

RE: J0723-3720  
 Precision/Lot 71 Liberty Meadows/Harnett

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

**Site Information:**

Customer: Project Name: J0723-3720  
 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 20 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I60801063	A1-GE	9/15/2023
2	I60801064	A2-GE	9/15/2023
3	I60801065	A3	9/15/2023
4	I60801066	A4	9/15/2023
5	I60801067	A5	9/15/2023
6	I60801068	A6-GE	9/15/2023
7	I60801069	B1-GE	9/15/2023
8	I60801070	B2	9/15/2023
9	I60801071	B3	9/15/2023
10	I60801072	B3-GRD	9/15/2023
11	I60801073	C1-GE	9/15/2023
12	I60801074	C2-GRD	9/15/2023
13	I60801075	M1-GE	9/15/2023
14	I60801076	M2	9/15/2023
15	I60801077	M3	9/15/2023
16	I60801078	P1-GE	9/15/2023
17	I60801079	P2	9/15/2023
18	I60801080	VC1	9/15/2023
19	I60801081	VC2	9/15/2023
20	I60801082	VC3	9/15/2023

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: Garcia, Juan  
 My license renewal date for the state of North Carolina is December 31, 2024.  
 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 J0723-3720	Truss A1-GE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	160801063
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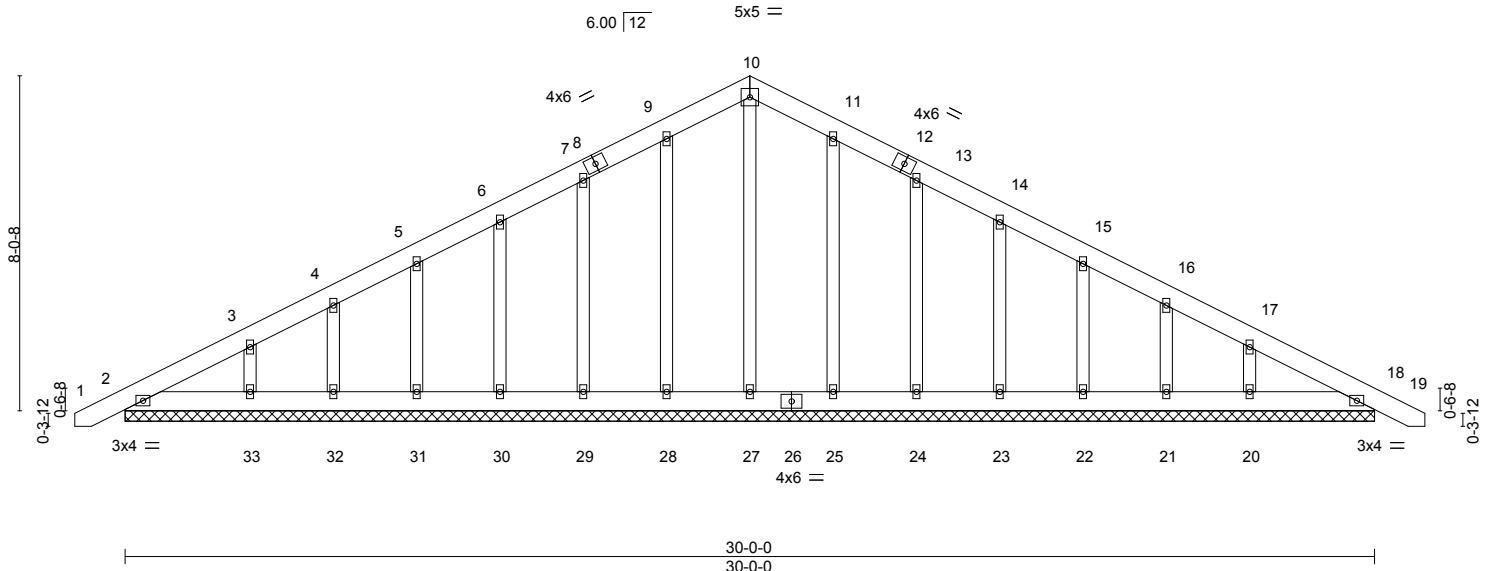
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:04 2023 Page 1

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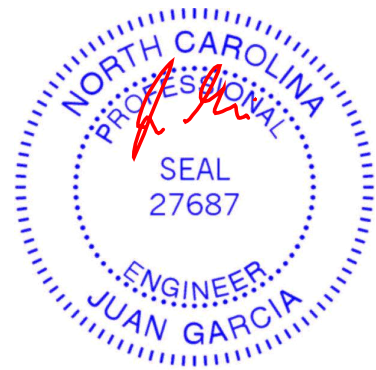
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.04	Vert(LL)	0.00 18	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	0.00 18	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.00 18	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 231 lb	FT = 20%

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

**REACTIONS.** All bearings 30-0-0.  
 (lb) - Max Horz 2=162(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 28, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20, 18  
 Max Grav All reactions 250 lb or less at joint(s) 2, 27, 28, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20, 18

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 9-10=-106/268, 10-11=-106/268

- 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) 2, 28, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20, 18.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.



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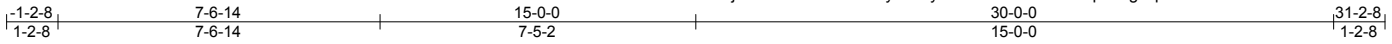
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. 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>ENGINEERING BY</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0723-3720	Truss A2-GE	Truss Type COMMON STRUCTURAL GA	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett 160801064
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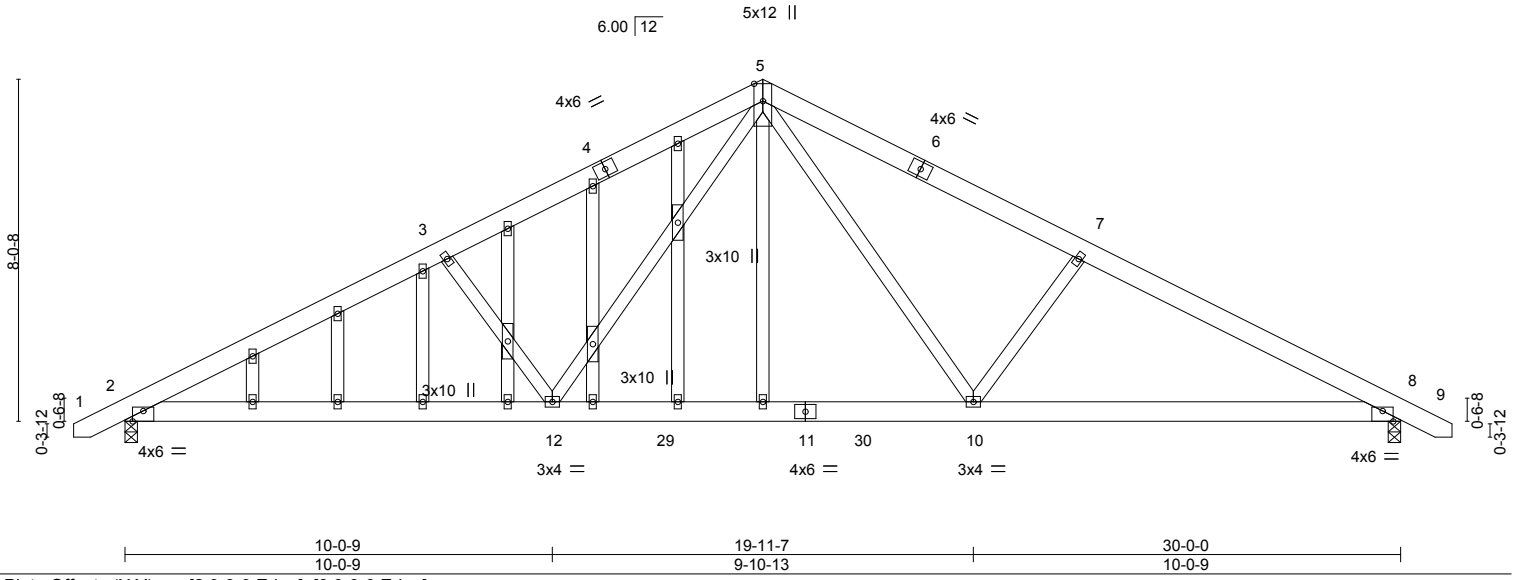
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:06 2023 Page 1

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Scale = 1:54.2



<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.24	Vert(LL) -0.12 10-12 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.38	Vert(CT) -0.20 10-12 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.33	Horz(CT) 0.04 8 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.06 12 >999 240	Weight: 236 lb	FT = 20%

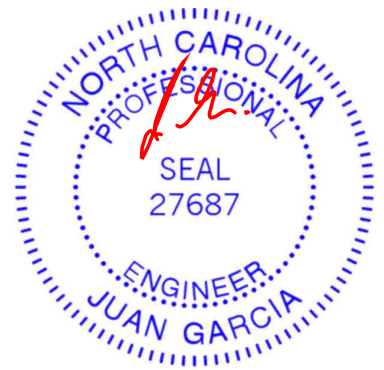
**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2  
OTHERS 2x4 SP No.2

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

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
Max Horz 2=162(LC 12)  
Max Uplift 2=-277(LC 12), 8=-277(LC 13)  
Max Grav 2=1258(LC 1), 8=1258(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2076/762, 3-5=-1837/752, 5-7=-1837/752, 7-8=-2076/762  
BOT CHORD 2-12=-545/1787, 10-12=-207/1173, 8-10=-550/1787  
WEBS 5-10=-232/708, 7-10=-442/381, 5-12=-232/708, 3-12=-442/381

- 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) 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
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=277, 8=277.



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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)

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

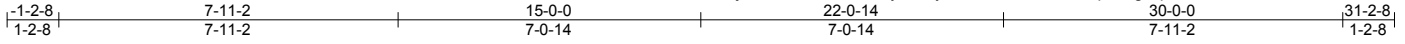
Job J0723-3720	Truss A3	Truss Type FINK	Qty 6	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett 160801065
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Comtech, Inc. Fayetteville, NC - 28314,

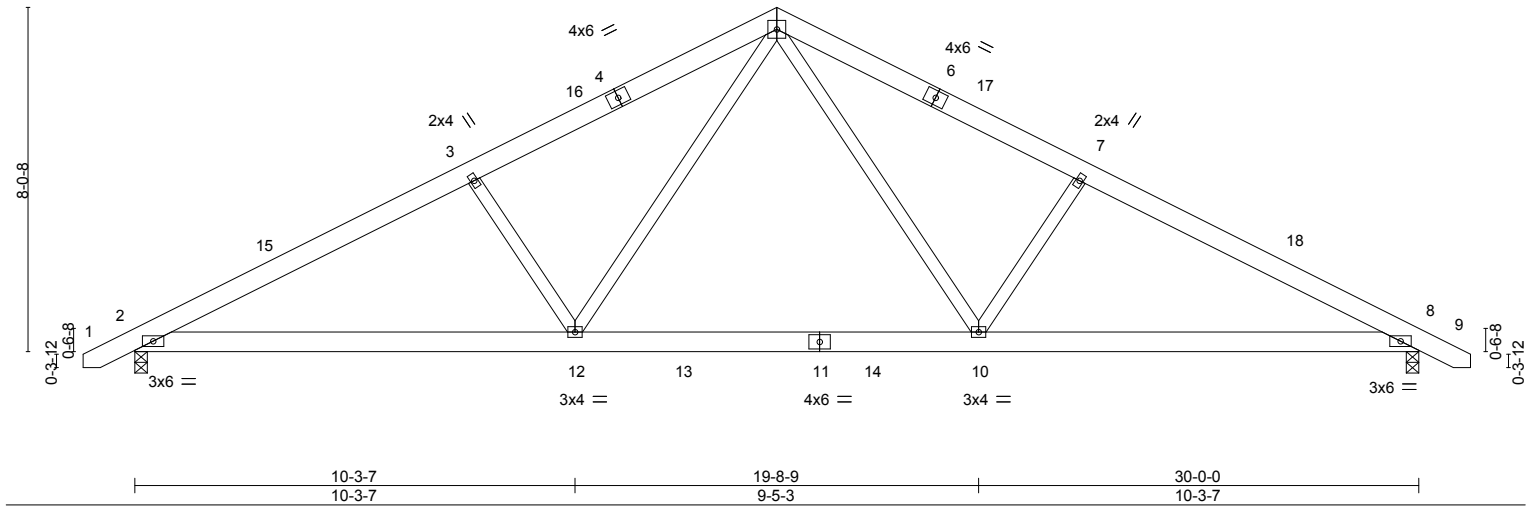
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Job Reference (optional)



Scale = 1:53.8



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 0.25	Vert(LL)	-0.14 10-12	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.41	Vert(CT)	-0.21 10-12	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.18	Horz(CT)	0.04 8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.04 2-12	>999	240		
								Weight: 193 lb	FT = 20%

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

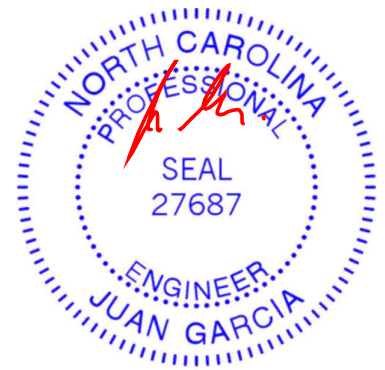
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-1-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=104(LC 11)  
 Max Uplift 2=-88(LC 12), 8=-88(LC 13)  
 Max Grav 2=1258(LC 1), 8=1258(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2051/461, 3-5=-1838/477, 5-7=-1838/477, 7-8=-2051/461  
 BOT CHORD 2-12=-287/1789, 10-12=-88/1190, 8-10=-302/1761  
 WEBS 3-12=-443/272, 5-12=-130/758, 5-10=-130/758, 7-10=-443/272

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-2 to 3-4-11, Interior(1) 3-4-11 to 15-0-0, Exterior(2) 15-0-0 to 19-4-13, Interior(1) 19-4-13 to 31-0-2 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.



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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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 Edenton, NC 27932

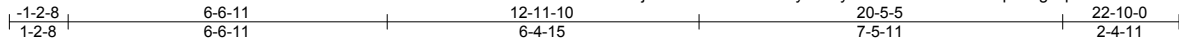


Job J0723-3720	Truss A5	Truss Type ROOF SPECIAL	Qty 9	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	160801067
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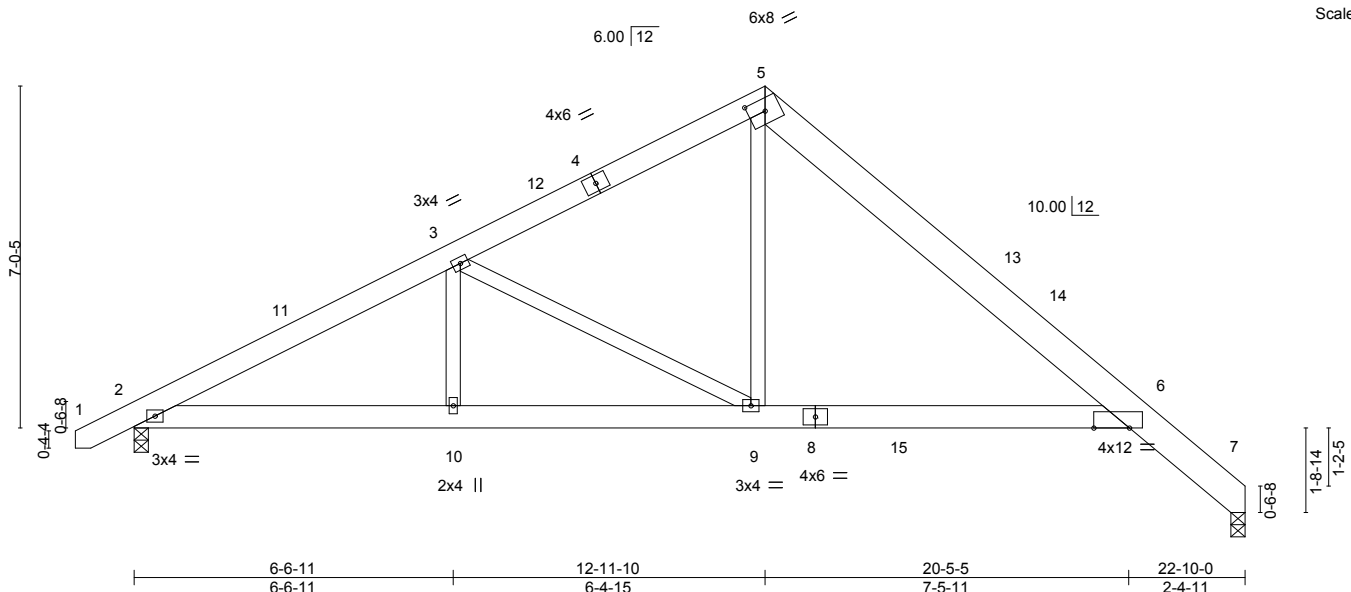


Plate Offsets (X,Y)--	[5:0-4-3,0-3-0], [6:0-8-13,Edge]
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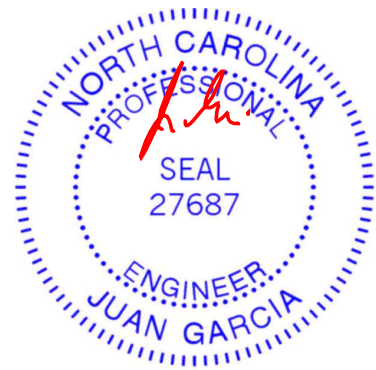
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.78	Vert(LL)	-0.19	6-9	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.59	Vert(CT)	-0.40	6-9	>684		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.45	Horz(CT)	0.27	7	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.15	6-9	>999	Weight: 149 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1 *Except* 5-7: 2x8 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-8-15 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** (size) 7=0-3-8, 2=0-3-8  
 Max Horz 2=192(LC 11)  
 Max Uplift 7=-37(LC 13), 2=-76(LC 12)  
 Max Grav 7=920(LC 20), 2=976(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1527/321, 3-5=-1051/290, 5-6=-1123/269, 6-7=-546/162  
 BOT CHORD 2-10=-155/1281, 9-10=-155/1281, 6-9=0/879  
 WEBS 3-9=-526/179, 5-9=-32/581

- 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) -1-0-10 to 3-4-3, Interior(1) 3-4-3 to 12-11-10, Exterior(2) 12-11-10 to 17-4-7, Interior(1) 17-4-7 to 22-8-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 5) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.



September 15, 2023

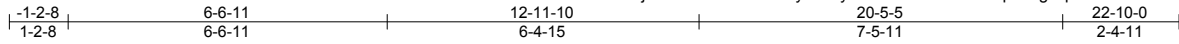
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. 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>	 818 Soundside Road Edenton, NC 27932
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Job J0723-3720	Truss A6-GE	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	160801068
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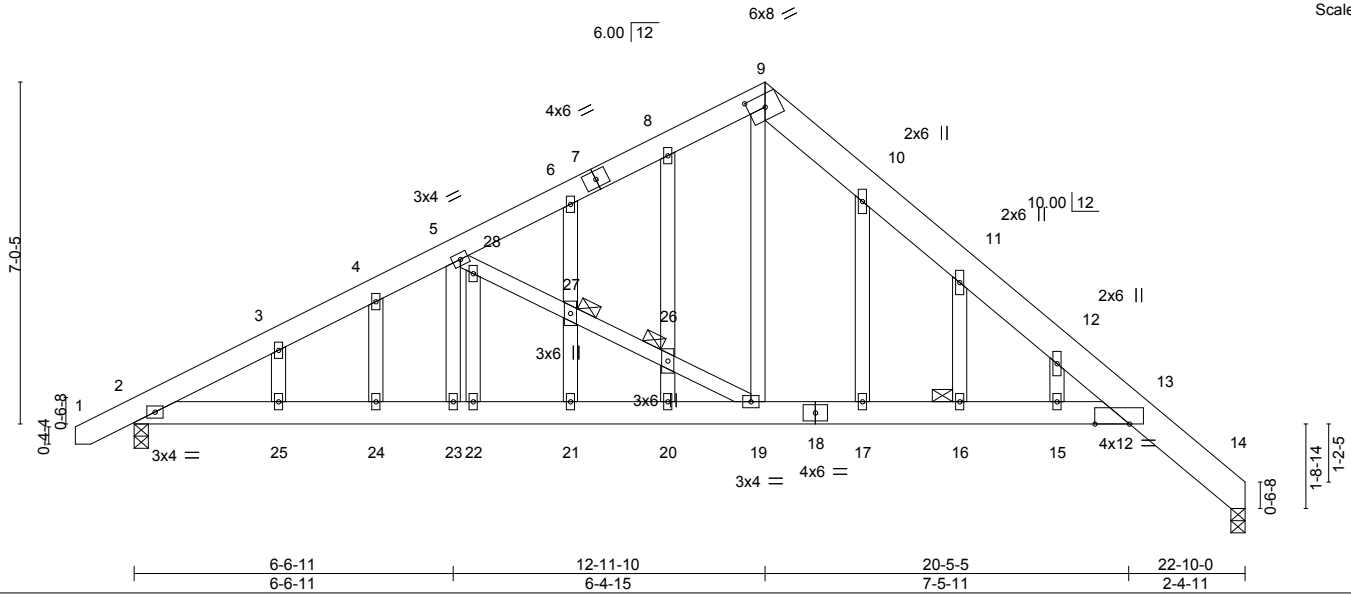
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:10 2023 Page 1

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Scale = 1:47.4



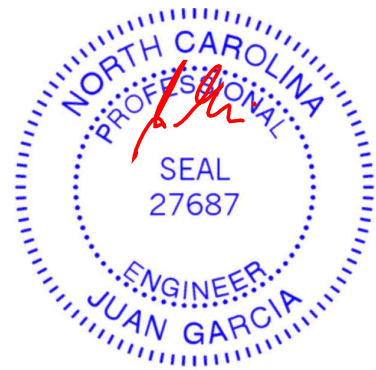
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.78	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.66	Vert(LL) -0.19 15-16 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.17	Vert(CT) -0.39 15-16 >695 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.23 14 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.22 15-16 >999 240	Weight: 183 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1 *Except* 9-14: 2x8 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-2-3 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	JOINTS 1 Brace at Jt(s): 26, 27, 16
OTHERS 2x4 SP No.2	

**REACTIONS.** (size) 14=0-3-8, 2=0-3-8  
 Max Horz 2=246(LC 11)  
 Max Uplift 14=161(LC 13), 2=-229(LC 12)  
 Max Grav 14=911(LC 1), 2=976(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1497/421, 3-4=-1426/470, 4-5=-1386/498, 5-6=-1039/353, 6-8=-998/400,  
 8-9=-942/429, 9-10=-991/428, 10-11=-1035/363, 11-12=-1116/311, 12-13=-1037/229,  
 13-14=-539/192  
 BOT CHORD 2-25=-286/1258, 24-25=-286/1258, 23-24=-286/1258, 22-23=-286/1258, 21-22=-286/1258,  
 20-21=-286/1258, 19-20=-286/1258, 17-19=-66/877, 16-17=-67/877, 15-16=-68/877,  
 13-15=-71/884  
 WEBS 5-28=-517/263, 27-28=-484/239, 26-27=-488/244, 19-26=-493/243, 9-19=-247/592

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) 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
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=161, 2=229.



September 15, 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

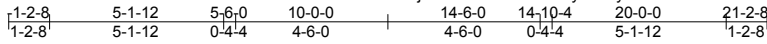
818 Soundside Road  
 Edenton, NC 27932

Job J0723-3720	Truss B1-GE	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	160801069
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:12 2023 Page 1

ID:JUICoITBhCOnVImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoiJ4zJC?f



5x5 =

Scale = 1:68.1

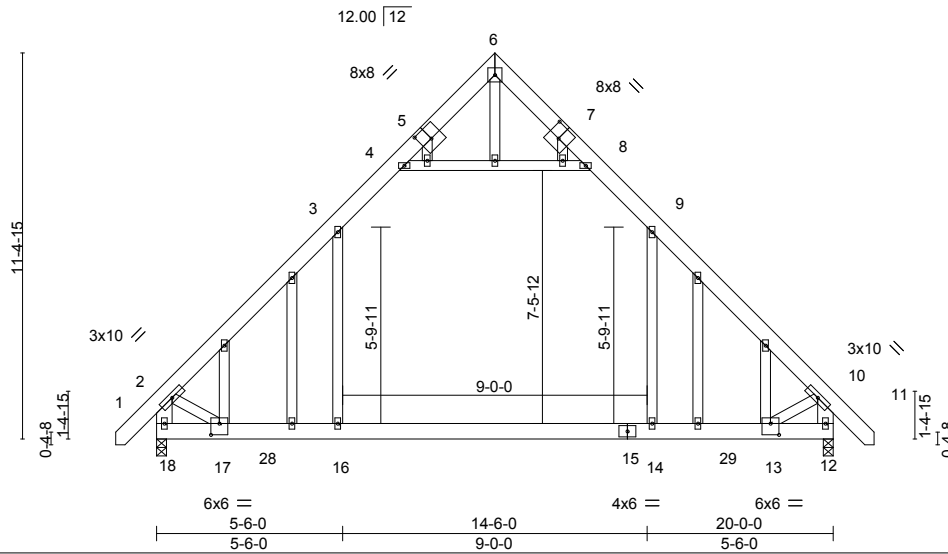


Plate Offsets (X,Y)--	[5:0-4-0,0-4-8], [7:0-4-0,0-4-8], [13:0-3-0,0-4-0], [17:0-3-0,0-4-0]
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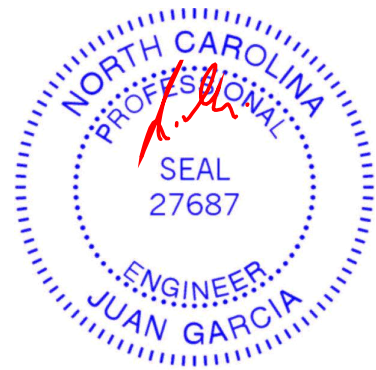
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.34	Vert(LL)	-0.22	14-16	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.50	Vert(CT)	-0.32	14-16	>740		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.42	Horz(CT)	0.01	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.15	16	>999		
								Weight: 182 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except*	
10-12,2-18: 2x6 SP No.1	
OTHERS 2x4 SP No.2	

**REACTIONS.** (size) 12=0-3-8, 18=0-3-8  
 Max Horz 18=332(LC 10)  
 Max Uplift 12=150(LC 13), 18=150(LC 12)  
 Max Grav 12=1067(LC 20), 18=1067(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1126/227, 3-4=-682/288, 8-9=-682/288, 9-10=-1126/227  
 BOT CHORD 17-18=-332/332, 16-17=-59/770, 14-16=-59/771, 13-14=-59/770  
 WEBS 9-14=-15/474, 3-16=-15/474, 4-8=-764/413, 10-12=-1428/251, 10-13=-71/926,  
 2-18=-1428/251, 2-17=-71/927

- 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) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=150, 18=150.



September 15, 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.sbcomponents.com)

**ENGINEERING BY**  
**TRENCO**  
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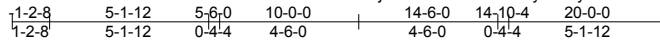
818 Soundside Road  
 Edenton, NC 27932



Job J0723-3720	Truss B2	Truss Type COMMON	Qty 3	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801070
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8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:13 2023 Page 1



4x6 =

Scale = 1:74.5

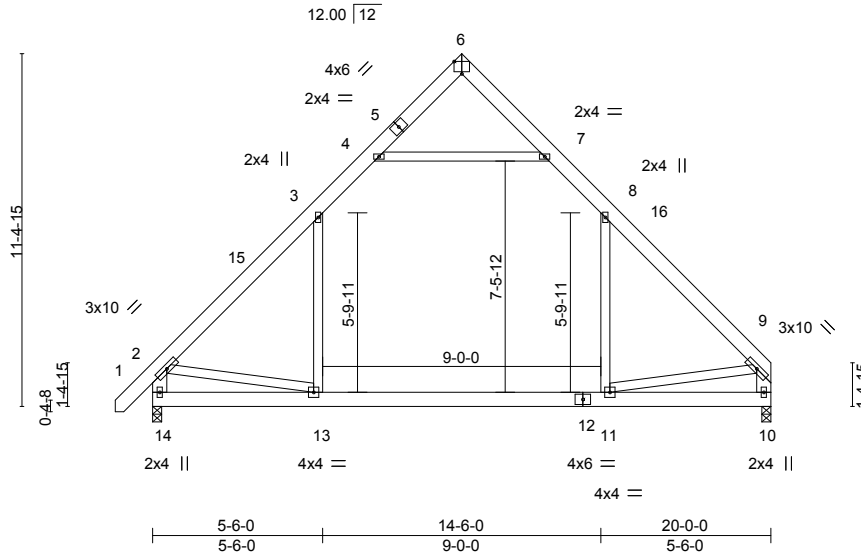


Plate Offsets (X,Y)-- [6:0-3-0,Edge]

<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 20.0	Plate Grip DOL 1.15	TC 0.35	Vert(LL) -0.18 11-13 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.44	Vert(CT) -0.25 11-13 >950 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.43	Horz(CT) 0.01 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.11 11 >999 240	Weight: 162 lb	FT = 20%

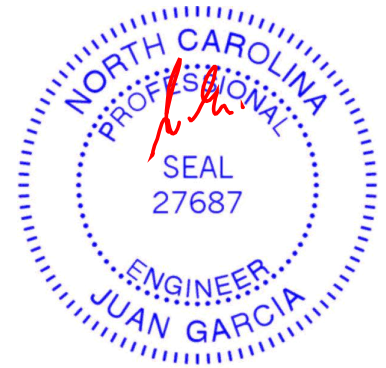
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 2-14,9-10: 2x6 SP No.1

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

**REACTIONS.** (size) 14=0-3-8, 10=0-3-8  
 Max Horz 14=255(LC 9)  
 Max Uplift 14=-37(LC 12), 10=-32(LC 12)  
 Max Grav 14=977(LC 19), 10=920(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1052/187, 3-4=-648/257, 7-8=-647/264, 8-9=-1049/172  
 BOT CHORD 13-14=-255/244, 11-13=-12/693  
 WEBS 8-11=0/396, 3-13=-1/399, 4-7=-770/361, 2-14=-1021/262, 2-13=0/724, 9-10=-964/190,  
 9-11=-12/707

- 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) -1-0-14 to 3-3-15, Interior(1) 3-3-15 to 10-0-0, Exterior(2) 10-0-0 to 14-7-15, Interior(1) 14-7-15 to 19-9-4 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 14, 10.



September 15, 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 J0723-3720	Truss B3	Truss Type COMMON	Qty 3	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett 160801071
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:13 2023 Page 1

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4x6 =

Scale = 1:74.5

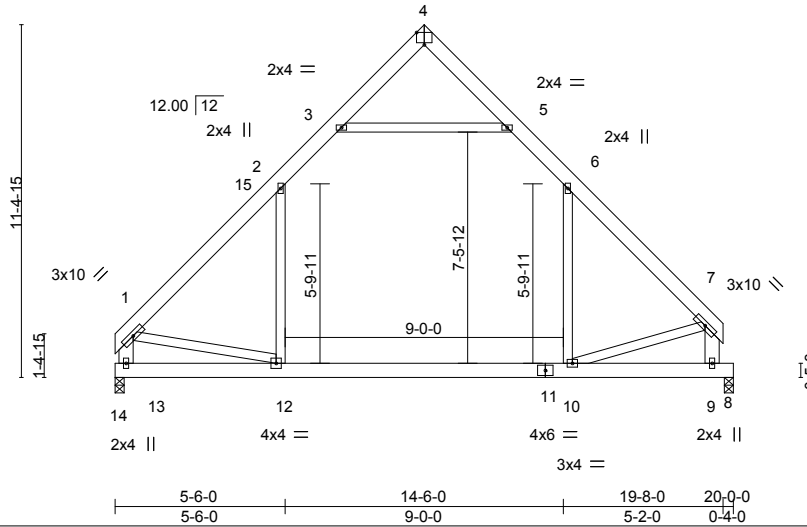


Plate Offsets (X,Y)--	[4:0-3:0,Edge]
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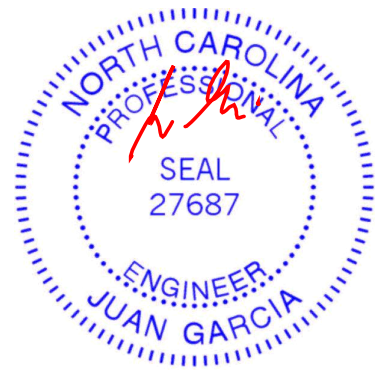
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.37	Vert(LL)	-0.17	10-12	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.42	Vert(CT)	-0.24	10-12	>989		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.42	Horz(CT)	0.01	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.11	10	>999		
								Weight: 158 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 7-9,1-13: 2x6 SP No.1	

REACTIONS.
(size) 8=0-3-8, 13=0-3-8
Max Horz 13=231(LC 9)
Max Uplift 8=-27(LC 12), 13=-27(LC 13)
Max Grav 8=894(LC 19), 13=930(LC 20)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1044/170, 2-3=-656/262, 5-6=-642/261, 6-7=-1057/184
BOT CHORD 10-12=-16/693
WEBS 6-10=0/426, 2-12=0/386, 3-5=-754/358, 7-10=-17/729, 7-9=-1055/200, 1-13=-977/188, 1-12=-9/713

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-4-4 to 4-9-1, Interior(1) 4-9-1 to 10-0-0, Exterior(2) 10-0-0 to 14-7-15, Interior(1) 14-7-15 to 19-3-12 zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 13.



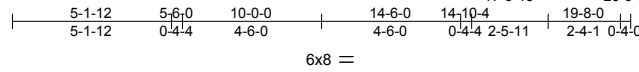
September 15, 2023

<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 J0723-3720	Truss B3-GRD	Truss Type COMMON	Qty 1	Ply 3	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	160801072
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:15 2023 Page 1



Scale = 1:74.5

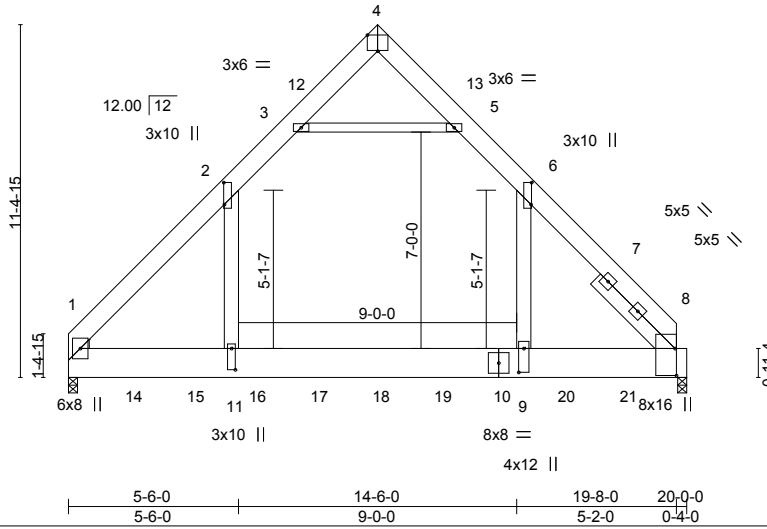


Plate Offsets (X,Y)--	[2:0-8-8,0-0-4], [4:0-4-0,Edge], [6:0-8-8,0-0-4], [8:0-10-8,0-0-9], [9:0-9-4,0-2-0], [11:0-8-4,0-1-8]
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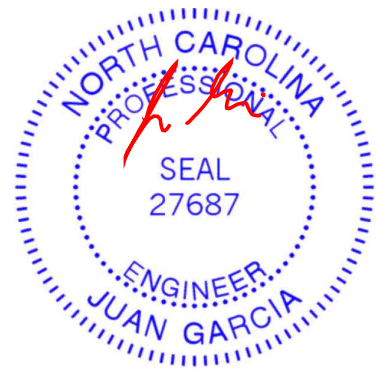
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.98	Vert(LL)	-0.19	9-11	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.33	Vert(CT)	-0.26	9-11	>900		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.37	Horz(CT)	0.01	8	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S	Wind(LL)	0.01	11	>999		
								Weight: 675 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x12 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except* 3-5: 2x4 SP No.2	
WEDGE Left: 2x4 SP No.3	
SLIDER Right 2x6 SP No.1 3-4-14	

REACTIONS.	(size)
8=0-3-8, 1=0-3-8	
Max Horz 1=252(LC 24)	
Max Uplift 8=64(LC 8), 1=65(LC 9)	
Max Grav 8=8827(LC 14), 1=8959(LC 14)	

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-2=-10284/143, 2-3=-5203/188, 3-4=-1355/987, 4-5=-1350/1081, 5-6=-5125/186, 6-8=-10204/147
BOT CHORD	1-11=-61/6249, 9-11=-61/6249, 8-9=-61/6249
WEBS	6-9=-66/7118, 2-11=-32/7114, 3-5=-7986/191

- NOTES-**
- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x12 - 2 rows staggered at 0-4-0 oc.  
Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 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; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 1.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 891 lb down and 72 lb up at 8-0-12, and 872 lb down and 61 lb up at 10-0-0, and 891 lb down and 72 lb up at 12-0-12 on top chord, and 1642 lb down at 2-0-0, 1642 lb down at 4-0-0, 1642 lb down at 6-0-0, 1642 lb down at 8-0-0, 1642 lb down at 10-0-0, 1642 lb down at 12-0-0, 1642 lb down at 14-0-0, and 1642 lb down at 16-0-0, and 1642 lb down at 18-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.



September 15, 2023

**LOAD CASE(S)** Standard  
Continued on page 2

<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>818 Soundside Road Edenton, NC 27932</p>
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Job J0723-3720	Truss B3-GRD	Truss Type COMMON	Qty 1	Ply <b>3</b>	Precision/Lot 71 Liberty Meadows/Harnett I60801072 Job Reference (optional)
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:15 2023 Page 2  
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**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-4=-60, 4-8=-60, 1-8=-20

Concentrated Loads (lb)

Vert: 4=-851 10=-418(B) 12=-851 13=-851 14=-418(B) 15=-418(B) 16=-418(B) 17=-418(B) 18=-418(B) 19=-418(B) 20=-418(B) 21=-418(B)

**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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



818 Soundside Road  
Edenton, NC 27932

Job J0723-3720	Truss C1-GE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801073
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Comtech, Inc. Fayetteville, NC - 28314,

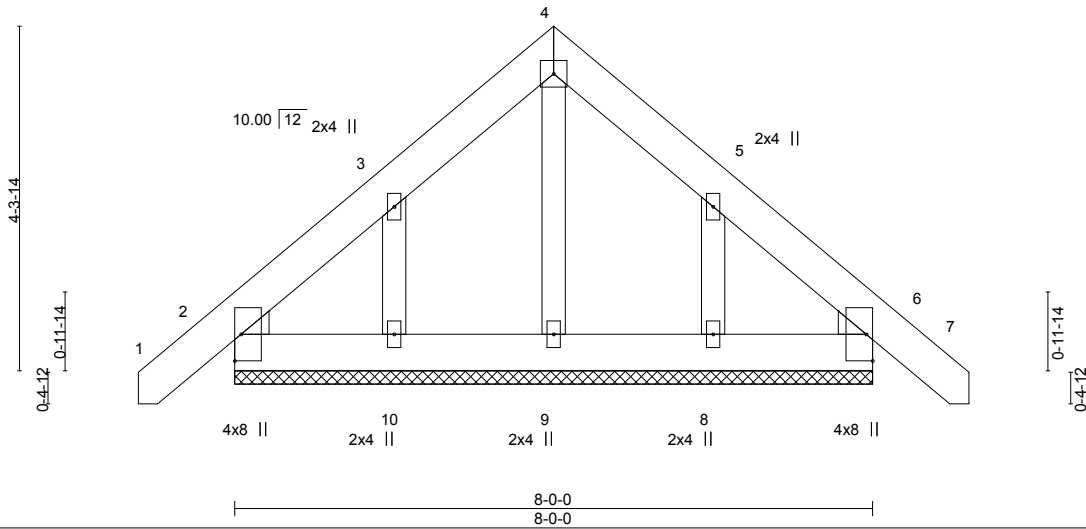
8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:16 2023 Page 1

ID:jUICoITBhCOnIVImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f



4x4 =

Scale = 1:28.9



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.03	Vert(LL)	-0.00	6	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.01	Vert(CT)	-0.00	7	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-P						
								Weight: 63 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 OTHERS 2x4 SP No.2  
 WEDGE  
 Left: 2x4 SP No.2 , Right: 2x4 SP No.2

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

**REACTIONS.** All bearings 8-0-0.  
 (lb) - Max Horz 2=127(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 6 except 10=143(LC 12), 8=140(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9, 10, 8

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; 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
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6 except (jt=lb) 10=143, 8=140.
  - 9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 6.



September 15, 2023

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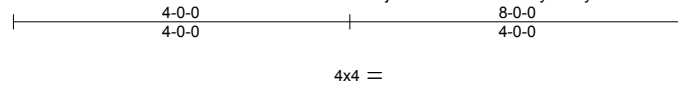
818 Soundside Road  
 Edenton, NC 27932

Job J0723-3720	Truss C2-GRD	Truss Type COMMON GIRDER	Qty 1	Ply 2	Precision/Lot 71 Liberty Meadows/Harnett I60801074
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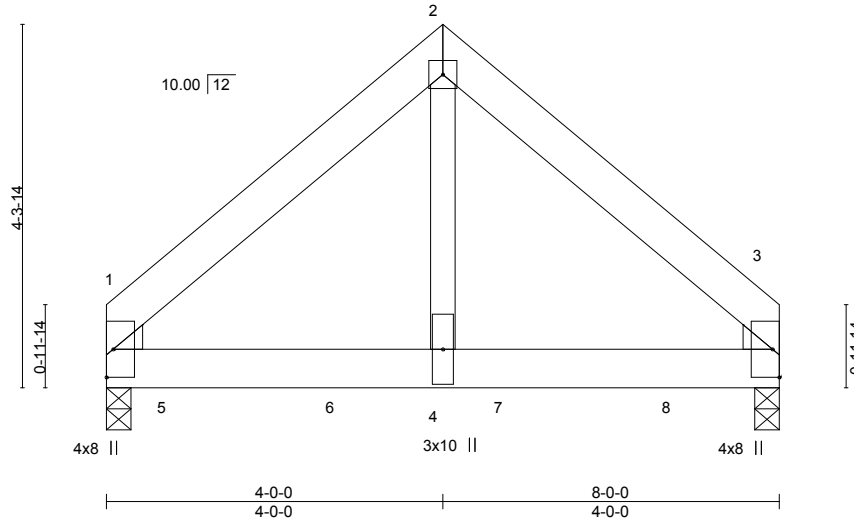
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:17 2023 Page 1

ID:JUICoITBhC0nIvImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.4



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.36	Vert(LL)	-0.02 3-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.54	Vert(CT)	-0.03 3-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.37	Horz(CT)	0.01 3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.01 3-4	>999	240		
								Weight: 101 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2

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

**BRACING-**

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

**REACTIONS.**

(size) 1=0-3-8, 3=0-3-8  
 Max Horz 1=-91(LC 23)  
 Max Uplift 1=-186(LC 8), 3=-168(LC 9)  
 Max Grav 1=2832(LC 2), 3=2542(LC 2)

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

TOP CHORD 1-2=-2320/172, 2-3=-2320/172  
 BOT CHORD 1-4=-96/1615, 3-4=-96/1615  
 WEBS 2-4=-145/2987

**NOTES-**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 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; BCDL=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=186, 3=168.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1211 lb down and 88 lb up at 0-9-4, 1208 lb down and 92 lb up at 2-9-4, and 1208 lb down and 92 lb up at 4-9-4, and 1208 lb down and 92 lb up at 6-9-4 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



September 15, 2023

Continued on page 2

**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 J0723-3720	Truss C2-GRD	Truss Type COMMON GIRDER	Qty 1	Ply <b>2</b>	Precision/Lot 71 Liberty Meadows/Harnett I60801074 Job Reference (optional)
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:17 2023 Page 2  
ID:jUICoITBhC0nlVmGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

Concentrated Loads (lb)

Vert: 5=-1174(B) 6=-1170(B) 7=-1170(B) 8=-1170(B)

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818 Soundside Road  
Edenton, NC 27932

Job J0723-3720	Truss M1-GE	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	160801075
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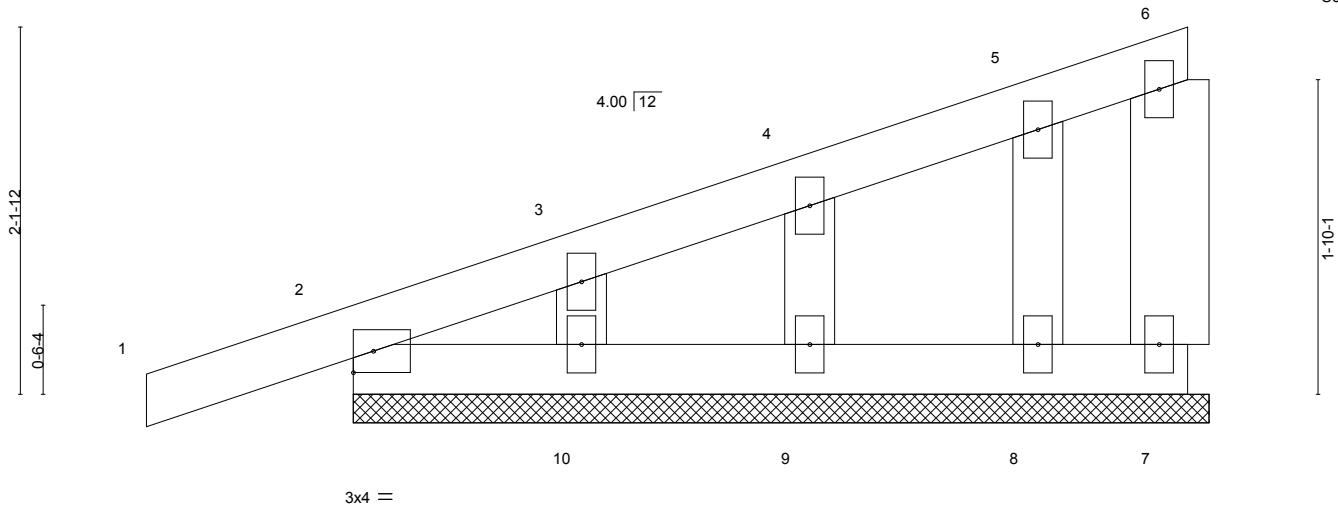
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:18 2023 Page 1

ID:jUICoITBhC0nlVmGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:13.5



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	0.00	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 0.02	Horz(CT)	0.00		n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 24 lb	FT = 20%

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

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

**REACTIONS.** All bearings 5-0-0.  
 (lb) - Max Horz 2=96(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 7, 2, 10, 9, 8  
 Max Grav All reactions 250 lb or less at joint(s) 7, 2, 10, 9, 8

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCCL=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
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 1-4-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2, 10, 9, 8.



September 15, 2023

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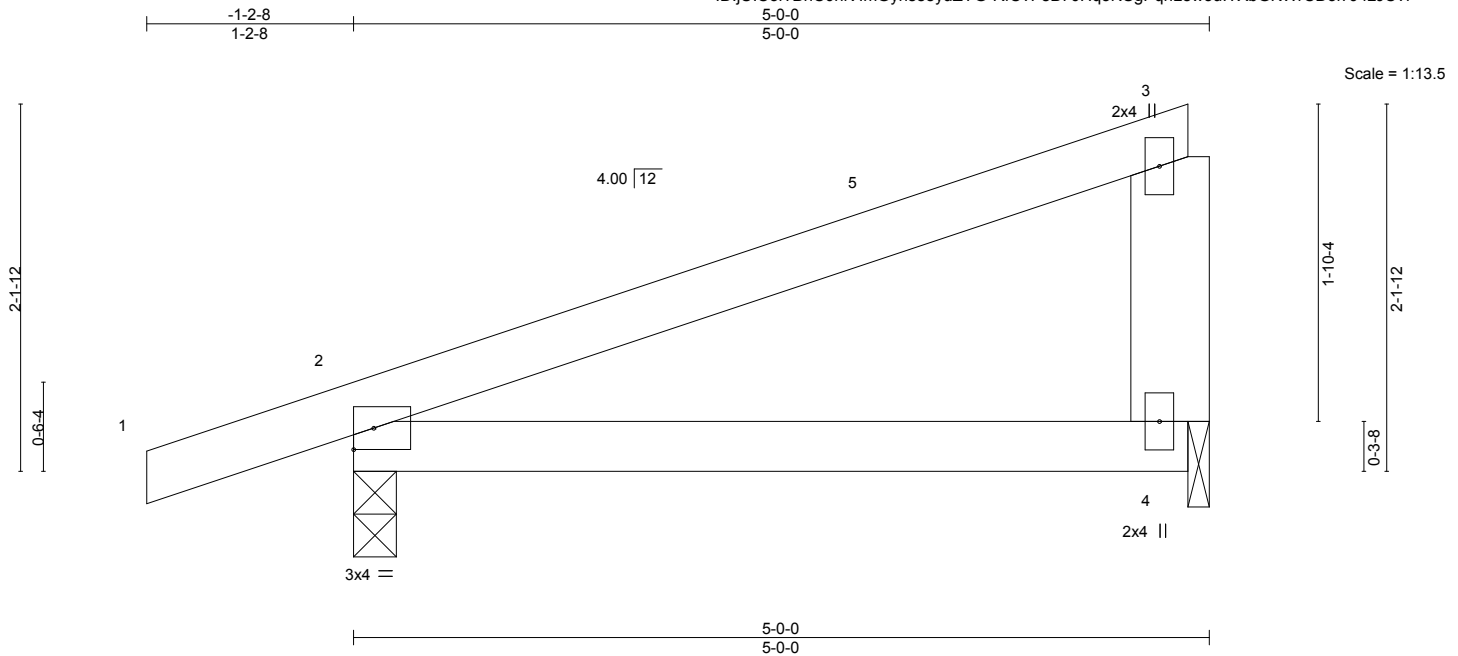
Job J0723-3720	Truss M2	Truss Type MONOPICH	Qty 5	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett 160801076
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8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:19 2023 Page 1

ID:jUICoITBhC0nIvImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Job Reference (optional)



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 0.33	Vert(LL)	-0.02 2-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.44	Vert(CT)	-0.05 2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.05 2-4	>999	240	Weight: 21 lb	FT = 20%

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

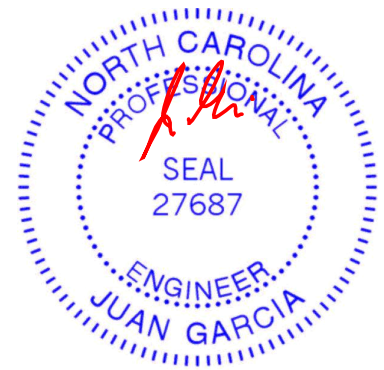
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-0, 4=0-1-8  
 Max Horz 2=68(LC 8)  
 Max Uplift 2=-115(LC 8), 4=-76(LC 8)  
 Max Grav 2=277(LC 1), 4=174(LC 1)

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

**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) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 4-9-4 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
- 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) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=6) 2=115.



September 15, 2023

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**TRENCO**  
 A MITEK Affiliate

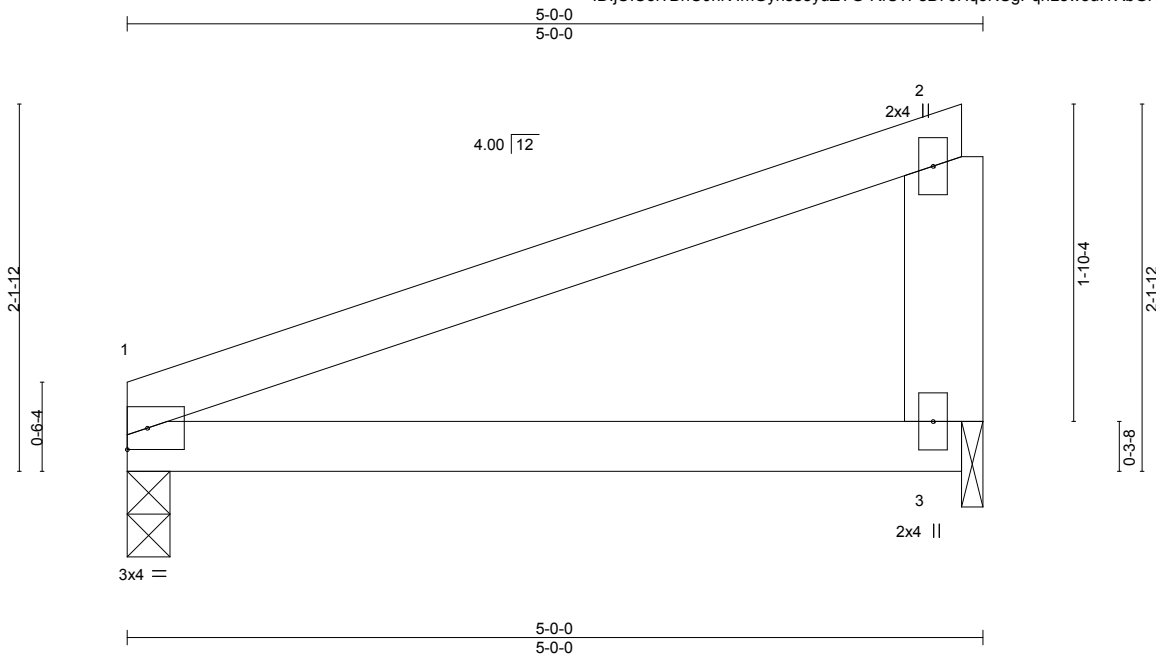
818 Soundside Road  
 Edenton, NC 27932

Job J0723-3720	Truss M3	Truss Type MONOPITCH	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	160801077
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:20 2023 Page 1

ID:JUIColTBhC0nlVImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



Scale = 1:13.5

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.31	Vert(LL)	-0.02	1-3	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.37	Vert(CT)	-0.05	1-3	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL)	0.05	1-3	>999	Weight: 19 lb	FT = 20%
	Code IRC2015/TPI2014							

**LUMBER-**

TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x6 SP No.1

**BRACING-**

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

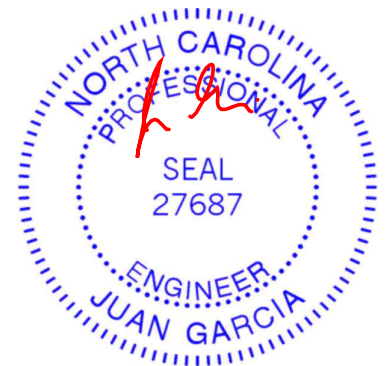
**REACTIONS.**

(size) 1=0-3-0, 3=0-1-8  
 Max Horz 1=59(LC 8)  
 Max Uplift 1=60(LC 8), 3=83(LC 8)  
 Max Grav 1=186(LC 1), 3=186(LC 1)

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

**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) 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
- 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) Bearing at joint(s) 3 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 3.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



September 15, 2023

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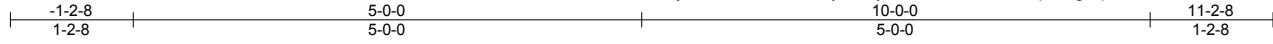
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 71 Liberty Meadows/Harnett
J0723-3720	P1-GE	GABLE	1	1	160801078
					Job Reference (optional)

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:21 2023 Page 1

ID:jUICoITBhCOnIvImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



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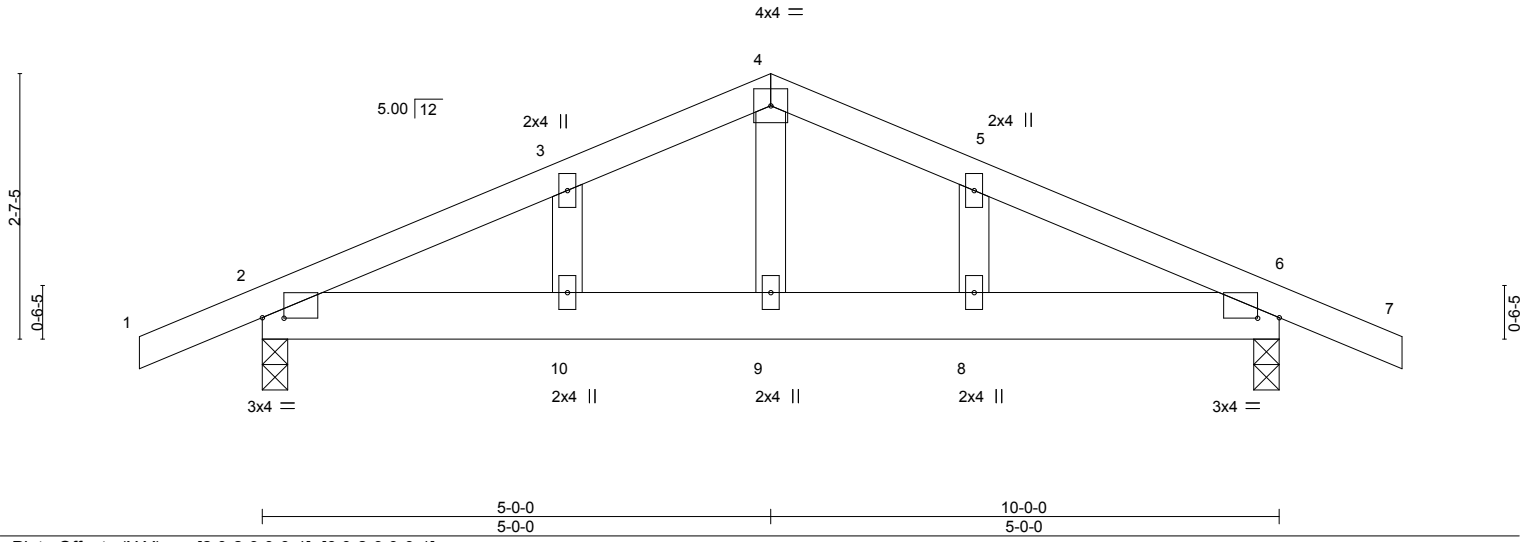


Plate Offsets (X,Y)--	[2:0-2-9,0-0-1], [6:0-2-9,0-0-1]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.13	Vert(LL) -0.01 8 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.13	Vert(CT) -0.02 8 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.06	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.02 8 >999 240	Weight: 50 lb	FT = 20%

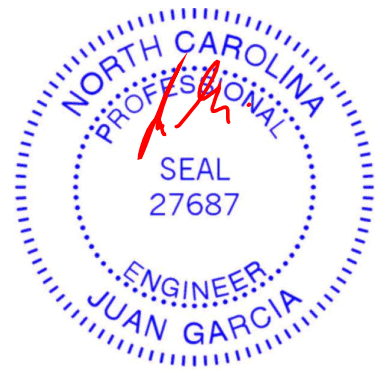
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2  
 OTHERS 2x4 SP No.2

**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.** (size) 2=0-3-0, 6=0-3-0  
 Max Horz 2=-52(LC 13)  
 Max Uplift 2=-204(LC 8), 6=-204(LC 9)  
 Max Grav 2=470(LC 1), 6=470(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-559/645, 3-4=-523/687, 4-5=-523/687, 5-6=-559/645  
 BOT CHORD 2-10=-507/464, 9-10=-507/464, 8-9=-507/464, 6-8=-507/464  
 WEBS 4-9=-399/250

- 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) 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
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) Gable 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) except (jt=lb) 2=204, 6=204.



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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)

**ENGINEERING BY**  
**TRENCO**  
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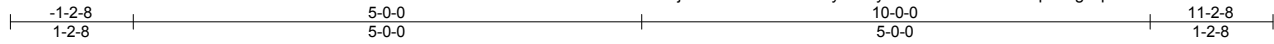
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 71 Liberty Meadows/Harnett	160801079
J0723-3720	P2	COMMON	5	1		

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8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:22 2023 Page 1

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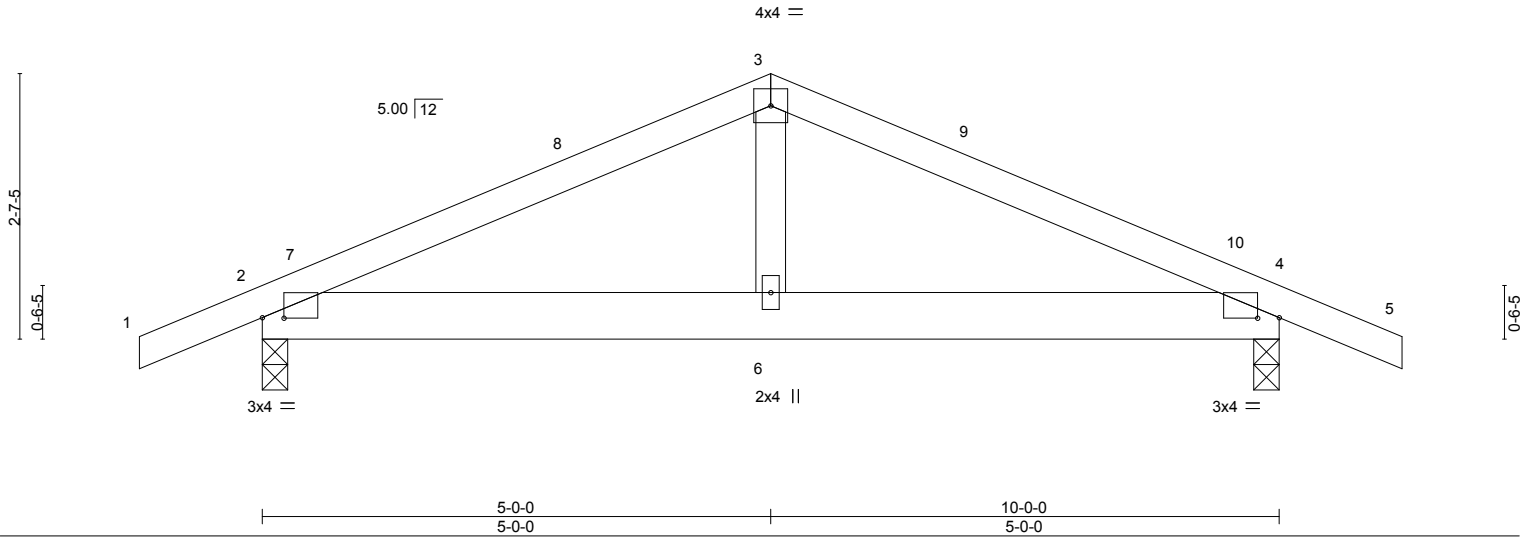


Plate Offsets (X,Y)--	[2:0-2-9,0-0-1], [4:0-2-9,0-0-1]
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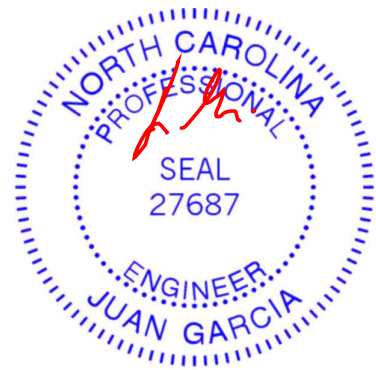
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.21	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.11	Vert(LL) -0.01 6 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.05	Vert(CT) -0.02 4-6 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.02 4-6 >999 240	Weight: 46 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.** (size) 2=0-3-0, 4=0-3-0  
 Max Horz 2=-31(LC 17)  
 Max Uplift 2=-147(LC 8), 4=-147(LC 9)  
 Max Grav 2=470(LC 1), 4=470(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-567/636, 3-4=-567/636  
 BOT CHORD 2-6=-476/457, 4-6=-476/457  
 WEBS 3-6=-318/237

- 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) -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
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=147, 4=147.



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Job J0723-3720	Truss VC1	Truss Type VALLEY	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett 160801080
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Comtech, Inc. Fayetteville, NC - 28314,

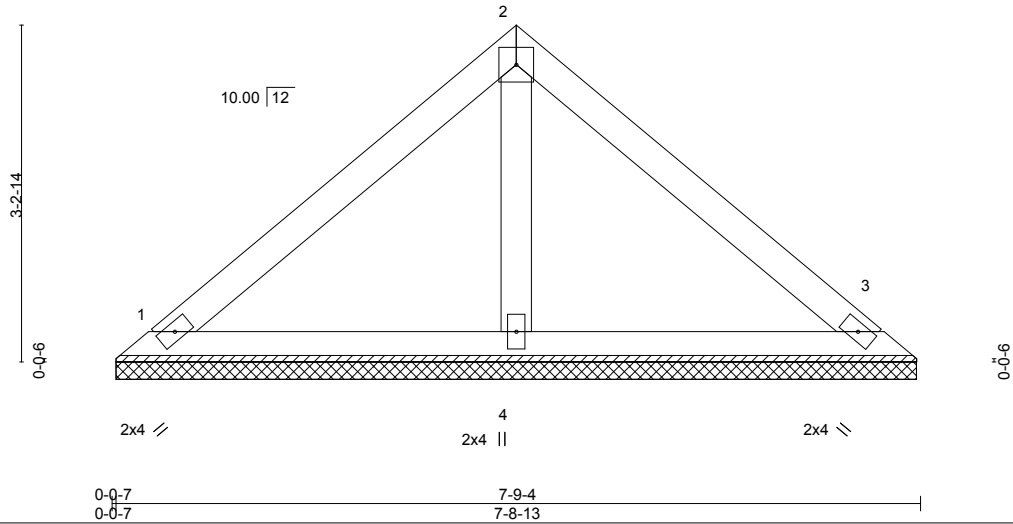
8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:22 2023 Page 1

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4x4 =

Scale = 1:22.1



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.18	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.09	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.03	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P					Weight: 29 lb	FT = 20%
	Code IRC2015/TPI2014							

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

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

**REACTIONS.** (size) 1=7-8-5, 3=7-8-5, 4=7-8-5  
 Max Horz 1=70(LC 8)  
 Max Uplift 1=24(LC 13), 3=31(LC 13)  
 Max Grav 1=161(LC 1), 3=161(LC 1), 4=235(LC 1)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=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
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
  - 6) N/A



September 15, 2023

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Job J0723-3720	Truss VC2	Truss Type VALLEY	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett 160801081
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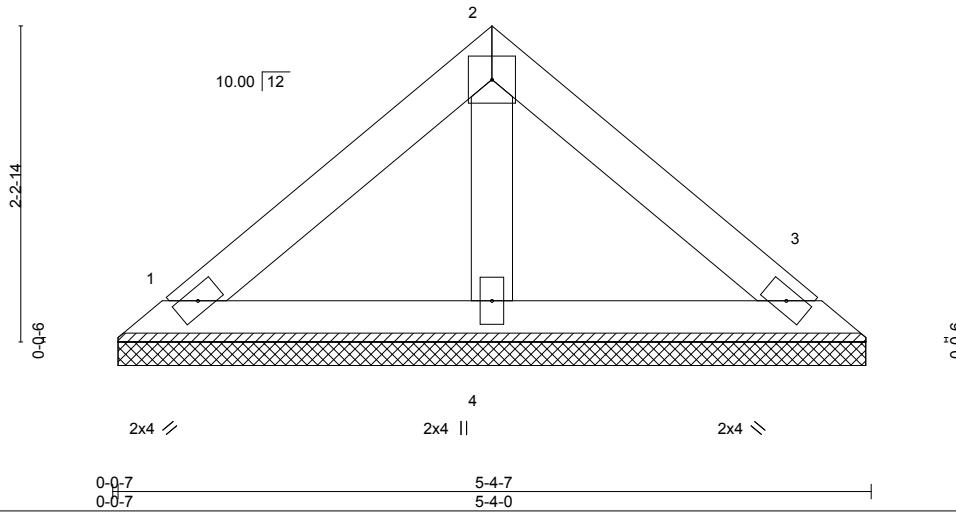
8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:23 2023 Page 1

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4x4 =

Scale = 1:16.3



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 0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.01	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 19 lb	FT = 20%

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

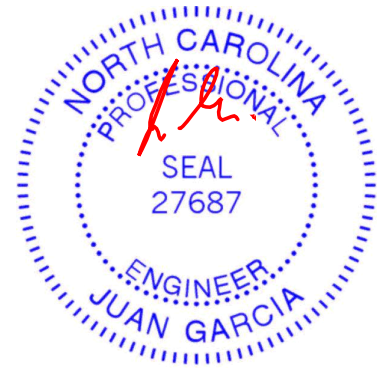
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-4-7 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=5-3-8, 3=5-3-8, 4=5-3-8  
 Max Horz 1=-46(LC 10)  
 Max Uplift 1=-16(LC 13), 3=-20(LC 13)  
 Max Grav 1=106(LC 1), 3=106(LC 1), 4=154(LC 1)

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BC DL=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
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 6) N/A



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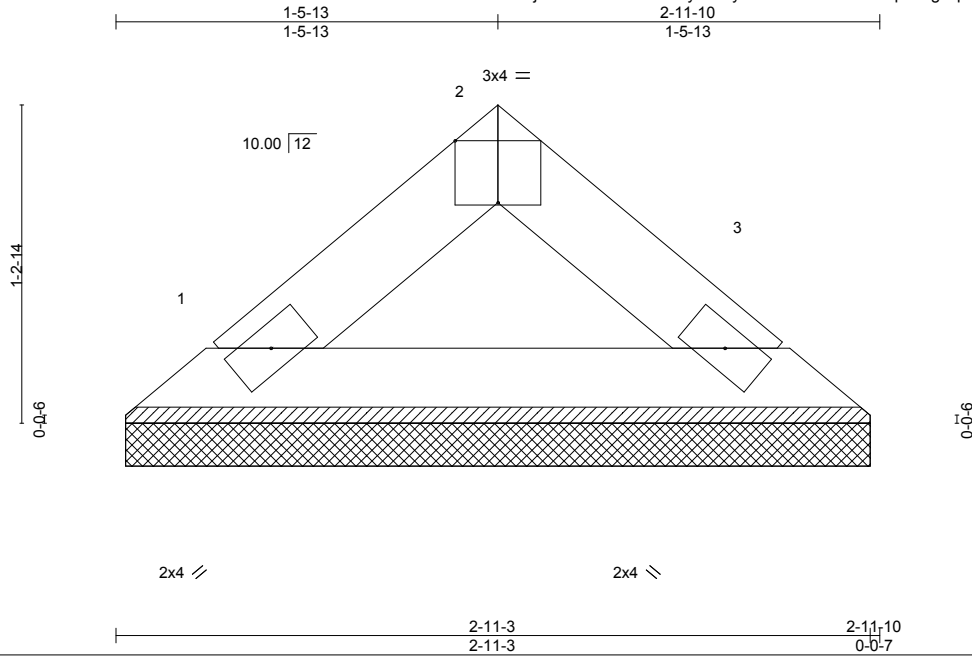
Job J0723-3720	Truss VC3	Truss Type VALLEY	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett 160801082
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8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:00:24 2023 Page 1

ID:jUICoITBhC0nlVImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Job Reference (optional)



Scale = 1:9.0

Plate Offsets (X,Y)-- [2:0-2-0,Edge]		2-11-3		2-11-10		0-0-7	
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d
TCLL 20.0	Plate Grip DOL	1.15	TC 0.02	Vert(LL)	n/a	-	n/a 999
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	n/a	-	n/a 999
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a n/a
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P				
							<b>PLATES</b> MT20
							<b>GRIP</b> 244/190
							Weight: 9 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 2-11-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=2-10-12, 3=2-10-12  
Max Horz 1=22(LC 8)  
Max Uplift 1=4(LC 12), 3=4(LC 13)  
Max Grav 1=87(LC 1), 3=87(LC 1)

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=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
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



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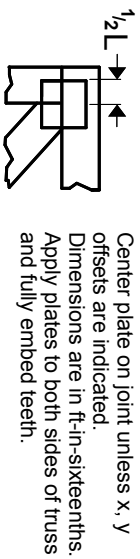
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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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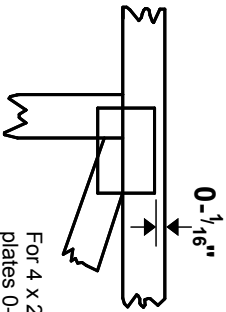
818 Soundside Road  
Edenton, NC 27932

# Symbols

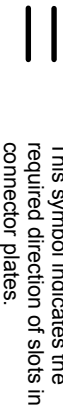
## PLATE LOCATION AND ORIENTATION



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-  $\frac{1}{16}$ \" from outside edge of truss.



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

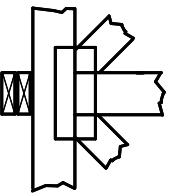
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

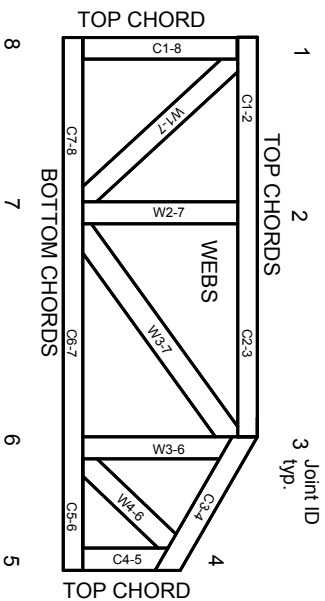


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/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



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  
**TRINGCO**  
A MITek Affiliate

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



RE: J0723-3721  
 Precision/Lot 71 Liberty Meadows/Harnett

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

**Site Information:**

Customer: Project Name: J0723-3721  
 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 15 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I60801083	ET1	9/15/2023
2	I60801084	ET2	9/15/2023
3	I60801085	F01	9/15/2023
4	I60801086	F02	9/15/2023
5	I60801087	F02-A	9/15/2023
6	I60801088	F03	9/15/2023
7	I60801089	F04	9/15/2023
8	I60801090	F05	9/15/2023
9	I60801091	F06	9/15/2023
10	I60801092	F07	9/15/2023
11	I60801093	FG-1	9/15/2023
12	I60801094	FG-2	9/15/2023
13	I60801095	FG-3	9/15/2023
14	I60801096	FG-4	9/15/2023
15	I60801097	FG-5	9/15/2023

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: Fox, Steve

My license renewal date for the state of North Carolina is December 31, 2024.

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.



September 15, 2023

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 71 Liberty Meadows/Harnett
J0723-3721	ET1	GABLE	1	1	60801083
					Job Reference (optional)

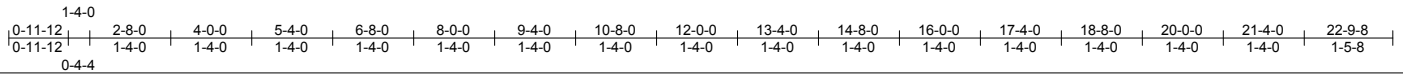
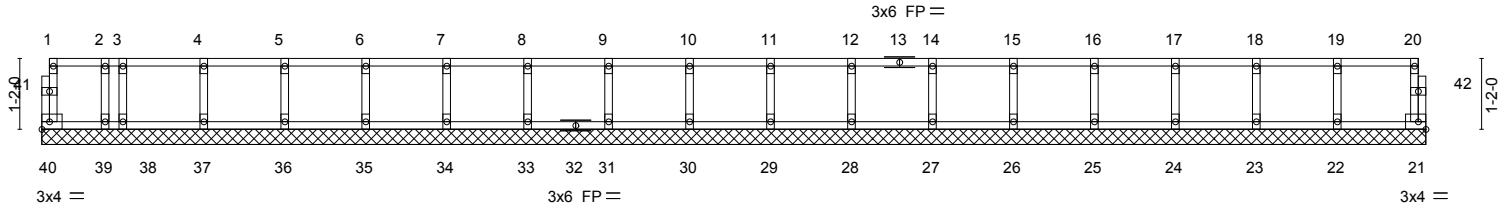
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:04 2023 Page 1  
ID:JUICoITBhC0nlVmGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

0-1-8

0-1-8

Scale = 1:37.9



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	21	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R						Weight: 96 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 22-9-8.

(lb) - Max Grav All reactions 250 lb or less at joint(s) 40, 21, 39, 38, 37, 36, 35, 34, 33, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22

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

**NOTES-**

- All plates are 1.5x3 MT20 unless otherwise indicated.
- Plates checked for a plus or minus 1 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- 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.



September 15, 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 J0723-3721	Truss ET2	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	60801084
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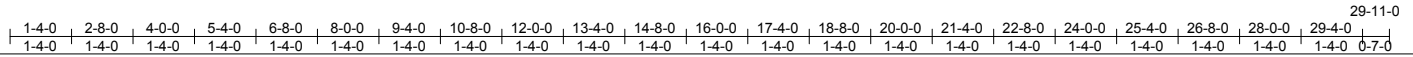
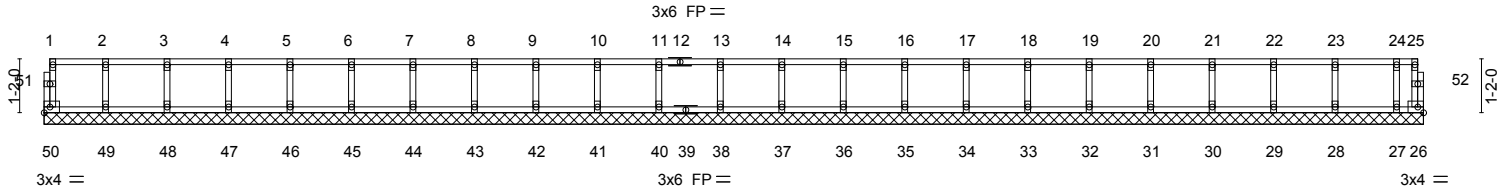
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:05 2023 Page 1  
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0-1/8

0-1/8

Scale = 1:50.0



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 40.0	Plate Grip DOL	1.00	TC 0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.01	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	26	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R							
									Weight: 124 lb	FT = 20%F, 11%E

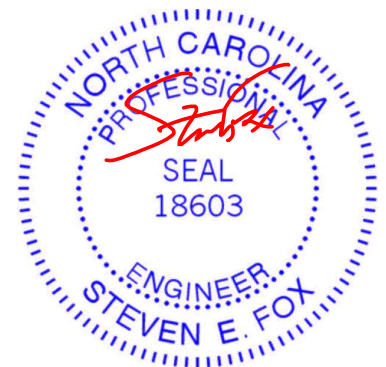
**LUMBER-**  
TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

**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 29-11-0.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 50, 26, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27

**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.



September 15, 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)

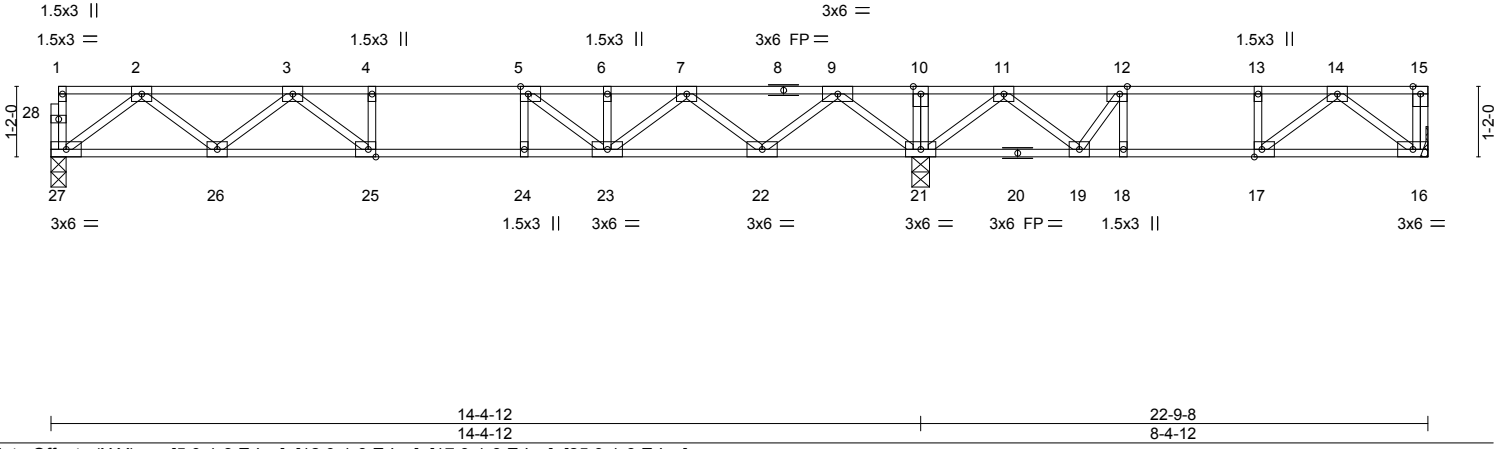


818 Soundside Road  
Edenton, NC 27932

Job J0723-3721	Truss F01	Truss Type Floor	Qty 9	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801085
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:07 2023 Page 1  
ID:jUICoITBhC0nlVImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



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 0.57	Vert(LL)	-0.12 25-26	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.60	Vert(CT)	-0.15 25-26	>999	360		
BCLL 0.0	Rep Stress Incr	NO	WB 0.44	Horz(CT)	0.03 16	n/a	n/a		
BCDL 5.0	Code IRC2015/TP12014		Matrix-S						
								Weight: 114 lb	FT = 20%F, 11%E

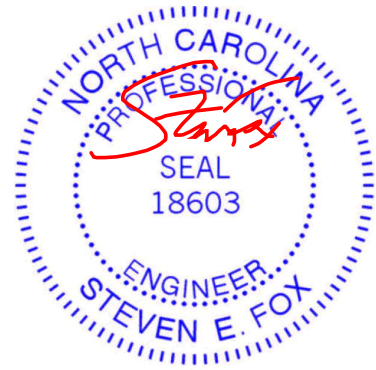
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 27=0-3-0, 21=0-3-8, 16=Mechanical  
Max Grav 27=710(LC 10), 21=1473(LC 1), 16=1641(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 15-16=-1306/0, 2-3=-1402/0, 3-4=-2185/0, 4-5=-2185/0, 5-6=-1882/0, 6-7=-1882/0, 7-9=-807/0, 9-10=0/1225, 10-11=0/1225, 11-12=-430/429, 12-13=-634/202, 13-14=-634/202  
BOT CHORD 26-27=0/879, 25-26=0/1895, 24-25=0/2185, 23-24=0/2185, 22-23=0/1470, 19-21=-696/91, 18-19=-202/634, 17-18=-202/634, 16-17=-36/422  
WEBS 2-27=-1100/0, 2-26=0/681, 3-26=-641/0, 3-25=0/496, 9-21=-1328/0, 9-22=0/933, 11-21=-834/0, 11-19=0/624, 14-16=-529/46, 14-17=-212/272, 7-22=-898/0, 7-23=0/556, 5-23=-641/0, 12-19=-614/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) 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.

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 16-27=-10, 1-15=-100  
Concentrated Loads (lb)  
Vert: 15=-1250



September 15, 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>	 818 Soundside Road Edenton, NC 27932
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Job J0723-3721	Truss F02-A	Truss Type Floor	Qty 2	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett	160801087
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Comtech, Inc., Fayetteville, NC 28309

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 13:28:58 2023 Page 1  
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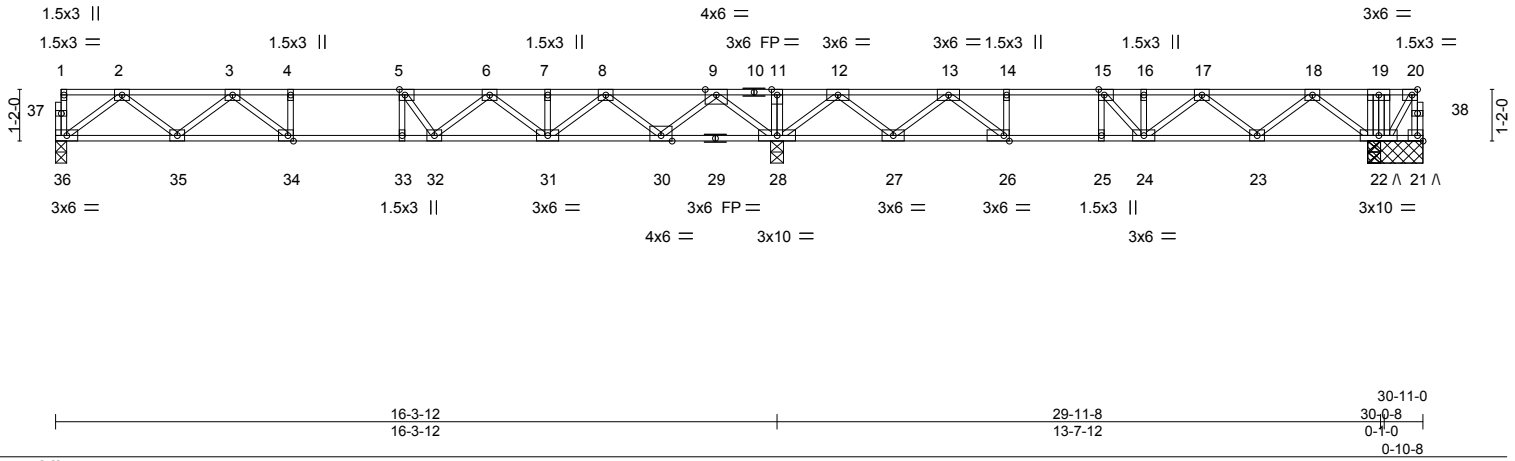


Plate Offsets (X,Y)-- [5:0-1-8,Edge], [15:0-1-8,Edge], [20:0-1-8,Edge], [26:0-1-8,Edge], [34:0-1-8,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 2-0-0	TC 0.99	Vert(LL) -0.19	33	>999	480		MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.97	Vert(CT) -0.25	33	>783	360			
BCLL 0.0	Rep Stress Incr NO	WB 0.57	Horz(CT) 0.04	21	n/a	n/a			
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S							
								Weight: 159 lb	FT = 20%F, 11%E

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

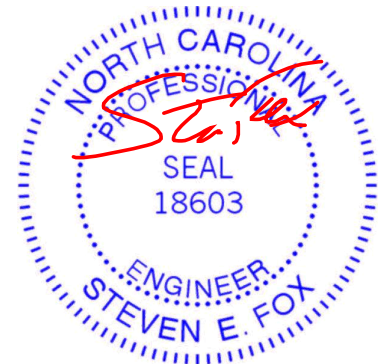
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** All bearings 1-3-0 except (jt=length) 36=0-3-0, 28=0-3-8.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) except 36=761(LC 3), 22=3693(LC 4), 22=3596(LC 1), 22=3596(LC 1), 28=1963(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1522/0, 3-4=-2499/0, 4-5=-2499/0, 5-6=-2428/0, 6-7=-1711/0, 7-8=-1711/0, 8-9=-245/424, 9-10=0/2343, 10-11=0/2343, 11-12=0/2343, 12-13=-542/1160, 13-14=-1714/418, 14-15=-1714/418, 15-16=-1825/118, 16-17=-1825/118, 17-18=-1205/12  
BOT CHORD 35-36=0/945, 34-35=0/2089, 33-34=0/2499, 32-33=0/2499, 31-32=0/2200, 30-31=-155/1097, 29-30=-1123/0, 28-29=-1123/0, 27-28=-1472/0, 26-27=-827/1189, 25-26=-418/1714, 24-25=-418/1714, 23-24=-48/1637, 22-23=-2/750  
WEBS 2-36=-1183/0, 2-35=0/751, 3-35=-738/0, 3-34=0/594, 4-34=-267/0, 9-28=-1610/0, 9-30=0/1187, 19-22=-2995/0, 12-28=-1400/0, 12-27=0/955, 13-27=-1017/0, 13-26=0/1038, 14-26=-432/0, 15-25=-304/0, 18-22=-1042/0, 8-30=-1158/0, 8-31=0/835, 6-31=-662/0, 6-32=0/489, 5-32=-484/0, 18-23=-14/592, 17-23=-563/46, 16-24=-286/0, 15-24=0/651

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) "A" indicates Released bearing: allow for upward movement at joint(s) 21, 22.
  - 5) 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.
  - 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.

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 21-36=-10, 1-19=-100, 19-20=-220  
Concentrated Loads (lb)  
Vert: 19=-2832



September 15, 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 71 Liberty Meadows/Harnett	160801088
J0723-3721	F03	Floor	3	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:11 2023 Page 1  
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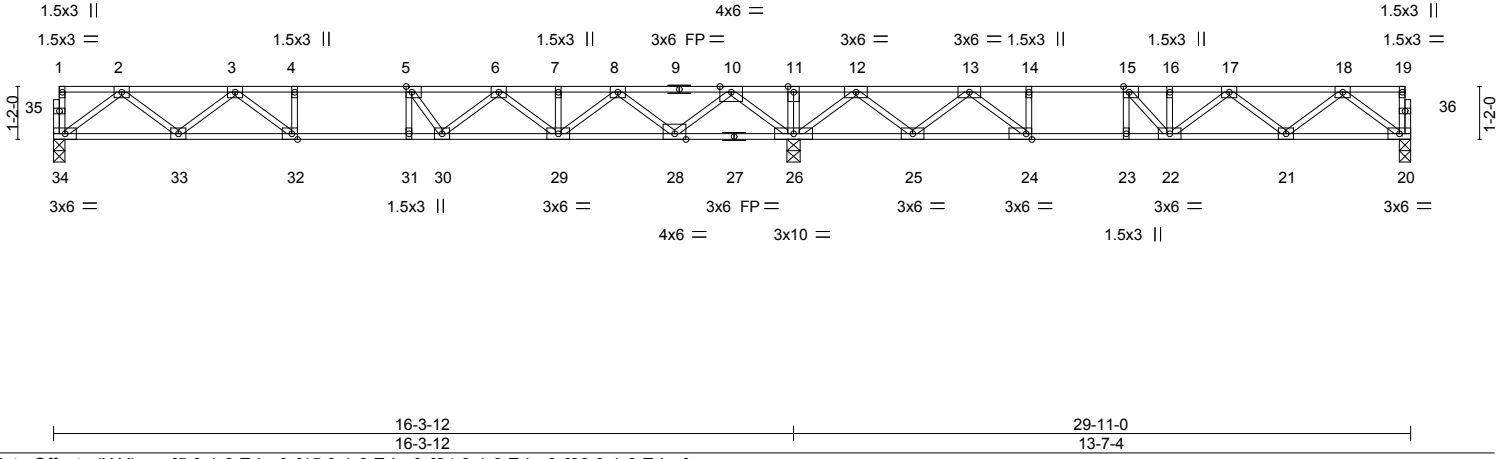


Plate Offsets (X,Y)--	[5:0-1-8,Edge], [15:0-1-8,Edge], [24:0-1-8,Edge], [32:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.87	Vert(LL) -0.19 31 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.90	Vert(CT) -0.25 31 >783 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.57	Horz(CT) 0.04 20 n/a n/a		
BCDL 5.0	Code IRC2015/TP12014	Matrix-S			
				Weight: 149 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) 34=0-3-0, 20=0-3-0, 26=0-3-8  
Max Grav 34=761(LC 3), 20=650(LC 4), 26=1967(LC 1)

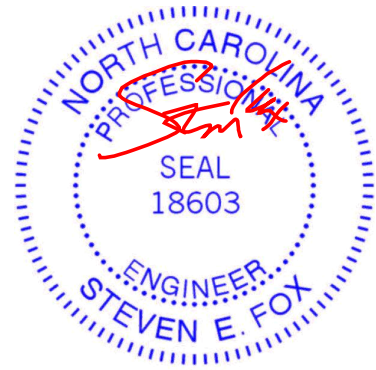
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-1522/0, 3-4=-2500/0, 4-5=-2500/0, 5-6=-2429/0, 6-7=-1712/0, 7-8=-1712/0, 8-10=-246/417, 10-11=0/2340, 11-12=0/2340, 12-13=-559/1148, 13-14=-1743/392, 14-15=-1743/392, 15-16=-1862/83, 16-17=-1862/83, 17-18=-1252/0

BOT CHORD 33-34=0/945, 32-33=0/2090, 31-32=0/2500, 30-31=0/2500, 29-30=0/2201, 28-29=-149/1099, 26-28=-1116/0, 25-26=-1464/0, 24-25=-810/1211, 23-24=-392/1743, 22-23=-392/1743, 21-22=-7/1679, 20-21=0/798

WEBS 2-34=-1183/0, 2-33=0/752, 3-33=-739/0, 3-32=0/596, 4-32=-268/0, 10-26=-1610/0, 10-28=0/1187, 18-20=-998/0, 18-21=-17/591, 17-21=-555/54, 16-22=-291/0, 12-26=-1407/0, 12-25=0/961, 13-25=-1024/0, 8-28=-1157/0, 8-29=0/834, 6-29=-662/0, 6-30=0/488, 5-30=-483/0, 13-24=0/1051, 14-24=-437/0, 15-22=0/666, 15-23=-309/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) 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.



September 15, 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>818 Soundside Road Edenton, NC 27932</p>
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Job J0723-3721	Truss F04	Truss Type Floor	Qty 2	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801089
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:12 2023 Page 1  
ID:JUIColTBhC0nlVmGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



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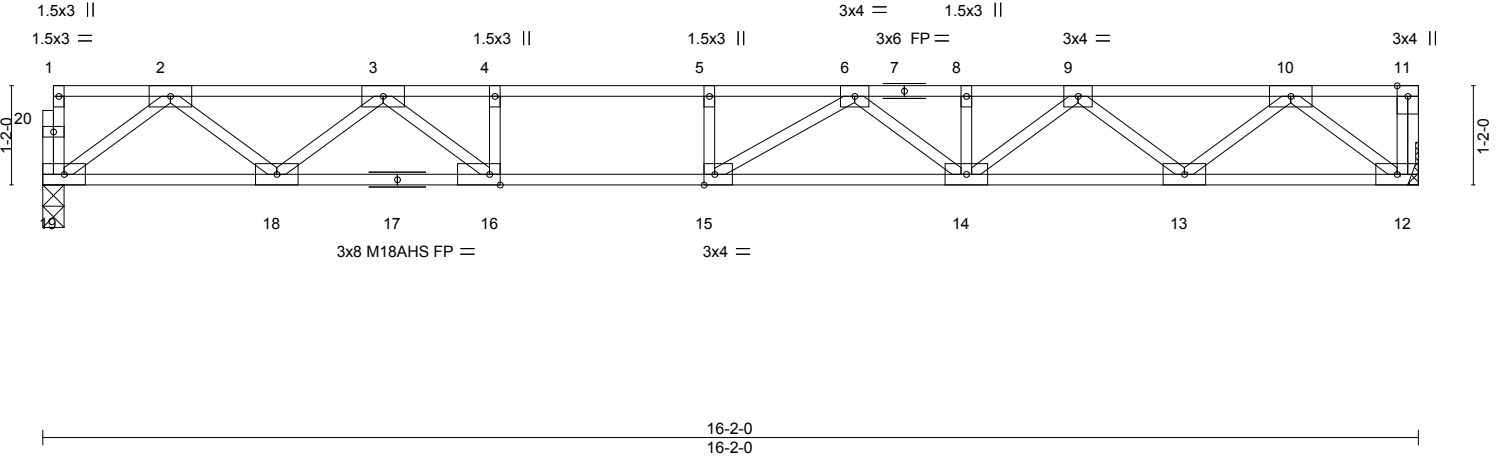


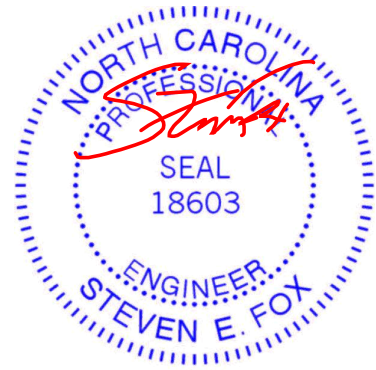
Plate Offsets (X,Y)--	[15:0-1-8,Edge], [16:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.68	Vert(LL) -0.29 14-15 >665 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.64	Vert(CT) -0.39 14-15 >490 360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr YES	WB 0.49	Horz(CT) 0.04 12 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 81 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat) *Except* 1-7: 2x4 SP 2400F 2.0E(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat) *Except* 12-17: 2x4 SP 2400F 2.0E(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 19=0-3-0, 12=Mechanical  
Max Grav 19=869(LC 1), 12=875(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1777/0, 3-4=-3174/0, 4-5=-3174/0, 5-6=-3174/0, 6-8=-2950/0, 8-9=-2950/0, 9-10=-1800/0  
BOT CHORD 18-19=0/1086, 16-18=0/2493, 15-16=0/3174, 14-15=0/3237, 13-14=0/2501, 12-13=0/1084  
WEBS 2-19=-1360/0, 2-18=0/900, 3-18=-933/0, 3-16=0/1037, 4-16=-464/0, 10-12=-1360/0, 10-13=0/933, 9-13=-912/0, 9-14=0/573, 6-14=-367/0, 6-15=-300/384

- 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.



September 15, 2023



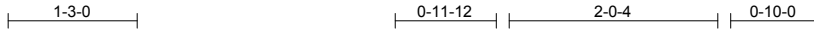
Job J0723-3721	Truss F05	Truss Type Floor	Qty 2	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801090
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8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:13 2023 Page 1

ID:jUICoITBhC0nIvImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Job Reference (optional)



0-1-8

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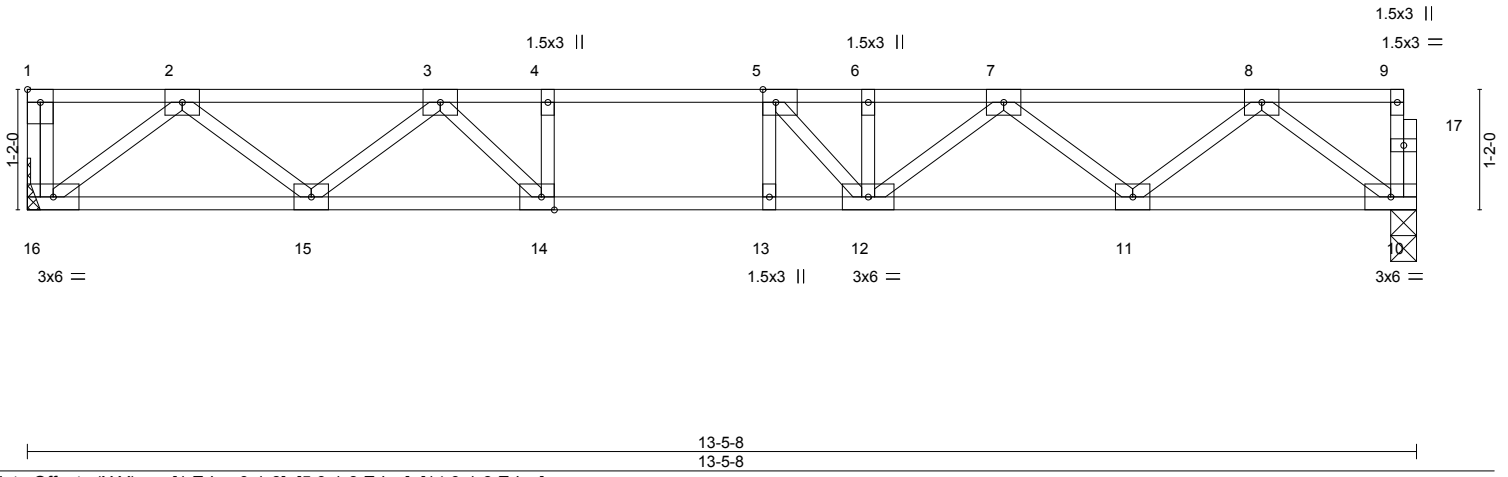


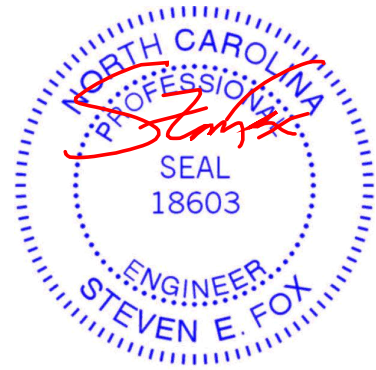
Plate Offsets (X,Y)--	[1:Edge,0-1-8], [5:0-1-8,Edge], [14:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.47	Vert(LL) -0.12 12-13 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.68	Vert(CT) -0.16 12-13 >961 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.33	Horz(CT) 0.03 10 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S			
				Weight: 69 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) 16=Mechanical, 10=0-3-0  
Max Grav 16=726(LC 1), 10=720(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1422/0, 3-4=-2238/0, 4-5=-2238/0, 5-6=-2198/0, 6-7=-2198/0, 7-8=-1431/0  
BOT CHORD 15-16=0/891, 14-15=0/1942, 13-14=0/2238, 12-13=0/2238, 11-12=0/1940, 10-11=0/891  
WEBS 8-10=-1115/0, 8-11=0/703, 7-11=-662/0, 7-12=0/330, 5-12=-377/177, 4-14=-307/0, 2-16=-1118/0, 2-15=0/690, 3-15=-677/0, 3-14=0/601

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) 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.



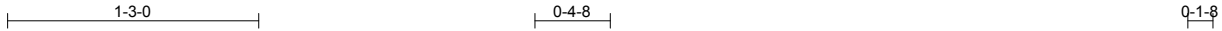
September 15, 2023

<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>ENGINEERING BY</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0723-3721	Truss F06	Truss Type Floor	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801091
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:14 2023 Page 1  
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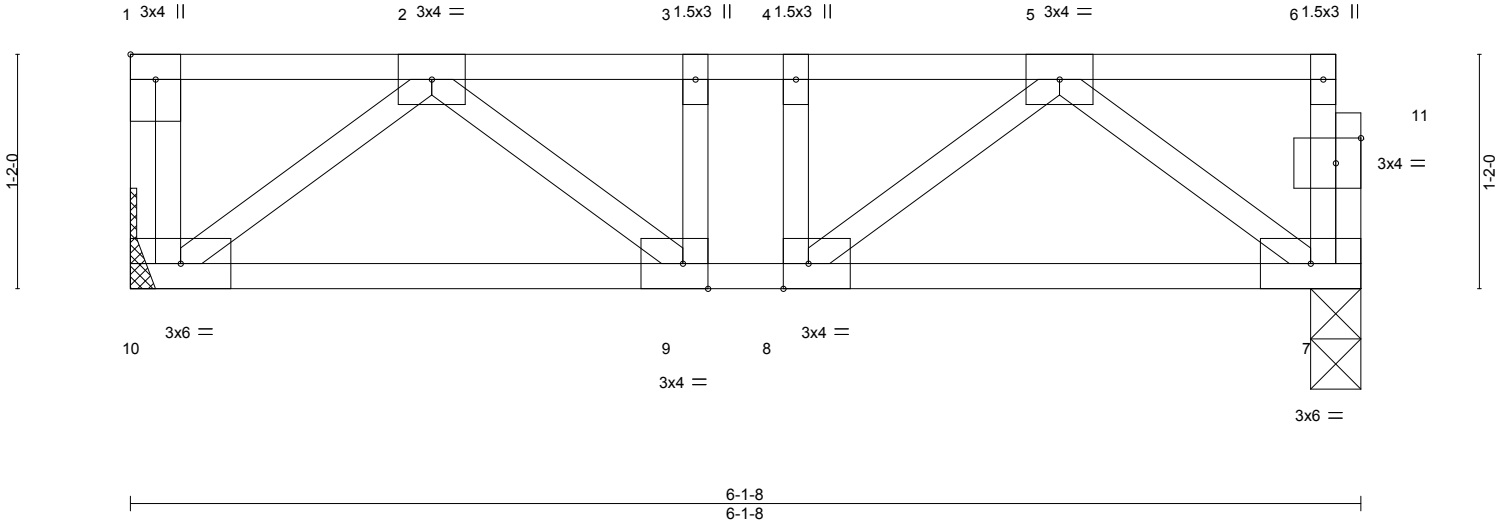


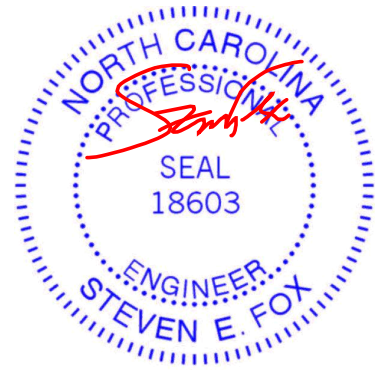
Plate Offsets (X,Y)-- [1:Edge,0-1-8], [8:0-1-8,Edge], [9:0-1-8,Edge], [11:0-1-8,0-1-8]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.08	Vert(LL)	-0.01	7-8	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.10	Vert(CT)	-0.01	7-8	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.10	Horz(CT)	0.00	7	n/a		
BCDL 5.0	Code IRC2015/TP12014		Matrix-S						
								Weight: 35 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) 10=Mechanical, 7=0-3-0  
Max Grav 10=323(LC 1), 7=317(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-463/0, 3-4=-463/0, 4-5=-463/0  
BOT CHORD 9-10=0/339, 8-9=0/463, 7-8=0/337  
WEBS 2-10=-425/0, 5-7=-419/0

- 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.



September 15, 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/TP1 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

Job J0723-3721	Truss F07	Truss Type Floor	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett Job Reference (optional)	60801092
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:14 2023 Page 1  
ID:jUICoIThBC0nIvImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

0-1-8



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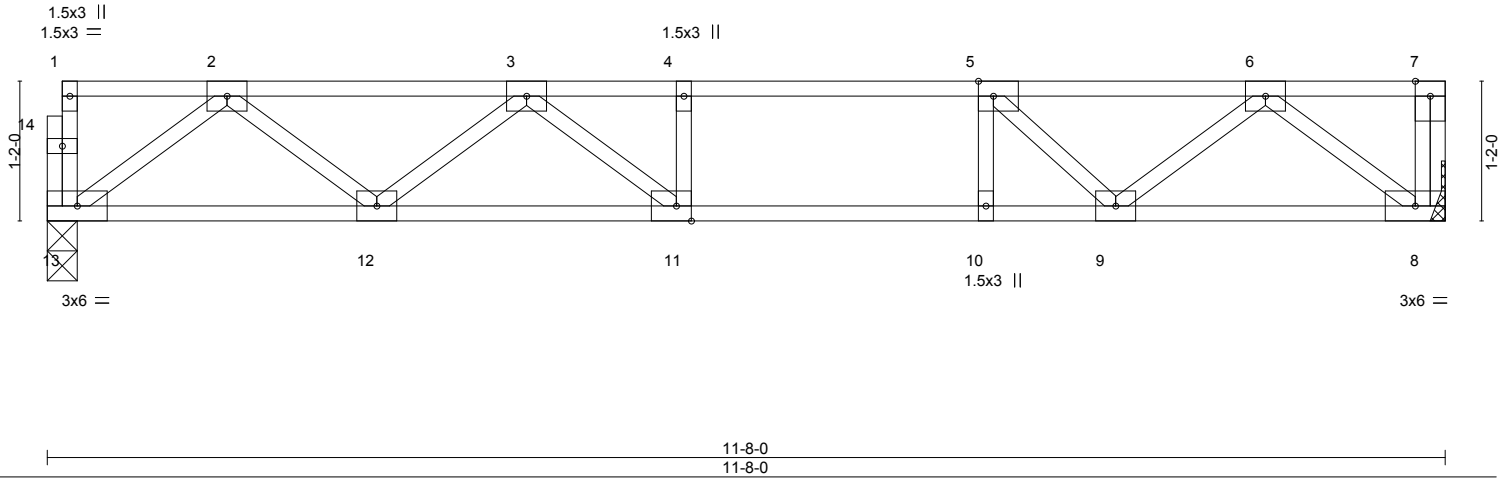


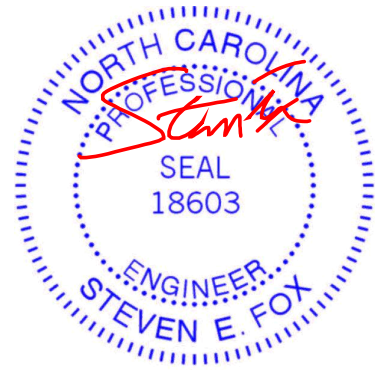
Plate Offsets (X,Y)--	[5:0-1-8,Edge], [11:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.53	Vert(LL) -0.13 11-12 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.69	Vert(CT) -0.17 11-12 >802 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.29	Horz(CT) 0.02 8 n/a n/a		
BCDL 5.0	Code IRC2015/TP12014	Matrix-S		Weight: 58 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) 13=0-3-0, 8=Mechanical  
Max Grav 13=622(LC 1), 8=628(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1195/0, 3-4=-1648/0, 4-5=-1648/0, 5-6=-1206/0  
BOT CHORD 12-13=0/765, 11-12=0/1564, 10-11=0/1648, 9-10=0/1648, 8-9=0/735  
WEBS 2-13=-958/0, 2-12=0/560, 3-12=-479/0, 3-11=-42/350, 6-8=-922/0, 6-9=0/612, 5-9=-647/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) 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.



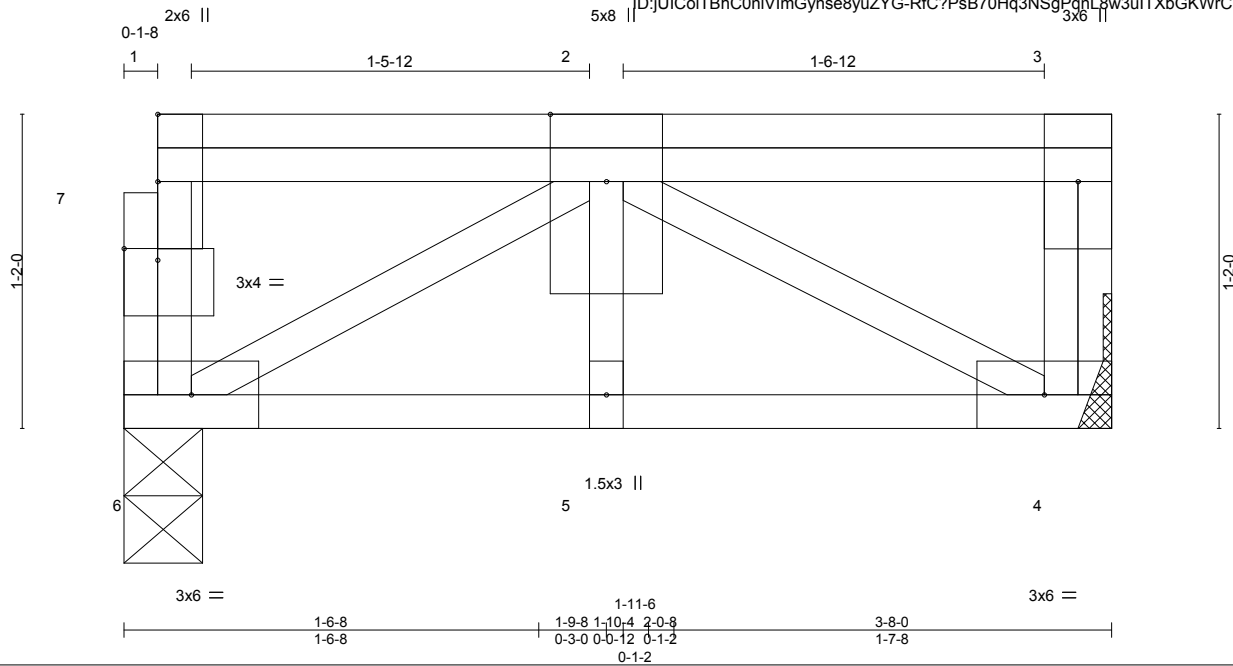
September 15, 2023

<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 (<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>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0723-3721	Truss FG-1	Truss Type FLOOR GIRDER	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801093
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Scale = 1:8.6

Plate Offsets (X,Y)--	[7:0-1-8,0-0-8]				
<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 0.10	Vert(LL) -0.01 5 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.14	Vert(CT) -0.01 5 >999 360		
BCLL 0.0	Rep Stress Incr NO	WB 0.16	Horz(CT) 0.00 4 n/a n/a		
BCDL 5.0	Code IRC2015/TP12014	Matrix-P		Weight: 27 lb	FT = 20%F, 11%E

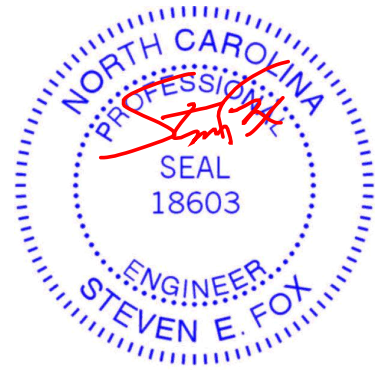
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 3-8-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 6=0-3-8, 4=Mechanical  
Max Grav 6=494(LC 1), 4=502(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
BOT CHORD 5-6=0/580, 4-5=0/580  
WEBS 2-4=-665/0, 2-6=-662/0

- NOTES-**
- 1) Plates checked for a plus or minus 1 degree rotation about its center.
  - 2) Refer to girder(s) for truss to truss connections.
  - 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.
  - 4) CAUTION, Do not erect truss backwards.
  - 5) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 223 lb down at 1-9-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 6) 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: 4-6=-10, 1-3=-220  
Concentrated Loads (lb)  
Vert: 2=-223(F)



September 15, 2023

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

Job J0723-3721	Truss FG-2	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett	160801094
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Comtech, Inc., Fayetteville, NC 28309

8.530 s Feb 23 2022 MiTek Industries, Inc. Fri Sep 15 16:11:32 2023 Page 1  
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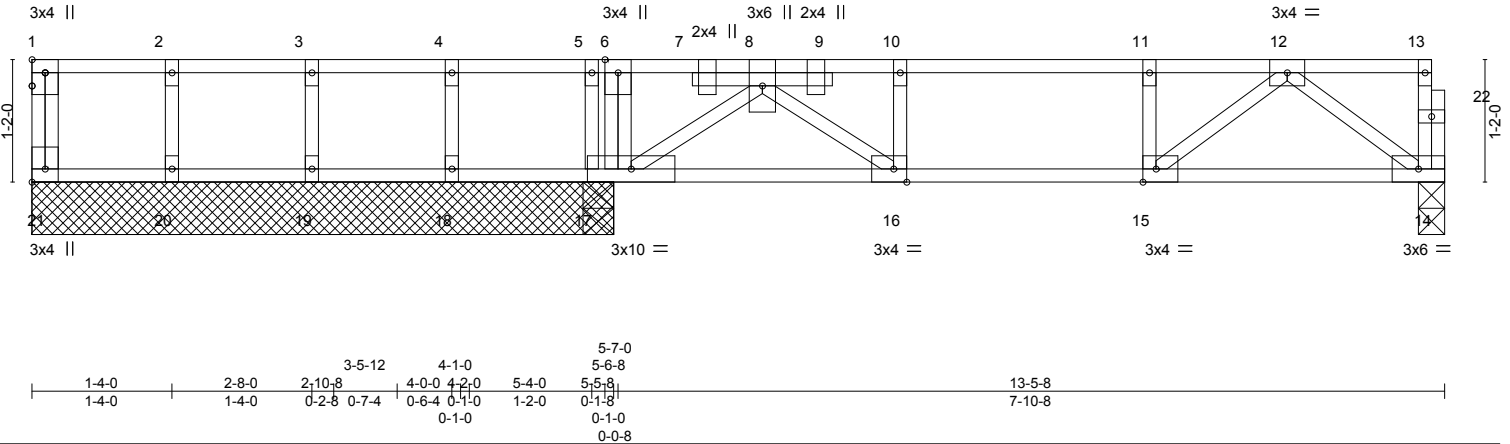
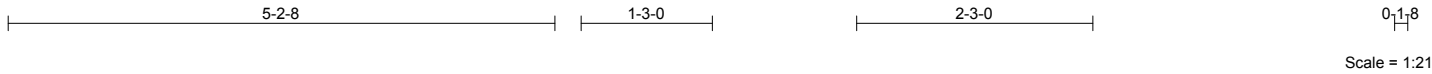


Plate Offsets (X,Y)--	[1:Edge,0-1-8], [1:0-1-8,0-1-8], [1:0-1-8,0-1-8], [15:0-1-8,Edge], [16:0-1-8,Edge], [21:Edge,0-1-8]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.47	Vert(LL) -0.05 16 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.43	Vert(CT) -0.07 16-17 >999 360		
BCLL 0.0	Rep Stress Incr NO	WB 0.29	Horz(CT) 0.01 14 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 67 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.

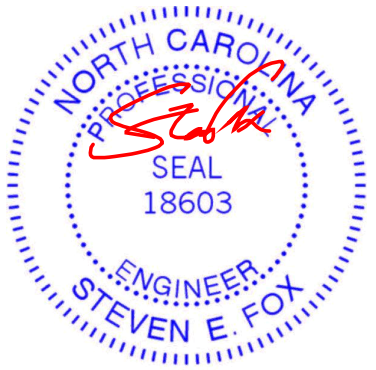
**REACTIONS.** All bearings 5-6-8 except (jt=length) 14=0-3-0.  
(lb) - Max Uplift All uplift 100 lb or less at joint(s) 18  
Max Grav All reactions 250 lb or less at joint(s) 21, 20, 19, 18 except 14=505(LC 4), 17=916(LC 1), 17=916(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 8-9=-1071/0, 9-10=-1066/0, 10-11=-1066/0, 11-12=-1066/0  
BOT CHORD 16-17=0/1010, 15-16=0/1066, 14-15=0/582  
WEBS 12-14=-725/0, 12-15=0/618, 8-17=-1164/0, 11-15=-309/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Gable studs spaced at 1-4-0 oc.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18.
  - 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.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION. Do not erect truss backwards.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 482 lb down at 7-2-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 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)**

- Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 14-21=-10, 1-13=-100  
Concentrated Loads (lb)  
Vert: 8=-402(F)
- Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 14-21=-10, 1-13=-100



September 15, 2023

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 71 Liberty Meadows/Harnett	160801094
J0723-3721	FG-2	GABLE	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309

8.530 s Feb 23 2022 MiTek Industries, Inc. Fri Sep 15 16:11:33 2023 Page 2  
 ID:jUIColTBhC0nIVImGynse8yuZYG-uuVgJmYUDn6sYLUFVt6ErmNE\_UibLybAPesZacydKnu

**LOAD CASE(S)**

- Concentrated Loads (lb)  
Vert: 8=-402(F)
- 3) 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 14-21=-10, 1-5=-100, 5-13=-20  
Concentrated Loads (lb)  
Vert: 8=-482(F)
- 4) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 14-21=-10, 1-5=-20, 5-13=-100  
Concentrated Loads (lb)  
Vert: 8=-402(F)
- 5) 3rd unbalanced Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 14-21=-10, 1-5=-100, 5-13=-20  
Concentrated Loads (lb)  
Vert: 8=-482(F)
- 6) 4th unbalanced Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 14-21=-10, 1-5=-20, 5-13=-100  
Concentrated Loads (lb)  
Vert: 8=-402(F)

**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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))

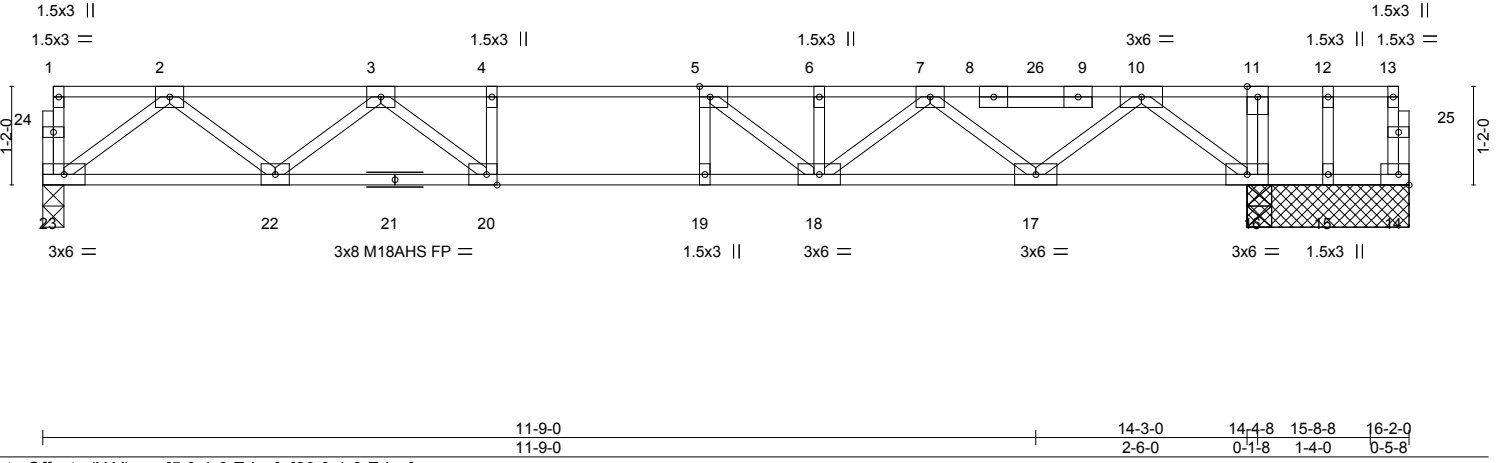
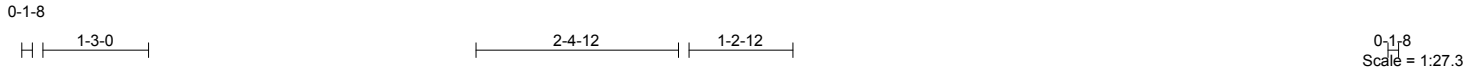


818 Soundside Road  
Edenton, NC 27932

Job J0723-3721	Truss FG-3	Truss Type GABLE	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801095
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:17 2023 Page 1  
ID:JUICoITBhCOnIvImGynse8yuZYG-RfC?PsB70Hq3NSgFqnL8w3uITXbGKWrCDoi7J4zJC?f



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.83	in (loc) l/defl L/d	MT20 244/190	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.62	Vert(LL) -0.19 18-19 >895 480	M18AHS 186/179	186/179
BCLL 0.0	Rep Stress Incr NO	WB 0.44	Vert(CT) -0.26 18-19 >646 360		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S	Horz(CT) 0.04 14 n/a n/a		
				Weight: 84 lb	FT = 20%F, 11%E

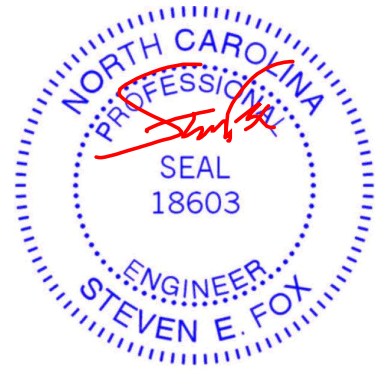
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat) *Except* 14-21: 2x4 SP 2400F 2.0E(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	
OTHERS 2x4 SP No.3(flat)	

**REACTIONS.** All bearings 1-11-0 except (jt=length) 23=0-3-0.  
 (lb) - Max Uplift All uplift 100 lb or less at joint(s) except 15=-119(LC 1)  
 Max Grav All reactions 250 lb or less at joint(s) 14 except 23=829(LC 1), 16=1299(LC 1), 16=1299(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1681/0, 3-4=-2910/0, 4-5=-2910/0, 5-6=-2944/0, 6-7=-2944/0, 7-10=-1952/0  
 BOT CHORD 22-23=0/1031, 20-22=0/2347, 19-20=0/2910, 18-19=0/2910, 17-18=0/2683, 16-17=0/1247  
 WEBS 2-23=-1292/0, 2-22=0/846, 3-22=-867/0, 3-20=0/719, 4-20=-321/0, 10-16=-1562/0,  
 10-17=0/918, 7-17=-951/0, 7-18=0/332

- NOTES-**
- All plates are MT20 plates unless otherwise indicated.
  - All plates are 3x4 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Gable studs spaced at 1-4-0 oc.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 119 lb uplift at joint 15.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 336 lb down at 11-9-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 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: 14-23=-10, 1-13=-100  
 Concentrated Loads (lb)  
 Vert: 26=-336(F)



September 15, 2023

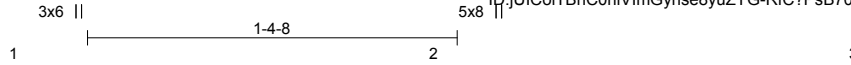
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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/TP1 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**  
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 818 Soundside Road  
 Edenton, NC 27932

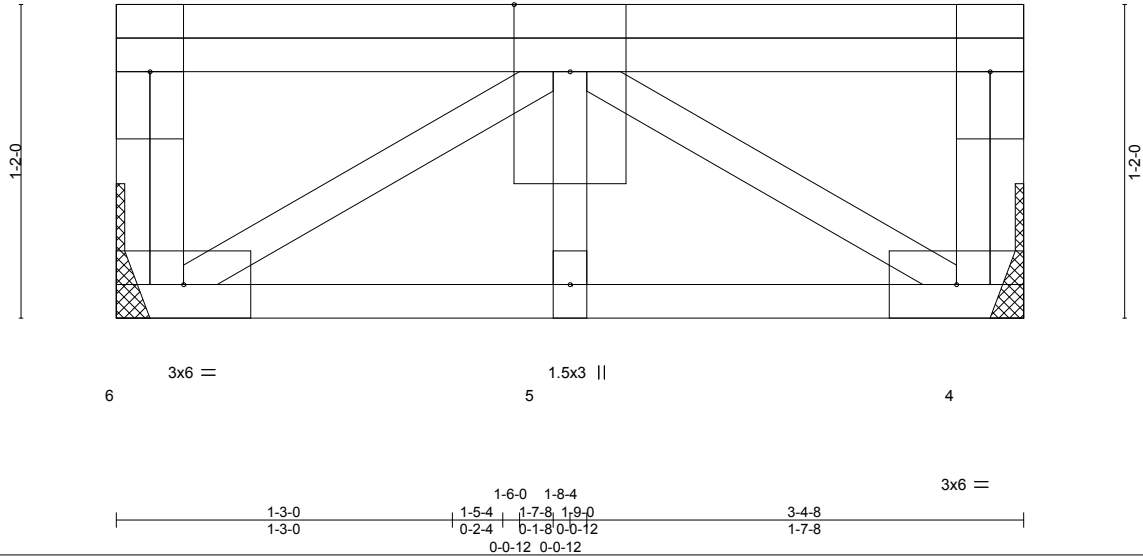
Job J0723-3721	Truss FG-4	Truss Type FLOOR GIRDER	Qty 1	Ply 1	Precision/Lot 71 Liberty Meadows/Harnett I60801096
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:18 2023 Page 1



Scale = 1:8.6



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.05	Vert(LL)	-0.00	5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.13	Vert(CT)	-0.01	5	>999		
BCLL 0.0	Rep Stress Incr	NO	WB 0.15	Horz(CT)	0.00	4	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-P					Weight: 26 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 3-4-8 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)	

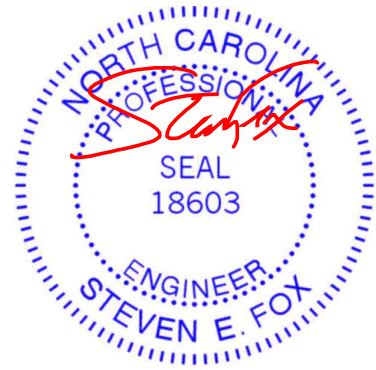
**REACTIONS.** (size) 6=Mechanical, 4=Mechanical  
Max Grav 6=436(LC 1), 4=436(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
BOT CHORD 5-6=0/553, 4-5=0/553  
WEBS 2-4=-653/0, 2-6=-653/0


- NOTES-**
- Plates checked for a plus or minus 1 degree rotation about its center.
  - Refer to girder(s) for truss to truss connections.
  - 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.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 528 lb down at 1-6-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 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

- Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 4-6=-10, 1-3=-100  
Concentrated Loads (lb)  
Vert: 2=-528(B)



September 15, 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 (<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>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 71 Liberty Meadows/Harnett	60801097
J0723-3721	FG-5	GABLE	1	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Fri Sep 15 02:01:19 2023 Page 1  
ID:JUIColTBhC0nVImGynse8yuZYG-RfC?PsB70Hq3NSgFqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:37.9

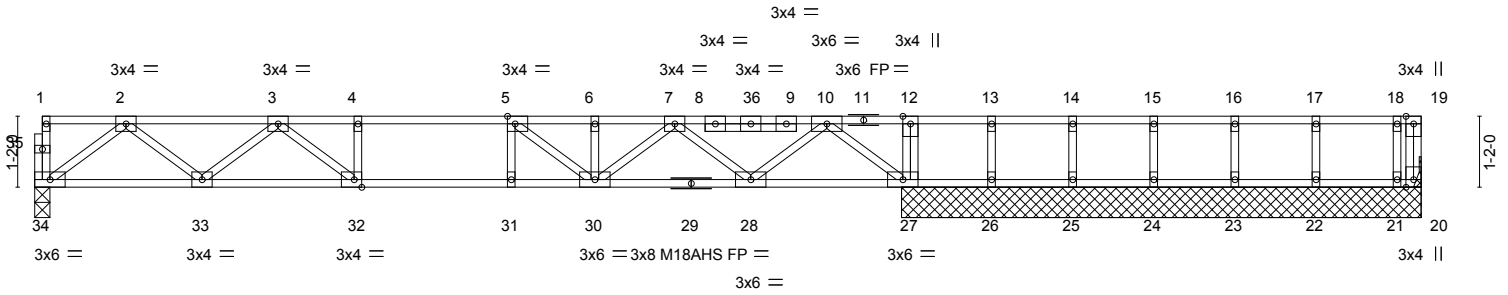


Plate Offsets (X,Y)--	[5:0-1-8,Edge], [32:0-1-8,Edge]	14-3-0	14-3-0	15-8-12	14-4-12	17-0-12	18-4-12	19-8-12	21-0-12	22-4-12	22-9-8
					0-1-12	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-4-12

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 0.84	Vert(LL)	-0.19	30-31	>884	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.63	Vert(CT)	-0.27	30-31	>639	M18AHS	186/179
BCLL 0.0	Rep Stress Incr	NO	WB 0.45	Horz(CT)	0.04	20	n/a		
BCDL 5.0	Code IRC2015/TP12014		Matrix-S						
								Weight: 111 lb	FT = 20%F, 11%E

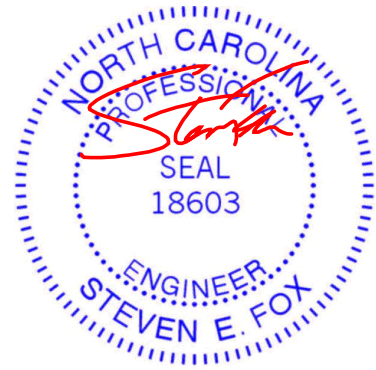
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP 2400F 2.0E(flat) *Except* 20-29: 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	
OTHERS 2x4 SP No.3(flat)	

**REACTIONS.** All bearings 8-6-8 except (jt=length) 34=0-3-0.  
 (lb) - Max Uplift All uplift 100 lb or less at joint(s) 20, 20  
 Max Grav All reactions 250 lb or less at joint(s) 26, 25, 24, 23, 22, 21 except 34=831(LC 1), 27=1236(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1686/0, 3-4=-2928/0, 4-5=-2928/0, 5-6=-2965/0, 6-7=-2965/0, 7-10=-1971/0  
 BOT CHORD 33-34=0/1034, 32-33=0/2357, 31-32=0/2928, 30-31=0/2928, 28-30=0/2702, 27-28=0/1252  
 WEBS 2-34=-1295/0, 2-33=0/848, 3-33=-874/0, 3-32=0/729, 4-32=-323/0, 10-27=-1571/0,  
 10-28=0/936, 7-28=-951/0, 7-30=0/336

- NOTES-**
- All plates are MT20 plates unless otherwise indicated.
  - All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Gable studs spaced at 1-4-0 oc.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 20.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 336 lb down at 11-9-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 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: 20-34=-10, 1-19=-100  
 Concentrated Loads (lb)  
 Vert: 36=-336(B)



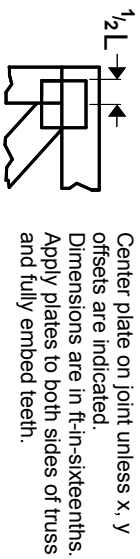
September 15, 2023

**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/TP1 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)

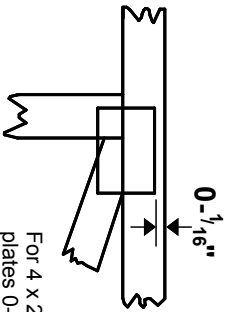
**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

# Symbols

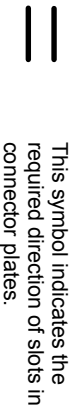
## PLATE LOCATION AND ORIENTATION



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-  $\frac{1}{16}$ \" from outside edge of truss.



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

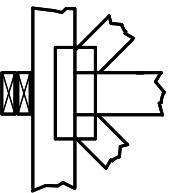
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

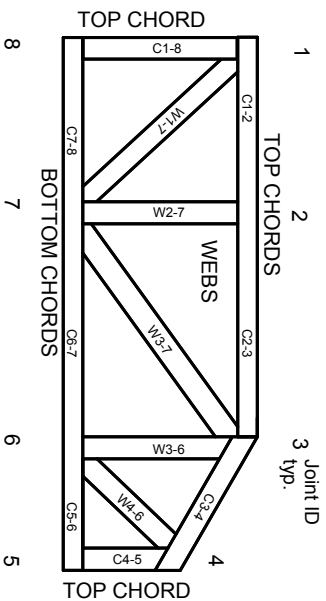


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/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



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.

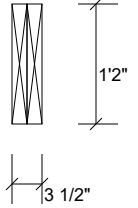
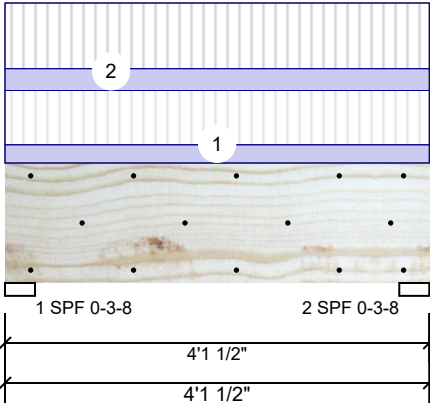
**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

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

**BM2 Kerto-S LVL 1.750" X 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	1235	435	0	0	0
2	Vertical	1235	435	0	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	32%	435 / 1235	1670	L	D+L
2 - SPF	3.500"	Vert	32%	435 / 1235	1670	L	D+L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1361 ft-lb	2' 3/4"	26999 ft-lb	0.050 (5%)	D+L	L
Unbraced	1361 ft-lb	2' 3/4"	23153 ft-lb	0.059 (6%)	D+L	L
Shear	1434 lb	2'8"	10453 lb	0.137 (14%)	D+L	L
LL Defl inch (L/11315)	0.004	2' 13/16"	0.092 (L/480)	0.042 (4%)	L	L
TL Defl inch (L/8369)	0.005	2' 13/16"	0.122 (L/360)	0.043 (4%)	D+L	L

**Design Notes**

- Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- Refer to last page of calculations for fasteners required for specified loads.
- Girders are designed to be supported on the bottom edge only.
- Top must be laterally braced at end bearings.
- Bottom must be laterally braced at end bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Near Face	91 PLF	271 PLF	0 PLF	0 PLF	0 PLF	F05
2	Uniform			Far Face	109 PLF	328 PLF	0 PLF	0 PLF	0 PLF	F04
	Self Weight				11 PLF					

**Notes**

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

**Lumber**

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

chemicals

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

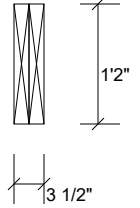
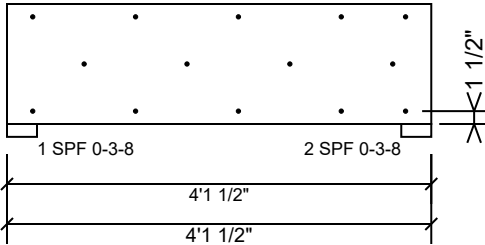
This design is valid until 6/28/2026

**Manufacturer Info**

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

**BM2 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	89.0 %
Load	218.5 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
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

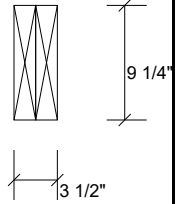
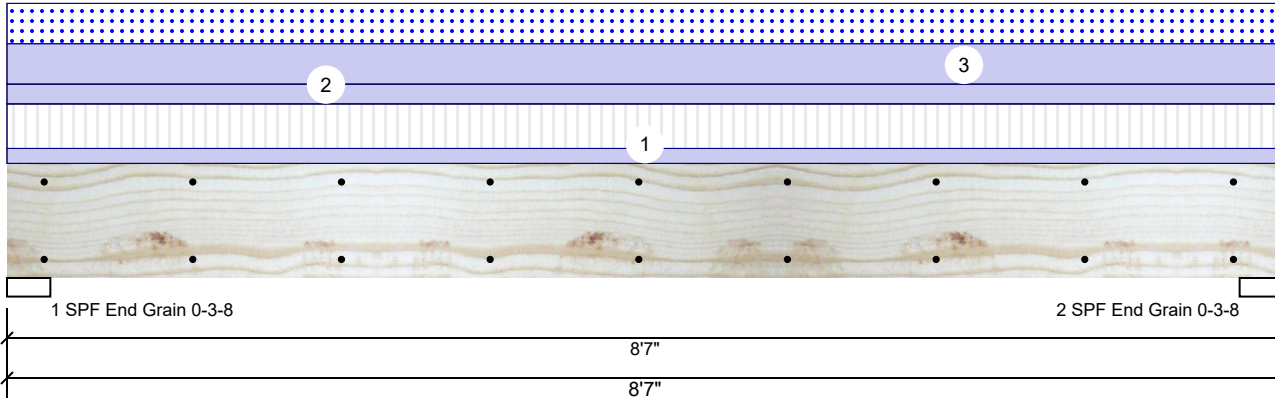
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[www.metsawood.com/us](http://www.metsawood.com/us)

This design is valid until 6/28/2026

**BM1 Kerto-S LVL 1.750" X 9.250" 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:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED Ib (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1163	1988	1051	0	0
2	Vertical	1163	1988	1051	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	35%	1988 / 1661	3649	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	35%	1988 / 1661	3649	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7016 ft-lb	4'3 1/2"	14423 ft-lb	0.486 (49%)	D+0.75(L+S)	L
Unbraced	7016 ft-lb	4'3 1/2"	8689 ft-lb	0.807 (81%)	D+0.75(L+S)	L
Shear	2751 lb	1' 3/4"	7943 lb	0.346 (35%)	D+0.75(L+S)	L
LL Defl inch	0.094 (L/1042)	4'3 9/16"	0.271 (L/360)	0.345 (35%)	0.75(L+S)	L
TL Defl inch	0.206 (L/474)	4'3 9/16"	0.406 (L/240)	0.506 (51%)	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 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 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			Top	91 PLF	271 PLF	0 PLF	0 PLF	0 PLF	F01
2	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
3	Uniform			Top	245 PLF	0 PLF	245 PLF	0 PLF	0 PLF	A5
	Self Weight				7 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

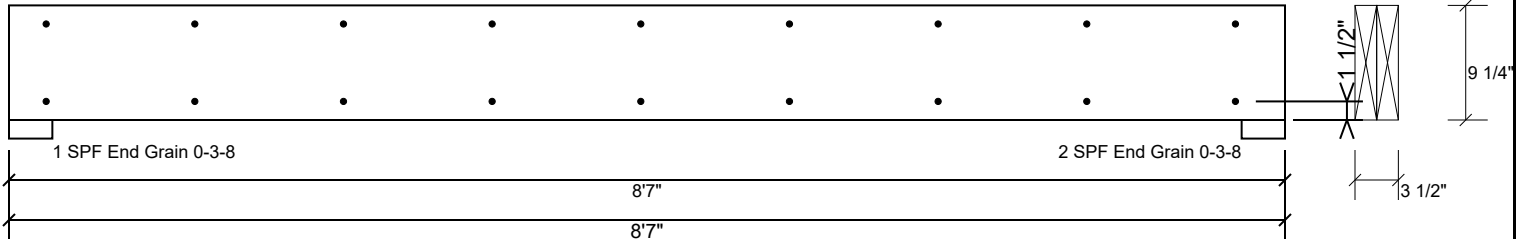
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**Manufacturer Info**

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www.metsawood.com/us

**BM1 Kerto-S LVL 1.750" X 9.250" 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.
C <sub>m</sub>	1
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.

**Lumber**

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

**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

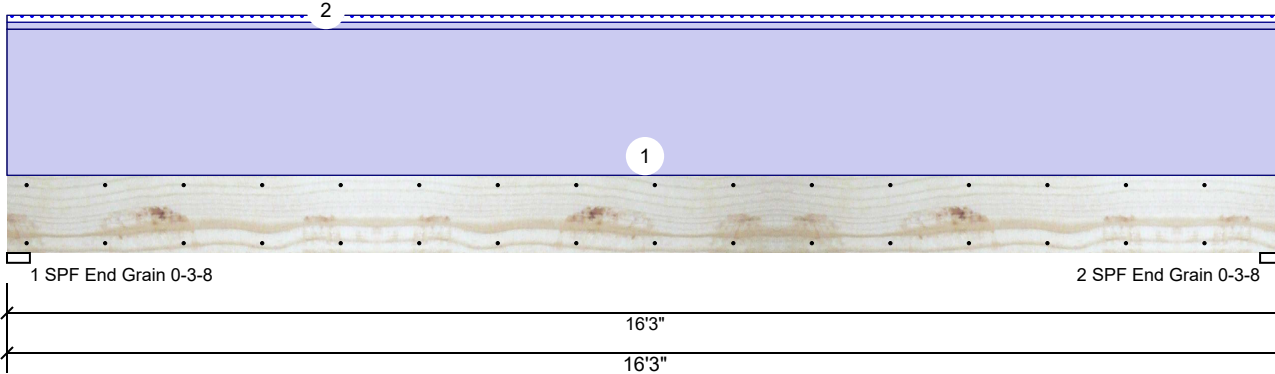
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**Manufacturer Info**

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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:	480	Load Sharing:	No
Deflection TL:	360	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	1863	81	0	0
2	Vertical	0	1863	81	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	19%	1863 / 81	1944	L	D+S
2 - SPF End Grain	3.500"	Vert	19%	1863 / 81	1944	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7146 ft-lb	8'1 1/2"	17919 ft-lb	0.399 (40%)	D	Uniform
Unbraced	7146 ft-lb	8'1 1/2"	17919 ft-lb	0.399 (40%)	D	Uniform
Shear	1578 lb	14'11 5/8"	7980 lb	0.198 (20%)	D	Uniform
LL Defl inch (L/12477)	0.015	8'1 9/16"	0.395 (L/480)	0.038 (4%)	S	L
TL Defl inch (L/522)	0.363	8'1 9/16"	0.526 (L/360)	0.690 (69%)	D+S	L

**Design Notes**

- Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- Refer to last page of calculations for fasteners required for specified loads.
- Girders are designed to be supported on the bottom edge only.
- Top loads must be supported equally by all plies.
- Top must be continuously laterally braced.
- Bottom must be laterally braced at bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	210 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1-GE
2	Tie-In	0-0-0 to 16-3-0	0-6-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	RAKE OH
	Self Weight				9 PLF					

**Notes**

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

**Lumber**

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

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

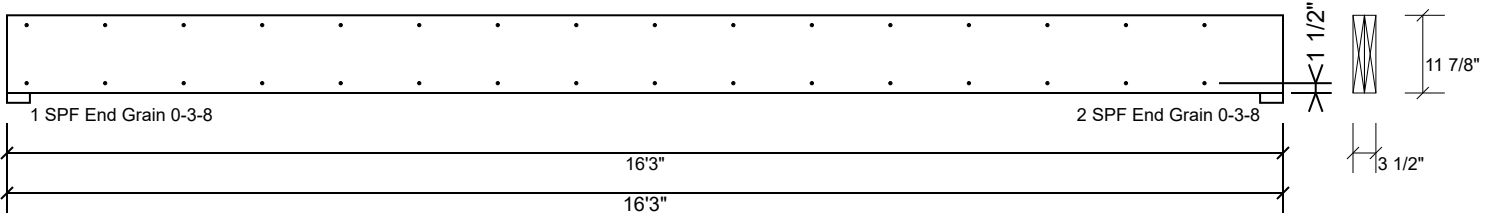
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**GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

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.
C <sub>m</sub>	1
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.

**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 6/28/2026

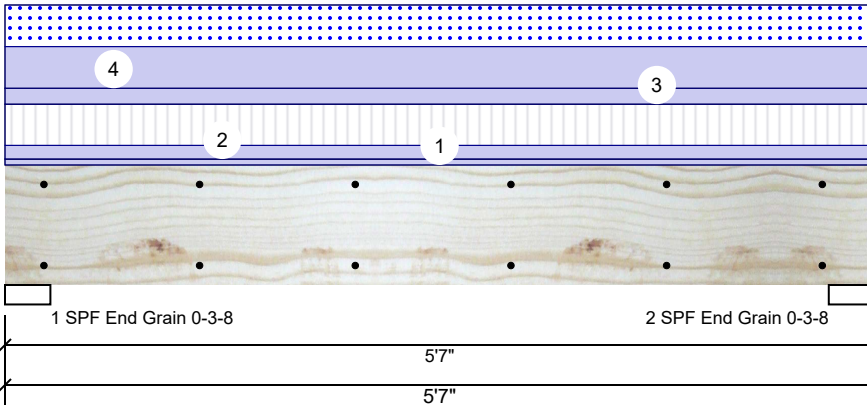
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**HDR1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

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 Ib (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	868	1645	877	0	0
2	Vertical	868	1645	877	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	29%	1645 / 1309	2953	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	29%	1645 / 1309	2953	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3473 ft-lb	2'9 1/2"	14423 ft-lb	0.241 (24%)	D+0.75(L+S)	L
Unbraced	3473 ft-lb	2'9 1/2"	11505 ft-lb	0.302 (30%)	D+0.75(L+S)	L
Shear	1835 lb	4'6 1/4"	7943 lb	0.231 (23%)	D+0.75(L+S)	L
LL Defl inch	0.021 (L/2896)	2'9 1/2"	0.128 (L/480)	0.166 (17%)	0.75(L+S)	L
TL Defl inch	0.048 (L/1283)	2'9 1/2"	0.171 (L/360)	0.281 (28%)	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 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 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			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	wall
2	Uniform			Top	103 PLF	311 PLF	0 PLF	0 PLF	0 PLF	floor trusses
3	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	wall
4	Uniform			Top	314 PLF	0 PLF	314 PLF	0 PLF	0 PLF	roof trusses
	Self Weight				7 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

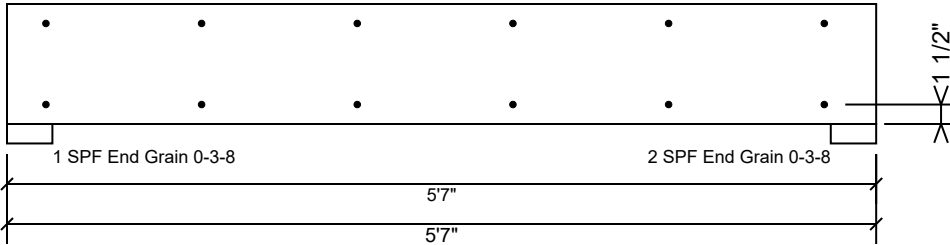
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**HDR1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

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.
C <sub>m</sub>	1
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.

**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

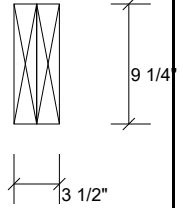
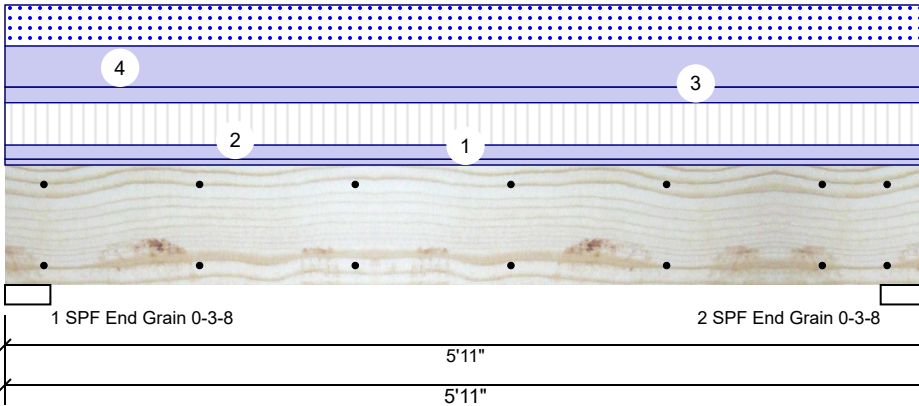
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**HDR2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

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	961	1758	929	0	0
2	Vertical	961	1758	929	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	31%	1758 / 1418	3176	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	31%	1758 / 1418	3176	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3998 ft-lb	2'11 1/2"	14423 ft-lb	0.277 (28%)	D+0.75(L+S)	L
Unbraced	3998 ft-lb	2'11 1/2"	11110 ft-lb	0.360 (36%)	D+0.75(L+S)	L
Shear	2041 lb	1' 3/4"	7943 lb	0.257 (26%)	D+0.75(L+S)	L
LL Defl inch	0.027 (L/2418)	2'11 1/2"	0.136 (L/480)	0.198 (20%)	0.75(L+S)	L
TL Defl inch	0.061 (L/1080)	2'11 1/2"	0.182 (L/360)	0.333 (33%)	D+0.75(L+S)	L

**Design Notes**

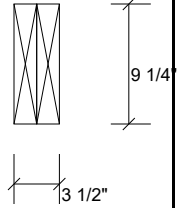
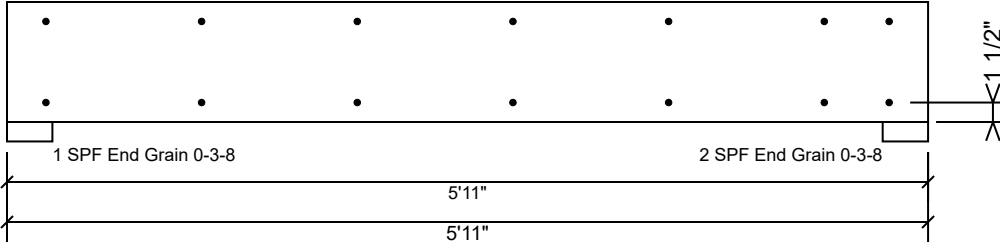
- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page 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 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			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Top	108 PLF	325 PLF	0 PLF	0 PLF	0 PLF	FLOOR TRUSSES
3	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
4	Uniform			Top	314 PLF	0 PLF	314 PLF	0 PLF	0 PLF	ROOF TRUSSES
	Self Weight				7 PLF					

<p><b>Notes</b></p> <p>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.</p> <p><b>Lumber</b></p> <ol style="list-style-type: none"> <li>1. Dry service conditions, unless noted otherwise</li> <li>2. LVL not to be treated with fire retardant or corrosive chemicals</li> </ol>	<p><b>Handling &amp; Installation</b></p> <ol style="list-style-type: none"> <li>1. LVL beams must not be cut or drilled</li> <li>2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals</li> <li>3. Damaged Beams must not be used</li> <li>4. Design assumes top edge is laterally restrained</li> <li>5. Provide lateral support at bearing points to avoid lateral displacement and rotation</li> </ol>	<p>6. For flat roofs provide proper drainage to prevent ponding</p>	<p><b>Manufacturer Info</b></p> <p>Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us</p>
			<p>This design is valid until 6/28/2026</p>

**HDR2 Kerto-S LVL 1.750" X 9.250" 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.
C <sub>m</sub>	1
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.

**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 6/28/2026

**Manufacturer Info**

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