

RE: J0924-5212  
 Lot 12 Magnolia Hills

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

**Site Information:**

Customer: Project Name: J0924-5212  
 Lot/Block: Model:  
 Address: Subdivision:  
 City: State:

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

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

This package includes 24 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I64022649	A1	3/6/2024	21	I64022669	M1GE	3/6/2024
2	I64022650	A1-GR	3/6/2024	22	I64022670	PB	3/6/2024
3	I64022651	A1GE	3/6/2024	23	I64022671	PBA	3/6/2024
4	I64022652	A2	3/6/2024	24	I64022672	PGBE	3/6/2024
5	I64022653	A2-GR	3/6/2024				
6	I64022654	A2A-GR	3/6/2024				
7	I64022655	A3	3/6/2024				
8	I64022656	A3GE	3/6/2024				
9	I64022657	B1	3/6/2024				
10	I64022658	B1GE	3/6/2024				
11	I64022659	C1	3/6/2024				
12	I64022660	C1SG	3/6/2024				
13	I64022661	C2	3/6/2024				
14	I64022662	C2GE	3/6/2024				
15	I64022663	D1	3/6/2024				
16	I64022664	D1SG	3/6/2024				
17	I64022665	D2	3/6/2024				
18	I64022666	G1	3/6/2024				
19	I64022667	G1GE	3/6/2024				
20	I64022668	M1	3/6/2024				

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

Truss Design Engineer's Name: Gilbert, Eric

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

North Carolina COA: C-0844

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



March 06, 2024

Job J0924-5212	Truss A1	Truss Type ATTIC	Qty 3	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022649
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Comtech, Inc. Fayetteville, NC - 28314,

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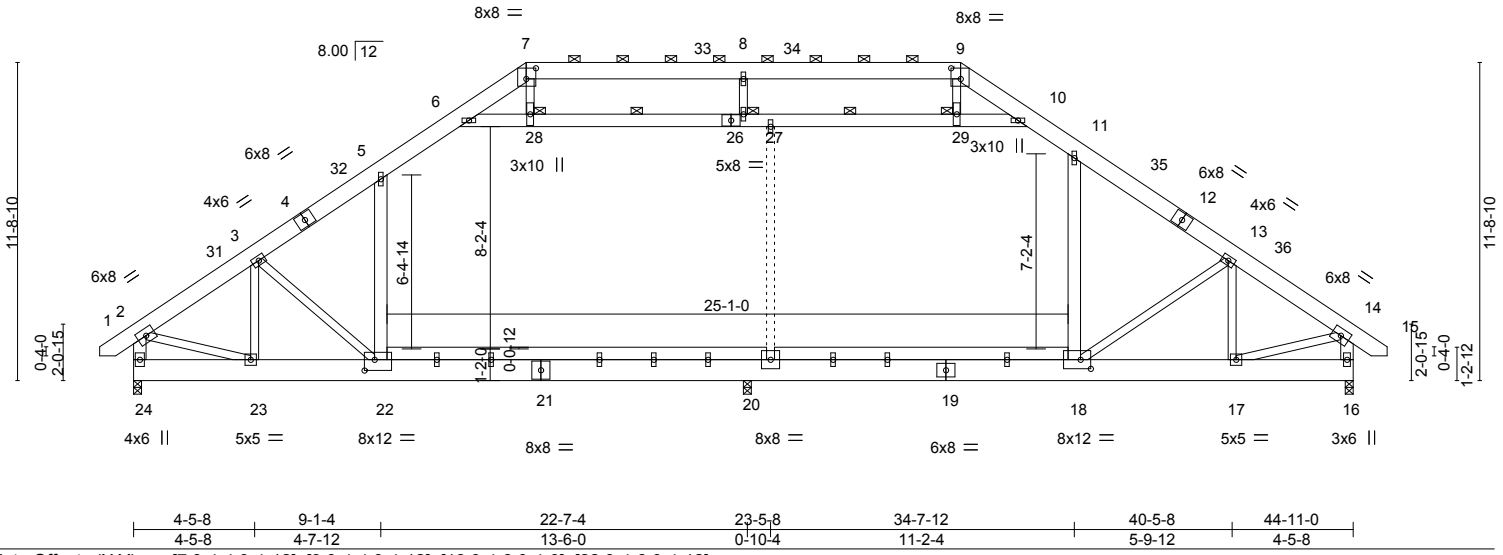


Plate Offsets (X,Y)--	[7:0-4-4,0-4-12], [9:0-4-4,0-4-12], [18:0-4-8,0-4-0], [22:0-4-8,0-4-12]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.31	Vert(LL)	-0.29	20-22	>921	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.45	Vert(CT)	-0.40	20-22	>672		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.64	Horz(CT)	0.03	16	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S	Wind(LL)	0.22	18-20	>999		
								Weight: 547 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 SP 2400F 2.0E	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-9.
BOT CHORD 2x10 SP 2400F 2.0E *Except* 22-25,18-25: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 5-22,11-18,6-26,2-24,14-16,10-26: 2x6 SP No.1	WEBS 1 Row at midpt 27-28, 27-29
	JOINTS 1 Brace at Jt(s): 27, 28, 29

**REACTIONS.** (size) 24=0-3-8, 16=0-3-8, 20=0-3-8  
 Max Horz 24=299(LC 11)  
 Max Grav 24=2234(LC 2), 16=2157(LC 2), 20=1817(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2432/199, 3-5=-2785/211, 5-6=-2309/356, 6-7=-1823/473, 7-8=-1566/452, 8-9=-1566/452, 9-10=-1820/476, 10-11=-2262/362, 11-13=-2712/247, 13-14=-2334/222, 2-24=-2097/244, 14-16=-2019/257  
 BOT CHORD 23-24=-224/433, 22-23=-95/2157, 20-22=0/2151, 18-20=0/2151, 17-18=-81/1885  
 WEBS 5-22=0/730, 11-18=0/576, 6-28=-1169/0, 27-28=-1143/0, 27-29=-1143/0, 10-29=-1175/0, 2-23=-45/1839, 7-28=0/474, 9-29=-5/470, 3-23=-839/74, 3-22=-246/450, 13-18=-244/562, 13-17=-784/101, 14-17=-76/1744

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-7 to 3-6-7, Interior(1) 3-6-7 to 14-5-8, Exterior(2) 14-5-8 to 20-9-12, Interior(1) 20-9-12 to 30-5-8, Exterior(2) 30-5-8 to 36-9-12, Interior(1) 36-9-12 to 45-10-7 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) All plates are 2x6 MT20 unless otherwise indicated.
  - 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) Ceiling dead load (10.0 psf) on member(s). 5-6, 10-11, 6-28, 27-28, 27-29, 10-29; Wall dead load (5.0psf) on member(s).5-22, 11-18
  - 8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22, 18-20
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 10) Attic room checked for L/360 deflection.



March 6, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbccomponents.com)

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

Job J0924-5212	Truss A1-GR	Truss Type ATTIC	Qty 1	Ply 2	Lot 12 Magnolia Hills 164022650
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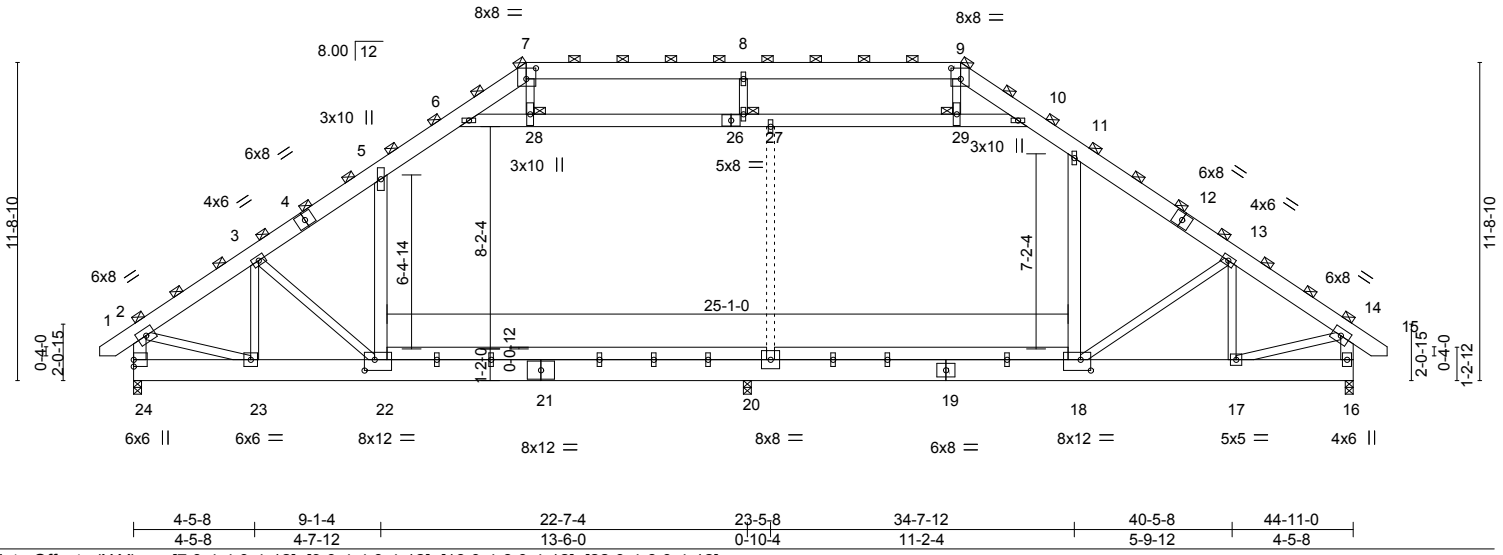


Plate Offsets (X,Y)--	[7:0-4-4,0-4-12], [9:0-4-4,0-4-12], [18:0-4-8,0-4-12], [22:0-4-8,0-4-12]
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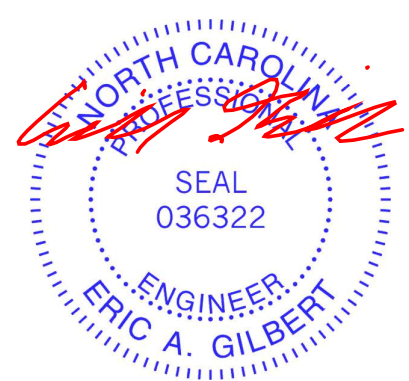
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	4-0-0	TC 0.55	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.52	Vert(LL) -0.45 20-22 >598 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.64	Vert(CT) -0.61 20-22 >441 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.04 16 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.22 18-20 >999 240		
				Weight: 1094 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 SP 2400F 2.0E	TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals
BOT CHORD 2x10 SP 2400F 2.0E *Except*	(Switched from sheeted: Spacing > 2-8-0).
WEBS 2x4 SP No.2 *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
	JOINTS 1 Brace at Jt(s): 7, 9, 2, 14, 27, 28, 29

REACTIONS.
(size) 24=0-3-8, 16=0-3-8, 20=0-3-8
Max Horz 24=-494(LC 6)
Max Grav 24=5742(LC 2), 16=4452(LC 2), 20=3642(LC 14)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-6103/0, 3-5=-6141/0, 5-6=-4906/0, 6-7=-3604/579, 7-8=-3092/535, 8-9=-3092/535, 9-10=-3620/551, 10-11=-4855/0, 11-13=-5822/0, 13-14=-4736/0, 2-24=-5193/0, 14-16=-4098/0
BOT CHORD 23-24=-353/928, 22-23=0/5333, 20-22=0/4674, 18-20=0/4674, 17-18=0/3809, 16-17=0/531
WEBS 5-22=0/2100, 11-18=0/1303, 6-28=-2970/0, 27-28=-2926/0, 27-29=-2926/0, 10-29=-2984/0, 2-23=0/4670, 8-27=-177/256, 7-28=-7/934, 9-29=0/961, 3-23=-1069/342, 3-22=-950/672, 13-18=-374/1539, 13-17=-1906/106, 14-17=0/3485

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.  
Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x6 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Ceiling dead load (10.0 psf) on member(s). 5-6, 10-11, 6-28, 27-28, 27-29, 10-29; Wall dead load (5.0psf) on member(s).5-22, 11-18
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22, 18-20
  - Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.



Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills
J0924-5212	A1-GR	ATTIC	1	2	164022650

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**NOTES-**

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

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-2=-120, 2-5=-120, 5-6=-160, 6-7=-120, 7-9=-120, 9-10=-120, 10-11=-160, 11-14=-120, 14-15=-120, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Drag: 5-22=-20, 11-18=-20

2) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-2=-100, 2-5=-100, 5-6=-140, 6-7=-100, 7-9=-100, 9-10=-100, 10-11=-140, 11-14=-100, 14-15=-100, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Drag: 5-22=-20, 11-18=-20

3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-40, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-120(F=-40), 16-22=-80, 6-10=-40  
 Drag: 5-22=-20, 11-18=-20

4) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=5, 2-5=-26, 5-6=-50, 6-7=-26, 7-9=41, 9-10=22, 10-11=-2, 11-14=22, 14-15=8, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-29, 2-7=2, 9-14=46, 14-15=32  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

5) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=8, 2-5=22, 5-6=-2, 6-7=22, 7-9=41, 9-10=-26, 10-11=-50, 11-14=-26, 14-15=5, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-32, 2-7=-46, 9-14=-2, 14-15=29  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

6) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-56, 2-5=-69, 5-6=-109, 6-7=-69, 7-9=-2, 9-10=-21, 10-11=-61, 11-14=-21, 14-15=-8, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=16, 2-7=29, 9-14=19, 14-15=32  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

7) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-8, 2-5=-21, 5-6=-61, 6-7=-21, 7-9=-2, 9-10=-69, 10-11=-109, 11-14=-69, 14-15=-56, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-32, 2-7=-19, 9-14=-29, 14-15=16  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

8) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=28, 2-5=41, 5-6=17, 6-7=41, 7-9=17, 9-10=17, 10-11=-7, 11-14=17, 14-15=4, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-52, 2-7=-65, 9-14=41, 14-15=28  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

9) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=4, 2-5=17, 5-6=-7, 6-7=17, 7-9=17, 9-10=41, 10-11=17, 11-14=41, 14-15=28, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-28, 2-7=-41, 9-14=65, 14-15=52  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

10) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=28, 2-5=41, 5-6=17, 6-7=41, 7-9=17, 9-10=17, 10-11=-7, 11-14=17, 14-15=4, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-52, 2-7=-65, 9-14=41, 14-15=28  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

11) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=4, 2-5=17, 5-6=-7, 6-7=17, 7-9=17, 9-10=41, 10-11=17, 11-14=41, 14-15=28, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-28, 2-7=-41, 9-14=65, 14-15=52  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

12) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=12, 2-5=-2, 5-6=-42, 6-7=-2, 7-9=-26, 9-10=-26, 10-11=-66, 11-14=-26, 14-15=-12, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-52, 2-7=-38, 9-14=14, 14-15=28  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

13) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-12, 2-5=-26, 5-6=-66, 6-7=-26, 7-9=-26, 9-10=-2, 10-11=-42, 11-14=-2, 14-15=12, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-28, 2-7=-14, 9-14=38, 14-15=52  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

14) Dead + Attic Floor: Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-40, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-240(F=-200), 18-22=-240, 16-18=-40, 6-10=-40  
 Drag: 5-22=-20, 11-18=-20

15) Dead: Lumber Increase=1.00, Plate Increase=1.00

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills
J0924-5212	A1-GR	ATTIC	1	2	I64022650

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:24:49 2024 Page 3

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**LOAD CASE(S)** Standard

- Uniform Loads (plf)
  - Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-40, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-240(F=-200), 18-22=-240, 16-18=-40, 6-10=-40
  - Drag: 5-22=-20, 11-18=-20
- 16) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-112, 2-5=-122, 5-6=-162, 6-7=-122, 7-9=-71, 9-10=-86, 10-11=-126, 11-14=-86, 14-15=-76, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Horz: 1-2=12, 2-7=22, 9-14=14, 14-15=24
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 17) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-76, 2-5=-86, 5-6=-126, 6-7=-86, 7-9=-71, 9-10=-122, 10-11=-162, 11-14=-122, 14-15=-112, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Horz: 1-2=-24, 2-7=-14, 9-14=-22, 14-15=-12
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 18) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-61, 2-5=-71, 5-6=-111, 6-7=-71, 7-9=-89, 9-10=-89, 10-11=-129, 11-14=-89, 14-15=-79, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Horz: 1-2=-39, 2-7=-29, 9-14=11, 14-15=21
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 19) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-79, 2-5=-89, 5-6=-129, 6-7=-89, 7-9=-89, 9-10=-71, 10-11=-111, 11-14=-71, 14-15=-61, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Horz: 1-2=-21, 2-7=-11, 9-14=29, 14-15=39
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 20) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-120, 2-5=-120, 5-6=-160, 6-7=-120, 7-9=-120, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40
    - Drag: 5-22=-20, 11-18=-20
- 21) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-120, 9-10=-120, 10-11=-160, 11-14=-120, 14-15=-120, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40
    - Drag: 5-22=-20, 11-18=-20
- 22) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-100, 2-5=-100, 5-6=-140, 6-7=-100, 7-9=-100, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Drag: 5-22=-20, 11-18=-20
- 23) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-100, 9-10=-100, 10-11=-140, 11-14=-100, 14-15=-100, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Drag: 5-22=-20, 11-18=-20
- 24) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=5, 2-5=-26, 5-6=-50, 6-7=-26, 7-9=41, 9-10=22, 10-11=-2, 11-14=22, 14-15=8, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24
    - Horz: 1-2=29, 2-7=2, 9-14=46, 14-15=32
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 25) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=8, 2-5=22, 5-6=-2, 6-7=22, 7-9=41, 9-10=-26, 10-11=-50, 11-14=-26, 14-15=5, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24
    - Horz: 1-2=32, 2-7=-46, 9-14=-2, 14-15=29
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 26) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-56, 2-5=-69, 5-6=-109, 6-7=-69, 7-9=-2, 9-10=-21, 10-11=-61, 11-14=-21, 14-15=-8, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40
    - Horz: 1-2=16, 2-7=29, 9-14=19, 14-15=32
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 27) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-8, 2-5=-21, 5-6=-61, 6-7=-21, 7-9=-2, 9-10=-69, 10-11=-109, 11-14=-69, 14-15=-56, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40
    - Horz: 1-2=-32, 2-7=-19, 9-14=-29, 14-15=-16
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 28) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=28, 2-5=41, 5-6=17, 6-7=41, 7-9=17, 9-10=17, 10-11=-7, 11-14=17, 14-15=4, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24
    - Horz: 1-2=-52, 2-7=-65, 9-14=41, 14-15=28
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 29) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Continued on page 4

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Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills
J0924-5212	A1-GR	ATTIC	1	<b>2</b>	I64022650

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Job Reference (optional)

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-2=4, 2-5=17, 5-6=-7, 6-7=17, 7-9=17, 9-10=41, 10-11=17, 11-14=41, 14-15=28, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-28, 2-7=-41, 9-14=65, 14-15=52  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

30) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=28, 2-5=41, 5-6=17, 6-7=41, 7-9=17, 9-10=17, 10-11=-7, 11-14=17, 14-15=4, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-52, 2-7=-65, 9-14=41, 14-15=28  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

31) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=4, 2-5=17, 5-6=-7, 6-7=17, 7-9=17, 9-10=41, 10-11=17, 11-14=41, 14-15=28, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-28, 2-7=-41, 9-14=65, 14-15=52  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

32) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=12, 2-5=-2, 5-6=-42, 6-7=-2, 7-9=-26, 9-10=-26, 10-11=-66, 11-14=-26, 14-15=-12, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-52, 2-7=-38, 9-14=14, 14-15=28  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

33) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-12, 2-5=-26, 5-6=-66, 6-7=-26, 7-9=-26, 9-10=-2, 10-11=-42, 11-14=-2, 14-15=12, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-28, 2-7=-14, 9-14=38, 14-15=52  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

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

Uniform Loads (plf)

Vert: 1-2=-112, 2-5=-122, 5-6=-162, 6-7=-122, 7-9=-71, 9-10=-86, 10-11=-126, 11-14=-86, 14-15=-76, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Horz: 1-2=12, 2-7=22, 9-14=14, 14-15=24  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

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

Uniform Loads (plf)

Vert: 1-2=-76, 2-5=-86, 5-6=-126, 6-7=-86, 7-9=-71, 9-10=-122, 10-11=-162, 11-14=-122, 14-15=-112, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Horz: 1-2=-24, 2-7=-14, 9-14=-22, 14-15=-12  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

36) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-61, 2-5=-71, 5-6=-111, 6-7=-71, 7-9=-89, 9-10=-89, 10-11=-129, 11-14=-89, 14-15=-79, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Horz: 1-2=-39, 2-7=-29, 9-14=11, 14-15=21  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

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

Uniform Loads (plf)

Vert: 1-2=-79, 2-5=-89, 5-6=-129, 6-7=-89, 7-9=-89, 9-10=-71, 10-11=-111, 11-14=-71, 14-15=-61, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Horz: 1-2=-21, 2-7=-11, 9-14=29, 14-15=39  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

**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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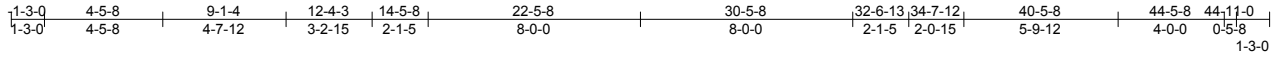
Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills	164022651
J0924-5212	A1GE	GABLE	1	1		

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Job Reference (optional)



Scale = 1:86.8

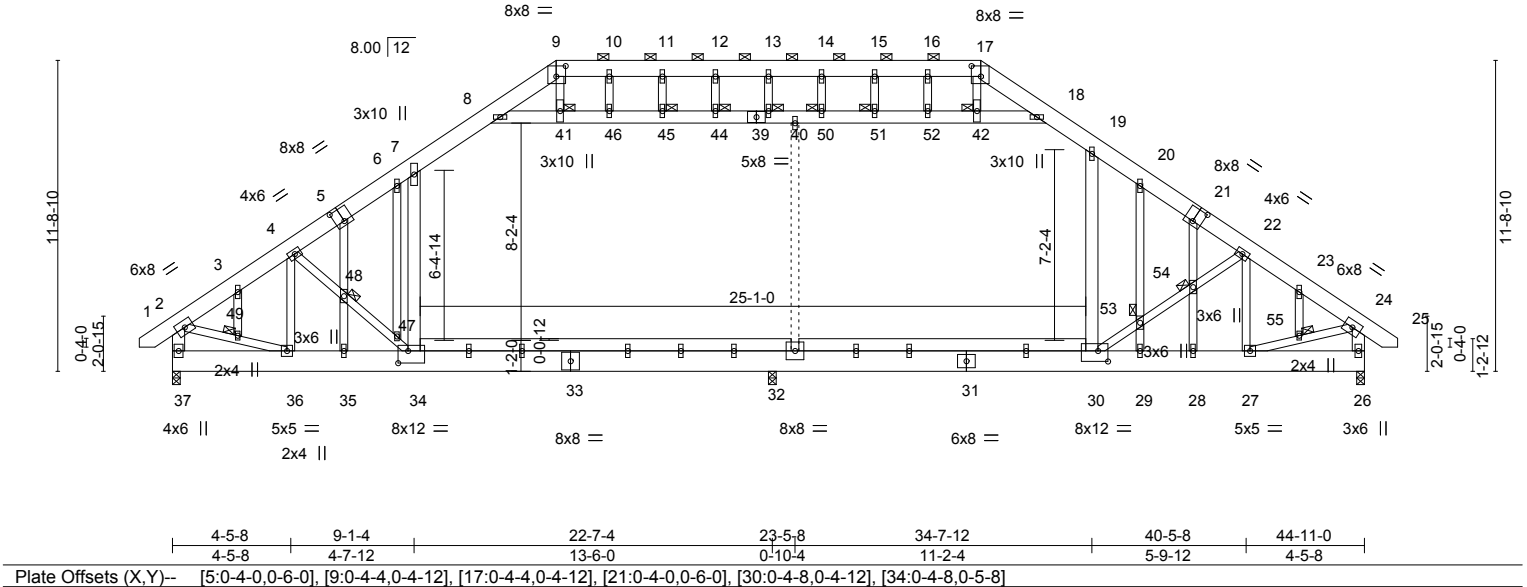


Plate Offsets (X, Y)-- [5:0-4-0,0-6-0], [9:0-4-4,0-4-12], [17:0-4-4,0-4-12], [21:0-4-0,0-6-0], [30:0-4-8,0-4-12], [34:0-4-8,0-5-8]

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 0.31	Vert(LL)	-0.28 32-34	>956	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.44	Vert(CT)	-0.38 32-34	>699	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.58	Horz(CT)	0.03 26	n/a	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S	Wind(LL)	0.27 30-32	>983	240		
								Weight: 596 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 SP 2400F 2.0E	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 9-17.
BOT CHORD 2x10 SP 2400F 2.0E *Except* 34-38,30-38: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 7-34,19-30,8-39,2-37,24-26,18-39: 2x6 SP No.1	JOINTS 1 Brace at Jt(s): 40, 41, 42, 44, 45, 48, 49, 50, 51, 53, 54, 55
OTHERS 2x4 SP No.2	

**REACTIONS.** (size) 37=0-3-8, 26=0-3-8, 32=0-3-8  
 Max Horz 37=374(LC 11)  
 Max Uplift 37=-89(LC 12), 26=-93(LC 13)  
 Max Grav 37=2252(LC 2), 26=2176(LC 2), 32=1780(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2532/306, 3-4=-2381/316, 4-5=-2664/309, 5-6=-2869/322, 6-7=-2827/345, 7-8=-2332/478, 8-9=-1898/615, 9-10=-1650/569, 10-11=-1645/569, 11-12=-1645/569, 12-13=-1645/569, 13-14=-1645/569, 14-15=-1645/569, 15-16=-1645/569, 16-17=-1650/569, 17-18=-1891/609, 18-19=-2282/478, 19-20=-2752/386, 20-21=-2663/348, 21-22=-2648/311, 22-23=-2281/345, 23-24=-2426/336, 2-37=-2145/338, 24-26=-2065/361  
 BOT CHORD 36-37=-303/527, 35-36=-243/2160, 34-35=-243/2160, 32-34=-45/2177, 30-32=-45/2177, 29-30=-180/1906, 28-29=-180/1906, 27-28=-180/1906, 26-27=-38/298  
 WEBS 7-34=0/974, 19-30=0/812, 8-41=-1224/52, 41-46=-1198/60, 45-46=-1198/60, 44-45=-1198/60, 40-44=-1198/60, 40-50=-1198/60, 50-51=-1198/60, 51-52=-1198/60, 42-52=-1198/60, 18-42=-1237/67, 2-49=-122/1773, 36-49=-125/1830, 9-41=-206/679, 17-42=-227/667, 4-36=-534/188, 4-48=-346/496, 47-48=-344/471, 34-47=-419/490, 30-53=-376/597, 53-54=-341/556, 22-54=-356/585, 22-27=-632/181, 27-55=-153/1735, 24-55=-149/1682, 10-46=-277/144, 5-48=-549/9, 35-48=-538/7, 16-52=-270/156, 20-53=-306/47, 29-53=-338/31

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) Provide adequate drainage to prevent water ponding.
  - 5) All plates are 2x6 MT20 unless otherwise indicated.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



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Continued on page 2

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

818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills	I64022651
J0924-5212	A1GE	GABLE	1	1	Job Reference (optional)	

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8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:24:47 2024 Page 2  
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**NOTES-**

- 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) Ceiling dead load (10.0 psf) on member(s). 7-8, 18-19, 8-41, 41-46, 45-46, 44-45, 40-44, 40-50, 50-51, 51-52, 42-52, 18-42; Wall dead load (5.0psf) on member(s).7-34, 19-30
- 10) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 32-34, 30-32
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 37 and 93 lb uplift at joint 26.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 13) Attic room checked for L/360 deflection.

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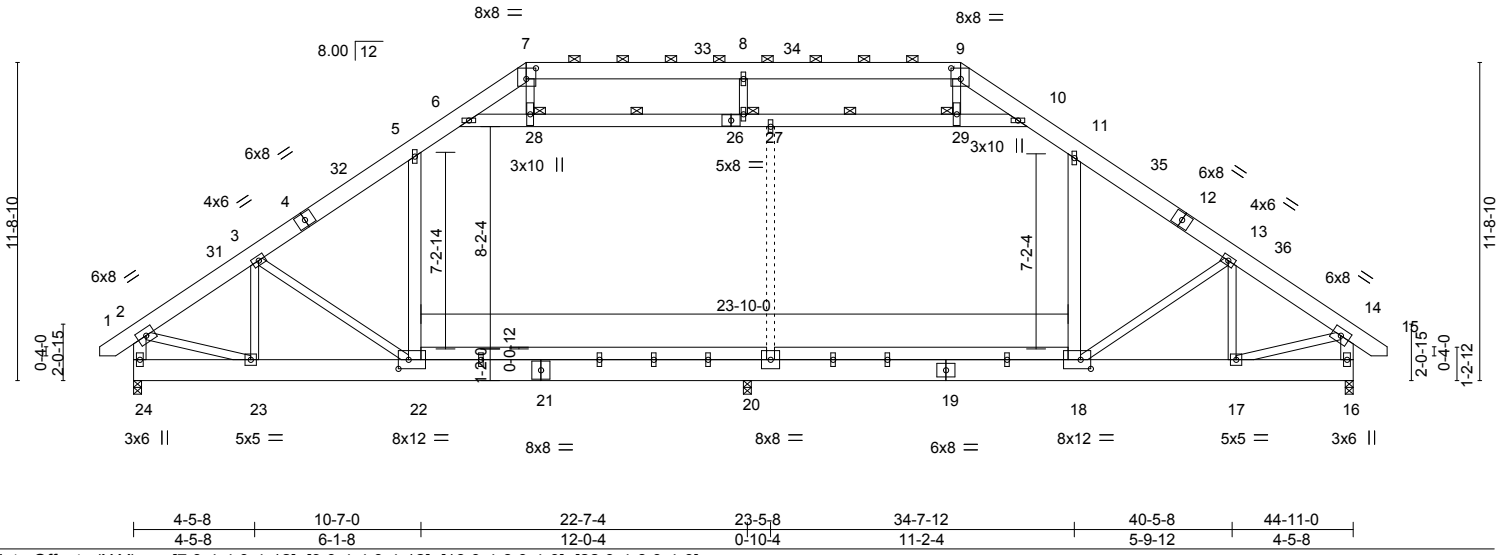


Job J0924-5212	Truss A2	Truss Type ATTIC	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022652
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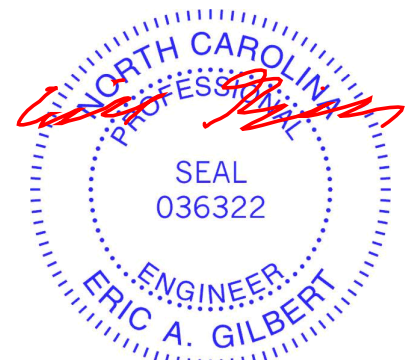
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.26	Vert(LL) -0.23 20-22 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.41	Vert(CT) -0.29 20-22 >916 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.64	Horz(CT) 0.03 16 n/a n/a		
BCDL 10.0	Code IRC2015/TP12014	Matrix-S	Wind(LL) 0.22 20-22 >999 240	Weight: 548 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x8 SP 2400F 2.0E	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-9.
BOT CHORD 2x10 SP 2400F 2.0E *Except* 22-25,18-25: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 5-22,11-18,6-26,2-24,14-16,10-26: 2x6 SP No.1	WEBS 1 Row at midpt 27-28, 27-29
	JOINTS 1 Brace at Jt(s): 27, 28, 29

**REACTIONS.** (size) 24=0-3-8, 16=0-3-8, 20=0-3-8  
 Max Horz 24=-247(LC 10)  
 Max Grav 24=2179(LC 2), 16=2174(LC 2), 20=1721(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2370/206, 3-5=-2728/233, 5-6=-2261/352, 6-7=-1845/460, 7-8=-1591/434, 8-9=-1591/434, 9-10=-1847/458, 10-11=-2267/352, 11-13=-2726/233, 13-14=-2360/208, 2-24=-2051/249, 14-16=-2043/251  
 BOT CHORD 23-24=-183/405, 22-23=-76/2093, 20-22=0/2154, 18-20=0/2154, 17-18=-91/1909  
 WEBS 5-22=0/606, 11-18=0/596, 6-28=-1081/0, 27-28=-1051/0, 27-29=-1051/0, 10-29=-1084/0, 2-23=-84/1792, 7-28=-1/467, 9-29=0/471, 3-23=-752/71, 3-22=-223/510, 13-18=-223/526, 13-17=-766/75, 14-17=-86/1776

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-7 to 3-6-7, Interior(1) 3-6-7 to 14-5-8, Exterior(2) 14-5-8 to 20-9-12, Interior(1) 20-9-12 to 30-5-8, Exterior(2) 30-5-8 to 36-9-12, Interior(1) 36-9-12 to 45-10-7 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) All plates are 2x6 MT20 unless otherwise indicated.
  - 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) Ceiling dead load (10.0 psf) on member(s). 5-6, 10-11, 6-28, 27-28, 27-29, 10-29; Wall dead load (5.0psf) on member(s).5-22, 11-18
  - 8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22, 18-20
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 10) Attic room checked for L/360 deflection.



March 6, 2024

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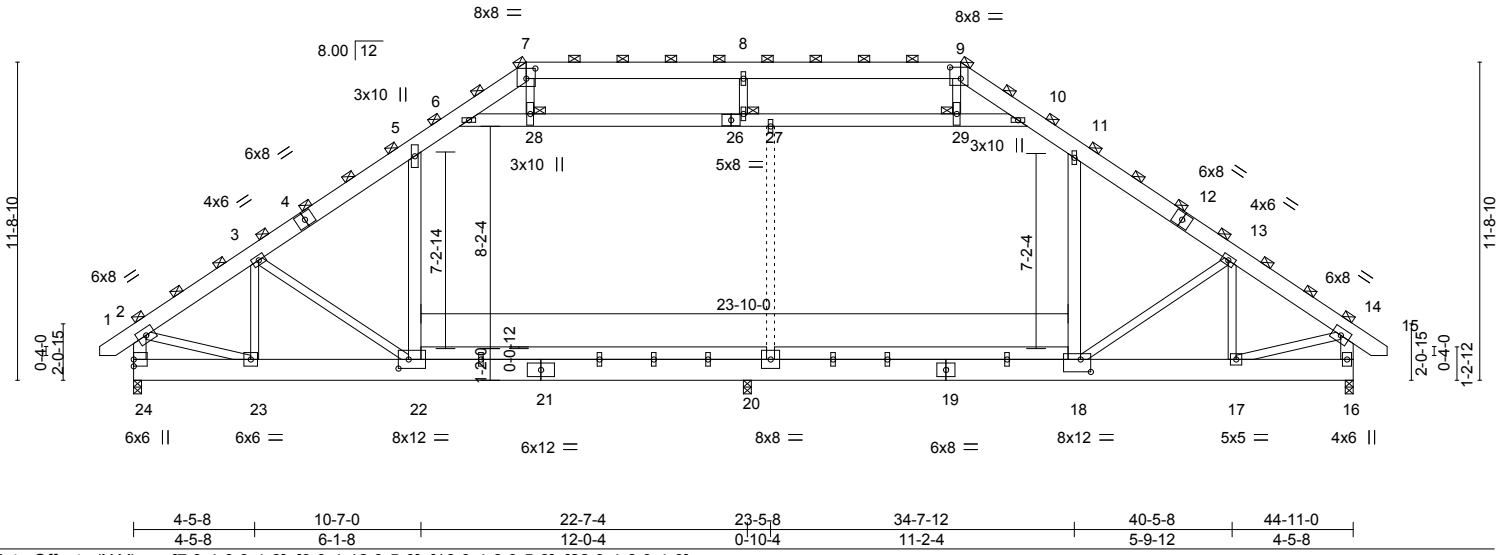
**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job J0924-5212	Truss A2-GR	Truss Type ATTIC	Qty 1	Ply 2	Lot 12 Magnolia Hills 164022653
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LOADING (psf)	SPACING-	4-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.39	Vert(LL)	-0.41 20-22	>652	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.47	Vert(CT)	-0.54 20-22	>496	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.67	Horz(CT)	0.04 16	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.22 20-22	>999	240	Weight: 1095 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x8 SP 2400F 2.0E	TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals
BOT CHORD 2x10 SP 2400F 2.0E *Except*	(Switched from sheeted: Spacing > 2-8-0).
22-25, 18-25: 2x6 SP No. 1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No. 2 *Except*	JOINTS 1 Brace at Jt(s): 7, 9, 2, 14, 27, 28, 29
5-22, 11-18, 6-26, 2-24, 14-16, 10-26: 2x6 SP No. 1	

**REACTIONS.** (size) 24=0-3-8, 16=0-3-8, 20=0-3-8  
 Max Horz 24=-494(LC 6)  
 Max Grav 24=5786(LC 2), 16=4525(LC 2), 20=3460(LC 14)

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

TOP CHORD 2-3=-6237/0, 3-5=-6111/0, 5-6=-4873/0, 6-7=-3651/530, 7-8=-3153/463, 8-9=-3153/464, 9-10=-3689/494, 10-11=-4949/0, 11-13=-5951/0, 13-14=-4815/0, 2-24=-5318/0, 14-16=-4167/0

BOT CHORD 23-24=-339/916, 22-23=0/5449, 20-22=0/4769, 18-20=0/4769, 17-18=0/3877, 16-17=0/538

WEBS 5-22=0/1895, 11-18=0/1379, 6-28=-2843/0, 27-28=-2804/0, 27-29=-2804/0, 10-29=-2865/0, 2-23=0/4804, 8-27=-176/258, 7-28=-23/912, 9-29=0/980, 3-23=-931/369, 3-22=-919/681, 13-18=-321/1550, 13-17=-1956/44, 14-17=0/3556

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.  
 Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x6 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Ceiling dead load (10.0 psf) on member(s). 5-6, 10-11, 6-28, 27-28, 27-29, 10-29; Wall dead load (5.0psf) on member(s). 5-22, 11-18
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22, 18-20
  - Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.



Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills
J0924-5212	A2-GR	ATTIC	1	2	64022653

Comtech, Inc. Fayetteville, NC - 28314,

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**NOTES-**

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

**LOAD CASE(S) Standard**

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

Uniform Loads (plf)

Vert: 1-2=-120, 2-5=-120, 5-6=-160, 6-7=-120, 7-9=-120, 9-10=-120, 10-11=-160, 11-14=-120, 14-15=-120, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Drag: 5-22=-20, 11-18=-20

2) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-2=-100, 2-5=-100, 5-6=-140, 6-7=-100, 7-9=-100, 9-10=-100, 10-11=-140, 11-14=-100, 14-15=-100, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Drag: 5-22=-20, 11-18=-20

3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-40, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-120(F=-40), 16-22=-80, 6-10=-40  
 Drag: 5-22=-20, 11-18=-20

4) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=5, 2-5=-26, 5-6=-50, 6-7=-26, 7-9=41, 9-10=22, 10-11=-2, 11-14=22, 14-15=8, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-29, 2-7=2, 9-14=46, 14-15=32  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

5) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=8, 2-5=22, 5-6=-2, 6-7=22, 7-9=41, 9-10=-26, 10-11=-50, 11-14=-26, 14-15=5, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-32, 2-7=-46, 9-14=-2, 14-15=29  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

6) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-56, 2-5=-69, 5-6=-109, 6-7=-69, 7-9=-2, 9-10=-21, 10-11=-61, 11-14=-21, 14-15=-8, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=16, 2-7=29, 9-14=19, 14-15=32  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

7) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-8, 2-5=-21, 5-6=-61, 6-7=-21, 7-9=-2, 9-10=-69, 10-11=-109, 11-14=-69, 14-15=-56, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-32, 2-7=-19, 9-14=-29, 14-15=16  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

8) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=28, 2-5=41, 5-6=17, 6-7=41, 7-9=17, 9-10=17, 10-11=-7, 11-14=17, 14-15=4, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-52, 2-7=-65, 9-14=41, 14-15=28  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

9) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=4, 2-5=17, 5-6=-7, 6-7=17, 7-9=17, 9-10=41, 10-11=17, 11-14=41, 14-15=28, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-28, 2-7=-41, 9-14=65, 14-15=52  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

10) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=28, 2-5=41, 5-6=17, 6-7=41, 7-9=17, 9-10=17, 10-11=-7, 11-14=17, 14-15=4, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-52, 2-7=-65, 9-14=41, 14-15=28  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

11) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=4, 2-5=17, 5-6=-7, 6-7=17, 7-9=17, 9-10=41, 10-11=17, 11-14=41, 14-15=28, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-28, 2-7=-41, 9-14=65, 14-15=52  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

12) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=12, 2-5=-2, 5-6=-42, 6-7=-2, 7-9=-26, 9-10=-26, 10-11=-66, 11-14=-26, 14-15=-12, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-52, 2-7=-38, 9-14=14, 14-15=28  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

13) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-12, 2-5=-26, 5-6=-66, 6-7=-26, 7-9=-26, 9-10=-2, 10-11=-42, 11-14=-2, 14-15=12, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-28, 2-7=-14, 9-14=38, 14-15=52  
 Drag: 7-8=-0, 8-9=0, 5-22=-20, 11-18=-20

14) Dead + Attic Floor: Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-40, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-240(F=-200), 18-22=-240, 16-18=-40, 6-10=-40  
 Drag: 5-22=-20, 11-18=-20

15) Dead: Lumber Increase=1.00, Plate Increase=1.00

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills
J0924-5212	A2-GR	ATTIC	1	2	I64022653

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:24:55 2024 Page 3

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**LOAD CASE(S)** Standard

- Uniform Loads (plf)
  - Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-40, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-240(F=-200), 18-22=-240, 16-18=-40, 6-10=-40
  - Drag: 5-22=-20, 11-18=-20
- 16) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-112, 2-5=-122, 5-6=-162, 6-7=-122, 7-9=-71, 9-10=-86, 10-11=-126, 11-14=-86, 14-15=-76, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Horz: 1-2=12, 2-7=22, 9-14=14, 14-15=24
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 17) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-76, 2-5=-86, 5-6=-126, 6-7=-86, 7-9=-71, 9-10=-122, 10-11=-162, 11-14=-122, 14-15=-112, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Horz: 1-2=-24, 2-7=-14, 9-14=-22, 14-15=-12
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 18) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-61, 2-5=-71, 5-6=-111, 6-7=-71, 7-9=-89, 9-10=-89, 10-11=-129, 11-14=-89, 14-15=-79, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Horz: 1-2=-39, 2-7=-29, 9-14=11, 14-15=21
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 19) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-79, 2-5=-89, 5-6=-129, 6-7=-89, 7-9=-89, 9-10=-71, 10-11=-111, 11-14=-71, 14-15=-61, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Horz: 1-2=-21, 2-7=-11, 9-14=29, 14-15=39
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 20) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-120, 2-5=-120, 5-6=-160, 6-7=-120, 7-9=-120, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40
    - Drag: 5-22=-20, 11-18=-20
- 21) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-120, 9-10=-120, 10-11=-160, 11-14=-120, 14-15=-120, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40
    - Drag: 5-22=-20, 11-18=-20
- 22) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-100, 2-5=-100, 5-6=-140, 6-7=-100, 7-9=-100, 9-10=-40, 10-11=-80, 11-14=-40, 14-15=-40, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Drag: 5-22=-20, 11-18=-20
- 23) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-40, 2-5=-40, 5-6=-80, 6-7=-40, 7-9=-100, 9-10=-100, 10-11=-140, 11-14=-100, 14-15=-100, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40
    - Drag: 5-22=-20, 11-18=-20
- 24) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=5, 2-5=-26, 5-6=-50, 6-7=-26, 7-9=41, 9-10=22, 10-11=-2, 11-14=22, 14-15=8, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24
    - Horz: 1-2=29, 2-7=2, 9-14=46, 14-15=32
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 25) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=8, 2-5=22, 5-6=-2, 6-7=22, 7-9=41, 9-10=-26, 10-11=-50, 11-14=-26, 14-15=5, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24
    - Horz: 1-2=32, 2-7=-46, 9-14=-2, 14-15=29
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 26) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-56, 2-5=-69, 5-6=-109, 6-7=-69, 7-9=-2, 9-10=-21, 10-11=-61, 11-14=-21, 14-15=-8, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40
    - Horz: 1-2=16, 2-7=29, 9-14=19, 14-15=32
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 27) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-8, 2-5=-21, 5-6=-61, 6-7=-21, 7-9=-2, 9-10=-69, 10-11=-109, 11-14=-69, 14-15=-56, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40
    - Horz: 1-2=-32, 2-7=-19, 9-14=-29, 14-15=-16
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 28) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=28, 2-5=41, 5-6=17, 6-7=41, 7-9=17, 9-10=17, 10-11=-7, 11-14=17, 14-15=4, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24
    - Horz: 1-2=-52, 2-7=-65, 9-14=41, 14-15=28
    - Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20
- 29) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Continued on page 4

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

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills
J0924-5212	A2-GR	ATTIC	1	<b>2</b>	Job Reference (optional)

I64022653

Comtech, Inc. Fayetteville, NC - 28314,

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**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-2=4, 2-5=17, 5-6=-7, 6-7=17, 7-9=17, 9-10=41, 10-11=17, 11-14=41, 14-15=28, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-28, 2-7=-41, 9-14=65, 14-15=52  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

30) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=28, 2-5=41, 5-6=17, 6-7=41, 7-9=17, 9-10=17, 10-11=-7, 11-14=17, 14-15=4, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-52, 2-7=-65, 9-14=41, 14-15=28  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

31) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=4, 2-5=17, 5-6=-7, 6-7=17, 7-9=17, 9-10=41, 10-11=17, 11-14=41, 14-15=28, 22-24=-64(F=-40), 18-22=-48, 16-18=-24, 6-10=-24  
 Horz: 1-2=-28, 2-7=-41, 9-14=65, 14-15=52  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

32) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=12, 2-5=-2, 5-6=-42, 6-7=-2, 7-9=-26, 9-10=-26, 10-11=-66, 11-14=-26, 14-15=-12, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-52, 2-7=-38, 9-14=14, 14-15=28  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

33) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-12, 2-5=-26, 5-6=-66, 6-7=-26, 7-9=-26, 9-10=-2, 10-11=-42, 11-14=-2, 14-15=12, 22-24=-80(F=-40), 18-22=-80, 16-18=-40, 6-10=-40  
 Horz: 1-2=-28, 2-7=-14, 9-14=38, 14-15=52  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

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

Uniform Loads (plf)

Vert: 1-2=-112, 2-5=-122, 5-6=-162, 6-7=-122, 7-9=-71, 9-10=-86, 10-11=-126, 11-14=-86, 14-15=-76, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Horz: 1-2=12, 2-7=22, 9-14=14, 14-15=24  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

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

Uniform Loads (plf)

Vert: 1-2=-76, 2-5=-86, 5-6=-126, 6-7=-86, 7-9=-71, 9-10=-122, 10-11=-162, 11-14=-122, 14-15=-112, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Horz: 1-2=-24, 2-7=-14, 9-14=-22, 14-15=-12  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

36) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-61, 2-5=-71, 5-6=-111, 6-7=-71, 7-9=-89, 9-10=-89, 10-11=-129, 11-14=-89, 14-15=-79, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Horz: 1-2=-39, 2-7=-29, 9-14=11, 14-15=21  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

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

Uniform Loads (plf)

Vert: 1-2=-79, 2-5=-89, 5-6=-129, 6-7=-89, 7-9=-89, 9-10=-71, 10-11=-111, 11-14=-71, 14-15=-61, 22-24=-200(F=-160), 18-22=-200, 16-18=-40, 6-10=-40  
 Horz: 1-2=-21, 2-7=-11, 9-14=29, 14-15=39  
 Drag: 7-8=0, 8-9=0, 5-22=-20, 11-18=-20

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

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818 Soundside Road  
 Edenton, NC 27932



Job J0924-5212	Truss A2A-GR	Truss Type ATTIC	Qty 1	Ply 3	Lot 12 Magnolia Hills Job Reference (optional)	I64022654
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:24:53 2024 Page 1

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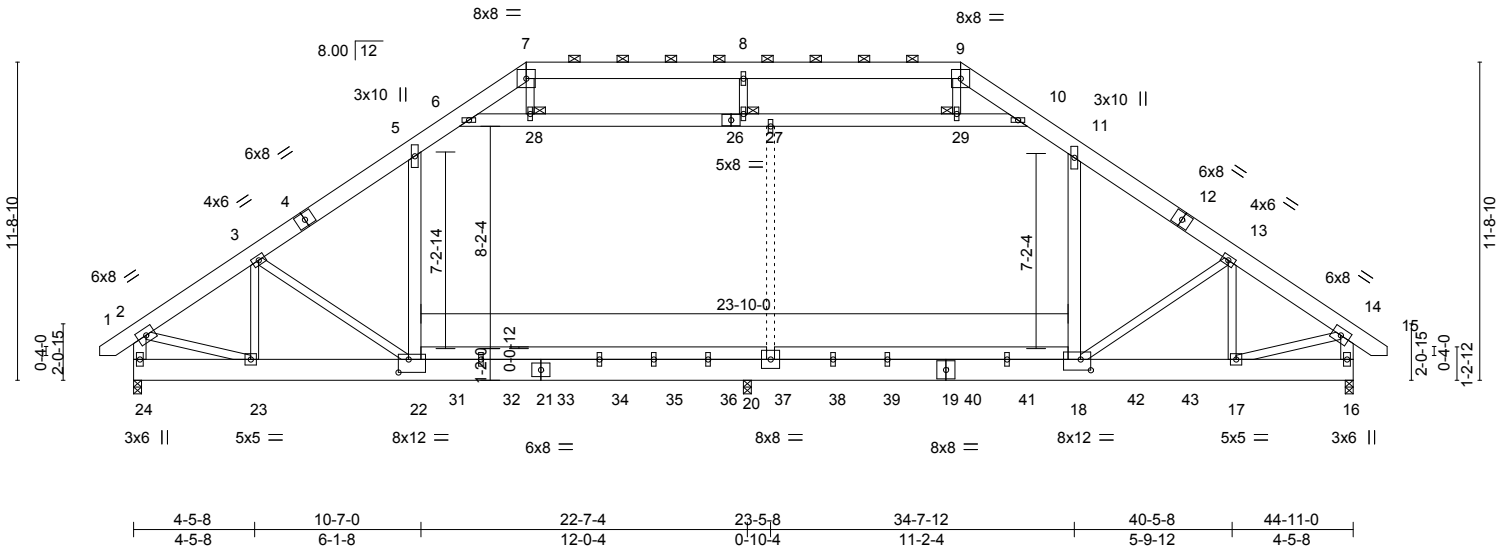


Plate Offsets (X,Y)--	[18:0-4-8,0-4-12], [22:0-4-8,0-5-12]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.33	Vert(LL) -0.21 18-20 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.44	Vert(CT) -0.30 18-20 >882 240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.52	Horz(CT) 0.03 16 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.07 20-22 >999 240	Weight: 1643 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x8 SP 2400F 2.0E	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-9.
BOT CHORD 2x10 SP 2400F 2.0E *Except* 22-25,18-25: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 5-22,11-18,6-26,2-24,14-16,10-26: 2x6 SP No.1	JOINTS 1 Brace at Jt(s): 27, 28, 29

**REACTIONS.** (size) 24=0-3-8, 16=0-3-8, 20=0-3-8  
 Max Horz 24=-247(LC 6)  
 Max Grav 24=4361(LC 2), 16=6249(LC 14), 20=5112(LC 14)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-4921/0, 3-5=-6068/0, 5-6=-4453/0, 6-7=-1708/246, 7-8=-1385/218, 8-9=-1385/218, 9-10=-1679/244, 10-11=-4417/0, 11-13=-6209/0, 13-14=-7115/0, 2-24=-4117/0, 14-16=-5829/0  
 BOT CHORD 23-24=-183/488, 22-23=-31/4031, 20-22=0/4884, 18-20=0/4884, 17-18=0/5912, 16-17=0/658  
 WEBS 5-22=0/2885, 11-18=0/3225, 6-28=-5064/0, 27-28=-5026/0, 27-29=-5026/0, 10-29=-5051/0, 2-23=0/3763, 7-28=-1/561, 9-29=0/470, 3-23=-1579/71, 3-22=-223/1123, 13-18=-1275/457, 13-17=-766/768, 14-17=0/5563

- NOTES-**
- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x10 - 4 rows staggered at 0-5-0 oc.  
 Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x6 MT20 unless otherwise indicated.



March 6, 2024

Continued on page 2

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



Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills
J0924-5212	A2A-GR	ATTIC	1	3	164022654

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:24:53 2024 Page 2

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**NOTES-**

- 7) Concentrated loads from layout are not present in Load Case(s): #3 Dead + Uninhabitable Attic Without Storage; #4 Dead + 0.6 MWFRS Wind (Pos. Internal) Left; #5 Dead + 0.6 MWFRS Wind (Pos. Internal) Right; #6 Dead + 0.6 MWFRS Wind (Neg. Internal) Left; #7 Dead + 0.6 MWFRS Wind (Neg. Internal) Right; #8 Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel; #9 Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel; #10 Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel; #11 Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel; #12 Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel; #13 Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel; #20 Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left); #21 Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right); #22 Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel); #23 Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel); #36 Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) Left; #37 Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) Right; #38 Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Left; #39 Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Right; #40 Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel; #41 Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel; #42 Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel; #43 Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel; #44 Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel; #45 Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel; #46 Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left); #47 Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right); #48 Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel); #49 Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel).
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 10) Ceiling dead load (10.0 psf) on member(s). 5-6, 10-11, 6-28, 27-28, 27-29, 10-29; Wall dead load (5.0psf) on member(s).5-22, 11-18
- 11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22, 18-20
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2488 lb down at 10-4-12, 160 lb down and 83 lb up at 11-9-4, 160 lb down and 83 lb up at 13-9-4, 160 lb down and 83 lb up at 15-9-4, 160 lb down and 83 lb up at 17-9-4, 160 lb down and 83 lb up at 19-9-4, 160 lb down and 83 lb up at 21-9-4, 917 lb down at 23-9-4, 917 lb down at 25-9-4, 917 lb down at 27-9-4, 264 lb down at 29-9-4, 264 lb down at 30-9-4, 264 lb down at 32-9-4, 264 lb down at 34-9-4, 264 lb down at 36-9-4, and 264 lb down at 38-9-4, and 2939 lb down at 40-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 14) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-2=-60, 2-5=-60, 5-6=-80, 6-7=-60, 7-9=-60, 9-10=-60, 10-11=-80, 11-14=-60, 14-15=-60, 22-24=-20, 18-22=-40, 16-18=-20, 6-10=-20

Drag: 5-22=-10, 11-18=-10

Concentrated Loads (lb)

Vert: 22=-761(B) 18=-48(B) 19=-48(B) 17=-1000(B) 31=-5(B) 32=-5(B) 33=-5(B) 34=-5(B) 35=-5(B) 36=-5(B) 37=-236(B) 38=-236(B) 39=-236(B) 40=-48(B)

41=-48(B) 42=-48(B) 43=-48(B)

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

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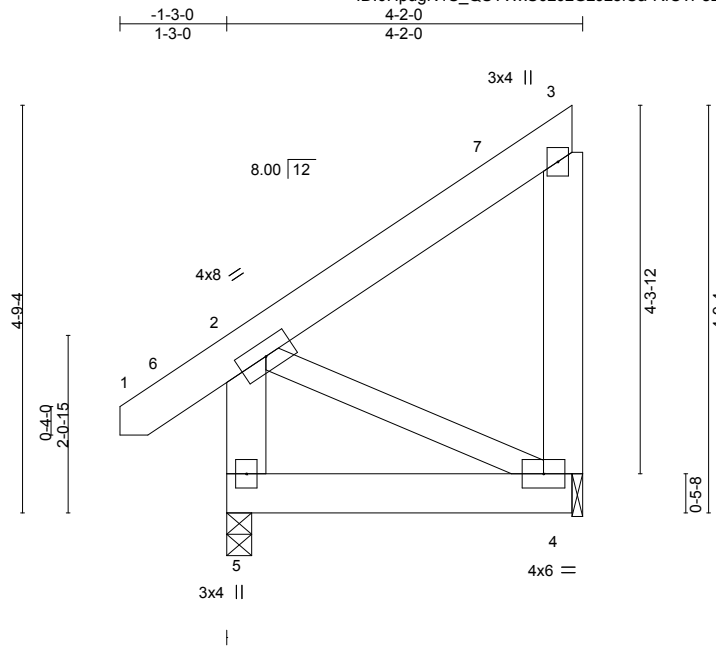
818 Soundside Road  
Edenton, NC 27932

Job J0924-5212	Truss A3	Truss Type MONOPITCH	Qty 2	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	I64022655
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8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:24:56 2024 Page 1

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Scale = 1:27.0

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)	-0.00 4-5	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	-0.01 4-5	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	-0.00 4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.00 5	****	240	Weight: 42 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x6 SP No.1 \*Except\*  
 2-4: 2x4 SP No.2

**BRACING-**

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

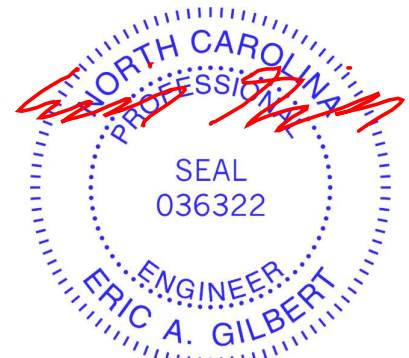
**REACTIONS.**

(size) 5=0-3-8, 4=0-1-8  
 Max Horz 5=106(LC 9)  
 Max Uplift 4=81(LC 12)  
 Max Grav 5=241(LC 1), 4=167(LC 19)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-1-1 to 3-3-12, Interior(1) 3-3-12 to 3-11-0 zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 4.



March 6, 2024

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

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



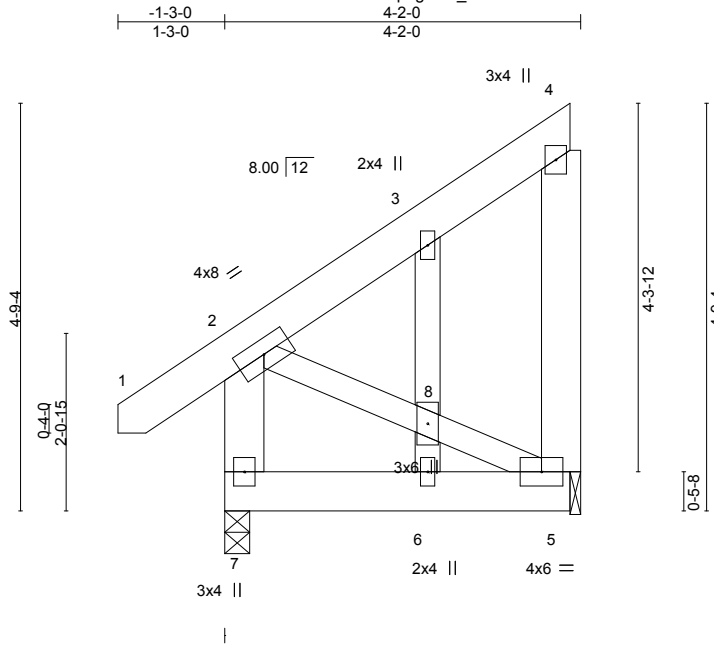
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills
J0924-5212	A3GE	GABLE	1	1	I64022656
					Job Reference (optional)

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:24:57 2024 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:27.0

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.04	Vert(LL)	-0.00	6	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.04	Vert(CT)	-0.00	6	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.04	Horz(CT)	-0.00	5	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL)	0.00	6	>999		
	Code IRC2015/TPI2014						Weight: 46 lb	FT = 20%

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

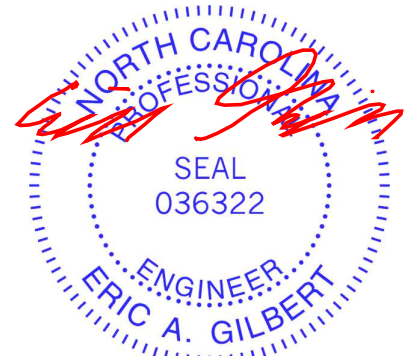
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-2-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=0-3-8, 5=0-1-8  
 Max Horz 7=150(LC 12)  
 Max Uplift 5=-139(LC 12)  
 Max Grav 7=241(LC 1), 5=165(LC 19)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable studs spaced at 2-0-0 oc.
- 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) 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.
- 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 139 lb uplift at joint 5.



March 6, 2024

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

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



818 Soundside Road  
 Edenton, NC 27932

Job J0924-5212	Truss B1	Truss Type ROOF SPECIAL	Qty 7	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022657
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:24:58 2024 Page 1

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5x5 =

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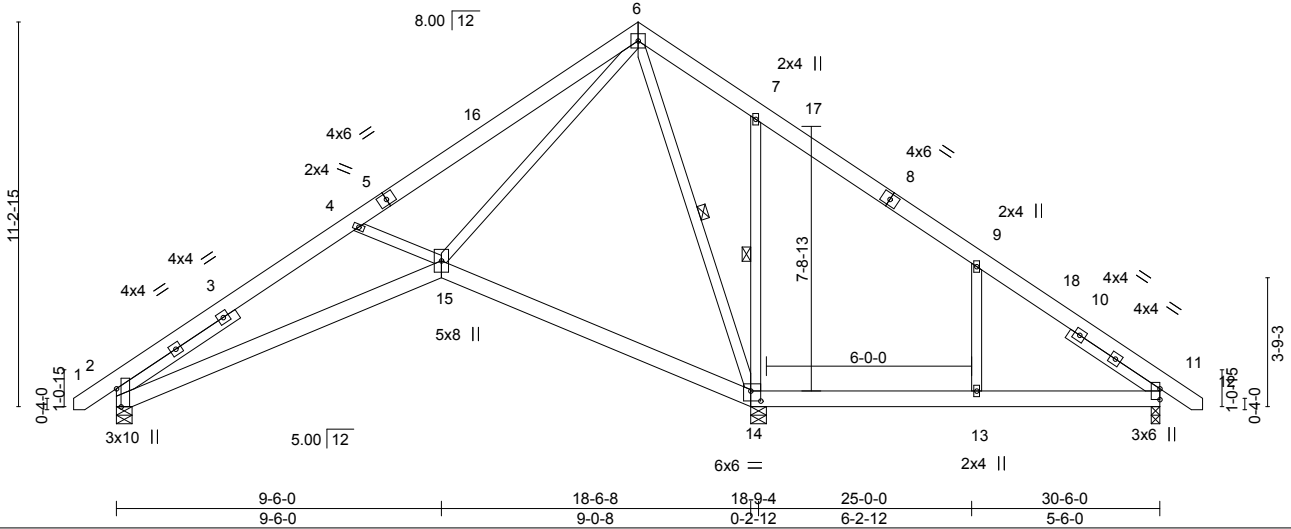


Plate Offsets (X,Y)--	[2:0-6-5,Edge], [14:0-3-8,0-3-8]
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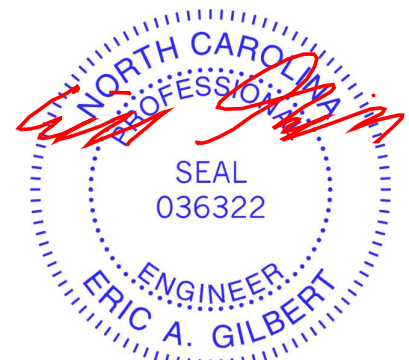
LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.55	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.53	Vert(LL) -0.25 13-14 >574 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.47	Vert(CT) -0.42 13-14 >338 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.09 14 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.32 13-14 >451 240	Weight: 230 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 6-0-0 oc bracing. Except:
WEBS 2x4 SP No.2	10-0-0 oc bracing: 2-15.
SLIDER Left 2x4 SP No.2 4-3-8, Right 2x4 SP No.2 3-2-0	WEBS 1 Row at midpt 7-14, 6-14

REACTIONS.
(size) 2=0-5-8, 14=0-5-8, 11=0-3-0
Max Horz 2=-262(LC 10)
Max Uplift 2=-95(LC 13), 14=-71(LC 12), 11=-375(LC 8)
Max Grav 2=727(LC 1), 14=1553(LC 19), 11=631(LC 26)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1447/716, 4-6=-1074/633, 6-7=-419/769, 7-9=-258/492, 9-11=-438/453
BOT CHORD 2-15=-498/1305, 13-14=-303/231, 11-13=-303/231
WEBS 4-15=-495/289, 6-15=-232/1121, 7-14=-699/516, 6-14=-849/141

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-1-1 to 3-3-12, Interior(1) 3-3-12 to 15-3-0, Exterior(2) 15-3-0 to 19-7-13, Interior(1) 19-7-13 to 31-7-1 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 2, 71 lb uplift at joint 14 and 375 lb uplift at joint 11.
  - 7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



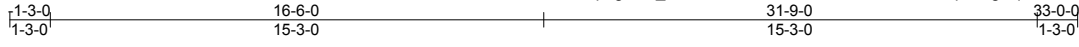
March 6, 2024

Job J0924-5212	Truss B1GE	Truss Type GABLE	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022658
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:00 2024 Page 1

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5x5 =

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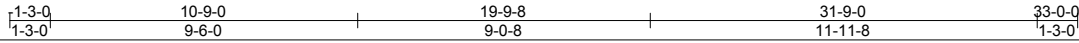
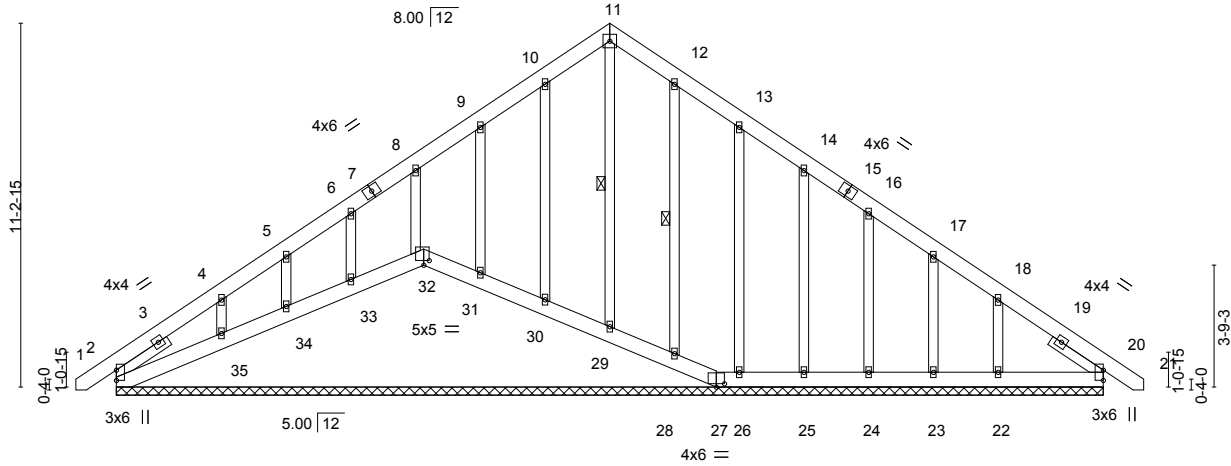


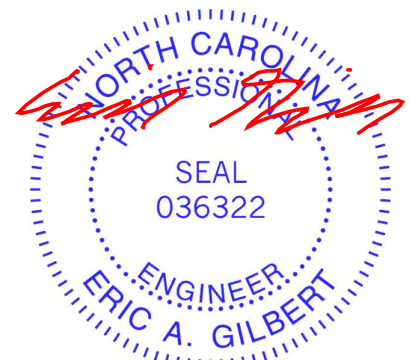
Plate Offsets (X,Y)--	[27:0-3-0,0-1-4], [32:0-2-0,0-1-12]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.07	Vert(LL) 0.00 20 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(CT) 0.00 20 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.17	Horz(CT) 0.01 20 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 266 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS 1 Row at midpt 11-29, 12-28
SLIDER Left 2x4 SP No.2 1-11-14, Right 2x4 SP No.2 1-10-13	

**REACTIONS.** All bearings 30-6-0.  
 (lb) - Max Horz 2=-327(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 32, 27, 20, 30, 31, 33, 34, 28, 25, 24, 23 except 2=-181(LC 8), 35=-230(LC 12), 26=-109(LC 13), 22=-190(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 27, 20, 30, 31, 33, 34, 28, 26, 25, 24, 23 except 2=324(LC 20), 32=268(LC 19), 29=254(LC 13), 35=296(LC 19), 22=284(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-292/240, 9-10=-260/286, 10-11=-293/319, 11-12=-294/319, 12-13=-260/273  
 BOT CHORD 31-32=-142/251, 30-31=-143/253, 29-30=-143/253, 28-29=-143/253, 27-28=-138/253  
 WEBS 4-35=-251/239, 18-22=-250/206

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 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) 27, 20, 30, 31, 33, 34, 28, 25, 24, 23 except (jt=lb) 2=181, 35=230, 26=109, 22=190.
  - 10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



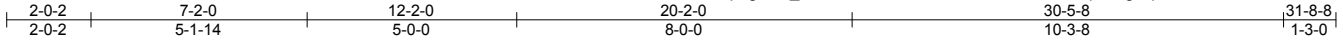
March 6, 2024

Job J0924-5212	Truss C1	Truss Type ROOF SPECIAL	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022659
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:01 2024 Page 1

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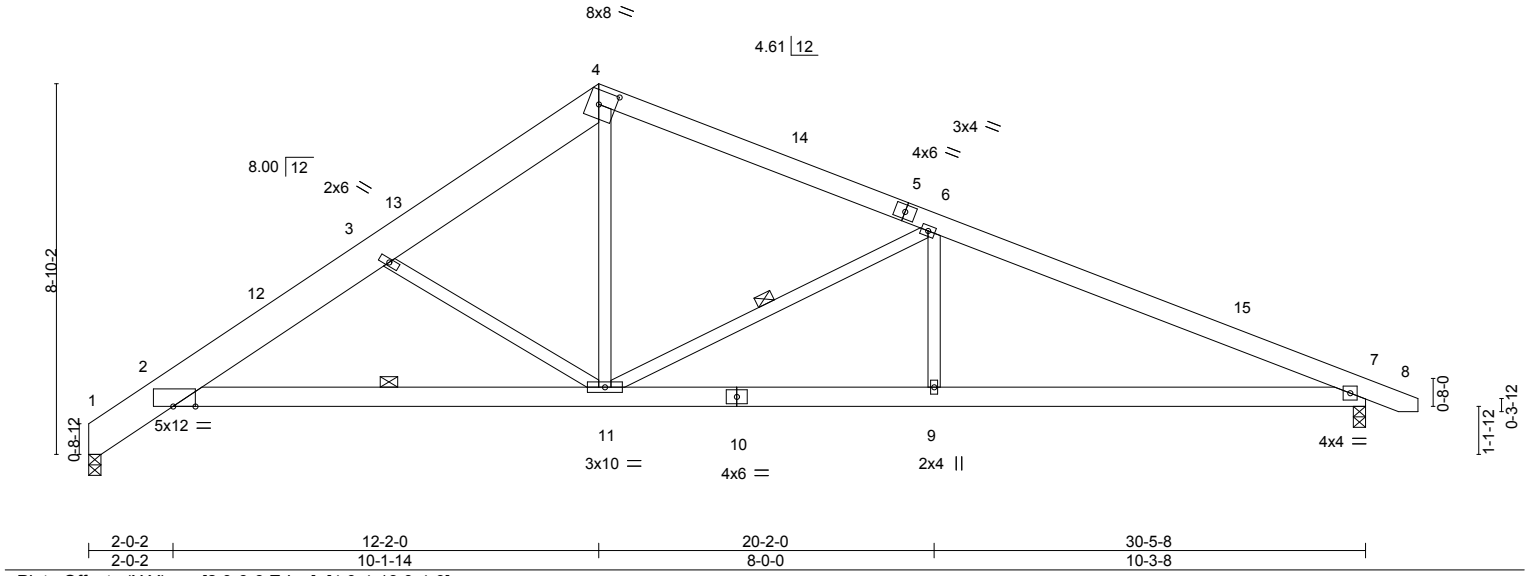


Plate Offsets (X, Y)--	[2:0-6-6,Edge], [4:0-4-13,0-4-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.71	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.47	Vert(LL) -0.11 2-11 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.51	Vert(CT) -0.28 2-11 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.12 7 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.08 2-11 >999 240	Weight: 212 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1 *Except* 1-4: 2x10 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-5-9 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 10-0-0 oc bracing: 2-11
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 6-11

**REACTIONS.** (size) 1=0-3-8, 7=0-3-8  
 Max Horz 1=-201(LC 10)  
 Max Uplift 1=-48(LC 12), 7=-104(LC 13)  
 Max Grav 1=1210(LC 1), 7=1278(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-569/121, 2-3=-2092/501, 3-4=-1644/425, 4-6=-1467/377, 6-7=-2383/481  
 BOT CHORD 2-11=-353/1874, 9-11=-346/2112, 7-9=-346/2112  
 WEBS 3-11=-791/296, 4-11=-169/1036, 6-11=-960/266, 6-9=0/375

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 12-2-0, Exterior(2) 12-2-0 to 16-6-13, Interior(1) 16-6-13 to 31-5-11 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 5) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 7=104.



March 6, 2024

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</p>	<p>ENGINEERING BY  <b>TRENCO</b>  <small>A MiTek Affiliate</small></p> <p>818 Soundside Road        Edenton, NC 27932</p>
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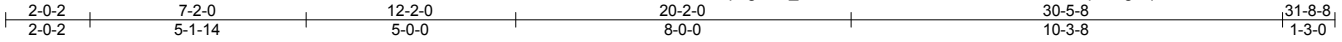


Job J0924-5212	Truss C1SG	Truss Type ROOF SPECIAL STRUCTU	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022660
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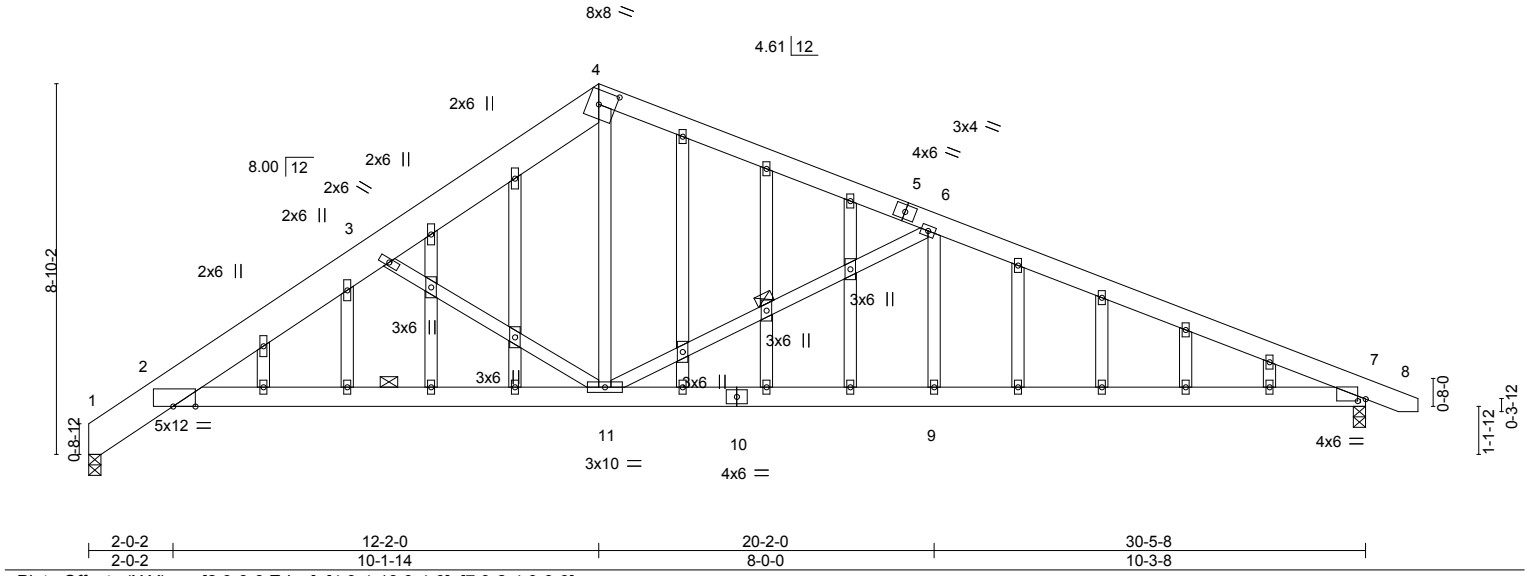
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:02 2024 Page 1

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Scale = 1:55.0



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 0.71	Vert(LL)	-0.11 2-11	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	LC 0.47	Vert(CT)	-0.28 2-11	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.51	Horz(CT)	0.12 7	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.11 2-11	>999	240	Weight: 263 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1 *Except* 1-4: 2x10 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-4-5 oc purlins. BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 10-0-0 oc bracing: 2-11
BOT CHORD 2x6 SP No.1	WEBS 1 Row at midpt 6-11
WEBS 2x4 SP No.2	
OTHERS 2x4 SP No.2	

<b>REACTIONS.</b>	(size) 1=0-3-8, 7=0-3-8 Max Horz 1=-273(LC 10) Max Uplift 1=-208(LC 12), 7=-307(LC 13) Max Grav 1=1210(LC 1), 7=1278(LC 1)
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<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-2=-569/212, 2-3=-2092/687, 3-4=-1644/583, 4-6=-1467/531, 6-7=-2383/765
BOT CHORD	2-11=-471/1874, 9-11=-577/2112, 7-9=-577/2112
WEBS	3-11=-791/393, 4-11=-299/1036, 6-11=-960/461, 6-9=0/375

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable 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.
  - Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=208, 7=307.



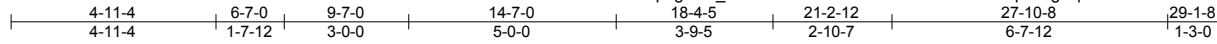
March 6, 2024

Job J0924-5212	Truss C2	Truss Type ROOF SPECIAL	Qty 7	Ply 1	Lot 12 Magnolia Hills	I64022661
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:03 2024 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



4x6 =

Scale = 1:55.5

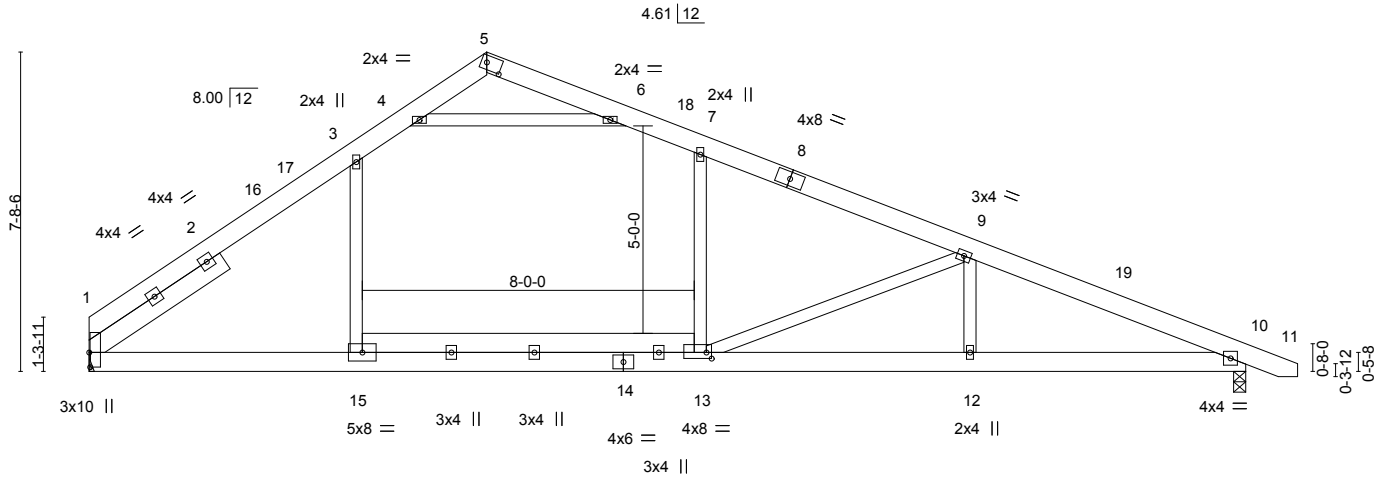


Plate Offsets (X,Y)-- [1:0-4-4,0-0-4], [5:0-4-7,0-2-0], [13:0-1-8,0-1-12]

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 0.51	Vert(LL)	-0.31	12-13	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.90	Vert(CT)	-0.56	12-13	>598		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.92	Horz(CT)	0.04	10	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.23	12-13	>999		
								Weight: 205 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.1 \*Except\*  
9-12,9-13: 2x4 SP No.2  
SLIDER Left 2x6 SP No.1 3-11-6

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-11-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-2-13 oc bracing.

**REACTIONS.** (size) 1=Mechanical, 10=0-3-8  
Max Horz 1=-189(LC 10)  
Max Uplift 1=-37(LC 12), 10=-104(LC 13)  
Max Grav 1=1108(LC 1), 10=1180(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-3=-1685/375, 3-4=-1221/401, 5-6=-39/275, 6-7=-1215/378, 7-9=-1449/349,  
9-10=-2434/469  
BOT CHORD 1-15=-153/1243, 13-15=-161/1248, 12-13=-366/2187, 10-12=-366/2187  
WEBS 3-15=0/525, 7-13=0/385, 4-6=-1466/447, 9-12=0/375, 9-13=-1095/232

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 9-7-0, Exterior(2) 9-7-0 to 13-11-13, Interior(1) 13-11-13 to 28-10-11 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) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 10=104.



March 6, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

818 Soundside Road  
Edenton, NC 27932

Job J0924-5212	Truss C2GE	Truss Type ROOF SPECIAL SUPPORT	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	I64022662
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:05 2024 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

9-7-0 7-8-6 27-10-8 29-1-8  
9-7-0 18-3-8 1-3-0

Scale = 1:52.1

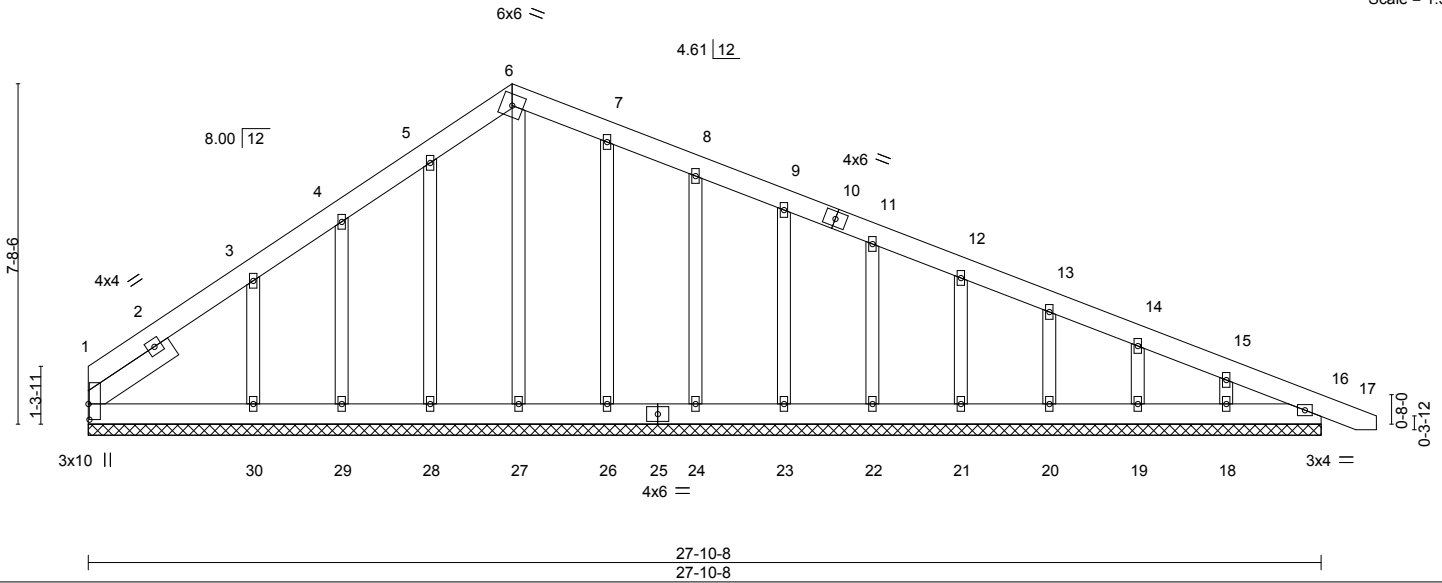


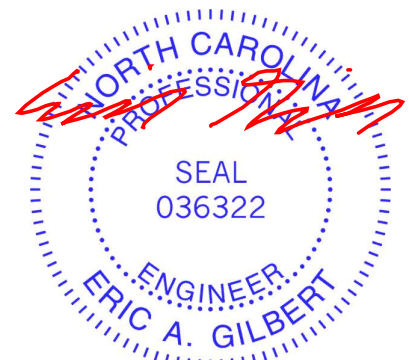
Plate Offsets (X,Y)-- [1:0-4-4,0-0-4]		CSI.		DEFL.				PLATES	GRIP
LOADING (psf)	SPACING-	TC	BC	in	(loc)	l/defl	L/d	MT20	244/190
TCLL 20.0	Plate Grip DOL 2-0-0	0.07	0.03	Vert(LL) -0.00	16	n/r	120		
TCDL 10.0	Lumber DOL 1.15	0.12	0.12	Vert(CT) -0.00	16	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S		Horz(CT) 0.00	16	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014							Weight: 215 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	
SLIDER Left 2x6 SP No.1 2-3-13	

**REACTIONS.** All bearings 27-10-8.  
 (lb) - Max Horz 1=260(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 28, 29, 26, 24, 23, 22, 21, 20, 19, 18, 16 except 30=206(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 27, 28, 29, 26, 24, 23, 22, 21, 20, 19, 18, 16 except 30=346(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 5-6=-158/274, 6-7=-157/257  
 WEBS 3-30=-281/228

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 28, 29, 26, 24, 23, 22, 21, 20, 19, 18, 16 except (jt=lb) 30=206.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.



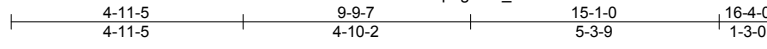
March 6, 2024

Job J0924-5212	Truss D1	Truss Type ROOF SPECIAL	Qty 2	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	I64022663
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Comtech, Inc. Fayetteville, NC - 28314,

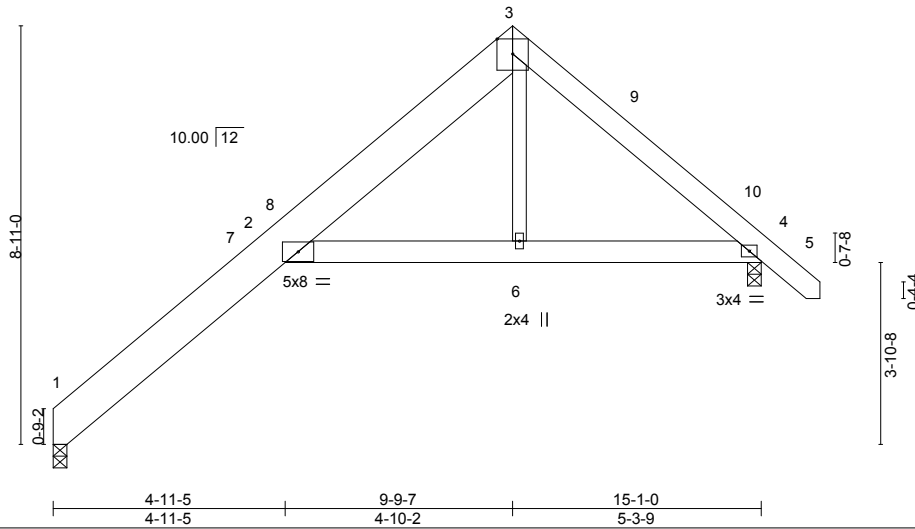
8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:06 2024 Page 1

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8x8 =

Scale = 1:49.1



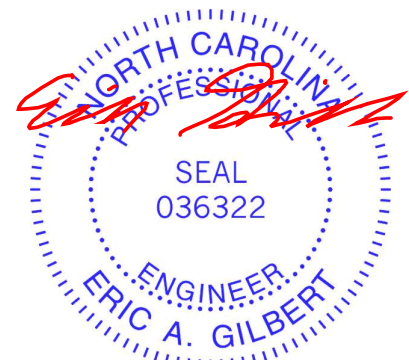
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.66	Vert(LL)	-0.15	2	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.31	Vert(CT)	-0.30	2	>597		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.23	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.15	2	>999		
								Weight: 102 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x10 SP No.1 *Except* 3-5: 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	


**REACTIONS.** (size) 1=0-3-8, 4=0-3-8  
 Max Horz 1=179(LC 9)  
 Max Uplift 1=-6(LC 12), 4=-46(LC 12)  
 Max Grav 1=610(LC 1), 4=674(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-394/97, 2-3=-530/150, 3-4=-768/205  
 BOT CHORD 2-6=-14/550, 4-6=-13/557  
 WEBS 3-6=0/284

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 9-9-7, Exterior(2) 9-9-7 to 14-2-4, Interior(1) 14-2-4 to 16-2-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 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) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4.



March 6, 2024

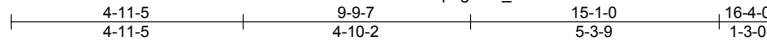
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (<a href="http://www.tpinst.org">www.tpinst.org</a>) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (<a href="http://www.sbcacomponents.com">www.sbcacomponents.com</a>)</p>	<p>ENGINEERING BY</p>  <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills	I64022664
J0924-5212	D1SG	GABLE	1	1		
Comtech, Inc. Fayetteville, NC - 28314,						Job Reference (optional)

Comtech, Inc. Fayetteville, NC - 28314,

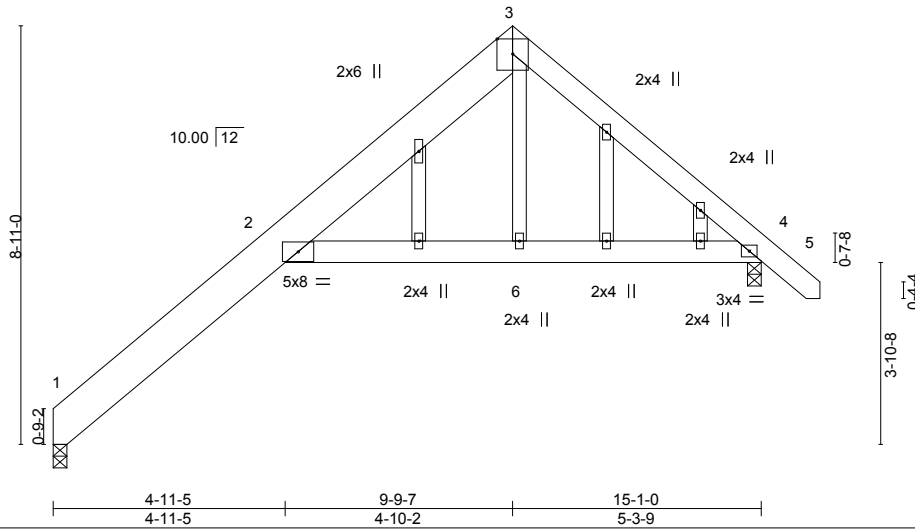
8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:07 2024 Page 1

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8x8 =

Scale = 1:49.1



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.66	Vert(LL)	-0.15	2	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.31	Vert(CT)	-0.30	2	>597		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.23	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.22	2	>814		
								Weight: 110 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x10 SP No.1 *Except* 3-5: 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	
OTHERS 2x4 SP No.2	


**REACTIONS.** (size) 1=0-3-8, 4=0-3-8  
 Max Horz 1=247(LC 12)  
 Max Uplift 1=-83(LC 12), 4=-145(LC 12)  
 Max Grav 1=610(LC 1), 4=674(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-415/127, 2-3=-530/161, 3-4=-783/245  
 BOT CHORD 2-6=-93/570, 4-6=-93/577  
 WEBS 3-6=0/284

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) 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) 1 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 capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 4=145.



March 6, 2024

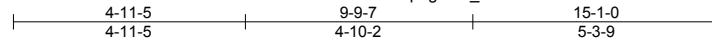
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (<a href="http://www.tpinst.org">www.tpinst.org</a>) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (<a href="http://www.sbcacomponents.com">www.sbcacomponents.com</a>)</p>	<p>ENGINEERING BY</p>  <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0924-5212	Truss D2	Truss Type ROOF SPECIAL	Qty 2	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	I64022665
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Comtech, Inc. Fayetteville, NC - 28314,

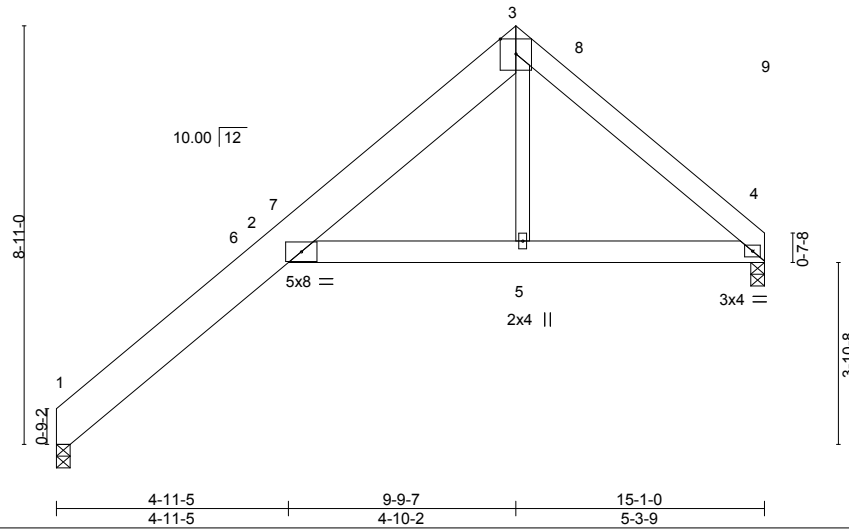
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8x8 =

Scale = 1:49.1



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.67	Vert(LL)	-0.15	2	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.31	Vert(CT)	-0.30	2	>594		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.24	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.16	2	>999		
								Weight: 99 lb	FT = 20%

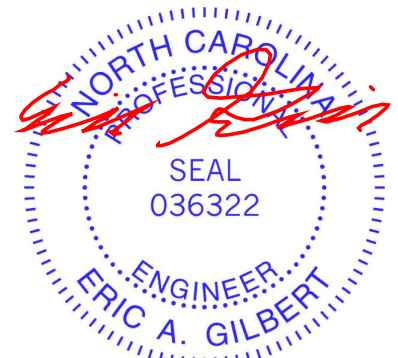
**LUMBER-**  
 TOP CHORD 2x10 SP No.1 \*Except\*  
 3-4: 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2

**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) 1=0-3-8, 4=0-3-8  
 Max Horz 1=191(LC 9)  
 Max Uplift 1=-3(LC 12), 4=-47(LC 12)  
 Max Grav 1=613(LC 1), 4=596(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-391/85, 2-3=-540/159, 3-4=-774/241  
 BOT CHORD 2-5=-71/542, 4-5=-70/549  
 WEBS 3-5=0/287

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 9-9-7, Exterior(2) 9-9-7 to 14-2-4, Interior(1) 14-2-4 to 14-11-4 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.
  - Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4.



March 6, 2024

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818 Soundside Road  
 Edenton, NC 27932



Job J0924-5212	Truss G1	Truss Type COMMON	Qty 3	Ply 1	Lot 12 Magnolia Hills I64022666
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Comtech, Inc. Fayetteville, NC - 28314,

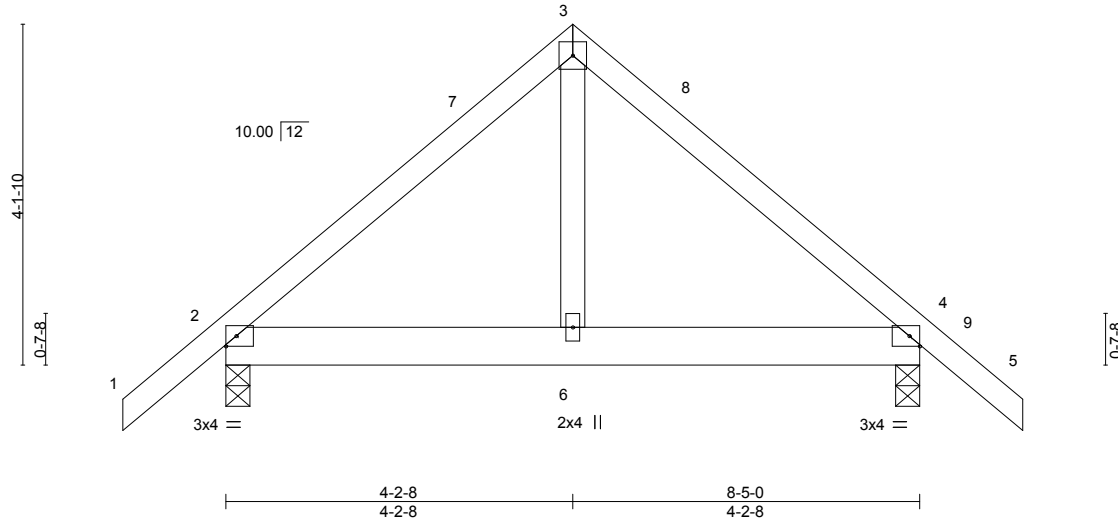
8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:08 2024 Page 1

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4x4 =

Scale = 1:27.9



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 0.29	Vert(LL)	-0.00	6	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(CT)	-0.01	2-6	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	4	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-P	Wind(LL)	-0.00	6	>999		
								Weight: 46 lb	FT = 20%

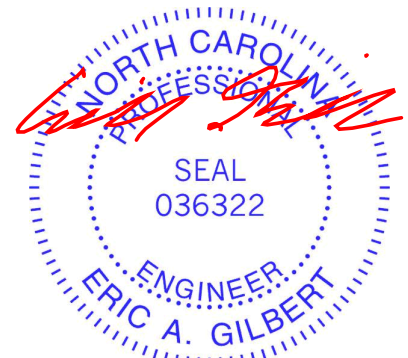
**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2

**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=0-3-8, 4=0-3-8  
Max Horz 2=109(LC 11)  
Max Uplift 2=-34(LC 12), 4=-34(LC 13)  
Max Grav 2=409(LC 1), 4=409(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-321/71, 3-4=-321/71

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-3-0 to 3-1-13, Interior(1) 3-1-13 to 4-2-8, Exterior(2) 4-2-8 to 8-7-5, Interior(1) 8-7-5 to 9-8-0 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



March 6, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road  
Edenton, NC 27932

Job J0924-5212	Truss G1GE	Truss Type GABLE	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	I64022667
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Comtech, Inc. Fayetteville, NC - 28314,

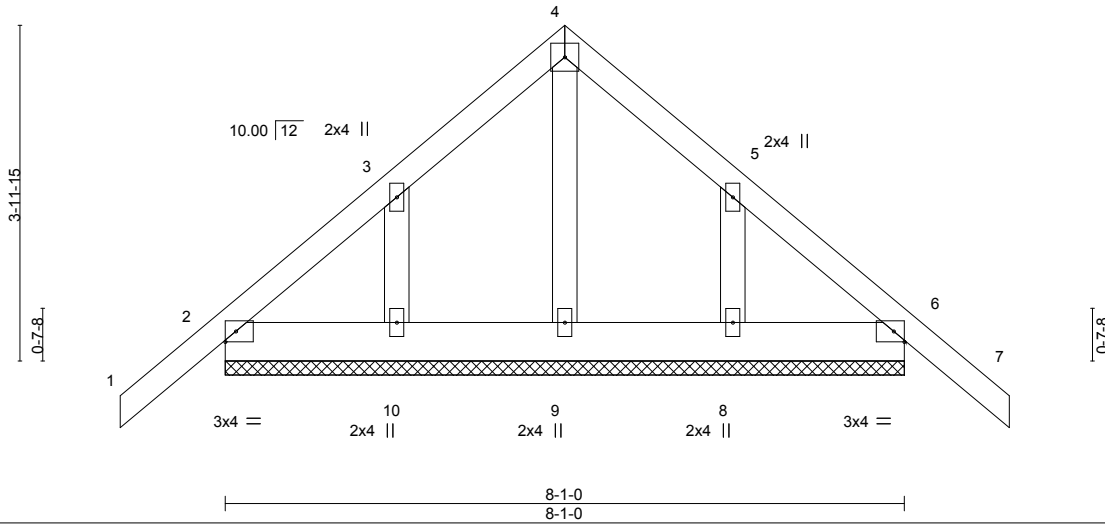
8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:09 2024 Page 1

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4x4 =

Scale = 1:27.4



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.08	Vert(LL)	-0.01	7	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.01	Vert(CT)	-0.01	7	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 50 lb	FT = 20%

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

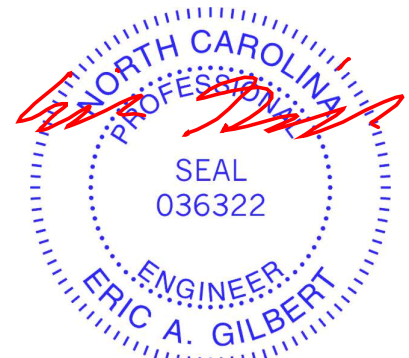
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 8-1-0.  
(lb) - Max Horz 2=132(LC 11)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 6 except 10=126(LC 12), 8=124(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9, 10, 8

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6 except (jt=lb) 10=126, 8=124.



March 6, 2024

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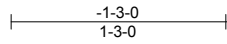
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills	I64022668
J0924-5212	M1	MONOPICH	3	1		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:10 2024 Page 1

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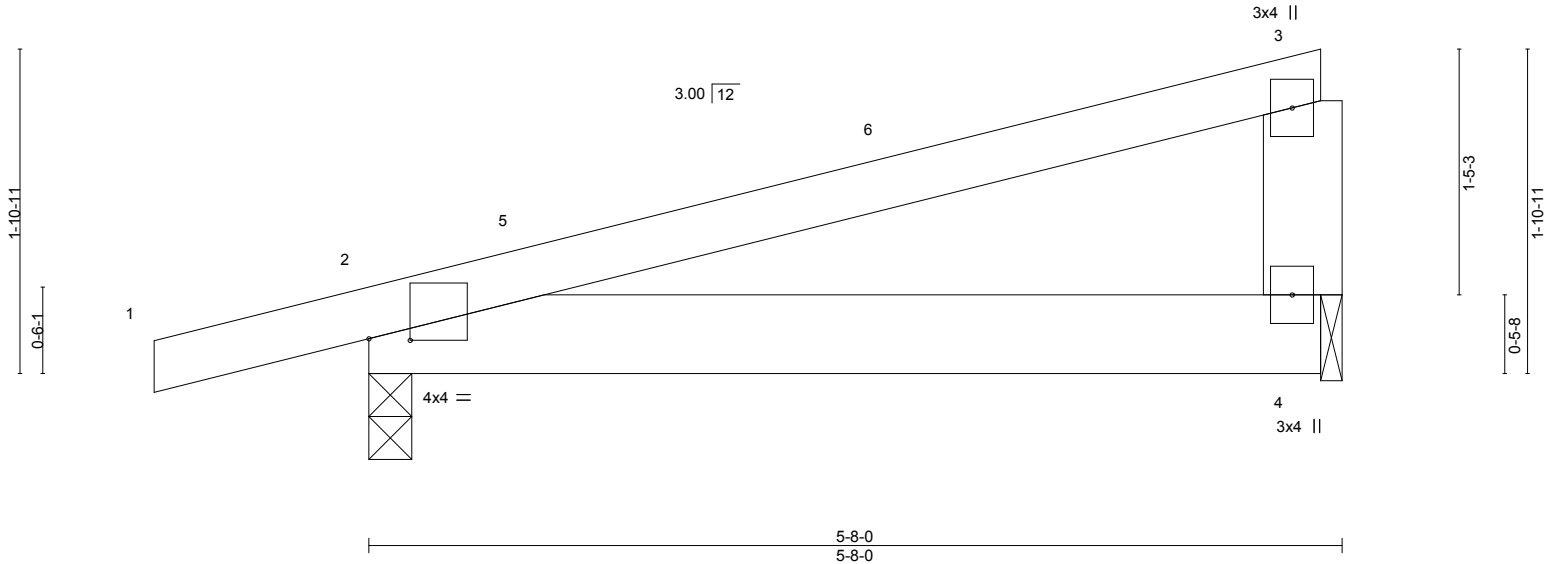


Plate Offsets (X,Y)-- [2:0-2-14,0-0-2]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.36	Vert(LL)	-0.01	2-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.11	Vert(CT)	-0.02	2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00		n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.02	2-4	>999	240	Weight: 26 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 5-8-0 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=57(LC 8)  
 Max Uplift 2=-132(LC 8), 4=-82(LC 8)  
 Max Grav 2=306(LC 1), 4=202(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-3-0 to 3-1-13, Interior(1) 3-1-13 to 5-5-4 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=132.



March 6, 2024

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818 Soundside Road  
 Edenton, NC 27932

Job J0924-5212	Truss M1GE	Truss Type GABLE	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022669
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:11 2024 Page 1

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5-8-0  
5-8-0

Scale = 1:13.4

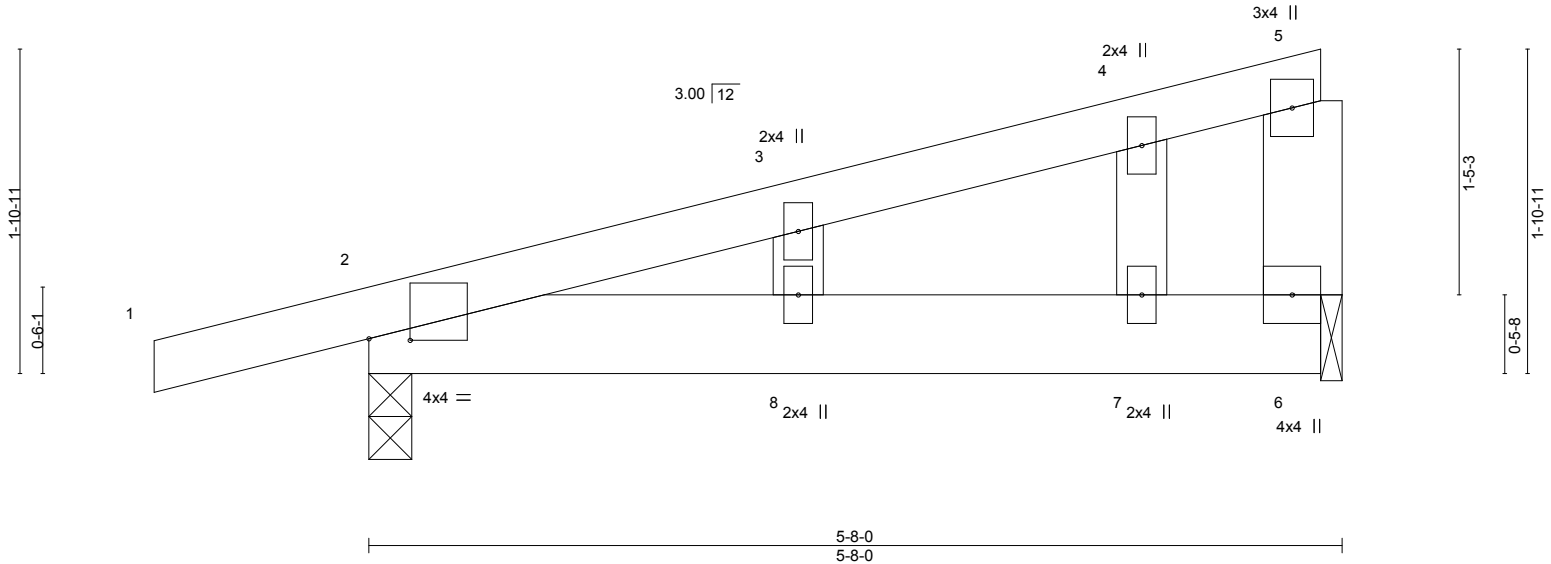


Plate Offsets (X,Y)--	[2:0-2-14,0-0-2]								
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.11	Vert(LL)	0.02	8	>999	240	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	-0.02	8	>999	240	
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	-0.00	6	n/a	n/a	
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 28 lb	FT = 20%

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

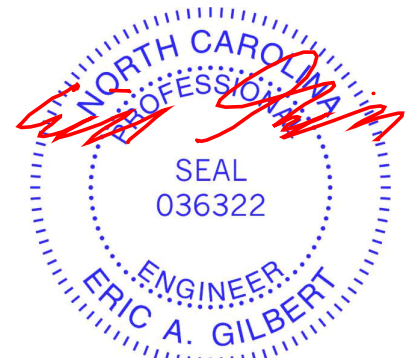
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-8-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-0, 6=0-1-8  
Max Horz 2=81(LC 8)  
Max Uplift 2=-189(LC 8), 6=-120(LC 8)  
Max Grav 2=306(LC 1), 6=202(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable studs spaced at 2-0-0 oc.
- 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) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 6.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=189, 6=120.



March 6, 2024

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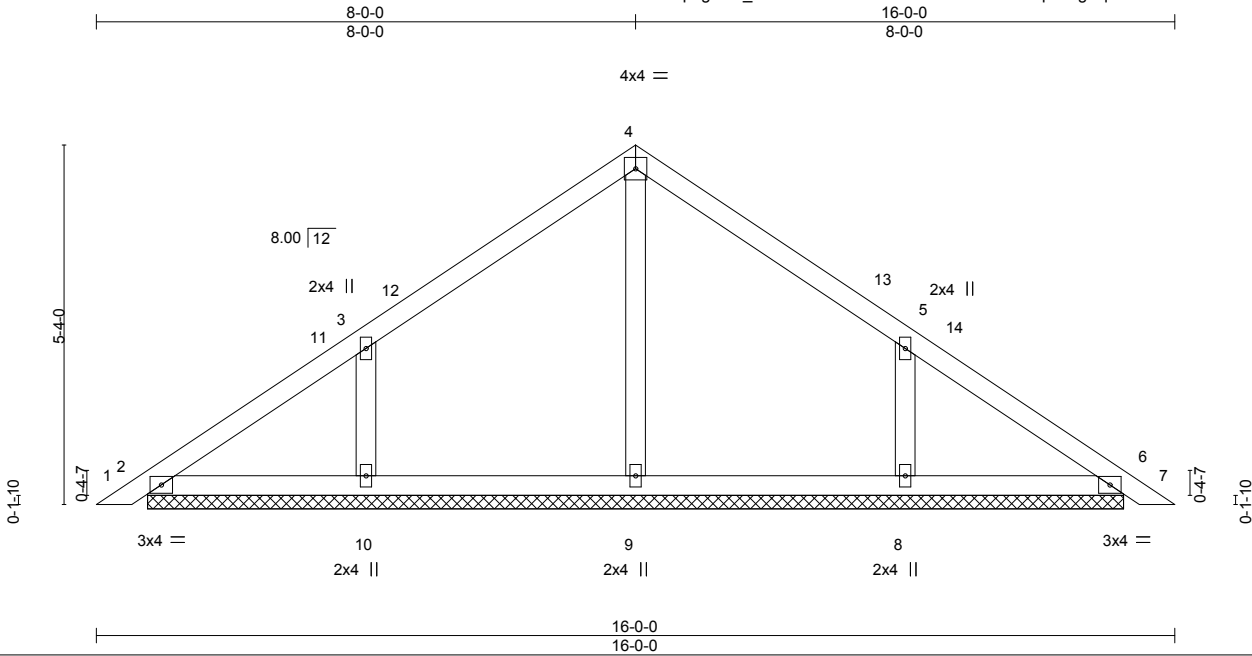
818 Soundside Road  
Edenton, NC 27932

Job J0924-5212	Truss PB	Truss Type GABLE	Qty 5	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022670
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:12 2024 Page 1

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Scale = 1:34.2

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.14	Vert(LL)	0.00	6	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	0.00	7	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 63 lb	FT = 20%

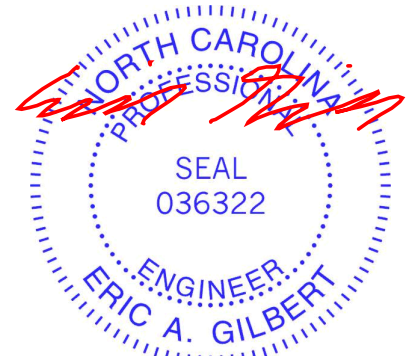
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** All bearings 14-5-12.  
 (lb) - Max Horz 2=-124(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2 except 10=-104(LC 12), 8=-104(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 6 except 9=252(LC 1), 10=363(LC 19), 8=362(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 3-10=-309/207, 5-8=-310/207

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-3-2 to 4-7-15, Interior(1) 4-7-15 to 8-0-0, Exterior(2) 8-0-0 to 12-4-13, Interior(1) 12-4-13 to 15-8-14 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 4'-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3'-6-0 tall by 2'-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 10=104, 8=104.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



March 6, 2024

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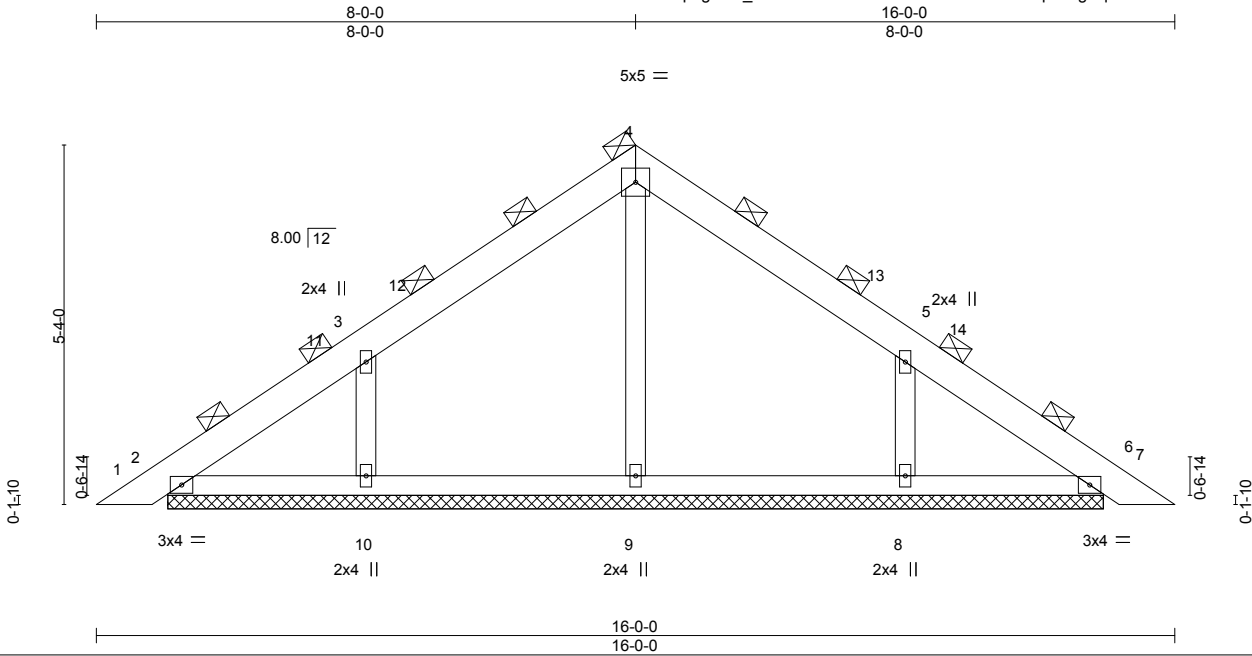
818 Soundside Road  
 Edenton, NC 27932

Job J0924-5212	Truss PBA	Truss Type GABLE	Qty 2	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	164022671
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:13 2024 Page 1

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Scale = 1:34.2

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	5-0-0	TC 0.17	Vert(LL)	0.00	6	n/r	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.23	Vert(CT)	0.00	7	n/r		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.16	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Rep Stress Incr NO	Matrix-S					Weight: 77 lb	FT = 20%
	Code IRC2015/TPI2014							

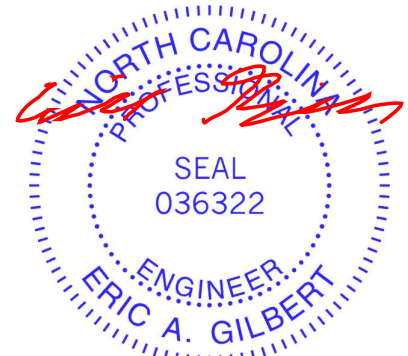
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

**BRACING-**  
 TOP CHORD 2-0-0 oc purlins (6-0-0 max.)  
 (Switched from sheeted: Spacing > 2-8-0).  
 Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 13-10-9.  
 (lb) - Max Horz 2=-303(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2 except 10=-253(LC 12), 8=-249(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) except 2=392(LC 1), 6=392(LC 1), 9=617(LC 1), 10=864(LC 19),  
 8=858(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-326/230, 3-4=-389/340, 4-5=-388/348  
 WEBS 4-9=-411/0, 3-10=-756/503, 5-8=-757/504

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-4-15 to 4-9-12, Interior(1) 4-9-12 to 8-0-0, Exterior(2) 8-0-0 to 12-4-13, Interior(1) 12-4-13 to 15-7-1 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) Gable requires continuous bottom chord bearing.
  - 5) Gable studs spaced at 4-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 10=253, 8=249.
  - 9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 6, 2024

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

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

ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

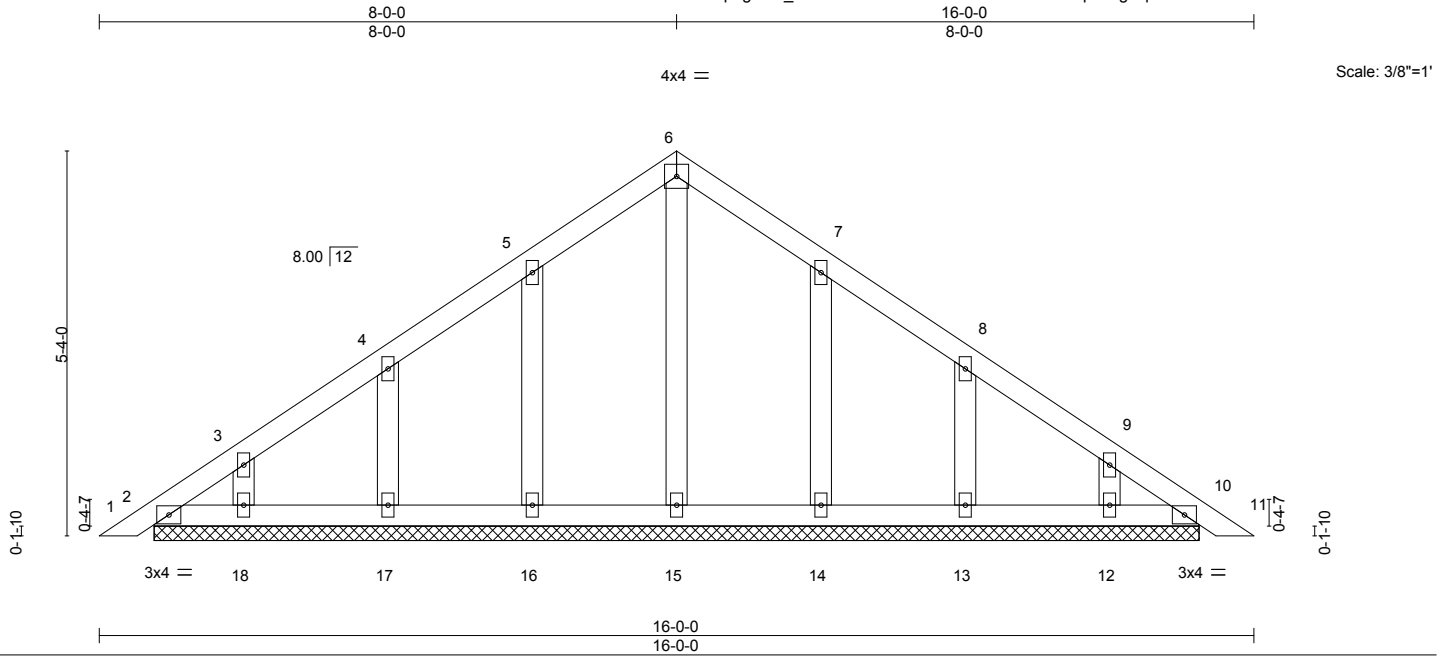


Job J0924-5212	Truss PGBE	Truss Type GABLE	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	I64022672
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:14 2024 Page 1

ID:0HpgN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



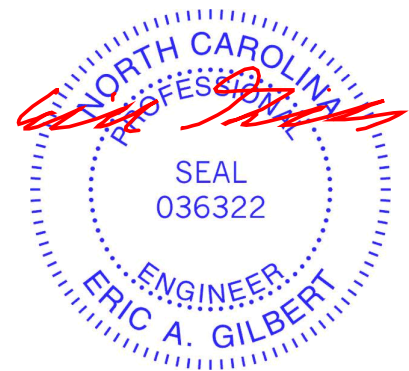
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.03	Vert(LL)	-0.00	10	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	10	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 75 lb	FT = 20%

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

**REACTIONS.** All bearings 14-5-12.  
 (lb) - Max Horz 2--155(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 16, 17, 18, 14, 13, 12  
 Max Grav All reactions 250 lb or less at joint(s) 2, 10, 15, 16, 17, 18, 14, 13, 12

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

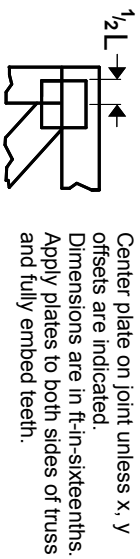
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 16, 17, 18, 14, 13, 12.
  - 10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



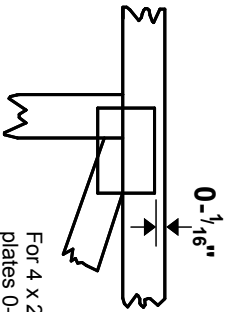
March 6, 2024

# Symbols

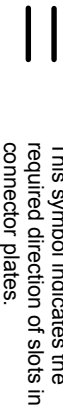
## PLATE LOCATION AND ORIENTATION



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



For 4 x 2 orientation, locate plates 0-  $\frac{1}{16}$ \" from outside edge of truss.



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

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

## PLATE SIZE

4 X 4

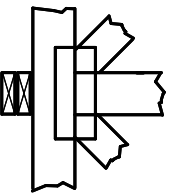
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

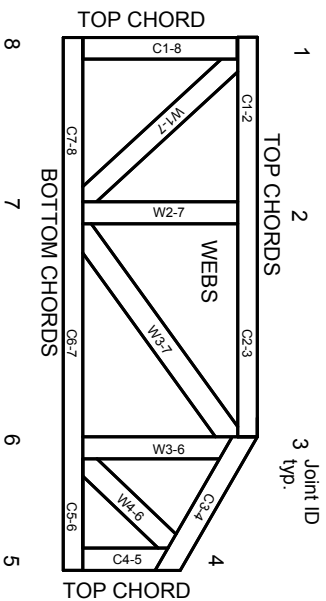


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

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

# Numbering System



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

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

## Product Code Approvals

ICC-ES Reports:

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

## Design General Notes

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

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

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# General Safety Notes

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

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

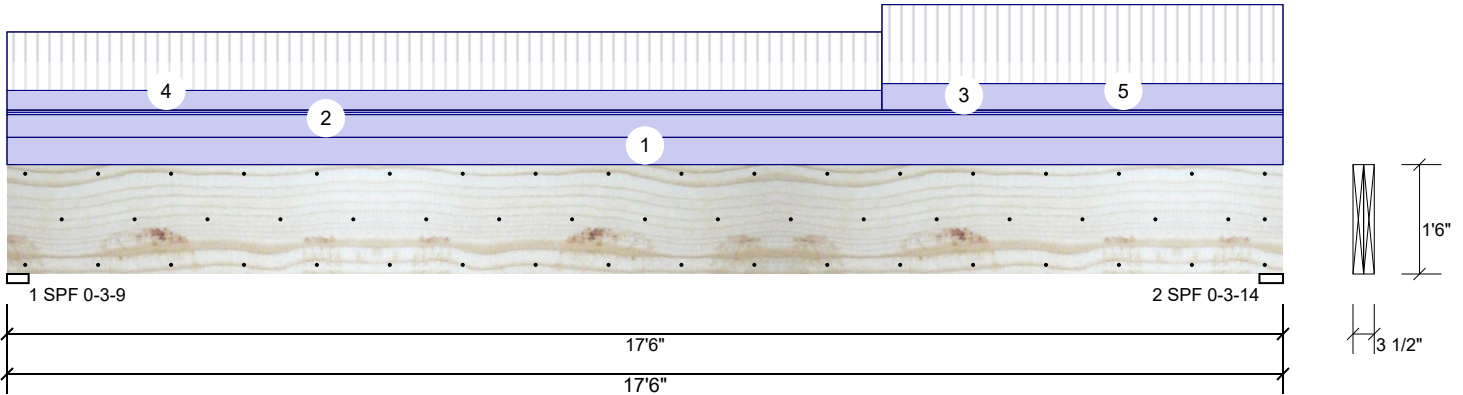
**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

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

**BM1 Kerto-S LVL 1.750" X 18.000" 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	2318	2907	87	0	0
2	Vertical	2674	3033	88	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.563"	Vert	99%	2907 / 2318	5226	L	D+L
2 - SPF	3.875"	Vert	99%	3033 / 2674	5707	L	D+L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	22105 ft-lb	8'10 13/16"	42981 ft-lb	0.514 (51%)	D+L	L
Unbraced	22105 ft-lb	8'10 13/16"	42981 ft-lb	0.514 (51%)	D+L	L
Shear	4439 lb	15'8 1/8"	13440 lb	0.330 (33%)	D+L	L
LL Defl inch	0.172 (L/1190)	8'9 15/16"	0.426 (L/480)	0.403 (40%)	L	L
TL Defl inch	0.381 (L/536)	8'9 1/2"	0.568 (L/360)	0.671 (67%)	D+L	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
2	Uniform			Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	C2GE
3	Tie-In	0-0-0 to 17-6-0	0-6-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof Load
4	Part. Uniform	0-0-0 to 12-0-0		Top	86 PLF	257 PLF	0 PLF	0 PLF	0 PLF	F3
5	Part. Uniform	12-0-0 to 17-6-0		Top	116 PLF	347 PLF	0 PLF	0 PLF	0 PLF	F2
	Self Weight				14 PLF					

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

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

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

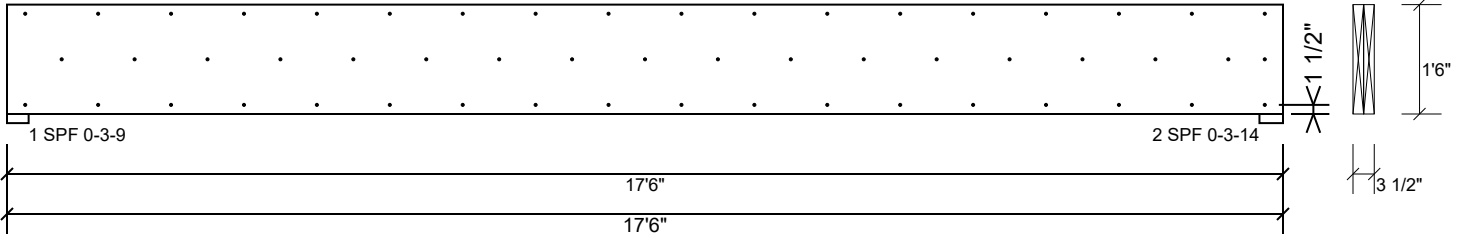
**Manufacturer Info**  
 Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
 www.metsawood.com/us

Comtech, Inc.  
 1001 S Reilly Rd., NC  
 28314  
 (910) 864-8787



**BM1 Kerto-S LVL 1.750" X 18.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

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

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

**Notes**

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

**Lumber**

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

chemicals

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

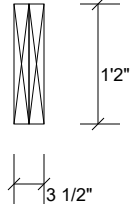
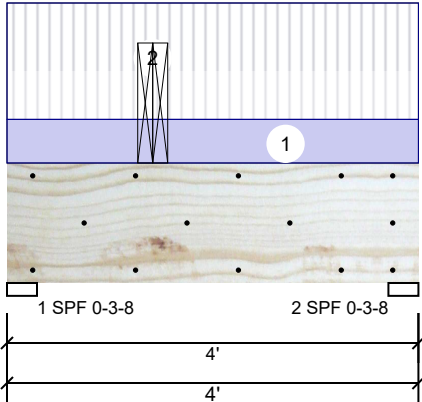
Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

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 1001 S Reilly Rd., NC  
 28314  
 (910) 864-8787



**BM2 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Member Information**

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

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

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	80	1806	1701	0	0
2	Vertical	80	937	858	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	67%	1806 / 1701	3507	L	D+S
2 - SPF	3.500"	Vert	34%	937 / 858	1795	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4138 ft-lb	1'5"	31049 ft-lb	0.133 (13%)	D+S	L
Unbraced	4138 ft-lb	1'5"	31049 ft-lb	0.133 (13%)	D+S	L
Shear	3296 lb	1'5 1/2"	12021 lb	0.274 (27%)	D+S	L
LL Defl inch	0.007 (L/6271)	1'5"	0.089 (L/480)	0.077 (8%)	S	L
TL Defl inch	0.014 (L/3057)	1'5"	0.118 (L/360)	0.118 (12%)	D+S	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Tie-In	0-0-0 to 4-0-0	1-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Floor Load
2	Point	1-5-0		Top	2640 lb	0 lb	2559 lb	0 lb	0 lb	B3 Brg 2
	Bearing Length	0-3-8								
	Self Weight				11 PLF					

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

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

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

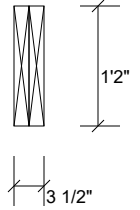
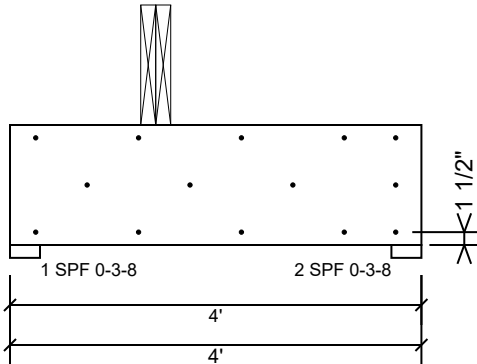
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 1001 S Reilly Rd., NC  
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**BM2 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

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

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
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  
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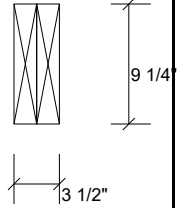
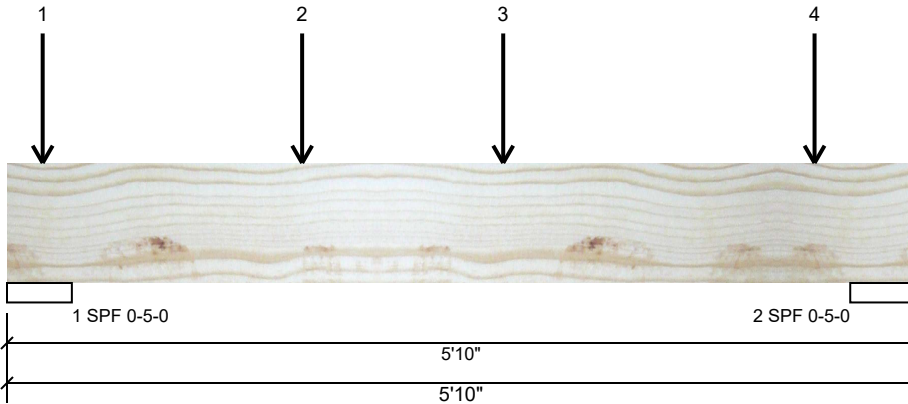


This design is valid until 6/28/2026



**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:	240
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	3107	3086	0	0
2	Vertical	0	2835	2814	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.000"	Vert	83%	3107 / 3086	6193	L	D+S
2 - SPF	5.000"	Vert	76%	2835 / 2814	5649	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9142 ft-lb	1'10 3/4"	14423 ft-lb	0.634 (63%)	D+S	L
Unbraced	9142 ft-lb	1'10 3/4"	11505 ft-lb	0.795 (79%)	D+S	L
Shear	5936 lb	1'2 1/4"	7943 lb	0.747 (75%)	D+S	L
LL Defl inch	0.058 (L/1065)	2'8 7/16"	0.128 (L/480)	0.451 (45%)	S	L
TL Defl inch	0.116 (L/531)	2'8 7/16"	0.256 (L/240)	0.452 (45%)	D+S	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Point	0-2-12		Top	127 lb	0 lb	127 lb	0 lb	0 lb	A2
	Bearing Length	0-3-8								
2	Point	1-10-12		Top	3363 lb	0 lb	3363 lb	0 lb	0 lb	A1-GR
	Bearing Length	0-3-8								
3	Point	3-2-4		Top	1205 lb	0 lb	1205 lb	0 lb	0 lb	A1
	Bearing Length	0-3-8								

Continued on page 2...

**Notes**

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

**Lumber**

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

chemicals

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

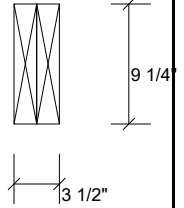
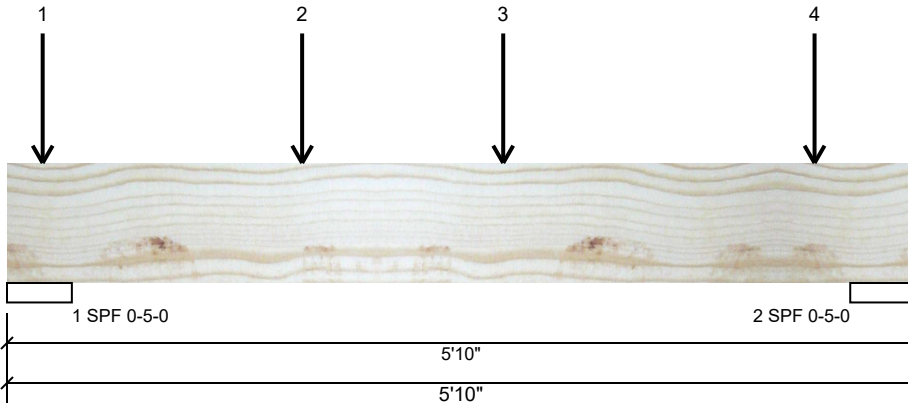
Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

Comtech, Inc.  
 1001 S Reilly Rd., NC  
 28314  
 (910) 864-8787



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

Level: Level



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
4	Point	5-2-4		Top	1205 lb	0 lb	1205 lb	0 lb	0 lb	A1
	Bearing Length	0-3-8								
	Self Weight				7 PLF					

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

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

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

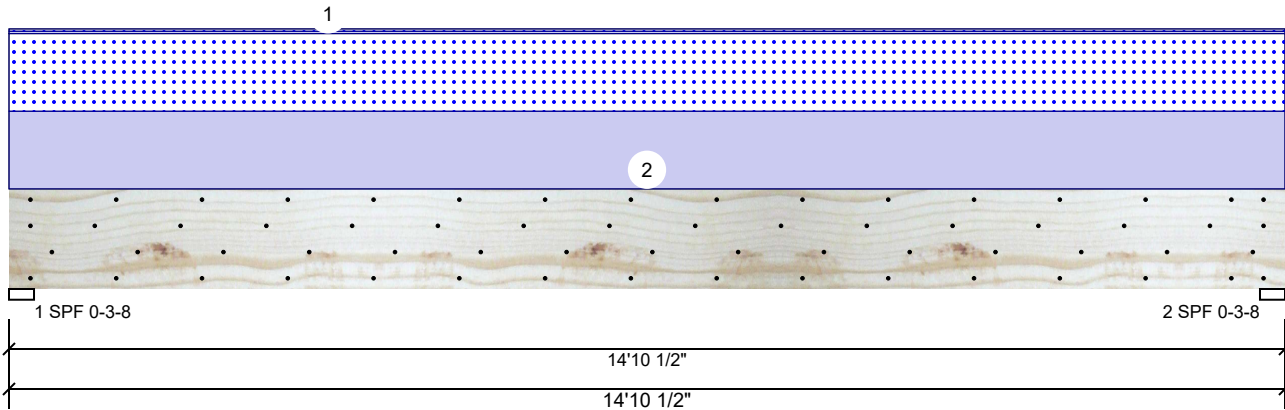
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**BM4 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Roof
Slope:	0/12
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	2639	2559	0	0
2	Vertical	0	2639	2559	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	100%	2639 / 2559	5198	L	D+S
2 - SPF	3.500"	Vert	100%	2639 / 2559	5198	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	18157 ft-lb	7'5 1/4"	31049 ft-lb	0.585 (58%)	D+S	L
Unbraced	18157 ft-lb	7'5 1/4"	31049 ft-lb	0.585 (58%)	D+S	L
Shear	4994 lb	1'5 1/2"	12021 lb	0.415 (42%)	D+S	L
LL Defl inch	0.230 (L/753)	7'5 5/16"	0.481 (L/360)	0.478 (48%)	S	L
TL Defl inch	0.467 (L/370)	7'5 5/16"	0.721 (L/240)	0.648 (65%)	D+S	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Tie-In	0-0-0 to 14-10-8	0-6-0	Near Face	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof Load
2	Uniform			Far Face	334 PLF	0 PLF	334 PLF	0 PLF	0 PLF	C2
	Self Weight				11 PLF					

**Notes**

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

**Lumber**

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

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

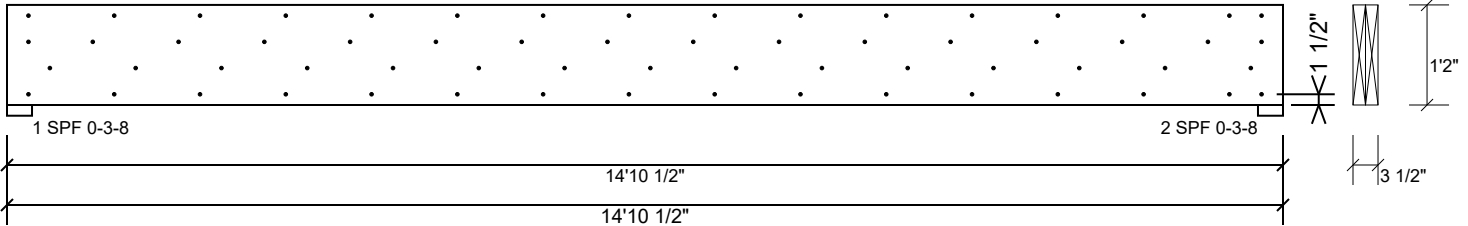
Metsä Wood  
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**BM4 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	88.7 %
Load	334.0 PLF
Yield Limit per Foot	376.5 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

**Notes**

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

**Lumber**

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

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

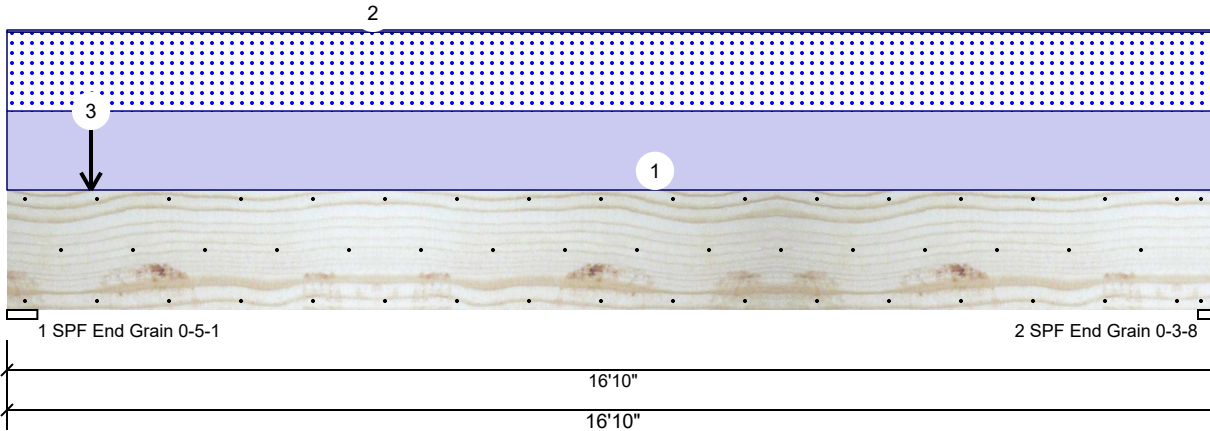
Metsä Wood  
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[www.metsawood.com/us](http://www.metsawood.com/us)

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**GDH Kerto-S LVL 1.750" X 20.000" 2-Ply - PASSED**

Level: Level



**Member Information**

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

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	7562	7303	0	0
2	Vertical	0	5273	5017	0	0

**Bearings**

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	5.063"	Vert	100%	7562 / 7303	14865	L	D+S
2 - SPF End Grain	3.500"	Vert	100%	5273 / 5017	10290	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	41804 ft-lb	8'3 5/16"	60066 ft-lb	0.696 (70%)	D+S	L
Unbraced	41804 ft-lb	8'3 5/16"	60066 ft-lb	0.696 (70%)	D+S	L
Shear	9662 lb	2'1 1/16"	17173 lb	0.563 (56%)	D+S	L
LL Defl inch	0.244 (L/801)	8'4 13/16"	0.542 (L/360)	0.449 (45%)	S	L
TL Defl inch	0.499 (L/391)	8'4 13/16"	0.813 (L/240)	0.614 (61%)	D+S	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	586 PLF	0 PLF	586 PLF	0 PLF	0 PLF	A1
2	Uniform			Top	15 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
3	Point	1-2-0		Top	2456 lb	0 lb	2456 lb	0 lb	0 lb	A1-GR
	Bearing Length	0-3-8								
	Self Weight				16 PLF					

**Notes**

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

**Lumber**

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

chemicals

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

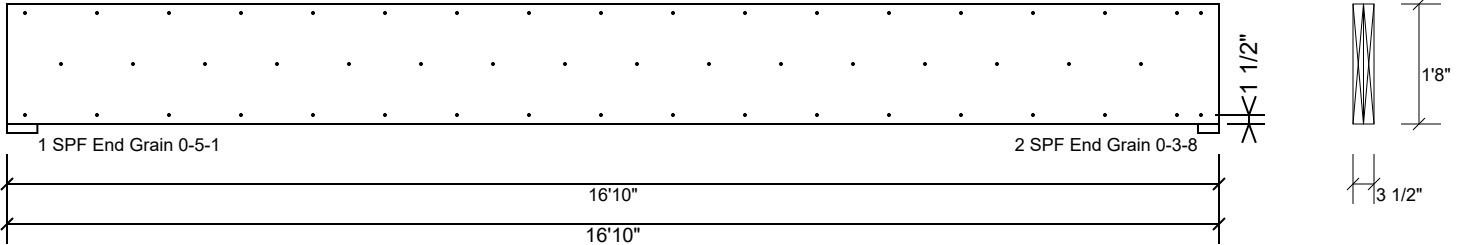
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 28314  
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**GDH Kerto-S LVL 1.750" X 20.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

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

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
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
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6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

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

Comtech, Inc.  
 1001 S Reilly Rd., NC  
 28314  
 (910) 864-8787





RE: J0924-5213  
Lot 12 Magnolia Hills

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

**Site Information:**

Customer: Project Name: J0924-5213  
Lot/Block: Model:  
Address: Subdivision:  
City: State:

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

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

This package includes 5 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I64022673	F1	3/5/2024
2	I64022674	F1A	3/5/2024
3	I64022675	F2	3/5/2024
4	I64022676	F3	3/5/2024
5	I64022677	F4	3/5/2024

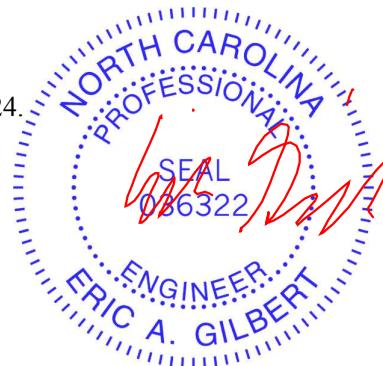
The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Truss Design Engineer's Name: Gilbert, Eric

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

North Carolina COA: C-0844

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



March 05, 2024

Job J0924-5213	Truss F1	Truss Type FLOOR	Qty 6	Ply 1	Lot 12 Magnolia Hills I64022673
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:26 2024 Page 1  
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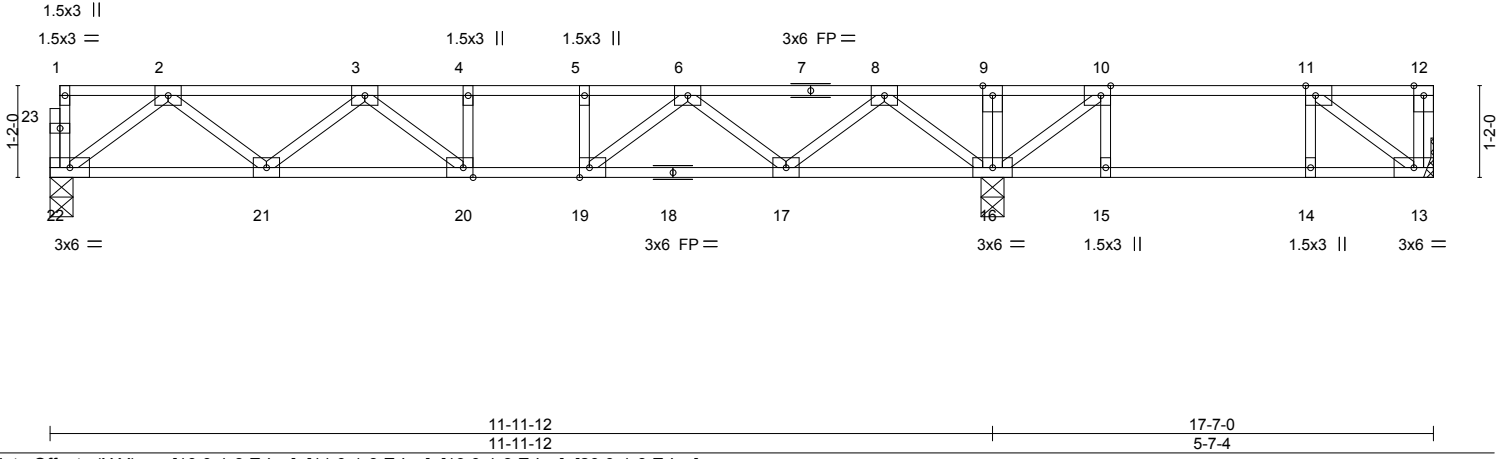
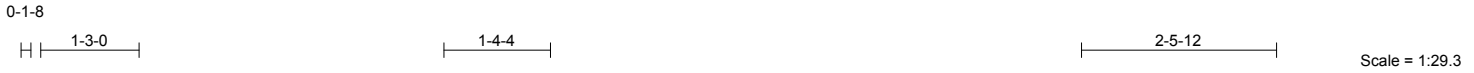


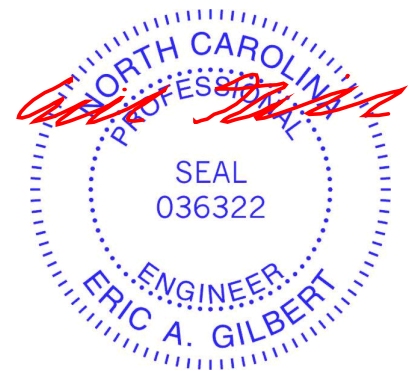
Plate Offsets (X,Y)--	[10:0-1-8,Edge], [11:0-1-8,Edge], [19:0-1-8,Edge], [20:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.37	Vert(LL) -0.06 20-21 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.37	Vert(CT) -0.09 20-21 >999 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.30	Horz(CT) 0.02 13 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S			
				Weight: 89 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) 22=0-3-8, 16=0-3-8, 13=Mechanical  
Max Grav 22=628(LC 10), 16=1033(LC 9), 13=284(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1204/0, 3-4=-1732/0, 4-5=-1732/0, 5-6=-1732/0, 6-8=-1092/0, 8-9=0/336, 9-10=0/336, 10-11=-309/29  
BOT CHORD 21-22=0/771, 20-21=0/1597, 19-20=0/1732, 17-19=0/1529, 16-17=0/624, 15-16=-29/309, 14-15=-29/309, 13-14=-29/309  
WEBS 2-22=-965/0, 2-21=0/562, 3-21=-512/0, 3-20=-39/343, 8-16=-1043/0, 8-17=0/628, 6-17=-593/0, 6-19=0/430, 10-16=-600/0, 11-13=-382/36

- 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.



March 5, 2024

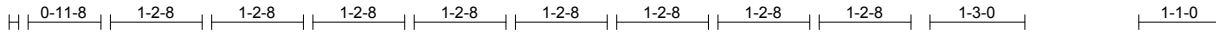
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TP1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</p>	<p>818 Soundside Road Edenton, NC 27932</p>
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Job J0924-5213	Truss F1A	Truss Type FLOOR	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	I64022674
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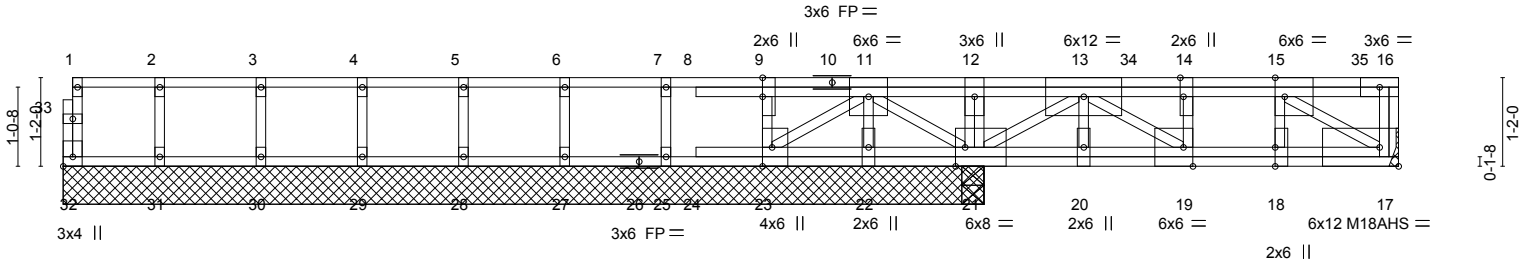
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:28 2024 Page 1  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRcDoi7J4zJC?f

0-1-8



Scale = 1:30.3



	12-0-0	12-1-8	17-7-0
	12-0-0	0-1-8	5-5-8
Plate Offsets (X,Y)--	[9:0-3-0,0-0-0], [14:0-3-0,Edge], [15:0-1-8,Edge], [18:0-3-0,0-0-0], [19:0-1-8,Edge], [21:0-1-8,Edge], [23:0-3-0,Edge], [32:Edge,0-1-8]		

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.66	Vert(LL)	-0.02	19	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.47	Vert(CT)	-0.04	19	>999	M18AHS	186/179
BCLL 0.0	Rep Stress Incr	NO	WB 0.81	Horz(CT)	0.01	17	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 110 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, Except: 6-0-0 oc bracing: 22-23,21-22.
WEBS 2x4 SP No.3(flat)	

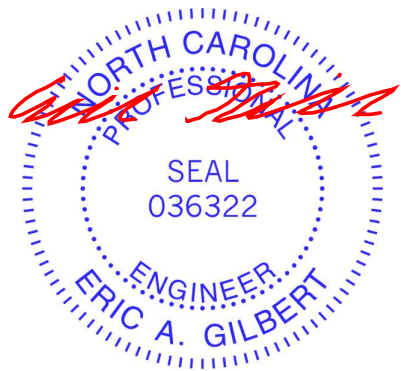
**REACTIONS.** All bearings 12-1-8 except (jt=length) 17=Mechanical.  
 (lb) - Max Uplift All uplift 100 lb or less at joint(s) except 22=-285(LC 4), 23=-288(LC 4)  
 Max Grav All reactions 250 lb or less at joint(s) 32, 23, 25, 27, 28, 29, 30, 31 except 21=2853(LC 1), 21=2853(LC 1), 17=2959(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 16-17=-1087/0, 11-12=0/1449, 12-13=0/1449, 13-14=-2936/0, 14-15=-2936/0  
 BOT CHORD 22-23=-604/0, 21-22=-604/0, 20-21=0/1593, 19-20=0/1593, 18-19=0/2936, 17-18=0/2936  
 WEBS 11-21=-1010/0, 13-21=-3427/0, 13-19=0/1618, 14-19=-860/0, 15-17=-3482/0, 15-18=-276/245, 11-23=0/736, 12-21=-275/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are MT20 plates unless otherwise indicated.
  - 3) All plates are 1.5x3 MT20 unless otherwise indicated.
  - 4) Plates checked for a plus or minus 1 degree rotation about its center.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 285 lb uplift at joint 22 and 288 lb uplift at joint 23.
  - 7) Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
  - 8) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 9) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
 Concentrated Loads (lb)  
 Vert: 15=-1299 34=-1299 35=-1250
- 2) Dead: Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100



March 5, 2024

Continued on page 2

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPH Quality Criteria and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</p>	 818 Soundside Road Edenton, NC 27932
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Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills	I64022674
J0924-5213	F1A	FLOOR	1	1		
Job Reference (optional)						

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:28 2024 Page 2  
 ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 3) 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-140, 16-35=-20  
Concentrated Loads (lb)  
Vert: 15=-390 34=-390 35=-341
- 4) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-20, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 5) 3rd unbalanced Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-140, 16-35=-20  
Concentrated Loads (lb)  
Vert: 15=-390 34=-390 35=-341
- 6) 4th unbalanced Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-20, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 7) 1st chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 8) 2nd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 9) 3rd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 10) 4th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 11) 5th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 12) 6th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 13) 7th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 14) 8th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 15) 9th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 16) 10th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 17) 11th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100

Continued on page 3

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills	I64022674
J0924-5213	F1A	FLOOR	1	1		
						Job Reference (optional)

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:28 2024 Page 3  
 ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 18) 12th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 19) 13th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 20) 14th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 21) 15th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-15=-220, 15-35=-140, 16-35=-20  
Concentrated Loads (lb)  
Vert: 15=-390 34=-1299 35=-341
- 22) 16th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-14=-140, 14-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-390 35=-1250
- 23) 17th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 24) 18th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 25) 19th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 26) 20th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 27) 21st chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 28) 22nd chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 29) 23rd chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 30) 24th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 31) 25th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 32) 26th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100

Continued on page 4

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



818 Soundside Road  
Edenton, NC 27932

Job J0924-5213	Truss F1A	Truss Type FLOOR	Qty 1	Ply 1	Lot 12 Magnolia Hills Job Reference (optional)	I64022674
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:28 2024 Page 4  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 33) 27th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 34) 28th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 35) 29th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 36) 30th chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-1299 35=-1250
- 37) 31st chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-15=-220, 15-35=-140, 16-35=-20  
Concentrated Loads (lb)  
Vert: 15=-390 34=-1299 35=-341
- 38) 32nd chase Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-32=-10, 1-12=-100, 12-14=-140, 14-35=-220, 16-35=-100  
Concentrated Loads (lb)  
Vert: 15=-1299 34=-390 35=-1250

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



818 Soundside Road  
Edenton, NC 27932



Job J0924-5213	Truss F2	Truss Type FLOOR	Qty 3	Ply 1	Lot 12 Magnolia Hills I64022675
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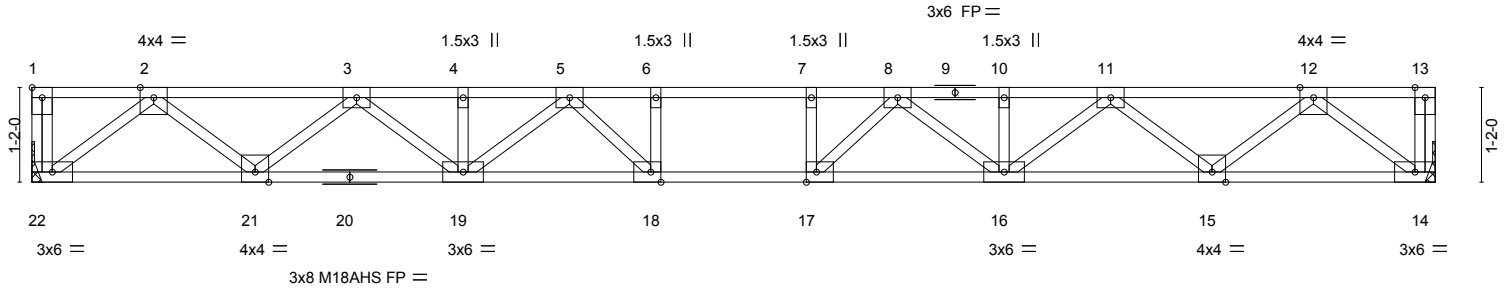
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:29 2024 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:28.4



17-3-8  
17-3-8

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

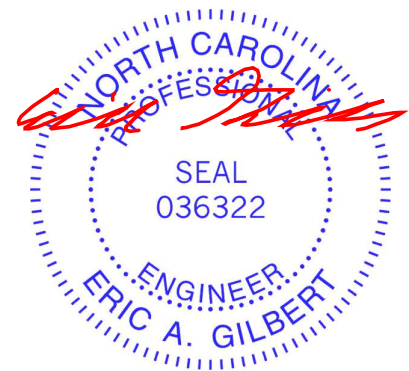
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.47	Vert(LL)	-0.25	17-18	>821	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.75	Vert(CT)	-0.34	17-18	>597	M18AHS	186/179
BCLL 0.0	Rep Stress Incr	YES	WB 0.49	Horz(CT)	0.06	14	n/a		
BCDL 5.0	Code	IRC2015/TPI2014	Matrix-S						
								Weight: 89 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) 22=Mechanical, 14=Mechanical  
Max Grav 22=937(LC 1), 14=937(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1961/0, 3-4=-3242/0, 4-5=-3242/0, 5-6=-3793/0, 6-7=-3793/0, 7-8=-3793/0, 8-10=-3242/0, 10-11=-3242/0, 11-12=-1961/0  
BOT CHORD 21-22=0/1169, 19-21=0/2719, 18-19=0/3607, 17-18=0/3793, 16-17=0/3607, 15-16=0/2719, 14-15=0/1169  
WEBS 2-22=-1467/0, 2-21=0/1031, 3-21=-986/0, 3-19=0/668, 12-14=-1467/0, 12-15=0/1031, 11-15=-986/0, 11-16=0/668, 5-19=-466/0, 8-16=-466/0, 8-17=-99/572, 7-17=-301/10, 5-18=-99/572, 6-18=-301/10

- NOTES-
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are MT20 plates unless otherwise indicated.
  - 3) All plates are 3x4 MT20 unless otherwise indicated.
  - 4) Plates checked for a plus or minus 1 degree rotation about its center.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) 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.



**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 J0924-5213	Truss F3	Truss Type FLOOR	Qty 6	Ply 1	Lot 12 Magnolia Hills 164022676
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:30 2024 Page 1  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:28.4

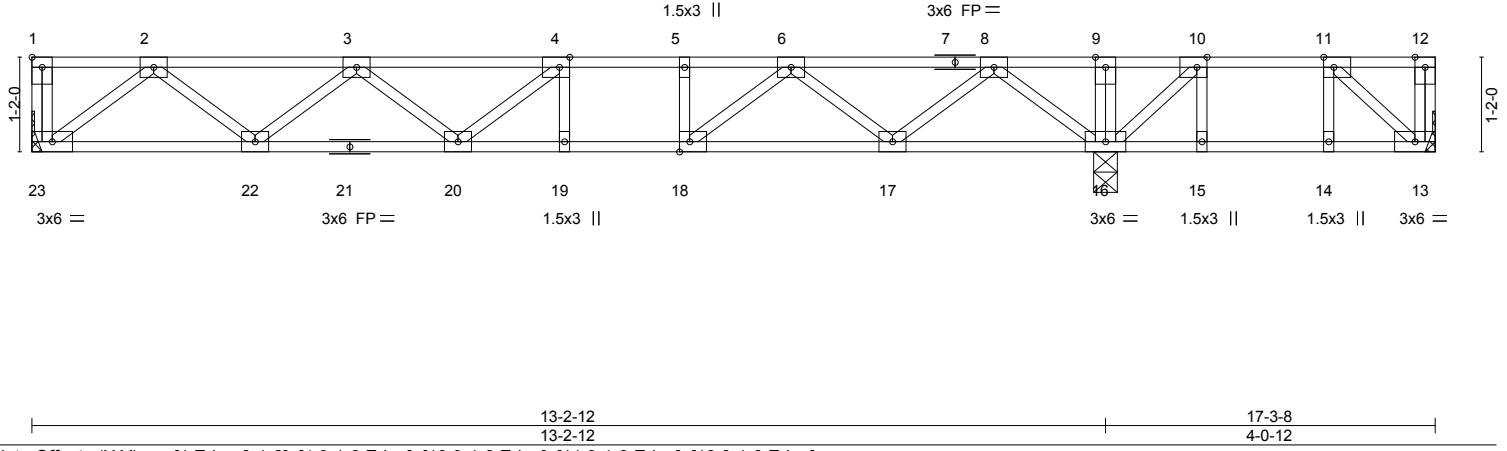


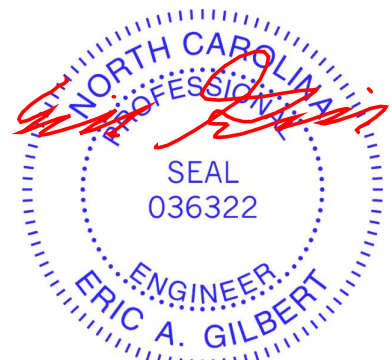
Plate Offsets (X,Y)--	[1:Edge,0-1-8], [4:0-1-8,Edge], [10:0-1-8,Edge], [11:0-1-8,Edge], [18:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.37	Vert(LL) -0.11 19-20 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.65	Vert(CT) -0.15 19-20 >999 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.35	Horz(CT) 0.03 16 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 90 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) 23=Mechanical, 13=Mechanical, 16=0-3-8  
 Max Uplift 13=63(LC 3)  
 Max Grav 23=686(LC 10), 13=180(LC 4), 16=1100(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1338/0, 3-4=-1948/0, 4-5=-1992/0, 5-6=-1992/0, 6-8=-1059/0, 8-9=0/507, 9-10=0/507  
 BOT CHORD 22-23=0/829, 20-22=0/1819, 19-20=0/1992, 18-19=0/1992, 17-18=0/1617, 16-17=0/498  
 WEBS 2-23=-1041/0, 2-22=0/662, 3-22=-626/0, 8-16=-1167/0, 8-17=0/740, 6-17=-739/0, 6-18=0/605, 10-16=-560/0

- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 13.
  - 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 7) CAUTION, Do not erect truss backwards.



March 5, 2024

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TP1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (<a href="http://www.tpinst.org">www.tpinst.org</a>) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (<a href="http://www.sbcacomponents.com">www.sbcacomponents.com</a>)</p>	<p>ENGINEERING BY  <b>TRENCO</b>  <small>A MiTek Affiliate</small></p> <p>818 Soundside Road        Edenton, NC 27932</p>
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Job J0924-5213	Truss F4	Truss Type FLOOR	Qty 1	Ply 1	Lot 12 Magnolia Hills I64022677
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:32 2024 Page 1  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:28.4

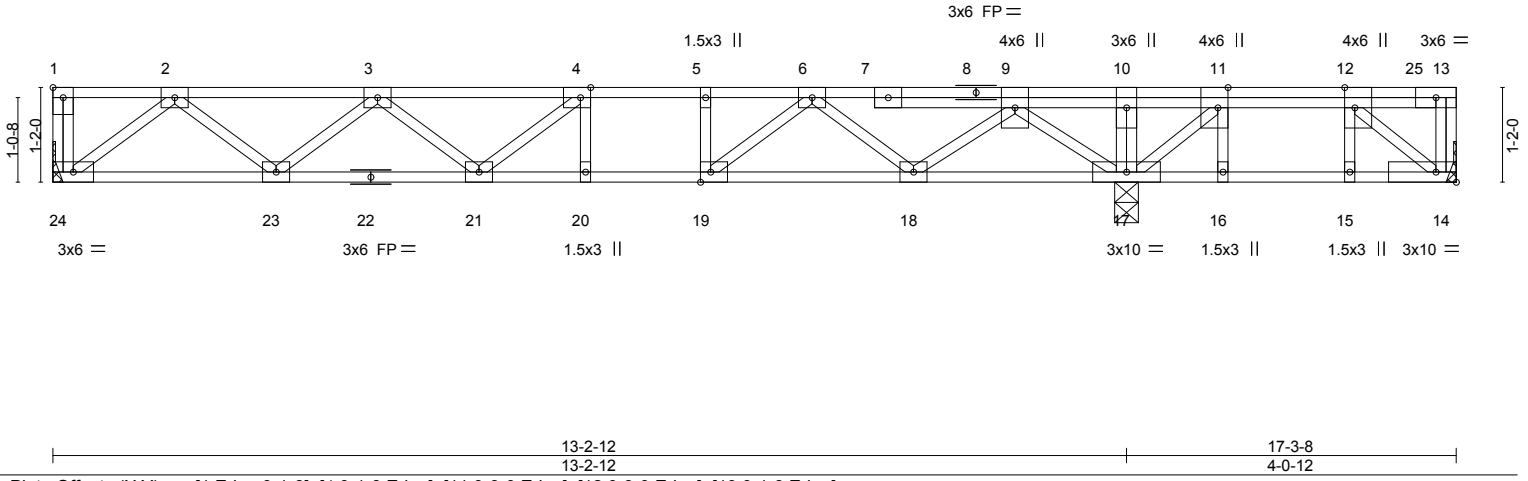


Plate Offsets (X,Y)--	[1:Edge,0-1-8], [4:0-1-8,Edge], [11:0-3-0,Edge], [12:0-3-0,Edge], [19:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.41	Vert(LL) -0.10 20-21 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.66	Vert(CT) -0.13 20-21 >999 360		
BCLL 0.0	Rep Stress Incr NO	WB 0.46	Horz(CT) 0.03 14 n/a n/a		
BCDL 5.0	Code IRC2015/TP12014	Matrix-S		Weight: 99 lb	FT = 20%F, 11%E

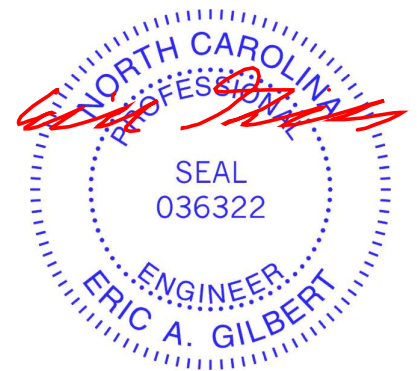
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP 2400F 2.0E(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 24=Mechanical, 14=Mechanical, 17=0-3-8  
Max Grav 24=700(LC 10), 14=2508(LC 4), 17=1748(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 13-14=-1282/0, 2-3=-1374/0, 3-4=-2016/0, 4-5=-2093/0, 5-6=-2093/0, 6-9=-1230/0, 9-10=-296/671, 10-11=-295/671, 11-12=-1522/0  
BOT CHORD 23-24=0/848, 21-23=0/1871, 20-21=0/2093, 18-19=0/1719, 17-18=0/695, 16-17=0/1522, 15-16=0/1522, 14-15=0/1522  
WEBS 2-24=-1064/0, 2-23=0/684, 3-23=-647/0, 3-21=0/282, 9-17=-1207/0, 9-18=0/736, 6-18=-707/0, 6-19=0/558, 4-21=-284/37, 12-14=-1972/0, 11-17=-1955/0

- 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) Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
  - 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - 7) CAUTION, Do not erect truss backwards.

- LOAD CASE(S)** Standard
- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 1-10=-100, 10-25=-220, 13-25=-100, 14-24=-10  
Concentrated Loads (lb)  
Vert: 12=-1250 25=-1250
  - 2) Dead: Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 1-10=-100, 10-25=-220, 13-25=-100, 14-24=-10  
Concentrated Loads (lb)  
Vert: 12=-1250 25=-1250
  - 3) 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00



Continued on page 2

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPH Quality Criteria and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</p>	<p>ENGINEERING BY <b>TRENCO</b> A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Lot 12 Magnolia Hills	I64022677
J0924-5213	F4	FLOOR	1	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Mar 4 15:25:32 2024 Page 2  
 ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Uniform Loads (plf)
  - Vert: 1-10=-100, 10-25=-140, 13-25=-20, 14-24=-10
- Concentrated Loads (lb)
  - Vert: 12=-341 25=-341
- 4) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-10=-20, 10-25=-220, 13-25=-100, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-1250
- 5) 3rd unbalanced Dead: Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-10=-100, 10-25=-140, 13-25=-20, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-341 25=-341
- 6) 4th unbalanced Dead: Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-10=-20, 10-25=-220, 13-25=-100, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-1250
- 7) 1st chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-5=-100, 5-10=-20, 10-25=-220, 13-25=-100, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-1250
- 8) 2nd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-4=-20, 4-10=-100, 10-25=-220, 13-25=-100, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-1250
- 9) 3rd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-10=-100, 10-12=-220, 12-25=-140, 13-25=-20, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-341
- 10) 4th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-10=-100, 10-11=-140, 11-25=-220, 13-25=-100, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-1250
- 11) 5th chase Dead: Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-5=-100, 5-10=-20, 10-25=-220, 13-25=-100, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-1250
- 12) 6th chase Dead: Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-4=-20, 4-10=-100, 10-25=-220, 13-25=-100, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-1250
- 13) 7th chase Dead: Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-10=-100, 10-12=-220, 12-25=-140, 13-25=-20, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-341
- 14) 8th chase Dead: Lumber Increase=1.00, Plate Increase=1.00
  - Uniform Loads (plf)
    - Vert: 1-10=-100, 10-11=-140, 11-25=-220, 13-25=-100, 14-24=-10
  - Concentrated Loads (lb)
    - Vert: 12=-1250 25=-1250

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

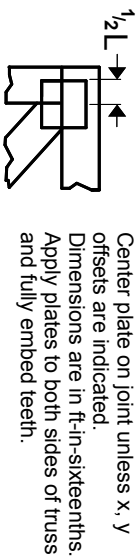
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



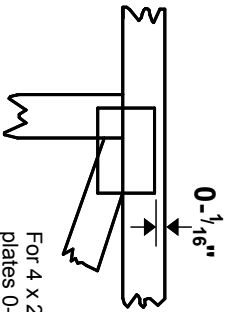
818 Soundside Road  
 Edenton, NC 27932

# Symbols

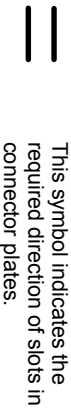
## PLATE LOCATION AND ORIENTATION



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



For 4 x 2 orientation, locate plates 0-  $\frac{1}{16}$ \" from outside edge of truss.



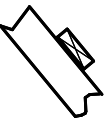
\* Plate location details available in MITek software or upon request.

## PLATE SIZE

4 X 4

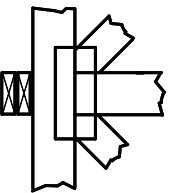
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



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

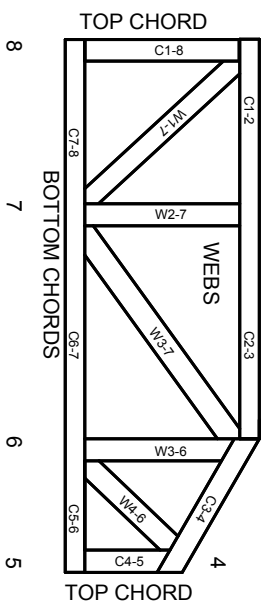
## Industry Standards:

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

# Numbering System



1 TOP CHORDS  
2 Joint ID typ.



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

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

# Product Code Approvals

ICC-ES Reports:

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

# Design General Notes

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

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

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# General Safety Notes

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

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative 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.

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