

**Trenco**

818 Soundside Rd  
Edenton, NC 27932

Re: J0225-1024  
Lot 21 Magnolia Hills

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

Pages or sheets covered by this seal: 174762414 thru 174762437

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

North Carolina COA: C-0844



July 10, 2025

---

Galinski, John

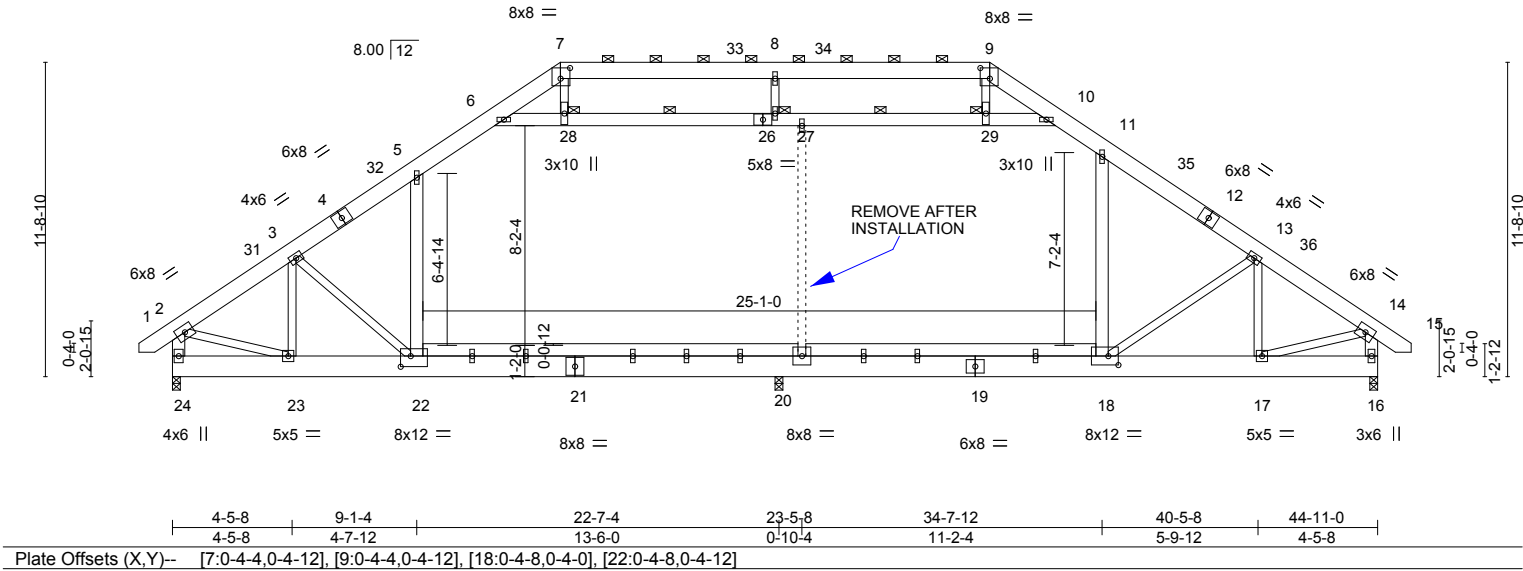
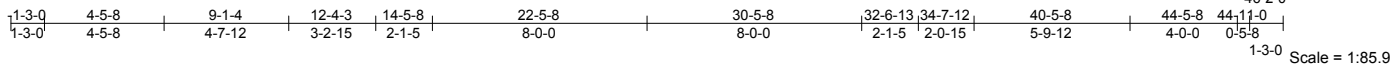
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes),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



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills	174762414
J0225-1024	A1	ATTIC	3	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:38 2025 Page 1  
ID:0HpugN1S\_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 0.31	Vert(LL)	-0.29 20-22	>921	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.45	Vert(CT)	-0.40 20-22	>672	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.64	Horz(CT)	0.03 16	n/a	n/a		
BCDL 10.0	Code IRC2021/TP12014		Matrix-S	Wind(LL)	0.22 18-20	>999	240	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=-2432/19, 3-5=-2785/18, 5-6=-2309/161, 6-7=-1823/281, 7-8=-1566/267, 8-9=-1566/267, 9-10=-1820/284, 10-11=-2262/171, 11-13=-2712/58, 13-14=-2334/42, 2-24=-2097/66, 14-16=-2019/81  
BOT CHORD 23-24=-224/433, 22-23=-38/2157, 20-22=0/2151, 18-20=0/2151, 17-18=0/1885  
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=0/1839, 7-28=-9/474, 9-29=-13/470, 3-23=-839/74, 3-22=-246/450, 13-18=-244/562, 13-17=-784/101, 14-17=0/1744

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-7 to 3-6-7, Interior(1) 3-6-7 to 14-5-8, Exterior(2R) 14-5-8 to 20-9-12, Interior(1) 20-9-12 to 30-5-8, Exterior(2R) 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
  - 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
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Attic room checked for L/360 deflection.



July 10, 2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

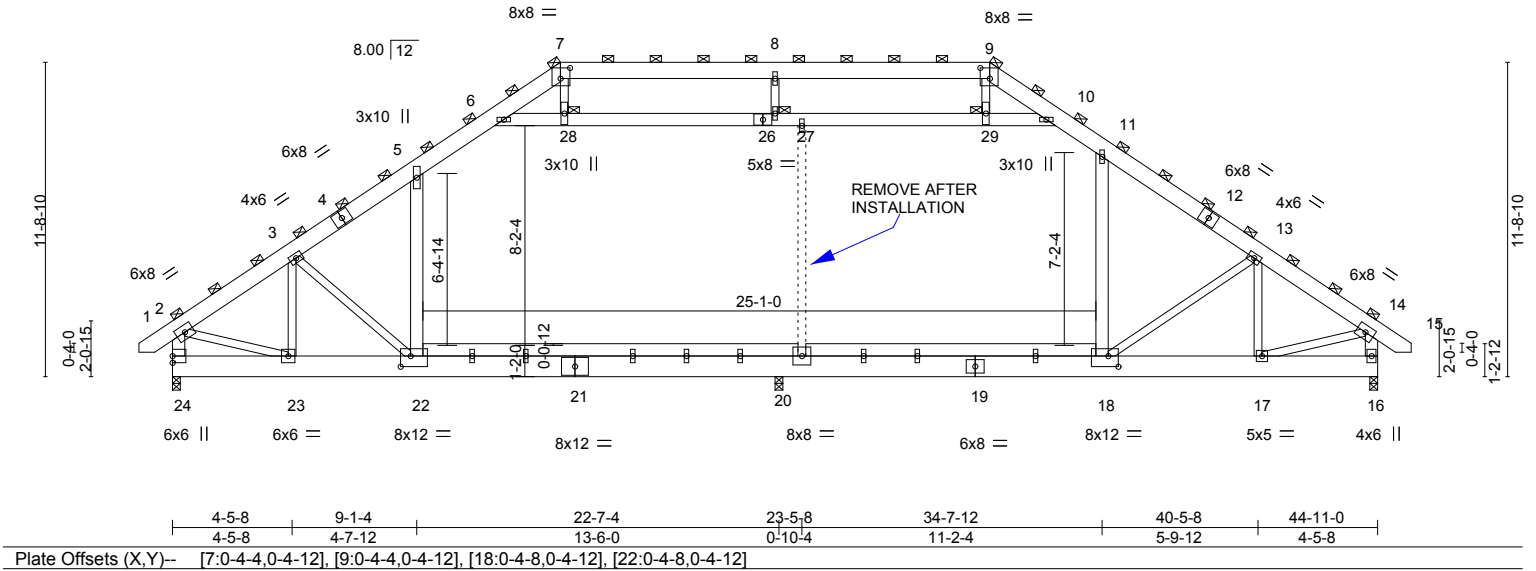
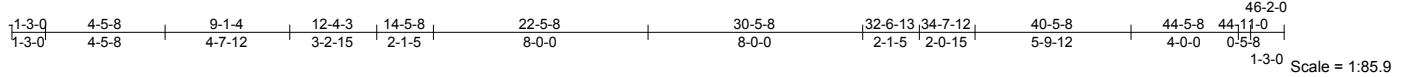


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A1-GR	ATTIC	1	2	174762415

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:40 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?f



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.55	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.52	Vert(LL) -0.45 20-22 >598 360		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.64	Vert(CT) -0.61 20-22 >441 240		
BCDL 10.0	Code IRC2021/TPI2014	Matrix-S	Horz(CT) 0.04 16 n/a n/a		
			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).
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=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=-4856/0, 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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - 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, 38, 39, 40, 41 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.



July 10,2025



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A1-GR	ATTIC	1	2	174762415

Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:40 2025 Page 2  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f

**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



July 10, 2025

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/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.sbcacompnents.com](http://www.sbcacompnents.com))

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A1-GR	ATTIC	1	2	174762415

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:40 2025 Page 3  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

**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) Dead + 0.6 MWFRS Wind Min. Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-24, 2-7=-33, 7-9=-24, 9-14=-24, 14-15=-24, 22-24=-64(F=-40), 18-22=-48, 16-18=-24  
Horz: 2-7=9
- 21) Dead + 0.6 MWFRS Wind Min. Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-24, 2-7=-24, 7-9=-24, 9-14=-33, 14-15=-24, 22-24=-64(F=-40), 18-22=-48, 16-18=-24  
Horz: 9-14=-9
- 22) 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
- 23) 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
- 24) 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
- 25) 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
- 26) 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
- 27) 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
- 28) 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
- 29) 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
- 30) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60



July 10, 2025

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A1-GR	ATTIC	1	2	174762415

Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:40 2025 Page 4  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- 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) 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
- 32) 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
- 33) 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
- 34) 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
- 35) 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
- 36) 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
- 37) 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
- 38) 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
- 39) 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
- 40) Reversal: Dead + 0.6 MWFRS Wind Min. Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-24, 2-7=-33, 7-9=-24, 9-14=-24, 14-15=-24, 22-24=-64(F=-40), 18-22=-48, 16-18=-24  
Horz: 2-7=9
- 41) Reversal: Dead + 0.6 MWFRS Wind Min. Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-24, 2-7=-24, 7-9=-24, 9-14=-33, 14-15=-24, 22-24=-64(F=-40), 18-22=-48, 16-18=-24  
Horz: 9-14=-9



July 10, 2025

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

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

ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

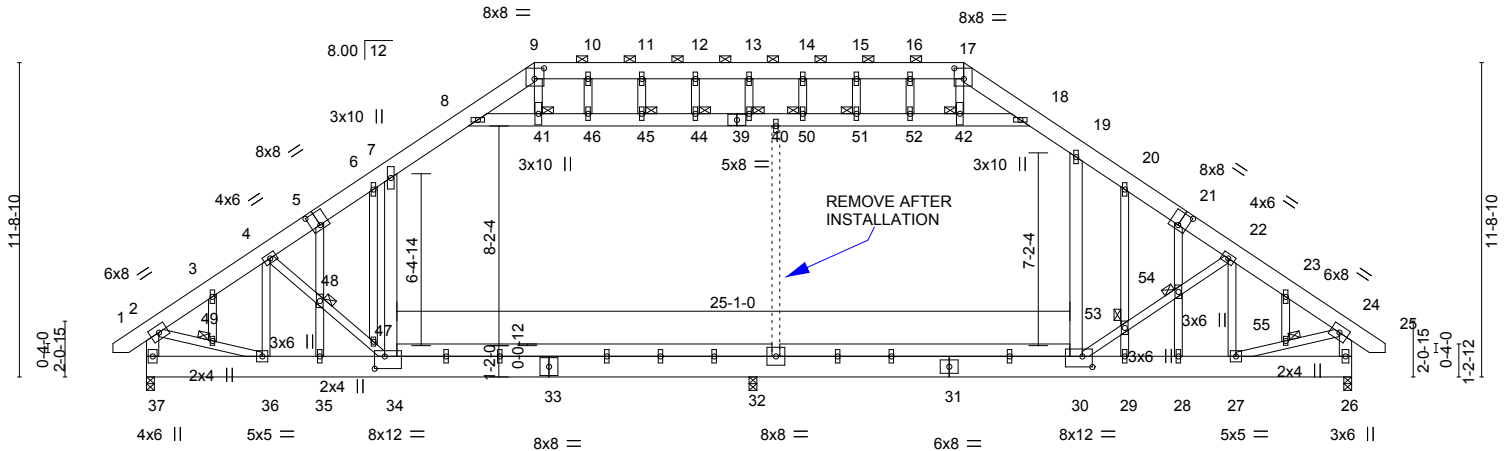
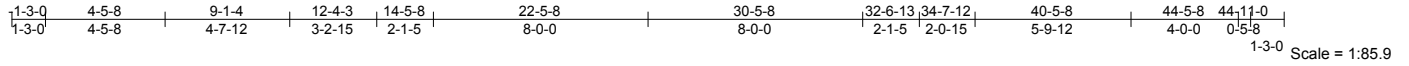
818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills	174762416
J0225-1024	A1GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:39 2025 Page 1  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f



	4-5-8	9-1-4	22-7-4	23-5-8	34-7-12	40-5-8	44-11-0		
	4-5-8	4-7-12	13-6-0	0-10-4	11-2-4	5-9-12	4-5-8		
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 IRC2021/TPI2014		Matrix-S	Wind(LL)	0.27 30-32	>983	240	Weight: 596 lb	FT = 20%

LUMBER-

TOP CHORD 2x8 SP 2400F 2.0E  
BOT CHORD 2x10 SP 2400F 2.0E \*Except\*  
34-38,30-38: 2x6 SP No.1  
WEBS 2x4 SP No.2 \*Except\*  
7-34,19-30,8-39,2-37,24-26,18-39: 2x6 SP No.1  
OTHERS 2x4 SP No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 9-17.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
JOINTS 1 Brace at Jt(s): 40, 41, 42, 44, 45, 48, 49, 50, 51, 53, 54, 55

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=-2532/277, 3-4=-2381/289, 4-5=-2664/266, 5-6=-2869/280, 6-7=-2827/305, 7-8=-2332/431, 8-9=-1898/615, 9-10=-1650/556, 10-11=-1645/556, 11-12=-1645/556, 12-13=-1645/556, 13-14=-1645/556, 14-15=-1645/556, 15-16=-1645/556, 16-17=-1650/557, 17-18=-1891/609, 18-19=-2282/431, 19-20=-2752/344, 20-21=-2663/305, 21-22=-2648/268, 22-23=-2281/317, 23-24=-2426/307, 2-37=-2145/310, 24-26=-2065/332  
BOT CHORD 36-37=-303/527, 35-36=-243/2160, 34-35=-243/2160, 32-34=-25/2177, 30-32=-25/2177, 29-30=-166/1906, 28-29=-166/1906, 27-28=-166/1906, 26-27=-43/298  
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=-101/1773, 36-49=-103/1830, 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=-132/1735, 24-55=-129/1682, 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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-11-7 to 3-6-7, Exterior(2N) 3-6-7 to 14-5-8, Corner(3R) 14-5-8 to 18-11-6, Exterior(2N) 18-11-6 to 30-5-8, Corner(3R) 30-5-8 to 34-11-6, Exterior(2N) 34-11-6 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) 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.



July 10, 2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A1GE	GABLE	1	1	174762416
Job Reference (optional)					

Comtech, Inc, Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:39 2025 Page 2  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCDoi7J4zJC?f

NOTES-

- 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) 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.



July 10,2025

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

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

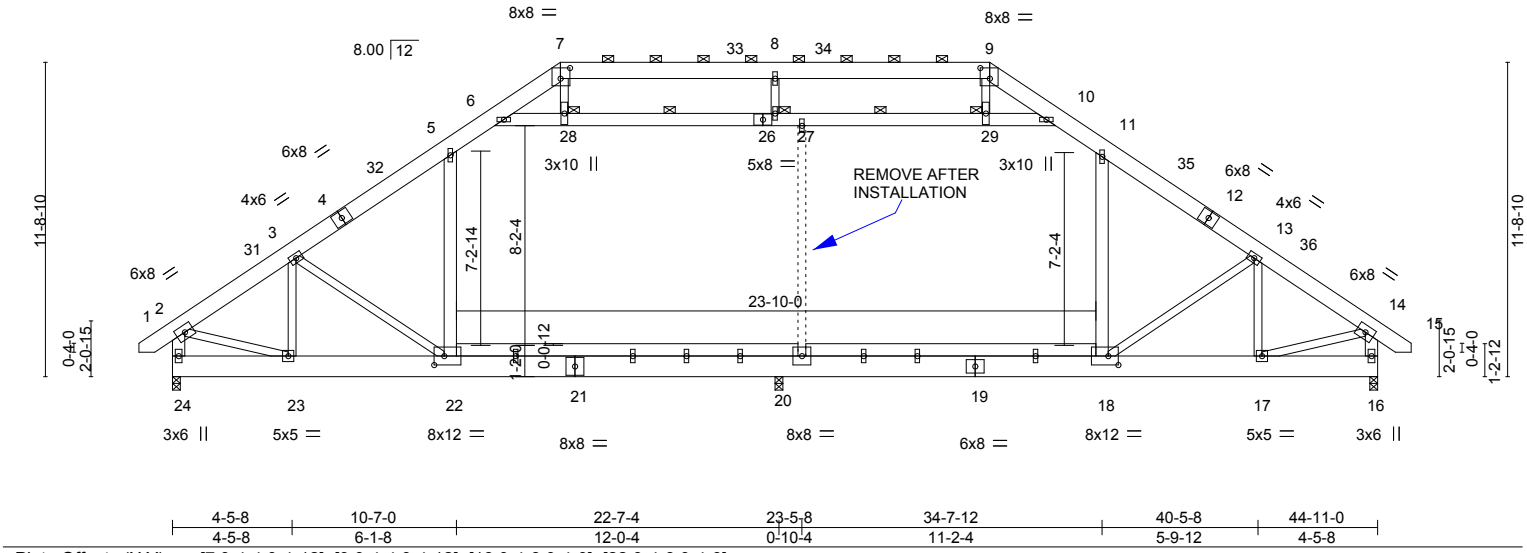
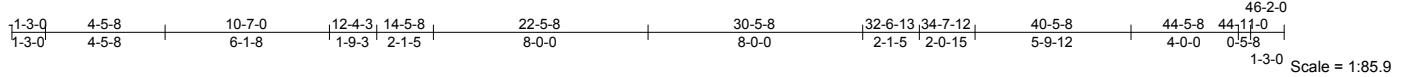


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A2	ATTIC	1	1	174762417

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:41 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.26	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.41	Vert(LL) -0.23 20-22 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.64	Vert(CT) -0.29 20-22 >916 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.03 16 n/a n/a		
	Code IRC2021/TP12014		Wind(LL) 0.22 20-22 >999 240	Weight: 548 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)
Max Horz 24=247(LC 10)	24=0-3-8, 16=0-3-8, 20=0-3-8
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=-2370/19, 3-5=-2728/40, 5-6=-2261/158, 6-7=-1845/266, 7-8=-1591/247, 8-9=-1591/247, 9-10=-1847/265, 10-11=-2267/158, 11-13=-2726/41, 13-14=-2360/20, 2-24=-2051/71, 14-16=-2043/74
BOT CHORD	23-24=-183/405, 22-23=-31/2093, 20-22=0/2154, 18-20=0/2154, 17-18=0/1909
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=0/1792, 7-28=-13/467, 9-29=-11/471, 3-23=-752/71, 3-22=-223/510, 13-18=-223/526, 13-17=-766/75, 14-17=0/1776

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-7 to 3-6-7, Interior(1) 3-6-7 to 14-5-8, Exterior(2R) 14-5-8 to 20-9-12, Interior(1) 20-9-12 to 30-5-8, Exterior(2R) 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
  - 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
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Attic room checked for L/360 deflection.



July 10, 2025



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A2-GR	ATTIC	1	2	174762418

Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:43 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f

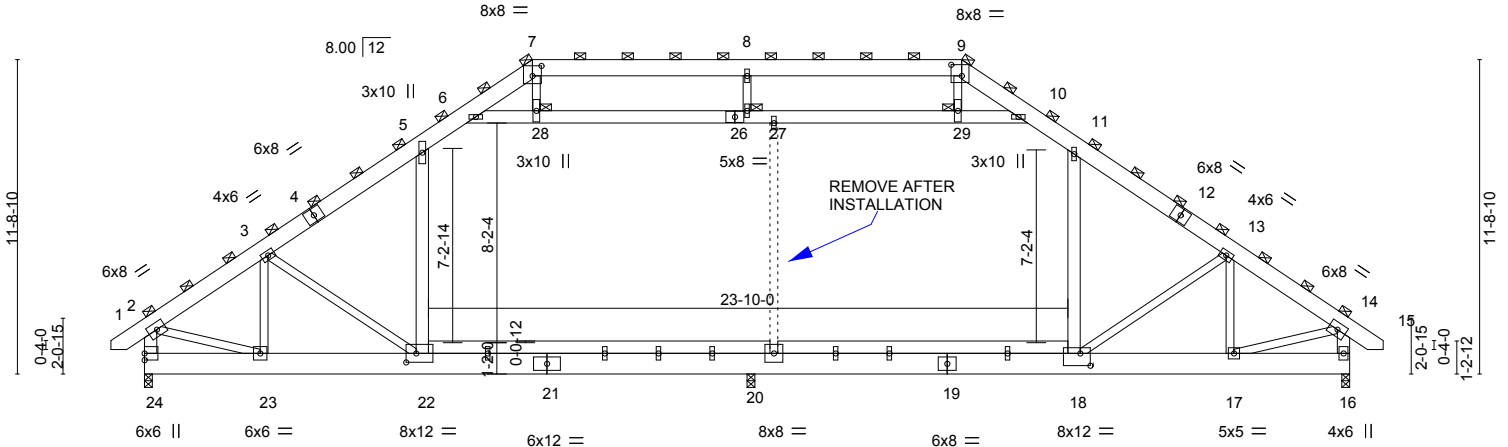
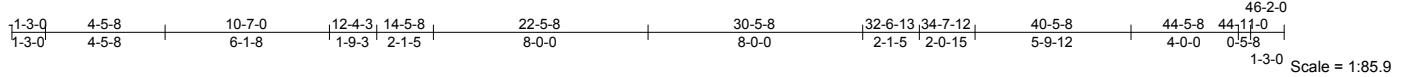


Plate Offsets (X,Y)--	[7:0-4-0,0-4-8], [9:0-4-12,0-5-0], [18:0-4-8,0-5-8], [22:0-4-8,0-4-0]
-----------------------	---

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 IRC2021/TPI2014		Matrix-S	Wind(LL)	0.22 20-22	>999	240	Weight: 1095 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).
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=-2842/0, 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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - 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, 38, 39, 40, 41 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.



July 10,2025



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A2-GR	ATTIC	1	2	174762418

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:43 2025 Page 2  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f

**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



July 10, 2025

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/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.sbcacompnents.com](http://www.sbcacompnents.com))

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A2-GR	ATTIC	1	2	174762418

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:43 2025 Page 3  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**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) Dead + 0.6 MWFRS Wind Min. Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-24, 2-7=-33, 7-9=-24, 9-14=-24, 14-15=-24, 22-24=-64(F=-40), 18-22=-48, 16-18=-24  
Horz: 2-7=9
- 21) Dead + 0.6 MWFRS Wind Min. Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-24, 2-7=-24, 7-9=-24, 9-14=-33, 14-15=-24, 22-24=-64(F=-40), 18-22=-48, 16-18=-24  
Horz: 9-14=-9
- 22) 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
- 23) 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
- 24) 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
- 25) 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
- 26) 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
- 27) 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
- 28) 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
- 29) 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
- 30) Reversal: Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60



July 10, 2025

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A2-GR	ATTIC	1	2	174762418
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:43 2025 Page 4  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f

**LOAD CASE(S)** Standard

- 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) 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
- 32) 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
- 33) 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
- 34) 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
- 35) 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
- 36) 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
- 37) 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
- 38) 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
- 39) 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
- 40) Reversal: Dead + 0.6 MWFRS Wind Min. Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-24, 2-7=-33, 7-9=-24, 9-14=-24, 14-15=-24, 22-24=-64(F=-40), 18-22=-48, 16-18=-24  
Horz: 2-7=9
- 41) Reversal: Dead + 0.6 MWFRS Wind Min. Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-24, 2-7=-24, 7-9=-24, 9-14=-33, 14-15=-24, 22-24=-64(F=-40), 18-22=-48, 16-18=-24  
Horz: 9-14=-9



July 10, 2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](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 21 Magnolia Hills
J0225-1024	A2A-GR	ATTIC	1	3	174762419

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:42 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

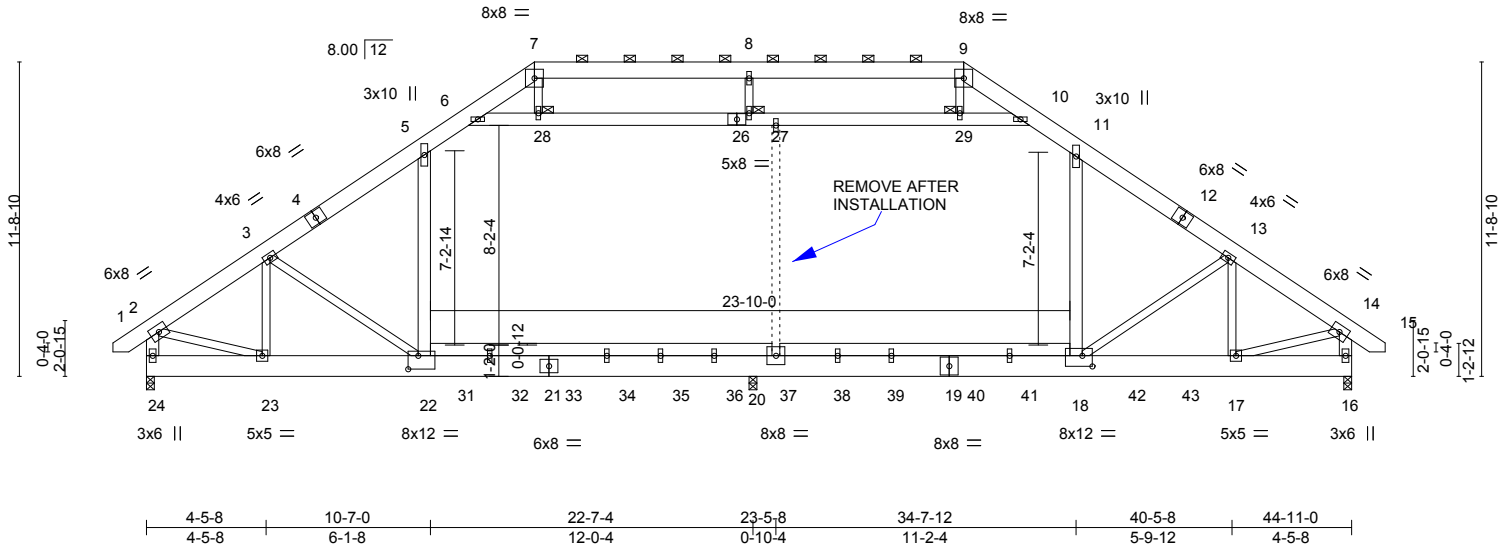
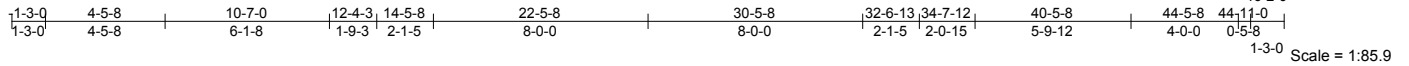


Plate Offsets (X,Y)-- [18:0-4-8,0-4-12], [22:0-4-8,0-6-0]											
<b>LOADING</b> (psf)		<b>SPACING-</b> 2-0-0		<b>CSI.</b>		<b>DEFL.</b> in (loc) l/defl L/d		<b>PLATES</b> <b>GRIP</b>			
TCLL	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.21 18-20	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.30 18-20	>872	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.53	Horz(CT)	0.03 16	n/a	n/a		
BCDL	10.0	Code IRC2021/TPI2014		Matrix-S		Wind(LL)	0.07 20-22	>999	240	Weight: 1643 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	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=4364(LC 2), 16=6289(LC 14), 20=5113(LC 14)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-4923/0, 3-5=-6079/0, 5-6=-4461/0, 6-7=-1707/246, 7-8=-1384/218, 8-9=-1384/218, 9-10=-1678/244, 10-11=-4423/0, 11-13=-6224/0, 13-14=-7162/0, 2-24=-4119/0, 14-16=-5868/0
BOT CHORD	23-24=-183/489, 22-23=-31/4032, 20-22=0/4894, 18-20=0/4894, 17-18=0/5951, 16-17=0/661
WEBS	5-22=0/2888, 11-18=0/3237, 6-28=-5077/0, 27-28=-5039/0, 27-29=-5039/0, 10-29=-5064/0, 2-23=0/3763, 7-28=-1/563, 9-29=0/469, 3-23=-1589/71, 3-22=-223/1133, 13-18=-1312/457, 13-17=-766/805, 14-17=0/5602

NOTES-
1) 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 0-4-0 oc. Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x6 MT20 unless otherwise indicated.



July 10,2025

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/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> A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
---------------------	---	---



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A2A-GR	ATTIC	1	3	174762419
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:42 2025 Page 2  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?f

NOTES-

- 7) N/A
- 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 2984 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=-1017(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)



July 10,2025

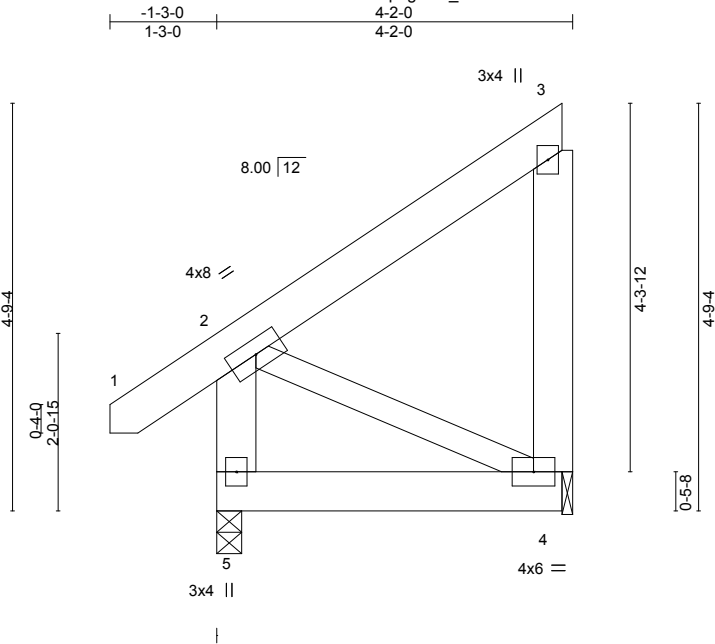


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A3	MONOPITCH	2	1	174762420
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:43 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?f



Scale = 1:27.0

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.09	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 IRC2021/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.

BOT CHORD 4-5=-283/108  
WEBS 2-4=-118/311

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-1 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.



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	A3GE	GABLE	1	1	174762421
					Job Reference (optional)

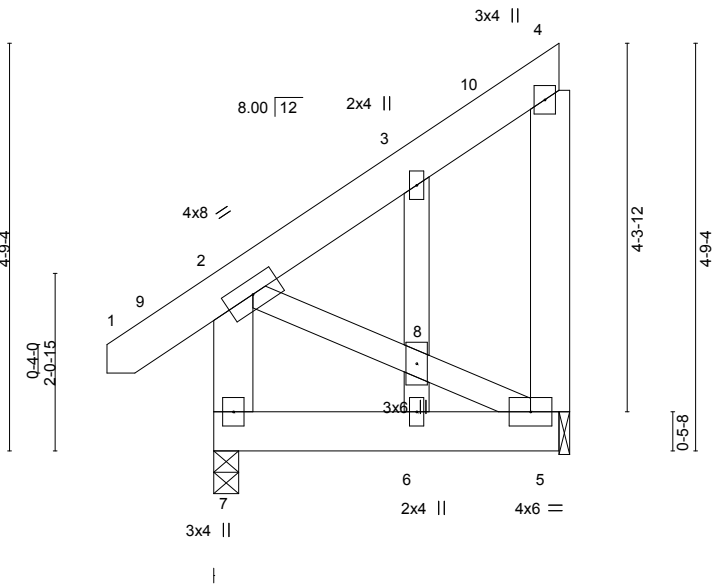
Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:44 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f



Scale = 1:27.0



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	-0.00	6	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	-0.00	6	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.08	Horz(CT)	-0.00	5	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL)	0.00	6	>999	240	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.**

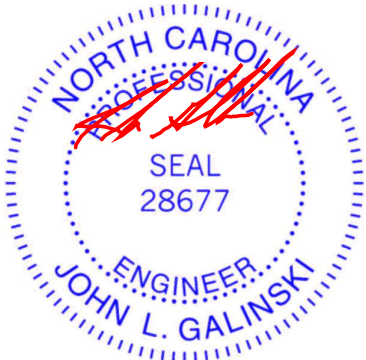
(size) 7=0-3-8, 5=0-1-8  
Max Horz 7=150(LC 12)  
Max Uplift 5=-139(LC 12)  
Max Grav 7=241(LC 1), 5=165(LC 19)

**FORCES.**

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
BOT CHORD 6-7=-338/145, 5-6=-338/145  
WEBS 2-8=-145/352, 5-8=-154/367

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-1 to 3-3-12, Exterior(2N) 3-3-12 to 3-11-0 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.



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	B1	ROOF SPECIAL	7	1	174762422
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:44 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

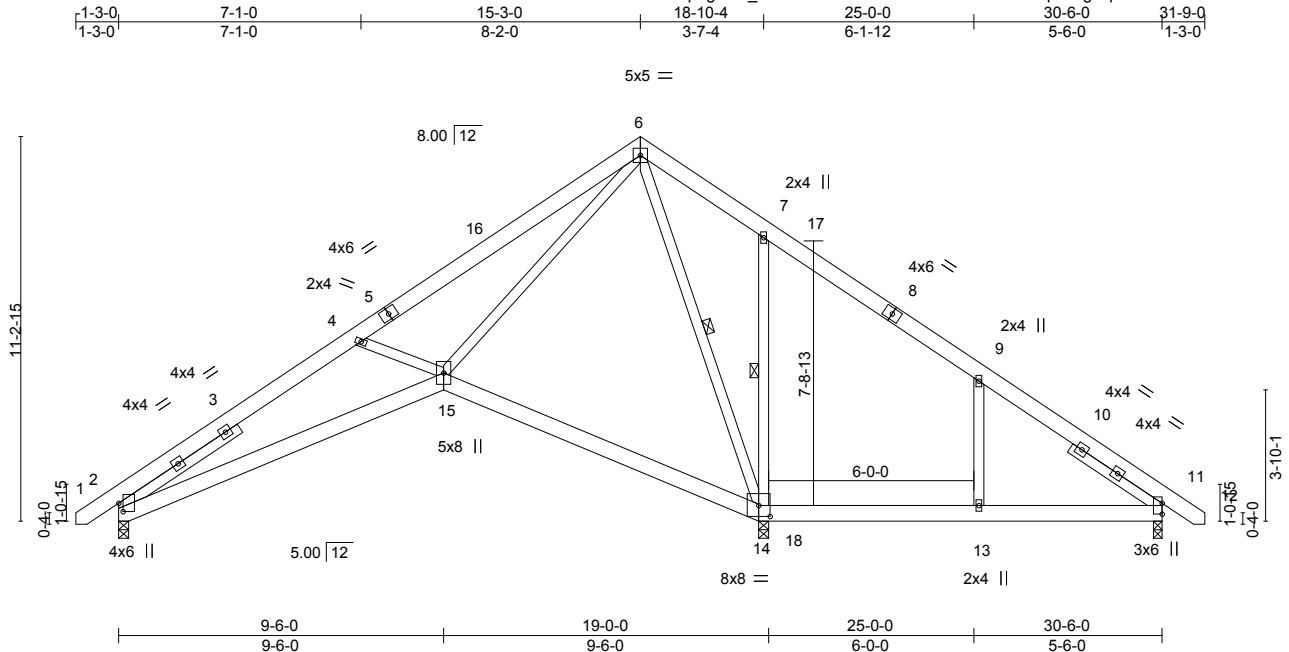


Plate Offsets (X,Y)-- [2:0-2-15,0-1-9], [14:0-4-0,0-3-13]											
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES GRIP			
TCLL	20.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.26 13-14	>542	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.43 13-14	>330	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.10 14	n/a	n/a		
BCDL	10.0	Code IRC2021/TPI2014		Matrix-S		Wind(LL)	0.34 13-14	>419	240	Weight: 230 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2  
SLIDER Left 2x4 SP No.2 4-3-0, Right 2x4 SP No.2 3-2-0

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:  
WEBS 1 Row at midpt 7-14, 6-14

**REACTIONS.** (size) 2=0-3-8, 14=0-3-8, 11=0-3-0  
Max Horz 2=-262(LC 10)  
Max Uplift 2=-93(LC 13), 14=-71(LC 12), 11=-377(LC 8)  
Max Grav 2=795(LC 20), 14=1817(LC 19), 11=618(LC 28)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1570/770, 4-6=-1219/682, 6-7=-320/838, 7-9=-157/517, 9-11=-335/517  
BOT CHORD 2-15=-574/1505, 13-14=-318/148, 11-13=-318/148  
WEBS 4-15=-437/293, 6-15=-277/1375, 7-14=-708/553, 6-14=-945/138

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-1 to 3-3-12, Interior(1) 3-3-12 to 15-3-0, Exterior(2R) 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 93 lb uplift at joint 2, 71 lb uplift at joint 14 and 377 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.



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

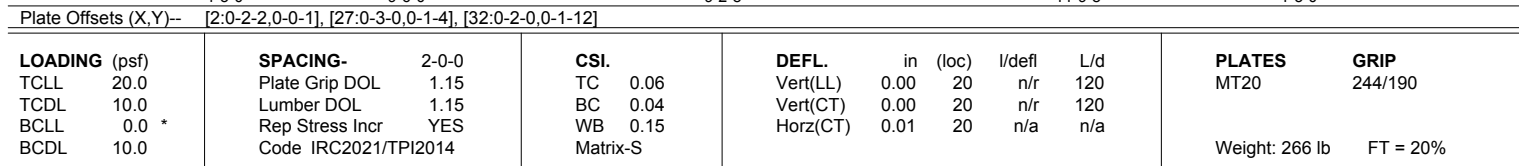


Comtech, Inc. Fayetteville, NC - 28314, 8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:45 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz5iCa-RfC?PsB70Hq3NSgPqnLw3ulTXbGKWrCDoi7J4zJC?f

1-3-0 16-6-0 20-1-4 31-9-0 33-0-0  
1-3-0 15-3-0 3-7-4 11-7-12 1-3-0

5x5 = Scale = 1:68.



**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=-179(LC 8),  
35=-221(LC 12), 26=-110(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=319(LC  
20), 32=265(LC 19), 29=255(LC 13), 35=293(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=-293/241, 9-10=-186/286, 10-11=-208/316, 11-12=-209/317, 12-13=-185/270  
BOT CHORD 31-32=-130/251, 30-31=-130/253, 29-30=-130/253, 28-29=-130/253, 27-28=-126/253

- 

July 10, 2025

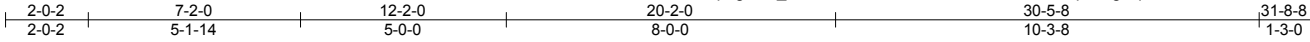


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	C1	ROOF SPECIAL	1	1	174762424
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:45 2025 Page 1

ID:0HpguN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f



Scale = 1:56.0

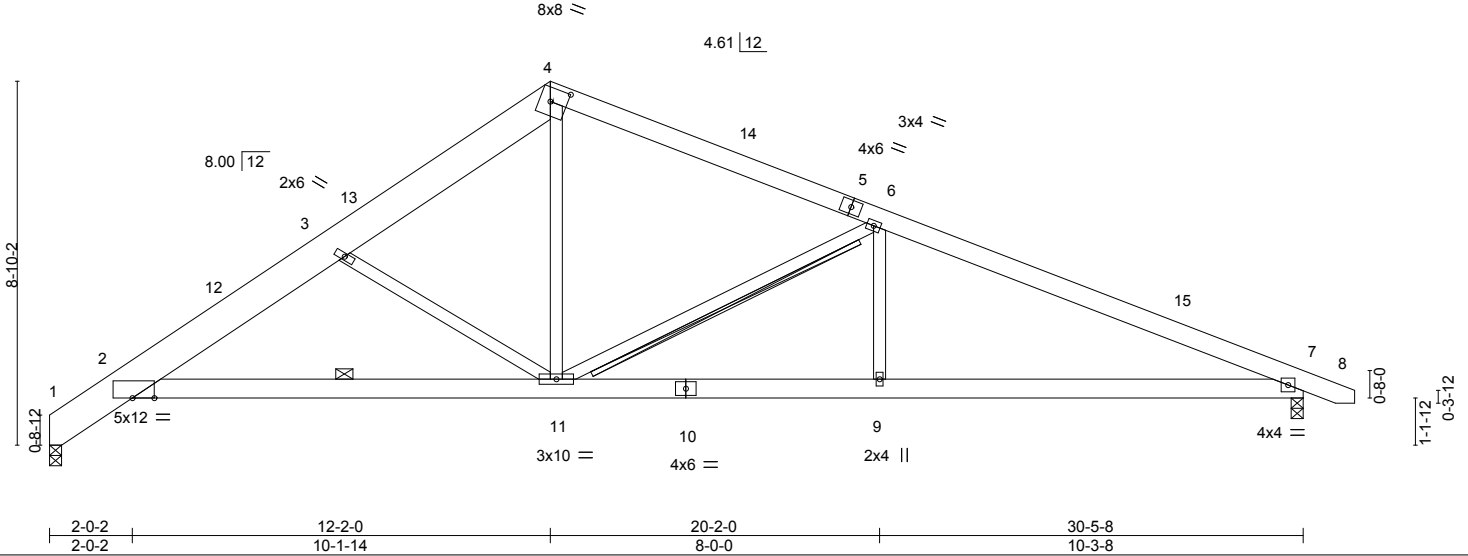


Plate Offsets (X,Y)--		[2:0-6-6,Edge], [4:0-4-13,0-4-0]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.71
TCDL 10.0	Lumber DOL	1.15	BC 0.47
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.50
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S
DEFL.	in (loc)	l/defl	L/d
Vert(LL)	-0.11 2-11	>999	360
Vert(CT)	-0.28 2-11	>999	240
Horz(CT)	0.12 7	n/a	n/a
Wind(LL)	0.08 2-11	>999	240
PLATES	GRIP		
MT20	244/190		
Weight: 212 lb	FT = 20%		

LUMBER-

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

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-5-9 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
10-0-0 oc bracing: 2-11  
WEBS T-Brace: 2x4 SPF No.2 - 6-11  
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
Brace must cover 90% of web length.

REACTIONS.

(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=-569/126, 2-3=-2092/519, 3-4=-1644/440, 4-6=-1467/411, 6-7=-2383/507  
BOT CHORD 2-11=-409/1874, 9-11=-366/2112, 7-9=-366/2112  
WEBS 3-11=-764/339, 4-11=-190/1036, 6-11=-960/279, 6-9=0/375

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 12-2-0, Exterior(2R) 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.
- 7) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



July 10,2025

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

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

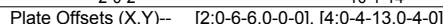
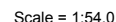
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Comtech, Inc., Fayetteville, NC 28309

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Jul 10 08:08:24 2025 Page 1  
ID:0HpuqN1S QSTWxS0z0zGz9z5iCa-dDb1S ?Di9m1ZPXpbnlDqggObOfM425XuxEIE vzX8r



**LUMBER-**

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

<b>BRACING-</b>	
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
WEBS	1 Row at midpt                      6-11

**REACTIONS.** (lb/size) 1=1210/0-3-8, 7=1278/0-3-8  
Max Horz 1=-273(LC 10)  
Max Uplift 1=-208(LC 12), 7=-307(LC 13)

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

TOP CHORD	1-2=-569/212, 2-3=-2092/511, 3-39=-1644/397, 4-39=-1612/430, 4-40=-1363/409, 5-40=-1449/380, 5-6=-1467/378, 6-7=-2383/509
BOT CHORD	2-11=-445/1874, 10-11=-359/212, 9-10=-359/2112, 7-9=-359/2112
WEBS	3-11=-784/393, 4-11=-188/1036, 6-11=-960/401, 6-9=0/375

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDF=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 12-2-0, Exterior(2R) 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 208 lb uplift at joint 1 and 307 lb uplift at joint 7.



July 10, 2025



WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MITR-17-0169: 1/2/2023 FOR ONE 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 21 Magnolia Hills
J0225-1024	C2	ROOF SPECIAL	7	1	174762426
Job Reference (optional)					

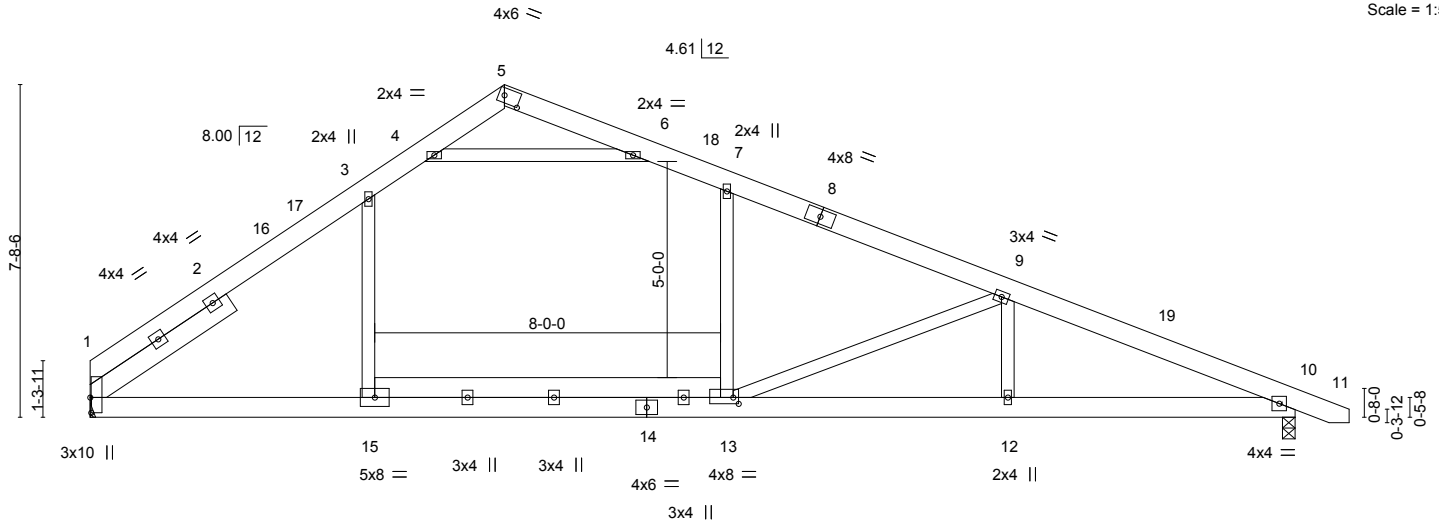
Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:47 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

4-11-4	6-7-0	9-7-0	14-7-0	18-4-5	21-2-12	27-10-8	29-1-8
4-11-4	1-7-12	3-0-0	5-0-0	3-9-5	2-10-7	6-7-12	1-3-0

Scale = 1:53.3



6-7-0	9-7-0	14-7-0	18-4-5	21-2-12	27-10-8
6-7-0	3-0-0	5-0-0	3-9-5	2-10-7	6-7-12

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	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.90	Vert(CT)	-0.56 12-13	>598	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.92	Horz(CT)	0.04 10	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL)	0.23 12-13	>999	240	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=-1685/393, 3-4=-1221/417, 5-6=-43/275, 6-7=-1215/407, 7-9=-1449/387,  
9-10=-2434/503  
BOT CHORD 1-15=-165/1243, 13-15=-173/1248, 12-13=-396/2187, 10-12=-396/2187  
WEBS 3-15=0/525, 7-13=0/385, 4-6=-1466/471, 9-12=0/375, 9-13=-1095/252

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 9-7-0, Exterior(2R) 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
- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 10=104.



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	C2GE	ROOF SPECIAL SUPPORT	1	1	174762427
Job Reference (optional)					

Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:47 2025 Page 1  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

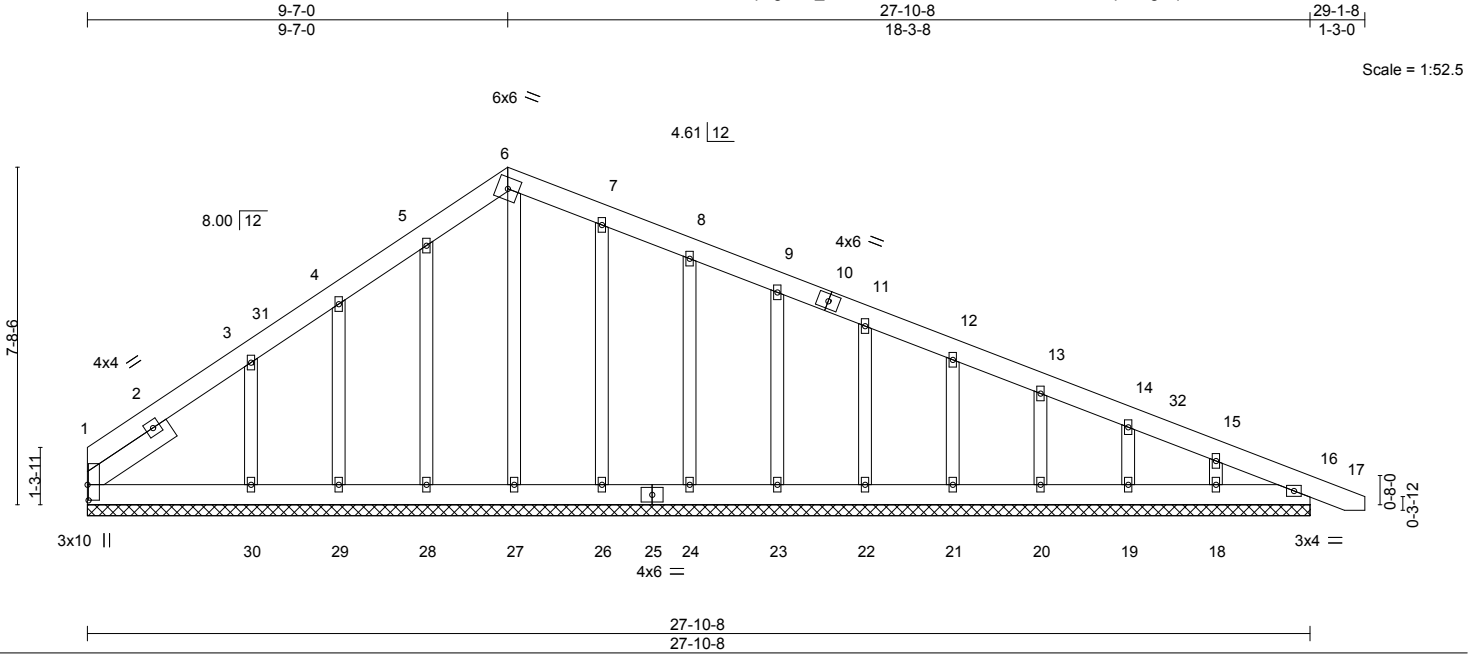


Plate Offsets (X,Y)-- [1:0-4-4,0-0-4]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d				PLATES GRIP		
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	-0.00	16	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.00	16	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code IRC2021/TPI2014		Matrix-S							Weight: 215 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
OTHERS 2x4 SP No.2  
SLIDER Left 2x6 SP No.1 2-3-13

**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 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=-129/309, 6-7=-119/293, 7-8=-107/260  
WEBS 3-30=-257/344

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 4-4-13, Exterior(2N) 4-4-13 to 9-7-0, Corner(3R) 9-7-0 to 13-8-12, Exterior(2N) 13-8-12 to 28-10-11 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.



July 10,2025

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

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

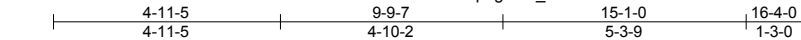
ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932

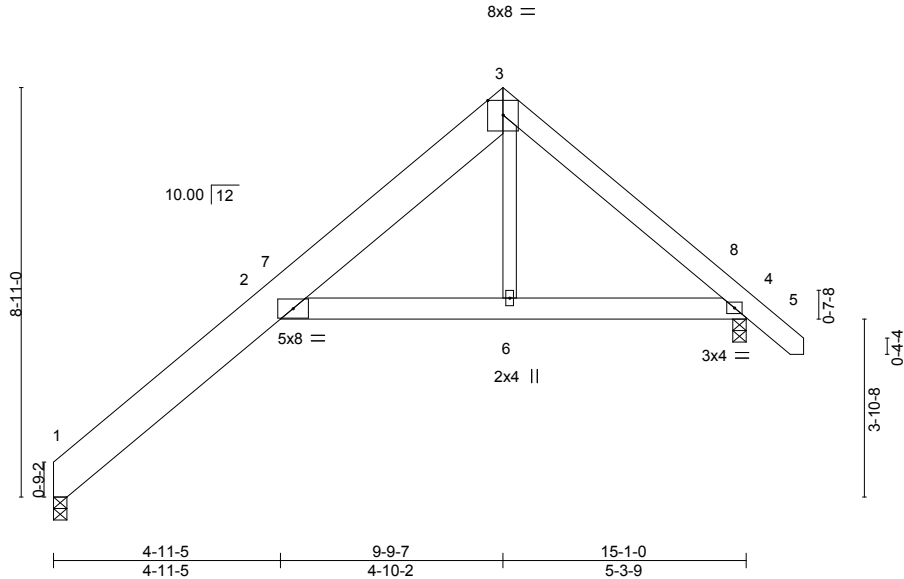


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	D1	ROOF SPECIAL	2	1	174762428
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314, 8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:48 2025 Page 1  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?f



Scale = 1:50.2



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.66	Vert(LL)	-0.15	2	>999	360	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.31	Vert(CT)	-0.30	2	>597	240	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.23	4	n/a	n/a	
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL)	0.17	2	>999	240	
									Weight: 102 lb FT = 20%

LUMBER-

TOP CHORD 2x10 SP No.1 \*Except\*  
3-5: 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=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=-394/101, 2-3=-530/224, 3-4=-768/330  
BOT CHORD 2-6=-54/550, 4-6=-54/557  
WEBS 3-6=0/284

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 9-9-7, Exterior(2R) 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
- 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.



July 10, 2025

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

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

ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932

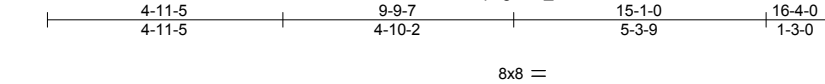


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	D1SG	GABLE	1	1	174762429
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:48 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?f



Scale: 1/4"=1'

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.66	Vert(LL)	-0.15	2	>999	360	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.31	Vert(CT)	-0.30	2	>597	240	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.23	4	n/a	n/a	
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL)	0.22	2	>814	240	
Weight: 110 lb									FT = 20%

**LUMBER-**

TOP CHORD 2x10 SP No.1 \*Except\*  
3-5: 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2  
OTHERS 2x4 SP No.2

**BRACING-**

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

**REACTIONS.**

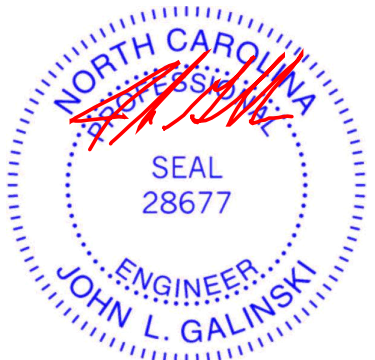
(size) 1=0-3-8, 4=0-3-8  
Max Horz 1=247(LC 12)  
Max Uplift 1=-83(LC 12), 4=-145(LC 12)  
Max Grav 1=610(LC 1), 4=674(LC 1)

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

TOP CHORD 1-2=-415/127, 2-3=-530/198, 3-4=-783/302  
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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 9-9-7, Exterior(2R) 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) 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.



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

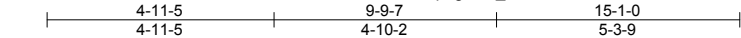


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	D2	ROOF SPECIAL	2	1	174762430
Job Reference (optional)					

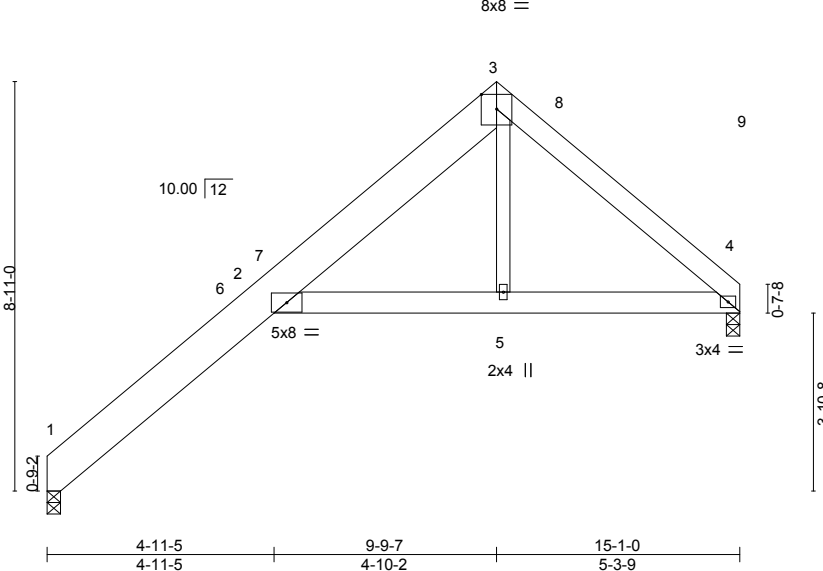
Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:48 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f



Scale = 1:50.2



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.67	Vert(LL)	-0.15	2	>999	360	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.31	Vert(CT)	-0.30	2	>594	240	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.24	4	n/a	n/a	
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.16	2	>999	240	
									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-

- 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 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
- 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.



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932

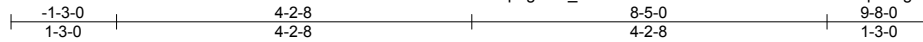


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	G1	COMMON	3	1	174762431
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

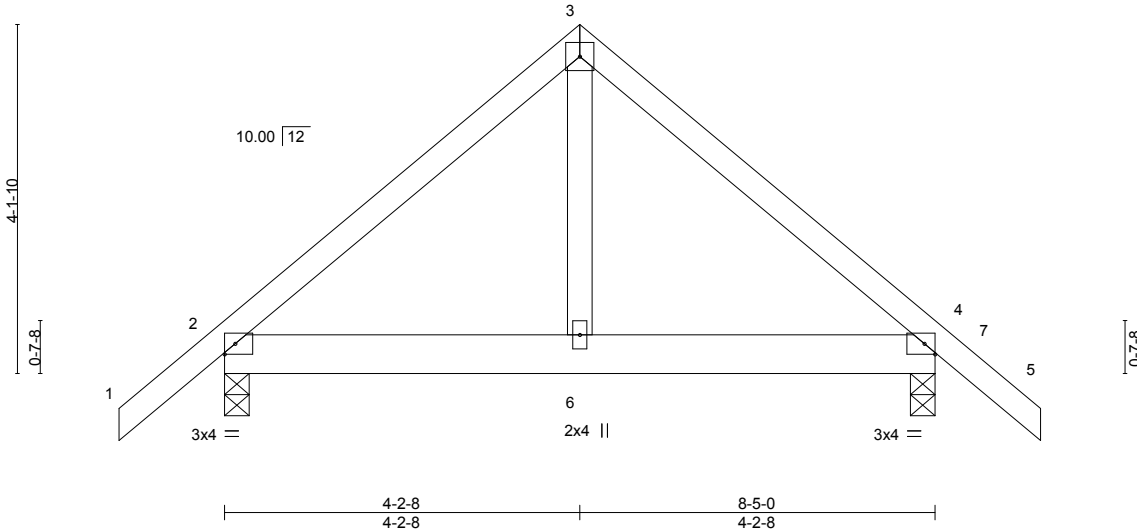
8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:49 2025 Page 1

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



4x4 =

Scale = 1:27.3



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.29	Vert(LL)	-0.00	6	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(CT)	-0.01	2-6	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-P	Wind(LL)	0.00	6	>999	240	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 10)  
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=-321/119, 3-4=-321/120

#### NOTES-

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



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932

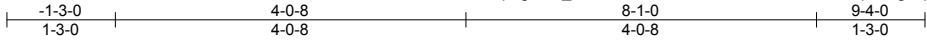


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	G1GE	GABLE	1	1	174762432
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

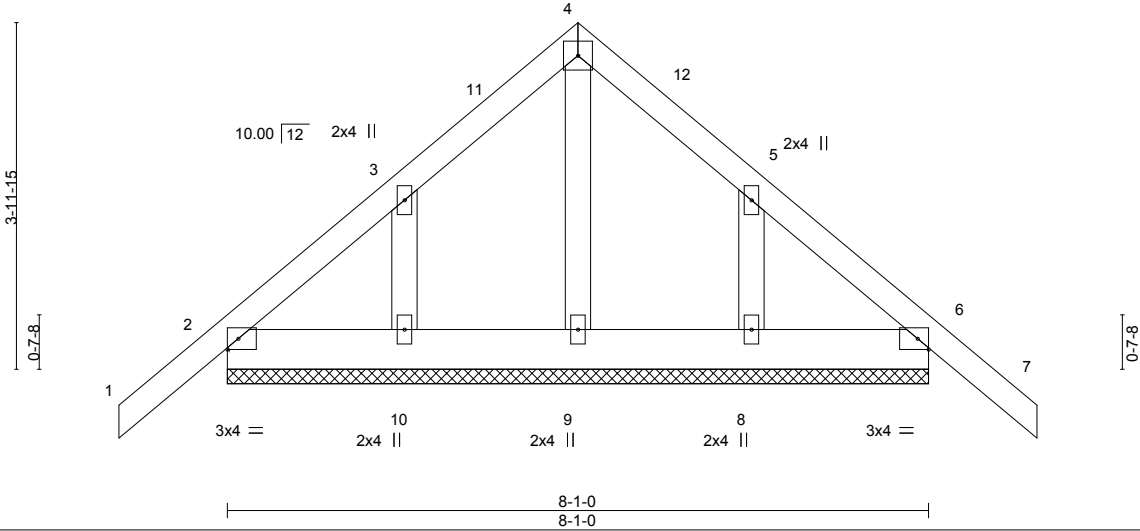
8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:49 2025 Page 1

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



4x4 =

Scale = 1:26.6



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 0.13	Vert(LL)	-0.01	7	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.01	7	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	6	n/a	n/a		
BCDL 10.0	Code IRC2021/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.

WEBS 3-10=218/265, 5-8=219/264

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-3-0 to 3-1-13, Exterior(2N) 3-1-13 to 4-0-8, Corner(3R) 4-0-8 to 8-5-5, Exterior(2N) 8-5-5 to 9-4-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6 except (jt=lb) 10=126, 8=124.



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932



8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:50 2025 Page 1  
ID:0HpuqN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hg3NSgPqnL8w3uITxbGKwRCdoi7J4zJC?r

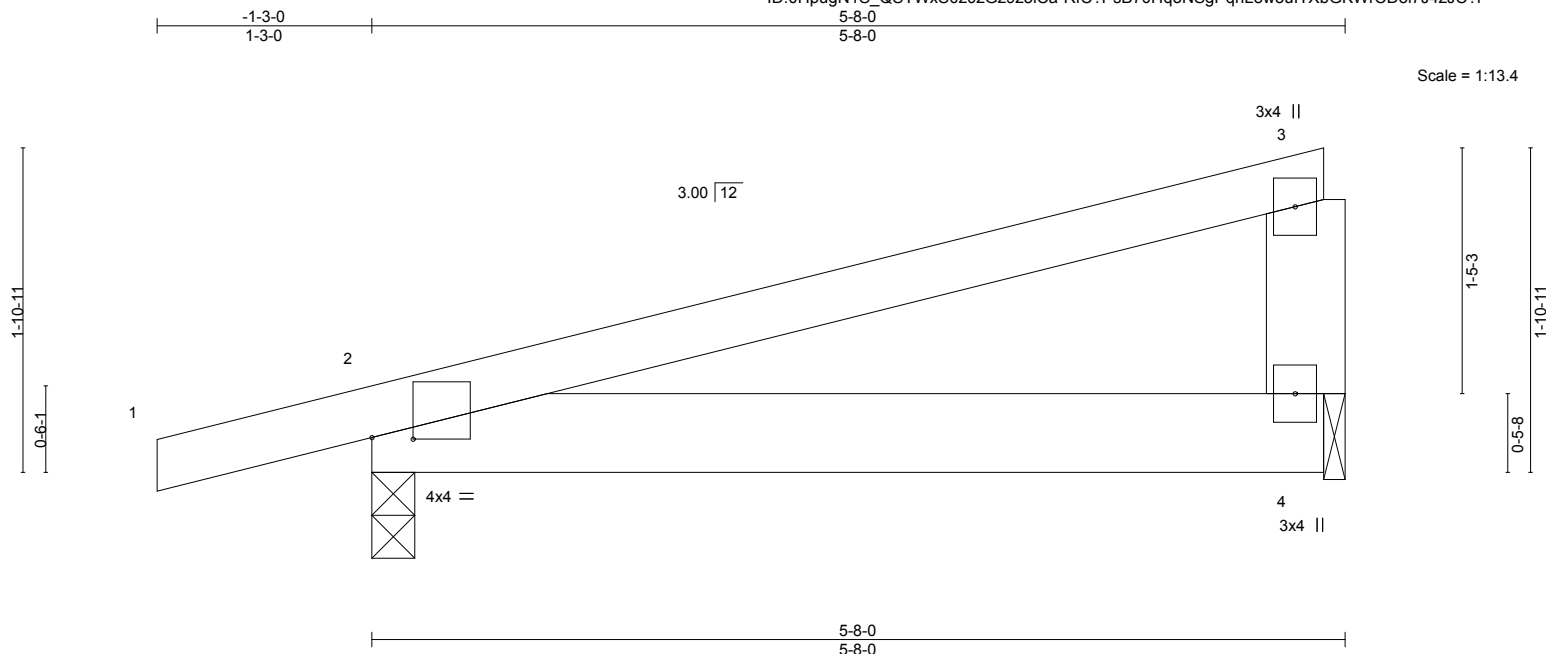


Plate Offsets (X,Y)-- [2-0-2-14,0-0-2]												
<b>LOADING</b> (psf)		<b>SPACING-</b> 2-0-0		<b>CSI.</b>		<b>DEFL.</b> in (loc) l/defl L/d				<b>PLATES</b> <b>GRIP</b>		
TCLL	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.01	2-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	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 IRC2021/TPI2014		Matrix-P		Wind(LL)	0.04	2-4	>999	240	Weight: 26 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 5-8-0 oc purlins, except end verticals.
BOT CHORD	2x6 SP No.1		
WEBS	2x6 SP No.1	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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-3-0 to 3-1-13, Interior(1I) 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.



July 10, 2025

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

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



818 Soundside Road  
Edenton, NC 27932





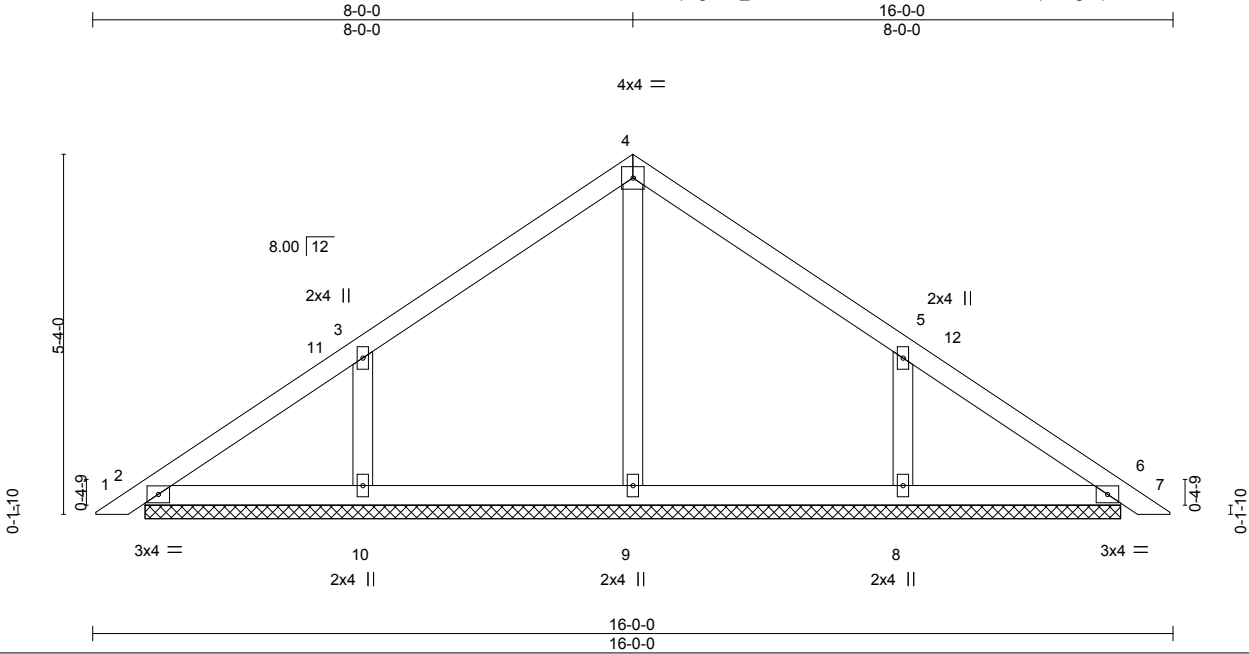


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	PB	GABLE	5	1	174762435
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:50 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?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 0.14	Vert(LL)	0.00	6	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	0.00	7	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.00	6	n/a	n/a		
BCDL 10.0	Code IRC2021/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" oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.

**REACTIONS.**

All bearings 14-5-6.  
(lb) - Max Horz 2=-123(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=362(LC 19), 8=362(LC 20)

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

WEBS 3-10=-278/225, 5-8=-277/225

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-7 to 4-8-4, Interior(1) 4-8-4 to 8-0-0, Exterior(2R) 8-0-0 to 12-4-13, Interior(1) 12-4-13 to 15-8-9 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" 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" tall by 2'-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=104, 8=104.
- 9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



July 10,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

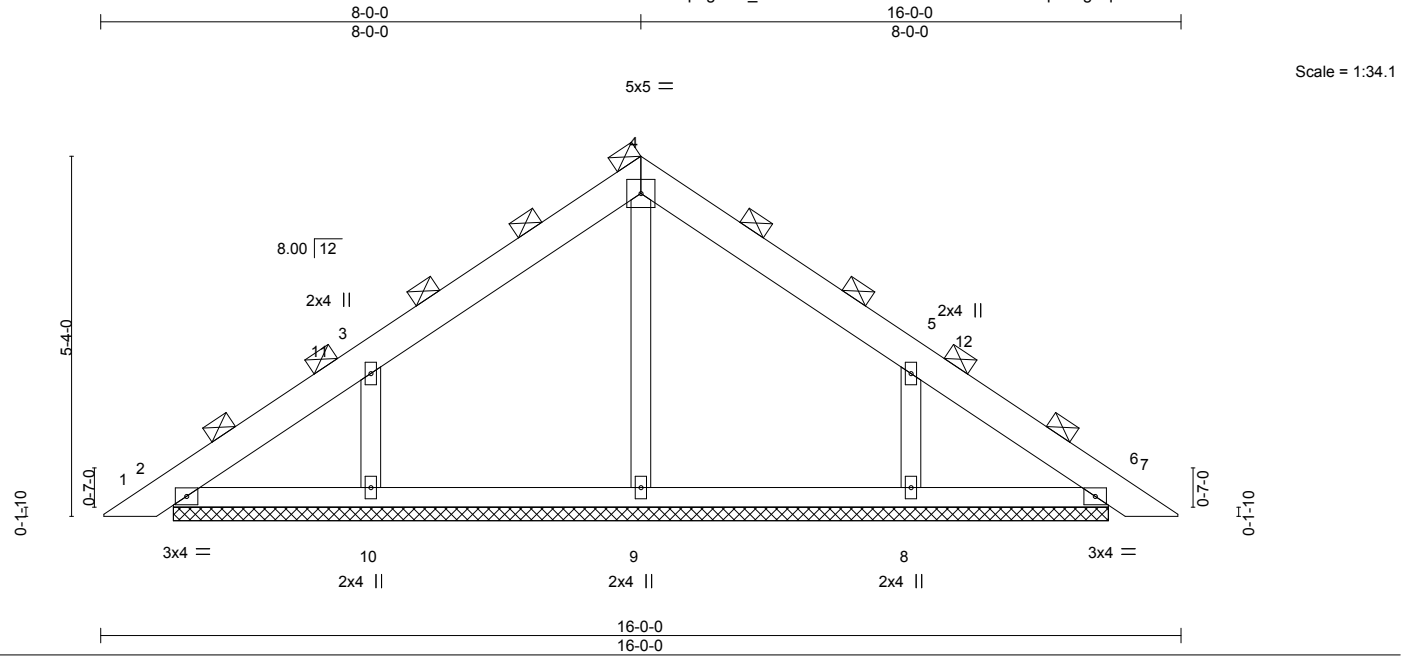


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	PBA	GABLE	2	1	174762436
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:51 2025 Page 1

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



LOADING (psf)	SPACING-	5-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.17	Vert(LL)	0.00	6	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.23	Vert(CT)	0.00	7	n/r	120		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.16	Horz(CT)	0.00	6	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S						Weight: 77 lb	FT = 20%

**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).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 13-10-3.  
(lb) - Max Horz 2=-302(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=390(LC 1), 6=390(LC 1), 9=616(LC 1), 10=863(LC 19), 8=857(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-327/230, 3-4=-350/358, 4-5=-316/351  
WEBS 4-9=-411/0, 3-10=-674/548, 5-8=-668/548

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-5-4 to 4-10-1, Interior(1) 4-10-1 to 8-0-0, Exterior(2R) 8-0-0 to 12-4-13, Interior(1) 12-4-13 to 15-6-12 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=253, 8=249.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



July 10,2025

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

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

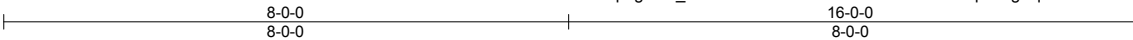


Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1024	PGBE	GABLE	1	1	174762437
Job Reference (optional)					

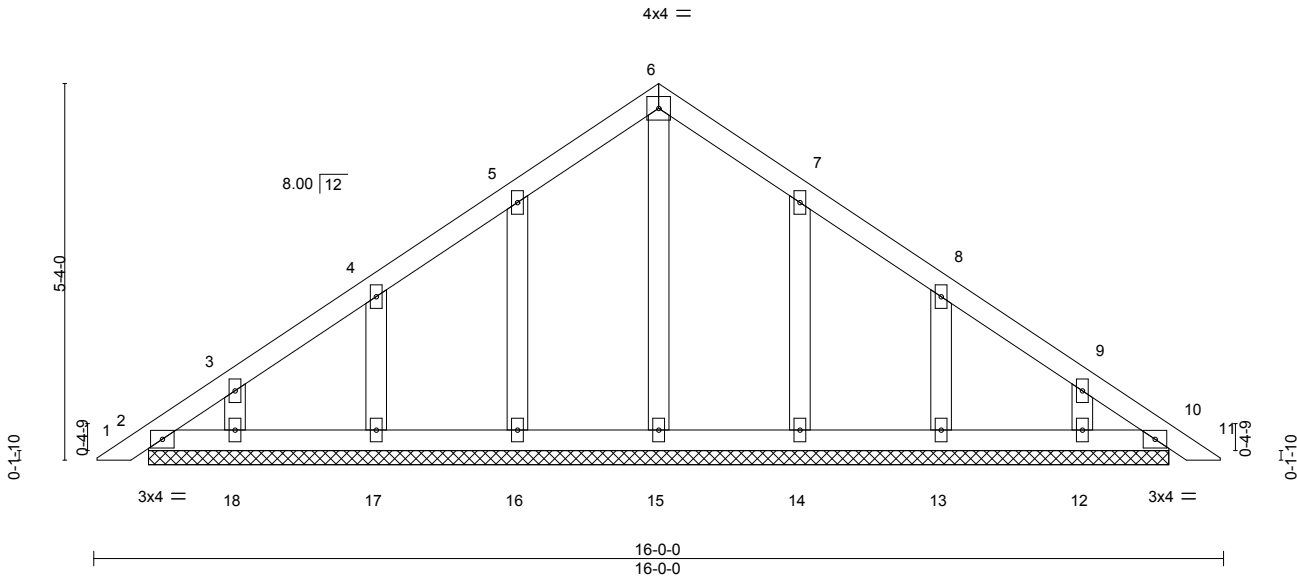
Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:21:51 2025 Page 1

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



Scale = 1:32.6



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 IRC2021/TPI2014		Matrix-S						Weight: 74 lb	FT = 20%

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

**REACTIONS.** All bearings 14-5-6.  
(lb) - Max Horz 2=154(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-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-7 to 4-8-4, Interior(1) 4-8-4 to 8-0-0, Exterior(2R) 8-0-0 to 12-4-13, Interior(1) 12-4-13 to 15-8-9 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 16, 17, 18, 14, 13, 12.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

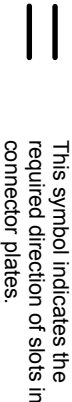
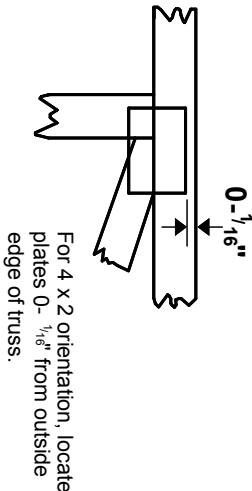
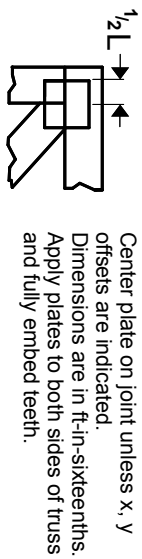


July 10,2025



# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

**4 X 4**

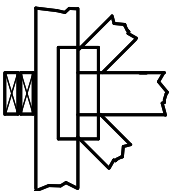
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

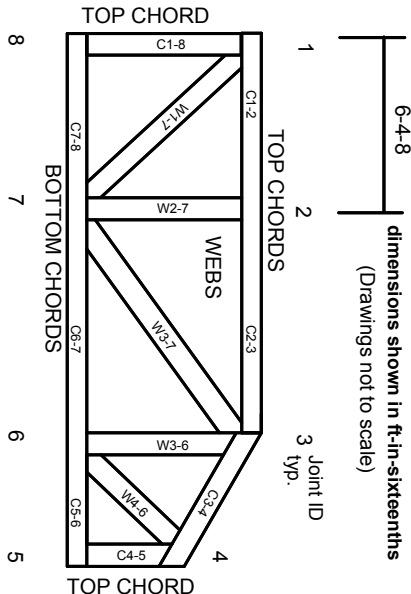
## BEARING



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

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

# Numbering System



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

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

# Product Code Approvals

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

# Design General Notes

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

© 2023 MITek® All Rights Reserved

# General Safety Notes

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

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

**MITek**

ENGINEERING BY  
**TRENCO**  
A MITek Affiliate

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



**Trenco**

818 Soundside Rd  
Edenton, NC 27932

Re: J0225-1025  
Lot 21 Magnolia Hills

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

Pages or sheets covered by this seal: 174762438 thru 174762442

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

North Carolina COA: C-0844



July 9, 2025

Gilbert, Eric

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



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1025	F1	FLOOR	6	1	174762438
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:04 2025 Page 1  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

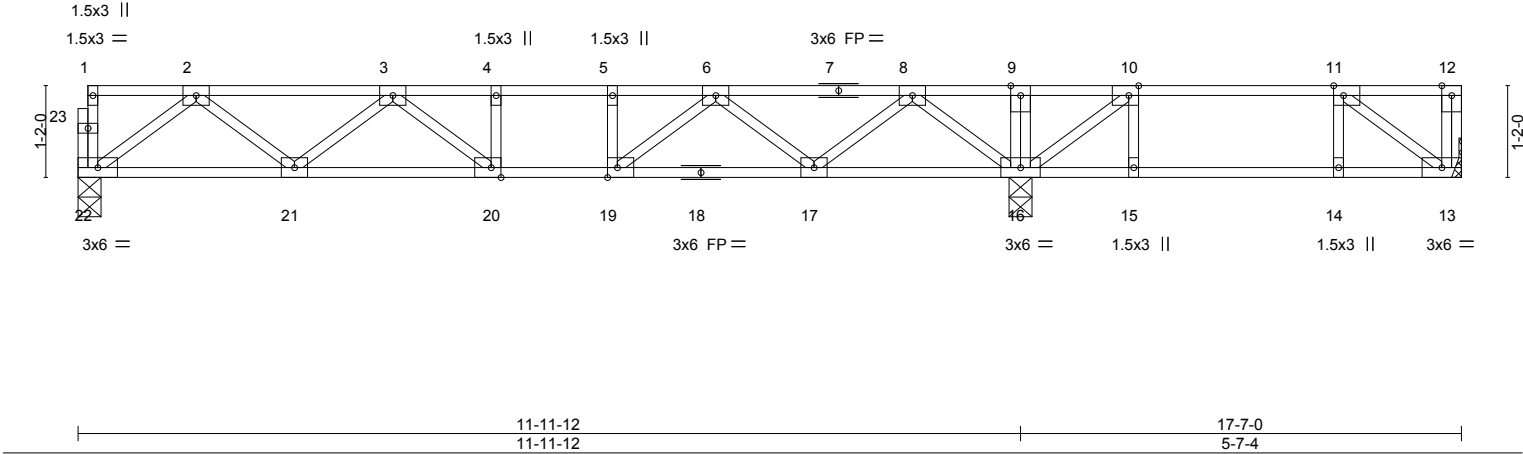


Plate Offsets (X,Y)--		[10:0-1-8,Edge], [11:0-1-8,Edge], [19:0-1-8,Edge], [20:0-1-8,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 40.0	Plate Grip DOL	1.00	TC 0.37
TCDL 10.0	Lumber DOL	1.00	BC 0.37
BCLL 0.0	Rep Stress Incr	YES	WB 0.30
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S
DEFL.	in (loc)	l/defl	L/d
Vert(LL)	-0.06 20-21	>999	480
Vert(CT)	-0.09 20-21	>999	360
Horz(CT)	0.02 13	n/a	n/a
PLATES	GRIP		
MT20	244/190		
Weight: 89 lb		FT = 20%F, 11%E	

**LUMBER-**

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

**BRACING-**

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

**REACTIONS.**

(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.



July 9, 2025

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

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

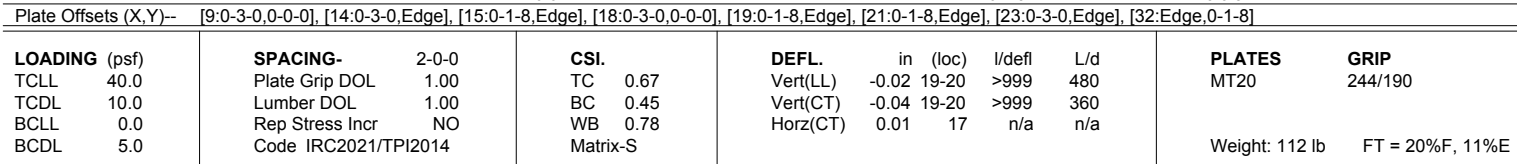
ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932



8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:05 2025 Page 1  
ID:0HpuqN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hg3NSgPqnL8w3uITxbGKWrcD0j7J4zJC?f

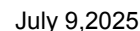
Scale = 1:29.6



TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 22-23, 21-22.

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



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



818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1025	F1A	FLOOR	1	1	174762439
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:05 2025 Page 2  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?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

*Eric A. Gilbert*



July 9, 2025

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/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))

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



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1025	F1A	FLOOR	1	1	174762439
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:05 2025 Page 3  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?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

*win this*



July 9,2025

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	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1025	F1A	FLOOR	1	1	174762439
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:05 2025 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

*Eric A. Gilbert*



July 9, 2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1025	F2	FLOOR	3	1	174762440
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:05 2025 Page 1

ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?f



Scale = 1:28.4

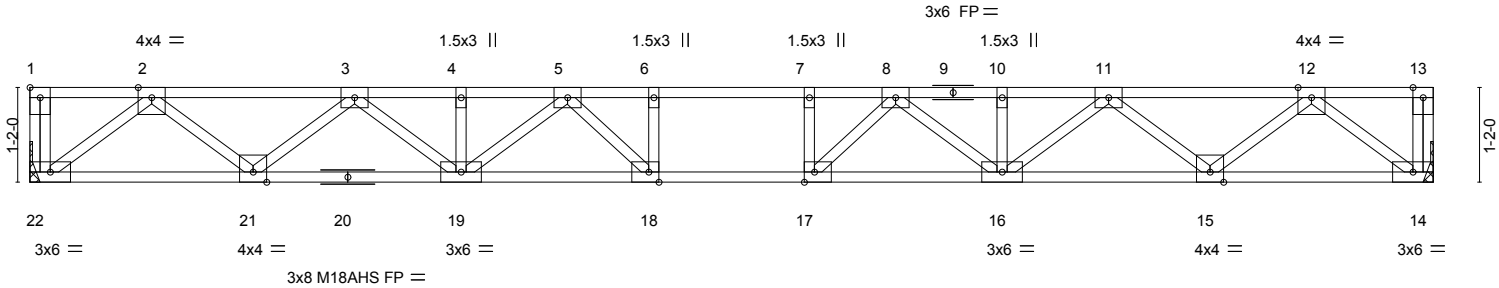


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [17:0-1-8,Edge], [18:0-1-8,Edge]					
<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d
TCLL	40.0	Plate Grip DOL	1.00	TC	0.47
TCDL	10.0	Lumber DOL	1.00	BC	0.75
BCLL	0.0	Rep Stress Incr	YES	WB	0.49
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S	
					<b>PLATES</b>
					MT20
					M18AHS
					Weight: 89 lb
					FT = 20%F, 11%E

**LUMBER-**

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

**BRACING-**

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

**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.



July 9,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932



8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:06 2025 Page 1  
ID:0HpuqN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hg3NSgPqnL8w3uITxbGKwRCdoi7J4zJC?r

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1025	F4	FLOOR	1	1	174762442
Comtech, Inc., Fayetteville, NC - 28314,					Job Reference (optional)

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:06 2025 Page 1  
ID:0HpugN1S\_QSTWxS0z0zGz9z5iCa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

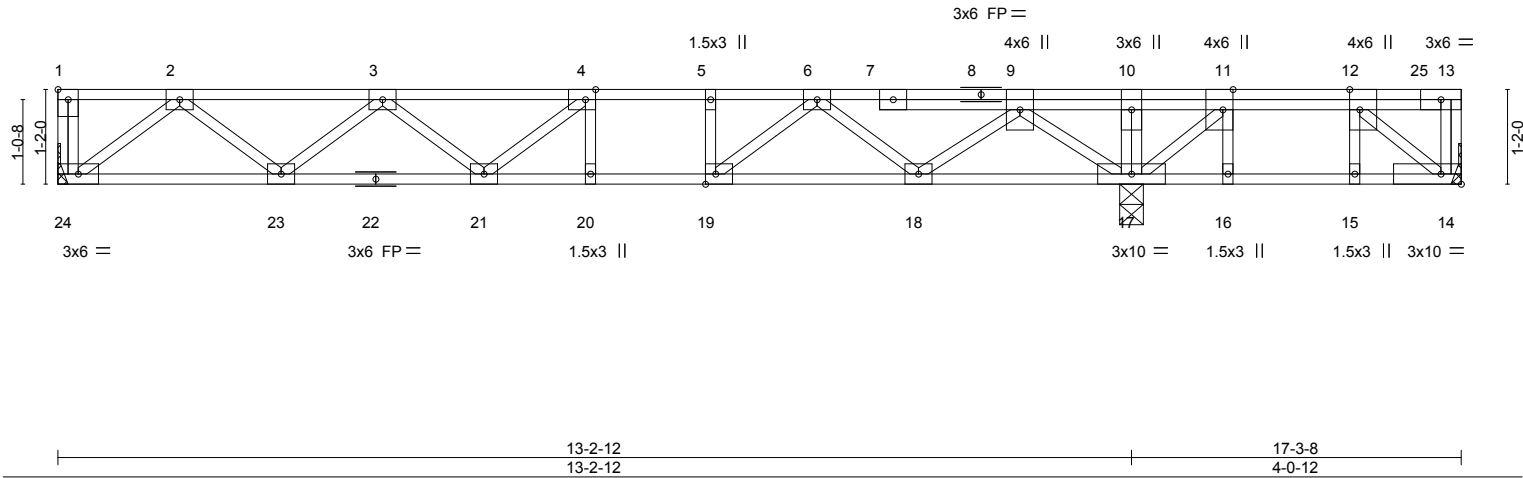


Plate Offsets (X,Y)--		[1:Edge,0-1-8], [4:0-1-8,Edge], [11:0-3-0,Edge], [12:0-3-0,Edge], [19:0-1-8,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 40.0	Plate Grip DOL	1.00	TC 0.41
TCDL 10.0	Lumber DOL	1.00	BC 0.66
BCLL 0.0	Rep Stress Incr	NO	WB 0.46
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S
DEFL.	in (loc)	l/defl	L/d
Vert(LL)	-0.10 20-21	>999	480
Vert(CT)	-0.13 20-21	>999	360
Horz(CT)	0.03 14	n/a	n/a
PLATES	GRIP		
MT20	244/190		
Weight: 99 lb	FT = 20%F, 11%E		

LUMBER-	BRACING-
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, 19-20=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



Job	Truss	Truss Type	Qty	Ply	Lot 21 Magnolia Hills
J0225-1025	F4	FLOOR	1	1	174762442
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Jul 9 06:19:06 2025 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



July 9, 2025

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

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

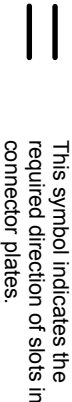
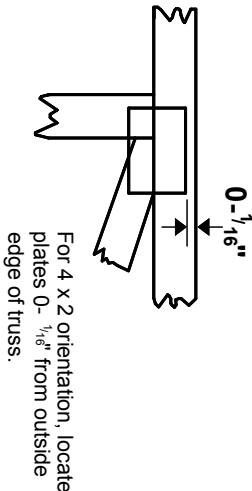
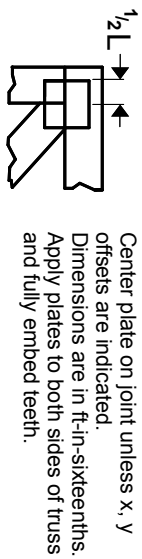
ENGINEERING BY  
**TRENCO**  
A MITEK Affiliate

818 Soundside Road  
Edenton, NC 27932



# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

**4 X 4**

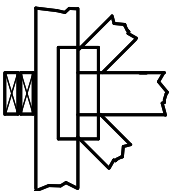
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

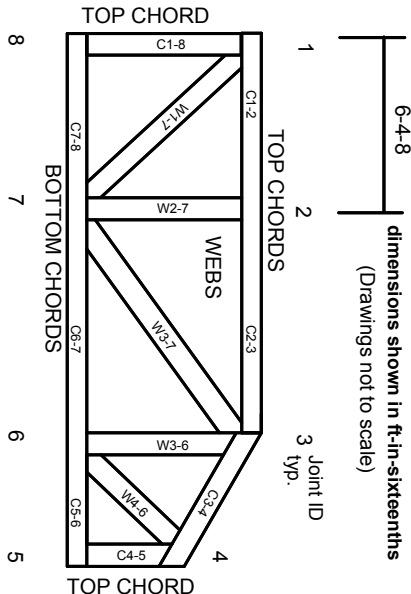
## BEARING



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

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

# Numbering System



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

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

# Product Code Approvals

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

# Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.  
Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

© 2023 MITek® All Rights Reserved

# General Safety Notes

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

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

**MITek®**

ENGINEERING BY  
**TRENCO**  
A MITek Affiliate

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





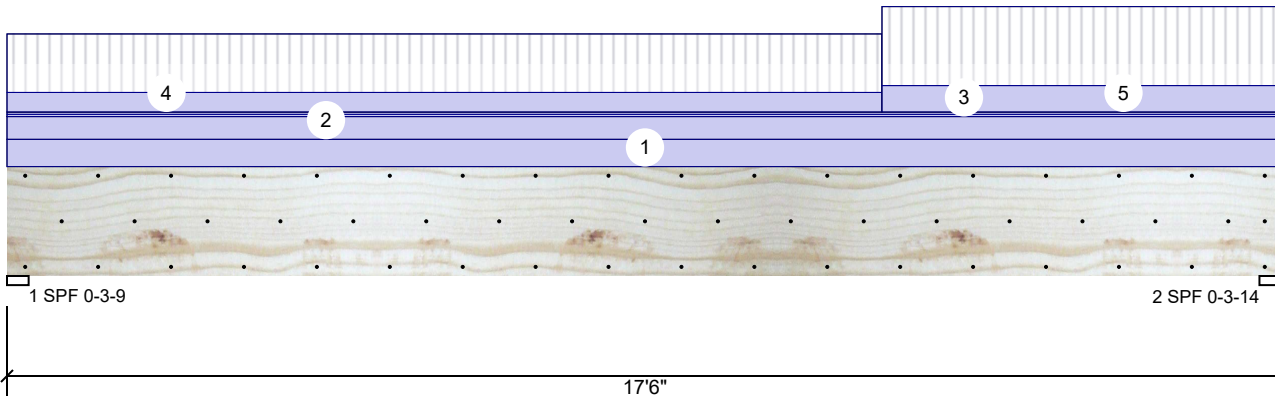
Client: Precision Custom Homes  
Project:  
Address:

Date: 7/9/2025  
Input by: Neil Baggett  
Job Name: Lot 21 Magnolia Hills  
Project #:

Page 1 of 10

## 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	51%	D+L	L
Unbraced	22105 ft-lb	8'10 13/16"	42981 ft-lb	51%	D+L	L
Shear	4418 lb	15'8 1/8"	13440 lb	33%	D+L	L
LL Defl inch	0.172 (L/1190)	8'9 15/16"	0.426 (L/480)	40%	L	L
TL Defl inch	0.381 (L/536)	8'9 1/2"	0.568 (L/360)	67%	D+L	L

### Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

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

chemicals

### Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

### Manufacturer Info

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

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







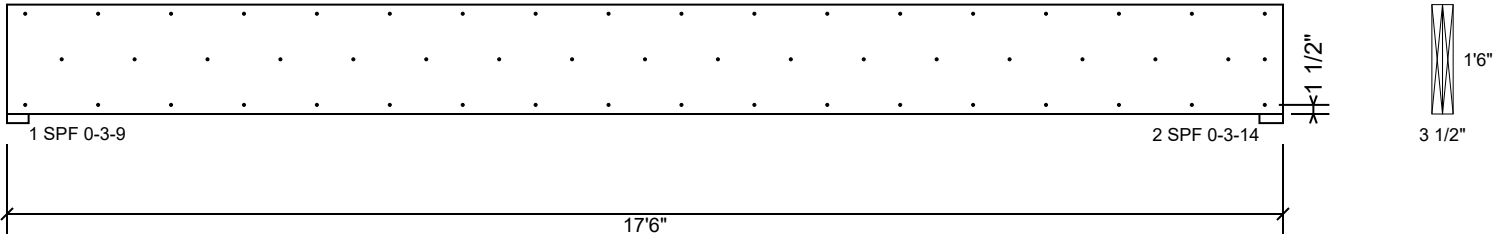
Client: Precision Custom Homes  
Project:  
Address:

Date: 7/9/2025  
Input by: Neil Baggett  
Job Name: Lot 21 Magnolia Hills  
Project #:

Page 2 of 10

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

### Lumber

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

chemicals

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

### Manufacturer Info

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

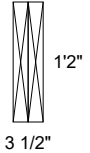
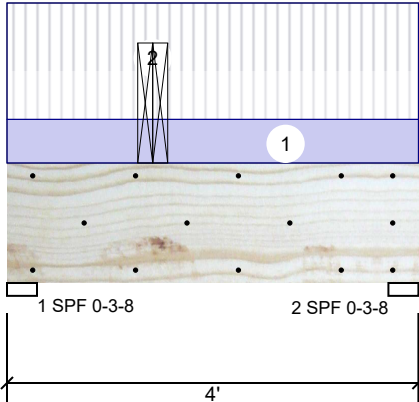
Comtech, Inc.  
1001 S. Reilly Road, Suite #639  
Fayetteville, NC  
USA  
28314  
910-864-TRUS





## 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	13%	D+S	L
Unbraced	4138 ft-lb	1'5"	31049 ft-lb	13%	D+S	L
Shear	3284 lb	1'5 1/2"	12021 lb	27%	D+S	L
LL Defl inch	0.007 (L/6271)	1'5"	0.089 (L/480)	8%	S	L
TL Defl inch	0.014 (L/3057)	1'5"	0.118 (L/360)	12%	D+S	L

### Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

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

chemicals

### Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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

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



This design is valid until 2/28/2028





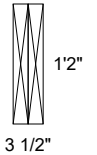
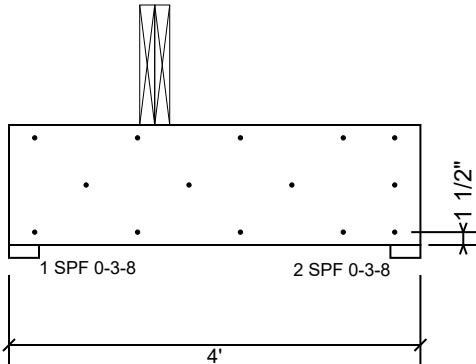
Client: Precision Custom Homes  
Project:  
Address:

Date: 7/9/2025  
Input by: Neil Baggett  
Job Name: Lot 21 Magnolia Hills  
Project #:

Page 4 of 10

**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

This design is valid until 2/28/2028

### Manufacturer Info

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

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







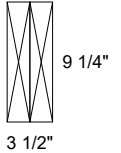
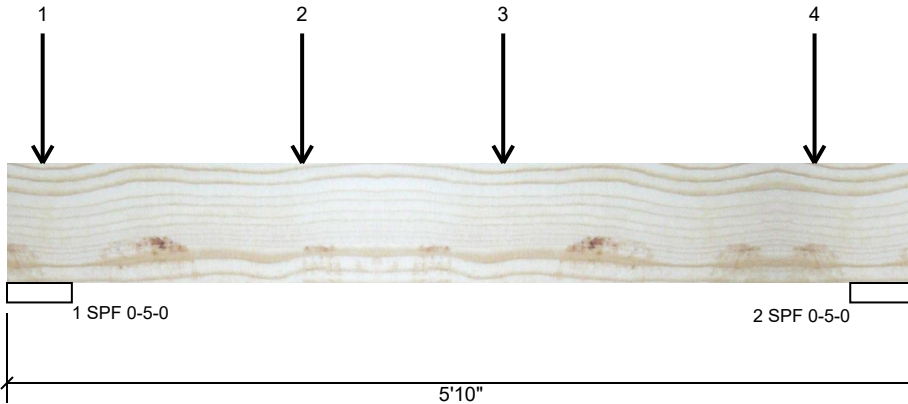
Client: Precision Custom Homes  
Project:  
Address:

Date: 7/9/2025  
Input by: Neil Baggett  
Job Name: Lot 21 Magnolia Hills  
Project #:

Page 5 of 10

## 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	63%	D+S	L
Unbraced	9142 ft-lb	1'10 3/4"	11505 ft-lb	79%	D+S	L
Shear	5930 lb	1'2 1/4"	7943 lb	75%	D+S	L
LL Defl inch	0.058 (L/1065)	2'8 7/16"	0.128 (L/480)	45%	S	L
TL Defl inch	0.116 (L/531)	2'8 7/16"	0.256 (L/240)	45%	D+S	L

### Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings.
- 2 Girders are designed to be supported on bottom edge only and across their full width.
- 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								
4	Point	5-2-4		Top	1205 lb	0 lb	1205 lb	0 lb	0 lb	A1

Continued on page 2...

### Notes

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

### Lumber

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

chemicals

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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

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



This design is valid until 2/28/2028





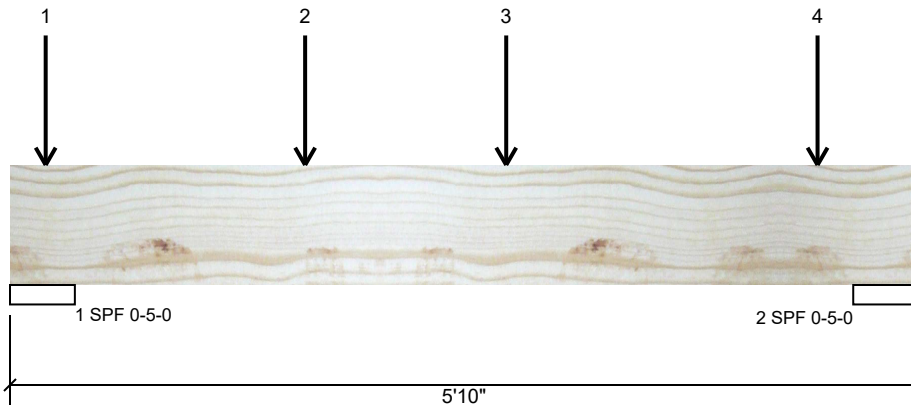
Client: Precision Custom Homes  
Project:  
Address:

Date: 7/9/2025  
Input by: Neil Baggett  
Job Name: Lot 21 Magnolia Hills  
Project #:

Page 6 of 10

**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
	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 2/28/2028

#### Manufacturer Info

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

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







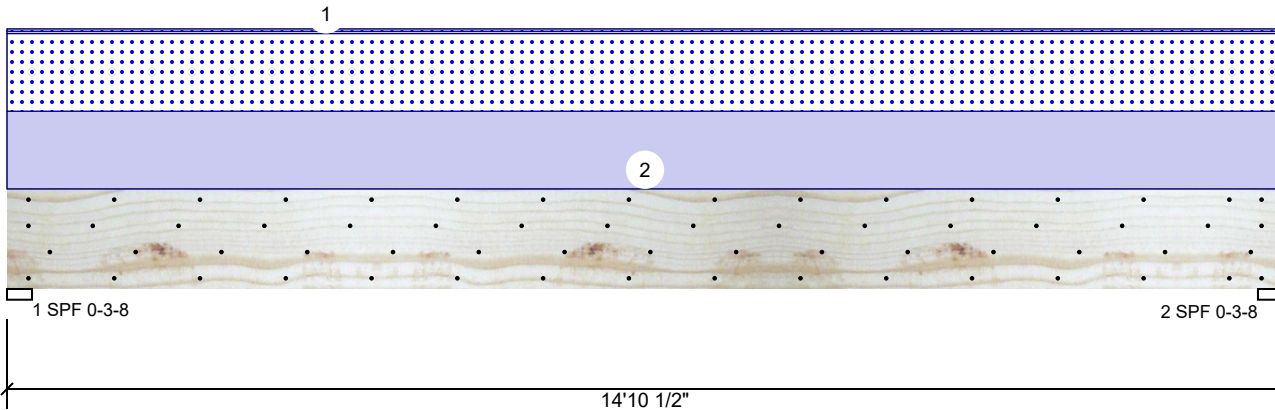
Client: Precision Custom Homes  
Project:  
Address:

Date: 7/9/2025  
Input by: Neil Baggett  
Job Name: Lot 21 Magnolia Hills  
Project #:

Page 7 of 10

## 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	58%	D+S	L
Unbraced	18157 ft-lb	7'5 1/4"	31049 ft-lb	58%	D+S	L
Shear	4981 lb	1'5 1/2"	12021 lb	41%	D+S	L
LL Defl inch	0.230 (L/753)	7'5 5/16"	0.481 (L/360)	48%	S	L
TL Defl inch	0.467 (L/370)	7'5 5/16"	0.721 (L/240)	65%	D+S	L

### Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

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

chemicals

### Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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

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



This design is valid until 2/28/2028





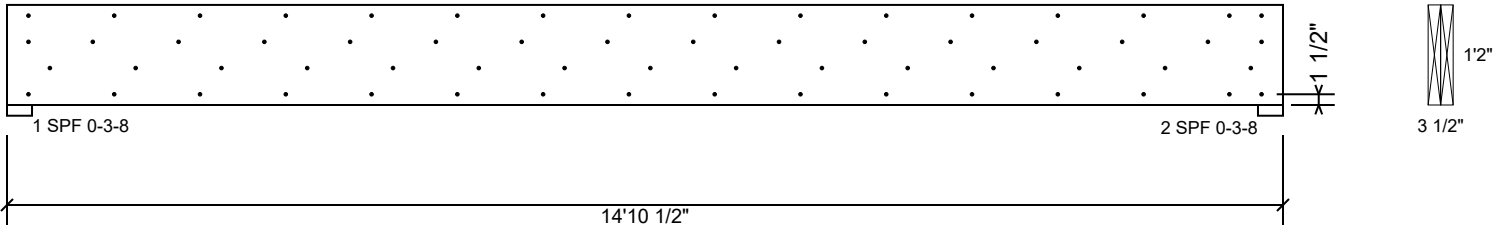
Client: Precision Custom Homes  
Project:  
Address:

Date: 7/9/2025  
Input by: Neil Baggett  
Job Name: Lot 21 Magnolia Hills  
Project #:

Page 8 of 10

## 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 2/28/2028

#### Manufacturer Info

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

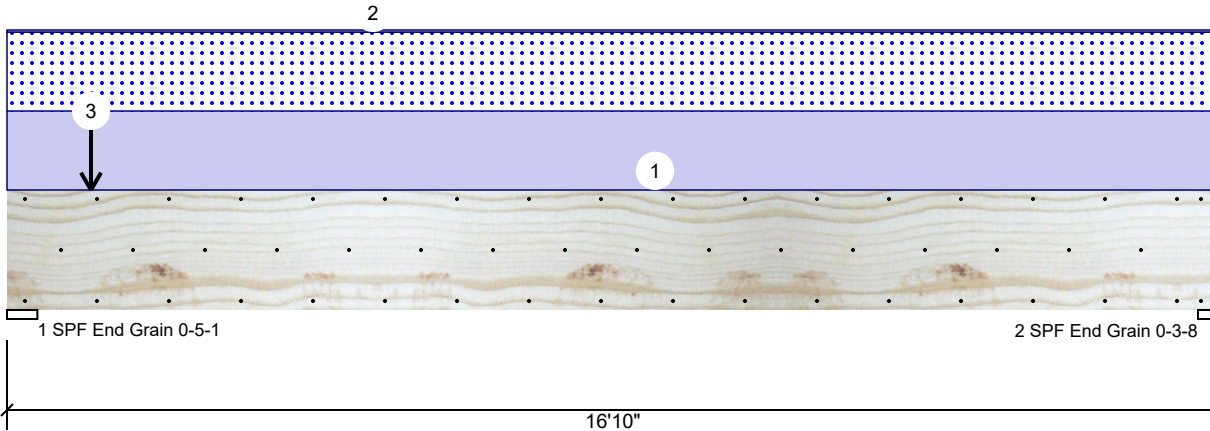
Comtech, Inc.  
1001 S. Reilly Road, Suite #639  
Fayetteville, NC  
USA  
28314  
910-864-TRUS





# 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	70%	D+S	L
Unbraced	41804 ft-lb	8'3 5/16"	60066 ft-lb	70%	D+S	L
Shear	9636 lb	2'1 1/16"	17173 lb	56%	D+S	L
LL Defl inch	0.244 (L/801)	8'4 13/16"	0.542 (L/360)	45%	S	L
TL Defl inch	0.499 (L/391)	8'4 13/16"	0.813 (L/240)	61%	D+S	L

## Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings.
- 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 Headers are designed to be supported on bottom edge only and across their full width.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be 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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

## Lumber

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

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 2/28/2028

## Manufacturer Info

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

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







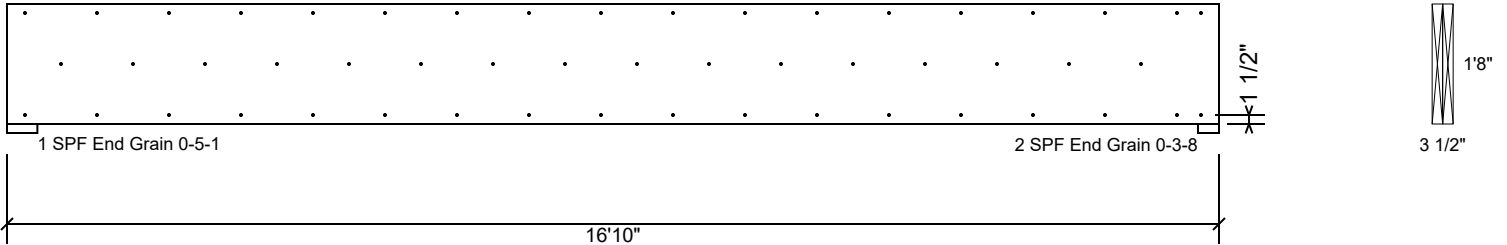
Client: Precision Custom Homes  
Project:  
Address:

Date: 7/9/2025  
Input by: Neil Baggett  
Job Name: Lot 21 Magnolia Hills  
Project #:

Page 10 of 10

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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

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



This design is valid until 2/28/2028