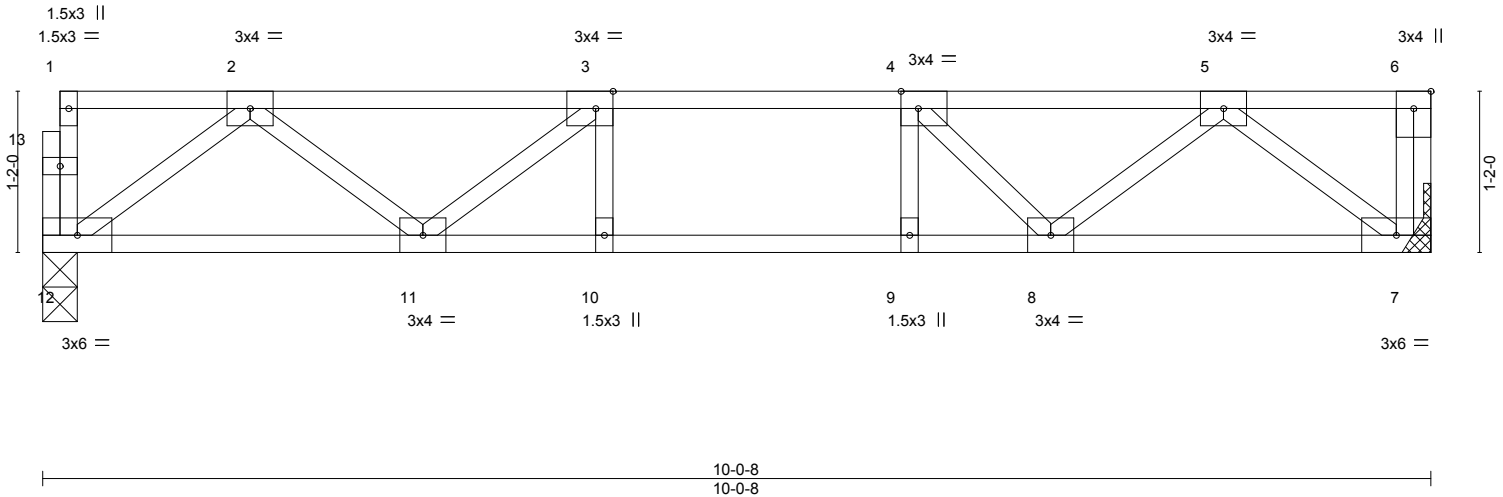
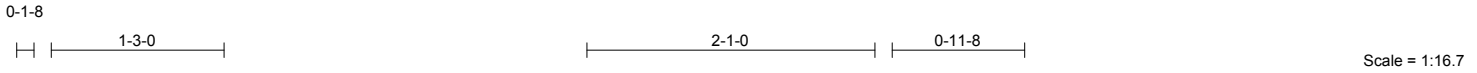


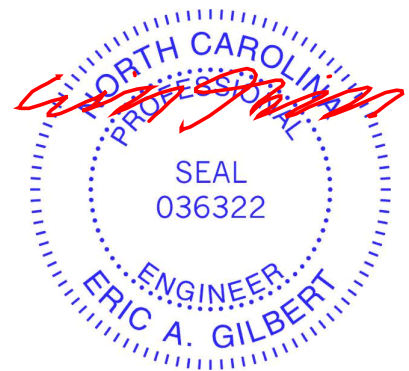
Plate Offsets (X, Y)--	[3:0-1-8,Edge], [4:0-1-8,Edge]								
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00		TC 0.28	Vert(LL) -0.06	10-11	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00		BC 0.44	Vert(CT) -0.07	10	>999	360		
BCLL 0.0	Rep Stress Incr YES		WB 0.21	Horz(CT) 0.01	7	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 51 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.** (size) 12=0-3-0, 7=Mechanical  
 Max Grav 12=532(LC 1), 7=539(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-959/0, 3-4=-1240/0, 4-5=-971/0  
 BOT CHORD 11-12=0/648, 10-11=0/1240, 9-10=0/1240, 8-9=0/1240, 7-8=0/633  
 WEBS 2-12=-811/0, 2-11=0/405, 3-11=-402/0, 5-7=-794/0, 5-8=0/440, 4-8=-432/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.



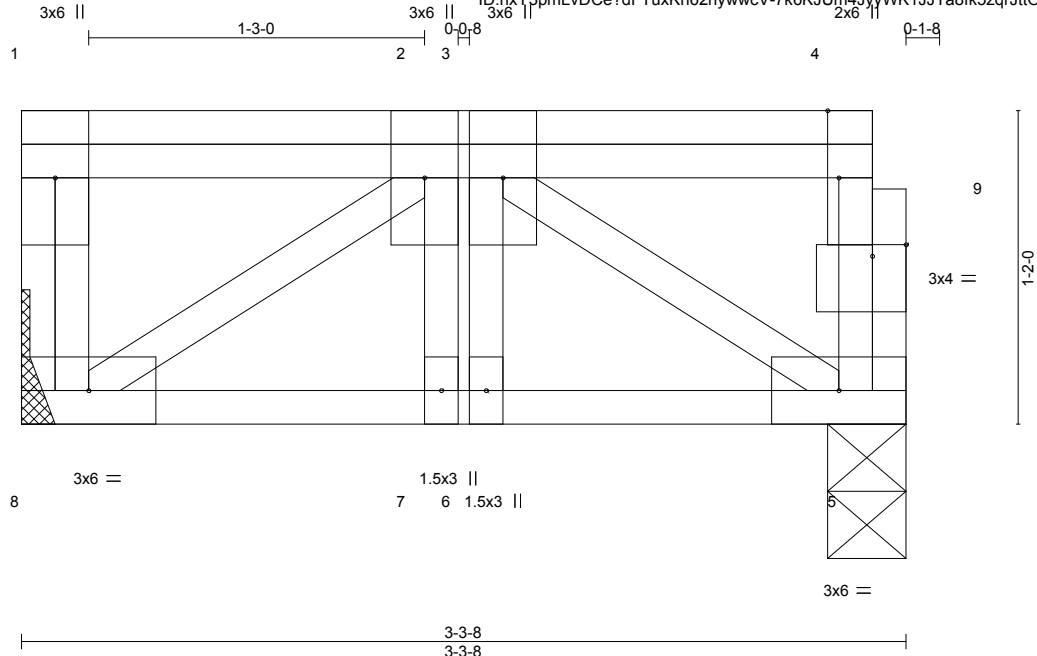
April 13, 2023

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TP1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</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 J0823-4325	Truss F8	Truss Type FLOOR GIRDER	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett I57763313
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:30 2023 Page 1



Scale = 1:8.6

Plate Offsets (X,Y)--	[4:0-3-0,Edge], [9:0-1-8,0-0-8]
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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 0.08	Vert(LL)	-0.00	7	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.15	Vert(CT)	-0.01	7	>999		
BCLL 0.0	Rep Stress Incr	NO	WB 0.16	Horz(CT)	0.00	5	n/a		
BCDL 5.0	Code IRC2015/TP12014		Matrix-S						
								Weight: 26 lb	FT = 20%F, 11%E

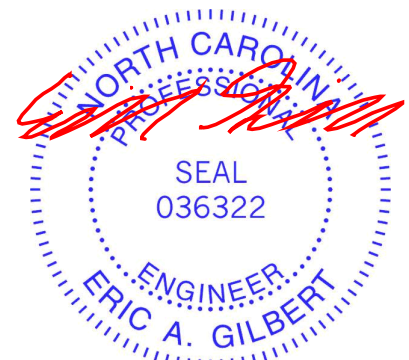
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 3-3-8 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 8=Mechanical, 5=0-3-8  
Max Grav 8=500(LC 1), 5=459(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-578/0  
BOT CHORD 7-8=0/578, 6-7=0/578, 5-6=0/578  
WEBS 2-8=-700/0, 3-5=-695/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 676 lb down at 1-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 5-8=10, 1-4=-100  
Concentrated Loads (lb)  
Vert: 2=-631(B)



April 13, 2023

Job J0823-4325	Truss F9	Truss Type FLOOR GIRDER	Qty 1	Ply 1	Precision/Lot 35 Liberty Meadows/Harnett 157763314
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:31 2023 Page 1  
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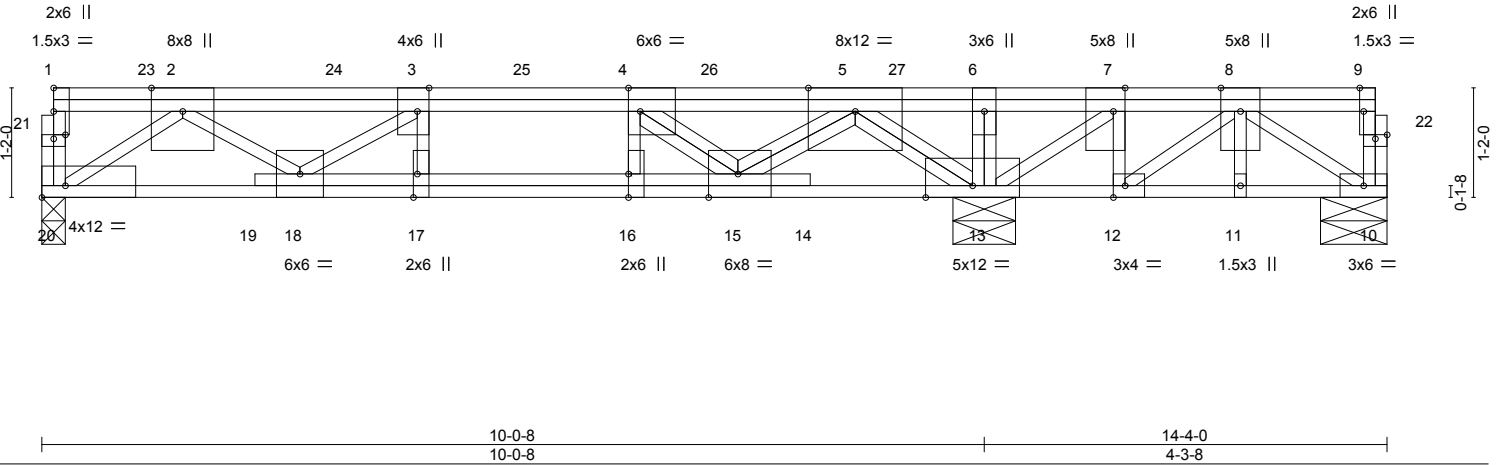
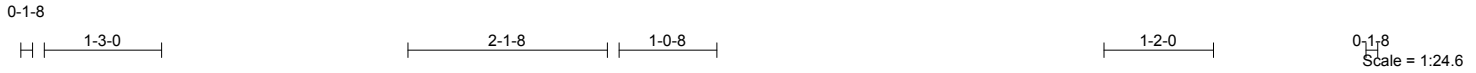


Plate Offsets (X,Y)--	[3:0-3-0,Edge], [4:0-1-8,Edge], [7:0-3-0,Edge], [9:0-3-0,Edge], [12:0-1-8,Edge], [15:0-3-12,Edge], [16:0-3-0,0-0-0], [17:0-3-0,Edge], [20:Edge,0-1-8], [21:0-1-8,0-0-8], [22:0-1-8,0-0-8]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.83	Vert(LL)	-0.11	17	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.99	Vert(CT)	-0.16	17	>759		
BCLL 0.0	Rep Stress Incr	NO	WB 0.88	Horz(CT)	0.03	13	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 108 lb	FT = 20%F, 11%E

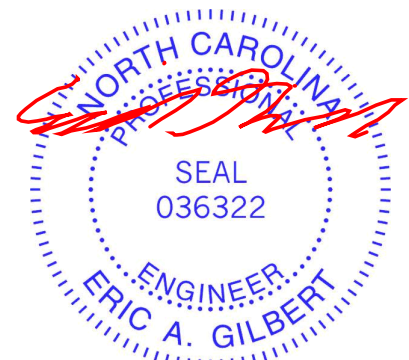
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 20=0-3-0, 10=0-8-8, 13=0-8-0  
 Max Uplift 10=-284(LC 3)  
 Max Grav 20=2267(LC 3), 13=4757(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-4197/0, 3-4=-5207/0, 4-5=-2819/0, 5-6=0/3050, 6-7=0/3050, 7-8=0/982  
 BOT CHORD 18-20=0/3051, 17-18=0/5207, 16-17=0/5207, 15-16=0/5207, 13-15=0/567, 12-13=-982/0, 11-12=-416/0, 10-11=-416/0  
 WEBS 2-20=-3737/0, 2-18=0/1421, 3-18=-1232/0, 3-17=-324/0, 4-16=0/511, 5-13=-4392/0, 5-15=0/2826, 4-15=-3093/0, 8-10=0/503, 7-13=-2592/0, 7-12=0/431, 6-13=-707/0, 8-12=-763/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 284 lb uplift at joint 10.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 917 lb down at 1-2-4, 917 lb down at 3-2-4, 917 lb down at 5-2-4, 917 lb down at 7-2-4, and 911 lb down at 11-2-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 10-20=-10, 1-9=-100  
 Concentrated Loads (lb)  
 Vert: 7=-1142(B) 23=-837(B) 24=-837(B) 25=-837(B) 26=-837(B) 27=-837(B)



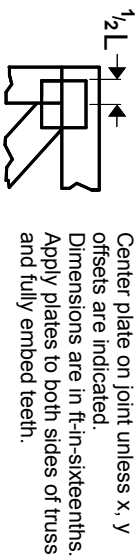
April 13, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

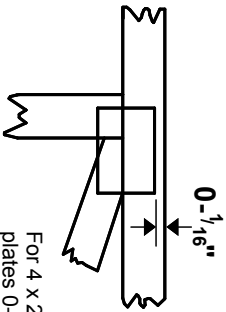
**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

# Symbols

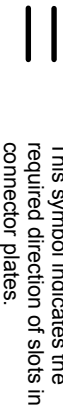
## PLATE LOCATION AND ORIENTATION



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.



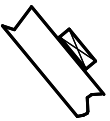
\* Plate location details available in MITek software or upon request.

## PLATE SIZE

4 X 4

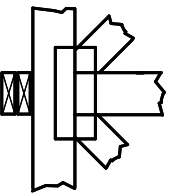
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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/letter where bearings occur. Min size shown is for crushing only.

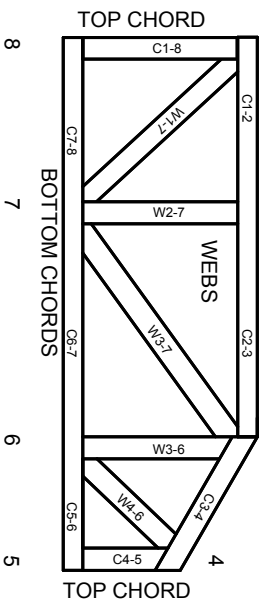
## Industry Standards:

ANSI/TFP 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



1 TOP CHORDS  
2 JOINT ID  
3 typ.



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-1988, ESR-2362, ESR-2685, ESR-3282  
ESR-4722, ESL-1388

# Design General Notes

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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# 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.

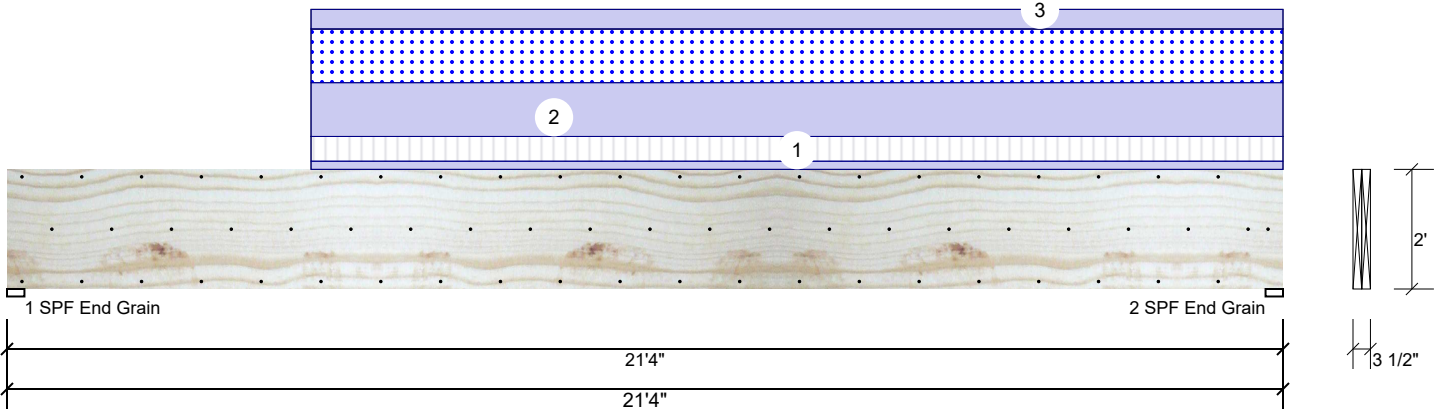
**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023

**BM2 Kerto-S LVL 1.750" X 24.000" 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:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	935	3274	2029	0	0
2	Vertical	1535	5249	3333	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	53%	3274 / 2223	5497	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	86%	5249 / 3651	8901	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	43078 ft-lb	11'2 11/16"	84163 ft-lb	0.512 (51%)	D+0.75(L+S)	L
Unbraced	43078 ft-lb	11'2 11/16"	43441 ft-lb	0.992 (99%)	D+0.75(L+S)	L
Shear	6921 lb	19' 1/2"	20608 lb	0.336 (34%)	D+0.75(L+S)	L
LL Defl inch	0.192 (L/1303)	10'10 13/16"	0.522 (L/480)	0.368 (37%)	0.75(L+S)	L
TL Defl inch	0.470 (L/534)	10'10 11/16"	0.697 (L/360)	0.675 (67%)	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 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 4' 1/2" o.c.
- 7 Bottom must be laterally braced at end bearings.
- 8 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	Part. Uniform	5-1-0 to 21-4-0		Near Face	50 PLF	152 PLF	0 PLF	0 PLF	0 PLF	F1
2	Part. Uniform	5-1-0 to 21-4-0		Top	330 PLF	0 PLF	330 PLF	0 PLF	0 PLF	A TRUSSES
3	Part. Uniform	5-1-0 to 21-4-0		Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
	Self Weight				19 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**

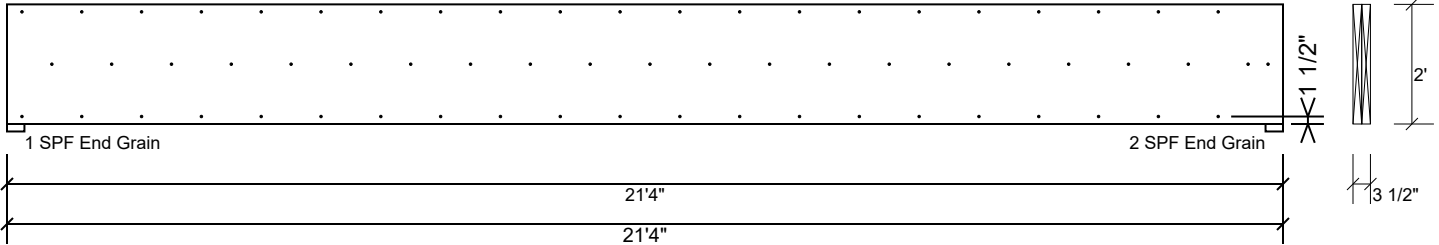
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**BM2 Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	41.1 %
Load	101.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
Duration Factor	1.00

**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**

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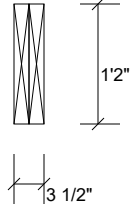
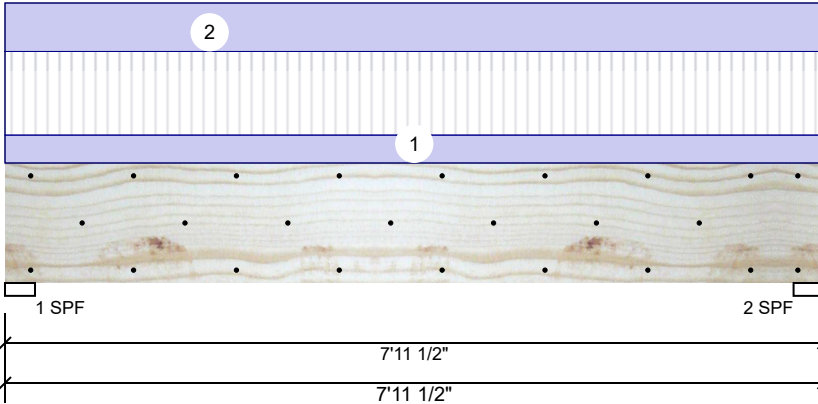
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USA  
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**BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	824	795	0	0	0
2	Vertical	824	795	0	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	31%	795 / 824	1619	L	D+L
2 - SPF	3.500"	Vert	31%	795 / 824	1619	L	D+L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2861 ft-lb	3'11 3/4"	26999 ft-lb	0.106 (11%)	D+L	L
Unbraced	2861 ft-lb	3'11 3/4"	13588 ft-lb	0.211 (21%)	D+L	L
Shear	1360 lb	6'6"	10453 lb	0.130 (13%)	D+L	L
LL Defl inch	0.013 (L/7127)	3'11 13/16"	0.188 (L/480)	0.067 (7%)	L	L
TL Defl inch	0.025 (L/3626)	3'11 13/16"	0.250 (L/360)	0.099 (10%)	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 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 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	69 PLF	207 PLF	0 PLF	0 PLF	0 PLF	F7
2	Uniform			Top	120 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**  
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

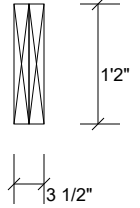
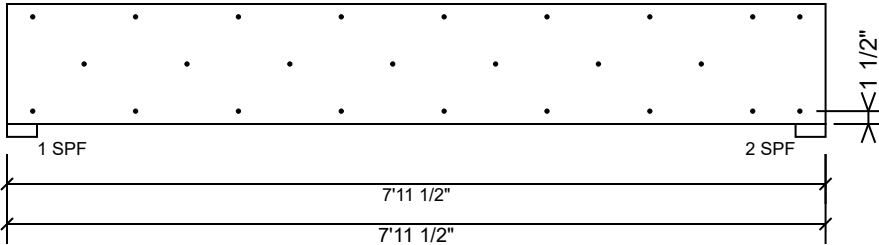
This design is valid until 11/3/2024

**Manufacturer Info**  
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**BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	56.2 %
Load	138.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
Duration Factor	1.00

**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**

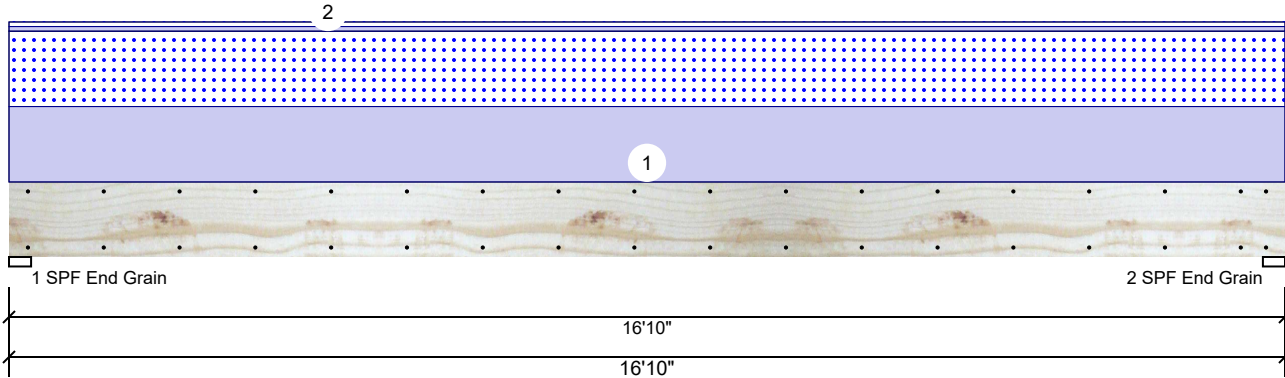
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**GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Header Supports:	No
Importance:	Normal - II	Glass:	
Temperature:	Temp <= 100°F	Deck:	Not Checked

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1551	1473	0	0
2	Vertical	0	1551	1473	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	29%	1551 / 1473	3024	L	D+S
2 - SPF End Grain	3.500"	Vert	29%	1551 / 1473	3024	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12041 ft-lb	8'5"	22897 ft-lb	0.526 (53%)	D+S	L
Unbraced	12041 ft-lb	8'5"	22897 ft-lb	0.526 (53%)	D+S	L
Shear	2572 lb	1'3 3/8"	10197 lb	0.252 (25%)	D+S	L
LL Defl inch	0.306 (L/642)	8'5 1/16"	0.546 (L/360)	0.561 (56%)	S	L
TL Defl inch	0.628 (L/313)	8'5 1/16"	0.819 (L/240)	0.767 (77%)	D+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 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be continuously laterally braced.
- 7 Bottom must be laterally braced at bearings.
- 8 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	165 PLF	0 PLF	165 PLF	0 PLF	0 PLF	C1-GE
2	Tie-In	0-0-0 to 16-10-0	0-6-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	RAKE OH
	Self Weight				9 PLF					

**Notes**

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**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**

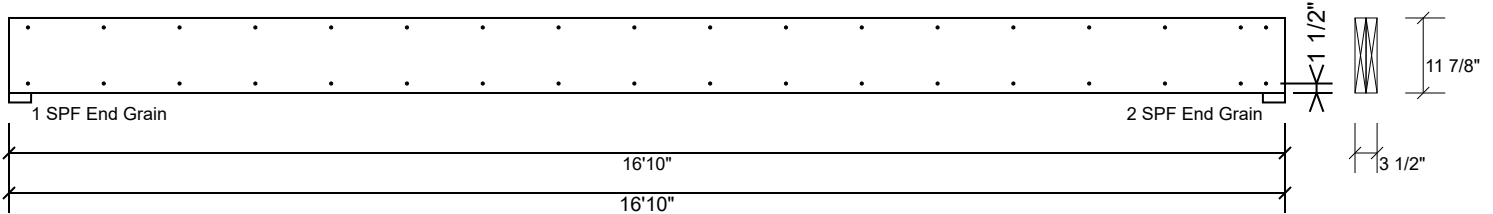
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**GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

**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.

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