

RE: J0225-1029-A  
Lot 89 Magnolia Hills

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

**Site Information:**

Customer: Precision Custom Homes and Renovations Project Name: J0225-1029-A  
Lot/Block: Model:  
Address: 17 Mahogany Ct. Subdivision:  
City: Cameron State: NC

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

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 25.2  
Wind Code: ASCE 7-16 Wind Speed: 130 mph  
Roof Load: 40.0 psf Floor Load: N/A psf

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

No.	Seal#	Truss Name	Date
1	I75629117	A1-GE	8/14/2025
2	I75629118	A2	8/14/2025
3	I75629119	A3	8/14/2025
4	I75629120	A4-GE	8/14/2025
5	I75629121	B1-GE	8/14/2025
6	I75629122	B2	8/14/2025
7	I75629123	C1-GE	8/14/2025
8	I75629124	C2	8/14/2025
9	I75629125	C3	8/14/2025
10	I75629126	C4	8/14/2025
11	I75629127	D1-GE	8/14/2025
12	I75629128	D2	8/14/2025
13	I75629129	G1-SG	8/14/2025
14	I75629130	G2	8/14/2025
15	I75629131	VD2	8/14/2025
16	I75629132	VD1	8/14/2025
17	I75629133	P2	8/14/2025
18	I75629134	P1-GE	8/14/2025

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

Truss Design Engineer's Name: Galinski, John

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844

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





Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	A1-GE	GABLE	1	1	I75629117
Job Reference (optional)					

Comtech, Inc. Fayetteville, NC - 28314,

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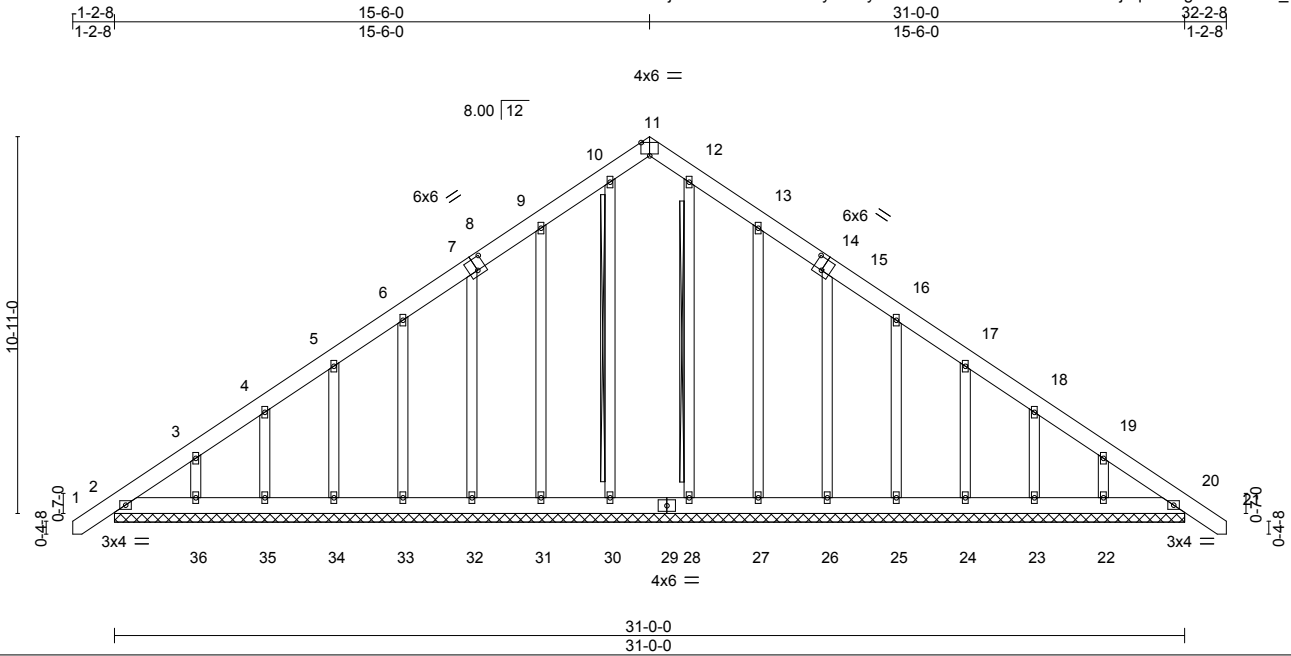


Plate Offsets (X,Y)--		[8:0-3-0,0-4-4], [11:0-3-0,Edge], [14:0-3-0,0-4-4]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0		Plate Grip DOL 1.15		TC 0.07		Vert(LL) -0.00	20	n/r	120	MT20	244/190
TCDL 10.0		Lumber DOL 1.15		BC 0.03		Vert(CT) 0.00	20	n/r	120		
BCLL 0.0 **		Rep Stress Incr YES		WB 0.16		Horz(CT) 0.01	20	n/a	n/a		
BCDL 10.0		Code IRC2021/TPI2014		Matrix-S						Weight: 276 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS T-Brace: 2x4 SPF No.2 - 10-30, 12-28  
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
Brace must cover 90% of web length.

REACTIONS.

All bearings 31-0-0.  
(lb) - Max Horz 2=-331(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 32, 33, 34, 35, 26, 25, 24, 23 except 31=-104(LC 12),  
36=-103(LC 12), 27=-109(LC 13), 22=-101(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 2, 20, 31, 32, 33, 34, 35, 36, 28, 27, 26, 25, 24, 23, 22  
except 30=257(LC 22)

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

TOP CHORD 2-3=-350/234, 3-4=-262/198, 19-20=-286/143  
BOT CHORD 2-36=-130/294, 35-36=-130/294, 34-35=-130/294, 33-34=-130/294, 32-33=-130/294,  
31-32=-130/294, 30-31=-130/294, 28-30=-130/294, 27-28=-130/294, 26-27=-130/294,  
25-26=-130/294, 24-25=-130/294, 23-24=-130/294, 22-23=-130/294, 20-22=-130/294

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-0-15 to 3-3-14, Exterior(2N) 3-3-14 to 15-6-0, Corner(3R) 15-6-0 to 19-10-13, Exterior(2N) 19-10-13 to 32-0-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20, 32, 33, 34, 35, 26, 25, 24, 23 except (jt=lb) 31=104, 36=103, 27=109, 22=101.
- 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



August 14, 2025

**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.sbcacompoments.com)

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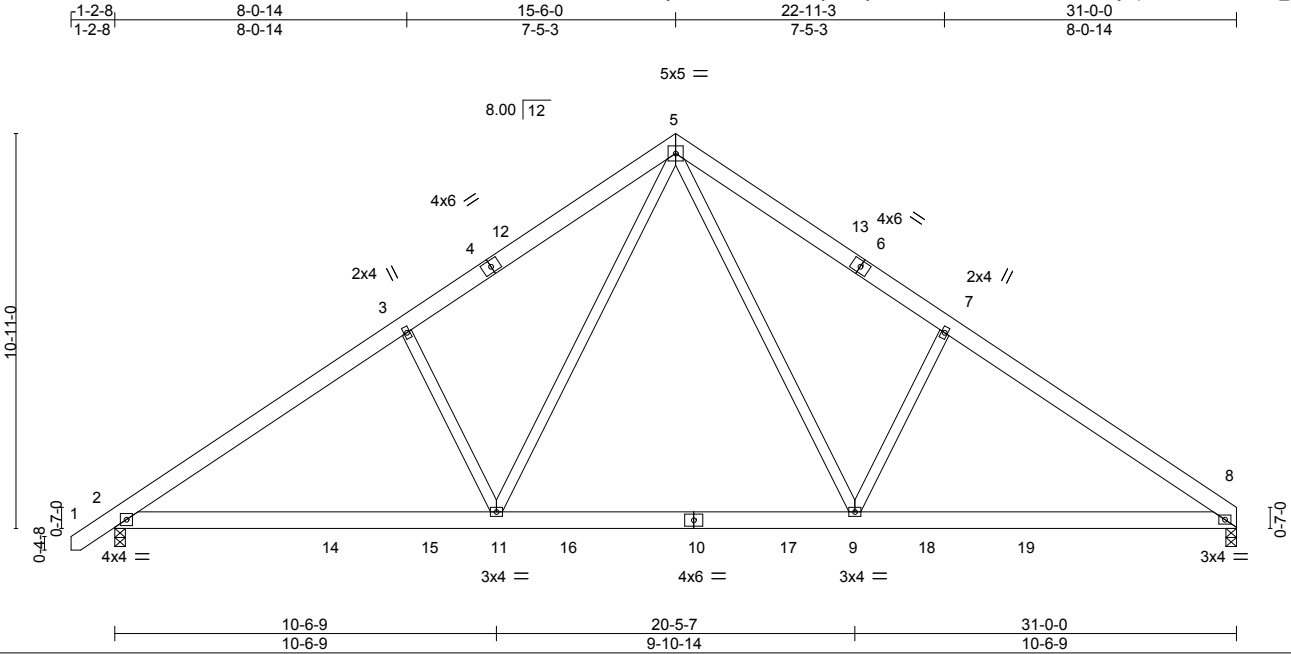


Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	A2	COMMON	6	1	175629118
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.27	Vert(LL)	-0.12 9-11	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.56	Vert(CT)	-0.22 8-9	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.40	Horz(CT)	0.04 8	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL)	0.04 2-11	>999	240		
									Weight: 214 lb FT = 20%

**LUMBER-**

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

**BRACING-**

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

**REACTIONS.**

(size) 2=0-3-8, 8=0-3-8  
Max Horz 2=260(LC 9)  
Max Uplift 2=-82(LC 12), 8=-65(LC 13)  
Max Grav 2=1616(LC 19), 8=1545(LC 20)

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

TOP CHORD 2-3=-2171/361, 3-5=-2041/454, 5-7=-2047/460, 7-8=-2176/366  
BOT CHORD 2-11=-201/1896, 9-11=0/1233, 8-9=-190/1724  
WEBS 5-9=-172/1082, 7-9=-471/311, 5-11=-170/1073, 3-11=-467/305

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 15-6-0, Exterior(2R) 15-6-0 to 19-10-13, Interior(1) 19-10-13 to 30-10-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.



August 14, 2025

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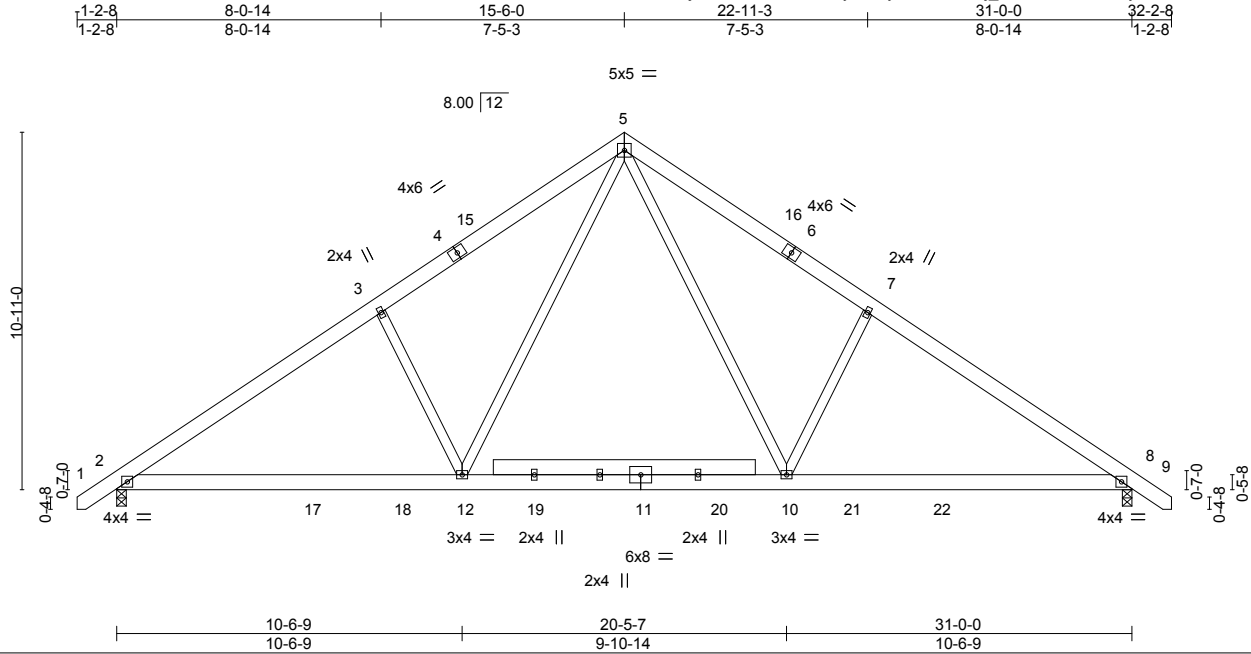
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Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	A3	COMMON	7	1	175629119
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

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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 0.26	Vert(LL)	-0.12 10-12	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.55	Vert(CT)	-0.21 2-12	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.39	Horz(CT)	0.04 8	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL)	0.04 2-12	>999	240	Weight: 235 lb	FT = 20%

**LUMBER-**

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

**BRACING-**

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

**REACTIONS.**

(size) 2=0-3-8, 8=0-3-8  
Max Horz 2=-265(LC 10)  
Max Uplift 2=-82(LC 12), 8=-82(LC 13)  
Max Grav 2=1608(LC 19), 8=1608(LC 20)

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

TOP CHORD 2-3=-2156/360, 3-5=-2026/452, 5-7=-2027/452, 7-8=-2157/360  
BOT CHORD 2-12=-160/1892, 10-12=0/1232, 8-10=-158/1717  
WEBS 5-10=-169/1067, 7-10=-468/305, 5-12=-169/1066, 3-12=-467/305

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 15-6-0, Exterior(2R) 15-6-0 to 19-10-13, Interior(1) 19-10-13 to 32-0-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.



August 14,2025

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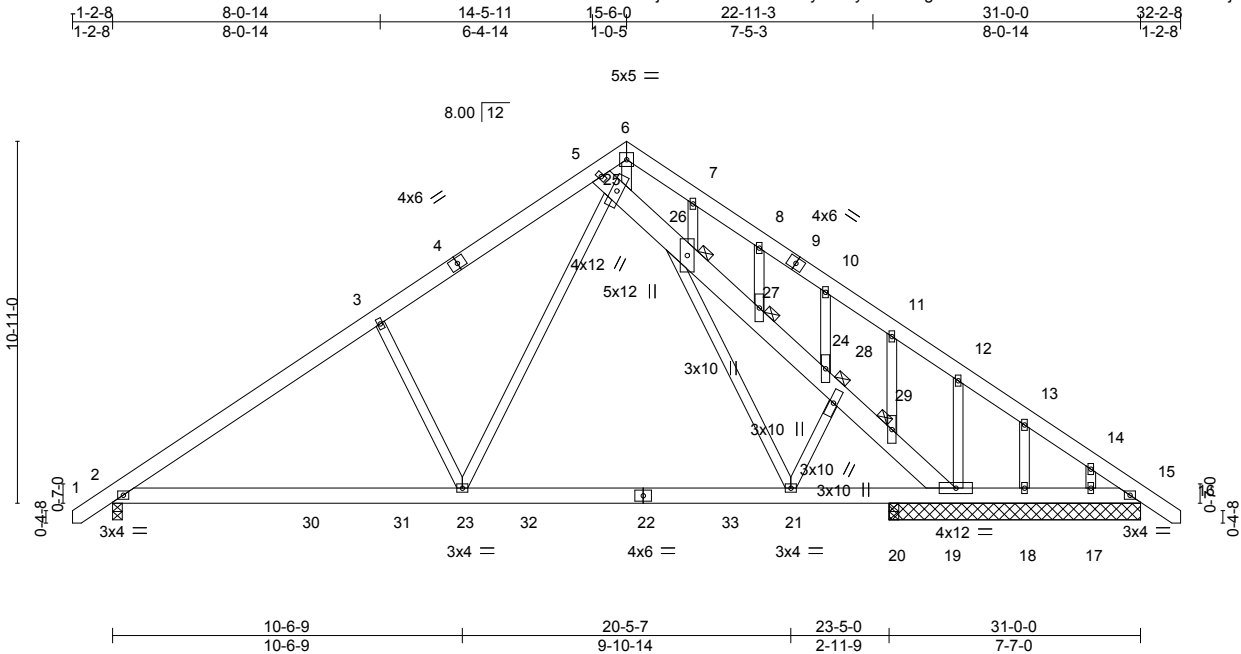


Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills	175629120
J0225-1029-A	A4-GE	GABLE	1	1	Job Reference (optional)	

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Scale = 1:69.5

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 0.29	Vert(LL)	-0.16 21-23	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.57	Vert(CT)	-0.24 21-23	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.43	Horz(CT)	0.03 15	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL)	0.05 2-23	>999	240	Weight: 275 lb	FT = 20%

LUMBER-

TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 5-19: 2x8 SP No.1  
 OTHERS 2x4 SP No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-4-7 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 JOINTS 1 Brace at Jt(s): 24, 26, 27, 29

REACTIONS.

All bearings 7-7-0 except (jt=length) 2=0-3-8, 20=0-3-8.  
 (lb) - Max Horz 2=-331(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 18, 17, 20 except 2=-228(LC 12), 19=-150(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 18, 17 except 2=1417(LC 19), 15=626(LC 20), 19=530(LC 19), 20=336(LC 20)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1800/262, 3-5=-1659/361, 5-6=-1138/406, 6-7=-871/344, 7-8=-932/289,  
 8-10=-964/241, 10-11=-891/144, 11-12=-908/82, 12-13=-822/4, 13-14=-869/0,  
 14-15=-884/0  
 BOT CHORD 2-23=-273/1632, 21-23=-3/956, 20-21=-40/1254, 19-20=-40/1254, 18-19=0/720,  
 17-18=0/720, 15-17=0/720  
 WEBS 21-26=-86/642, 21-24=-392/232, 23-25=-238/1080, 3-23=-392/367, 5-25=-794/284,  
 25-26=-267/208, 26-27=-701/158, 27-28=-701/174, 24-28=-796/223, 24-29=-719/190,  
 19-29=-731/217, 6-25=-358/1167, 12-19=-287/131

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 15-6-0, Exterior(2R) 15-6-0 to 19-10-13, Interior(1) 19-10-13 to 32-0-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 17, 20 except (jt=lb) 2=228, 19=150.



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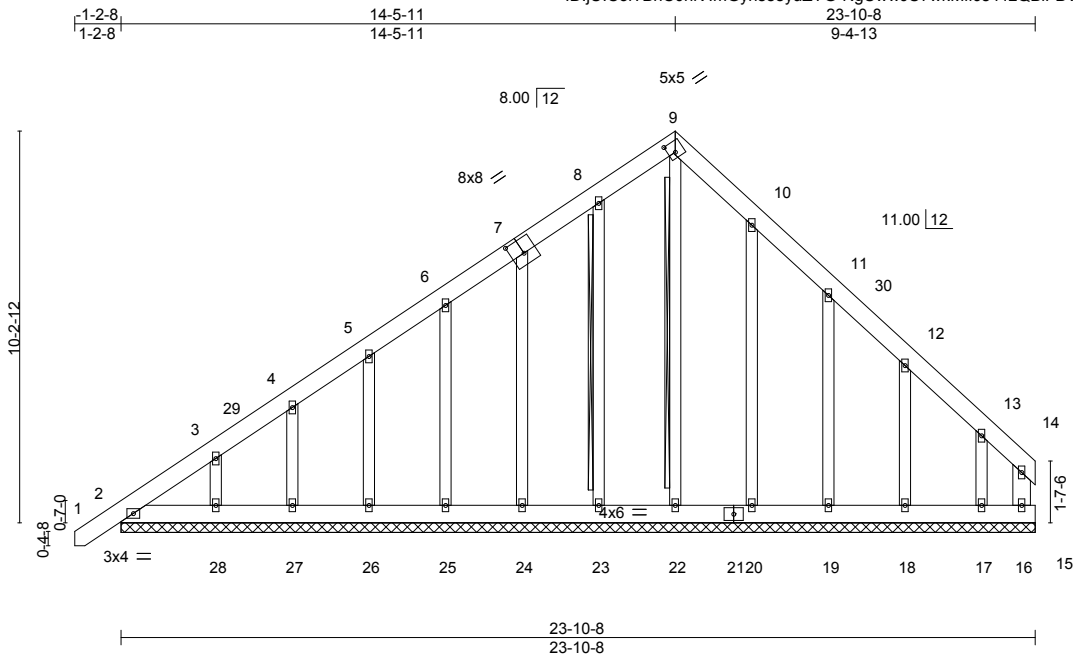


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 Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	B1-GE	GABLE	1	1	I75629121
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:37 2025 Page 1  
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Scale = 1:60.2

Plate Offsets (X,Y)--		[7:0-4-0,0-4-8], [9:0-2-3,0-3-4]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07
TCDL 10.0	Lumber DOL	1.15	BC 0.01
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.21
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S
DEFL.	in (loc)	l/defl	L/d
Vert(LL)	0.00	1	n/r
Vert(CT)	0.00	1	n/r
Horz(CT)	0.00	15	n/a
PLATES	GRIP		
MT20	244/190		
Weight: 217 lb		FT = 20%	

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD
BOT CHORD 2x6 SP No.1	BOT CHORD
WEBS 2x6 SP No.1	WEBS
OTHERS 2x4 SP No.2	
	Structural wood sheathing directly applied or 6-0-0 oc purlins.
	Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
	10-0-0 oc bracing: 16-17,15-16.
	T-Brace: 2x4 SPF No.2 - 9-22, 8-23
	Fasten (2X) T and I braces to narrow edge of web with 10d
	(0.131"x3") nails, 6in o.c.,with 3in minimum end distance.
	Brace must cover 90% of web length.

REACTIONS.	All bearings 23-10-8.
(lb) - Max Horz	2=299(LC 9)
Max Uplift	All uplift 100 lb or less at joint(s) 22, 23, 25, 26, 27, 20, 16 except
	2=-149(LC 8), 24=-102(LC 12), 28=-104(LC 12), 19=-152(LC 13), 18=-126(LC 13),
	17=-104(LC 13)
Max Grav	All reactions 250 lb or less at joint(s) 2, 15, 23, 24, 25, 26, 27, 28, 20,
	19, 18, 17, 16 except 22=436(LC 13)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-327/327, 3-4=-295/300, 4-5=-271/296, 5-6=-252/325, 6-7=-231/367, 7-8=-212/420,
	8-9=-227/421, 9-10=-249/461, 10-11=-213/397, 11-12=-140/265
WEBS	9-22=-412/160

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-0-15 to 3-3-14, Exterior(2N) 3-3-14 to 14-5-11, Corner(3R) 14-5-11 to 18-10-8, Exterior(2N) 18-10-8 to 23-6-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22, 23, 25, 26, 27, 20, 16 except (jt=lb) 2=149, 24=102, 28=104, 19=152, 18=126, 17=104.
  - 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



August 14,2025

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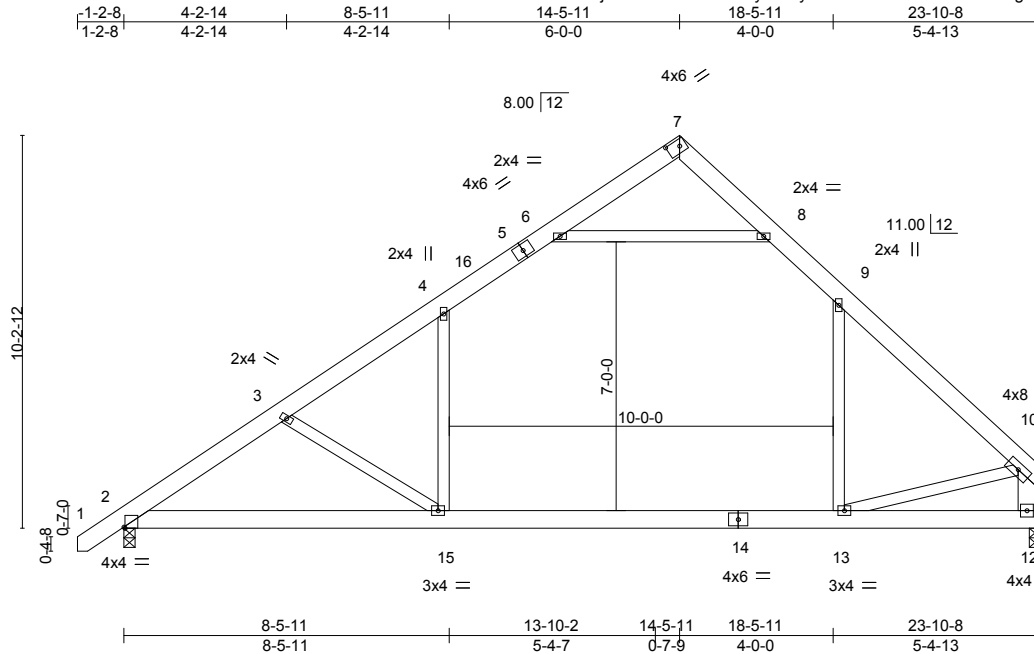
Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	B2	ROOF SPECIAL	9	1	175629122

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:38 2025 Page 1

ID:jUIColTBhC0nIvImGynse8yuZYG-rs2l8fVlh1UWNJRGbgxQESkWXQaUcjlSy0geuEyo007

Job Reference (optional)



Scale = 1:60.0

Plate Offsets (X,Y)-- [2:0-0-6,Edge], [7:0-4-0,0-2-0]											
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	0.76	Vert(LL)	-0.32 13-15	>881	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.50 13-15	>563	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.02 12	n/a	n/a		
BCDL	10.0	Code IRC2021/TPI2014		Matrix-S		Wind(LL)	0.19 15	>999	240	Weight: 172 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x4 SP No.2 \*Except\*  
10-12: 2x6 SP No.1

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-4-9 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 12-13.

#### REACTIONS.

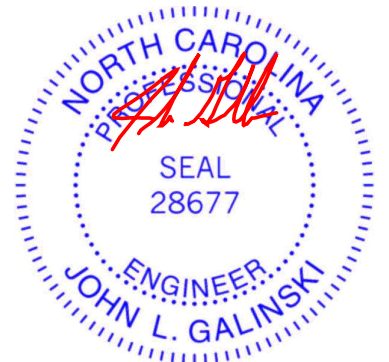
(size) 2=0-3-8, 12=0-3-8  
Max Horz 2=242(LC 9)  
Max Uplift 2=-72(LC 12), 12=-33(LC 12)  
Max Grav 2=1257(LC 19), 12=1213(LC 19)

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

TOP CHORD 2-3=-1716/283, 3-4=-1406/236, 4-6=-939/278, 6-7=-30/309, 8-9=-977/286,  
9-10=-1493/223, 10-12=-1396/208  
BOT CHORD 2-15=-236/1568, 13-15=-65/1049  
WEBS 4-15=0/685, 9-13=0/577, 6-8=-1254/334, 10-13=-56/1200, 3-15=-617/203

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 14-5-11, Exterior(2R) 14-5-11 to 18-7-9, Interior(1) 18-7-9 to 23-6-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12.



August 14,2025

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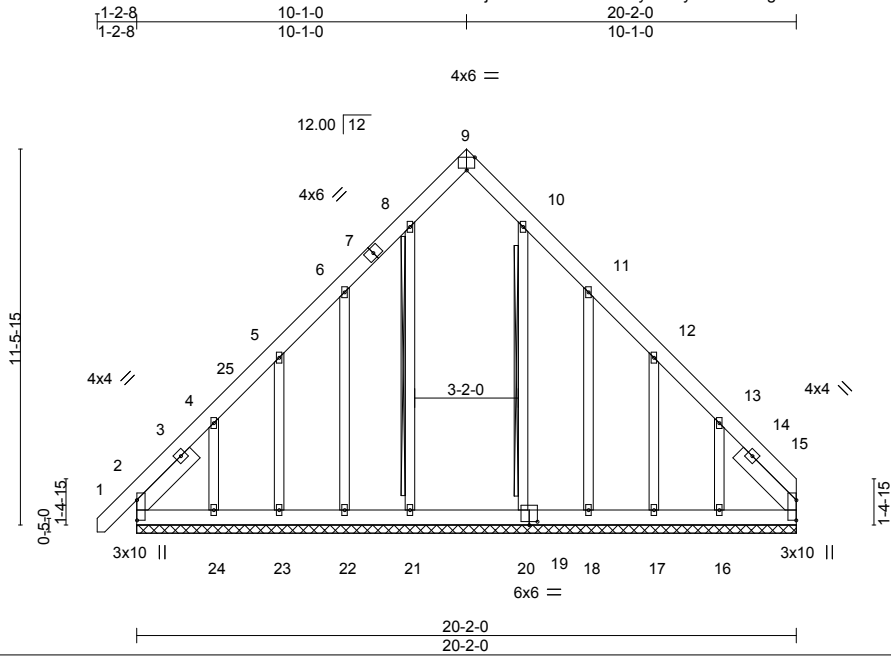


Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	C1-GE	GABLE	1	1	175629123
Job Reference (optional)					

Comtech, Inc. Fayetteville, NC - 28314,

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Scale = 1:70.4

Plate Offsets (X,Y)--		[2:0-7-7,0-0-1], [9:0-3-0,Edge], [15:0-7-7,0-0-1], [19:0-3-0,0-1-4]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07
TCDL 10.0	Lumber DOL	1.15	BC 0.06
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.14
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S
DEFL.	in (loc)	l/defl	L/d
Vert(LL)	-0.00	1	n/r
Vert(CT)	-0.00	1	n/r
Horz(CT)	0.01	15	n/a
PLATES	GRIP		
MT20	244/190		
Weight: 200 lb		FT = 20%	

LUMBER-

TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
OTHERS 2x4 SP No.2  
SLIDER Left 2x6 SP No.1 2-6-0, Right 2x6 SP No.1 2-6-0

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS T-Brace: 2x4 SPF No.2 - 8-21, 10-20  
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
Brace must cover 90% of web length.

REACTIONS.

All bearings 20-2-0.  
(lb) - Max Horz 2=333(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 21, 20 except 15=-122(LC 11),  
2=-107(LC 10), 22=-172(LC 12), 23=-114(LC 12), 24=-330(LC 12), 18=-177(LC 13),  
17=-114(LC 13), 16=-333(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 22, 23, 18, 17 except 15=432(LC 13),  
2=411(LC 12), 21=320(LC 19), 24=287(LC 19), 20=300(LC 20), 16=300(LC 20)

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

TOP CHORD 2-4=-558/249, 4-5=-294/151, 12-13=-276/124, 13-15=-564/240  
BOT CHORD 2-24=-175/420, 23-24=-177/421, 22-23=-177/422, 21-22=-177/422, 20-21=-177/422,  
18-20=-177/422, 17-18=-177/422, 16-17=-177/421, 15-16=-175/419  
WEBS 4-24=-227/360, 13-16=-228/390

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-2 to 3-3-11, Exterior(2N) 3-3-11 to 10-1-0, Corner(3R) 10-1-0 to 14-5-13, Exterior(2N) 14-5-13 to 20-2-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 21, 20 except (jt=lb) 15=122, 2=107, 22=172, 23=114, 24=330, 18=177, 17=114, 16=333.
- Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



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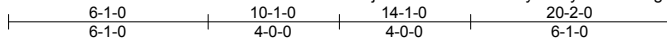


Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	C2	COMMON	2	1	175629124
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

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5x5 =

Scale = 1:70.2

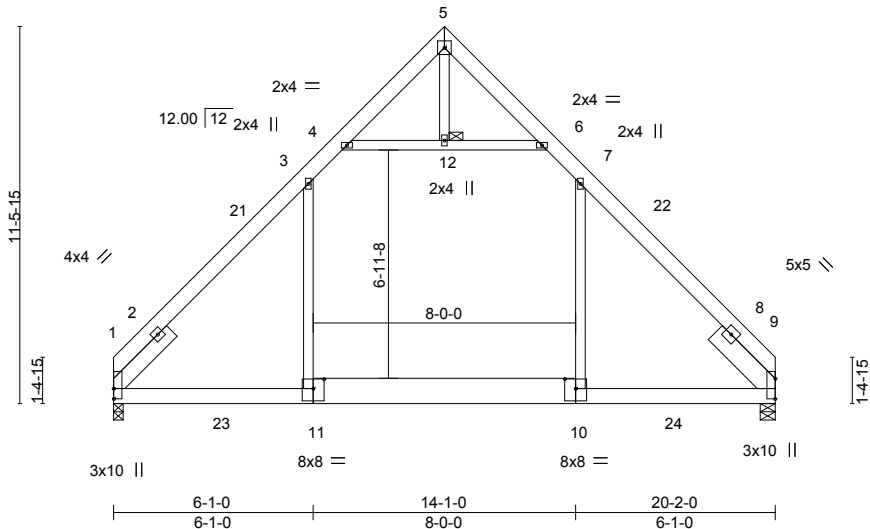


Plate Offsets (X,Y)-- [1:0-3-12,0-0-1], [9:0-7-7,0-0-1], [10:0-4-0,0-3-8], [11:0-4-0,0-3-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.23	Vert(LL)	0.10 11-15	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.30	Vert(CT)	-0.11 11-15	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.12	Horz(CT)	0.04 9	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-MS					Weight: 175 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1 \*Except\*  
10-11: 2x10 SP No.1  
WEBS 2x4 SP No.2  
SLIDER Left 2x6 SP No.1 2-6-0, Right 2x8 SP No.1 2-6-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
JOINTS 1 Brace at Jt(s): 12

#### REACTIONS.

(size) 1=0-3-8, 9=0-5-8  
Max Horz 1=242(LC 9)  
Max Uplift 1=-31(LC 13), 9=-31(LC 12)  
Max Grav 1=1091(LC 20), 9=1091(LC 19)

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

TOP CHORD 1-3=-1213/228, 3-4=-695/264, 6-7=-694/262, 7-9=-1214/231  
BOT CHORD 1-11=-25/789, 10-11=-23/798, 9-10=-24/786  
WEBS 7-10=-29/533, 3-11=-28/534, 4-12=-736/334, 6-12=-736/334

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 10-1-0, Exterior(2R) 10-1-0 to 14-2-15, Interior(1) 14-2-15 to 20-2-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9.



August 14, 2025

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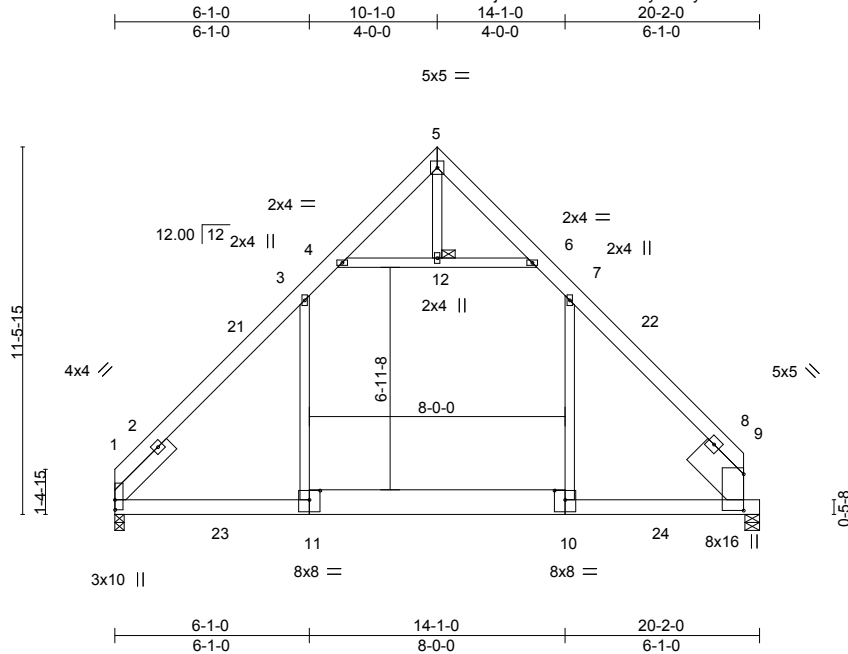
818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	C3	COMMON	4	1	175629125
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:40 2025 Page 1  
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Scale = 1:72.1

Plate Offsets (X,Y)--										[1:0-3-12,0-0-1], [9:1-1-11,0-0-0], [10:0-4-0,0-3-8], [11:0-4-0,0-3-8]									
LOADING (psf)		SPACING- 2-0-0			CSI.		DEFL.			in (loc)		l/defl		L/d		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL 1.15			TC 0.23		Vert(LL)			0.10 11-15		>999		240		MT20		244/190	
TCDL	10.0	Lumber DOL 1.15			BC 0.30		Vert(CT)			-0.11 11-15		>999		180					
BCLL	0.0 *	Rep Stress Incr YES			WB 0.12		Horz(CT)			0.04 9		n/a		n/a					
BCDL	10.0	Code IRC2021/TPI2014			Matrix-MS											Weight: 176 lb		FT = 20%	

**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1 \*Except\*  
10-11: 2x10 SP No.1  
WEBS 2x4 SP No.2  
SLIDER Left 2x6 SP No.1 2-6-0, Right 2x12 SP No.1 2-1-12

**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.  
JOINTS 1 Brace at Jt(s): 12

**REACTIONS.** (size) 1=0-3-8, 9=0-5-8, 9=0-5-8  
Max Horz 1=242(LC 9)  
Max Uplift 1=-31(LC 13), 9=-31(LC 12)  
Max Grav 1=1091(LC 20), 9=1091(LC 19), 9=807(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-3=-1213/228, 3-4=-695/264, 6-7=-694/262, 7-9=-1214/231  
BOT CHORD 1-11=-25/789, 10-11=-23/798, 9-10=-24/786  
WEBS 7-10=-29/534, 3-11=-28/533, 4-12=-736/334, 6-12=-736/334

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 10-1-0, Exterior(2R) 10-1-0 to 14-2-15, Interior(1) 14-2-15 to 20-2-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 9.



August 14, 2025

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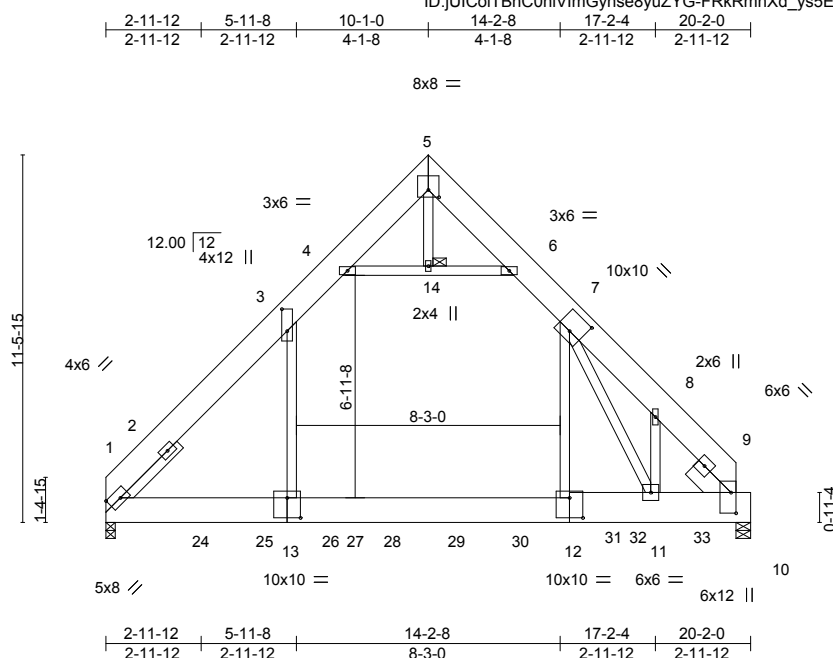


Plate Offsets (X,Y)-- [1:0-4-10,Edge], [3:0-8-4,0-2-0], [5:0-4-0,0-2-12], [7:0-5-0,0-6-12], [10:0-7-12,0-1-14], [12:0-5-0,0-7-8], [13:0-5-0,0-7-8]												
<b>LOADING</b> (psf)		<b>SPACING-</b> 2-0-0		<b>CSI.</b>		<b>DEFL.</b> in (loc) l/defl L/d				<b>PLATES</b>	<b>GRIP</b>	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.17	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.23	12-13	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.61	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code IRC2021/TPI2014		Matrix-MS		Wind(LL)	0.01	13	>999	240	Weight: 742 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x10 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	2x10 SP No.1 *Except*	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
	1-13: 2x10 SP 2400F 2.0E, 10-12: 2x12 SP No.1	JOINTS	1 Brace at Jt(s): 14
WEBS	2x4 SP No.2		
SLIDER	Left 2x4 SP No.2 2-6-0, Right 2x8 SP No.1 1-4-15		

**REACTIONS.** (size) 1=0-3-8, 10=0-5-8  
Max Horz 1=257(LC 8)  
Max Grav 1=10069(LC 14), 10=9681(LC 14)

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

**TOP CHORD** 1-3=-9935/0, 3-4=-4567/2, 4-5=-163/549, 5-6=-134/629, 6-7=-4485/115, 7-8=-9935/14,  
8-10=-9321/9597

**BOT CHORD** 1-13=-52/6337, 12-13=-52/6314, 11-12=-52/6482, 10-11=0/6320

**WEBS** 7-12=-47/8169, 3-13=0/7559, 4-14=-7492/98, 6-14=-7492/98, 5-14=-9/675,  
8-11=-947/11, 7-11=-530/148

**NOTES-**

- 1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-4-0 oc, 2x12 - 3 rows staggered at 0-4-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 2) 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.
- 3) Unbalanced roof live loads have been considered for this design.
- 4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60



August 14, 2025

Continued on page 2

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818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	C4	COMMON	1	3	175629126
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:41 2025 Page 2  
ID:jUIColTBhC0nIVImGynse8yuZYG-FRkRmhXd\_ys5EmArGoU7s4M3KdXgp5Wue\_uIVZyo0O4

NOTES-  
5) N/A

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1829 lb down at 0-10-4, 1826 lb down at 2-10-4, 1826 lb down at 4-10-4, 1826 lb down at 6-10-4, 1826 lb down at 8-10-4, 1826 lb down at 10-10-4, 1826 lb down at 12-10-4, 1826 lb down at 14-10-4, and 1826 lb down at 16-10-4, and 1783 lb down at 18-10-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)
- Vert: 1-5=-60, 5-9=-60, 9-22=60, 21-22=-60, 10-15=-20
- Concentrated Loads (lb)
- Vert: 17=-462(F) 20=-448(F) 24=-459(F) 25=-459(F) 27=-459(F) 28=-459(F) 29=-459(F) 30=-459(F) 32=-459(F) 33=-459(F)



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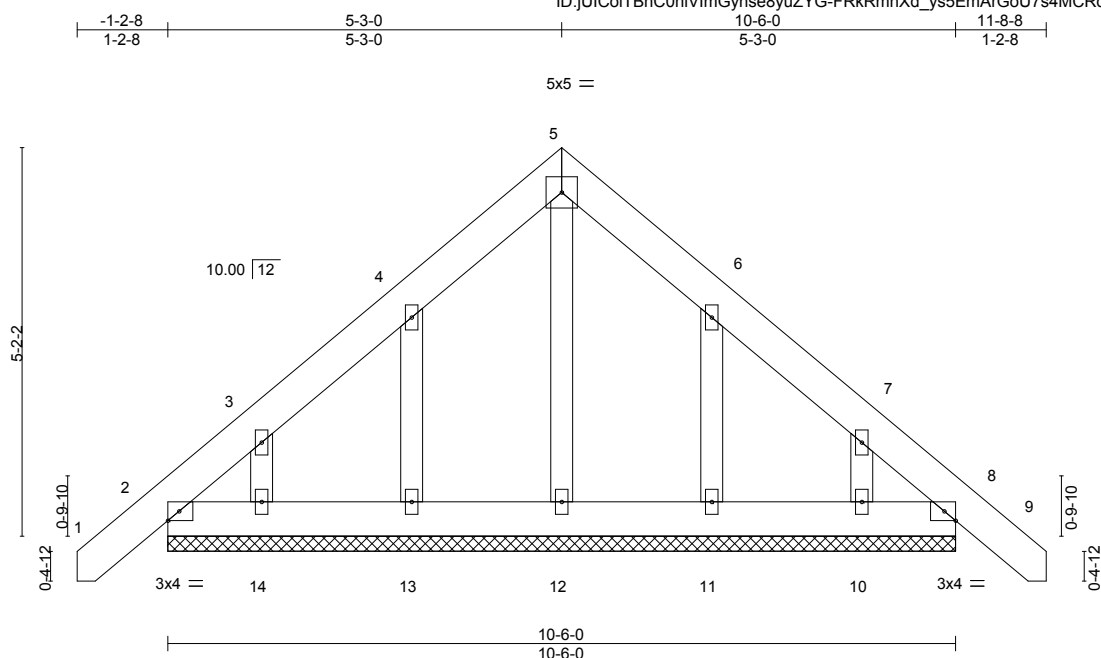


Plate Offsets (X,Y)-- [8:0-1-13,Edge]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d					PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	-0.00	8	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	8	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2021/TPI2014		Matrix-S							Weight: 82 lb	FT = 20%

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

**REACTIONS.** All bearings 10-6-0.  
(lb) - Max Horz 2=-158(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 8 except 13=-112(LC 12), 14=-106(LC 12), 11=-109(LC 13),  
10=-103(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-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-1 to 3-3-0, Exterior(2N) 3-3-0 to 5-3-0, Corner(3R) 5-3-0 to 9-7-13, Exterior(2N) 9-7-13 to 11-7-1 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" oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 2'-0" wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8 except (jt=lb) 13=112, 14=106, 11=109, 10=103.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.



August 14, 2025

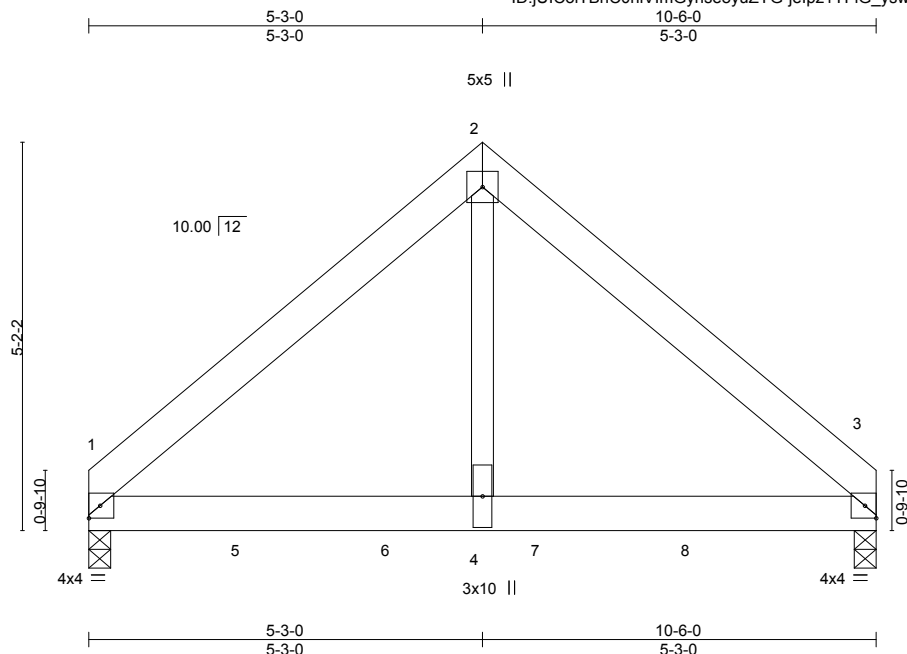


Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Components Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



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<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc)	<b>L/d</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.17	Vert(LL) -0.04 1-4	>999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.52	Vert(CT) -0.08 1-4	>999 240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.53	Horz(CT) 0.01 3	n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014	Matrix-S	Wind(LL) 0.02 1-4	>999 240	Weight: 129 lb	FT = 20%

**LUMBER-**

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP 2400F 2.0E
WEBS	2x4 SP No.2

**BRACING-**

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

### REACTIONS.

(size) 1=0-3-8, 3=0-3-8  
 Max Horz 1=112(LC 28)  
 Max Uplift 1=-175(LC 8), 3=-236(LC 9)  
 Max Grav 1=3379(LC 2), 3=4630(LC 2)

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

TOP CHORD 1-2=-3547/224, 2-3=-3553/224  
BOT CHORD 1-4=-115/2610, 3-4=-115/2610  
WEBS 2-4=-168/4354

**NOTES-**

- 1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 2) 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.
- 3) Unbalanced roof live loads have been considered for this design.
- 4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDEL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=175, 3=236.
- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1457 lb down and 85 lb up at 2-0-12, 1457 lb down and 85 lb up at 4-0-12, 1457 lb down and 85 lb up at 6-0-12, and 1457 lb down and 85 lb up at 8-0-12, and 1464 lb down and 78 lb up at 10-4-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

## 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=-60, 1-3=-20  
Concentrated Loads (lb)  
Vert: 3=-1214(B) 5=-1207(B) 6=-1207(B) 7=-1207(B) 8=-1207(B)



August 14, 2025

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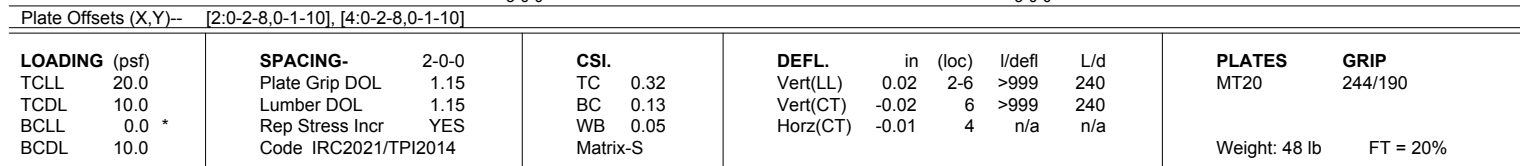
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



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Comtech, Inc. Fayetteville, NC - 28314, 25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:42 2025 Page 1  
ID:a?v8YwYZEPnU3AGkeBHSMyz37aZ-jelpz1YFIG\_yswl1qW?MPliul12DYhX2teer1?yo0O3  
-1-2-8 5-0-0 10-0-0 11-2-8  
1-2-8 5-0-0 5-0-0 1-2-8  
Scale = 1:22



**REACTIONS.** (size) 2=0-3-0, 4=0-3-0  
 Max Horz 2=42(LC 12)  
 Max Uplift 2=-270(LC 8), 4=-270(LC 9)  
 Max Grav 2=470(LC 1), 4=470(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-647/836, 3-4=-647/836  
 BOT CHORD 2-6=-657/556, 4-6=-657/556

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-2-8 to 3-2-5, Exterior(2N) 3-2-5 to 5-0-0, Corner(3R) 5-0-0 to 9-4-13, Exterior(2N) 9-4-13 to 11-2-8 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)  
2=270 4=270



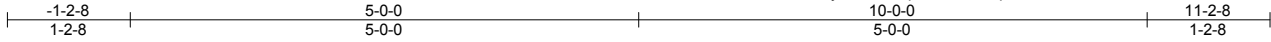
August 14, 2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	G2	COMMON	4	1	175629130
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:43 2025 Page 1  
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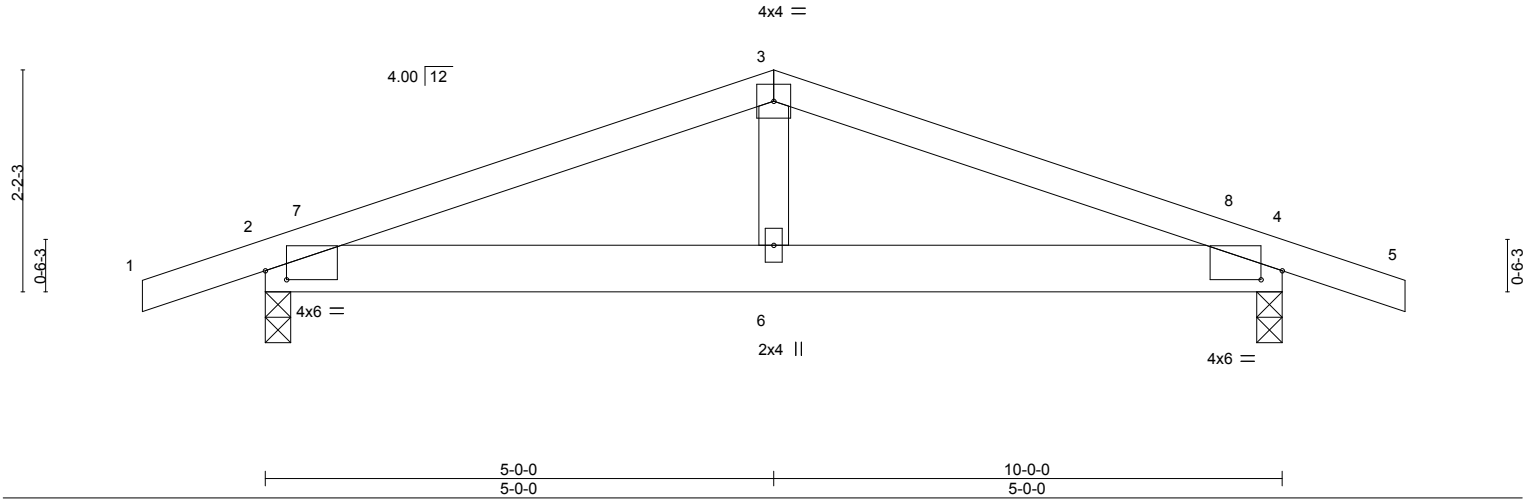


Plate Offsets (X,Y)--		[2:0-2-8,0-1-1], [4:0-2-8,0-1-1]	
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.27
TCDL 10.0	Lumber DOL	1.15	BC 0.13
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S
			<b>DEFL.</b> in (loc) l/defl L/d
			Vert(LL) -0.01 6 >999 360
			Vert(CT) -0.02 6 >999 240
			Horz(CT) 0.00 4 n/a n/a
			Wind(LL) 0.02 2-6 >999 240
			<b>PLATES</b> <b>GRIP</b>
			MT20 244/190
			Weight: 45 lb FT = 20%

**LUMBER-**

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

**BRACING-**

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

**REACTIONS.**

(size) 2=0-3-0, 4=0-3-0  
Max Horz 2=-25(LC 17)  
Max Uplift 2=-190(LC 8), 4=-190(LC 9)  
Max Grav 2=470(LC 1), 4=470(LC 1)

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

TOP CHORD 2-3=-647/691, 3-4=-647/690  
BOT CHORD 2-6=-556/556, 4-6=-556/556

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-0-0, Exterior(2R) 5-0-0 to 9-4-13, Interior(1) 9-4-13 to 11-2-8 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=190, 4=190.



August 14, 2025

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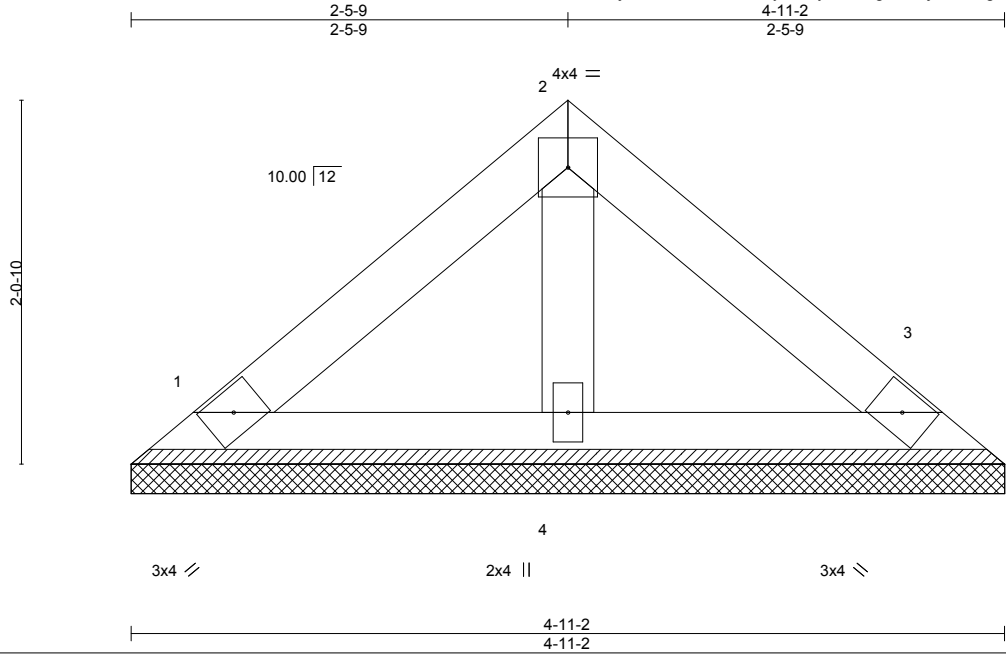
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Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	VD2	VALLEY	1	1	I75629131
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:44 2025 Page 1  
ID:jUlColTBhC0nIVImGynse8yuZYG-g0PZOjaWGtEg5EuQxx2qUj\_ivrk80bflKy7y5tyo0O1



Scale = 1:13.0

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 0.09	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.01	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-P					Weight: 18 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.2

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

(size) 1=4-11-2, 3=4-11-2, 4=4-11-2  
Max Horz 1=-41(LC 10)  
Max Uplift 1=-14(LC 13), 3=-18(LC 13)  
Max Grav 1=95(LC 1), 3=95(LC 1), 4=139(LC 1)

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



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**TRENCO**  
A MiTek Affiliate

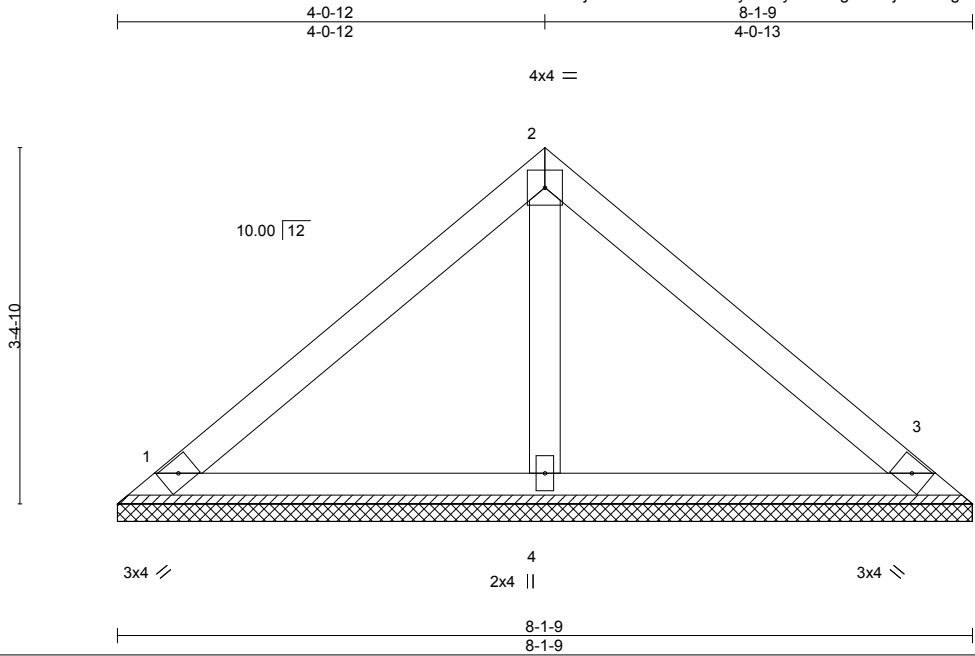
818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	VD1	VALLEY	1	1	I75629132
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:44 2025 Page 1  
ID:jUICoITBhC0nIVImGynse8yuZYG-g0PZOjaWGtEg5EuQxx2qUj\_gUjrj50bPLKy7y5tyo0O1



Scale = 1:21.9

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 0.24	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 0.03	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-P					Weight: 31 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.2

#### BRACING-

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

#### REACTIONS.

(size) 1=8-1-9, 3=8-1-9, 4=8-1-9  
Max Horz 1=-73(LC 8)  
Max Uplift 1=-26(LC 13), 3=-32(LC 13)  
Max Grav 1=169(LC 1), 3=169(LC 1), 4=247(LC 1)

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

#### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 6) Non Standard bearing condition. Review required.



August 14,2025

**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.sbcacompnents.com)

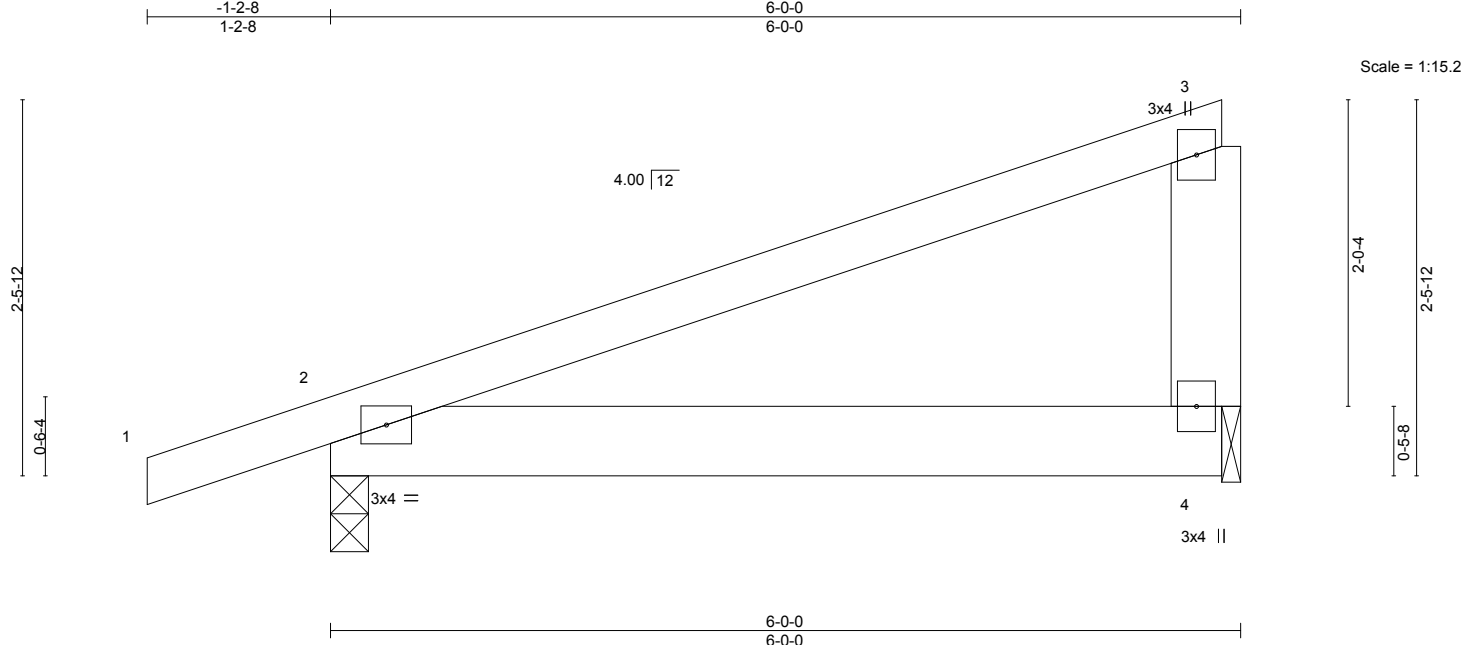
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1029-A	P2	MONOPITCH	6	1	175629133
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:44 2025 Page 1  
ID:jUlColTBhC0nIvImGynse8yuZYG-g0PZOjaWGtEg5EuQxx2qUj\_dkrj0brLKy7y5tyo0O1



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 0.42	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 0.00	Horz(CT)	0.00		n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-P	Wind(LL)	0.02	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, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 2=0-3-0, 4=0-1-8  
Max Horz 2=80(LC 8)  
Max Uplift 2=-129(LC 8), 4=-93(LC 8)  
Max Grav 2=315(LC 1), 4=216(LC 1)

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

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-2-8 to 3-2-5, Interior(1) 3-2-5 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
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=129.



August 14,2025

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818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills	I75629134
J0225-1029-A	P1-GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:24:43 2025 Page 1  
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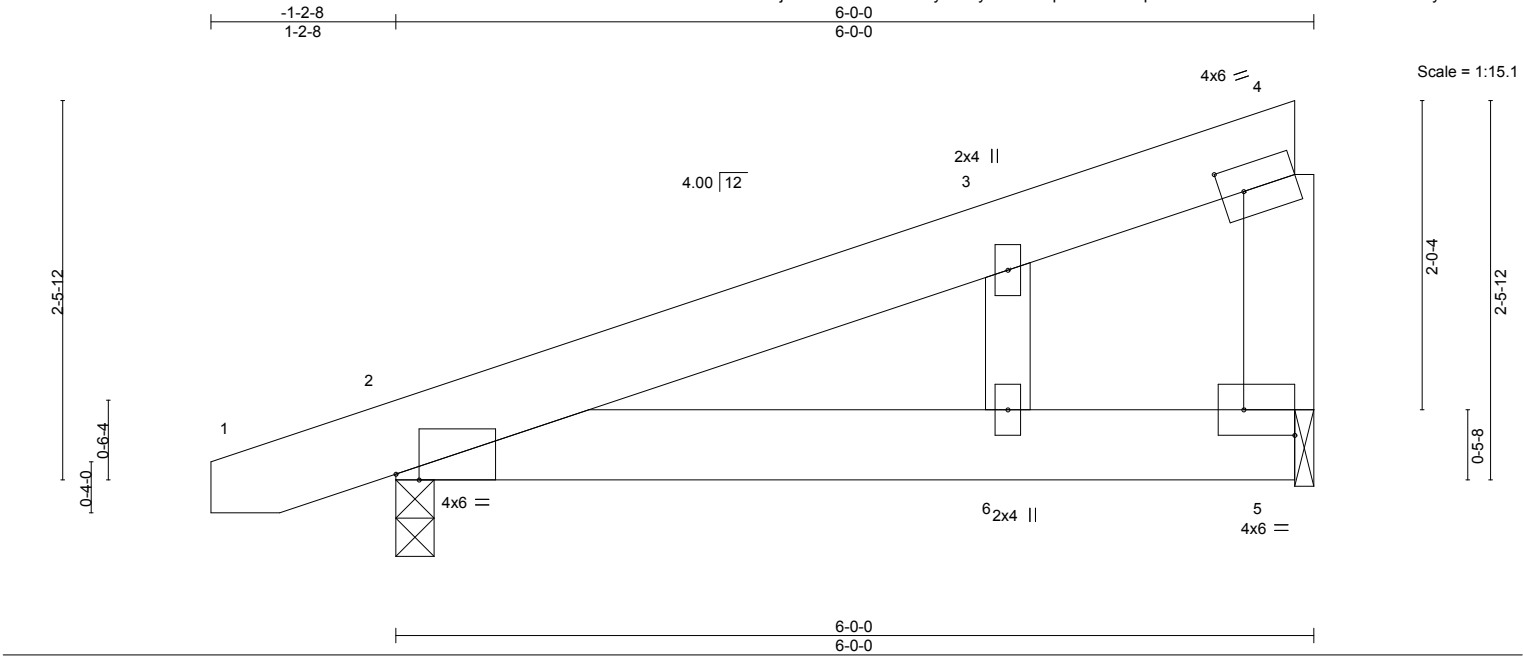


Plate Offsets (X,Y)--		[2:0-1-13,Edge], [4:0-1-13,0-2-0], [5:Edge,0-2-0]																	
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.		in (loc)		l/defl		L/d		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL		1.15		TC	0.12	Vert(LL)	0.02	2-6	>999		240		MT20		244/190		
TCDL	10.0	Lumber DOL		1.15		BC	0.10	Vert(CT)	-0.02	2-6	>999		240						
BCLL	0.0 *	Rep Stress Incr		YES		WB	0.03	Horz(CT)	-0.00	5	n/a		n/a						
BCDL	10.0	Code IRC2021/TPI2014				Matrix-S										Weight: 36 lb		FT = 20%	

LUMBER-

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

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) 2=0-3-0, 5=0-1-8  
Max Horz 2=110(LC 8)  
Max Uplift 2=173(LC 8), 5=138(LC 8)  
Max Grav 2=299(LC 1), 5=219(LC 1)

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

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-11-13 to 3-5-0, Exterior(2N) 3-5-0 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
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=173, 5=138.



August 14,2025

**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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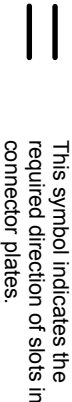
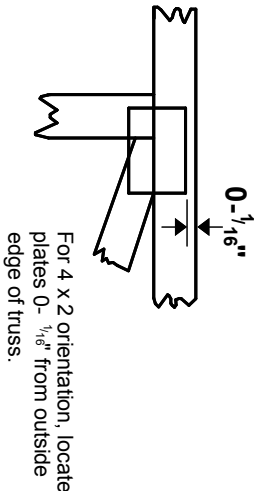
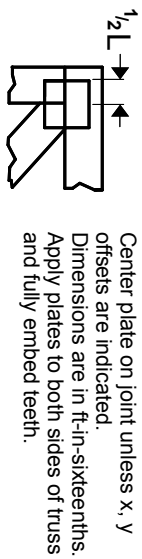
ENGINEERING BY  
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818 Soundside Road  
Edenton, NC 27932



# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

**4 X 4**

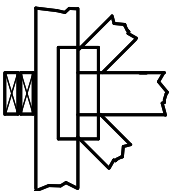
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

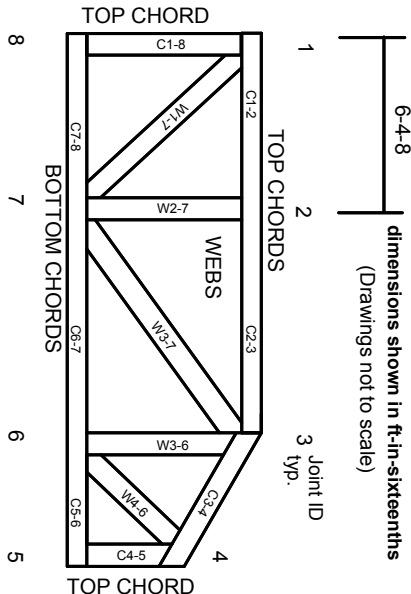
## BEARING



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

**Industry Standards:**  
ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: 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 1 section 6.3. These truss designs rely on lumber values established by others.

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# General Safety Notes

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

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

**MITek®**

**ENGINEERING BY  
TRENGO**  
A MITek Affiliate

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



RE: J0225-1030-A  
Lot 89 Magnolia Hills

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

**Site Information:**

Customer: Precision Custom Homes and Renovations Project Name: J0225-1030-A  
Lot/Block: Model:  
Address: 17 Mahogany Ct. Subdivision:  
City: Cameron State: NC

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

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 25.2  
Wind Code: N/A Wind Speed: N/A mph  
Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 16 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I75629375	ET1	8/14/2025
2	I75629376	ET2	8/14/2025
3	I75629377	ET3	8/14/2025
4	I75629378	ET4	8/14/2025
5	I75629379	F1	8/14/2025
6	I75629380	F2	8/14/2025
7	I75629381	F3	8/14/2025
8	I75629382	F4	8/14/2025
9	I75629383	F5	8/14/2025
10	I75629384	F6	8/14/2025
11	I75629385	F7	8/14/2025
12	I75629386	FG1	8/14/2025
13	I75629387	FG2	8/14/2025
14	I75629388	FG3	8/14/2025
15	I75629389	FG4	8/14/2025
16	I75629390	FG5	8/14/2025

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

Truss Design Engineer's Name: Galinski, John

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844

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





Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	ET1	GABLE	1	1	175629375
Job Reference (optional)					

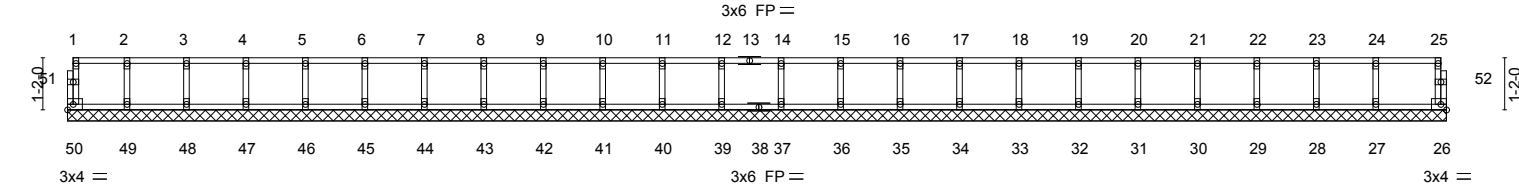
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25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:40:41 2025 Page 1  
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0-1-8

0-1-8

Scale = 1:51.7



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	14-8-0	16-0-0	17-4-0	18-8-0	20-0-0	21-4-0	22-8-0	24-0-0	25-4-0	26-8-0	28-0-0	29-4-0	30-11-0
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-7-0
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.		in (loc)		l/defl		L/d		PLATES		GRIP				
TCLL	40.0	Plate Grip DOL		1.00		TC 0.08		Vert(LL)		n/a -		n/a		999		MT20		244/190				
TCDL	10.0	Lumber DOL		1.00		BC 0.01		Vert(CT)		n/a -		n/a		999								
BCLL	0.0	Rep Stress Incr		YES		WB 0.03		Horz(CT)		0.00 26		n/a		n/a								
BCDL	5.0	Code IRC2021/TPI2014				Matrix-R										Weight: 127 lb		FT = 20%F, 11%E				

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

**REACTIONS.** All bearings 30-11-0.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 50, 26, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27

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

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



August 14,2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	ET2	GABLE	1	1	175629376
					Job Reference (optional)

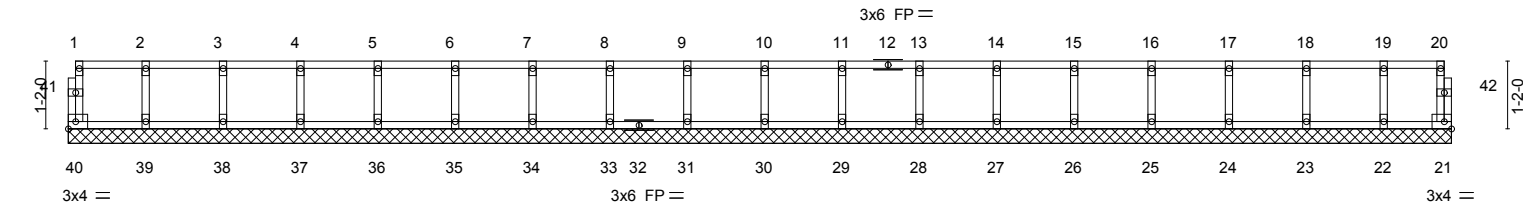
Comtech, Inc., Fayetteville, NC - 28314,

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0-1-8

0-1-8

Scale = 1:39.7



	1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	14-8-0	16-0-0	17-4-0	18-8-0	20-0-0	21-4-0	22-8-0	23-10-0	
	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-2-0	
LOADING (psf)	SPACING-			2-0-0	CSI.			DEFL.			in (loc)	l/defl	L/d	PLATES			GRIP		
TCLL 40.0	Plate Grip DOL			1.00	TC 0.06			Vert(LL)			n/a	-	n/a	999	MT20			244/190	
TCDL 10.0	Lumber DOL			1.00	BC 0.01			Vert(CT)			n/a	-	n/a	999					
BCLL 0.0	Rep Stress Incr			YES	WB 0.03			Horz(CT)			0.00	21	n/a	n/a					
BCDL 5.0	Code IRC2021/TPI2014				Matrix-R												Weight: 99 lb FT = 20%F, 11%E		

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

**REACTIONS.** All bearings 23-10-0.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 40, 21, 39, 38, 37, 36, 35, 34, 33, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22

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

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



August 14, 2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills	175629377
J0225-1030-A	ET3	GABLE	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

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ID:1NaocfdXFgYT90ywZp05ZYzwAzd-9V9dE9dJghB0NrhkBsmOWUfNV0fPUsGLd?BfjMyo093



Scale = 1:17.7

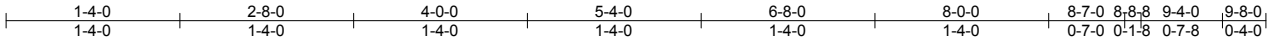
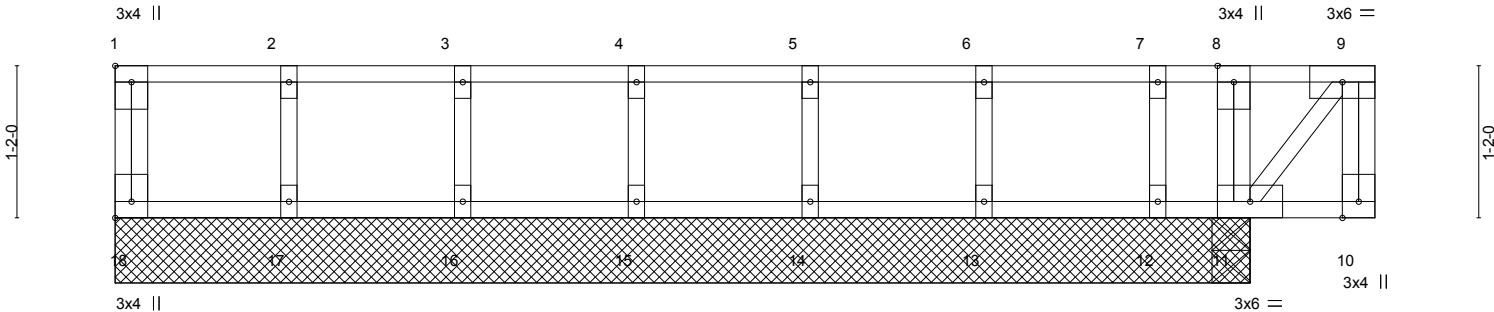


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [18:Edge,0-1-8]												
<b>LOADING</b> (psf)		<b>SPACING-</b> 2-0-0		<b>CSI.</b>		<b>DEFL.</b> in (loc) l/defl L/d				<b>PLATES</b> <b>GRIP</b>		
TCLL	40.0	Plate Grip DOL	1.00	TC	0.26	Vert(LL)	0.00	12	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.22	Vert(CT)	0.00	12	>999	360	Weight: 47 lb	FT = 20%F, 11%E
BCLL	0.0	Rep Stress Incr	NO	WB	0.05	Horz(CT)	-0.00	11	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S								

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.1(flat)	TOP CHORD	Structural wood sheathing directly applied or 9-8-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.1(flat)	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3(flat)		
OTHERS	2x4 SP No.3(flat)		

**REACTIONS.** All bearings 8-8-8.

(lb) - Max Uplift All uplift 100 lb or less at joint(s) except 12=190(LC 4)

Max Grav All reactions 250 lb or less at joint(s) 18, 17, 16, 15, 14, 13 except 11=441(LC 1), 11=441(LC 1)

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

WEBS 8-11=294/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 1-4-0 oc.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 190 lb uplift at joint 12.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 10-18=-10, 1-8=-100, 8-9=-220



August 14,2025



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0-1-8

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

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

**NOTES-**

- 1) All plates are 1.5x3 MT20 unless otherwise indicated.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Gable requires continuous bottom chord bearing.
- 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 5) Gable studs spaced at 1-4-0 oc.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



August 14, 2025

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

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[illegible]

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

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

**TOP CHORD** 2-3=-1302/0, 3-4=-1928/111, 4-5=-1928/111, 5-6=-1510/467, 6-8=-413/1022,  
8-9=0/2607, 9-10=0/2607, 10-11=-539/669, 11-13=-2039/130, 13-14=-3079/0,  
14-15=-3079/0, 15-16=-3079/0, 16-17=-2782/0, 17-18=-1749/0

**BOT CHORD** 33-34=0/824, 32-33=0/1736, 31-32=-111/1928, 30-31=-111/1928, 29-30=-737/1111,  
28-29=-1475/0, 26-28=-1179/0, 25-26=-363/1455, 24-25=0/2624, 23-24=0/3079,  
22-23=0/3080, 21-22=0/2421, 20-21=0/1051

**WEBS** 2-34=-1031/0, 2-33=0/622, 3-33=-565/55, 8-28=-1524/0, 8-29=0/1065, 10-28=-1764/0,  
10-26=0/1316, 11-26=-1268/0, 11-25=0/830, 13-25=-850/0, 13-24=0/928, 14-24=-405/0,  
18-20=-1315/0, 6-29=-1019/0, 6-30=0/675, 5-30=-864/0, 18-21=0/908, 17-21=-876/0,  
17-22=0/469, 16-22=-389/12, 16-23=-394/235

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x4 MT20 unless otherwise indicated.
- 3) Plates checked for a plus or minus 1 degree rotation about its center.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10'-0" o.c. and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 5) CAUTION. Do not erect truss backwards.



**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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ID:1NaocfdXFgYT90ywZp05ZYzwAzd-6tHNfreaCJRkc9g7JH0sbvkcvpBRydOe4JgmoEyo091

Technical drawing of a roof truss (Dachstuhl) showing the internal structure with various beams and supports. The drawing includes dimensions and labels for different parts of the truss.

**Dimensions:**

- Overall width: 14-4-12
- Overall height: 14-4-12
- Overall depth: 30-11-0
- Overall width (bottom): 16-6-4

**Labels and Components:**

- Top Chords:** 1.5x3 ||, 1.5x3 =, 1.5x3 ||, 4x4 =, 3x6 FP =, 1.5x3 ||, 1.5x3 =, 1.5x3 ||
- Bottom Chords:** 3x6 =, 1.5x3 ||, 4x4 =, 3x10 = 3x6 FP =, 1.5x3 ||, 3x6 =
- Vertical Supports:** 3x6 =, 1.5x3 ||, 4x4 =, 3x10 = 3x6 FP =, 1.5x3 ||, 3x6 =
- Diagonal Bracing:** 4x6 =
- Nodes:** 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

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

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

TOP CHORD	2-3=-1313/0, 3-4=-1956/36, 4-5=-1956/36, 5-6=-1548/363, 6-7=-462/889, 7-8=0/2427, 8-10=0/2427, 10-11=-551/643, 11-12=-1918/136, 12-13=-2754/0, 13-14=-2754/0, 14-15=-2516/0, 15-16=-1624/0
BOT CHORD	31-32=0/830, 30-31=0/1753, 29-30=-36/1956, 28-29=-36/1956, 27-28=-616/1155, 26-27=-1313/0, 24-26=-1115/0, 23-24=-353/1398, 22-23=0/2425, 21-22=0/2754, 20-21=0/2754, 19-20=0/2235, 18-19=0/983
WEBS	2-32=-1039/0, 2-31=0/629, 3-31=-573/33, 3-30=-205/259, 7-26=-1501/0, 7-27=0/1046, 6-27=-1001/0, 6-28=0/650, 5-28=-826/0, 10-26=-1668/0, 10-24=0/1226, 11-24=-1181/0, 11-23=0/749, 12-23=-756/0, 12-22=0/799, 13-22=-330/0, 16-18=-1230/0, 16-19=0/835, 15-19=-795/0, 15-20=-1365, 14-20=-336/121

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x4 MT20 unless otherwise indicated.
- 3) Plates checked for a plus or minus 1 degree rotation about its center.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 5) CAUTION. Do not erect truss backwards.



**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	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	F3	Floor	9	1	175629381
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:40:45 2025 Page 1  
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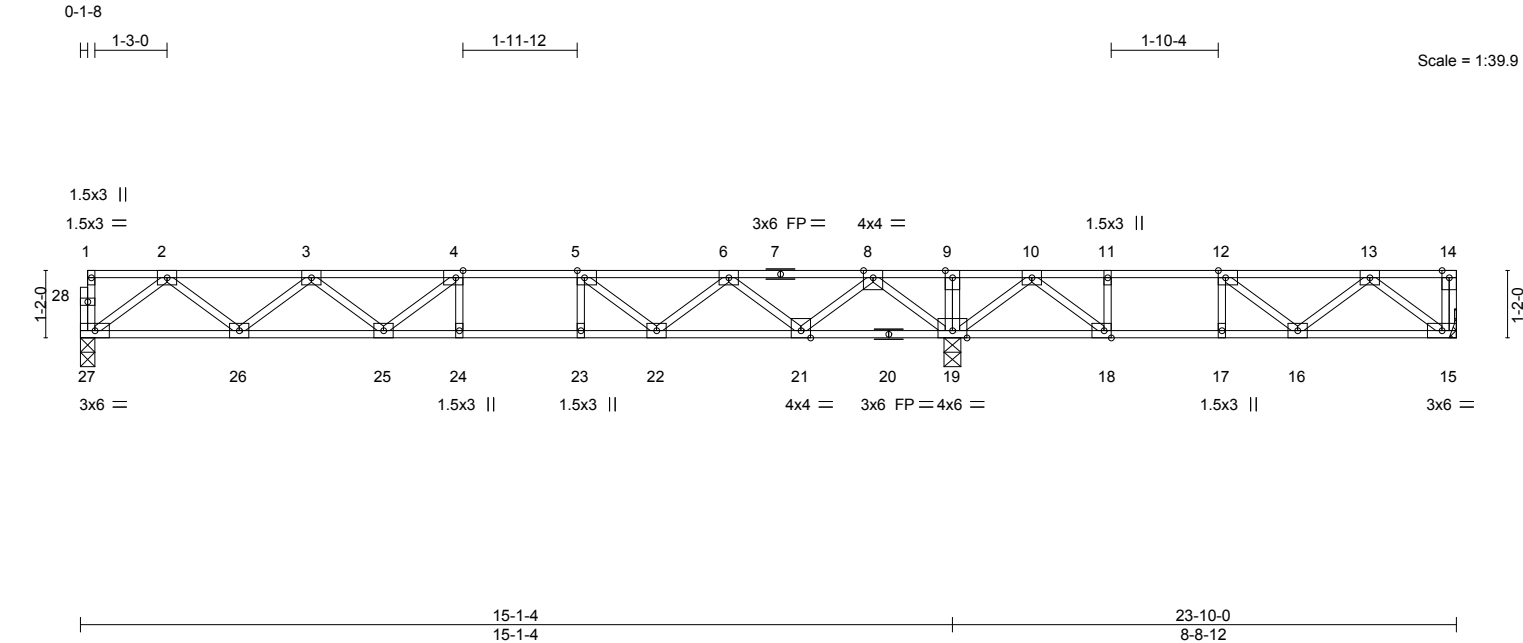


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge], [12:0-1-8,Edge], [18:0-1-8,Edge]									
<b>LOADING</b> (psf)		<b>SPACING-</b>		<b>CSI.</b>		<b>DEFL.</b>		<b>PLATES</b>	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.66	in (loc)	l/defl	L/d	GRIP
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(LL)	-0.15 24-25	>999	480
BCLL	0.0	Rep Stress Incr	NO	WB	0.47	Vert(CT)	-0.21 24-25	>861	360
BCDL	5.0	Code	IRC2021/TP12014	Matrix-S		Horz(CT)	0.04 15	n/a	n/a
								Weight: 119 lb	FT = 20%F, 11%E

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

**REACTIONS.** (size) 15=Mechanical, 27=0-3-0, 19=0-3-8  
Max Grav 15=1846(LC 4), 27=762(LC 10), 19=1476(LC 1)

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

TOP CHORD 14-15=-1426/0, 2-3=-1542/0, 3-4=-2351/0, 4-5=-2532/0, 5-6=-2102/0, 6-8=-1024/0, 8-9=0/1105, 9-10=0/1105, 10-11=-805/300, 11-12=-805/300, 12-13=-721/79

BOT CHORD 26-27=0/938, 25-26=0/2116, 24-25=0/2532, 23-24=0/2532, 22-23=0/2532, 21-22=0/1715, 19-21=-8/283, 18-19=-670/345, 17-18=-300/805, 16-17=-300/805, 15-16=0/544

WEBS 2-27=-1174/0, 2-26=0/786, 3-26=-747/0, 3-25=0/351, 4-25=-392/14, 8-19=-1376/0, 8-21=0/991, 6-21=-934/0, 6-22=0/546, 5-22=-652/0, 10-19=-841/0, 10-18=0/828, 13-15=-682/0, 12-16=-107/282, 11-18=-358/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 3x4 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Refer to girder(s) for truss to truss connections.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 15-27=-10, 1-14=-100

Concentrated Loads (lb)

Vert: 14=-1400



August 14,2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	F4	Floor	1	1	175629382
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

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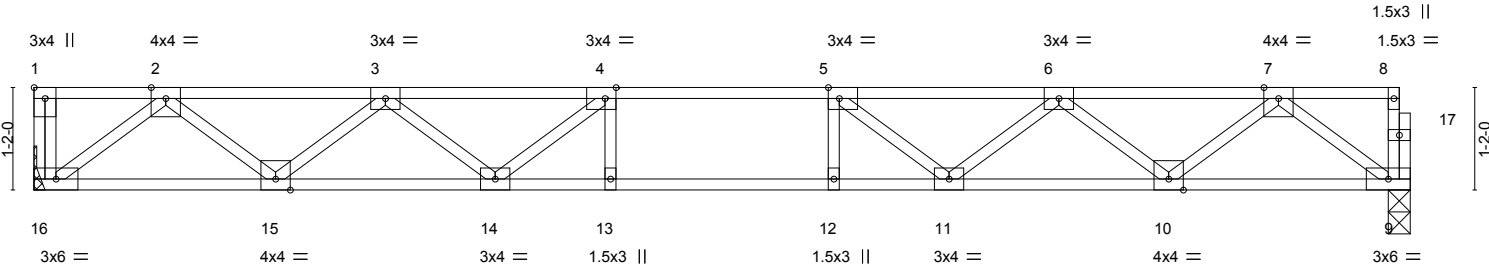
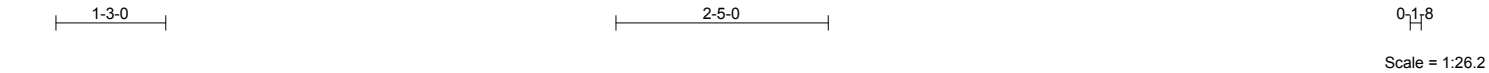


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [4:0-1-8,Edge], [5:0-1-8,Edge]					
<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d
TCLL	40.0	Plate Grip DOL	1.00	TC	0.46
TCDL	10.0	Lumber DOL	1.00	BC	0.85
BCLL	0.0	Rep Stress Incr	YES	WB	0.43
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S	
				<b>PLATES</b>	<b>GRIP</b>
				MT20	244/190
				Weight: 77 lb	FT = 20%F, 11%E

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.1(flat)	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.1(flat)	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3(flat)		
<b>REACTIONS.</b> (size) 16=Mechanical, 9=0-3-0			
Max Grav 16=848(LC 1), 9=842(LC 1)			
<b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.			
TOP CHORD	2-3=-1741/0, 3-4=-2748/0, 4-5=-3091/0, 5-6=-2748/0, 6-7=-1741/0		
BOT CHORD	15-16=0/1047, 14-15=0/2401, 13-14=0/3091, 12-13=0/3091, 11-12=0/3091, 10-11=0/2401, 9-10=0/1047		
WEBS	2-16=-1314/0, 2-15=0/903, 3-15=-858/0, 3-14=0/513, 7-9=-1310/0, 7-10=0/904, 6-10=-859/0, 6-11=0/513, 5-11=-640/0, 4-14=-640/0		

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Refer to girder(s) for truss to truss connections.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.



August 14,2025

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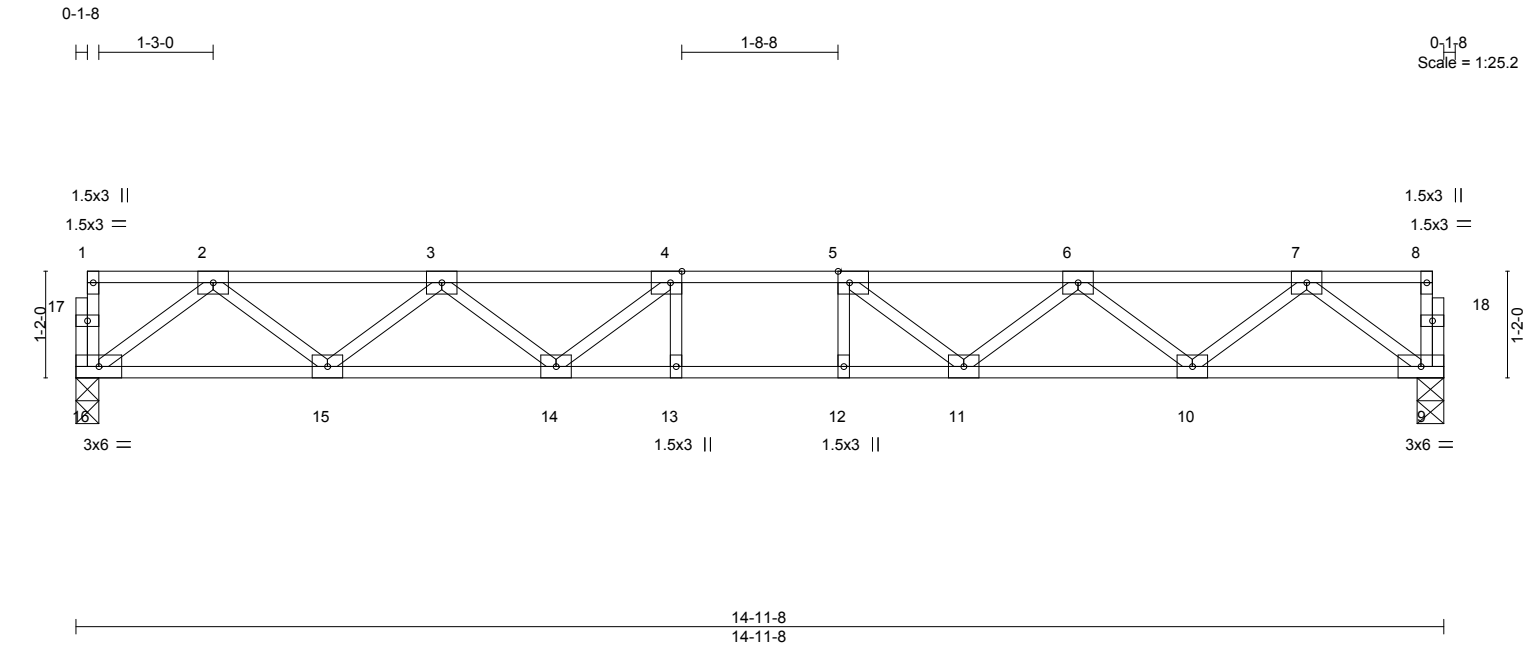
818 Soundside Road  
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Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	F5	Floor	2	1	175629383
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:40:45 2025 Page 1  
ID:1NaocfdXFgYT90yWZp05ZYzwAZd-a4rlsBfCzcZbEJPJs?v587HsSDaVh7SoJzPJkHyo090



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.34	Vert(LL)	-0.14 12-13 >999 480	MT20		244/190	
TCDL	10.0	Lumber DOL	1.00	BC	0.70	Vert(CT)	-0.20 12-13 >901 360				
BCLL	0.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.04 9 n/a n/a				
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							
								Weight: 75 lb FT = 20%F, 11%E			

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

**REACTIONS.** (size) 16=0-3-0, 9=0-3-8  
Max Grav 16=803(LC 1), 9=803(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1644/0, 3-4=-2552/0, 4-5=-2836/0, 5-6=-2552/0, 6-7=-1644/0  
BOT CHORD 15-16=0/994, 14-15=0/2260, 13-14=0/2836, 12-13=0/2836, 11-12=0/2836, 10-11=0/2260, 9-10=0/994  
WEBS 2-16=-1244/0, 2-15=0/847, 3-15=-802/0, 3-14=0/439, 7-9=-1244/0, 7-10=0/847, 6-10=-802/0, 6-11=0/439, 5-11=-533/0, 4-14=-533/0

**NOTES-**  
1) Unbalanced floor live loads have been considered for this design.  
2) All plates are 3x4 MT20 unless otherwise indicated.  
3) Plates checked for a plus or minus 1 degree rotation about its center.  
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails.  
Strongbacks to be attached to walls at their outer ends or restrained by other means.



August 14,2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	F6	Floor	2	1	175629384
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:40:46 2025 Page 1  
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-2GP74XgqkwhSrT\_WQiQKgKq\_Gdu\_QbExYd9ss7yo09?

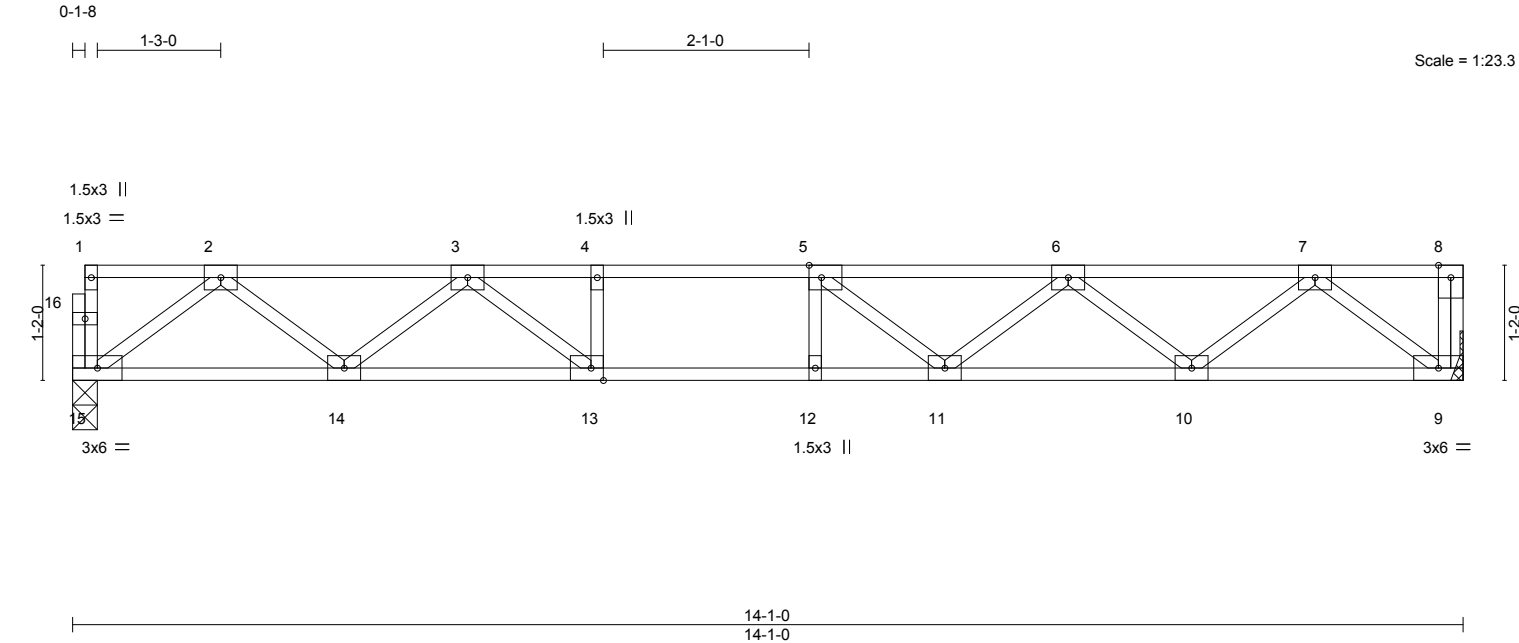


Plate Offsets (X,Y)--		[5:0-1-8,Edge], [13:0-1-8,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 40.0	Plate Grip DOL	1.00	TC 0.53
TCDL 10.0	Lumber DOL	1.00	BC 0.81
BCLL 0.0	Rep Stress Incr	YES	WB 0.37
BCDL 5.0	Code	IRC2021/TP12014	Matrix-S
DEFL.	in (loc)	l/defl	L/d
Vert(LL)	-0.16 11-12	>999	480
Vert(CT)	-0.22 11-12	>772	360
Horz(CT)	0.03 9	n/a	n/a
PLATES	GRIP		
MT20	244/190		
Weight: 70 lb	FT = 20%F, 11%E		

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

REACTIONS. (size) 15=0-3-0, 9=Mechanical  
Max Grav 15=755(LC 1), 9=761(LC 1)

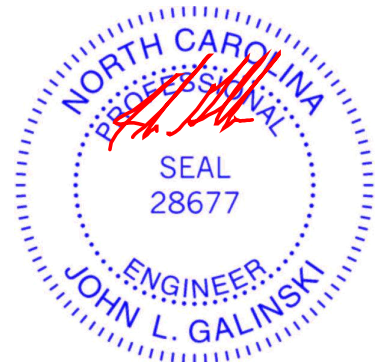
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-1505/0, 3-4=-2467/0, 4-5=-2467/0, 5-6=-2316/0, 6-7=-1525/0

BOT CHORD 14-15=0/935, 13-14=0/2068, 12-13=0/2467, 11-12=0/2467, 10-11=0/2092, 9-10=0/928

WEBS 2-15=-1171/0, 2-14=0/742, 3-14=-733/0, 3-13=0/690, 7-9=-1165/0, 7-10=0/776, 6-10=-739/0, 6-11=0/374, 5-11=-406/31, 4-13=-289/0

- NOTES-
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x4 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 6) CAUTION, Do not erect truss backwards.



August 14,2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	F7	Floor	2	1	175629385

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:40:46 2025 Page 1

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Job Reference (optional)

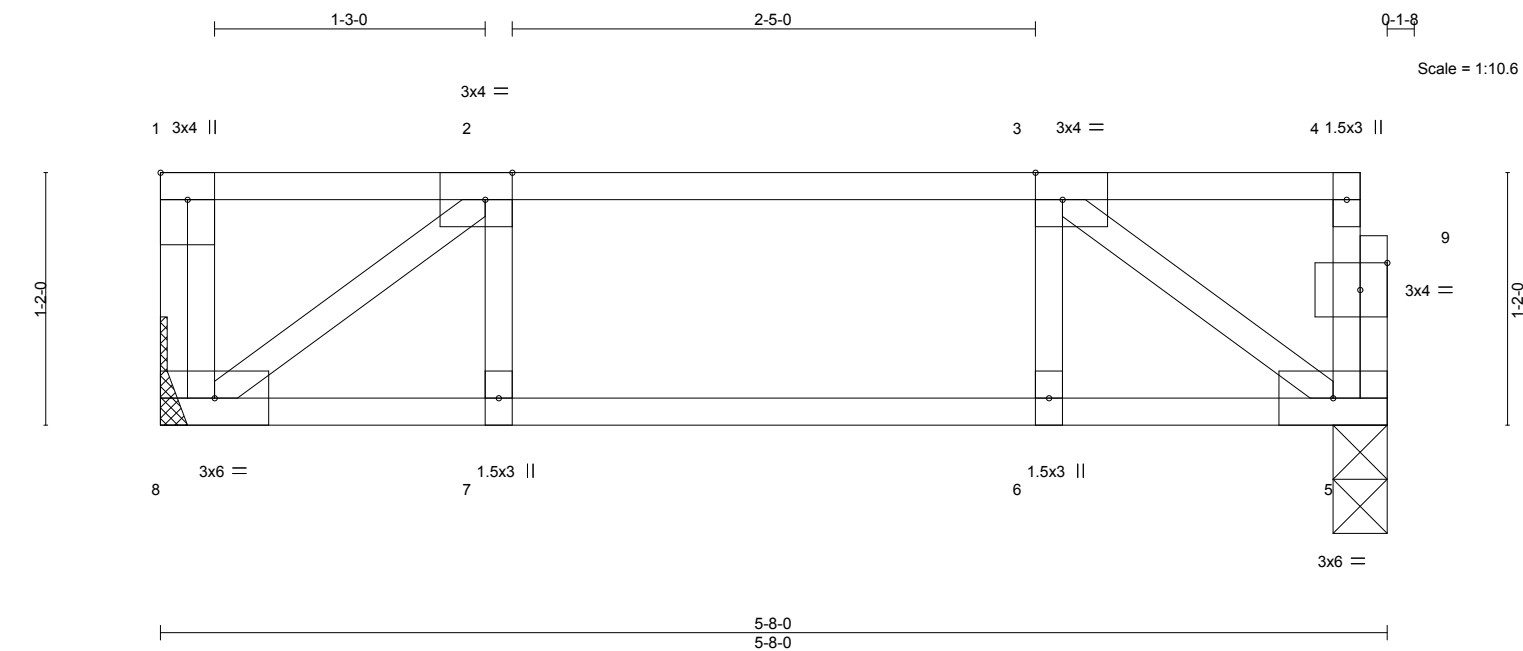


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [2:0-1-8,Edge], [3:0-1-8,Edge], [9:0-1-8,0-1-8]									
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.21	Vert(LL)	-0.01	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.12	Vert(CT)	-0.01		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S				Weight: 29 lb	FT = 20%F, 11%E

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.1(flat)	TOP CHORD	Structural wood sheathing directly applied or 5-8-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.1(flat)	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3(flat)		

**REACTIONS.** (size) 8=Mechanical, 5=0-3-0  
Max Grav 8=298(LC 1), 5=292(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-347/0  
BOT CHORD 7-8=0/347, 6-7=0/347, 5-6=0/347  
WEBS 2-8=-429/0, 3-5=-426/0

**NOTES-**

- Unbalanced floor live loads have been considered for this design.
- Plates checked for a plus or minus 1 degree rotation about its center.
- Refer to girder(s) for truss to truss connections.
- Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- CAUTION, Do not erect truss backwards.



August 14,2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills	175629386
J0225-1030-A	FG1	Floor	1	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314.

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0-1-8

H | 1-3-0 |

1-11-12

1-10-4

Scale = 1:39.9

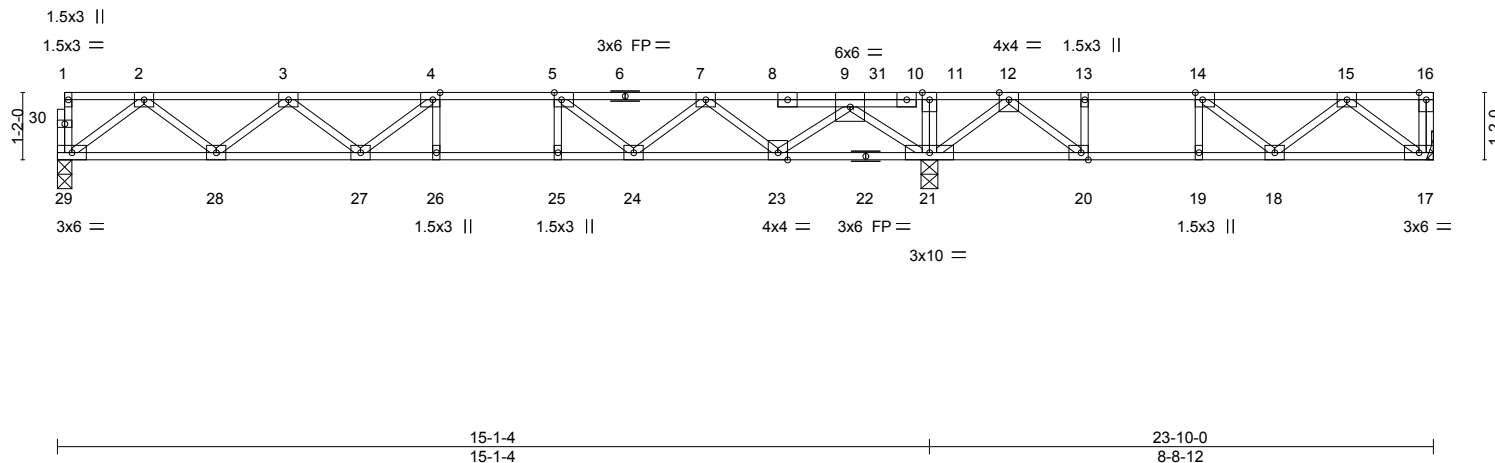


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge], [14:0-1-8,Edge], [20:0-1-8,Edge]									
<b>LOADING</b> (psf)		<b>SPACING-</b> 2-0-0		<b>CSI.</b>		<b>DEFL.</b> in (loc) l/defl L/d		<b>PLATES GRIP</b>	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.84	Vert(LL)	-0.15 26-27 >999 480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.21 26-27 >860 360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.52	Horz(CT)	0.04 21 n/a n/a		
BCDL	5.0	Code IRC2021/TPI2014		Matrix-S				Weight: 122 lb	FT = 20%F, 11%E

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

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

**REACTIONS.** (size) 17=Mechanical, 29=0-3-0, 21=0-3-8  
Max Gray 17=1803(LC 4), 29=789(LC 10), 21=2349(LC 1)

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

TOP CHORD	16-17=-1421/0, 2-3=-1610/0, 3-4=-2485/0, 4-5=-2730/0, 5-7=-2350/0, 7-9=-1398/0, 9-11=0/1413, 11-12=0/1393, 12-13=-607/486, 13-14=-607/486, 14-15=-613/181
BOT CHORD	28-29=0/975, 27-28=0/2213, 26-27=0/2730, 25-26=0/2730, 24-25=0/2730, 23-24=0/1988, 21-23=0/704, 20-21=-953/43, 19-20=-866/607, 18-19=-486/607, 17-18=-28/496
WEBS	11-21=-594/0, 2-29=-1220/0, 2-28=0/827, 3-28=-784/0, 3-27=0/399, 4-27=-471/0, 9-21=-2210/0, 9-23=0/906, 7-23=-817/0, 7-24=0/514, 5-24=-577/0, 15-17=-622/36, 14-18=0/390, 12-21=-842/0, 12-20=0/952, 13-20=-410/0

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x4 MT20 unless otherwise indicated.
- 3) Plates checked for a plus or minus 1 degree rotation about its center.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10'-0" oc and fastened to each truss with 3-10d (0.131" X 3") nails.  
Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 6) CAUTION, Do not erect truss backwards.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 936 lb down at 14'-2" to 12" on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

## LOAD CASE(S) Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-29=-10, 1-16=-100  
Concentrated Loads (lb)  
Vert: 16=-1400 31=-861(F)



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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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Components Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	FG2	FLOOR	1	1	175629387
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:40:47 2025 Page 1  
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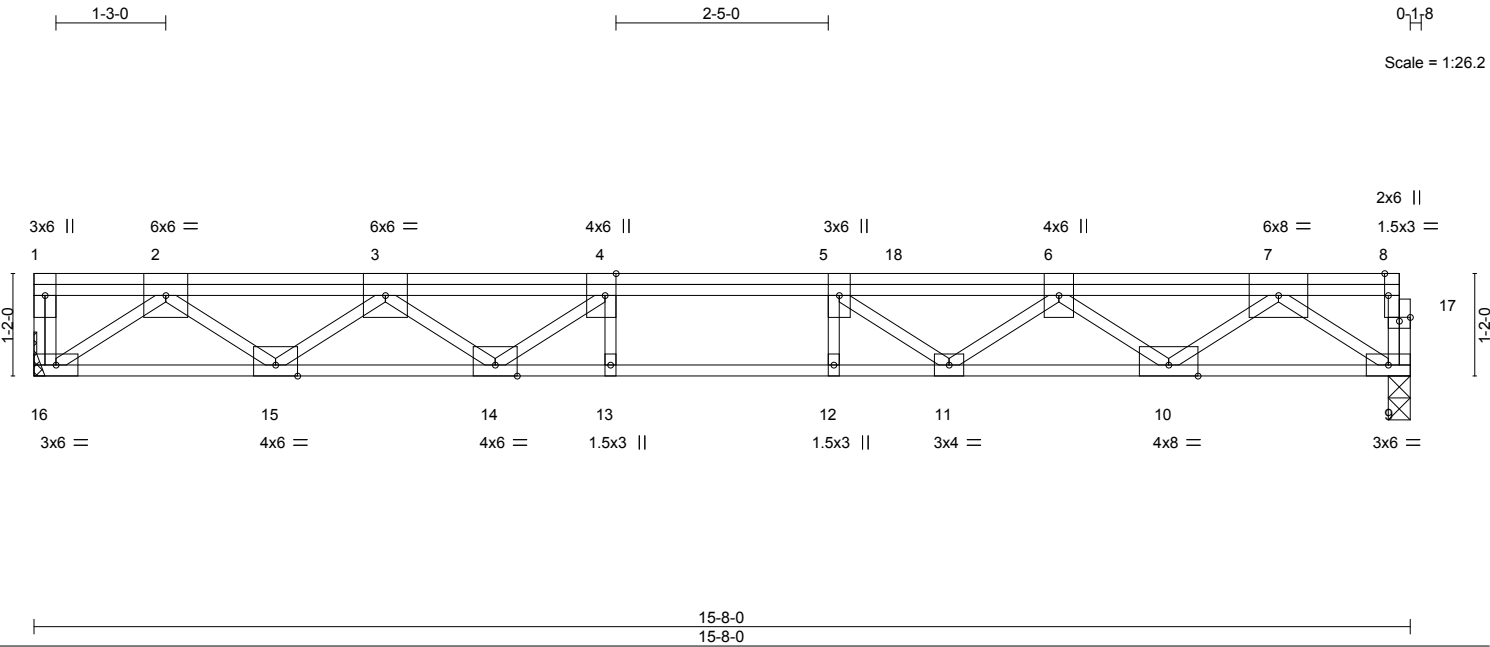


Plate Offsets (X,Y)-- [4:0-3-0,Edge], [8:0-3-0,Edge], [17:0-1-8,0-0-8]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.71	in (loc) l/defl L/d	<b>GRIP</b>
TCDL 10.0	Lumber DOL	1.00	BC 0.93	Vert(LL) -0.24 12 >760 480	MT20 244/190
BCLL 0.0	Rep Stress Incr	NO	WB 0.86	Vert(CT) -0.34 12 >545 360	
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S	Horz(CT) 0.06 9 n/a n/a	
					Weight: 99 lb FT = 20%F, 11%E

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

**REACTIONS.** (size) 16=Mechanical, 9=0-3-0  
Max Grav 16=1114(LC 1), 9=1297(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2517/0, 3-4=-4365/0, 4-5=-5379/0, 5-6=-5004/0, 6-7=-3095/0  
BOT CHORD 15-16=0/1492, 14-15=0/3494, 13-14=0/5379, 12-13=0/5379, 11-12=0/5379, 10-11=0/4498, 9-10=0/1670  
WEBS 2-16=-1832/0, 2-15=0/1302, 3-15=-1241/0, 3-14=0/1217, 4-14=-1435/0, 7-9=-2043/0, 7-10=0/1809, 6-10=-1782/0, 6-11=0/771, 5-11=-640/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 5) CAUTION, Do not erect truss backwards.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 791 lb down at 9-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 9-16=-10, 1-8=-100  
Concentrated Loads (lb)  
Vert: 18=-721(B)



August 14,2025

**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.sbcacompoments.com)

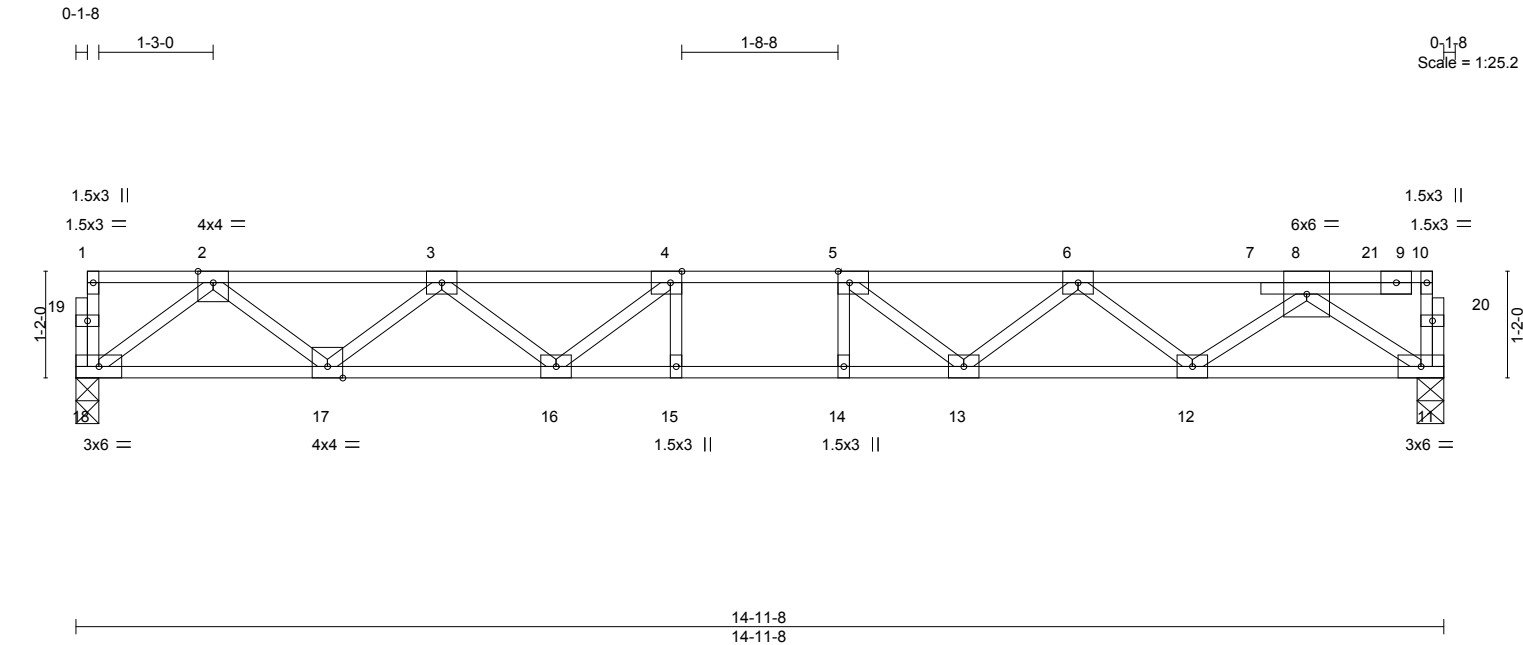
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	FG3	Floor	1	1	175629388
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

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LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.56	Vert(LL)	-0.16 14 >999 480	MT20		244/190	
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.23 14 >779 360				
BCLL	0.0	Rep Stress Incr	NO	WB	0.43	Horz(CT)	0.05 11 n/a n/a				
BCDL	5.0	Code IRC2021/TP12014		Matrix-S							
								Weight: 77 lb FT = 20%F, 11%E			

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

**REACTIONS.** (size) 18=0-3-0, 11=0-3-8  
Max Grav 18=839(LC 1), 11=1650(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 10-11=-597/0, 2-3=-1735/0, 3-4=-2731/0, 4-5=-3093/0, 5-6=-2878/0, 6-8=-2095/0  
BOT CHORD 17-18=0/1043, 16-17=0/2390, 15-16=0/3093, 14-15=0/3093, 13-14=0/3093, 12-13=0/2623, 11-12=0/1497  
WEBS 2-18=-1306/0, 2-17=0/901, 3-17=-852/0, 3-16=0/502, 4-16=-633/0, 8-11=-1793/0, 8-12=0/757, 6-12=-690/0, 6-13=0/383, 5-13=-437/41

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 3x4 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 946 lb down at 14-2-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 11-18=-10, 1-10=-100  
Concentrated Loads (lb)  
Vert: 21=-884(B)



August 14,2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills
J0225-1030-A	FG4	FLOOR GIRDER	1	1	175629389
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

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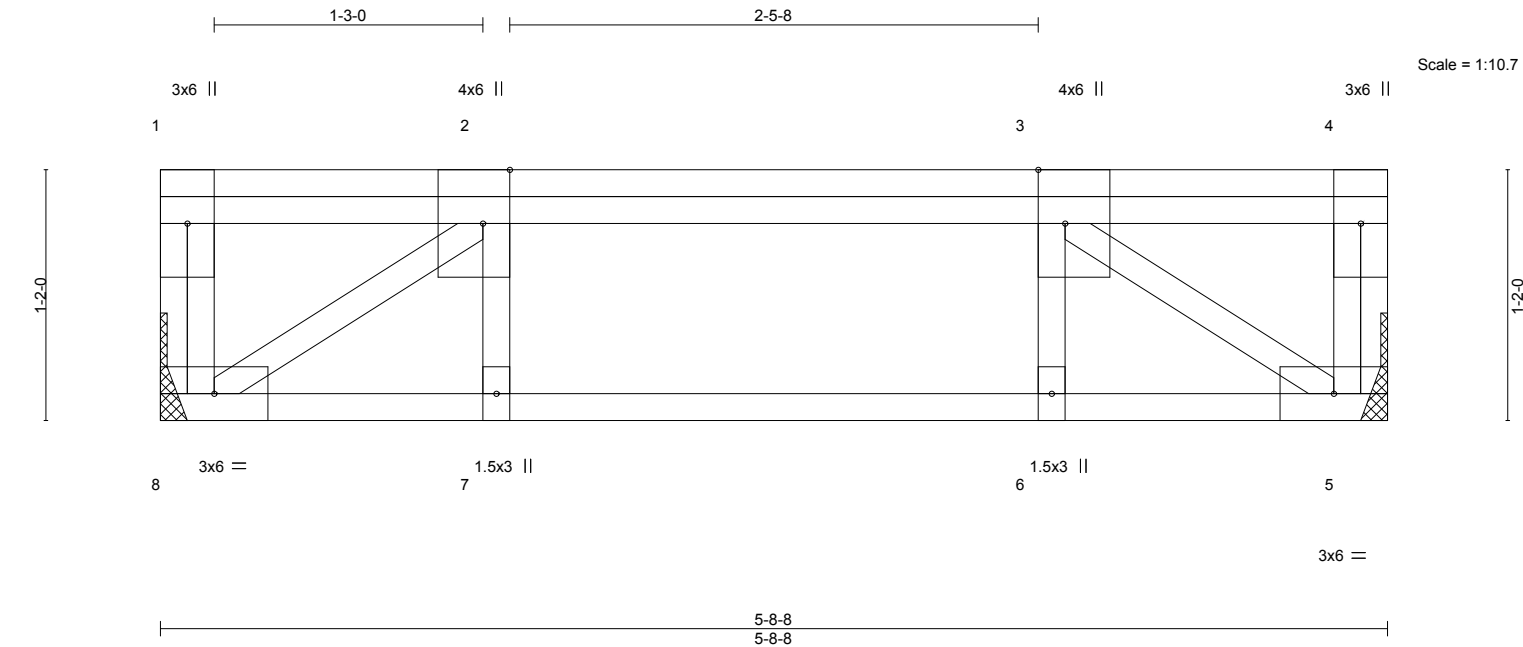


Plate Offsets (X,Y)-- [2:0-3-0,Edge], [3:0-3-0,Edge]											
<b>LOADING</b> (psf)		<b>SPACING-</b>		<b>CSI.</b>		<b>DEFL.</b>				<b>PLATES</b>	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.13	in (loc)	l/defl	L/d		MT20	GRIP
TCDL	10.0	Lumber DOL	1.00	BC	0.30	Vert(LL)	-0.02	6-7	>999	480	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.37	Vert(CT)	-0.03	6-7	>999	360	
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S		Horz(CT)	0.01	5	n/a	n/a	
										Weight: 37 lb	FT = 20%F, 11%E

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.1(flat)	TOP CHORD	Structural wood sheathing directly applied or 5-8-8 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.1(flat)	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3(flat)		

**REACTIONS.** (size) 8=Mechanical, 5=Mechanical  
Max Grav 8=961(LC 1), 5=961(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1310/0  
BOT CHORD 7-8=0/1310, 6-7=0/1310, 5-6=0/1310  
WEBS 2-8=-1585/0, 3-5=-1585/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 5) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 689 lb down at 1-10-4, and 689 lb down at 3-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 6) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 5-8=-10, 1-4=-100

Concentrated Loads (lb)

Vert: 2=-661(B) 3=-661(B)



August 14,2025



Job	Truss	Truss Type	Qty	Ply	Lot 89 Magnolia Hills	175629390
J0225-1030-A	FG5	FLOOR GIRDER	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314, 25.2.0 s Jul 24 2025 MiTek Industries, Inc. Thu Aug 14 06:40:48 2025 Page 1  
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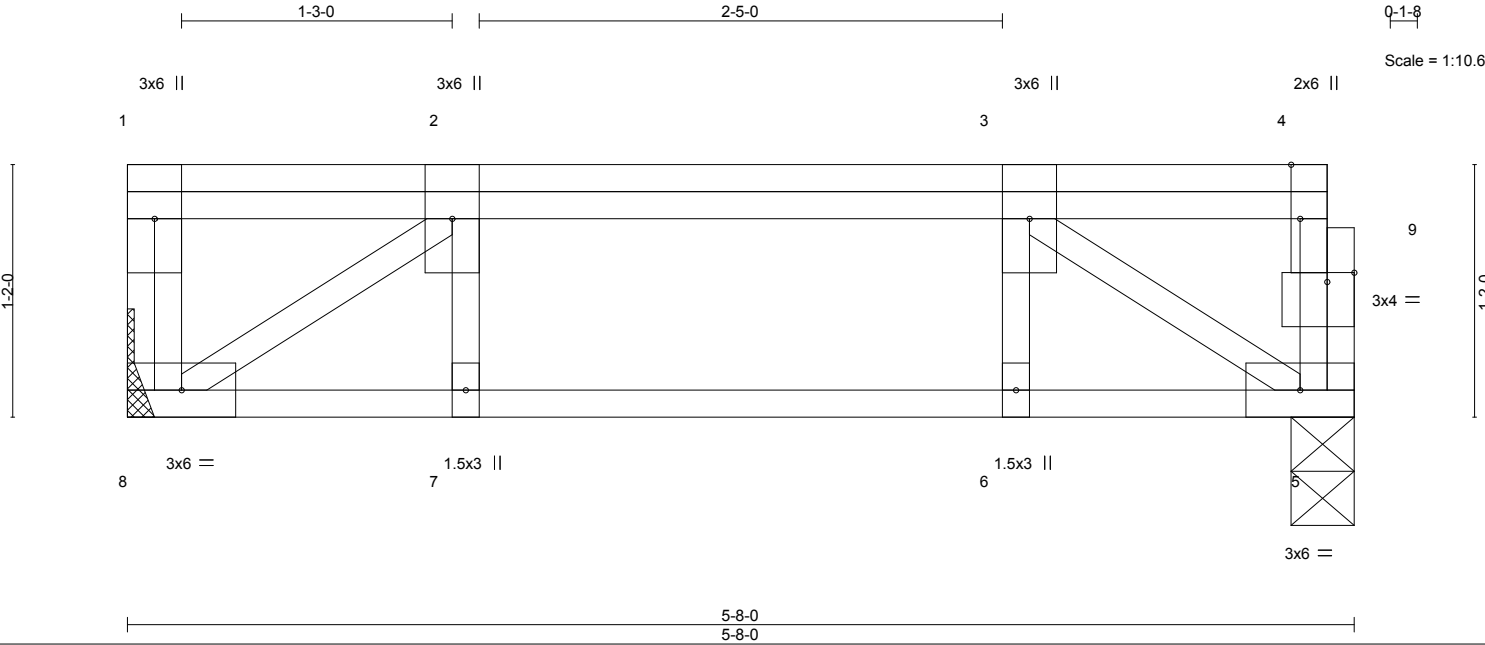


Plate Offsets (X,Y)-- [4:0-3-0,Edge], [9:0-1-8,0-0-8]		5-8-0 5-8-0			
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc) l/defl L/d
TCLL 40.0	Plate Grip DOL	1.00	TC 0.19	Vert(LL)	-0.01 6-7 >999 480
TCDL 10.0	Lumber DOL	1.00	BC 0.25	Vert(CT)	-0.02 6-7 >999 360
BCLL 0.0	Rep Stress Incr	NO	WB 0.29	Horz(CT)	0.01 5 n/a n/a
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S		
				<b>PLATES</b>	<b>GRIP</b>
				MT20	244/190
				Weight: 36 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 5-8-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 8=Mechanical, 5=0-3-8  
Max Grav 8=821(LC 1), 5=807(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1040/0  
BOT CHORD 7-8=0/1040, 6-7=0/1040, 5-6=0/1040  
WEBS 2-8=-1258/0, 3-5=-1250/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 5) CAUTION, Do not erect truss backwards.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 226 lb down at 1-10-4, and 228 lb down at 3-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) In the LOAD CASE(S), loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 5-8=-10, 1-4=-220  
Concentrated Loads (lb)  
Vert: 2=-198(F) 3=-198(F)



August 14,2025

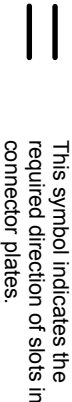
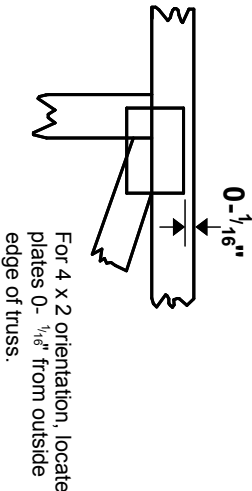
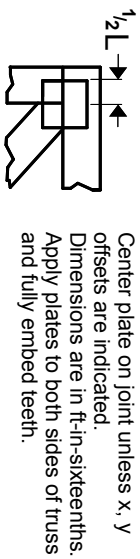
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before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

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



# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

**4 X 4**

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

## LATERAL BRACING LOCATION



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

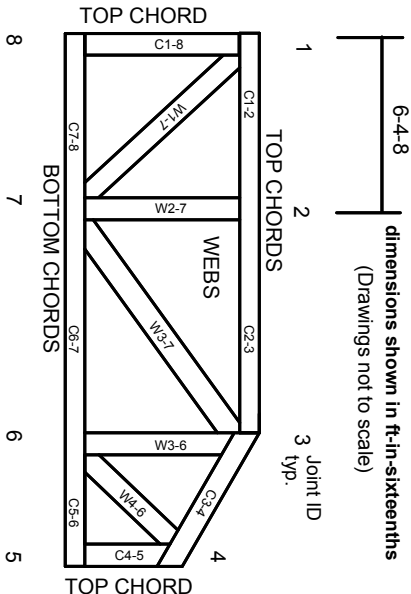
## BEARING



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

**Industry Standards:**  
ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: 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 1 section 6.3. These truss designs rely on lumber values established by others.

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# General Safety Notes

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

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

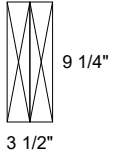
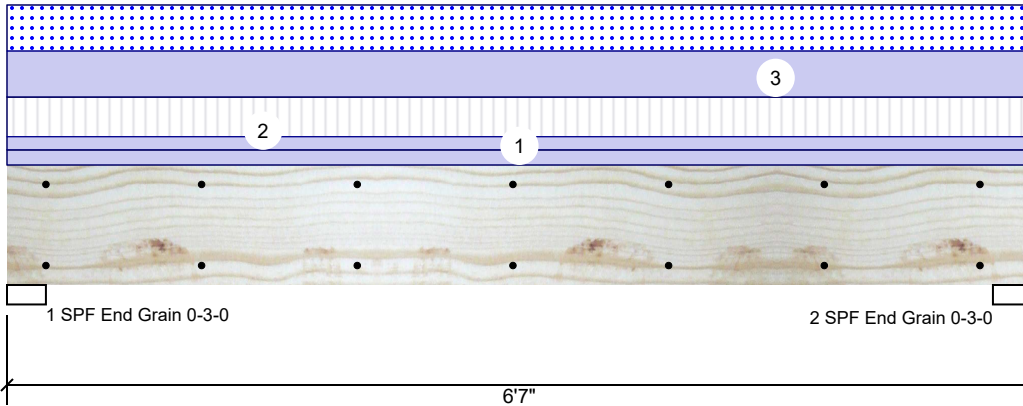
ENGINEERING BY  
**TRENCO**  
A MITek Affiliate

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



# BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



## Member Information

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

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

## Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1034	1959	1198	0	0
2	Vertical	1034	1959	1198	0	0

## Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	41%	1959 / 1674	3633	L	D+0.75(L+S)
2 - SPF End Grain	3.000"	Vert	41%	1959 / 1674	3633	L	D+0.75(L+S)

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5318 ft-lb	3'3 1/2"	14423 ft-lb	37%	D+0.75(L+S)	L
Unbraced	5318 ft-lb	3'3 1/2"	10370 ft-lb	51%	D+0.75(L+S)	L
Shear	2506 lb	1' 1/4"	7943 lb	32%	D+0.75(L+S)	L
LL Defl inch	0.046 (L/1636)	3'3 1/2"	0.155 (L/480)	29%	0.75(L+S)	L
TL Defl inch	0.099 (L/754)	3'3 1/2"	0.207 (L/360)	48%	D+0.75(L+S)	L

## Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Top	104 PLF	314 PLF	0 PLF	0 PLF	0 PLF	FG3
3	Uniform			Top	364 PLF	0 PLF	364 PLF	0 PLF	0 PLF	A3
	Self Weight				7 PLF					

## Notes

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

## Lumber

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

chemicals

## Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

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

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



This design is valid until 2/28/2028





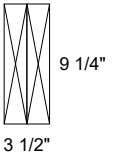
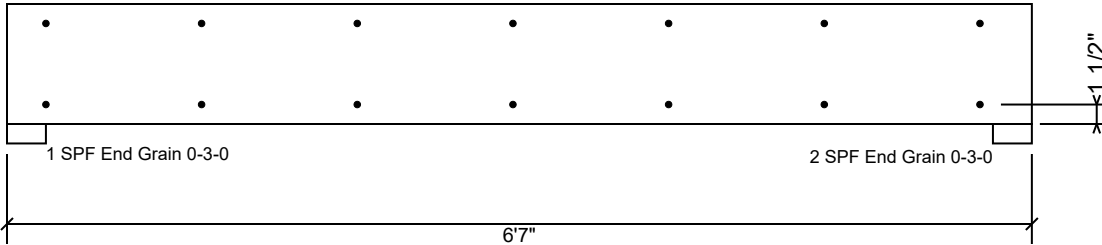
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Project:  
Address:

Date: 8/25/2025  
Input by: Neal Baggett  
Job Name: 89 MAGNOLIA HILLS  
Project #:

Page 2 of 8

**BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



### Multi-Ply Analysis

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

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

### Notes

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

### Lumber

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

chemicals

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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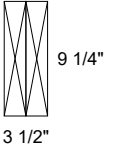
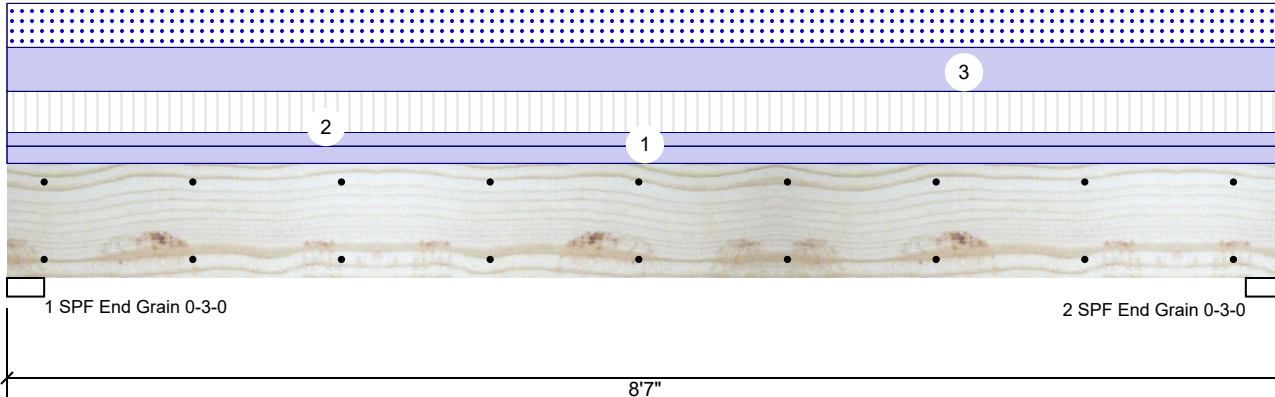


This design is valid until 2/28/2028



# **BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



## **Member Information**

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

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

## **Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1227	2267	1313	0	0
2	Vertical	1227	2267	1313	0	0

## **Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	47%	2267 / 1906	4172	L	D+0.75(L+S)
2 - SPF End Grain	3.000"	Vert	47%	2267 / 1906	4172	L	D+0.75(L+S)

## **Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8188 ft-lb	4'3 1/2"	14423 ft-lb	57%	D+0.75(L+S)	L
Unbraced	8188 ft-lb	4'3 1/2"	8625 ft-lb	95%	D+0.75(L+S)	L
Shear	3180 lb	7'6 3/4"	7943 lb	40%	D+0.75(L+S)	L
LL Defl inch	0.112 (L/883)	4'3 9/16"	0.205 (L/480)	54%	0.75(L+S)	L
TL Defl inch	0.244 (L/403)	4'3 9/16"	0.274 (L/360)	89%	D+0.75(L+S)	L

## **Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Top	95 PLF	286 PLF	0 PLF	0 PLF	0 PLF	F3
3	Uniform			Top	306 PLF	0 PLF	306 PLF	0 PLF	0 PLF	B2
	Self Weight				7 PLF					

## **Notes**

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

## **Lumber**

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

chemicals

## **Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

## **Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
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[www.metsawood.com/us](http://www.metsawood.com/us)

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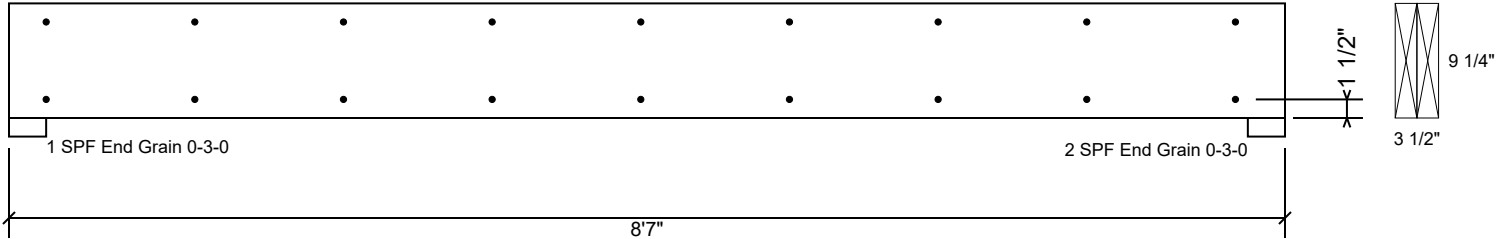
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Project:  
Address:

Date: 8/25/2025  
Input by: Neal Baggett  
Job Name: 89 MAGNOLIA HILLS  
Project #:

Page 4 of 8

## BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



### Multi-Ply Analysis

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

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

#### Notes

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

#### Lumber

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

#### chemicals

#### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

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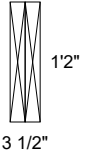
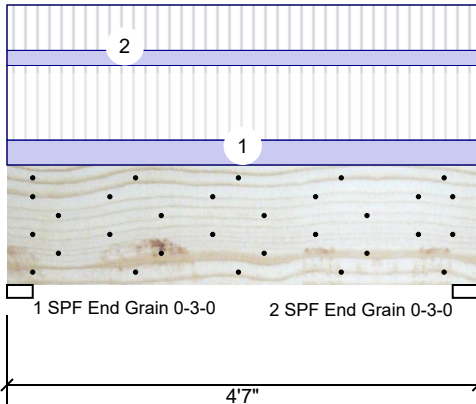


This design is valid until 2/28/2028



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

Level: Level



### Member Information

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

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

### Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2278	783	0	0	0
2	Vertical	2278	783	0	0	0

### Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	35%	783 / 2278	3061	L	D+L
2 - SPF End Grain	3.000"	Vert	35%	783 / 2278	3061	L	D+L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2957 ft-lb	2'3 1/2"	26999 ft-lb	11%	D+L	L
Unbraced	2957 ft-lb	2'3 1/2"	21560 ft-lb	14%	D+L	L
Shear	2715 lb	1'5"	10453 lb	26%	D+L	L
LL Defl inch	0.010 (L/5285)	2'3 9/16"	0.105 (L/480)	9%	L	L
TL Defl inch	0.013 (L/3932)	2'3 9/16"	0.140 (L/360)	9%	D+L	L

### Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Far Face	206 PLF	618 PLF	0 PLF	0 PLF	0 PLF	FG3
2	Uniform			Near Face	125 PLF	376 PLF	0 PLF	0 PLF	0 PLF	FG2
	Self Weight				11 PLF					

### Notes

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

### Lumber

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

chemicals

### Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

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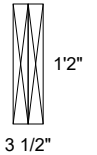
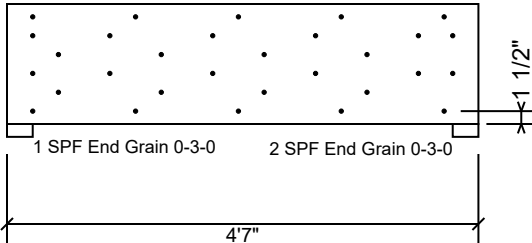
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Project:  
Address:

Date: 8/25/2025  
Input by: Neal Baggett  
Job Name: 89 MAGNOLIA HILLS  
Project #:

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

Level: Level



### Multi-Ply Analysis

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

Capacity	83.9 %
Load	412.0 PLF
Yield Limit per Foot	491.1 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
Duration Factor	1.00

#### Notes

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

#### Lumber

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

chemicals

#### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

#### Manufacturer Info

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

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

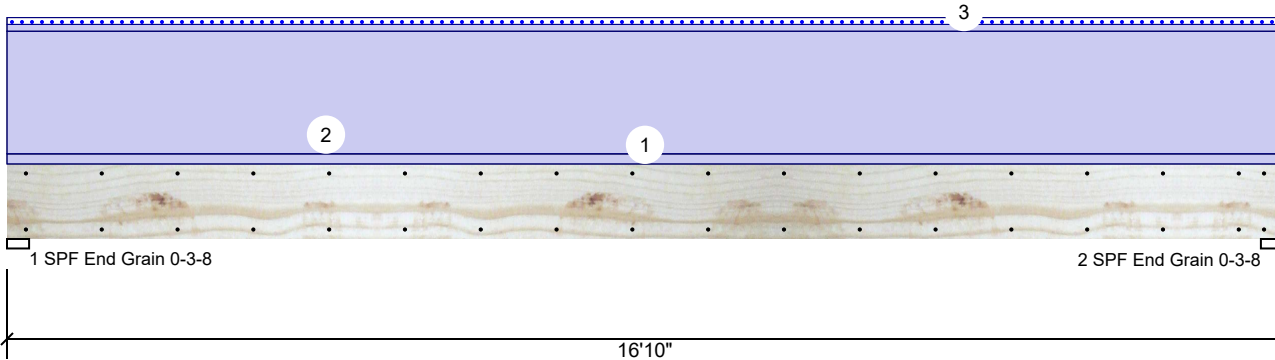


This design is valid until 2/28/2028



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

Level: Level



11 7/8"  
3 1/2"

### Member Information

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

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

### Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1887	168	0	0
2	Vertical	0	1887	168	0	0

### Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	20%	1887 / 168	2056	L	D+S
2 - SPF End Grain	3.500"	Vert	20%	1887 / 168	2056	L	D+S

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7516 ft-lb	8'5"	17919 ft-lb	42%	D	Uniform
Unbraced	8186 ft-lb	8'5"	8198 ft-lb	100%	D+S	L
Shear	1620 lb	15'6 5/8"	7980 lb	20%	D	Uniform
LL Defl inch	0.035 (L/5617)	8'5 1/16"	0.409 (L/480)	9%	S	L
TL Defl inch	0.427 (L/460)	8'5 1/16"	0.546 (L/360)	78%	D+S	L

### Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on bottom edge only and across their full width.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 11'9 1/4" o.c.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	15 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Top	180 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
3	Tie-In Far	0-0-0 to 16-10-0	1-0-0	Far Face	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	RAKE OH
3	Tie-In Near	0-0-0 to 16-10-0	0-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	RAKE OH
	Self Weight				9 PLF					

### Notes

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chemicals

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

### Manufacturer Info

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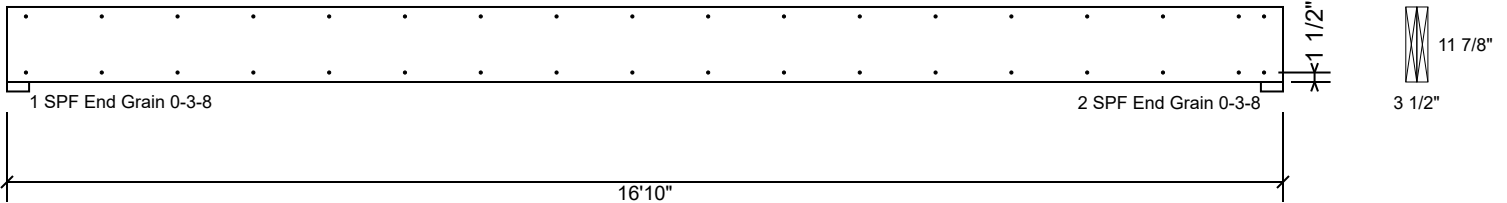
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**GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



### Multi-Ply Analysis

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

Capacity	10.6 %
Load	20.0 PLF
Yield Limit per Foot	188.3 PLF
Yield Limit per Fastener	94.1 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

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