

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: J0224-0932  
Lucas Residence

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

Pages or sheets covered by this seal: I63738795 thru I63738831

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

North Carolina COA: C-0844



February 21, 2024

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Tony Miller

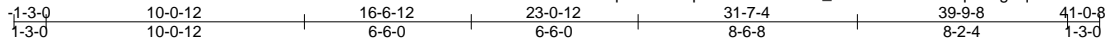
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes),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

Job J0224-0932	Truss A1	Truss Type PIGGYBACK BASE	Qty 4	Ply 1	Lucas Residence Job Reference (optional)	163738795
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Comtech, Inc. Fayetteville, NC - 28314,

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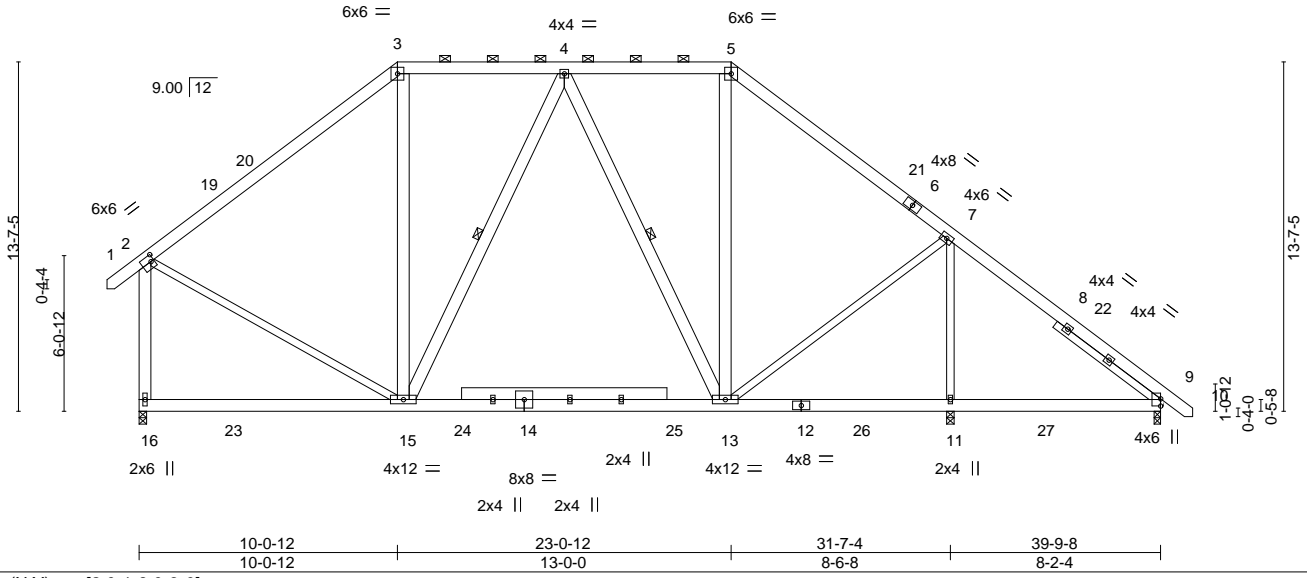


Plate Offsets (X,Y)--	[2:0-1-8,0-3-0]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.51	Vert(LL)	-0.21	13-15	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.29	Vert(CT)	-0.30	13-15	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.81	Horz(CT)	0.01	9	n/a	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S	Wind(LL)	0.05	9-11	>999	240		
									Weight: 415 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD 2x6 SP 2400F 2.0E *Except* 17-18: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except* 7-13,7-11,2-15: 2x4 SP No.2	WEBS 1 Row at midpt 4-15, 4-13
SLIDER Right 2x4 SP No.2 5-0-9	

<b>REACTIONS.</b>	(size) 16=0-3-8, 11=0-3-8, 9=0-3-0 Max Horz 16=-402(LC 10) Max Uplift 16=-57(LC 12), 11=-13(LC 8), 9=-102(LC 8) Max Grav 16=1440(LC 2), 11=1431(LC 2), 9=627(LC 1)
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<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-1110/403, 3-4=-843/446, 4-5=-841/440, 5-7=-1096/448, 7-9=-608/283, 2-16=-1312/443
BOT CHORD	15-16=-283/377, 13-15=-109/895, 11-13=-50/367, 9-11=-50/367
WEBS	3-15=-15/266, 4-15=-307/217, 4-13=-310/197, 5-13=-40/272, 7-13=-44/593, 7-11=-1100/283, 2-15=-65/807

- 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) -1-1-4 to 3-3-9, Interior(1) 3-3-9 to 10-0-12, Exterior(2) 10-0-12 to 16-6-12, Interior(1) 16-6-12 to 23-0-12, Exterior(2) 23-0-12 to 29-3-7, Interior(1) 29-3-7 to 40-10-9 zone; end vertical left exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 11 except (jt=lb) 9=102.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



February 21, 2024

**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

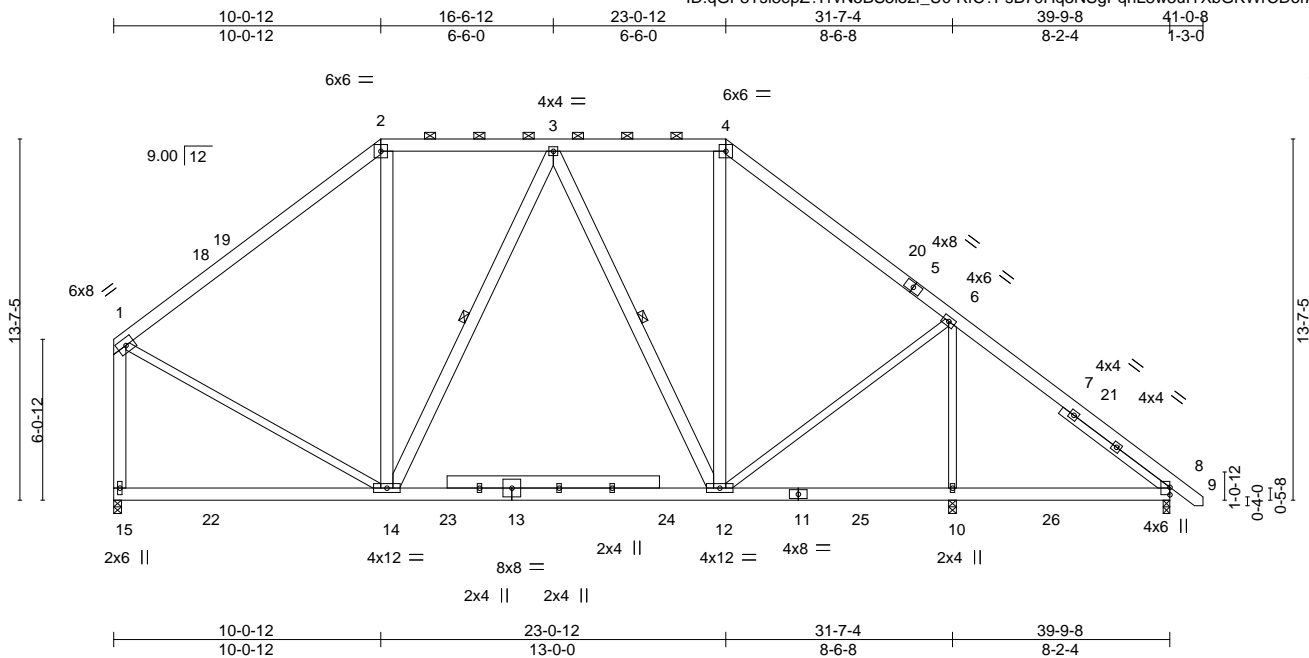
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738796
J0224-0932	A1A	PIGGYBACK BASE	2	1	Job Reference (optional)	

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ID:qGF8Tsl8epZ?11vN5BS5fzf\_Uc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



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 0.50	Vert(LL)	-0.21 12-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.29	Vert(CT)	-0.30 12-14	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.81	Horz(CT)	0.01 8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.05 8-10	>999	240	Weight: 412 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-4.
BOT CHORD 2x6 SP 2400F 2.0E *Except* 16-17: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except* 6-12,6-10,1-14: 2x4 SP No.2	WEBS 1 Row at midpt 3-14, 3-12
SLIDER Right 2x4 SP No.2 5-0-9	

**REACTIONS.** (size) 15=0-3-8, 10=0-3-8, 8=0-3-0  
 Max Horz 15=-394(LC 8)  
 Max Uplift 15=-42(LC 12), 10=-12(LC 8), 8=-101(LC 8)  
 Max Grav 15=1372(LC 2), 10=1432(LC 2), 8=628(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-1107/387, 2-3=-840/441, 3-4=-838/436, 4-6=-1098/444, 6-8=-609/280, 1-15=-1231/385  
 BOT CHORD 14-15=-270/368, 12-14=-106/898, 10-12=-47/368, 8-10=-47/368  
 WEBS 2-14=-16/260, 3-14=-305/221, 3-12=-311/194, 4-12=-36/272, 6-12=-43/594, 6-10=-1100/280, 1-14=-121/827

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - 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) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 10-0-12, Exterior(2) 10-0-12 to 16-6-12, Interior(1) 16-6-12 to 23-0-12, Exterior(2) 23-0-12 to 29-3-7, Interior(1) 29-3-7 to 40-10-9 zone; end vertical left exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 15, 10 except (jt=lb) 8=101.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



February 21, 2024

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818 Soundside Road  
 Edenton, NC 27932

Job J0224-0932	Truss A1GE	Truss Type GABLE	Qty 1	Ply 1	Lucas Residence 163738797
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:41 2024 Page 1

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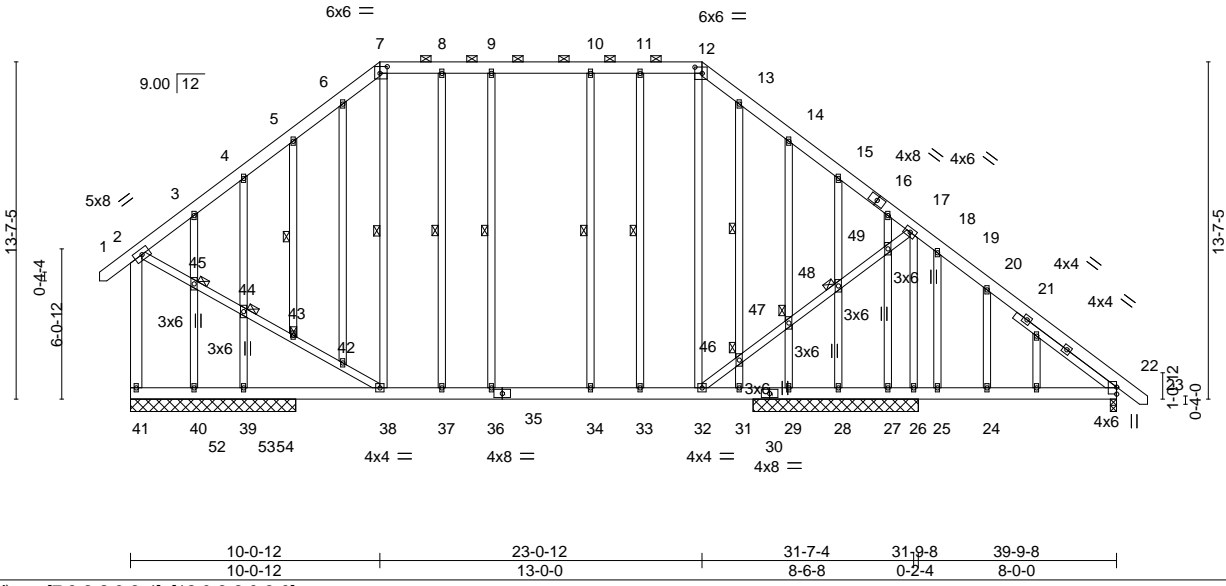


Plate Offsets (X,Y)--	[7:0-3-8,0-3-4], [12:0-3-8,0-3-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.46	Vert(LL)	-0.19 34-36	>999	360	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.60	Vert(CT)	-0.34 34-36	>787	240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.53	Horz(CT)	-0.02 22	n/a	n/a		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Wind(LL)	0.18 34-36	>999	240	Weight: 507 lb	FT = 20%
	Code IRC2015/TP12014							

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-12.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 40-41,39-40,38-39.
WEBS 2x4 SP No.2 *Except* 2-41: 2x6 SP No.1	WEBS 1 Row at midpt 7-38, 11-33, 10-34, 9-36, 8-37, 5-43, 13-46
OTHERS 2x4 SP No.2	JOINTS 1 Brace at Jt(s): 43, 44, 45, 46, 47, 48
SLIDER Right 2x4 SP No.2 5-0-9	

**REACTIONS.** All bearings 6-8-0 except (jt=length) 22=0-3-0.  
 (lb) - Max Horz 41=499(LC 32)  
 Max Uplift All uplift 100 lb or less at joint(s) 28 except 41=381(LC 4), 26=740(LC 30), 22=214(LC 5), 39=497(LC 8), 40=138(LC 4), 29=240(LC 35), 27=353(LC 27)  
 Max Grav All reactions 250 lb or less at joint(s) 28 except 41=1530(LC 1), 26=1651(LC 27), 22=517(LC 1), 39=609(LC 40), 40=352(LC 1), 29=355(LC 7), 27=302(LC 35)

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

TOP CHORD	2-3=-946/181, 3-4=-935/202, 4-5=-965/277, 5-6=-916/301, 6-7=-799/309, 7-8=-733/290, 8-9=-730/290, 9-10=-730/290, 10-11=-730/290, 11-12=-732/290, 12-13=-867/337, 13-14=-892/344, 14-15=-939/398, 15-17=-963/389, 17-18=-883/365, 18-19=-505/348, 19-20=-454/344, 20-22=-609/376, 2-41=-1074/182
BOT CHORD	40-41=-367/417, 39-40=-367/417, 38-39=-367/417, 37-38=-330/906, 36-37=-330/906, 34-36=-330/906, 33-34=-330/906, 32-33=-330/906, 31-32=-281/418, 29-31=-281/418, 28-29=-281/418, 27-28=-281/418, 26-27=-281/418, 25-26=-281/418, 24-25=-281/418, 22-24=-281/418
WEBS	32-46=-163/747, 46-47=-153/688, 47-48=-148/703, 48-49=-157/709, 18-49=-152/714, 18-26=-722/254, 2-45=-207/835, 44-45=-215/835, 43-44=-201/844, 42-43=-206/830, 38-42=-223/878, 4-44=-277/263, 39-44=-324/313, 19-25=-309/113

- 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; end vertical left exposed; porch right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) Provide adequate drainage to prevent water ponding.
  - 5) All plates are 2x4 MT20 unless otherwise indicated.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide with full coverage on the bottom chord and any other members, with BCDL = 10.0psf.



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

Job	Truss	Truss Type	Qty	Ply	Lucas Residence	I63738797
J0224-0932	A1GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:41 2024 Page 2  
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**NOTES-**

- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 28 except (jt=lb) 41=381, 26=740, 22=214, 39=497, 40=138, 29=240, 27=353.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 446 lb down and 191 lb up at 0-2-12, 196 lb down and 117 lb up at 2-2-12, and 196 lb down and 117 lb up at 4-2-12, and 196 lb down and 117 lb up at 6-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 12) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)
  - Vert: 1-2=-60, 2-7=-60, 7-12=-60, 12-23=-60, 22-41=-20
- Concentrated Loads (lb)
  - Vert: 41=-446(B) 52=-196 53=-196 54=-196



February 21, 2024

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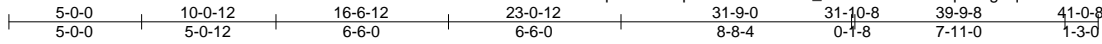


818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738798
J0224-0932	A2	PIGGYBACK BASE	4	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:43 2024 Page 1  
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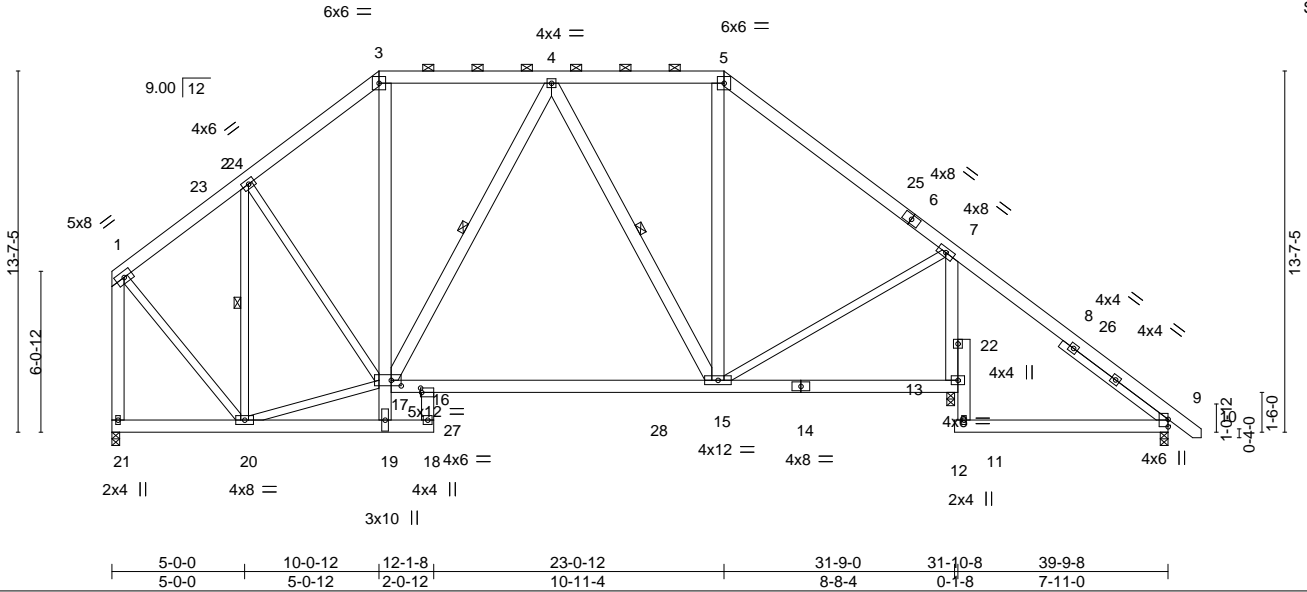


Plate Offsets (X,Y)--	[16:0-0-8,0-2-0], [17:0-4-8,0-2-8]
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LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.35	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.41	Vert(LL) -0.16 15-16 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.59	Vert(CT) -0.25 15-16 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 9 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.06 9-11 >999 240	Weight: 425 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except*	WEBS 1 Row at midpt 2-20, 4-17, 4-15
SLIDER Right 2x4 SP No.2 4-11-10	

**REACTIONS.** (size) 21=0-3-8, 9=0-3-8, 13=0-3-8  
 Max Horz 21=-394(LC 8)  
 Max Uplift 21=-42(LC 12), 9=-131(LC 8)  
 Max Grav 21=1247(LC 1), 9=270(LC 24), 13=1729(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-773/320, 2-3=-1071/425, 3-4=-834/407, 4-5=-796/411, 5-7=-1044/413, 7-9=-73/313, 1-21=-1196/355  
 BOT CHORD 20-21=-278/355, 19-20=-367/0, 18-19=-460/0, 16-18=-301/0, 16-17=-19/1277, 15-16=-121/919  
 WEBS 2-20=807/182, 2-17=-28/459, 17-19=0/447, 3-17=-87/336, 4-15=-373/194, 5-15=-25/277, 7-15=-37/861, 1-20=-224/848, 7-13=-1574/349, 17-20=-101/1005

- 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) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 10-0-12, Exterior(2) 10-0-12 to 16-6-12, Interior(1) 16-6-12 to 23-0-12, Exterior(2) 23-0-12 to 29-3-7, Interior(1) 29-3-7 to 40-10-9 zone; end vertical left exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 21 except (jt=lb) 9=131.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



February 21, 2024

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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/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.sbccomponents.com)

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

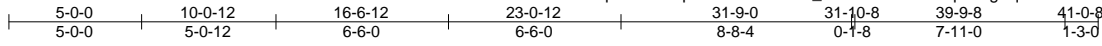


Job J0224-0932	Truss A2A	Truss Type PIGGYBACK BASE	Qty 2	Ply 1	Lucas Residence Job Reference (optional) 163738799
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:44 2024 Page 1

ID:qGF8Tsl8epZ?11vN5BS5l5zf\_Uc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



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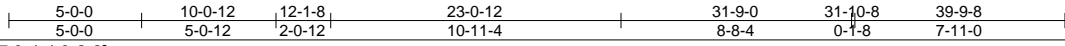
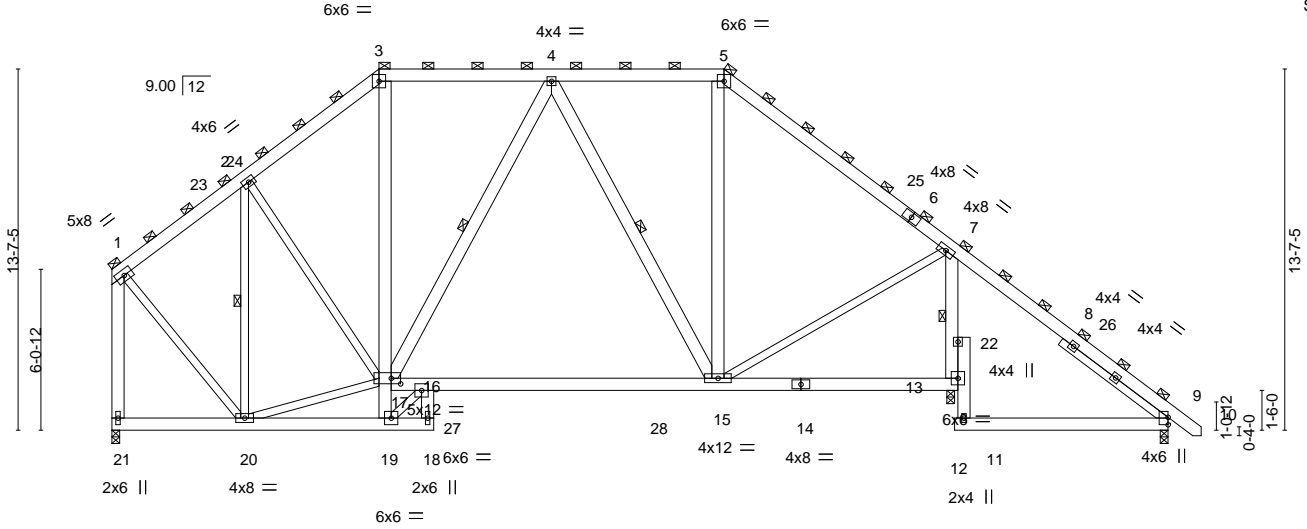


Plate Offsets (X,Y)-- [17:0-4-4,0-2-8]

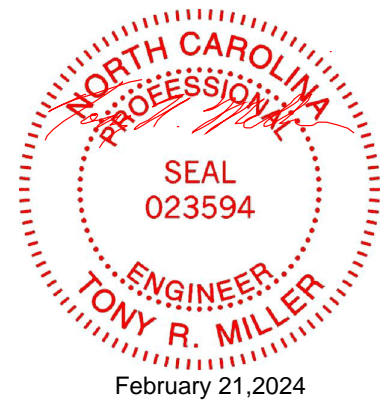
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	3-0-0	TC 0.59	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.37	Vert(LL) -0.18 15-16 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.61	Vert(CT) -0.29 15-16 >999 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.06 9 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.08 9-11 >999 240	Weight: 428 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD 2-0-0 oc purlins (5-8-10 max.), except end verticals
BOT CHORD 2x6 SP 2400F 2.0E *Except* 16-18: 2x6 SP No.1	(Switched from sheeted: Spacing > 2-8-0).
WEBS 2x6 SP No.1 *Except*	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
2-20,2-17,7-15,1-20,17-20,16-19: 2x4 SP No.2	WEBS 1 Row at midpt 2-20, 4-17, 4-15, 7-11
SLIDER Right 2x4 SP No.2 4-11-10	

**REACTIONS.** (size) 21=0-3-8, 9=0-3-8, 13=0-3-8  
 Max Horz 21=-591(LC 8)  
 Max Uplift 21=-63(LC 12), 9=-194(LC 8)  
 Max Grav 21=1871(LC 1), 9=407(LC 24), 13=2592(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-1161/478, 2-3=-1610/635, 3-4=-1251/609, 4-5=-1192/616, 5-7=-1567/618,  
 7-9=-108/465, 1-21=-1796/528  
 BOT CHORD 20-21=-417/532, 19-20=-702/0, 18-19=-271/0, 16-17=0/2054, 15-16=-181/1381  
 WEBS 2-20=-1210/273, 2-17=-42/688, 17-19=0/944, 3-17=-129/506, 4-17=-366/339,  
 4-15=-560/288, 5-15=-36/414, 7-15=-55/1289, 1-20=-331/1273, 7-13=-2355/524,  
 17-20=-106/1616, 16-19=-843/0

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 10-0-12, Exterior(2) 10-0-12 to 16-6-12, Interior(1) 16-6-12 to 23-0-12, Exterior(2) 23-0-12 to 29-3-7, Interior(1) 29-3-7 to 40-10-9 zone; end vertical left exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 21 except (jt=lb) 9=194.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

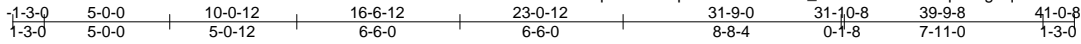


Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738800
J0224-0932	A3	PIGGYBACK BASE	4	1	Job Reference (optional)	

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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:45 2024 Page 1

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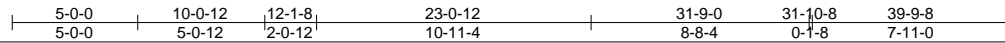
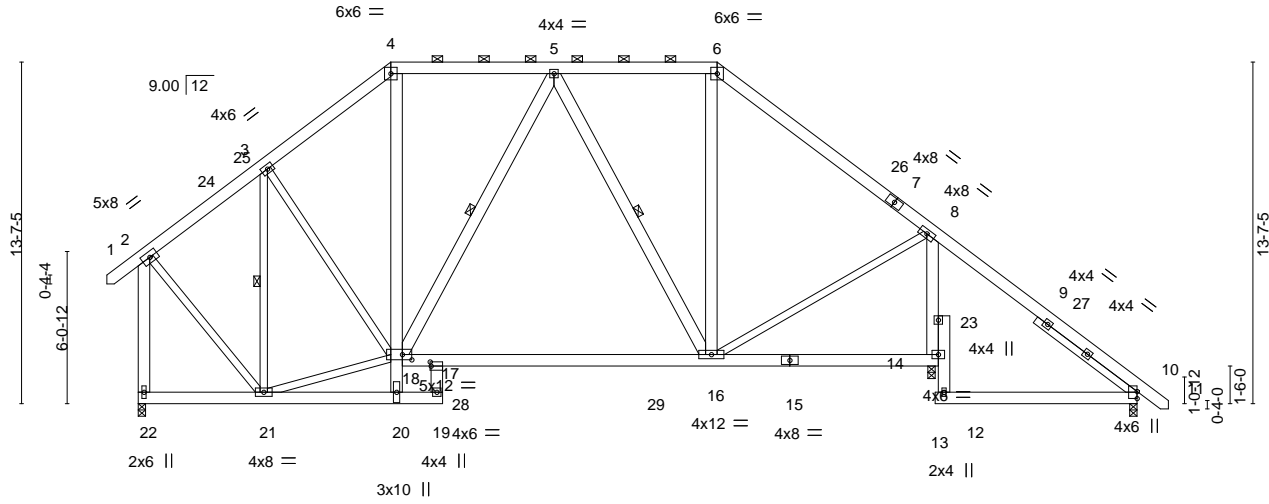


Plate Offsets (X,Y)--	[17:0-0-8,0-2-0], [18:0-4-8,0-2-8]
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LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.35	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.41	Vert(LL) -0.16 16-17 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.59	Vert(CT) -0.25 16-17 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 10 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.06 10-12 >999 240	Weight: 429 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except*	WEBS 1 Row at midpt 3-21, 5-18, 5-16
3-21,3-18,8-16,2-21,18-21: 2x4 SP No.2	
SLIDER Right 2x4 SP No.2 4-11-10	

**REACTIONS.** (size) 22=0-3-8, 10=0-3-8  
 Max Horz 22=402(LC 10)  
 Max Uplift 22=57(LC 12), 10=131(LC 8)  
 Max Grav 22=1329(LC 1), 10=270(LC 24), 14=1728(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-773/340, 3-4=-1066/434, 4-5=-840/415, 5-6=-799/415, 6-8=-1043/417, 8-10=-73/313, 2-22=-1278/413  
 BOT CHORD 21-22=-295/343, 20-21=-367/0, 19-20=-460/0, 17-19=-301/0, 17-18=-22/1273, 16-17=-124/916  
 WEBS 3-21=800/141, 3-18=24/463, 18-20=0/447, 4-18=-90/334, 5-16=-371/197, 6-16=-28/276, 8-16=-39/859, 2-21=-165/839, 8-14=-1573/355, 18-21=-107/1002

- 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) -1-1-4 to 3-3-9, Interior(1) 3-3-9 to 10-0-12, Exterior(2) 10-0-12 to 16-6-12, Interior(1) 16-6-12 to 23-0-12, Exterior(2) 23-0-12 to 29-3-7, Interior(1) 29-3-7 to 40-10-9 zone; end vertical left exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22 except (jt=lb) 10=131.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



February 21, 2024

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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738801
J0224-0932	A3GE	GABLE	1	1	Job Reference (optional)	

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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:47 2024 Page 1  
 ID:qGF8Tsl8epZ?11vN5BS5l5zf\_Uc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCdoi7J4zJC?f



5x10 M18AHS =

Scale = 1:86.1

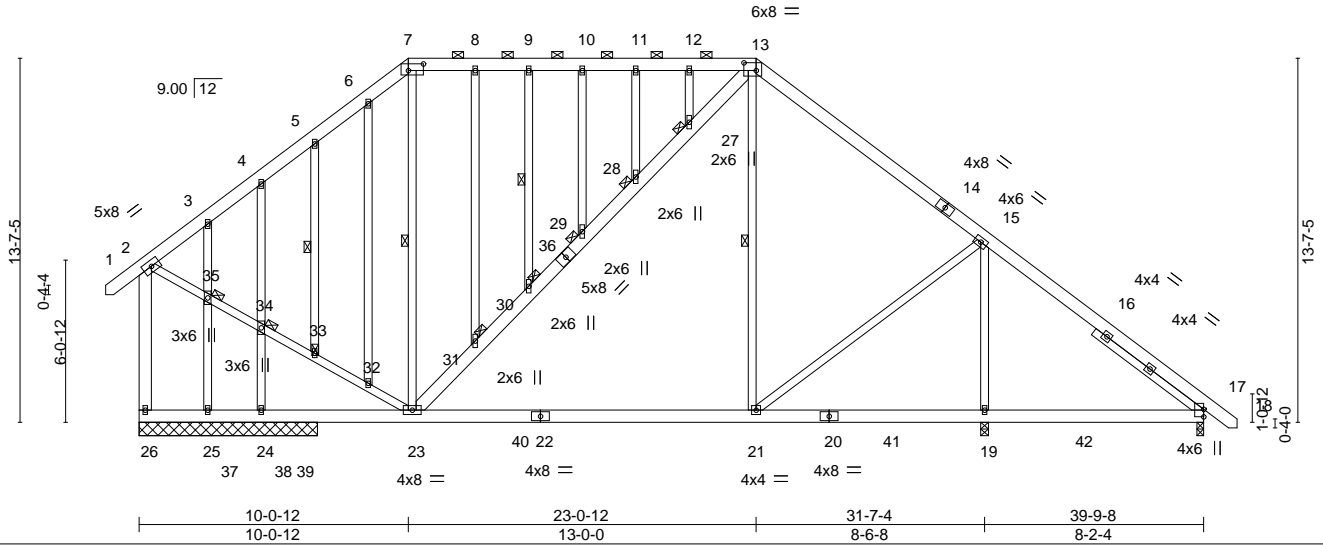


Plate Offsets (X,Y)--	[7:0-6-12,0-3-0], [13:0-5-8,0-3-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.45	Vert(LL)	-0.23	21-23	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.57	Vert(CT)	-0.37	21-23	>885	M18AHS	186/179
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.76	Horz(CT)	0.02	17	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S	Wind(LL)	0.05	17-19	>999		
								Weight: 447 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-13.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 2-26,13-36,23-36: 2x6 SP No.1	WEBS 1 Row at midpt 7-23, 13-21, 9-30, 5-33
OTHERS 2x4 SP No.2	JOINTS 1 Brace at Jt(s): 27, 28, 29, 30, 31, 33, 34, 35
SLIDER Right 2x4 SP No.2 5-0-9	

**REACTIONS.** All bearings 6-8-0 except (jt=length) 19=0-3-8, 17=0-3-0.  
 (lb) - Max Horz 26=-499(LC 6)  
 Max Uplift All uplift 100 lb or less at joint(s) 19 except 26=-432(LC 4), 17=-219(LC 9), 24=-486(LC 8), 25=-116(LC 5)  
 Max Grav All reactions 250 lb or less at joint(s) except 26=1562(LC 1), 19=1366(LC 2), 17=705(LC 1), 24=632(LC 1), 25=320(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-953/220, 3-4=-943/248, 4-5=-970/234, 5-6=-921/258, 6-7=-803/265, 7-8=-739/260, 8-9=-736/259, 9-10=-736/259, 10-11=-736/259, 11-12=-735/259, 12-13=-739/260, 13-15=-1125/322, 15-17=-687/240, 2-26=-1082/223  
 BOT CHORD 25-26=-372/422, 24-25=-372/422, 23-24=-372/422, 21-23=-163/861, 19-21=-104/449, 17-19=-104/449  
 WEBS 13-21=-66/258, 15-21=-77/630, 15-19=-1040/180, 2-35=-251/844, 34-35=-261/844, 33-34=-242/852, 32-33=-249/839, 23-32=-275/888, 4-34=-280/228, 24-34=-327/267, 30-31=-260/210

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; end vertical left exposed; porch right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19 except (jt=lb) 26=432, 17=219, 24=486, 25=116.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738801
J0224-0932	A3GE	GABLE	1	1	Job Reference (optional)	

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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:47 2024 Page 2  
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**NOTES-**

- 12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 446 lb down and 191 lb up at 0-2-12, 196 lb down and 117 lb up at 2-2-12, and 196 lb down and 117 lb up at 4-2-12, and 196 lb down and 117 lb up at 6-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 13) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-60, 2-7=-60, 7-13=-60, 13-18=-60, 17-26=-20
  - Concentrated Loads (lb)
    - Vert: 26=-446(F) 37=-196 38=-196 39=-196



February 21, 2024

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818 Soundside Road  
 Edenton, NC 27932

Job J0224-0932	Truss B1	Truss Type COMMON	Qty 3	Ply 1	Lucas Residence 163738802
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:49 2024 Page 1

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5x5 =

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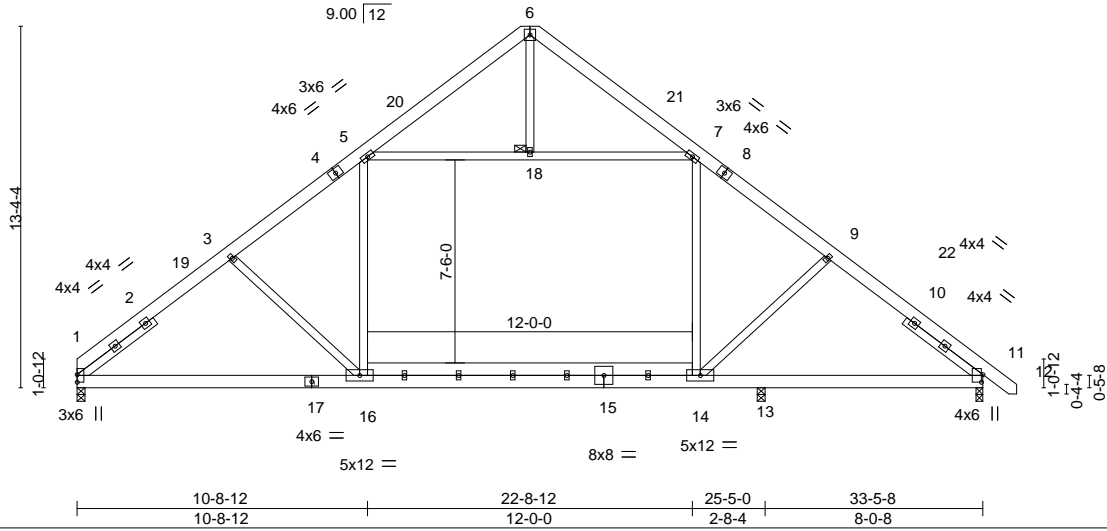


Plate Offsets (X,Y)-- [11:0-3-6,0-0-11]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.64	Vert(LL) -0.31 14-16 >980 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.77	Vert(CT) -0.42 14-16 >715 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 11 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.14 1-16 >999 240	Weight: 286 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2  
 SLIDER Left 2x4 SP No.2 3-6-5, Right 2x4 SP No.2 3-6-5

**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.  
 JOINTS 1 Brace at Jt(s): 18

**REACTIONS.** (size) 1=0-3-8, 11=0-3-0, 13=0-3-8  
 Max Horz 1=-318(LC 10)  
 Max Uplift 1=-96(LC 12), 11=-130(LC 12), 13=-361(LC 8)  
 Max Grav 1=1466(LC 19), 11=1485(LC 19), 13=313(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-3=-1982/369, 3-5=-1773/370, 5-6=-435/178, 6-7=-447/183, 7-9=-1895/375, 9-11=-2088/374  
 BOT CHORD 1-16=-189/1668, 14-16=-62/1548, 13-14=-155/1535, 11-13=-155/1535  
 WEBS 5-16=0/534, 7-14=-59/639, 5-18=-1211/319, 7-18=-1211/319

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 16-8-12, Exterior(2) 16-8-12 to 21-1-9, Interior(1) 21-1-9 to 34-6-12 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 11=130, 13=361.



February 21, 2024

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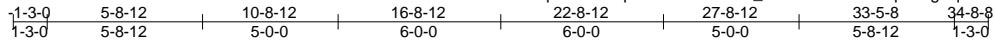
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 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738803
J0224-0932	B2	COMMON	2	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:50 2024 Page 1

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5x5 =

Scale = 1:85.0

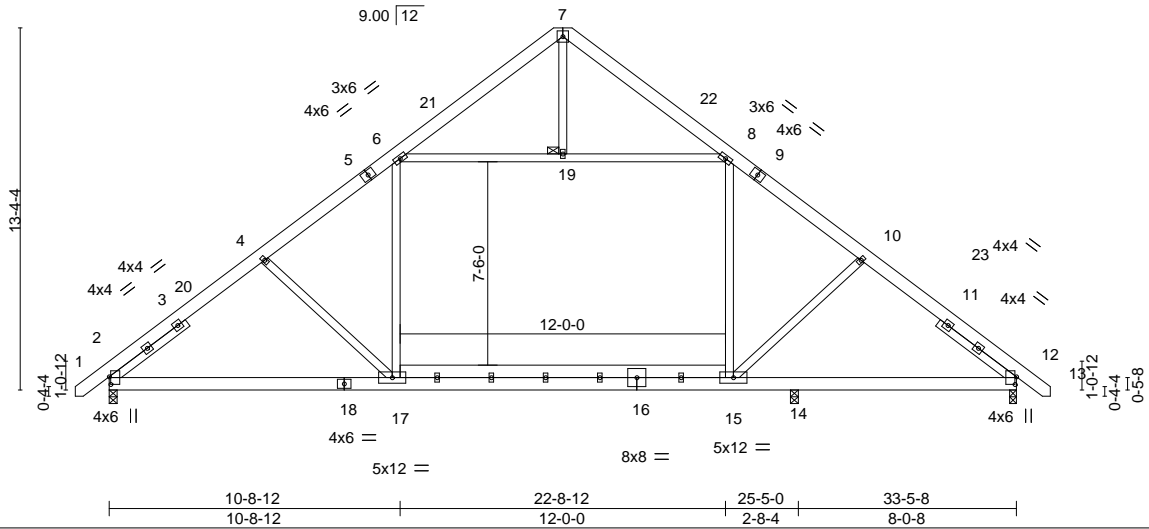


Plate Offsets (X,Y)--	[2:0-3-6,0-0-11], [12:0-3-6,0-0-11]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.64	Vert(LL) -0.31 15-17 >982 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.77	Vert(CT) -0.42 15-17 >715 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 12 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.14 2-17 >999 240	Weight: 289 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-4-9 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): 19
SLIDER Left 2x4 SP No.2 3-6-5, Right 2x4 SP No.2 3-6-5	

**REACTIONS.** (size) 2=0-3-8, 12=0-3-0, 14=0-3-8  
 Max Horz 2=321(LC 11)  
 Max Uplift 2=-112(LC 12), 12=-129(LC 12), 14=-361(LC 8)  
 Max Grav 2=1528(LC 19), 12=1482(LC 19), 14=314(LC 24)

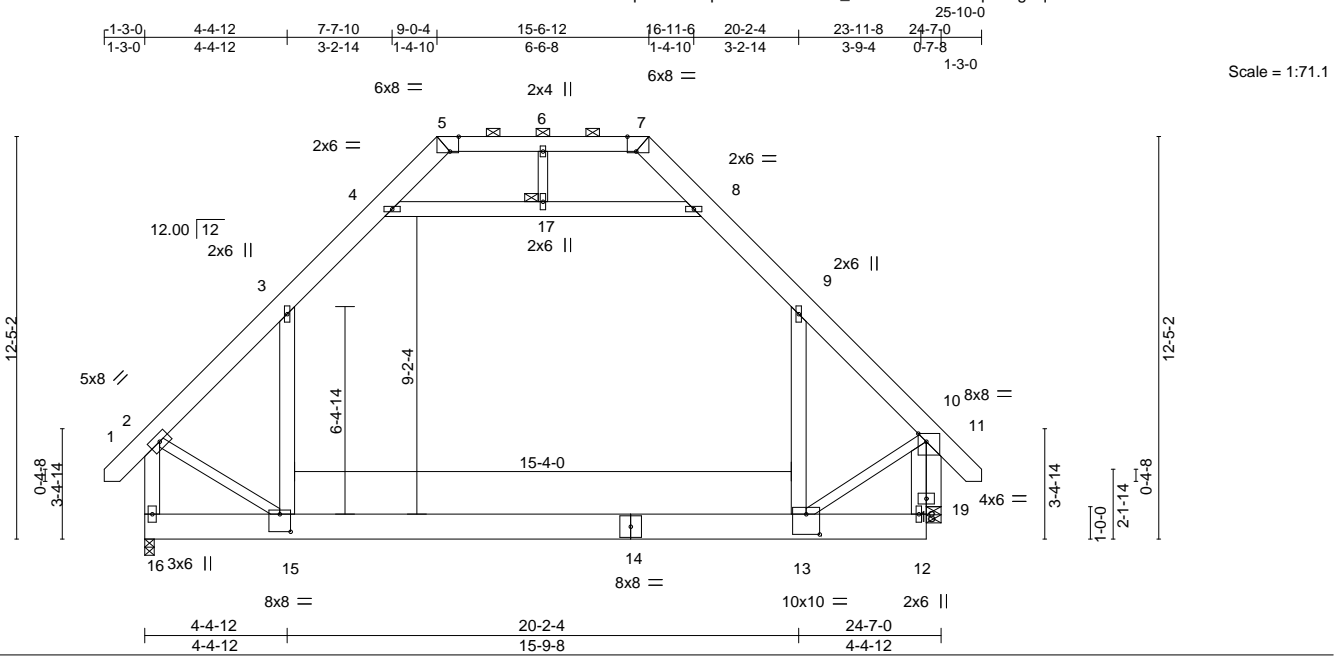
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1973/354, 4-6=-1768/358, 6-7=-435/178, 7-8=-447/183, 8-10=-1891/374, 10-12=-2084/373  
 BOT CHORD 2-17=-187/1661, 15-17=-61/1544, 14-15=-154/1532, 12-14=-154/1532  
 WEBS 4-17=-251/189, 6-17=0/530, 8-15=-59/637, 6-19=-1208/319, 8-19=-1208/319

- 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) -1-1-4 to 3-3-9, Interior(1) 3-3-9 to 16-8-12, Exterior(2) 16-8-12 to 21-1-9, Interior(1) 21-1-9 to 34-6-12 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are 2x4 MT20 unless otherwise indicated.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=112, 12=129, 14=361.



February 21, 2024

Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738804
J0224-0932	C1	ATTIC	4	1		
Comtech, Inc. Fayetteville, NC - 28314,						8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:51 2024 Page 1
						ID:qGF8Tsl8epZ?11vN5BS5i5zf_Uc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.26 13-15 >999 360	MT20	244/190		
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.40 13-15 >718 240				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.01 19 n/a n/a				
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	-0.07 13-15 >999 240	Weight: 284 lb	FT = 20%		

LUMBER-		BRACING-	
TOP CHORD	2x8 SP 2400F 2.0E *Except* 5-7: 2x6 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD	2x10 SP 2400F 2.0E	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x6 SP No.1 *Except*	JOINTS	1 Brace at Jt(s): 17
OTHERS	2-15,10-13,6-17: 2x4 SP No.2 2x6 SP No.1		

REACTIONS.	
(size)	16=0-3-8, 19=0-5-8
Max Horz	16=310(LC 10)
Max Grav	16=1766(LC 2), 19=1757(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	2-3=-1741/0, 3-4=-1124/219, 4-5=-397/225, 5-6=-208/312, 6-7=-208/312, 7-8=-395/222, 8-9=-1120/216, 9-10=-1755/16, 2-16=-2139/0
BOT CHORD	15-16=-291/361, 13-15=0/1107, 12-13=-4/279
WEBS	3-15=-33/823, 9-13=-1/876, 4-17=-1282/134, 8-17=-1282/134, 2-15=0/1279, 12-18=-530/92, 10-18=-530/92, 10-13=0/1119, 10-19=-1790/76

- 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) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 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.
  - 6) Ceiling dead load (10.0 psf) on member(s). 3-4, 8-9, 4-17, 8-17; Wall dead load (5.0psf) on member(s). 3-15, 9-13
  - 7) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 13-15
  - 8) Bearing at joint(s) 19 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 10) Attic room checked for L/360 deflection.



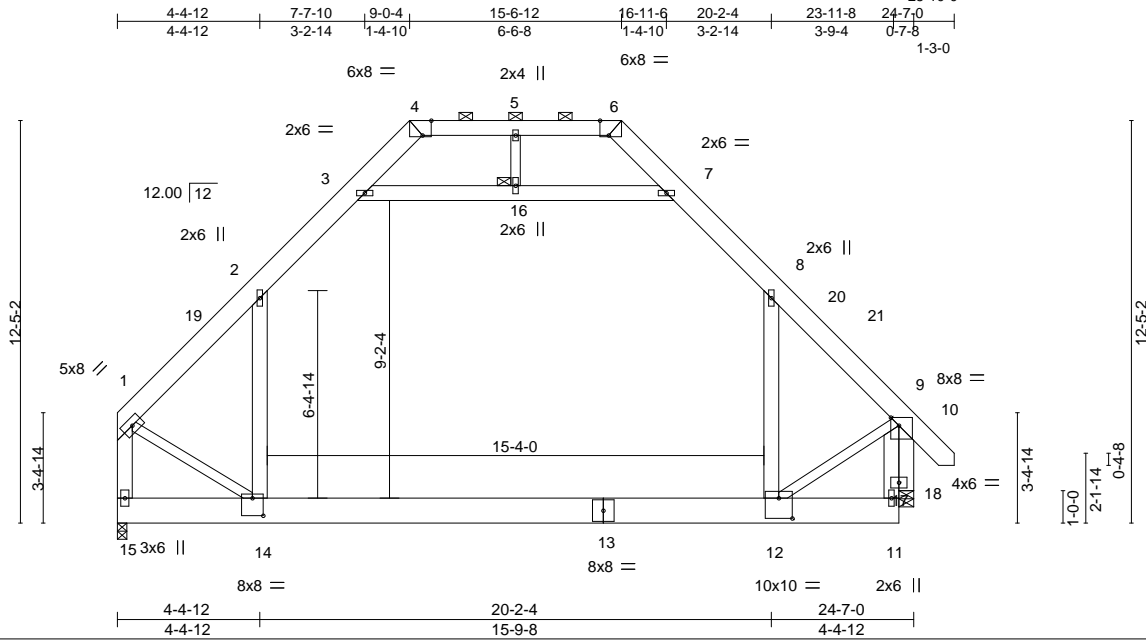


Job	Truss	Truss Type	Qty	Ply	Lucas Residence	63738805
J0224-0932	C2	ATTIC	3	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:53 2024 Page 1

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Scale = 1:71.1

Plate Offsets (X,Y)--	[4:0-3-4,Edge], [6:0-3-4,Edge], [9:0-3-0,Edge], [12:0-5-0,0-7-8], [14:0-4-0,0-6-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.30	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.41	Vert(LL) -0.26 12-14 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.32	Vert(CT) -0.40 12-14 >717 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 18 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) -0.06 12-14 >999 240	Weight: 280 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 SP 2400F 2.0E *Except* 4-6: 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD 2x10 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except*	JOINTS 1 Brace at Jt(s): 16
1-14,9-12,5-16: 2x4 SP No.2	
OTHERS 2x6 SP No.1	

<b>REACTIONS.</b>	(size) 15=0-3-8, 18=0-5-8 Max Horz 15=-317(LC 10) Max Grav 15=1702(LC 2), 18=1758(LC 2)
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<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-2=-1751/0, 2-3=-1126/189, 3-4=-395/169, 4-5=-205/314, 5-6=-205/314, 6-7=-393/161, 7-8=-1122/199, 8-9=-1779/24, 1-15=-2104/0
BOT CHORD	14-15=-227/320, 12-14=0/1113, 11-12=0/280
WEBS	2-14=-42/814, 8-12=0/877, 3-16=-1285/98, 7-16=-1285/98, 1-14=0/1281, 11-17=-512/58, 9-17=-512/58, 9-12=0/1119, 9-18=-1791/57

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-4-12, Interior(1) 4-4-12 to 9-2-10, Exterior(2) 9-2-10 to 21-7-1, Interior(1) 21-7-1 to 25-7-2 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
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-16, 7-16; Wall dead load (5.0psf) on member(s). 2-14, 8-12
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
  - Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Attic room checked for L/360 deflection.

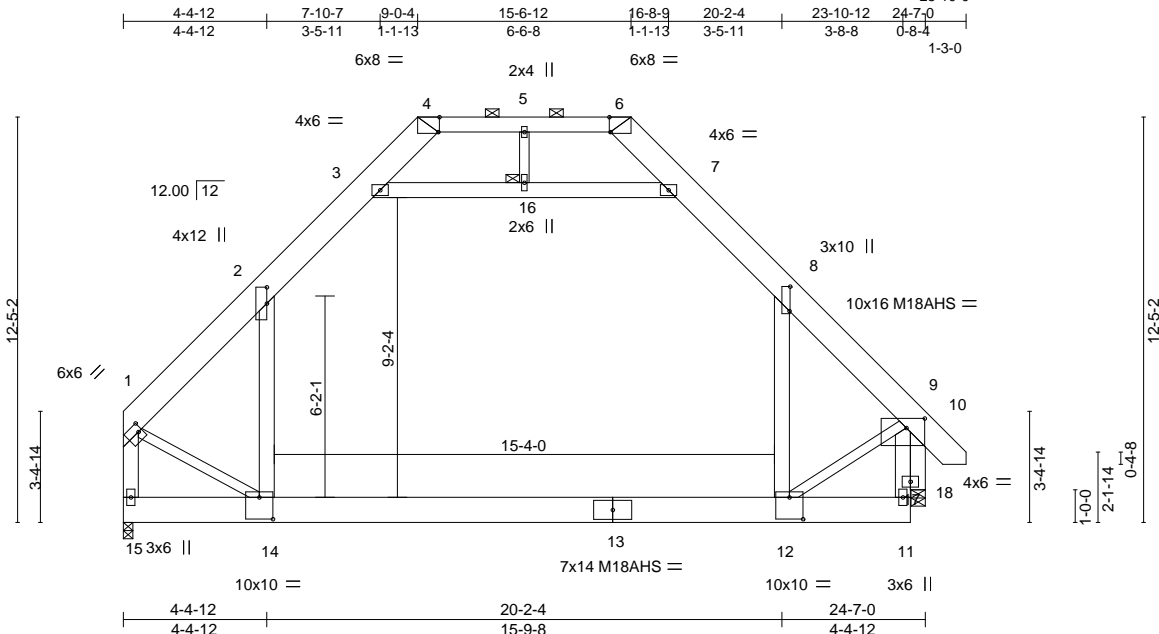


Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738806
J0224-0932	C2-GR	ATTIC	1	3	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

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Scale = 1:70.6

Plate Offsets (X,Y)--	[1:0-1-8,0-3-0], [2:0-6-0,0-0-0], [4:0-0-7,Edge], [6:0-0-7,Edge], [8:0-9-0,0-0-4], [9:0-6-12,0-3-8], [12:0-5-0,0-8-0], [14:0-5-0,0-8-0]
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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 0.54	Vert(LL)	-0.49 12-14	>585	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.70	Vert(CT)	-0.61 12-14	>474	240	M18AHS	186/179
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.48	Horz(CT)	0.02 18	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.06 12-14	>999	240		
								Weight: 904 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x10 SP 2400F 2.0E *Except* 4-6: 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 4-6.
BOT CHORD 2x10 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except*	JOINTS 1 Brace at Jt(s): 16
1-14,9-12,5-16: 2x4 SP No.2	
OTHERS 2x6 SP No.1	

<b>REACTIONS.</b>	(size) 15=0-3-8, 18=0-5-4 Max Horz 15=240(LC 6) Max Grav 15=9697(LC 2), 18=8132(LC 2)
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<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-2=-9084/0, 2-3=-3910/0, 3-4=-224/2034, 4-5=0/2940, 5-6=0/2940, 6-7=-205/1720, 7-8=-4218/0, 8-9=-8605/0, 1-15=-10821/0, 11-17=-2169/77, 9-17=-2169/77
BOT CHORD	14-15=-247/253, 12-14=0/5192, 11-12=0/1395
WEBS	2-14=0/7146, 8-12=0/6053, 3-16=-8133/0, 7-16=-8133/0, 1-14=0/5850, 9-12=0/4940, 5-16=0/266, 9-18=-8293/0

- NOTES-**
- 1) N/A
  - 2) 3-ply truss to be connected together as follows:  
Top chords connected with 10d (0.148"x3") nails as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected with 10d (0.148"x3") nails as follows: 2x10 - 5 rows staggered at 0-4-0 oc.  
Web connected with 10d (0.148"x3") nails as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
  - 3) 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.
  - 4) Unbalanced roof live loads have been considered for this design.
  - 5) 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
  - 6) Provide adequate drainage to prevent water ponding.
  - 7) All plates are MT20 plates unless otherwise indicated.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 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.
  - 10) Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-16, 7-16; Wall dead load (5.0psf) on member(s).2-14, 8-12
  - 11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
  - 12) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 13) Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this



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.**

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	Truss	Truss Type	Qty	Ply	Lucas Residence
J0224-0932	C2-GR	ATTIC	1	3	163738806

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:54 2024 Page 2  
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**NOTES-**

- 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 5200 lb down and 449 lb up at 4-5-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 16) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-60, 2-3=-80, 3-4=-60, 4-6=-60, 6-7=-60, 7-8=-80, 8-9=-60, 9-10=-60, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20  
Drag: 2-14=-10, 8-12=-10
- 2) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-50, 2-3=-70, 3-4=-50, 4-6=-50, 6-7=-50, 7-8=-70, 8-9=-50, 9-10=-50, 14-15=-20, 12-14=-540(B=-440), 11-12=-620(B=-600), 3-7=-20  
Drag: 2-14=-10, 8-12=-10  
Concentrated Loads (lb)  
Vert: 14=-5200(B)
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-6=-20, 6-7=-20, 7-8=-40, 8-9=-20, 9-10=-20, 14-15=-40, 12-14=-95(B=-55), 11-12=-115(B=-75), 3-7=-20  
Drag: 2-14=-10, 8-12=-10  
Concentrated Loads (lb)  
Vert: 14=-1950(B)
- 4) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-13, 2-3=-25, 3-4=-13, 4-6=21, 6-7=11, 7-8=-1, 8-9=11, 9-10=4, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12  
Horz: 1-4=1, 6-9=23, 9-10=16  
Drag: 2-14=-10, 8-12=-10  
Concentrated Loads (lb)  
Vert: 14=449(B)
- 5) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=11, 2-3=-1, 3-4=11, 4-6=21, 6-7=-13, 7-8=-25, 8-9=-13, 9-10=2, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12  
Horz: 1-4=-23, 6-9=1, 9-10=14  
Drag: 2-14=-10, 8-12=-10  
Concentrated Loads (lb)  
Vert: 14=449(B)
- 6) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-35, 2-3=-55, 3-4=-35, 4-6=-1, 6-7=-11, 7-8=-31, 8-9=-11, 9-10=-4, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20  
Horz: 1-4=15, 6-9=9, 9-10=16  
Drag: 2-14=-10, 8-12=-10
- 7) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-11, 2-3=-31, 3-4=-11, 4-6=-1, 6-7=-35, 7-8=-55, 8-9=-35, 9-10=-28, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20  
Horz: 1-4=-9, 6-9=-15, 9-10=-8  
Drag: 2-14=-10, 8-12=-10
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=21, 2-3=9, 3-4=21, 4-6=9, 6-7=9, 7-8=-3, 8-9=9, 9-10=2, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12  
Horz: 1-4=-33, 6-9=21, 9-10=14  
Drag: 2-14=-10, 8-12=-10  
Concentrated Loads (lb)  
Vert: 14=265(B)
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=9, 2-3=-3, 3-4=9, 4-6=9, 6-7=21, 7-8=9, 8-9=21, 9-10=14, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12  
Horz: 1-4=-21, 6-9=33, 9-10=26  
Drag: 2-14=-10, 8-12=-10  
Concentrated Loads (lb)  
Vert: 14=265(B)
- 10) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=21, 2-3=9, 3-4=21, 4-6=9, 6-7=9, 7-8=-3, 8-9=9, 9-10=2, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12  
Horz: 1-4=-33, 6-9=21, 9-10=14  
Drag: 2-14=-10, 8-12=-10  
Concentrated Loads (lb)  
Vert: 14=265(B)
- 11) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60



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Continued on page 3

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lucas Residence
J0224-0932	C2-GR	ATTIC	1	3	163738806

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:54 2024 Page 3  
ID:qGF8Tsl8epZ?11vN5BS5l5zf\_Uc-RfC?PsB70Hq3NSGpqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Uniform Loads (plf)  
Vert: 1-2=9, 2-3=-3, 3-4=9, 4-6=9, 6-7=21, 7-8=9, 8-9=21, 9-10=14, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12  
Horz: 1-4=-21, 6-9=33, 9-10=26  
Drag: 2-14=-10, 8-12=-10
- Concentrated Loads (lb)  
Vert: 14=265(B)
- 12) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-1, 2-3=-21, 3-4=-1, 4-6=-13, 6-7=-13, 7-8=-33, 8-9=-13, 9-10=-6, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20  
Horz: 1-4=-19, 6-9=7, 9-10=14  
Drag: 2-14=-10, 8-12=-10
- 13) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-13, 2-3=-33, 3-4=-13, 4-6=-13, 6-7=-1, 7-8=-21, 8-9=-1, 9-10=6, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20  
Horz: 1-4=-7, 6-9=19, 9-10=26  
Drag: 2-14=-10, 8-12=-10
- 14) Dead + Attic Floor: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-6=-20, 6-7=-20, 7-8=-40, 8-9=-20, 9-10=-20, 14-15=-20, 12-14=-395(B=-275), 11-12=-395(B=-375), 3-7=-20  
Drag: 2-14=-10, 8-12=-10
- Concentrated Loads (lb)  
Vert: 14=-3900(B)
- 15) Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-6=-20, 6-7=-20, 7-8=-40, 8-9=-20, 9-10=-20, 14-15=-20, 12-14=-395(B=-275), 11-12=-395(B=-375), 3-7=-20  
Drag: 2-14=-10, 8-12=-10
- 16) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-61, 2-3=-81, 3-4=-61, 4-6=-36, 6-7=-43, 7-8=-63, 8-9=-43, 9-10=-38, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20  
Horz: 1-4=11, 6-9=7, 9-10=12  
Drag: 2-14=-10, 8-12=-10
- 17) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-43, 2-3=-63, 3-4=-43, 4-6=-36, 6-7=-61, 7-8=-81, 8-9=-61, 9-10=-56, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20  
Horz: 1-4=7, 6-9=-11, 9-10=6  
Drag: 2-14=-10, 8-12=-10
- 18) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-36, 2-3=-56, 3-4=-36, 4-6=-45, 6-7=-45, 7-8=-65, 8-9=-45, 9-10=-40, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20  
Horz: 1-4=-14, 6-9=5, 9-10=10  
Drag: 2-14=-10, 8-12=-10
- 19) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-45, 2-3=-65, 3-4=-45, 4-6=-45, 6-7=-36, 7-8=-56, 8-9=-36, 9-10=-31, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20  
Horz: 1-4=-5, 6-9=14, 9-10=19  
Drag: 2-14=-10, 8-12=-10
- 20) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-60, 2-3=-80, 3-4=-60, 4-6=-60, 6-7=-20, 7-8=-40, 8-9=-20, 9-10=-20, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20  
Drag: 2-14=-10, 8-12=-10
- 21) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-6=-60, 6-7=-60, 7-8=-80, 8-9=-60, 9-10=-60, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20  
Drag: 2-14=-10, 8-12=-10
- 22) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-50, 2-3=-70, 3-4=-50, 4-6=-50, 6-7=-20, 7-8=-40, 8-9=-20, 9-10=-20, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20  
Drag: 2-14=-10, 8-12=-10
- 23) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-6=-50, 6-7=-50, 7-8=-70, 8-9=-50, 9-10=-50, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20  
Drag: 2-14=-10, 8-12=-10
- 24) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-13, 2-3=-25, 3-4=-13, 4-6=21, 6-7=11, 7-8=-1, 8-9=11, 9-10=4, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12  
Horz: 1-4=1, 6-9=23, 9-10=16  
Drag: 2-14=-10, 8-12=-10
- Concentrated Loads (lb)  
Vert: 14=449(B)
- 25) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60



February 21, 2024

Continued on page 4

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lucas Residence
J0224-0932	C2-GR	ATTIC	1	3	163738806

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:54 2024 Page 4  
 ID:qGF8Tsl8epZ?11vN5BS5l5zf\_Uc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Uniform Loads (plf)
  - Vert: 1-2=11, 2-3=-1, 3-4=11, 4-6=21, 6-7=-13, 7-8=-25, 8-9=-13, 9-10=2, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12
  - Horz: 1-4=-23, 6-9=-1, 9-10=14
  - Drag: 2-14=-10, 8-12=-10
- Concentrated Loads (lb)
  - Vert: 14=449(B)
- 26) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-35, 2-3=-55, 3-4=-35, 4-6=-1, 6-7=-11, 7-8=-31, 8-9=-11, 9-10=-4, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20
    - Horz: 1-4=15, 6-9=9, 9-10=16
    - Drag: 2-14=-10, 8-12=-10
- 27) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-11, 2-3=-31, 3-4=-11, 4-6=-1, 6-7=-35, 7-8=-55, 8-9=-35, 9-10=-28, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20
    - Horz: 1-4=-9, 6-9=-15, 9-10=8
    - Drag: 2-14=-10, 8-12=-10
- 28) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=21, 2-3=9, 3-4=21, 4-6=9, 6-7=9, 7-8=-3, 8-9=9, 9-10=2, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12
    - Horz: 1-4=-33, 6-9=21, 9-10=14
    - Drag: 2-14=-10, 8-12=-10
  - Concentrated Loads (lb)
    - Vert: 14=265(B)
- 29) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=9, 2-3=-3, 3-4=9, 4-6=9, 6-7=21, 7-8=9, 8-9=21, 9-10=14, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12
    - Horz: 1-4=-21, 6-9=33, 9-10=26
    - Drag: 2-14=-10, 8-12=-10
  - Concentrated Loads (lb)
    - Vert: 14=265(B)
- 30) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=21, 2-3=9, 3-4=21, 4-6=9, 6-7=9, 7-8=-3, 8-9=9, 9-10=2, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12
    - Horz: 1-4=-33, 6-9=21, 9-10=14
    - Drag: 2-14=-10, 8-12=-10
  - Concentrated Loads (lb)
    - Vert: 14=265(B)
- 31) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=9, 2-3=-3, 3-4=9, 4-6=9, 6-7=21, 7-8=9, 8-9=21, 9-10=14, 14-15=-12, 12-14=-79(B=-55), 11-12=-87(B=-75), 3-7=-12
    - Horz: 1-4=-21, 6-9=33, 9-10=26
    - Drag: 2-14=-10, 8-12=-10
  - Concentrated Loads (lb)
    - Vert: 14=265(B)
- 32) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-1, 2-3=-21, 3-4=-1, 4-6=-13, 6-7=-13, 7-8=-33, 8-9=-13, 9-10=-6, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20
    - Horz: 1-4=-19, 6-9=7, 9-10=14
    - Drag: 2-14=-10, 8-12=-10
- 33) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-13, 2-3=-33, 3-4=-13, 4-6=-13, 6-7=-1, 7-8=-21, 8-9=-1, 9-10=6, 14-15=-20, 12-14=-95(B=-55), 11-12=-95(B=-75), 3-7=-20
    - Horz: 1-4=-7, 6-9=19, 9-10=26
    - Drag: 2-14=-10, 8-12=-10
- 34) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-61, 2-3=-81, 3-4=-61, 4-6=-36, 6-7=-43, 7-8=-63, 8-9=-43, 9-10=-38, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20
    - Horz: 1-4=11, 6-9=7, 9-10=12
    - Drag: 2-14=-10, 8-12=-10
- 35) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-43, 2-3=-63, 3-4=-43, 4-6=-36, 6-7=-61, 7-8=-81, 8-9=-61, 9-10=-56, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20
    - Horz: 1-4=-7, 6-9=-11, 9-10=-6
    - Drag: 2-14=-10, 8-12=-10
- 36) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60



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Continued on page 5

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818 Soundside Road  
 Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lucas Residence	163738806
J0224-0932	C2-GR	ATTIC	1	3	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:54 2024 Page 5  
 ID:qGF8Tsl8epZ?11vN5BS5l5zf\_Uc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-2=-36, 2-3=-56, 3-4=-36, 4-6=-45, 6-7=-45, 7-8=-65, 8-9=-45, 9-10=40, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20  
 Horz: 1-4=-14, 6-9=5, 9-10=10  
 Drag: 2-14=10, 8-12=10

37) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-45, 2-3=-65, 3-4=-45, 4-6=-45, 6-7=-36, 7-8=-56, 8-9=-36, 9-10=-31, 14-15=-20, 12-14=-320(B=-220), 11-12=-320(B=-300), 3-7=-20  
 Horz: 1-4=-5, 6-9=14, 9-10=19  
 Drag: 2-14=-10, 8-12=10



February 21, 2024

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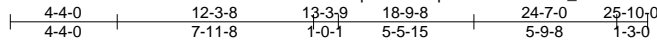
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lucas Residence
J0224-0932	C3	ROOF SPECIAL	4	1	163738807

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:55 2024 Page 1

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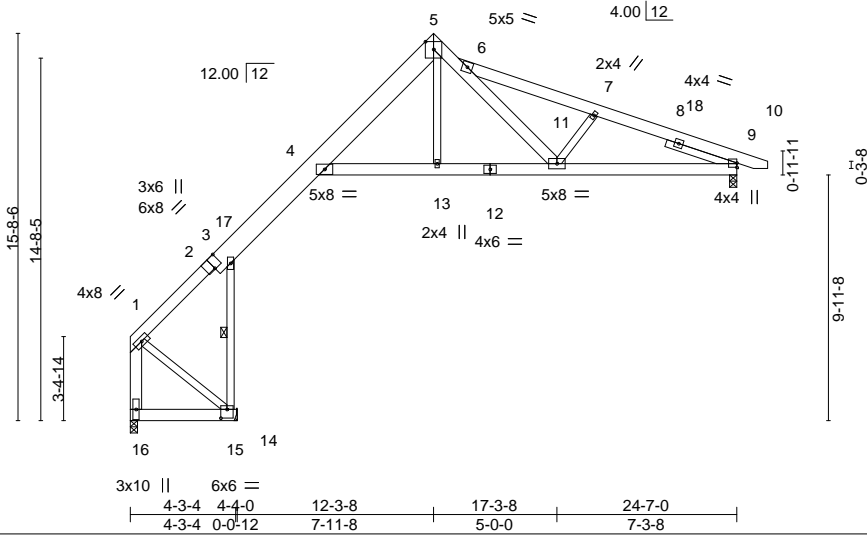


Plate Offsets (X,Y)--	[2:0-4-0,Edge], [15:0-3-0,0-4-4]
-----------------------	----------------------------------

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.49	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.28	Vert(LL) -0.09 4-13 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.15	Vert(CT) -0.18 4-13 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.17 9 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.09 4-13 >999 240	Weight: 197 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1 *Except* 2-5: 2x10 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1 *Except* 3-15: 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 15-16. 5-0-0 oc bracing: 3-15
WEBS 2x4 SP No.2 *Except* 1-16: 2x6 SP No.1	
SLIDER Right 2x4 SP No.2 2-11-13	

REACTIONS.
(size) 16=0-3-8, 15=Mechanical, 9=0-3-8
Max Horz 16=287(LC 12)
Max Uplift 16=446(LC 10), 15=601(LC 12), 9=97(LC 9)
Max Grav 16=501(LC 12), 15=1424(LC 19), 9=825(LC 1)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-386/601, 3-4=-541/64, 4-5=-969/208, 5-6=-558/200, 6-11=-77/490, 6-7=-1257/320, 7-9=-1445/348, 1-16=-484/695
BOT CHORD 15-16=-280/301, 3-15=-1347/561, 4-13=-98/775, 11-13=-97/780, 9-11=-256/1285
WEBS 1-15=-397/361, 7-11=-275/172

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 12-3-8, Exterior(2) 12-3-8 to 13-2-1, Interior(1) 13-2-1 to 25-6-9 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 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.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 16=446, 15=601.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



February 21, 2024

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

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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

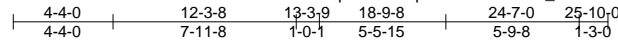
818 Soundside Road  
 Edenton, NC 27932

Job J0224-0932	Truss C3A	Truss Type ROOF SPECIAL	Qty 1	Ply 1	Lucas Residence 163738808
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:57 2024 Page 1

ID:qGF8Tsl8epZ?11vN5BS5i5zf\_Uc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



8x16 M18AHS ||

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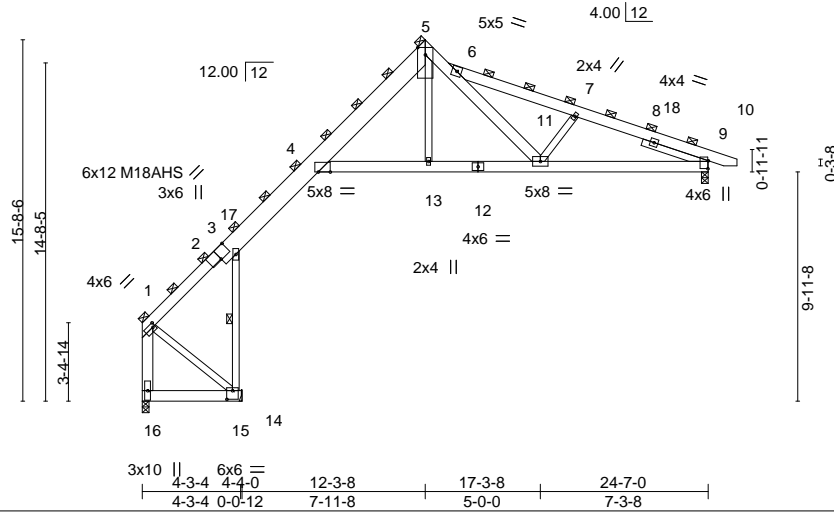


Plate Offsets (X, Y)-- [1:0-1-4,0-2-0], [2:0-6-0,Edge], [4:0-6-4,Edge], [9:0-4-2,0-0-4], [15:0-3-0,0-4-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	3-0-0	TC 0.87	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.47	Vert(LL) -0.14 4-13 >999 360	M18AHS	186/179
BCLL 0.0 *	Lumber DOL 1.15	WB 0.23	Vert(CT) -0.28 4-13 >890 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.25 9 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.13 4-13 >999 240		
				Weight: 197 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1 *Except* 2-5: 2x10 SP No.1	TOP CHORD 2-0-0 oc purlins (5-3-0 max.), except end verticals (Switched from sheeted: Spacing > 2-8-0).
BOT CHORD 2x6 SP No.1 *Except* 3-15: 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 15-16. 4-0-0 oc bracing: 3-15
WEBS 2x4 SP No.2 *Except* 1-16: 2x6 SP No.1	
SLIDER Right 2x4 SP No.2 2-11-13	

REACTIONS.
(size) 16=0-3-8, 15=Mechanical, 9=0-3-8
Max Horz 16=431(LC 12)
Max Uplift 16=669(LC 10), 15=902(LC 12), 9=145(LC 9)
Max Grav 16=752(LC 12), 15=2135(LC 19), 9=1238(LC 1)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-580/901, 3-4=-811/96, 4-5=-1453/312, 5-6=-837/300, 6-11=-116/735, 6-7=-1885/480, 7-9=-2168/522, 1-16=-726/1042
BOT CHORD 15-16=-420/452, 3-15=-2020/841, 4-13=-146/1162, 11-13=-145/1170, 9-11=-385/1927
WEBS 1-15=-595/541, 5-13=0/373, 7-11=-413/257

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 12-3-8, Exterior(2) 12-3-8 to 13-2-1, Interior(1) 13-2-1 to 25-6-9 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are MT20 plates unless otherwise indicated.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 16=669, 15=902, 9=145.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



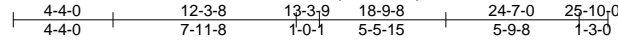
February 21, 2024

Job	Truss	Truss Type	Qty	Ply	Lucas Residence
J0224-0932	C3SG	GABLE	1	1	163738809
					Job Reference (optional)

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:58 2024 Page 1

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8x16 M18AHS ||

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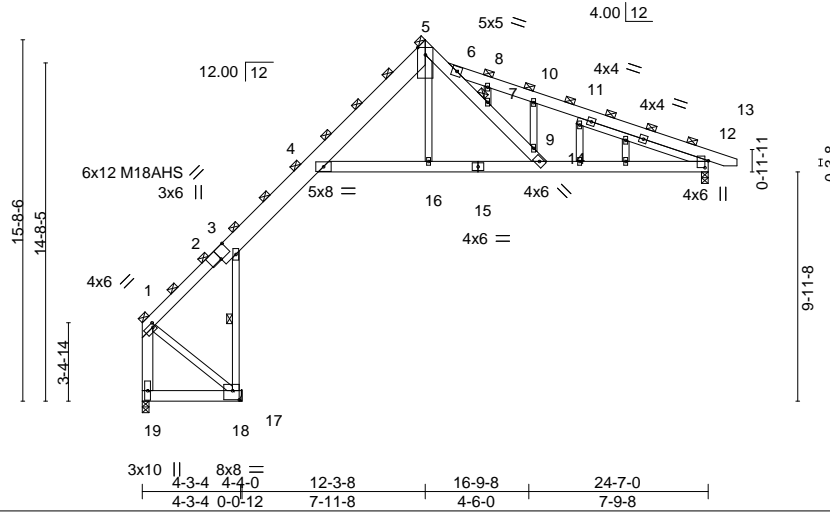


Plate Offsets (X,Y)-- [1:0-1-4,0-2-0], [2:0-6-0,Edge], [12:0-3-10,0-1-12], [18:0-3-8,0-4-12]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	3-0-0	TC 0.87	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.47	Vert(LL) -0.14 4-16 >999 360	M18AHS	186/179
BCLL 0.0 *	Lumber DOL 1.15	WB 0.23	Vert(CT) -0.27 4-16 >899 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.25 12 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.18 4-16 >999 240	Weight: 207 lb	FT = 20%

**LUMBER-**  
**TOP CHORD** 2x6 SP No.1 \*Except\*  
 2-5: 2x10 SP No.1  
**BOT CHORD** 2x6 SP No.1 \*Except\*  
 3-18: 2x4 SP No.2  
**WEBS** 2x4 SP No.2 \*Except\*  
 1-19: 2x6 SP No.1  
**OTHERS** 2x4 SP No.2  
**SLIDER** Right 2x4 SP No.2 5-11-8

**BRACING-**  
**TOP CHORD** 2-0-0 oc purlins (5-4-3 max.), except end verticals  
 (Switched from sheeted: Spacing > 2-8-0).  
**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 6-0-0 oc bracing: 18-19.  
 4-0-0 oc bracing: 3-18  
**JOINTS** 1 Brace at Jt(s): 5, 1, 7

**REACTIONS.** (size) 19=0-3-8, 18=Mechanical, 12=0-3-8  
 Max Horz 19=642(LC 12)  
 Max Uplift 19=830(LC 10), 18=1536(LC 12), 12=332(LC 9)  
 Max Grav 19=1137(LC 12), 18=2239(LC 19), 12=1238(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 1-3=-871/900, 3-4=-811/224, 4-5=-1450/469, 5-6=-838/343, 6-7=-399/968,  
 7-9=-449/1011, 9-14=-121/646, 6-8=-1973/830, 8-10=-2051/842, 10-12=-2107/686,  
 1-19=-1094/1041  
**BOT CHORD** 18-19=-621/452, 3-18=-2019/1065, 4-16=-203/1153, 14-16=-203/1162, 12-14=-504/1864  
**WEBS** 1-18=-595/801, 5-16=0/388, 9-10=-541/467

- 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 MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 19=830, 18=1536, 12=332.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



February 21, 2024

**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)



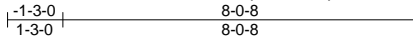
818 Soundside Road  
 Edenton, NC 27932

Job J0224-0932	Truss C4	Truss Type MONOPICH	Qty 2	Ply 1	Lucas Residence 163738810
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 09:59:59 2024 Page 1

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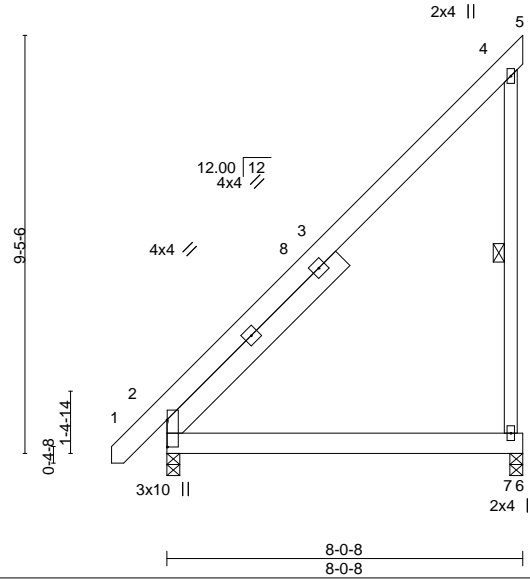


Plate Offsets (X,Y)--	[2:0-7-6,0-0-1]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.60	Vert(LL) -0.05 2-7 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.25	Vert(CT) -0.10 2-7 >948 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.00 7 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P	Wind(LL) 0.00 2 **** 240	Weight: 75 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 4-7
SLIDER Left 2x6 SP No.1 5-7-4	

**REACTIONS.** (size) 7=0-3-8, 2=0-3-8  
 Max Horz 2=295(LC 12)  
 Max Uplift 7=196(LC 12)  
 Max Grav 7=376(LC 19), 2=382(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-334/293, 4-7=-437/383

- 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) -1-1-6 to 3-3-7, Interior(1) 3-3-7 to 8-0-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=196.



February 21, 2024

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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932



Job J0224-0932	Truss C5	Truss Type COMMON	Qty 7	Ply 1	Lucas Residence 163738811
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:00 2024 Page 1

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5x8 =

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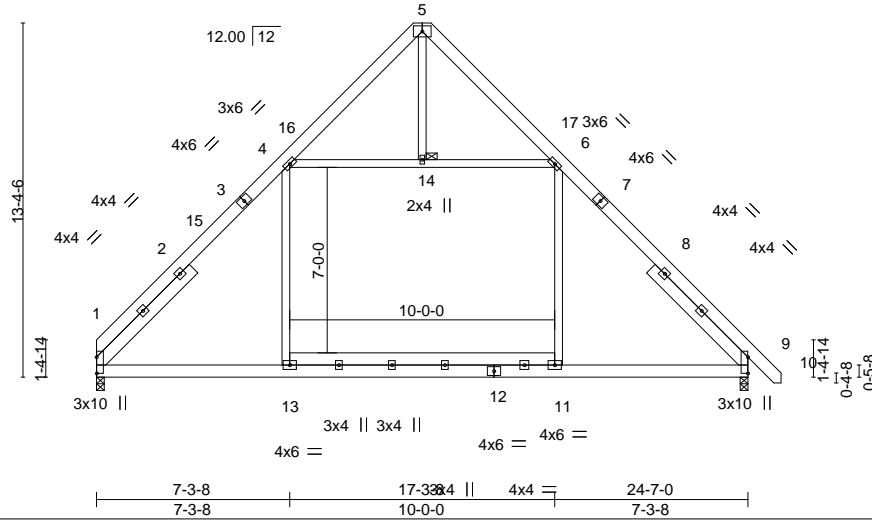


Plate Offsets (X,Y)--	[1:0-7-6,0-0-1], [9:0-7-6,0-0-1]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.22	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.42	Vert(LL) 0.20 1-13 >999 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.16	Vert(CT) -0.21 1-13 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.02 9 n/a n/a		
	Code IRC2015/TPI2014			Weight: 236 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	JOINTS 1 Brace at Jt(s): 14
SLIDER Left 2x6 SP No.1 5-1-15, Right 2x6 SP No.1 5-1-15	

**REACTIONS.** (size) 1=0-3-8, 9=0-3-8  
 Max Horz 1=-319(LC 8)  
 Max Uplift 1=-37(LC 13), 9=-42(LC 13)  
 Max Grav 1=1045(LC 20), 9=1095(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-4=-1322/260, 4-5=-343/125, 5-6=-343/125, 6-9=-1327/261  
 BOT CHORD 1-13=-8/853, 11-13=-11/853, 9-11=-7/852  
 WEBS 4-13=-32/463, 6-11=-35/469, 4-14=-772/359, 6-14=-772/359

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 12-3-8, Exterior(2) 12-3-8 to 16-8-5, Interior(1) 16-8-5 to 25-8-6 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9.



February 21, 2024

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

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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

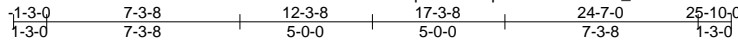
818 Soundside Road  
 Edenton, NC 27932

Job J0224-0932	Truss C6	Truss Type COMMON	Qty 7	Ply 1	Lucas Residence 163738812
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:01 2024 Page 1

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5x8 =

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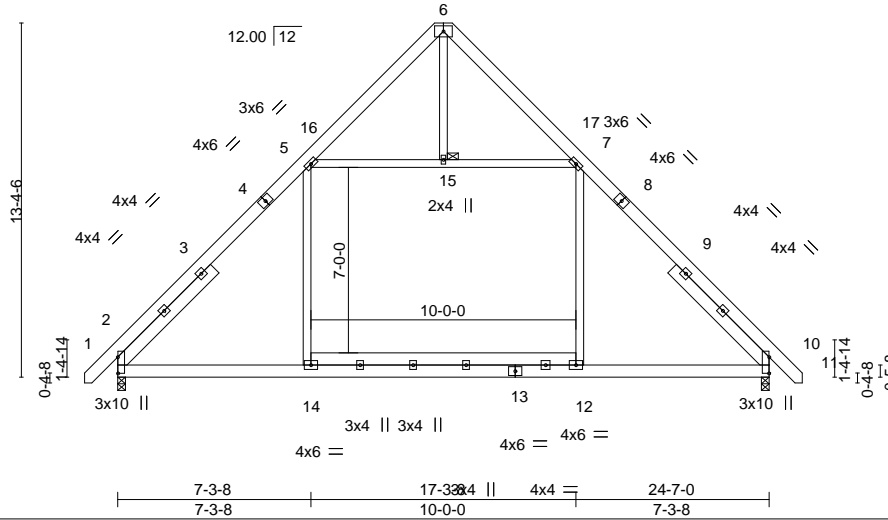


Plate Offsets (X,Y)--	[2:0-7-6,0-0-1], [10:0-7-6,0-0-1]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.22	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.41	Vert(LL) 0.20 2-14 >999 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.16	Vert(CT) -0.20 10-12 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.02 10 n/a n/a		
	Code IRC2015/TPI2014			Weight: 239 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	JOINTS 1 Brace at Jt(s): 15
SLIDER Left 2x6 SP No.1 5-1-15, Right 2x6 SP No.1 5-1-15	

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
 Max Horz 2=321(LC 11)  
 Max Uplift 2=-42(LC 12), 10=-42(LC 13)  
 Max Grav 2=1094(LC 19), 10=1094(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-5=-1321/260, 5-6=-343/126, 6-7=-343/126, 7-10=-1323/260  
 BOT CHORD 2-14=-7/850, 12-14=-11/851, 10-12=-7/849  
 WEBS 5-14=-33/464, 7-12=-35/467, 5-15=-769/349, 7-15=-769/349

- 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) -1-1-6 to 3-3-7, Interior(1) 3-3-7 to 12-3-8, Exterior(2) 12-3-8 to 16-8-5, Interior(1) 16-8-5 to 25-8-6 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.



Job	Truss	Truss Type	Qty	Ply	Lucas Residence
J0224-0932	C6GE	COMMON SUPPORTED GAB	1	1	63738813
					Job Reference (optional)

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:03 2024 Page 1

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5x5 ||

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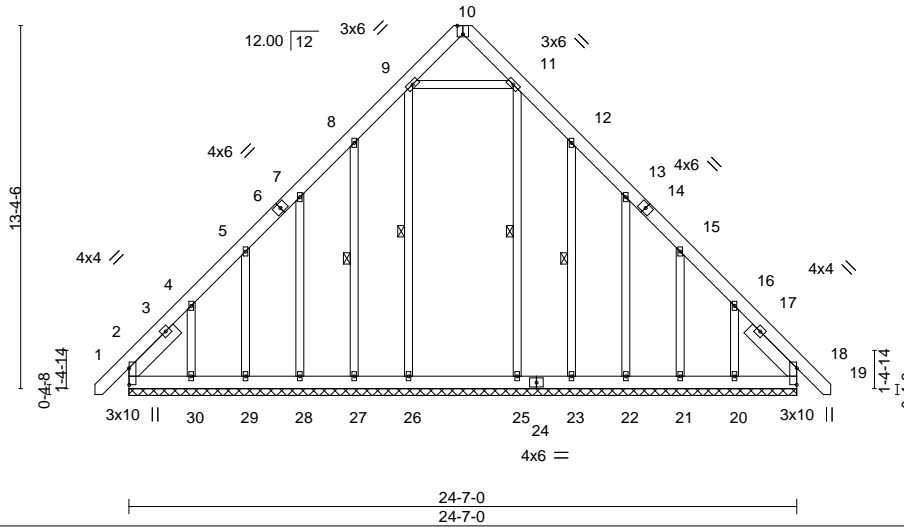


Plate Offsets (X,Y)--	[2:0-7-6,0-0-1], [10:0-3-12,Edge], [18:0-7-6,0-0-1]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.06	Vert(LL) -0.00 18 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(CT) -0.00 18 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.16	Horz(CT) 0.01 18 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S			
				Weight: 264 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 9-26, 8-27, 11-25, 12-23
OTHERS 2x4 SP No.2	
SLIDER Left 2x6 SP No.1 2-6-0, Right 2x6 SP No.1 2-6-0	

**REACTIONS.** All bearings 24-7-0.  
 (lb) - Max Horz 2=397(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 26, 18 except 2=195(LC 8), 27=121(LC 12), 28=148(LC 12), 29=121(LC 12), 30=298(LC 12), 23=115(LC 13), 22=150(LC 13), 21=124(LC 13), 20=276(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 27, 28, 29, 23, 22, 21, 20 except 2=394(LC 20), 26=328(LC 22), 30=261(LC 19), 25=294(LC 21), 18=323(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-459/330, 4-5=-275/220, 5-7=-257/208, 7-8=-231/273, 8-9=-306/325, 11-12=-306/306, 16-18=-376/208  
 BOT CHORD 2-30=-160/306, 29-30=-162/306, 28-29=-162/306, 27-28=-163/307, 26-27=-163/307, 25-26=-163/306, 23-25=-163/307, 22-23=-163/306, 21-22=-162/306, 20-21=-162/305, 18-20=-160/304  
 WEBS 4-30=-266/300, 16-20=-267/280, 9-11=-245/293

- 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 requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 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.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 26, 18 except (jt=lb) 2=195, 27=121, 28=148, 29=121, 30=298, 23=115, 22=150, 21=124, 20=276.
  - 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.



Job J0224-0932	Truss D1	Truss Type COMMON	Qty 2	Ply 1	Lucas Residence 163738814
Comtech, Inc. Fayetteville, NC - 28314,					Job Reference (optional)

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:04 2024 Page 1  
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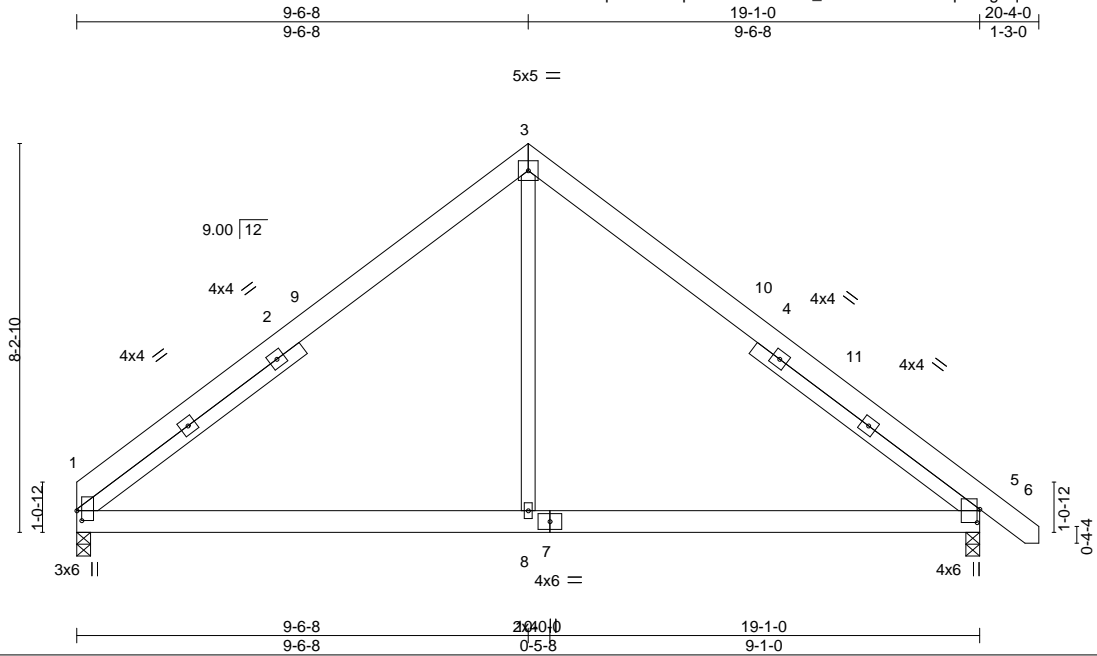


Plate Offsets (X,Y)--	[1:0-2-8,0-1-4], [5:0-3-6,0-0-11]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.43	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.31	Vert(LL) -0.04 1-8 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.10	Vert(CT) -0.09 1-8 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 5 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.03 5-8 >999 240	Weight: 133 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	
SLIDER Left 2x4 SP No.2 5-10-11, Right 2x4 SP No.2 5-10-11	

**REACTIONS.** (size) 1=0-3-8, 5=0-3-8  
 Max Horz 1=-189(LC 10)  
 Max Uplift 1=-35(LC 12), 5=-51(LC 13)  
 Max Grav 1=761(LC 1), 5=831(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-3=-832/205, 3-5=-871/203  
 BOT CHORD 1-8=0/553, 5-8=0/553  
 WEBS 3-8=0/452

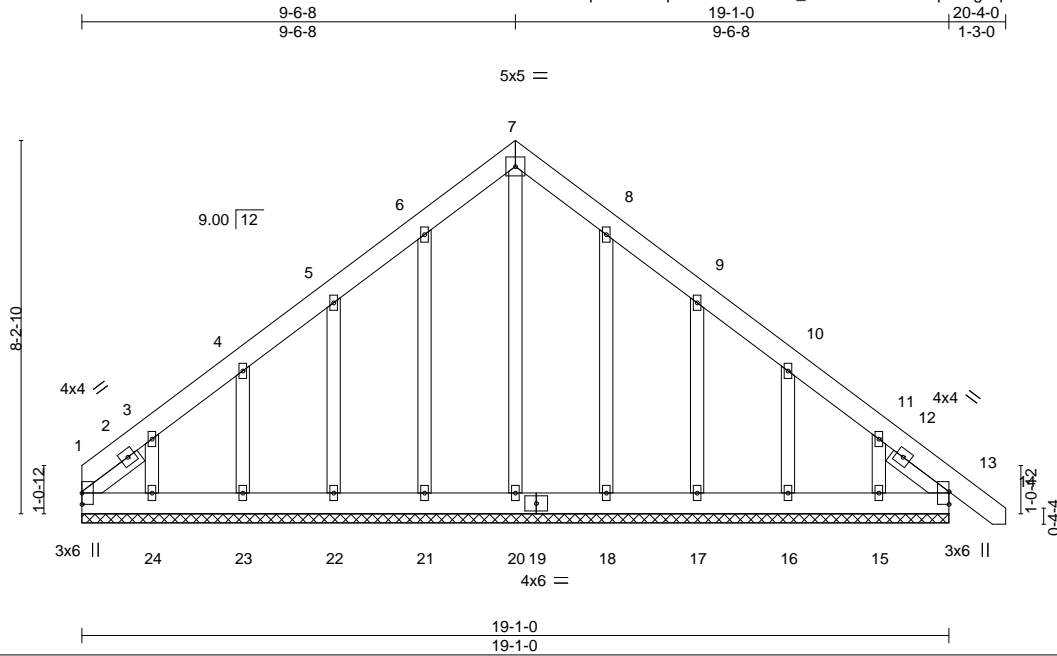
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 9-6-8, Exterior(2) 9-6-8 to 13-11-5, Interior(1) 13-11-5 to 20-2-4 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 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.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5.



Job J0224-0932	Truss D1GE	Truss Type GABLE	Qty 1	Ply 1	Lucas Residence 163738815
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:05 2024 Page 1  
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Scale = 1:50.7

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.03	Vert(LL)	-0.00	13	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	13	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.00	13	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 163 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
OTHERS 2x4 SP No.2  
SLIDER Left 2x4 SP No.2 1-6-7, Right 2x4 SP No.2 1-6-7

**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 19-1-0.  
(lb) - Max Horz 1=236(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 13, 21, 23, 18, 16 except 1=109(LC 10), 22=108(LC 12),  
24=179(LC 12), 17=110(LC 13), 15=150(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 13, 20, 21, 22, 23, 24, 18, 17, 16, 15

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-3=-280/190

- 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 requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 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.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 21, 23, 18, 16 except (jt=lb) 1=109, 22=108, 24=179, 17=110, 15=150.



February 21, 2024

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



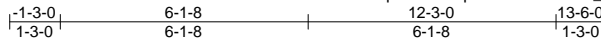
818 Soundside Road  
Edenton, NC 27932



Job J0224-0932	Truss E1	Truss Type COMMON	Qty 1	Ply 1	Lucas Residence 163738816
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:06 2024 Page 1  
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5x5 =

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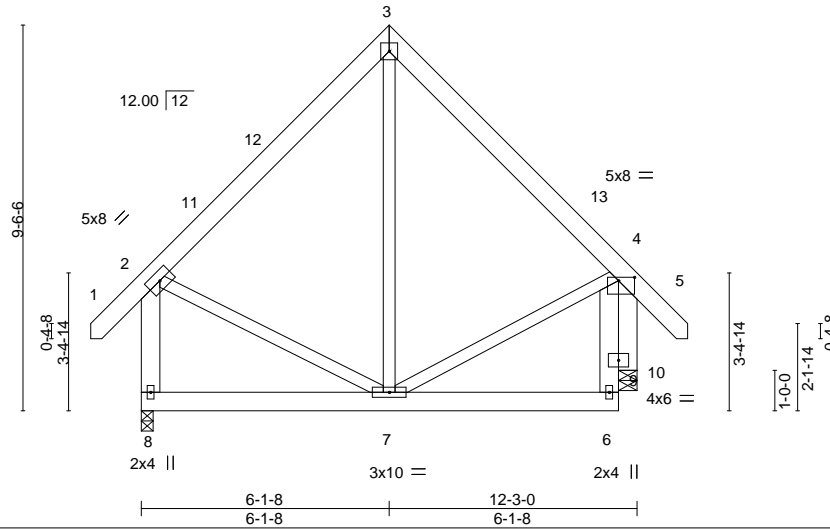


Plate Offsets (X,Y)--	[4:0-4-12,0-1-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.15	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.09	Vert(LL) -0.01 7-8 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.12	Vert(CT) -0.01 7-8 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 10 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.00 7 >999 240	Weight: 126 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except*	
OTHERS 2-8,4-6: 2x6 SP No.1	
2x6 SP No.1	

**REACTIONS.** (size) 8=0-3-8, 10=0-5-8  
 Max Horz 8=-268(LC 10)  
 Max Uplift 8=-31(LC 13), 10=-38(LC 12)  
 Max Grav 8=552(LC 1), 10=543(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-367/183, 3-4=-357/219, 2-8=-497/236  
 BOT CHORD 7-8=-197/265  
 WEBS 4-10=-552/223

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-1-6 to 3-3-7, Interior(1) 3-3-7 to 6-1-8, Exterior(2) 6-1-8 to 10-6-5, Interior(1) 10-6-5 to 13-4-6 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 10.



Job J0224-0932	Truss E1GE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	Lucas Residence 163738817
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:07 2024 Page 1

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4x6 =

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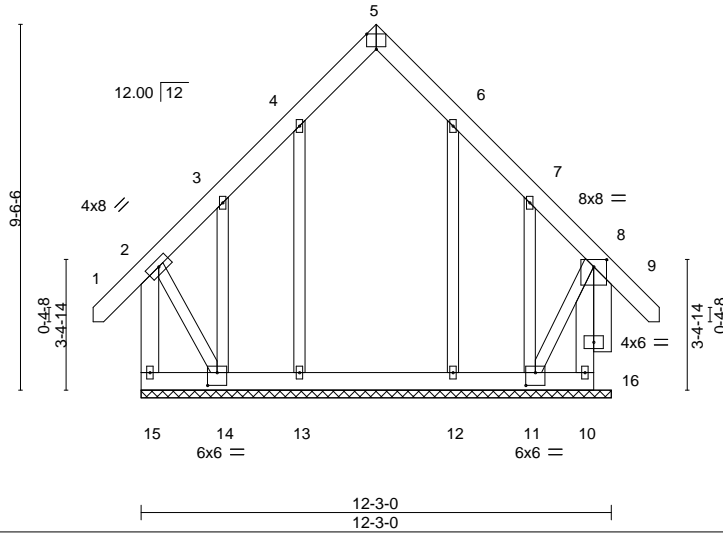


Plate Offsets (X,Y)--	[5:0-3-0,Edge], [8:0-4-0,0-2-4], [11:0-3-0,0-4-0], [14:0-3-0,0-4-0]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.08	Vert(LL)	-0.00	9	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	-0.01	9	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.15	Horz(CT)	0.00	10	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						

Weight: 138 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except* 2-14,8-11: 2x4 SP No.2	
OTHERS 2x4 SP No.2 *Except* 8-16: 2x6 SP No.1	

**REACTIONS.** All bearings 12-3-0.  
 (lb) - Max Horz 15=358(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 13, 12 except 15=212(LC 10),  
 10=246(LC 11), 14=458(LC 12), 11=553(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) except 15=428(LC 20), 10=516(LC 19), 13=336(LC 19), 14=363(LC 10), 12=318(LC 20), 11=405(LC 11)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-15=-395/223, 8-10=-513/278  
 BOT CHORD 14-15=-331/298, 13-14=-258/321, 12-13=-258/321, 11-12=-258/321  
 WEBS 2-14=-363/457, 8-11=-411/565

- 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 requires continuous bottom chord bearing.
  - 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 7) Gable studs spaced at 2-0-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 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.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 12 except (jt=lb) 15=212, 10=246, 14=458, 11=553.

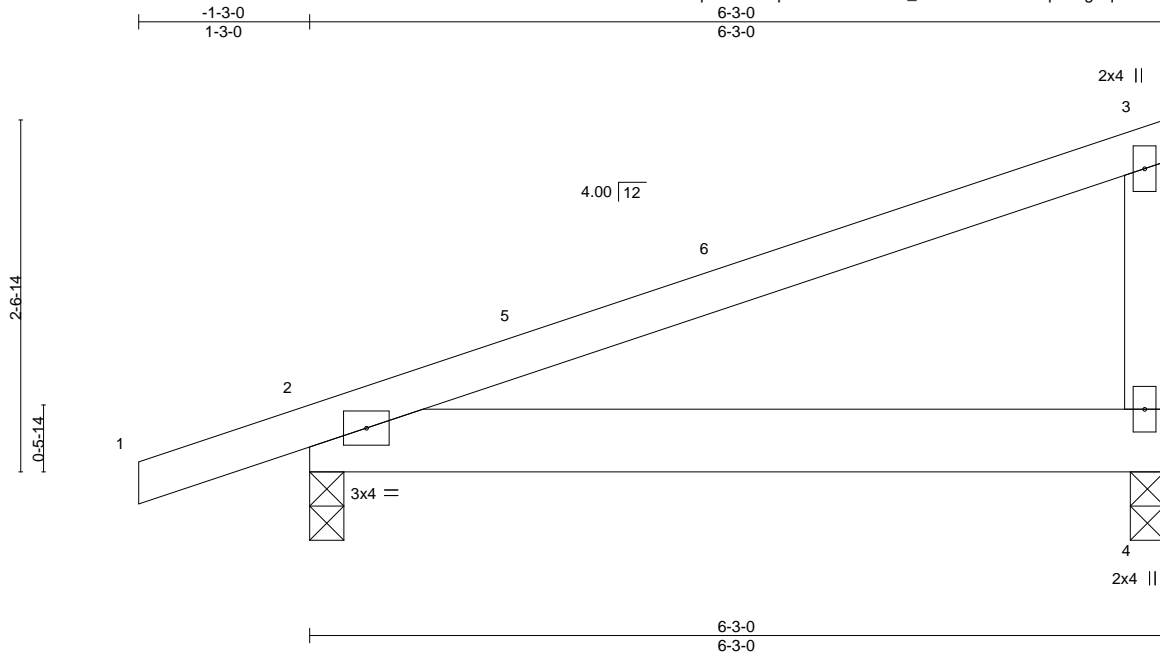


February 21, 2024

Job J0224-0932	Truss M1	Truss Type MONOPITCH	Qty 18	Ply 1	Lucas Residence 163738818
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:08 2024 Page 1  
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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 0.48	Vert(LL)	-0.02	2-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.14	Vert(CT)	-0.03	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)	0.04	2-4	>999	240		
									Weight: 29 lb	FT = 20%

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

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

**REACTIONS.** (size) 4=0-3-0, 2=0-3-0  
 Max Horz 2=85(LC 8)  
 Max Uplift 4=99(LC 8), 2=136(LC 8)  
 Max Grav 4=230(LC 1), 2=331(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; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-3-0 to 3-1-13, Interior(1) 3-1-13 to 6-1-4 zone; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=136.



February 21, 2024

**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	Truss	Truss Type	Qty	Ply	Lucas Residence	163738819
J0224-0932	M2	HALF HIP	2	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:09 2024 Page 1  
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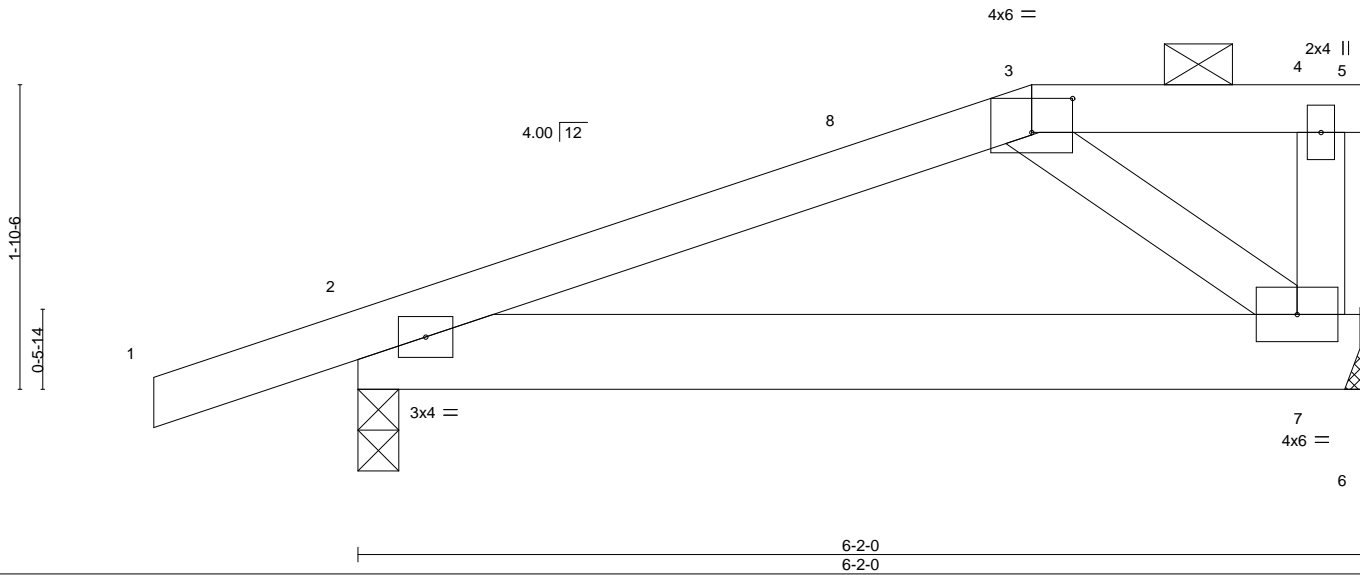


Plate Offsets (X,Y)--	[3:0-3-0,0-2-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.17	Vert(LL)	-0.01	2-7	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.13	Vert(CT)	-0.03	2-7	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	7	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.03	2-7	>999	Weight: 31 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-5.
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=Mechanical, 2=0-3-0  
 Max Horz 2=63(LC 8)  
 Max Uplift 7=86(LC 8), 2=139(LC 8)  
 Max Grav 7=232(LC 1), 2=323(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) -1-3-0 to 3-1-13, Interior(1) 3-1-13 to 4-1-8, Exterior(2) 4-1-8 to 6-2-0 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7 except (jt=1b) 2=139.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



February 21, 2024

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**ENGINEERING BY**  
**TRENCO**  
 A MITEK Affiliate

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 Edenton, NC 27932

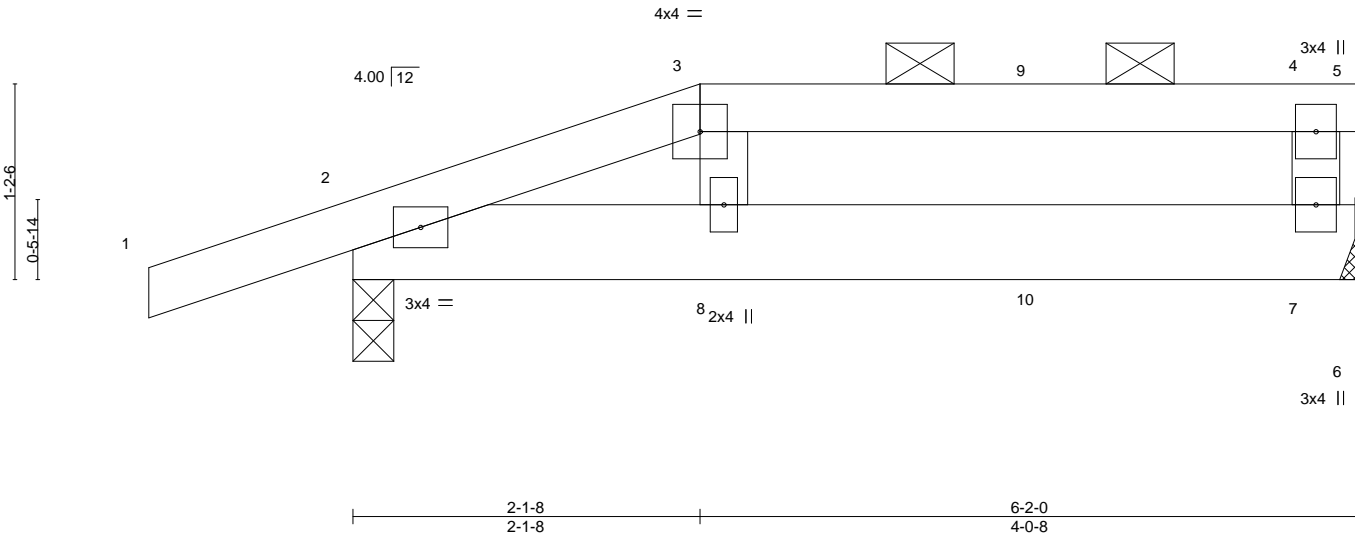
Job J0224-0932	Truss M3	Truss Type HALF HIP GIRDER	Qty 2	Ply 1	Lucas Residence Job Reference (optional)	163738820
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:10 2024 Page 1  
ID:qGF8Tsl8epZ?11vN5BS5I5zf\_Uc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



Scale = 1:14.1



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.22	Vert(LL)	0.01	8	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.11	Vert(CT)	-0.01	8	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.01	Horz(CT)	0.00	7	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 27 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=Mechanical, 2=0-3-0  
Max Horz 2=42(LC 4)  
Max Uplift 7=83(LC 4), 2=144(LC 4)  
Max Grav 7=232(LC 1), 2=323(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-263/83

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); porch left exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7 except (jt=lb) 2=144.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 14 lb down and 17 lb up at 2-1-8, and 14 lb down and 17 lb up at 4-2-12 on top chord, and 7 lb down and 22 lb up at 2-2-12, and 7 lb down and 22 lb up at 4-2-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 9) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-60, 3-4=-60, 4-5=-20, 2-6=-20



February 21, 2024

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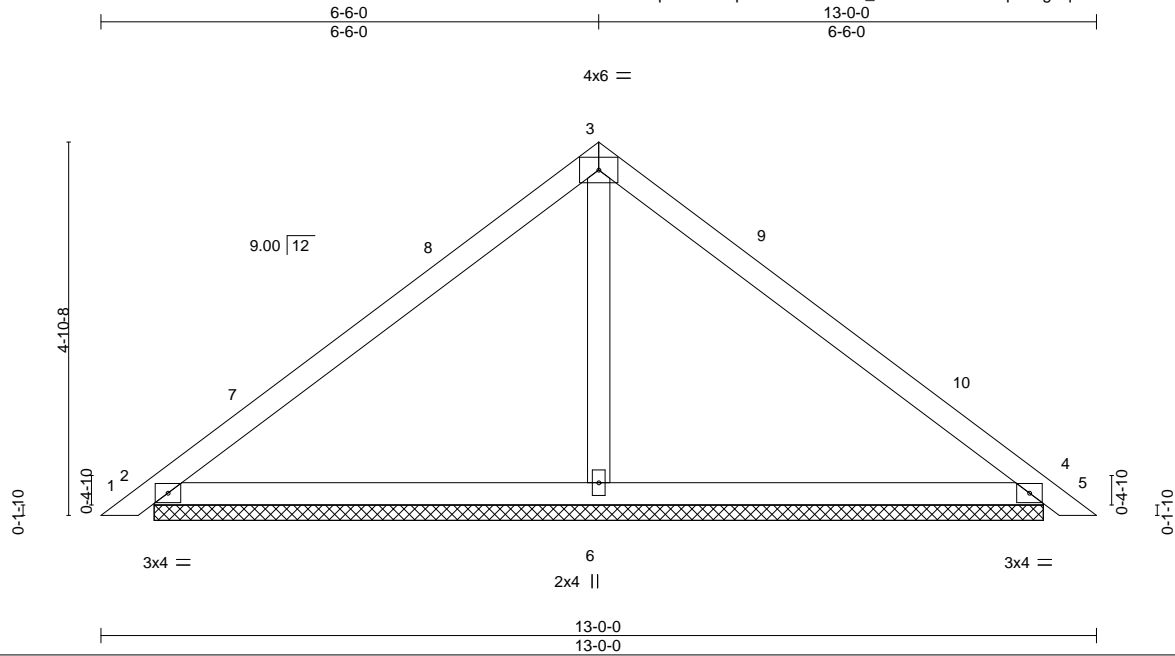


Job J0224-0932	Truss PB1	Truss Type Piggyback	Qty 16	Ply 1	Lucas Residence 163738821
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:11 2024 Page 1

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Scale = 1:30.1

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.35	Vert(LL)	0.01	5	n/r	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.25	Vert(CT)	0.02	5	n/r		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.09	Horz(CT)	0.00	4	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S					Weight: 47 lb	FT = 20%
	Code IRC2015/TPI2014							

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

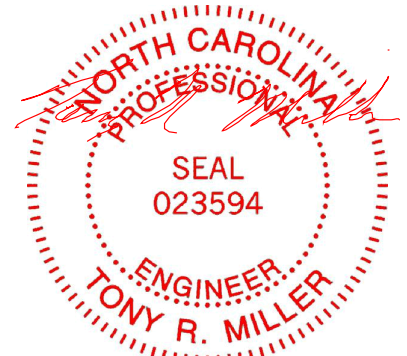
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=11-7-5, 4=11-7-5, 6=11-7-5  
 Max Horz 2=-113(LC 10)  
 Max Uplift 2=-34(LC 12), 4=-44(LC 13)  
 Max Grav 2=266(LC 1), 4=266(LC 1), 6=451(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-6=-270/102

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-15 to 4-7-11, Interior(1) 4-7-11 to 6-6-0, Exterior(2) 6-6-0 to 10-10-13, Interior(1) 10-10-13 to 12-9-1 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



February 21, 2024

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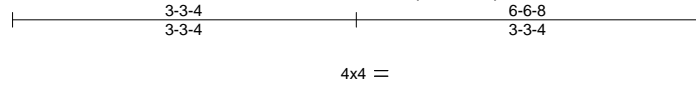


818 Soundside Road  
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Job	Truss	Truss Type	Qty	Ply	Lucas Residence
J0224-0932	PB2	Piggyback	8	1	163738822

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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:12 2024 Page 1  
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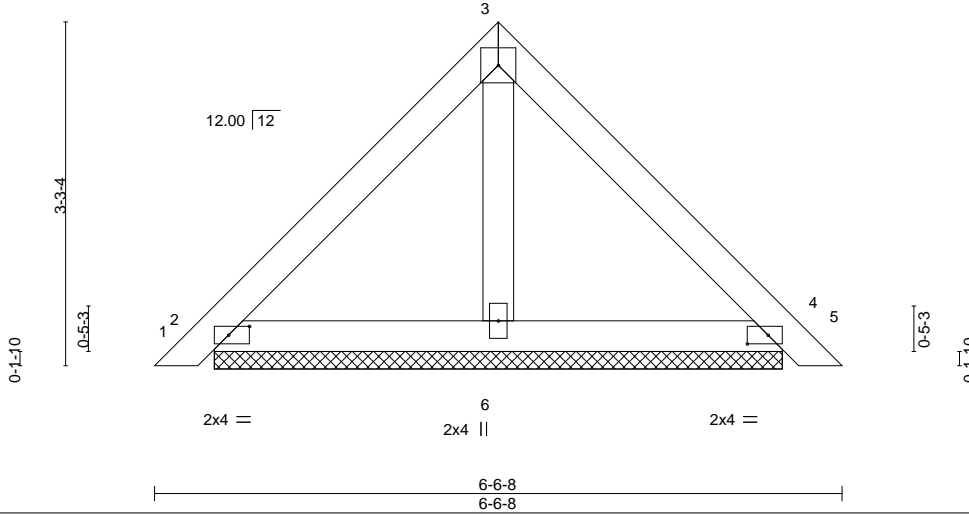


Plate Offsets (X,Y)--	[2:0-2-6,0-1-0], [4:0-2-6,0-1-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.12	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) 0.00 5 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.02	Vert(CT) 0.00 5 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2015/TPI2014			Weight: 25 lb	FT = 20%

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

**REACTIONS.** (size) 2=5-4-14, 4=5-4-14, 6=5-4-14  
 Max Horz 2=-73(LC 10)  
 Max Uplift 2=-26(LC 13), 4=-30(LC 13)  
 Max Grav 2=155(LC 1), 4=155(LC 1), 6=168(LC 3)

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

**NOTES-**

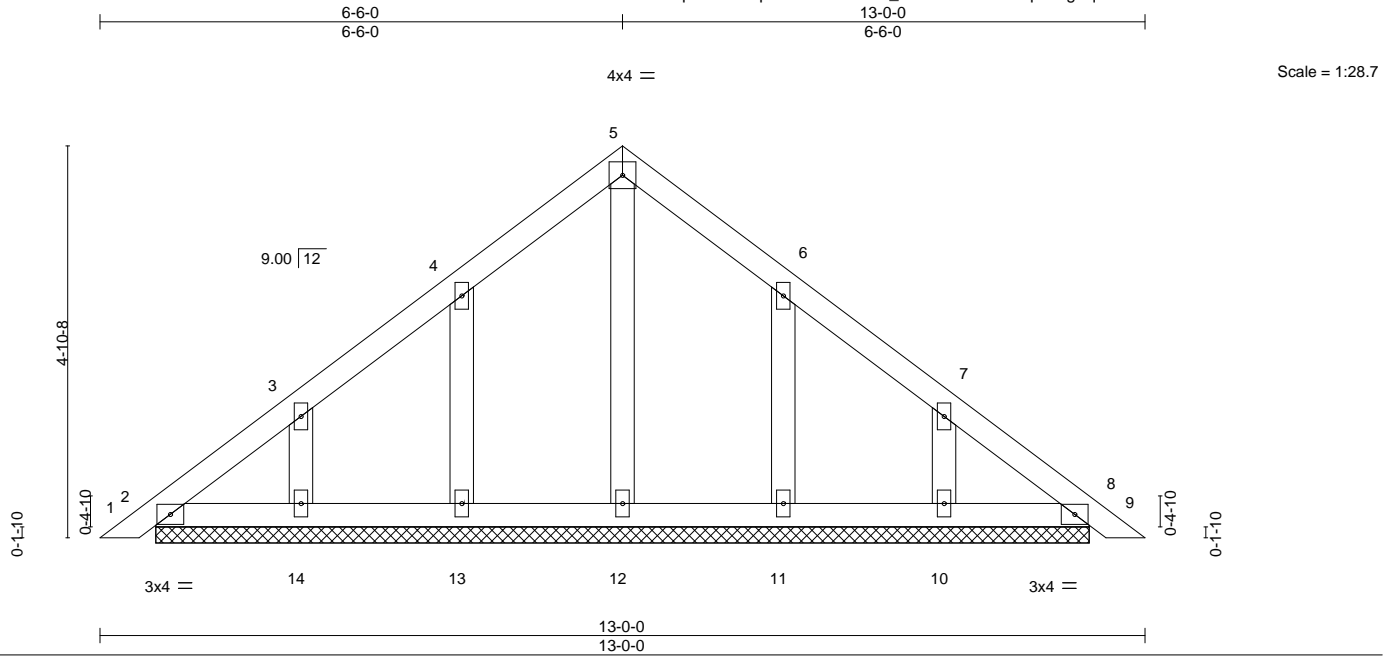
- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip 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 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- 7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



Job J0224-0932	Truss PBSE	Truss Type GABLE	Qty 2	Ply 1	Lucas Residence 163738823
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:13 2024 Page 1  
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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 0.04	Vert(LL)	0.00	8	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	0.00	8	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 59 lb	FT = 20%

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

**REACTIONS.** All bearings 11-7-5.  
 (lb) - Max Horz 2=141(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 8 except 13=103(LC 12), 14=105(LC 12), 11=102(LC 13), 10=104(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 14, 11, 10

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

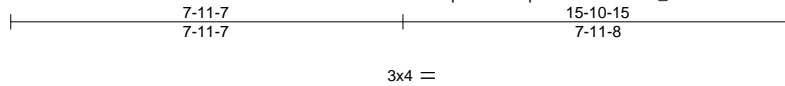
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8 except (jt=lb) 13=103, 14=105, 11=102, 10=104.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



Job J0224-0932	Truss V1GE	Truss Type GABLE	Qty 1	Ply 1	Lucas Residence 163738824
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:14 2024 Page 1  
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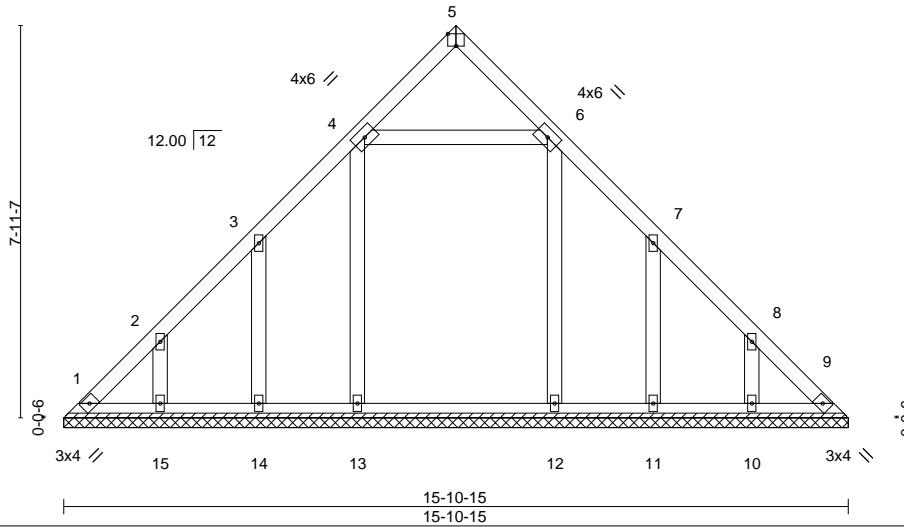


Plate Offsets (X, Y)-- [5:0-2-0,Edge], [6:0-0-0,0-0-0], [7:0-0-0,0-0-0], [8:0-0-0,0-0-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.05	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.10	Horz(CT)	0.00	9	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 92 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 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.** All bearings 15-10-15.  
(lb) - Max Horz 1--228(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 13 except 14--142(LC 12), 15--139(LC 12), 11--141(LC 13), 10--140(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 9, 14, 15, 11, 10 except 13=337(LC 19), 12=297(LC 20)

**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) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 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.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 13 except (jt=lb) 14=142, 15=139, 11=141, 10=140.



February 21, 2024

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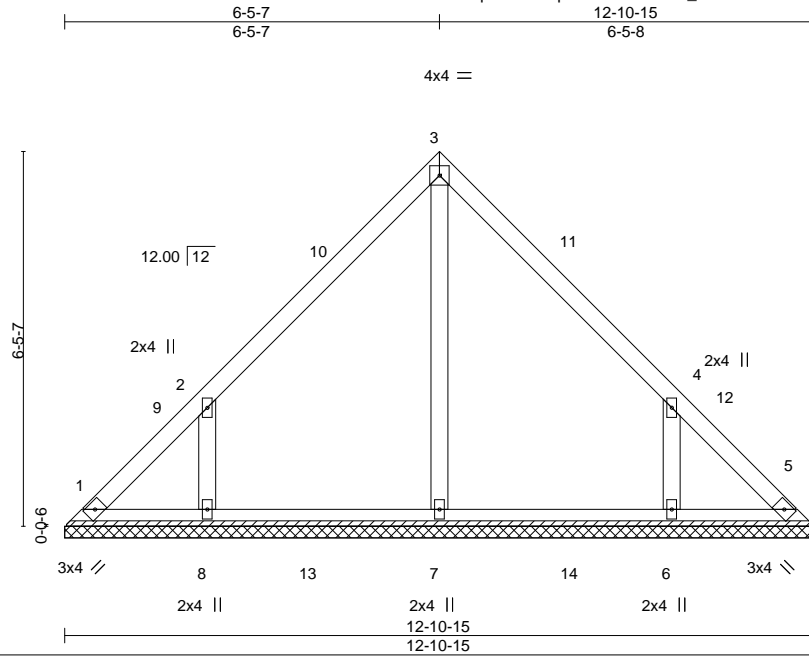
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lucas Residence
J0224-0932	V2	VALLEY	1	1	163738825

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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:15 2024 Page 1

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Scale = 1:39.7

Plate Offsets (X,Y)--	[4:0-0-0,0-0-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.14	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.11	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.09	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a		
	Code IRC2015/TPI2014			Weight: 59 lb	FT = 20%

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

**REACTIONS.** All bearings 12-10-15.  
 (lb) - Max Horz 1=146(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=162(LC 12), 6=162(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=327(LC 19), 8=362(LC 19), 6=362(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-357/290, 4-6=-357/290

- 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) 0-4-4 to 4-9-0, Interior(1) 4-9-0 to 6-5-7, Exterior(2) 6-5-7 to 10-10-4, Interior(1) 10-10-4 to 12-6-11 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=162, 6=162.

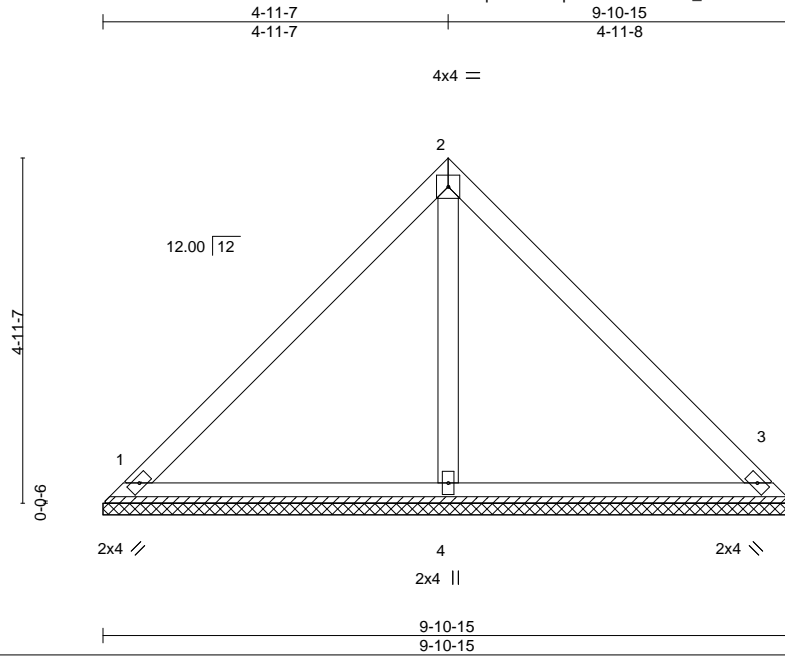




Job J0224-0932	Truss V3	Truss Type VALLEY	Qty 1	Ply 1	Lucas Residence 163738826
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:17 2024 Page 1  
ID:qGF8Tsl8epZ?11vN5BS5l5zf\_Uc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



4x4 =

Scale = 1:33.1

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.23	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.16	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.07	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S					Weight: 40 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=9-10-14, 3=9-10-14, 4=9-10-14  
Max Horz 1=-110(LC 8)  
Max Uplift 1=-27(LC 13), 3=-27(LC 13)  
Max Grav 1=209(LC 1), 3=209(LC 1), 4=319(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; 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 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



February 21, 2024

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Job J0224-0932	Truss V4	Truss Type VALLEY	Qty 1	Ply 1	Lucas Residence 163738827
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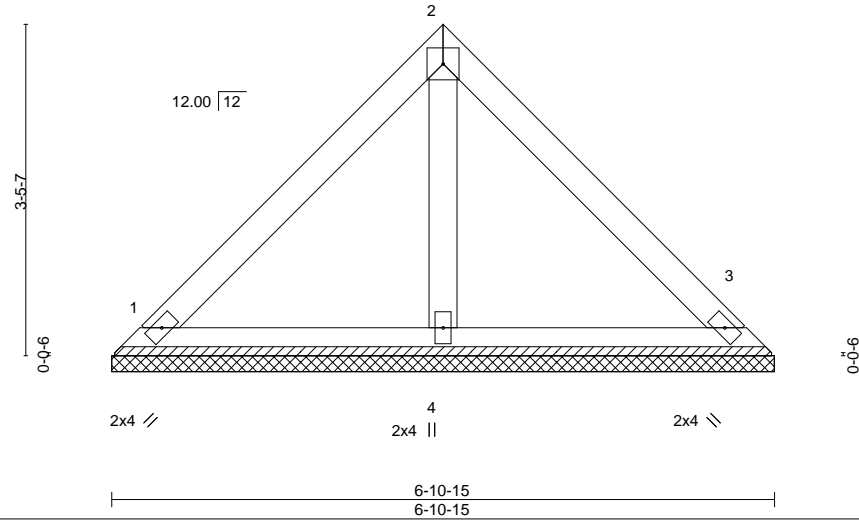
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:18 2024 Page 1  
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4x4 =

Scale: 1/2"=1'



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.16	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.07	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 27 lb	FT = 20%

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

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

**REACTIONS.** (size) 1=6-10-15, 3=6-10-15, 4=6-10-15  
 Max Horz 1=74(LC 9)  
 Max Uplift 1=27(LC 13), 3=27(LC 13)  
 Max Grav 1=151(LC 1), 3=151(LC 1), 4=194(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; 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 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.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



February 21, 2024

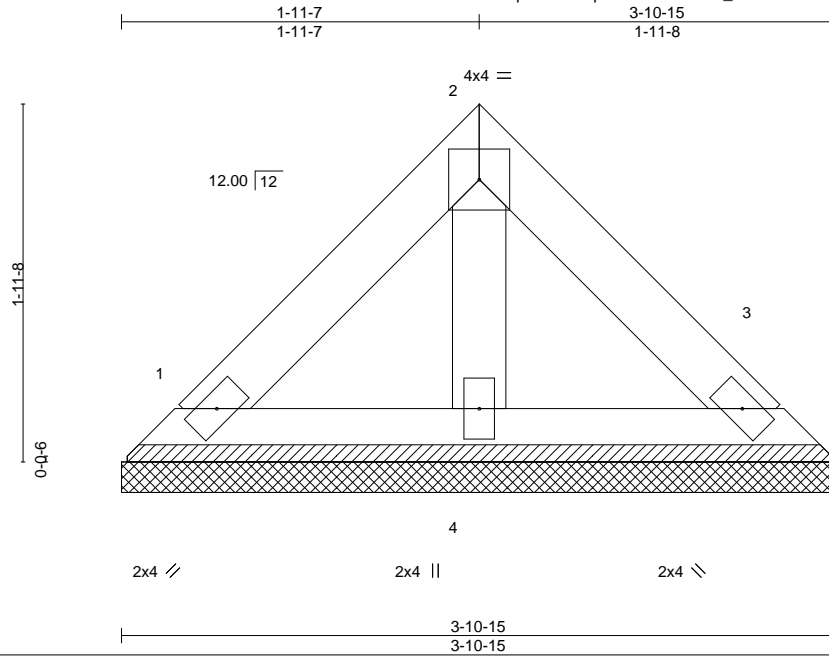
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
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Job J0224-0932	Truss V5	Truss Type VALLEY	Qty 1	Ply 1	Lucas Residence 163738828
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:19 2024 Page 1  
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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 0.04	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.01	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 14 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 3-10-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=3-10-15, 3=3-10-15, 4=3-10-15  
Max Horz 1=-38(LC 8)  
Max Uplift 1=-14(LC 13), 3=-14(LC 13)  
Max Grav 1=78(LC 1), 3=78(LC 1), 4=100(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 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.
- 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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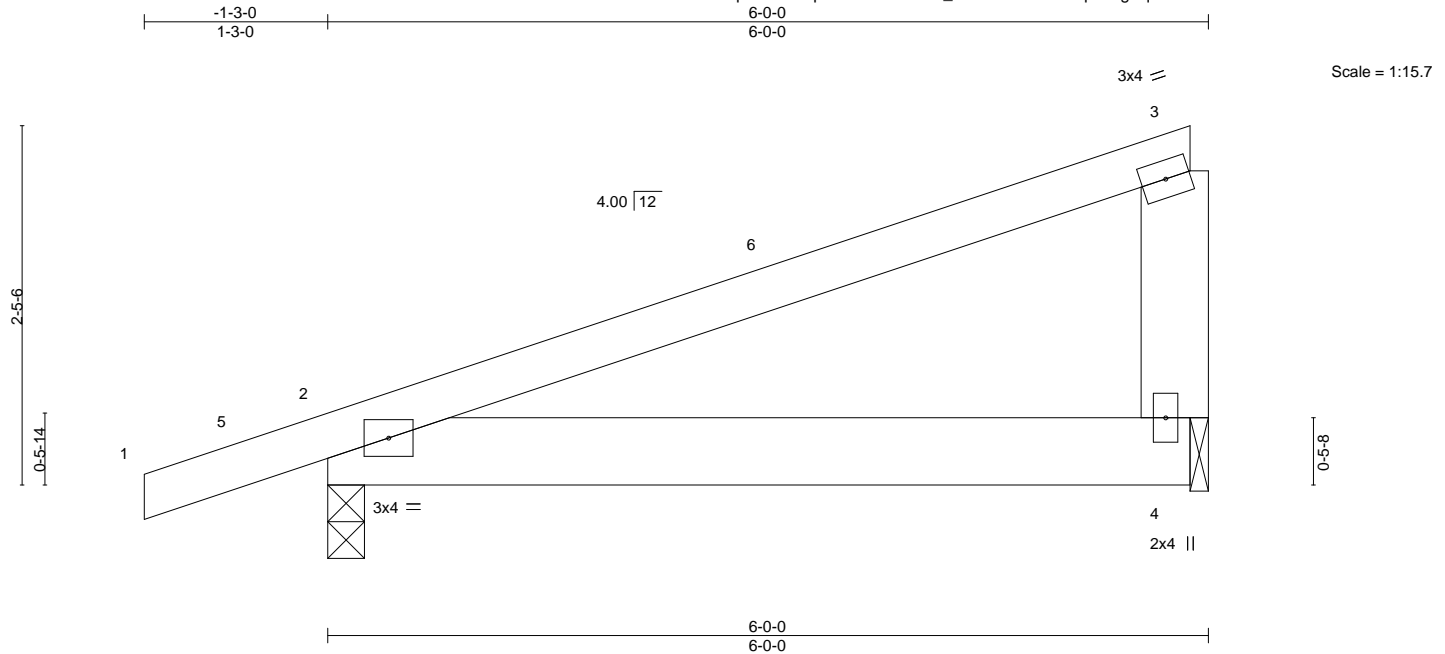
818 Soundside Road  
Edenton, NC 27932

Job J0224-0932	Truss X1	Truss Type JACK-OPEN	Qty 6	Ply 1	Lucas Residence 163738829
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:20 2024 Page 1

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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 0.41	Vert(LL)	-0.01 2-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	-0.03 2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.03 2-4	>999	240	Weight: 29 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 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) 2=0-3-0, 4=0-1-8  
 Max Horz 2=81(LC 8)  
 Max Uplift 2=-131(LC 8), 4=-93(LC 8)  
 Max Grav 2=318(LC 1), 4=216(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; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-3-0 to 3-1-13, Interior(1) 3-1-13 to 5-9-4 zone; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) 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=lb) 2=131.



**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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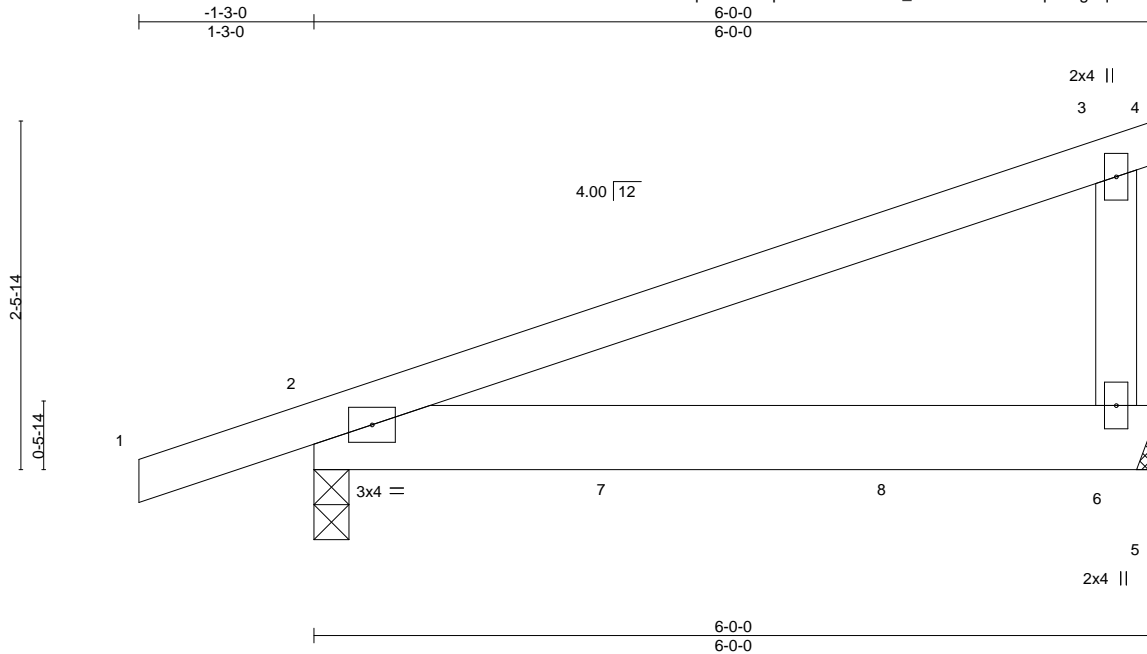


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Job J0224-0932	Truss X1-GR	Truss Type JACK-CLOSED GIRDER	Qty 2	Ply 2	Lucas Residence 163738830
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:20 2024 Page 1  
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Scale = 1:16.5

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 0.23	Vert(LL)	0.03	2-6	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.22	Vert(CT)	-0.04	2-6	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	0.00		n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 56 lb	FT = 20%

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

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

**REACTIONS.** (size) 6=Mechanical, 2=0-3-0  
Max Horz 2=83(LC 4)  
Max Uplift 6=-176(LC 4), 2=-199(LC 4)  
Max Grav 6=457(LC 1), 2=509(LC 1)

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

**NOTES-**

- 2-ply truss to be connected together as follows:  
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x6 - 2 rows staggered 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.
- Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); porch left exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=176, 2=199.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 212 lb down and 107 lb up at 2-2-4, and 212 lb down and 106 lb up at 4-2-4 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: 1-3=-60, 3-4=-20, 2-5=-20  
Concentrated Loads (lb)  
Vert: 7=-212(F) 8=-212(F)



February 21, 2024

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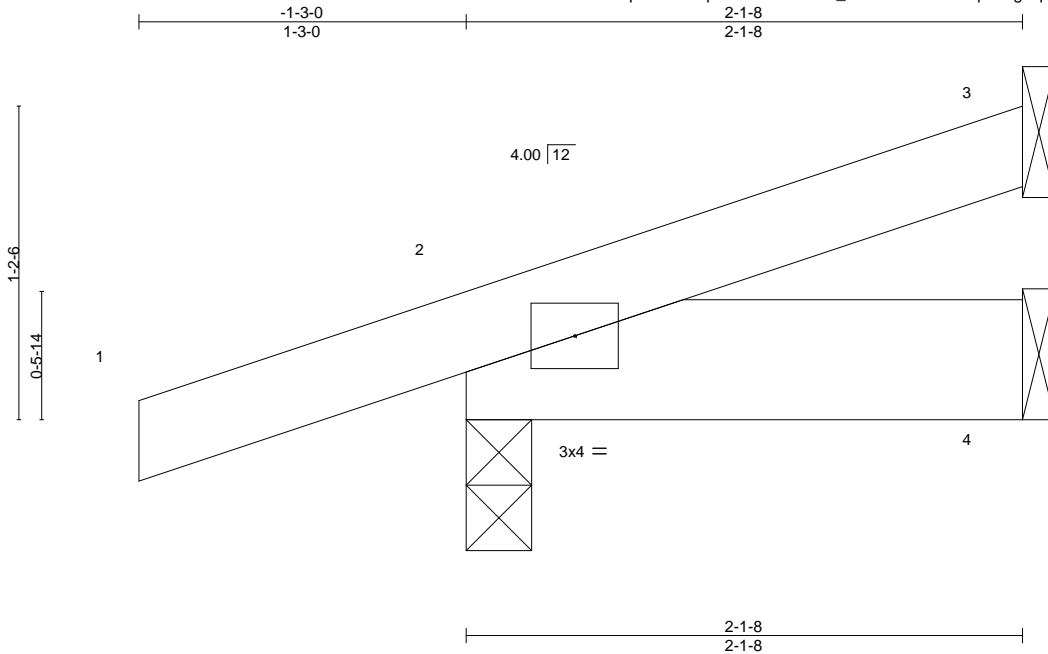
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Job J0224-0932	Truss Y1	Truss Type JACK-OPEN	Qty 4	Ply 1	Lucas Residence Job Reference (optional)	163738831
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8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Feb 20 10:00:21 2024 Page 1  
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Scale = 1:8.8

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.09	Vert(LL)	-0.00	2	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.01	Vert(CT)	-0.00	2	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	-0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL)	0.00	2	>999		
	Code IRC2015/TPI2014						Weight: 10 lb	FT = 20%

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

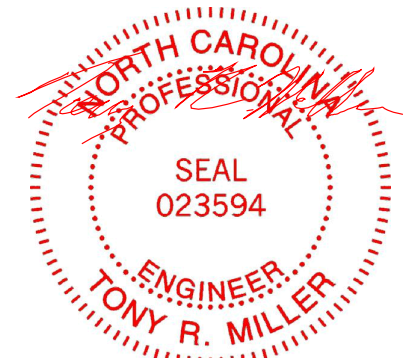
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-1-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-0, 4=Mechanical  
Max Horz 2=41(LC 8)  
Max Uplift 3=-18(LC 12), 2=-93(LC 8), 4=-10(LC 8)  
Max Grav 3=29(LC 1), 2=189(LC 1), 4=39(LC 3)

**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 exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.



February 21, 2024

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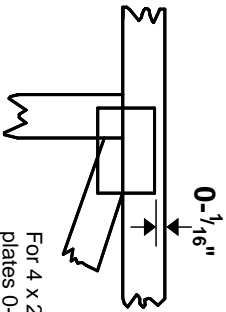
818 Soundside Road  
Edenton, NC 27932

# Symbols

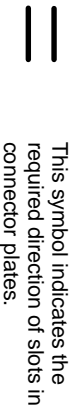
## PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.



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

## PLATE SIZE

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

**4 X 4**

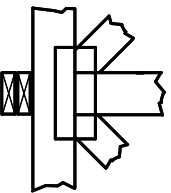
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

## BEARING

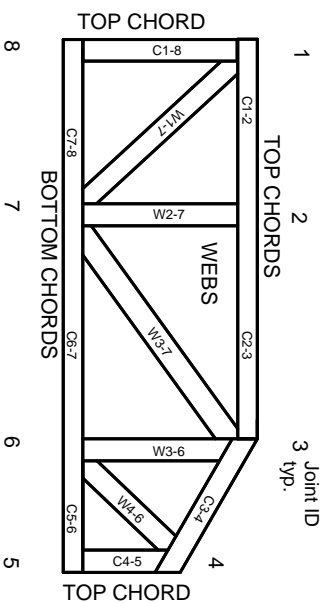


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

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

# Numbering System



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

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

# Product Code Approvals

ICC-ES Reports:  
ESR-1988, ESR-2362, ESR-2685, ESR-3282  
ESR-4722, ESL-1388

# Design General Notes

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

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

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# General Safety Notes

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

1. Additional stability/bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

**MITek**

ENGINEERING BY  
**TRENGO**  
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MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023