

RE: 251710-A
Lot 45 Magnolia Hills

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Precision Custom Homes and Renovations Project Name: 251710-A
Lot/Block: 45 Model:
Address: Subdivision: Magnolia Hills
City: Cameron State: NC

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

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

This package includes 23 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I76645128	A1	9/26/2025	21	I76645148	V4	9/26/2025
2	I76645129	A1GE	9/26/2025	22	I76645149	V5	9/26/2025
3	I76645130	A2	9/26/2025	23	I76645150	V6	9/26/2025
4	I76645131	A3	9/26/2025				
5	I76645132	A3GE	9/26/2025				
6	I76645133	B1GE	9/26/2025				
7	I76645134	B2	9/26/2025				
8	I76645135	C1	9/26/2025				
9	I76645136	C1-GR	9/26/2025				
10	I76645137	C1GE	9/26/2025				
11	I76645138	G1	9/26/2025				
12	I76645139	G1GE	9/26/2025				
13	I76645140	J1	9/26/2025				
14	I76645141	J2	9/26/2025				
15	I76645142	J2GE	9/26/2025				
16	I76645143	J3	9/26/2025				
17	I76645144	J3GE	9/26/2025				
18	I76645145	V1	9/26/2025				
19	I76645146	V2	9/26/2025				
20	I76645147	V3	9/26/2025				

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

Truss Design Engineer's Name: Galinski, John

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

North Carolina COA: C-0844

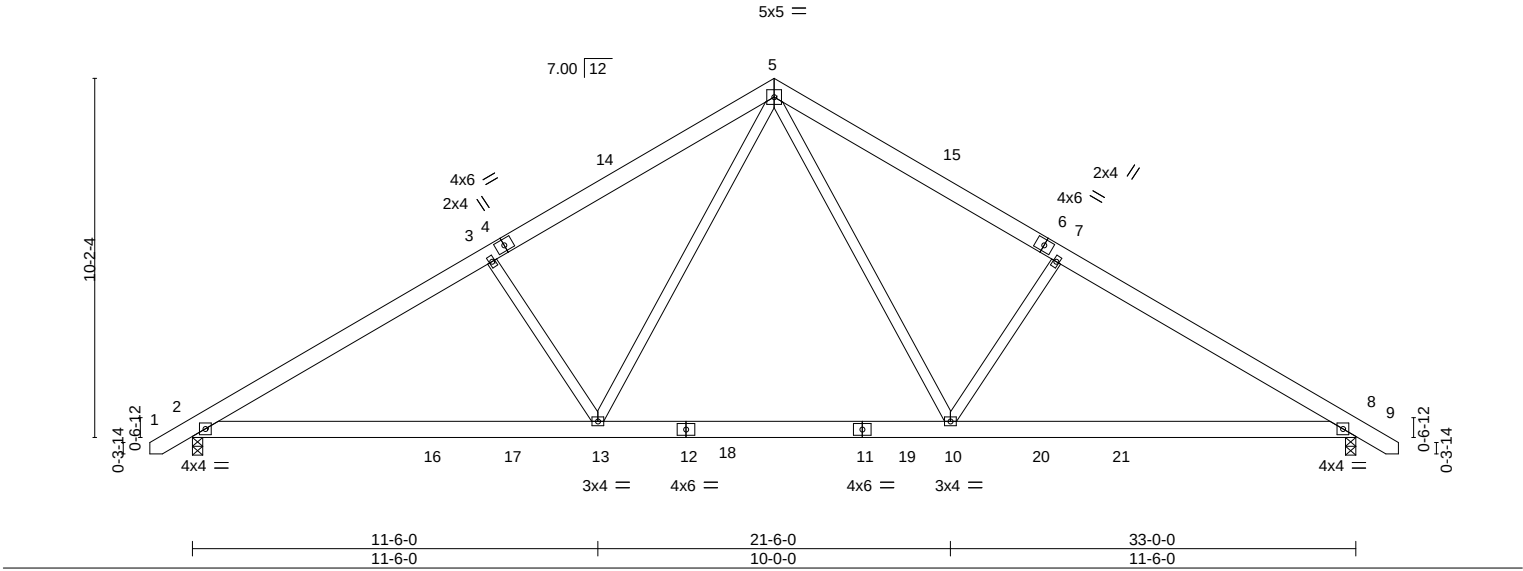
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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



Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	A1	COMMON	6	1	176645128

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Scale = 1:65.4



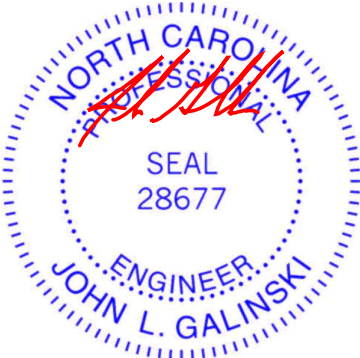
LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 2-0-0	TC 0.30	Vert(LL) -0.15	8-10	>999	360		MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.62	Vert(CT) -0.29	8-10	>999	240			
BCLL 0.0 *	Rep Stress Incr YES	WB 0.29	Horz(CT) 0.05	8	n/a	n/a			
BCDL 10.0	Code IRC2021/TPI2014	Matrix-S	Wind(LL) 0.05	2-13	>999	240		Weight: 221 lb	FT = 20%

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

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-245(LC 10)
Max Uplift 2=-91(LC 12), 8=-91(LC 13)
Max Grav 2=1692(LC 19), 8=1692(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2490/416, 3-5=-2285/457, 5-7=-2286/457, 7-8=-2491/416
BOT CHORD 2-13=-234/2241, 10-13=-10/1464, 8-10=-231/2057
WEBS 3-13=-508/299, 5-13=-140/1103, 5-10=-140/1103, 7-10=-508/300

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-6 to 3-4-7, Interior(1) 3-4-7 to 16-6-0, Exterior(2R) 16-6-0 to 20-10-13, Interior(1) 20-10-13 to 34-0-6 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 91 lb uplift at joint 2 and 91 lb uplift at joint 8.



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

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Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	A1GE	GABLE	1	1	176645129

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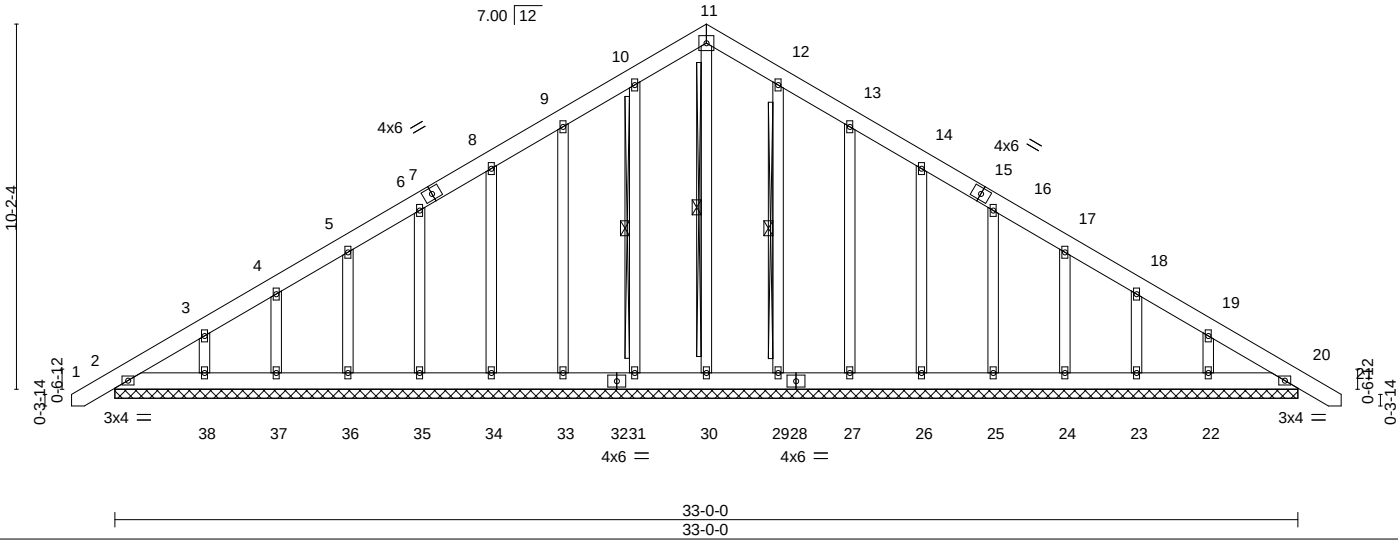
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Job Reference (optional)

1-2-8 1-2-8 16-6-0 16-6-0 33-0-0 33-0-0 34-2-8 34-2-8 1-2-8 1-2-8

5x5 =

Scale: 3/16"=1'



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.04	in (loc)	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(LL) -0.00 20 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.12	Vert(CT) 0.00 20 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 20 n/a n/a		
	Code IRC2021/TPI2014			Weight: 283 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS 1 Row at midpt 11-30, 10-31, 12-29

REACTIONS. All bearings 33-0-0.
(lb) - Max Horz 2=306(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 31, 33, 34, 35, 36, 37, 38, 29, 27, 26, 25, 24, 23, 22
Max Grav All reactions 250 lb or less at joint(s) 2, 20, 30, 31, 33, 34, 35, 36, 37, 38, 29, 27, 26, 25, 24, 23, 22

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-277/226, 10-11=-173/277, 11-12=-173/277

- 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) -1-0-6 to 3-4-7, Exterior(2N) 3-4-7 to 16-6-0, Corner(3R) 16-6-0 to 20-10-13, Exterior(2N) 20-10-13 to 34-0-6 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, 20, 31, 33, 34, 35, 36, 37, 38, 29, 27, 26, 25, 24, 23, 22.



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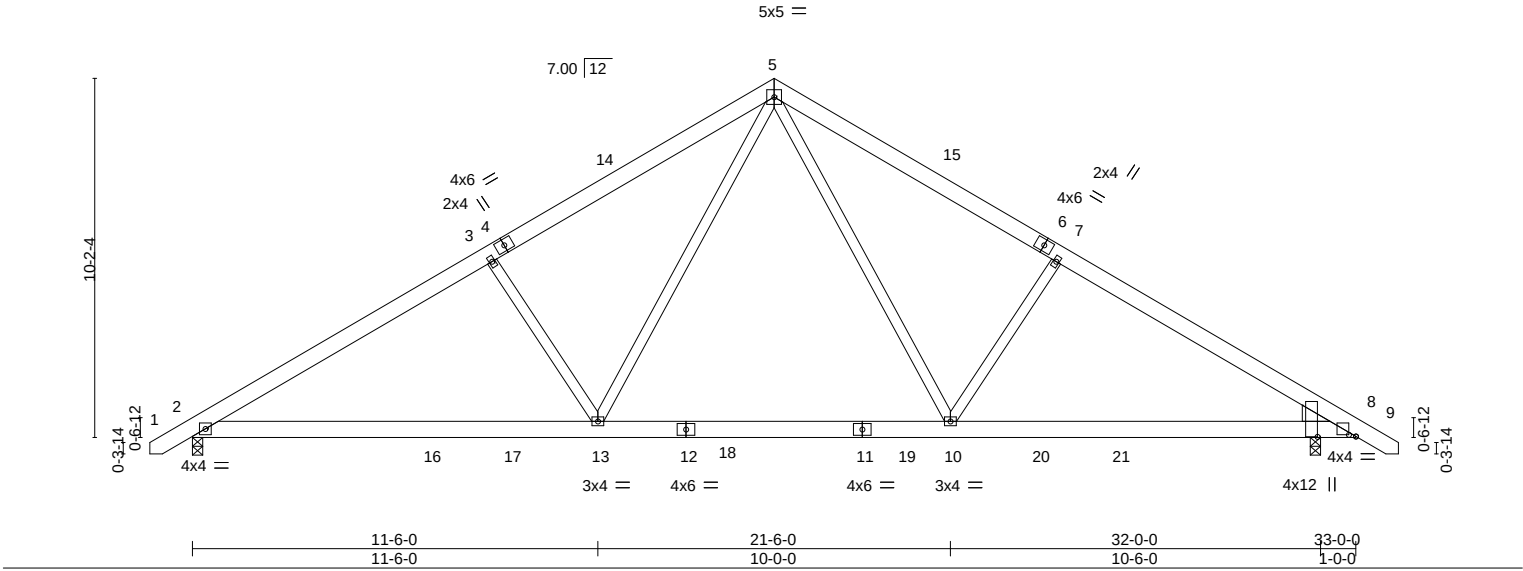
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TRENCO
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Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	A2	COMMON	4	1	176645130

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ID:aTXuLo?nW09qtpROz2WQ0wydkZW-kXuJLARDfySXMV00K0hcLtVZsYxp9M143I?jpjyZwaz
1-2-8 8-6-0 16-6-0 24-6-0 33-0-0 34-2-8
1-2-8 8-6-0 8-0-0 8-0-0 8-6-0 1-2-8

Scale = 1:65.4



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.15 8-10 >999 360	MT20		244/190	
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.29 8-10 >999 240				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.05 8 n/a n/a				
BCDL	10.0	Code IRC2021/TPI2014		Matrix-S		Wind(LL)	0.05 2-13 >999 240	Weight: 223 lb		FT = 20%	

LUMBER-		BRACING-	
TOP CHORD	2x6 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 4-8-0 oc purlins.
BOT CHORD	2x6 SP No.1	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.2		
WEDGE			
Right: 2x6 SP No.1			

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-245(LC 10)
Max Uplift 2=-91(LC 12), 8=-91(LC 13)
Max Grav 2=1692(LC 19), 8=1692(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2490/416, 3-5=-2285/457, 5-7=-2286/457, 7-8=-2491/416
BOT CHORD 2-13=-234/2241, 10-13=-10/1464, 8-10=-231/2057
WEBS 3-13=-508/299, 5-13=-140/1103, 5-10=-140/1103, 7-10=-508/300

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-6 to 3-4-7, Interior(1) 3-4-7 to 16-6-0, Exterior(2R) 16-6-0 to 20-10-13, Interior(1) 20-10-13 to 34-0-6 zone; cantilever right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.



September 26,2025

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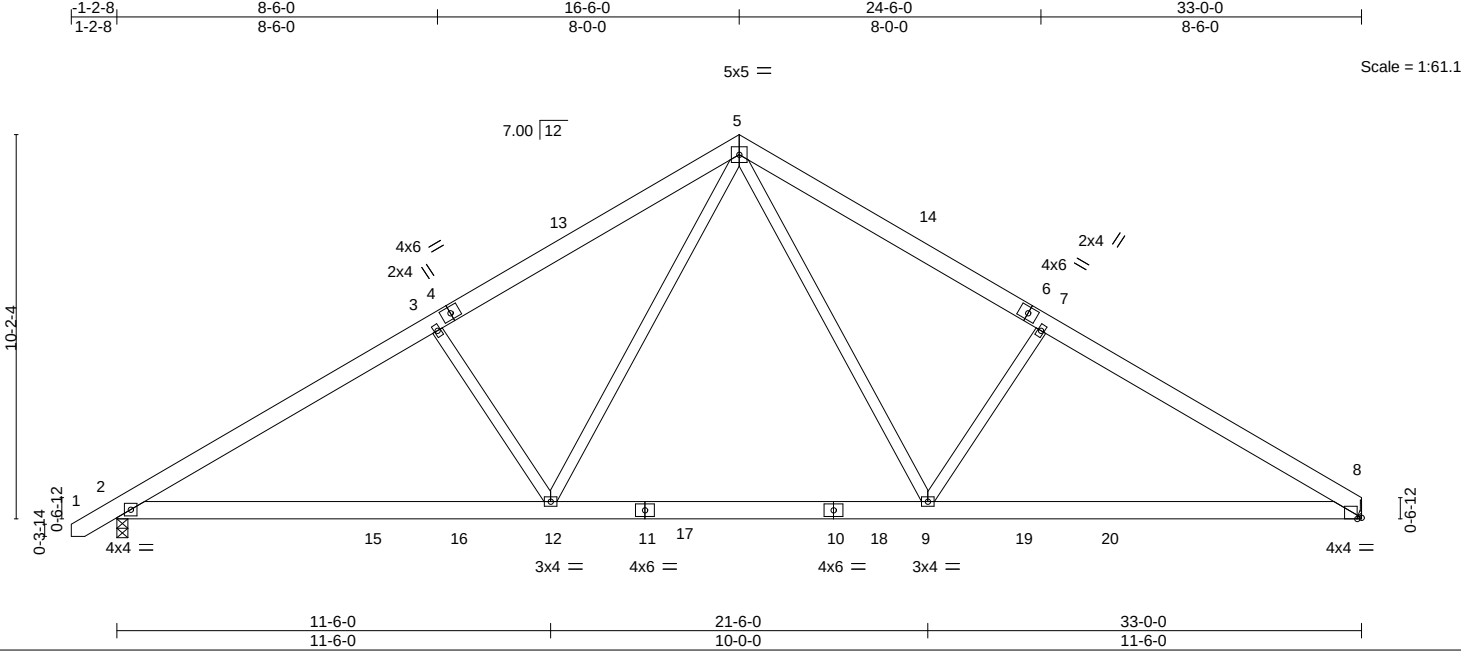
Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	A3	COMMON	9	1	176645131

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Job Reference (optional)



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.16 8-9 >999 360	MT20		244/190	
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.31 8-9 >999 240				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.05 8 n/a n/a				
BCDL	10.0	Code IRC2021/TPI2014		Matrix-S		Wind(LL)	0.05 2-12 >999 240				
								Weight: 218 lb		FT = 20%	

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

REACTIONS. (size) 2=0-3-8, 8=Mechanical
Max Horz 2=241(LC 9)
Max Uplift 2=-91(LC 12), 8=-75(LC 13)
Max Grav 2=1697(LC 19), 8=1629(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2499/418, 3-5=-2294/459, 5-7=-2309/465, 7-8=-2516/425
BOT CHORD 2-12=-269/2241, 9-12=-45/1465, 8-9=-261/2088
WEBS 3-12=-508/300, 5-12=-141/1101, 5-9=-144/1125, 7-9=-524/308

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-6 to 3-4-7, Interior(1) 3-4-7 to 16-6-0, Exterior(2R) 16-6-0 to 20-10-13, Interior(1) 20-10-13 to 32-11-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - 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) 2, 8.



September 26,2025

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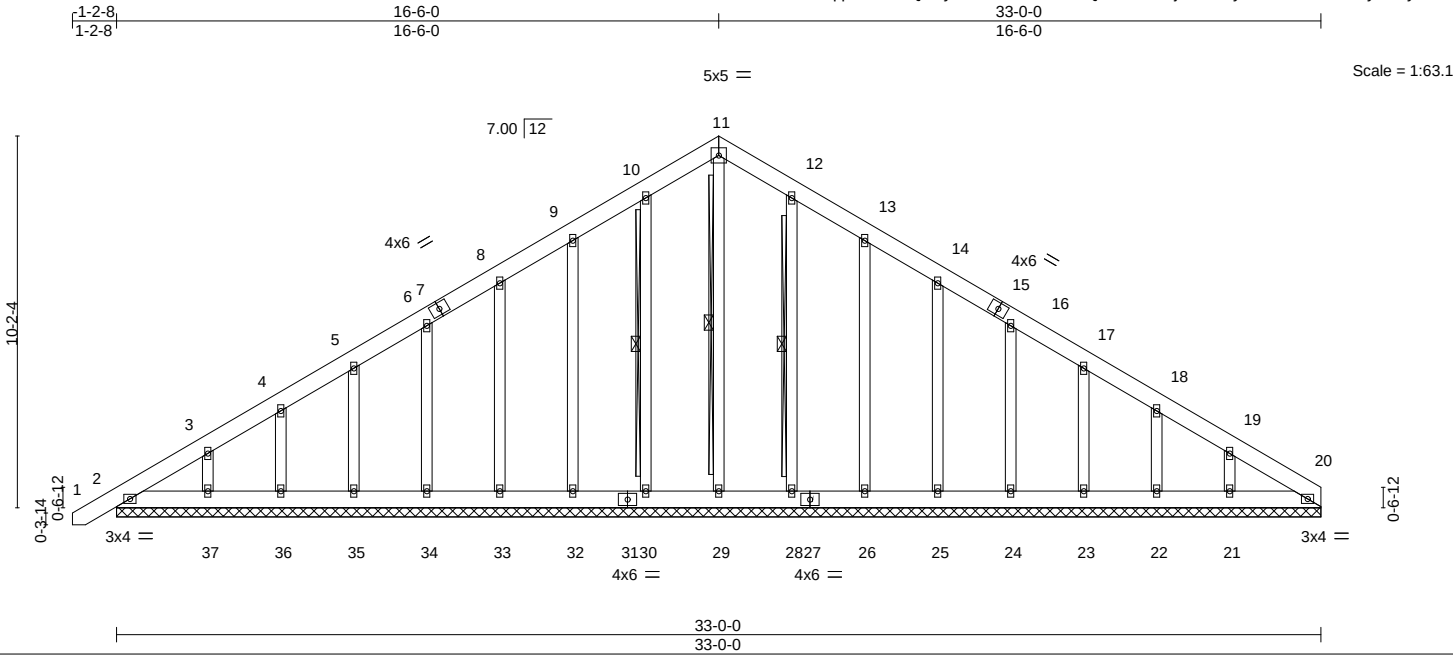
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Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	A3GE	GABLE	1	1	176645132

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:29 2025 Page 1
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Job Reference (optional)



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.04	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.12	Horz(CT)	0.01	20	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S						Weight: 280 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS 1 Row at midpt 11-29, 10-30, 12-28

REACTIONS. All bearings 33-0-0.
(lb) - Max Horz 2=301(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 30, 32, 33, 34, 35, 36, 37, 28, 26, 25, 24, 23, 22 except 21=-107(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 20, 29, 30, 32, 33, 34, 35, 36, 37, 28, 26, 25, 24, 23, 22, 21

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-280/222, 10-11=-169/265, 11-12=-169/265

- 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) -1-0-6 to 3-4-7, Exterior(2N) 3-4-7 to 16-6-0, Corner(3R) 16-6-0 to 20-10-13, Exterior(2N) 20-10-13 to 33-0-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20, 30, 32, 33, 34, 35, 36, 37, 28, 26, 25, 24, 23, 22 except (jt=lb) 21=107.



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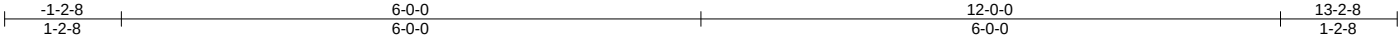
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	B1GE	GABLE	1	1	176645133

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:29 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-CkShYWSrQFaOzfzCujCrt52sxyPdsXEHOGL9yZway

Job Reference (optional)



Scale: 1/2"=1'

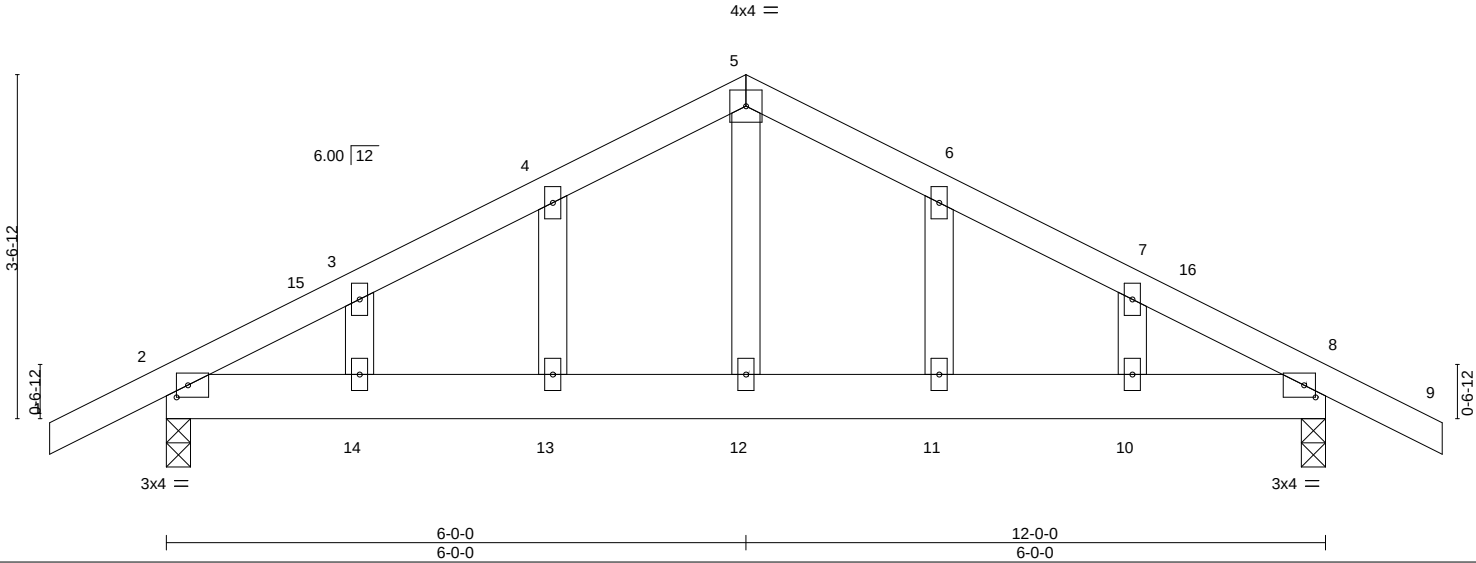


Plate Offsets (X,Y)--		[2:0-1-7,0-1-8], [8:0-1-7,0-1-8]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.12
TCDL 10.0	Lumber DOL	1.15	BC 0.19
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.08
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S
DEFL.	in (loc)	l/defl	L/d
Vert(LL)	-0.02 10-11	>999	360
Vert(CT)	-0.03 10-11	>999	240
Horz(CT)	0.01 8	n/a	n/a
Wind(LL)	0.03 13-14	>999	240
PLATES	GRIP		
MT20	244/190		
Weight: 65 lb	FT = 20%		

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

REACTIONS. (size) 2=0-3-0, 8=0-3-0
Max Horz 2=-73(LC 13)
Max Uplift 2=-143(LC 9), 8=-143(LC 8)
Max Grav 2=550(LC 1), 8=550(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-617/511, 3-4=-570/540, 4-5=-561/594, 5-6=-561/594, 6-7=-570/540, 7-8=-617/511
BOT CHORD 2-14=-358/491, 13-14=-358/491, 12-13=-358/491, 11-12=-358/491, 10-11=-358/491,
8-10=-358/491
WEBS 5-12=-379/328

- NOTES-
- Unbalanced roof live loads HAVING been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 6-0-0, Exterior(2R) 6-0-0 to 10-4-13, Interior(1) 10-4-13 to 13-2-8 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=143, 8=143.



September 26,2025

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

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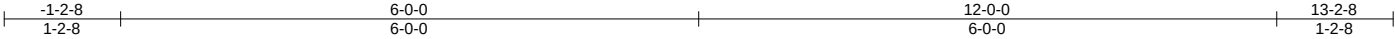
Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	B2	COMMON	4	1	176645134

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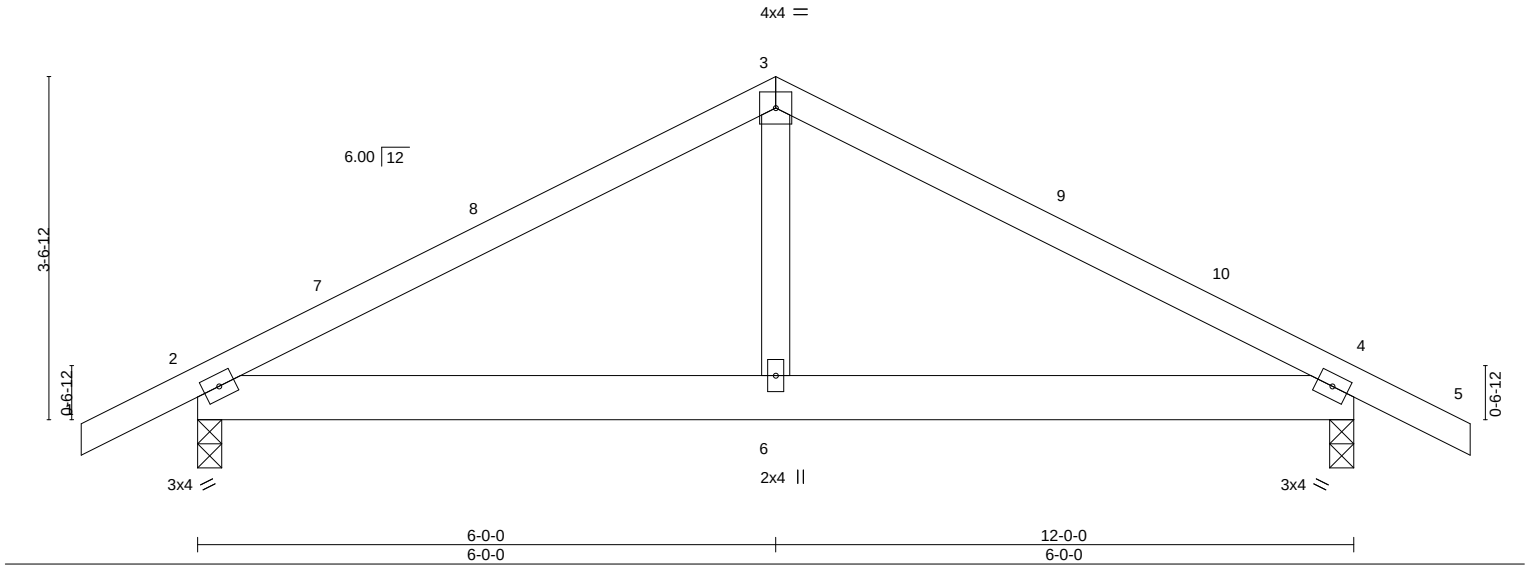
25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:30 2025 Page 1

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Job Reference (optional)



Scale: 1/2"=1'



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.31	Vert(LL)	-0.01	4-6	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.15	Vert(CT)	-0.02	4-6	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.01	4	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL)	0.03	2-6	>999	240		
									Weight: 57 lb	FT = 20%

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

REACTIONS. (size) 2=0-3-0, 4=0-3-0
 Max Horz 2=-47(LC 10)
 Max Uplift 2=-109(LC 9), 4=-109(LC 8)
 Max Grav 2=550(LC 1), 4=550(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-640/555, 3-4=-640/555
 BOT CHORD 2-6=-338/485, 4-6=-338/485
 WEBS 3-6=-213/296

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 6-0-0, Exterior(2R) 6-0-0 to 10-4-13, Interior(1) 10-4-13 to 13-2-8 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=109, 4=109.



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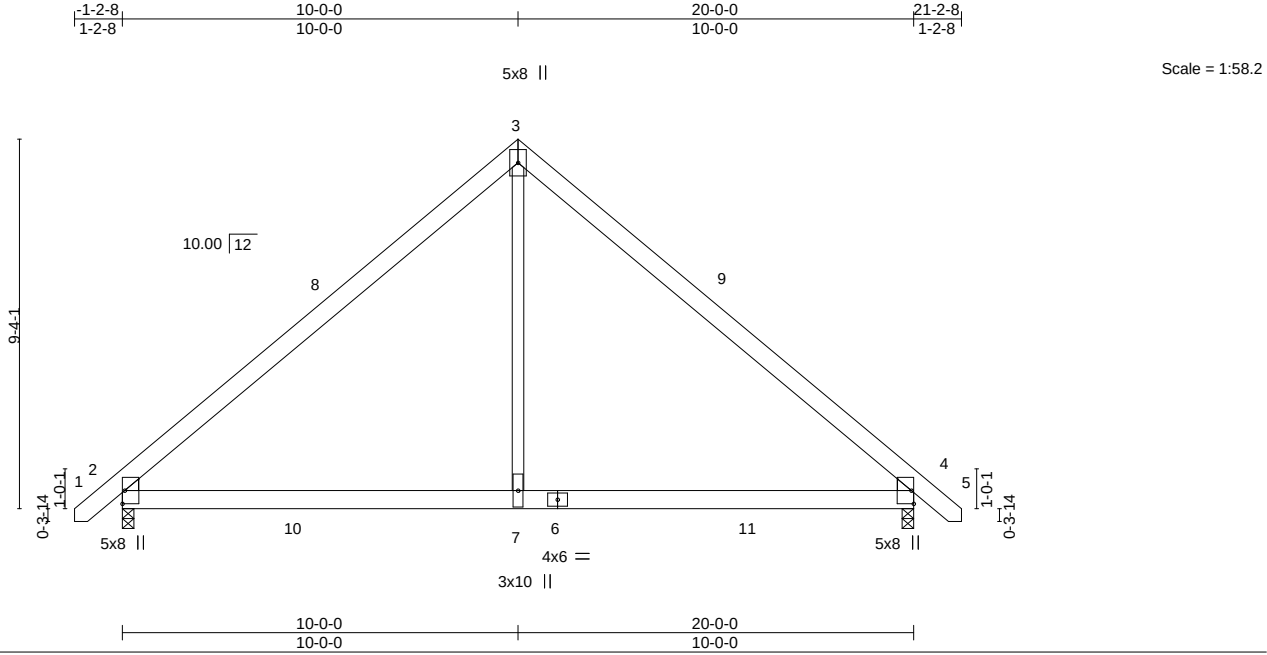
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Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	C1	COMMON	5	1	176645135

Comtech, Inc., Fayetteville, NC - 28314, 25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:30 2025 Page 1
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Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	C1-GR	COMMON GIRDER	1	2	176645136

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:32 2025 Page 1

ID:aTXuLo?nW09qtpROz2WQ0wydkZW-dl8qAYUjjAyyq7inZrmYVjgEP9LK50mg_MzwyUyZwav

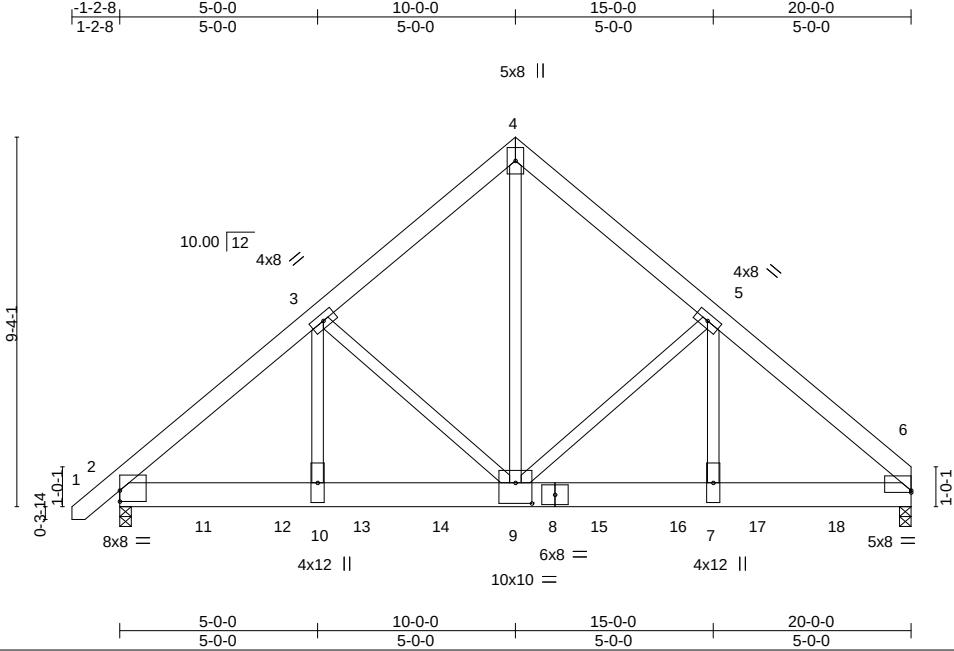


Plate Offsets (X,Y)--		[2:0-0-0,0-3-5], [6:Edge,0-0-9], [9:0-5-0,0-6-4]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.68
TCDL 10.0	Lumber DOL	1.15	BC 0.51
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.94
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) -0.09 9-10 >999 360
			Vert(CT) -0.15 9-10 >999 240
			Horz(CT) 0.04 6 n/a n/a
			Wind(LL) 0.05 9-10 >999 240
			PLATES GRIP
			MT20 244/190
			Weight: 341 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-3-7 oc purlins.
BOT CHORD 2x8 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

REACTIONS. (size) 6=0-3-8, 2=0-3-8
Max Horz 2=217(LC 28)
Max Uplift 6=424(LC 9), 2=437(LC 8)
Max Grav 6=7605(LC 2), 2=7590(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-9332/550, 3-4=-6323/462, 4-5=-6321/461, 5-6=-9348/547
BOT CHORD 2-10=-410/6760, 9-10=-410/6761, 7-9=-340/6764, 6-7=-340/6764
WEBS 4-9=-485/7700, 5-9=-2629/286, 5-7=-162/3903, 3-9=-2624/282, 3-10=-164/3877

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-6-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; 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
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=424, 2=437.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1528 lb down and 95 lb up at 2-0-12, 1528 lb down and 95 lb up at 4-0-12, 1528 lb down and 95 lb up at 6-0-12, 1528 lb down and 95 lb up at 8-0-12, 1528 lb down and 95 lb up at 10-0-12, 1528 lb down and 95 lb up at 12-0-12, 1528 lb down and 95 lb up at 14-0-12, and 1528 lb down and 95 lb up at 16-0-12, and 1528 lb down and 95 lb up at 18-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-60, 4-6=-60, 2-6=-20



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Continued on page 2

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	C1-GR	COMMON GIRDER	1	2	176645136

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25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:32 2025 Page 2
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-dl8qAYUjjAyyq7inZrmYVjgEP9LK50mg_MzwyUyZwav

LOAD CASE(S) Standard
Concentrated Loads (lb)
Vert: 9=-1290(F) 11=-1290(F) 12=-1290(F) 13=-1290(F) 14=-1290(F) 15=-1290(F) 16=-1290(F) 17=-1290(F) 18=-1290(F)

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	C1GE	GABLE	1	1	176645137

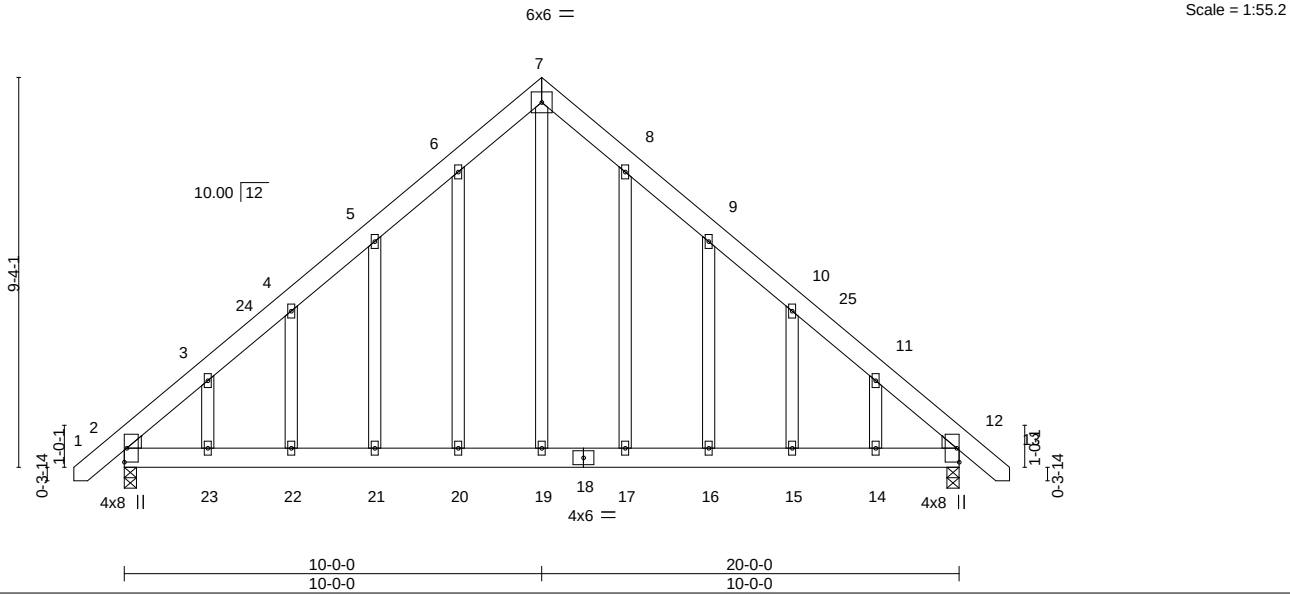
Comtech, Inc., Fayetteville, NC - 28314,

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Job Reference (optional)

20-0-0 21-2-8 1-2-8 10-0-0 10-0-0 10-0-0 1-2-8 1-2-8 1-2-8 1-2-8



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.20	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.40	Vert(LL) -0.09 15-16 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.48	Vert(CT) -0.14 15-16 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 12 n/a n/a		
	Code IRC2021/TPI2014		Wind(LL) 0.15 21-22 >999 240	Weight: 180 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

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) 12=0-3-8, 2=0-3-8
Max Horz 2=-276(LC 10)
Max Uplift 12=-169(LC 13), 2=-169(LC 12)
Max Grav 12=860(LC 1), 2=860(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-870/144, 3-4=-749/218, 4-5=-698/287, 5-6=-668/367, 6-7=-633/454, 7-8=-633/454,
8-9=-668/367, 9-10=-698/287, 10-11=-749/218, 11-12=-870/144
BOT CHORD 2-23=-39/567, 22-23=-39/567, 21-22=-39/567, 20-21=-39/567, 19-20=-39/567,
17-19=-39/567, 16-17=-39/567, 15-16=-39/567, 14-15=-39/567, 12-14=-39/567
WEBS 7-19=-371/539

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-0-8 to 3-4-4, Exterior(2N) 3-4-4 to 10-0-0, Corner(3R) 10-0-0 to 14-4-13, Exterior(2N) 14-4-13 to 21-0-8 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=169, 2=169.



September 26,2025

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	G1	COMMON	6	1	176645138

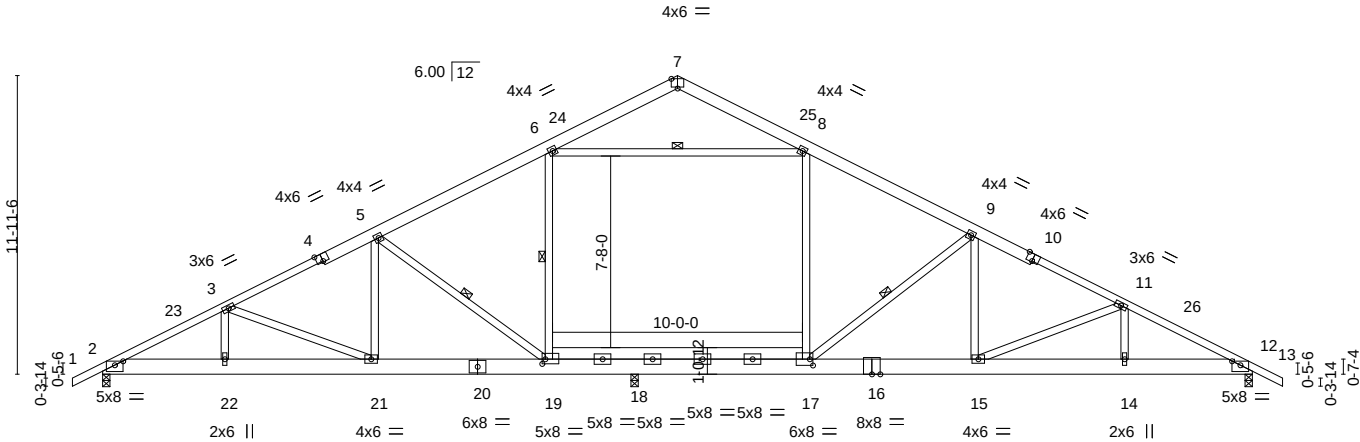
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1-2-8	4-10-10	8-8-12	10-10-10	17-10-10	23-0-0	27-10-10	34-10-10	40-10-10	46-0-0	47-2-8
1-2-8	4-10-10	3-10-2	2-1-14	7-0-0	5-1-6	4-10-10	7-0-0	6-0-0	5-1-6	1-2-8

Scale = 1:92.2



4-10-10	10-10-10	17-10-10	21-1-10	28-1-5	34-10-10	40-10-10	46-0-0
4-10-10	6-0-0	7-0-0	3-3-0	6-11-11	6-9-5	6-0-0	5-1-6
Plate Offsets (X,Y)-- [2:0-4-0,0-1-15], [4:0-3-0,Edge], [7:0-3-0,Edge], [10:0-3-0,Edge], [12:0-4-0,0-1-15], [17:0-1-8,0-3-0], [19:0-1-8,0-2-4]							

LOADING (psf)	SPACING-		CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15		TC 0.26	Vert(LL) -0.28	15-17	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15		BC 0.50	Vert(CT) -0.44	15-17	>675	240		
BCLL 0.0 *	Rep Stress Incr YES		WB 0.47	Horz(CT) 0.03	12	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S	Wind(LL) 0.16	15-17	>999	240	Weight: 376 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1 *Except* 1-4,10-13: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 3-9-2 oc purlins.
BOT CHORD 2x8 SP 2400F 2.0E *Except* 17-19: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 7-2-6 oc bracing: 18-19 6-8-13 oc bracing: 17-18.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 9-17, 6-19, 5-19, 6-8

REACTIONS. (size) 2=0-3-8, 12=0-3-8, 18=0-3-8
Max Horz 2=156(LC 11)
Max Uplift 2=-66(LC 12), 12=-168(LC 13), 18=-120(LC 12)
Max Grav 2=1329(LC 2), 12=1480(LC 20), 18=1598(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2350/446, 3-5=-1886/443, 5-6=-1372/414, 6-7=-378/186, 7-8=-350/181,
8-9=-1360/383, 9-11=-2287/470, 11-12=-2610/452
BOT CHORD 2-22=-293/2068, 21-22=-293/2068, 19-21=-192/1662, 18-19=-53/1159, 17-18=-49/1144,
15-17=-246/2000, 14-15=-326/2270, 12-14=-326/2270
WEBS 8-17=0/289, 9-17=-1133/260, 9-15=-26/728, 5-19=-875/234, 5-21=-23/483,
3-21=-438/108, 11-15=-294/94, 6-8=-957/320

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-2-7 to 3-2-5, Interior(1) 3-2-5 to 23-0-0, Exterior(2R) 23-0-0 to 27-4-13, Interior(1) 27-4-13 to 47-2-7 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 12=168, 18=120.



September 26,2025

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)

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A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	G1GE	COMMON SUPPORTED GAB	1	1	176645139

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:33 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-5VhCOuVMU4pSHHz7ZHn2xDYVZo1qfOpC0iUwWyZwau

Job Reference (optional)

1-2-8	23-0-0	46-0-0	47-2-8
1-2-8	23-0-0	23-0-0	1-2-8

Scale = 1:81.6

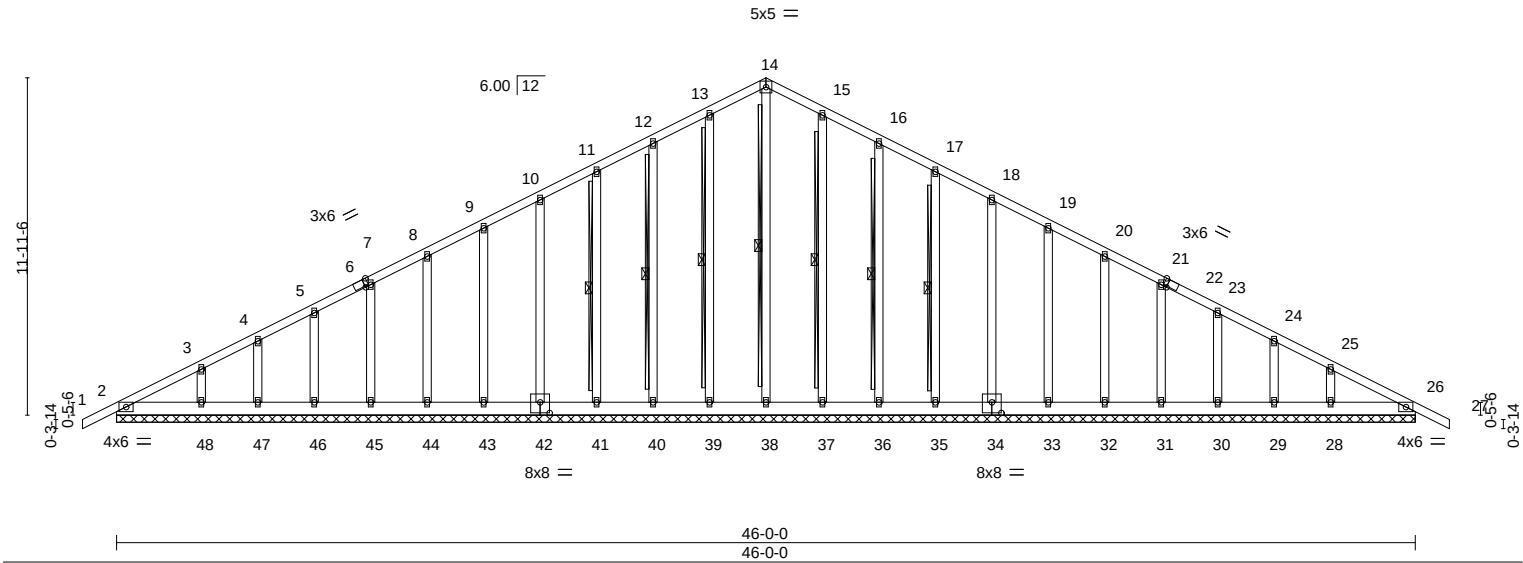


Plate Offsets (X,Y)-- [6:0-1-9,Edge], [22:0-1-9,Edge], [34:0-4-0,0-4-8], [42:0-4-0,0-4-8]									
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.08	Vert(LL)	-0.00	27	n/r	120	MT20 244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	-0.00	27	n/r	120	
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.15	Horz(CT)	0.01	26	n/a	n/a	
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S						Weight: 376 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS 1 Row at midpt 14-38, 13-39, 12-40, 11-41, 15-37, 16-36, 17-35

REACTIONS.	All bearings 46-0-0. (lb) - Max Horz 2=245(LC 16) Max Uplift All uplift 100 lb or less at joint(s) 2, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 26 Max Grav All reactions 250 lb or less at joint(s) 2, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 26
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FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-322/96, 11-12=-106/287, 12-13=-127/349, 13-14=-146/399, 14-15=-146/399, 15-16=-127/349, 16-17=-106/287 BOT CHORD 2-48=-82/298, 47-48=-82/298, 46-47=-82/298, 45-46=-82/298, 44-45=-82/298, 43-44=-82/298, 42-43=-82/298, 41-42=-82/298, 40-41=-82/298, 39-40=-82/298, 38-39=-82/298, 37-38=-82/298, 36-37=-82/298, 35-36=-82/298, 34-35=-82/298, 33-34=-82/298, 32-33=-82/298, 31-32=-82/298, 30-31=-82/298, 29-30=-82/298, 28-29=-82/298, 26-28=-82/298 WEBS 14-38=-255/50
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NOTES-
1) Unbalanced roof live loads have been considered for this design. 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-2-7 to 3-0-0, Exterior(2N) 3-0-0 to 23-0-0, Corner(3R) 23-0-0 to 27-4-13, Exterior(2N) 27-4-13 to 47-2-7 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1. 4) All plates are 2x4 MT20 unless otherwise indicated. 5) Gable requires continuous bottom chord bearing. 6) Gable studs spaced at 2-0-0 oc. 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads. 8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members. 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 26.



September 26,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	J1	MONO TRUSS	4	1	176645140

Comtech, Inc., Fayetteville, NC - 28314,

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6-0-0

0-1-8

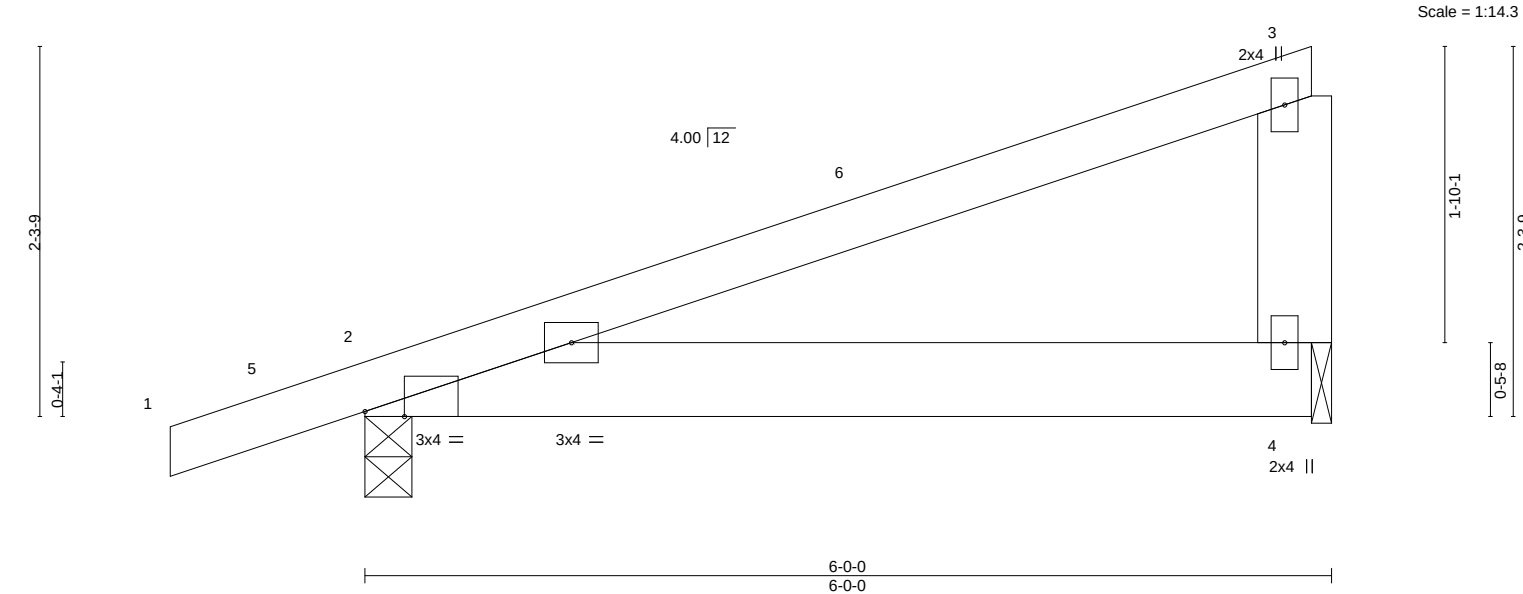


Plate Offsets (X,Y)--		[2:0-2-15,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.49
TCDL 10.0	Lumber DOL	1.15	BC 0.12
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-P
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) -0.01 2-4 >999 360
			Vert(CT) -0.03 2-4 >999 240
			Horz(CT) 0.00 n/a n/a
			Wind(LL) 0.02 2-4 >999 240
			PLATES GRIP
			MT20 244/190
			Weight: 29 lb FT = 20%

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

REACTIONS. (size) 2=0-3-8, 4=0-1-8
Max Horz 2=83(LC 8)
Max Uplift 2=-132(LC 8), 4=-90(LC 8)
Max Grav 2=316(LC 1), 4=215(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 3-4=-159/252

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-9-4 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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) 4 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 at joint(s) 4.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=132.



September 26,2025

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	J2	MONOPITCH	6	1	176645141

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4-10-84-10-84-10-8

5-0-05-0-05-0-0

0-1-80-1-80-1-8

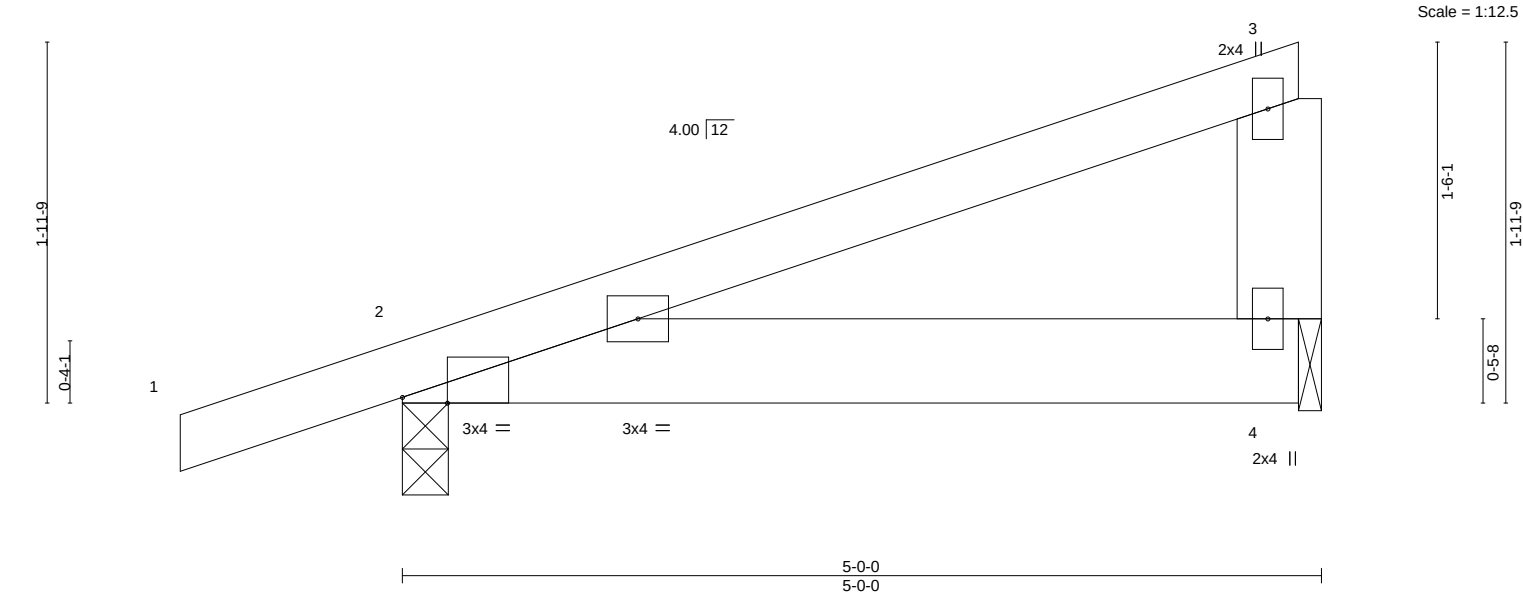


Plate Offsets (X,Y)--		[2:0-2-15,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.26
TCDL 10.0	Lumber DOL	1.15	BC 0.08
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-P
			DEFL.
			in (loc)
			l/defl
			L/d
			PLATES
			GRIP
			MT20
			244/190
			Weight: 24 lb
			FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	

REACTIONS. (size) 2=0-3-0, 4=0-1-8
Max Horz 2=72(LC 8)
Max Uplift 2=-119(LC 8), 4=-72(LC 8)
Max Grav 2=277(LC 1), 4=174(LC 1)

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

- NOTES-
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 4-9-4 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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) 4 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 at joint(s) 4.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=119.



September 26,2025

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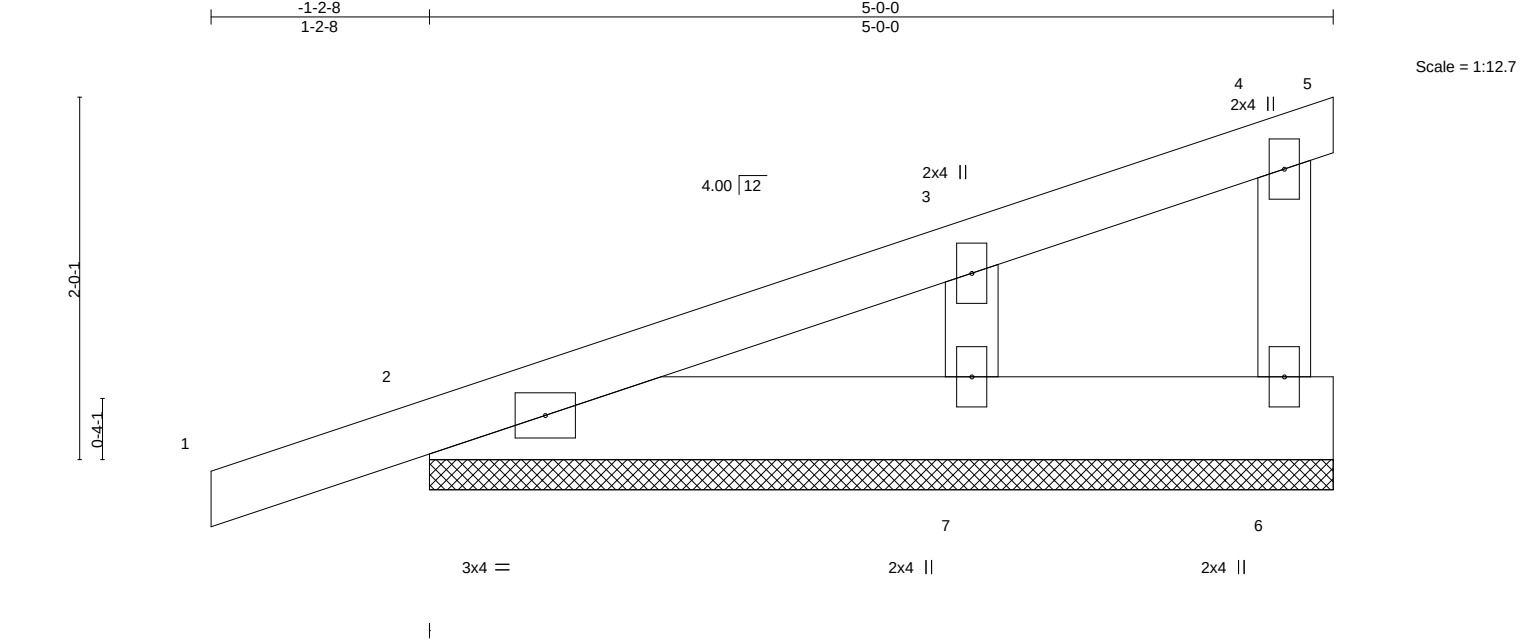
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	J2GE	MONOPITCH SUPPORTED	1	1	176645142

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:35 2025 Page 1

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LOADING (psf)	SPACING-		CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	2-0-0	TC 0.13	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	-0.00	5	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-P						Weight: 24 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	
OTHERS 2x4 SP No.2	

REACTIONS. All bearings 5-0-0.
(lb) - Max Horz 2=104(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 5, 6, 2, 7
Max Grav All reactions 250 lb or less at joint(s) 5, 6, 2, 7

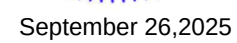
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-7=-160/319

- 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) -1-2-8 to 3-0-0, Exterior(2N) 3-0-0 to 5-0-0 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) 5, 6, 2, 7.
 - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

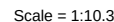


September 26,2025

Comtech, Inc. Fayetteville, NC - 28314, 25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:35 2025 Page 1
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Comtech, Inc. Fayetteville, NC - 28314, 25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:35 2025 Page 1
 ID:aTXuLo?nW09qtpRoz2WQ0wydkZW-1tpypaXc?5KXiaRME_JF7LluNUflbn6gKBaYpyZwas
 1-2-8 1-11-3 3-6-0
 1-2-8 1-11-3 1-6-13



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

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

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2'-0" 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) 7, 2, 8.



September 26, 2025



WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-17-15169: 1/2/2023 BEFORE USE.

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	V1	VALLEY	1	1	176645145

Comtech, Inc., Fayetteville, NC - 28314, 25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:36 2025 Page 1
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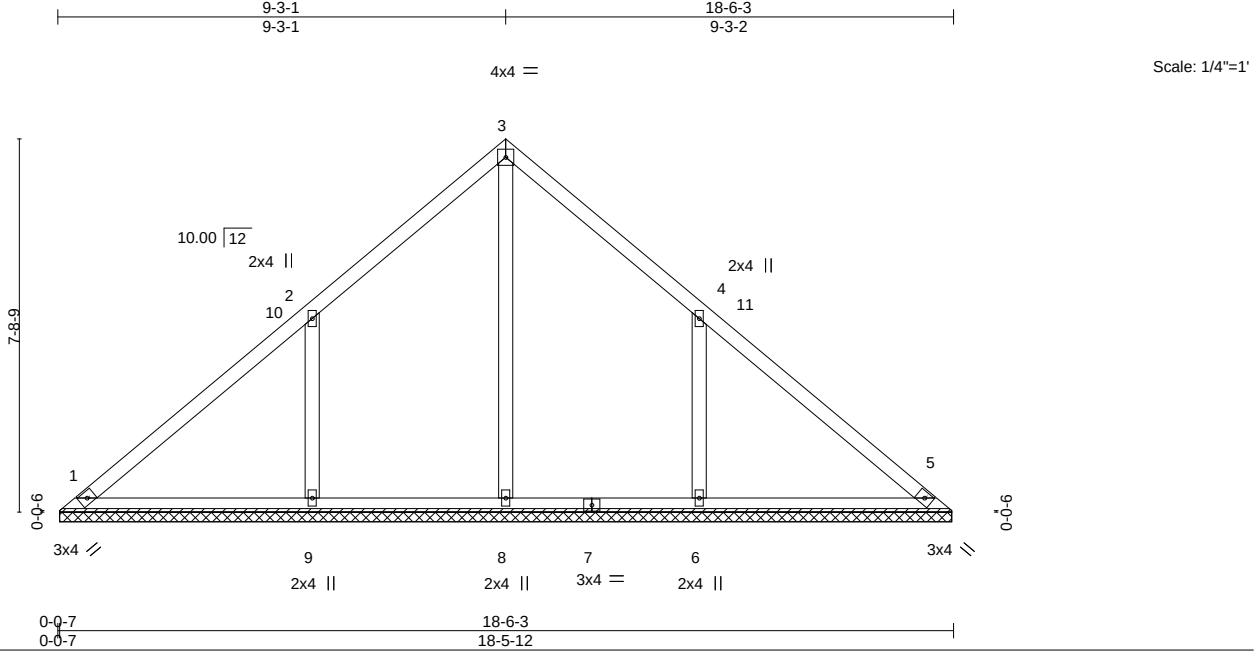


Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]									
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.23	Vert(LL)	n/a -	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.17	Vert(CT)	n/a -	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.00 5	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S					Weight: 84 lb	FT = 20%

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

REACTIONS. All bearings 18-5-5.
(lb) - Max Horz 1=177(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=172(LC 12), 6=172(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=391(LC 22), 9=612(LC 19), 6=612(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-364/291, 4-6=-363/291

- 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) 0-4-13 to 4-9-10, Interior(1) 4-9-10 to 9-3-1, Exterior(2R) 9-3-1 to 13-7-14, Interior(1) 13-7-14 to 18-1-6 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Gable requires continuous bottom chord bearing.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=172, 6=172.



September 26,2025

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

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TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	V2	VALLEY	1	1	176645146

Comtech, Inc,	Fayetteville, NC - 28314,	25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:36 2025 Page 1
		ID:aTXuLo?nW09qtpROz2WQ0wydkZW-V4NL0wYEmPT0Jk0YohrUgZr2dmof10yGv_x85FyZwar
		Job Reference (optional)

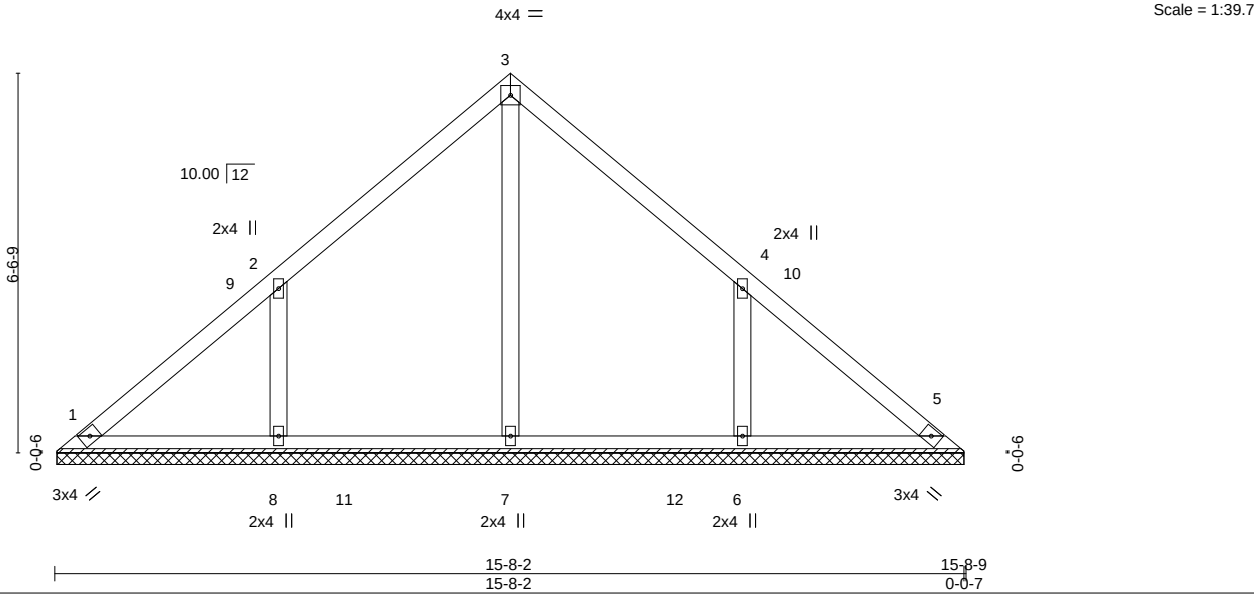


Plate Offsets (X,Y)--		[4:0-0-0,0-0-0]	
LOADING (psf)		SPACING-	
TCLL	20.0	Plate Grip DOL	1.15
TCDL	10.0	Lumber DOL	1.15
BCLL	0.0 *	Rep Stress Incr	YES
BCDL	10.0	Code	IRC2021/TPI2014
		CSI.	
		TC	0.15
		BC	0.16
		WB	0.10
		Matrix-S	
		DEFL.	
		in (loc)	l/defl
		Vert(LL)	n/a - n/a
		Vert(CT)	n/a - n/a
		Horz(CT)	0.00 5 n/a
		PLATES	
		MT20	244/190
		GRIP	
		Weight: 69 lb	FT = 20%

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

REACTIONS. All bearings 15-7-11.
 (lb) - Max Horz 1=149(LC 11)
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-143(LC 12), 6=-142(LC 13)
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=407(LC 19), 8=478(LC 19), 6=478(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 WEBS 2-8=-301/274, 4-6=-301/274

- 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) 0-4-13 to 4-9-10, Interior(1) 4-9-10 to 7-10-5, Exterior(2R) 7-10-5 to 12-3-1, Interior(1) 12-3-1 to 15-3-12 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Gable requires continuous bottom chord bearing.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3'-6-0 tall by 2'-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=143, 6=142.



September 26,2025

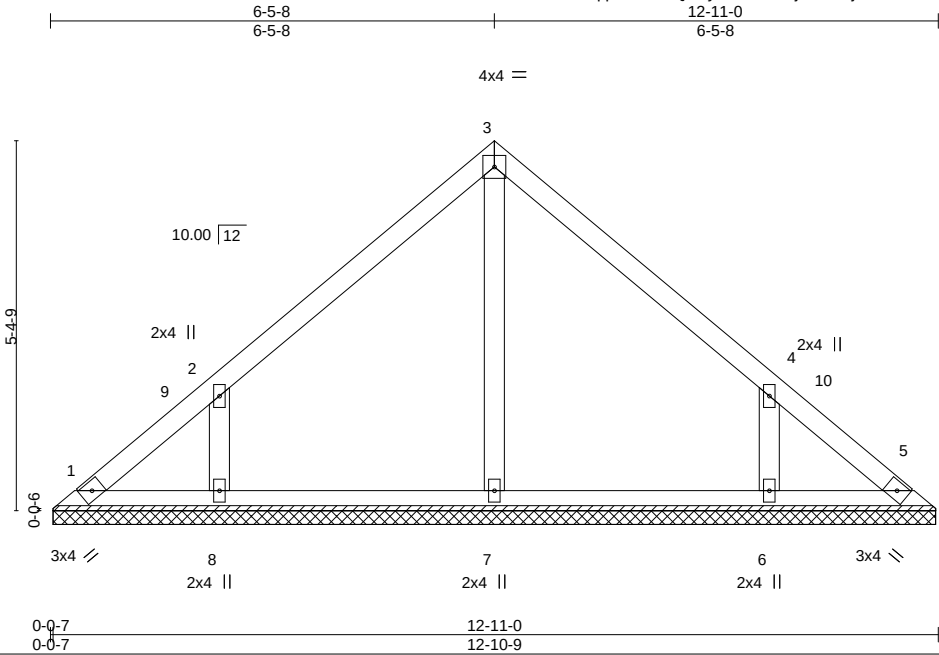
Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	V3	VALLEY	1	1	176645147

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:37 2025 Page 1

ID:aTXuLo?nW09qtpROz2WQ0wydkZW-zGxjDFYsXjbFxuakMPMjCmNDjA92mTgP7eghdhyZwaq

Job Reference (optional)



Scale = 1:33.5

Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]									
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.13	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.09	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S					Weight: 54 lb	FT = 20%

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

REACTIONS. All bearings 12-10-1.
(lb) - Max Horz 1=-121(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-124(LC 12), 6=-124(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=330(LC 19), 6=330(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-264/289, 4-6=-263/289

- 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) 0-4-13 to 4-9-10, Interior(1) 4-9-10 to 6-5-8, Exterior(2R) 6-5-8 to 10-10-5, Interior(1) 10-10-5 to 12-6-3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=124, 6=124.
 - Non Standard bearing condition. Review required.



September 26,2025

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 45 Magnolia Hills
251710-A	V4	VALLEY	1	1	176645148

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:37 2025 Page 1

ID:aTXuLo?nW09qtpROz2WQ0wydkZW-zGxjDFYsXjbFxuakMPMjCmNC8A8xmUuP7eghdhyZwaq

10-1-6

5-0-11

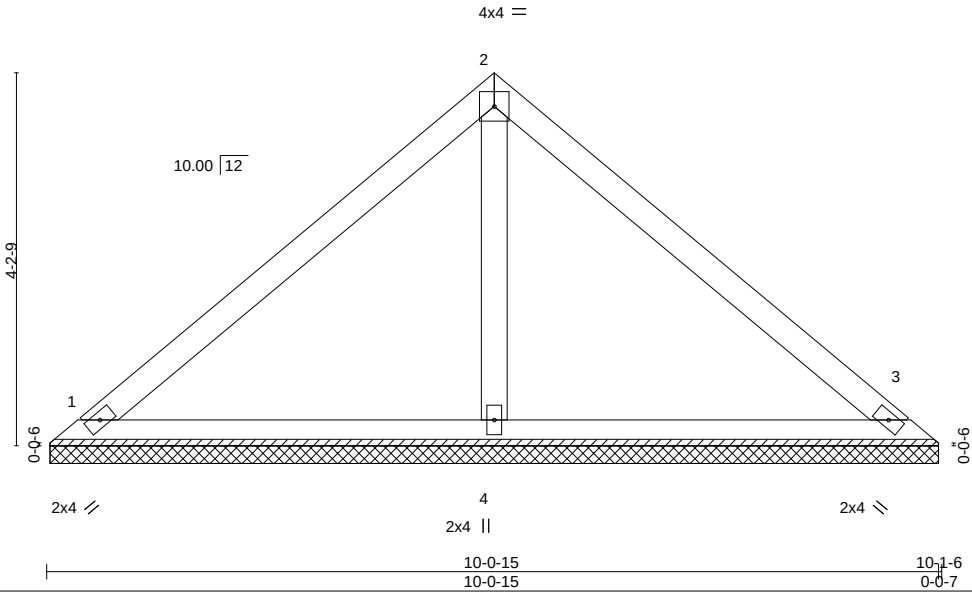
5-0-11

5-0-11

5-0-11

4x4 =

Scale = 1:26.0



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.16	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S						Weight: 38 lb	FT = 20%

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

REACTIONS. (size) 1=10-0-8, 3=10-0-8, 4=10-0-8
 Max Horz 1=93(LC 11)
 Max Uplift 1=-22(LC 13), 3=-30(LC 13)
 Max Grav 1=199(LC 1), 3=199(LC 1), 4=347(LC 1)

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

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



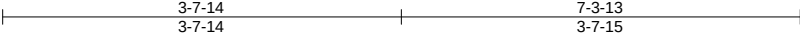
September 26,2025

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	V5	VALLEY	1	1	176645149
Job Reference (optional)					

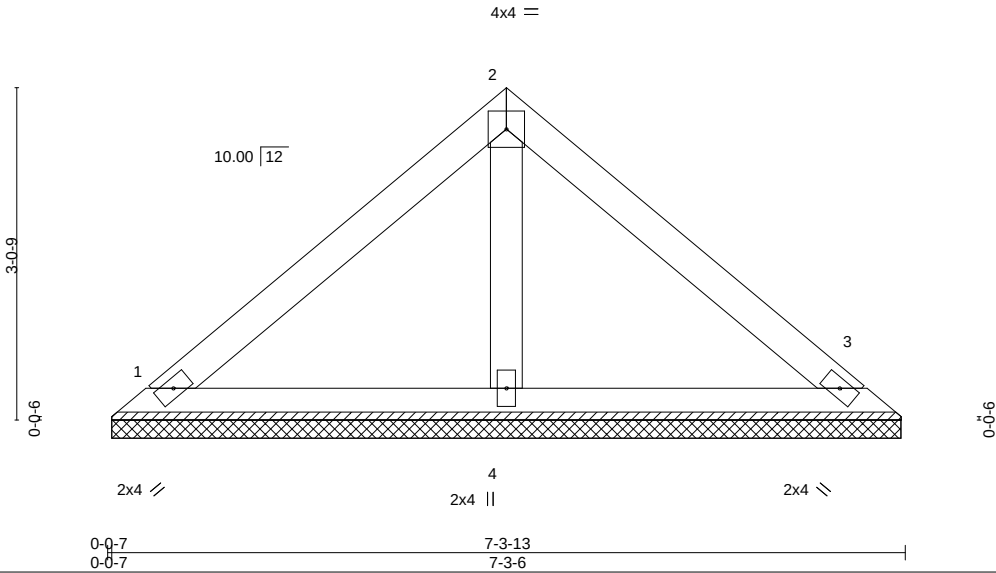
Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:38 2025 Page 1

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Scale = 1:21.1



LOADING (psf)	SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	2-0-0	TC 0.20		Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08		Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02		Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-P							Weight: 27 lb	FT = 20%

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

REACTIONS. (size) 1=7-2-14, 3=7-2-14, 4=7-2-14
Max Horz 1=-65(LC 8)
Max Uplift 1=-23(LC 13), 3=-29(LC 13)
Max Grav 1=151(LC 1), 3=151(LC 1), 4=220(LC 1)

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; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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, 3.
 - Non Standard bearing condition. Review required.



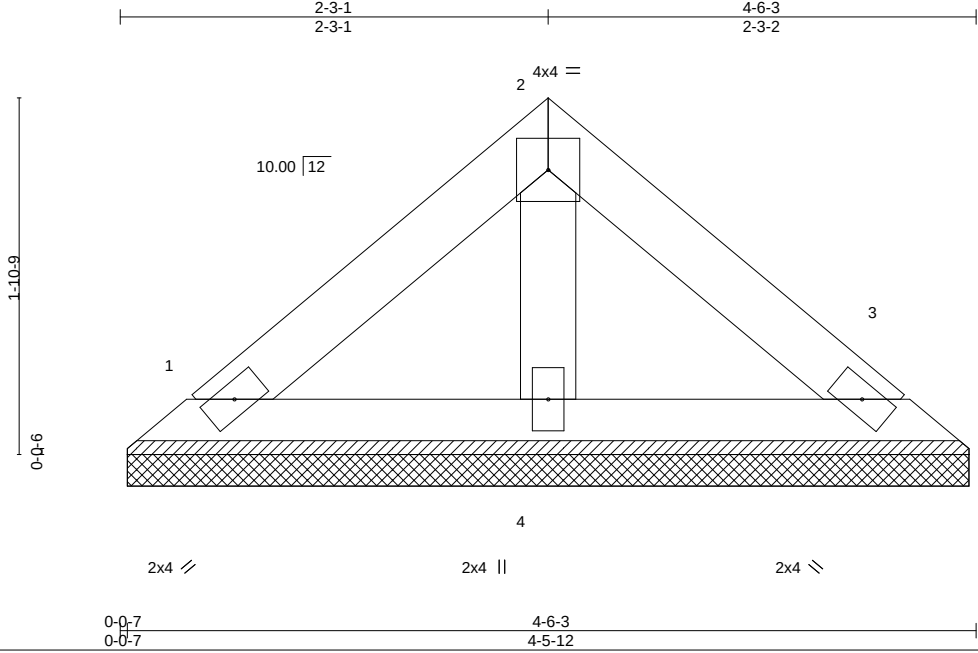
September 26,2025

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-A	V6	VALLEY	1	1	176645150

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:38 2025 Page 1

ID:aTXuLo?nW09qtpROz2WQ0wydkZW-SSV5RbZUI0j6Z29xv6tyl_wPOaVGvxqYMIQF98yZwap



LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.03	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.01	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014	Matrix-P						Weight: 16 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-6-3 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	

REACTIONS. (size) 1=4-5-5, 3=4-5-5, 4=4-5-5
Max Horz 1=-37(LC 8)
Max Uplift 1=-13(LC 13), 3=-16(LC 13)
Max Grav 1=86(LC 1), 3=86(LC 1), 4=125(LC 1)

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; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Gable requires continuous bottom chord bearing.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 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, 3.



September 26,2025

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

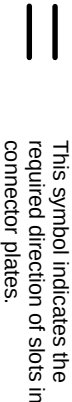
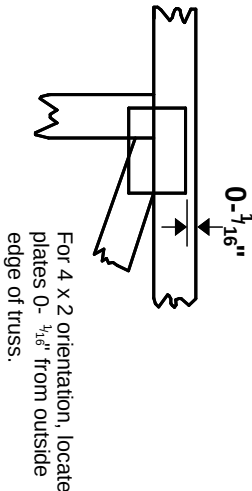
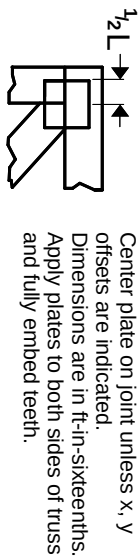
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 X 4

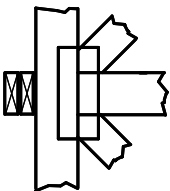
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

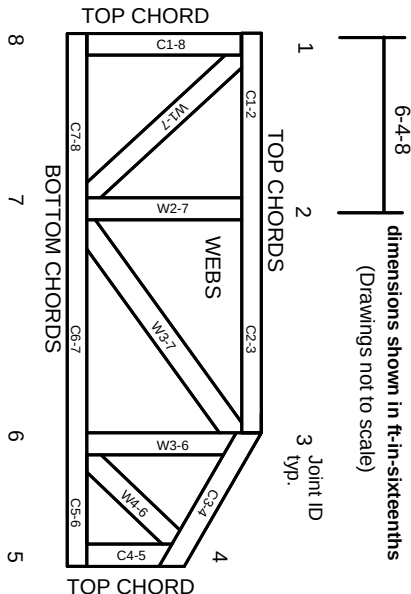
BEARING



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

Numbering System



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

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

Product Code Approvals

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

Design General Notes

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

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

RE: 251710-B
Lot 45 Magnolia Hills

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Precision Custom Homes and Renovations Project Name: 251710-B
Lot/Block: 45 Model:
Address: Subdivision: Magnolia Hills
City: Cameron State: NC

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

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

This package includes 10 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I76645151	ET1	9/26/2025
2	I76645152	ET2	9/26/2025
3	I76645153	ET3	9/26/2025
4	I76645154	F1	9/26/2025
5	I76645155	F2	9/26/2025
6	I76645156	F3	9/26/2025
7	I76645157	F4	9/26/2025
8	I76645158	F4A	9/26/2025
9	I76645159	F5	9/26/2025
10	I76645160	FG1	9/26/2025

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

Truss Design Engineer's Name: Galinski, John

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

North Carolina COA: C-0844

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



Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-B	ET1	GABLE	1	1	176645151
					Job Reference (optional)

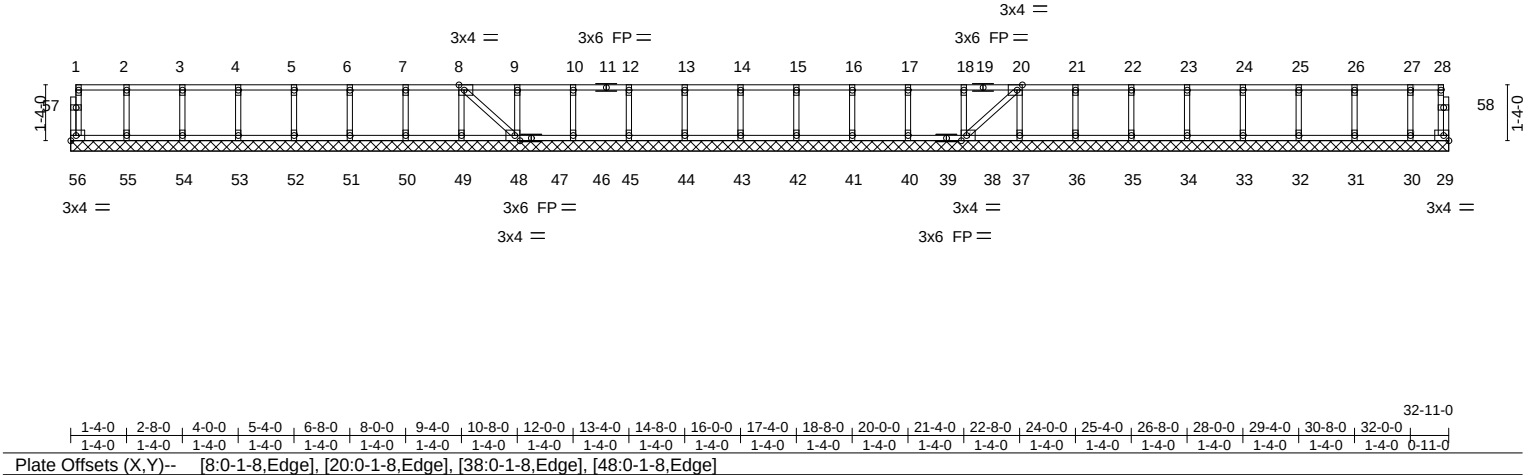
Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:58 2025 Page 1
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0-1-8
H

0-1-8
H

Scale = 1:55.0



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.01	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	-0.00	38	n/a	n/a		
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S						Weight: 147 lb	FT = 20%F, 11%E

LUMBER-

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

BRACING-

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

REACTIONS.

All bearings 32-11-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 56, 29, 55, 54, 53, 52, 51, 50, 49, 48, 46, 45, 44, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31, 30

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

NOTES-

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



September 26, 2025

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

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ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

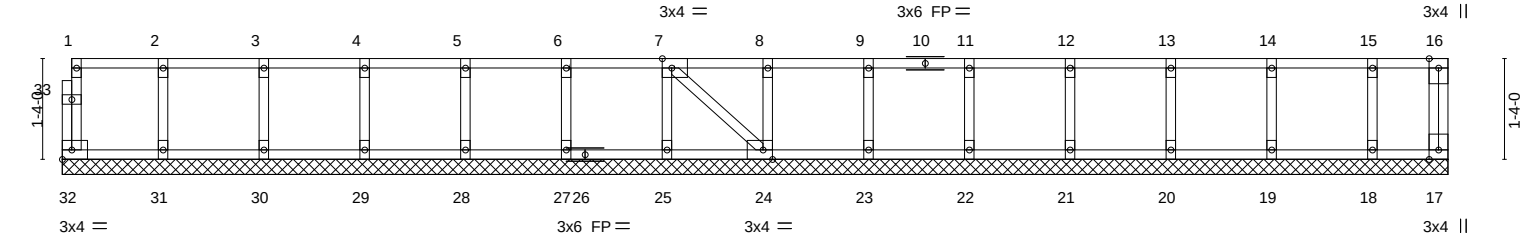
Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-B	ET2	GABLE	1	1	176645152
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:59 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-kgDjm7YRNesDgs_5VNOFS9I?92gUwRjeB3?sPQyZwaU

0-1-8
H

Scale = 1:30.5



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	14-8-0	16-0-0	17-4-0	18-4-0
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-0-0
Plate Offsets (X,Y)-- [7:0-1-8,Edge], [24:0-1-8,Edge]													

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.01	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	NO	WB 0.03	Horz(CT)	0.00	17	n/a	n/a		
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S						Weight: 84 lb	FT = 20%F, 11%E

LUMBER-

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

BRACING-

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

REACTIONS.

All bearings 18-4-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 32, 17, 31, 30, 29, 28, 27, 25, 24, 23, 22, 21, 20, 19, 18

FORCES.

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

NOTES-

- 1) All plates are 1.5x3 MT20 unless otherwise indicated.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Gable requires continuous bottom chord bearing.
- 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 5) Gable studs spaced at 1-4-0 oc.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails.
Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 7) CAUTION, Do not erect truss backwards.



September 26,2025

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A MITEK Affiliate

818 Soundside Road
Edenton, NC 27932

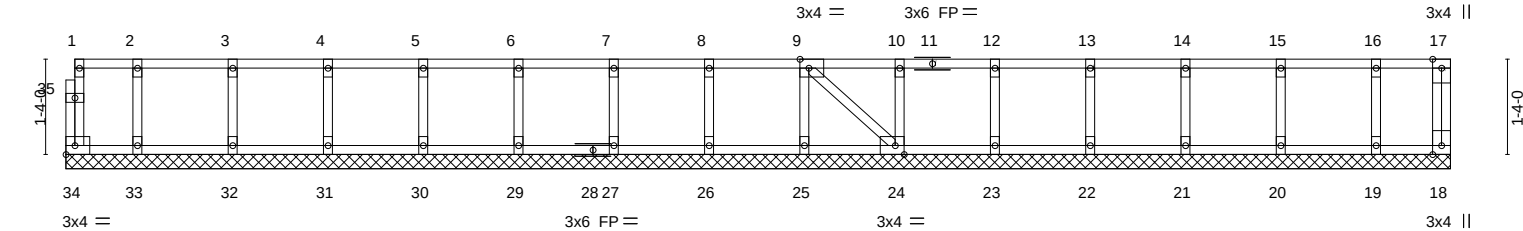
Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-B	ET3	GABLE	1	1	176645153
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:27:59 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-kgDjm7YRNesDgs_5VNOFS9l0H2gVwrJeb3?sPQyZwaU

0-1-8
H

Scale: 3/8"=1'



1-0-0	2-4-0	3-8-0	5-0-0	6-4-0	7-8-0	9-0-0	10-4-0	11-8-0	13-0-0	14-4-0	15-8-0	17-0-0	18-4-0	19-4-8
1-0-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-0-8
Plate Offsets (X,Y)-- [9:0-1-8,Edge], [24:0-1-8,Edge]														

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.01	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	18	n/a	n/a		
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S						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)
OTHERS 2x4 SP No.3(flat)

BRACING-

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

REACTIONS.

All bearings 19-4-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 34, 18, 33, 32, 31, 30, 29, 27, 26, 25, 24, 23, 22, 21, 20, 19

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

NOTES-

- 1) All plates are 1.5x3 MT20 unless otherwise indicated.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Gable requires continuous bottom chord bearing.
- 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 5) Gable studs spaced at 1-4-0 oc.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 7) CAUTION, Do not erect truss backwards.



September 26,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-B	F1	FLOOR	7	1	176645154
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:28:00 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-Csn5zTZ48y_4H0ZH35vU?Nq23Sq2flhoQjIPxzyZwaT

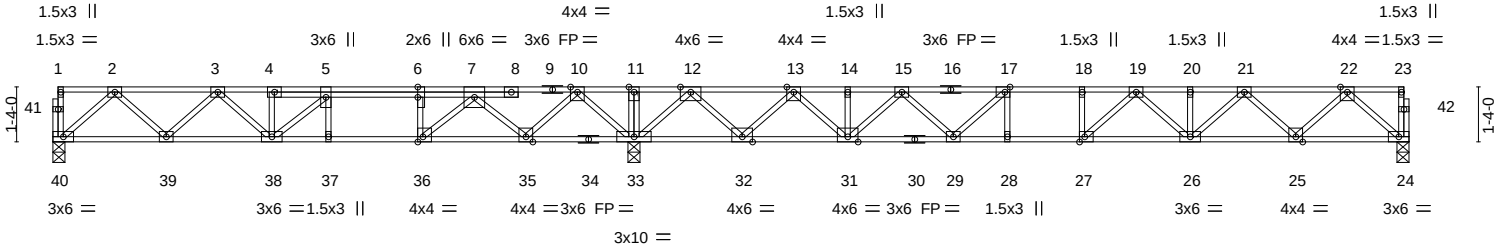


Plate Offsets (X,Y)--	[6:0-3-0,0-0-0], [17:0-1-8,Edge], [27:0-1-8,Edge], [36:0-1-8,Edge]
-----------------------	--

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.63	Vert(LL)	-0.20 27	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.82	Vert(CT)	-0.27 26-27	>820	360		
BCLL 0.0	Rep Stress Incr	YES	WB 0.63	Horz(CT)	0.04 24	n/a	n/a		
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S					Weight: 180 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) 40=0-3-8, 24=0-3-8, 33=0-3-8
Max Grav 40=662(LC 3), 24=882(LC 4), 33=2190(LC 1)

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

TOP CHORD 2-3=-1110/36, 3-4=-1659/212, 4-5=-1659/219, 5-6=-1602/621, 6-7=-1602/621, 7-10=-392/1404, 10-11=0/2571, 11-12=0/2571, 12-13=-40/475, 13-14=-1631/0, 14-15=-1631/0, 15-17=-2564/0, 17-18=-2931/0, 18-19=-2931/0, 19-20=-2592/0, 20-21=-2592/0, 21-22=-1586/0
BOT CHORD 39-40=0/704, 38-39=-106/1489, 37-38=-621/1602, 36-37=-621/1602, 35-36=-1086/1024, 33-35=-1709/0, 32-33=-1291/0, 31-32=-200/935, 29-31=0/2220, 28-29=0/2931, 27-28=0/2931, 26-27=0/2856, 25-26=0/2193, 24-25=0/952
WEBS 2-40=-935/0, 2-39=-59/564, 3-39=-528/98, 4-38=-325/0, 5-38=0/648, 22-24=-1266/0, 22-25=0/881, 21-25=-845/0, 21-26=0/542, 19-26=-358/0, 19-27=-253/331, 12-33=-1704/0, 12-32=0/1314, 10-33=-1399/0, 10-35=0/993, 7-35=-1033/0, 7-36=0/1214, 6-36=-690/0, 13-32=-1288/0, 13-31=0/991, 15-31=-835/0, 15-29=0/579, 17-29=-718/0

NOTES-

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



September 26,2025

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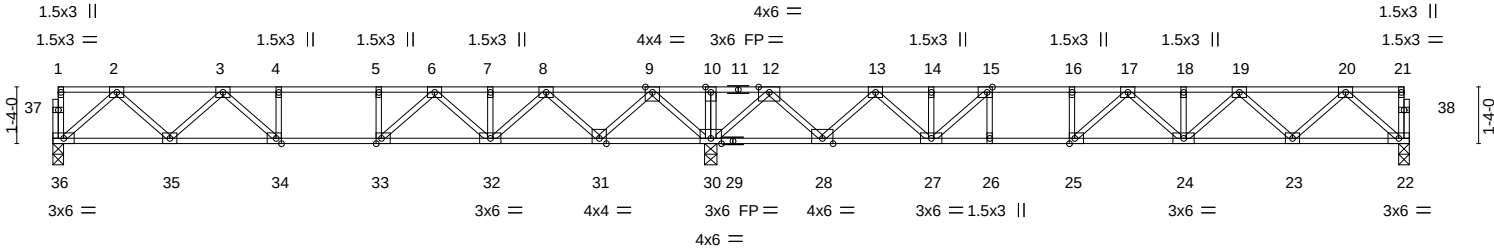
ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-B	F2	FLOOR	3	1	176645155
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:28:00 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-Csn5zTZ48y_4H0ZH35vU?Nq_dSoafm0oQjIPxsyZwaT



		15-5-12				31-11-0					
		15-5-12				16-5-4					
Plate Offsets (X,Y)--		[15:0-1-8,Edge], [25:0-1-8,Edge], [33:0-1-8,Edge], [34:0-1-8,Edge]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES GRIP			
TCLL	40.0	Plate Grip DOL	1.00	TC	0.85	Vert(LL)	-0.18 24-25	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.91	Vert(CT)	-0.25 24-25	>776	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.04 22	n/a	n/a		
BCDL	5.0	Code IRC2021/TPI2014		Matrix-S						Weight: 167 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) 36=0-3-0, 30=0-3-8, 22=0-3-0
Max Grav 36=719(LC 3), 30=2079(LC 1), 22=795(LC 4)

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

TOP CHORD 2-3=-1229/0, 3-4=-1941/0, 4-5=-1941/0, 5-6=-1941/0, 6-7=-1408/202, 7-8=-1408/202, 8-9=-241/659, 9-10=0/2218, 10-12=0/2218, 12-13=-523/817, 13-14=-1712/332, 14-15=-1712/332, 15-16=-2291/0, 16-17=-2291/0, 17-18=-2225/0, 18-19=-2225/0, 19-20=-1395/0
BOT CHORD 35-36=0/769, 34-35=0/1668, 33-34=0/1941, 32-33=-35/1748, 31-32=-414/927, 30-31=-1214/0, 28-30=-1129/0, 27-28=-547/1232, 26-27=0/2291, 25-26=0/2291, 24-25=0/2385, 23-24=0/1918, 22-23=0/852
WEBS 2-36=-1022/0, 2-35=0/640, 3-35=-610/0, 3-34=-83/372, 9-30=-1439/0, 9-31=0/1062, 20-22=-1132/0, 20-23=0/755, 19-23=-728/0, 19-24=-1/417, 17-25=-477/33, 12-30=-1508/0, 8-31=-1027/0, 8-32=0/734, 6-32=-547/0, 6-33=0/628, 5-33=-320/0, 12-28=0/1134, 13-28=-1085/0, 13-27=0/740, 15-27=-1088/0, 15-26=0/273

NOTES-

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



September 26,2025

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ENGINEERING BY
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818 Soundside Road
Edenton, NC 27932

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:28:01 2025 Page 1
ID:aTXuLo?nW09qtoRoz2W00vvdKZW-q3LTBpaivG6xvA8UdoOixANdPwr8EOD4xeNUvTlvZwaS

0-1-8
Scale = 1:32.8



TOP CHORD	Structural wood sheathing directly applied or 5-9-6 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 1.5x3 MT20 unless otherwise indicated.
- 4) Plates checked for a plus or minus 1 degree rotation about its center.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-0" oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



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

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-B	F4	FLOOR	10	1	176645157
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:28:01 2025 Page 1
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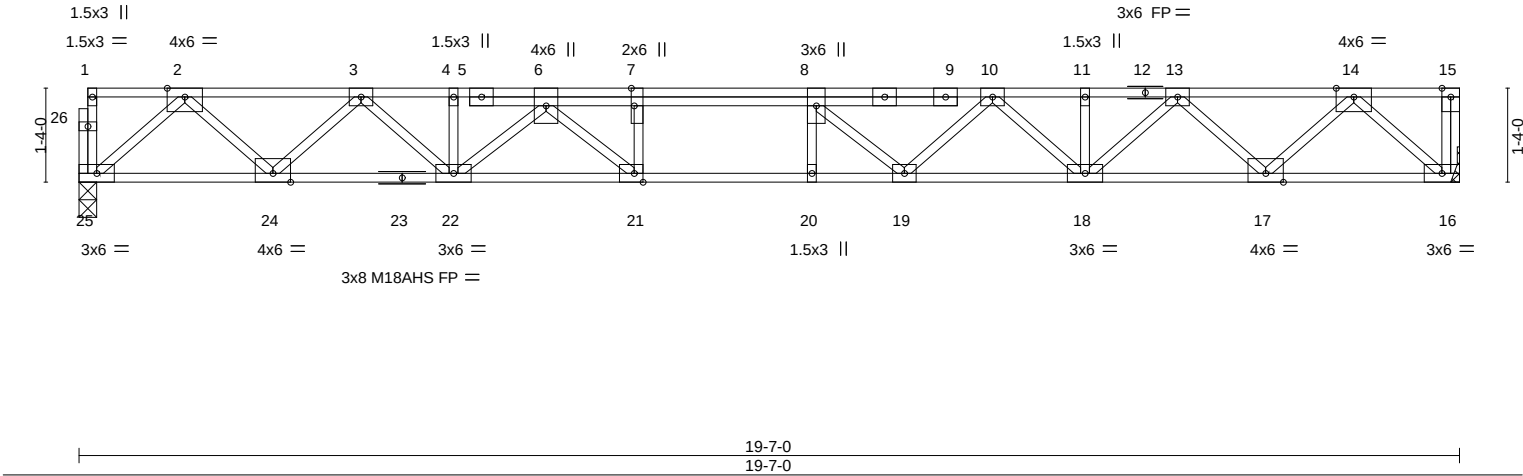
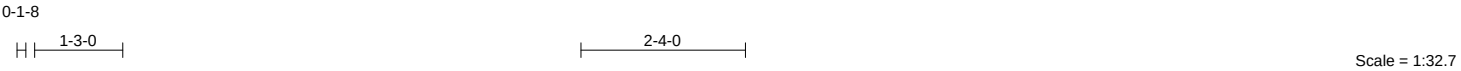


Plate Offsets (X,Y)--		[7:0-3-0,Edge], [21:0-1-8,Edge]										
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES		GRIP		
TCLL	40.0	Plate Grip DOL	1.00	TC	0.38	Vert(LL)	-0.28	20	>818	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.87	Vert(CT)	-0.39	20	>595	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.08	16	n/a	n/a		
BCDL	5.0	Code IRC2021/TPI2014		Matrix-S							Weight: 112 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) 25=0-3-0, 16=Mechanical
Max Grav 25=1057(LC 1), 16=1063(LC 1)

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

TOP CHORD 2-3=-1966/0, 3-4=-3330/0, 4-6=-3334/0, 6-7=-4400/0, 7-8=-4400/0, 8-10=-4108/0,
10-11=-3335/0, 11-13=-3335/0, 13-14=-1966/0
BOT CHORD 24-25=0/1151, 22-24=0/2750, 21-22=0/3935, 20-21=0/4400, 19-20=0/4400, 18-19=0/3798,
17-18=0/2749, 16-17=0/1152
WEBS 2-25=-1530/0, 2-24=0/1133, 3-24=-1090/0, 3-22=0/788, 6-22=-803/0, 6-21=0/943,
7-21=-540/0, 14-16=-1534/0, 14-17=0/1132, 13-17=-1090/0, 13-18=0/796, 10-18=-629/0,
10-19=0/571, 8-19=-610/0

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 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.
- 7) CAUTION, Do not erect truss backwards.



September 26,2025

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)

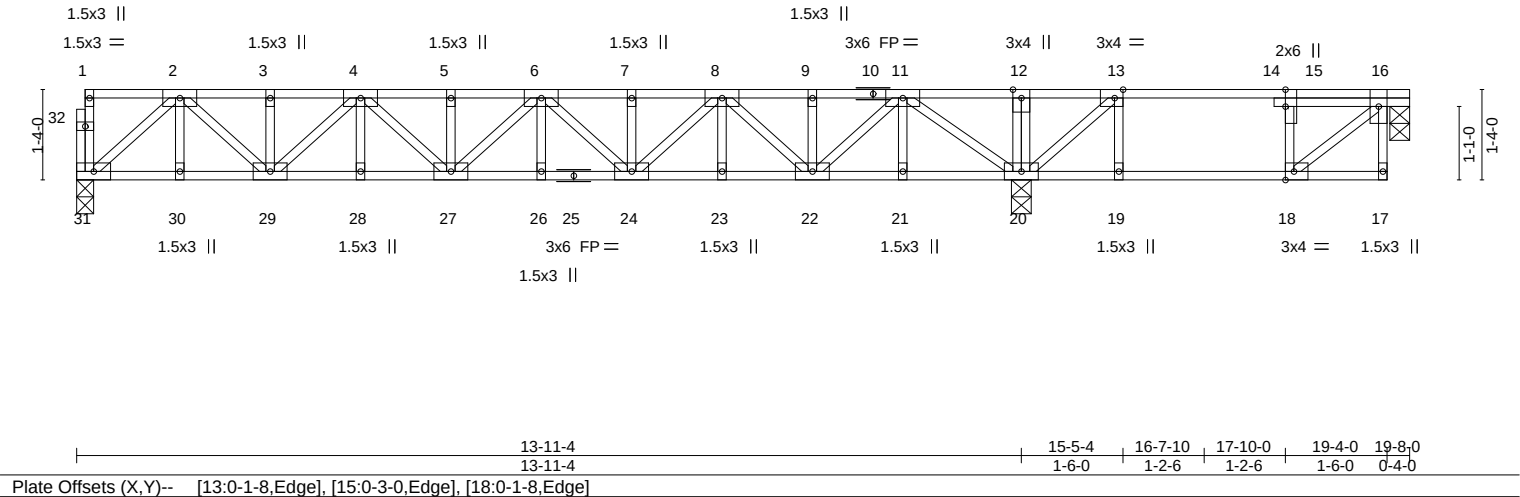
ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-B	F4A	FLOOR	1	1	176645158
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:28:02 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-9FvsO8bKfZEoXKjgAWxy4owQ9FdK7jE4t1EW?lyZwaR



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.40	Vert(LL)	-0.08	26	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.38	Vert(CT)	-0.11	26	>999	360		
BCLL 0.0	Rep Stress Incr	YES	WB 0.37	Horz(CT)	0.03	20	n/a	n/a		
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S						Weight: 115 lb	FT = 20%F, 11%E

LUMBER-			BRACING-		
TOP CHORD	2x4 SP No.1(flat)		TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.	
BOT CHORD	2x4 SP No.1(flat)		BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 19-20,18-19.	
WEBS	2x4 SP No.3(flat)				
REACTIONS.					
(size) 31=0-3-0, 16=0-3-8, 20=0-3-8					
Max Grav 31=730(LC 8), 16=275(LC 4), 20=1157(LC 7)					

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	2-3=-1331/0, 3-4=-1331/0, 4-5=-1969/0, 5-6=-1969/0, 6-7=-1961/0, 7-8=-1961/0, 8-9=-1306/0, 9-11=-1306/0, 11-12=0/365, 12-13=0/364, 13-15=-276/99, 15-16=-253/96
BOT CHORD	30-31=0/775, 29-30=0/775, 28-29=0/1732, 27-28=0/1732, 26-27=0/2047, 24-26=0/2047, 23-24=0/1717, 22-23=0/1717, 21-22=0/750, 20-21=0/750, 19-20=-96/253, 18-19=-96/253
WEBS	16-18=-125/330, 2-31=-1021/0, 2-29=0/751, 4-29=-541/0, 4-27=0/319, 8-24=0/345, 8-22=-569/0, 11-22=0/769, 11-20=-1229/0, 13-20=-575/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
 - 2) All plates are 3x6 MT20 unless otherwise indicated.
 - 3) Plates checked for a plus or minus 1 degree rotation about its center.
 - 4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
 - 5) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
 - 6) CAUTION, Do not erect truss backwards.

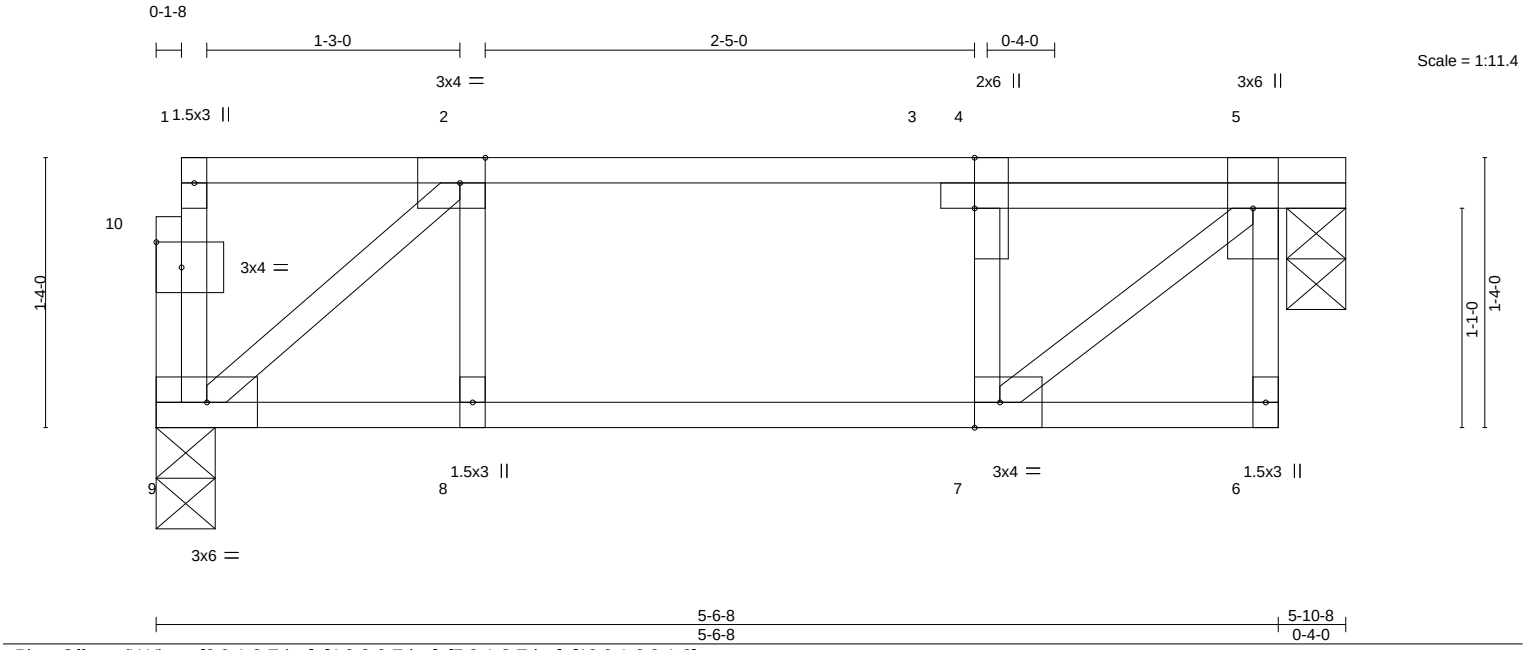


September 26,2025

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills	176645159
251710-B	F5	FLOOR	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:28:02 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-9FvsO8bKfZEoXKjgAWxy4owTDFhM7m44t1EW?lyZwaR



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.21	Vert(LL)	-0.01	7	>999	480	MT20
TCDL 10.0	Lumber DOL	1.00	BC 0.12	Vert(CT)	-0.01	7	>999	360	244/190
BCLL 0.0	Rep Stress Incr	YES	WB 0.18	Horz(CT)	-0.01	5	n/a	n/a	
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S						
								Weight: 32 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 5-10-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 9=0-3-8, 5=0-3-8
Max Grav 9=288(LC 1), 5=294(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-322/0, 4-5=-298/0
BOT CHORD 8-9=0/298, 7-8=0/298
WEBS 2-9=-386/0, 5-7=0/387

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 4) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 5) CAUTION, Do not erect truss backwards.



September 26,2025

Job	Truss	Truss Type	Qty	Ply	Lot 45 Magnolia Hills
251710-B	FG1	FLOOR	1	1	176645160
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

25.3.0 s Sep 17 2025 MiTek Industries, Inc. Fri Sep 26 00:28:03 2025 Page 1
ID:aTXuLo?nW09qtpROz2WQ0wydkZW-dRSEcUbyQtMf9UlskDTBd?SgGf0xsDFE6hz3YByZwaQ

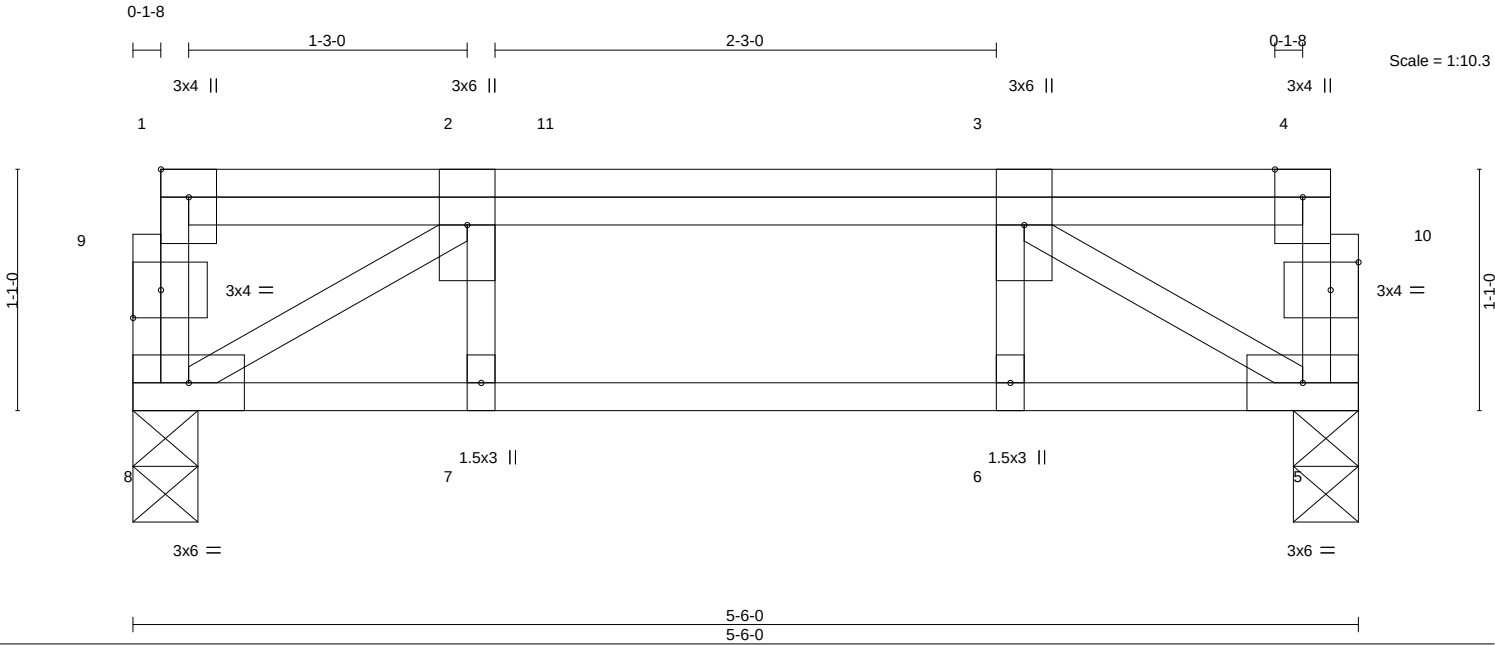


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [9:0-1-8,0-1-8], [10:0-1-8,0-1-8]					
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	PLATES
TCLL 40.0	Plate Grip DOL	1.00	TC 0.12	in (loc) l/defl L/d	MT20
TCDL 10.0	Lumber DOL	1.00	BC 0.17	Vert(LL) -0.01 6 >999 480	GRIP
BCLL 0.0	Rep Stress Incr	NO	WB 0.19	Vert(CT) -0.01 6-7 >999 360	244/190
BCDL 5.0	Code IRC2021/TPI2014		Matrix-S	Horz(CT) 0.01 5 n/a n/a	
					Weight: 34 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 5-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 8=0-3-8, 5=0-3-8
Max Grav 8=456(LC 1), 5=478(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-685/0
BOT CHORD 7-8=0/685, 6-7=0/685, 5-6=0/685
WEBS 2-8=-806/0, 3-5=-804/0

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) 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.

LOAD CASE(S) Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 5-8=-10, 1-4=-100
Concentrated Loads (lb)
Vert: 3=-175 11=-194



September 26,2025

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

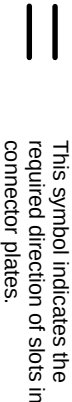
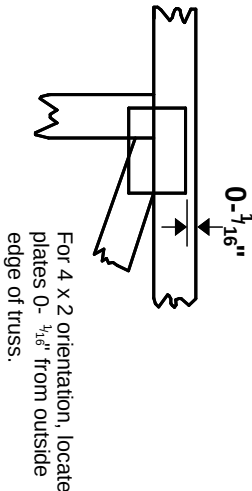
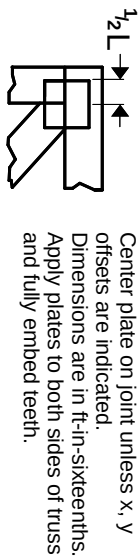
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 X 4

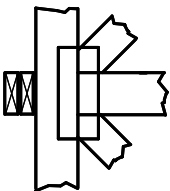
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

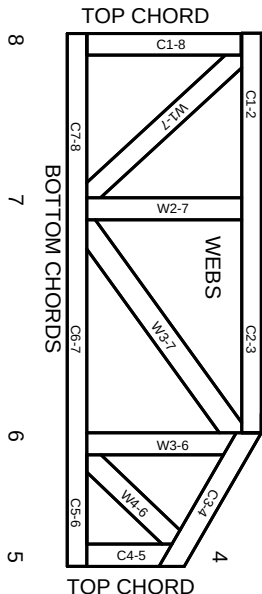
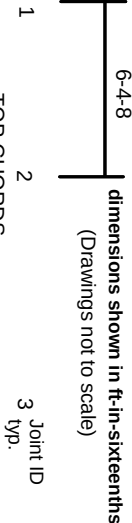


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

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



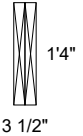
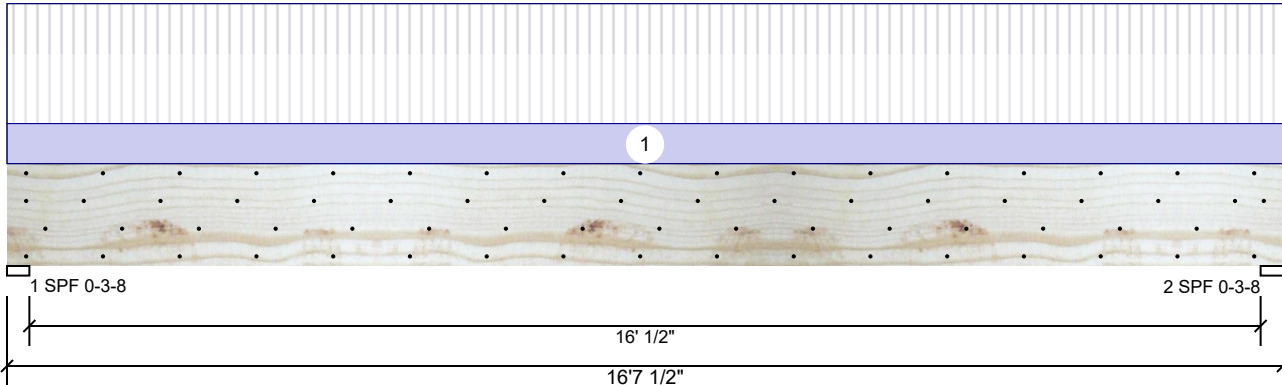
Client: Precision Custom Homes
Project:
Address:

Date: 10/14/2025
Input by: Hampton Horrocks
Job Name: Lot 45 Magnolia Hills
Project #: 251710-B

Page 1 of 10

BM1 Kerto-S LVL 1.750" X 16.000" 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 2012
Load Sharing: No
Deck: Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	3333	1217	0	0	0
2	Vertical	3333	1217	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	87%	1217 / 3333	4551	L	D+L
2 - SPF	3.500"	Vert	87%	1217 / 3333	4551	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17931 ft-lb	8'3 3/4"	34565 ft-lb	52%	D+L	L
Unbraced	17931 ft-lb	8'3 3/4"	17951 ft-lb	100%	D+L	L
Shear	4374 lb	15'	11947 lb	37%	D+L	L
LL Defl inch	0.286 (L/678)	8'3 13/16"	0.405 (L/480)	71%	L	L
TL Defl inch	0.391 (L/497)	8'3 13/16"	0.809 (L/240)	48%	D+L	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 laterally braced at a maximum of 6'5 3/4" o.c.
- Bottom must be laterally braced at end bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Near Face	134 PLF	401 PLF	0 PLF	0 PLF	0 PLF	F4
	Self Weight				12 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

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





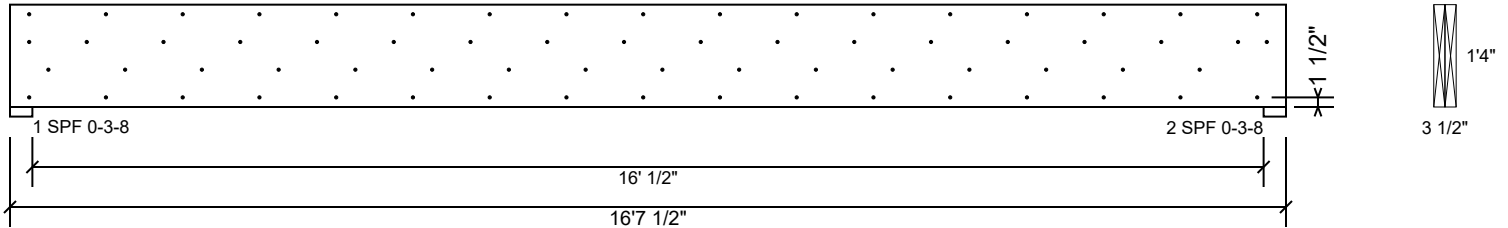
Client: Precision Custom Homes
Project:
Address:

Date: 10/14/2025
Input by: Hampton Horrocks
Job Name: Lot 45 Magnolia Hills
Project #: 251710-B

Page 2 of 10

BM1 Kerto-S LVL 1.750" X 16.000" 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	81.7 %
Load	267.5 PLF
Yield Limit per Foot	327.4 PLF
Yield Limit per Fastener	81.9 lb.
C _m	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
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

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





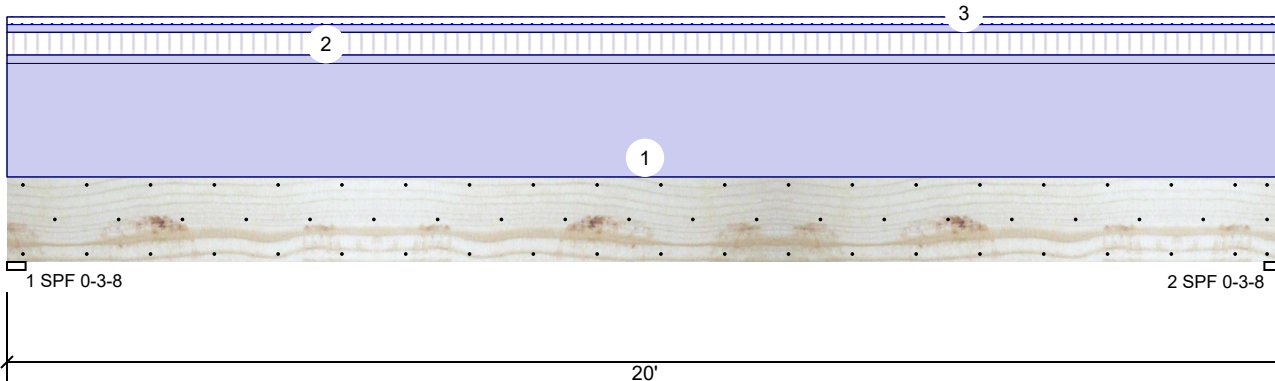
Client: Precision Custom Homes
Project:
Address:

Date: 10/14/2025
Input by: Hampton Horrocks
Job Name: Lot 45 Magnolia Hills
Project #: 251710-B

Page 3 of 10

BM2 Kerto-S LVL 1.750" X 16.000" 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 2012
Load Sharing: No
Deck: Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	400	2409	135	0	0
2	Vertical	400	2409	135	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	54%	2409 / 401	2811	L	D+0.75(L+S)
2 - SPF	3.500"	Vert	54%	2409 / 401	2811	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	13439 ft-lb	10'	34565 ft-lb	39%	D+L	L
Unbraced	13439 ft-lb	10'	13492 ft-lb	100%	D+L	L
Shear	2444 lb	18'4 1/2"	11947 lb	20%	D+L	L
LL Defl inch	0.059 (L/3960)	10' 1/16"	0.489 (L/480)	12%	0.75(L+S)	L
TL Defl inch	0.415 (L/565)	10' 1/16"	0.978 (L/240)	42%	D+0.75(L+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 laterally braced at a maximum of 8'9 7/16" o.c.
- Bottom must be laterally braced at end bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	200 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above, C1GE
2	Tie-In	0-0-0 to 20-0-0	1-0-0	Far Face	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Floor Load
3	Tie-In	0-0-0 to 20-0-0	0-6-0	Near Face	27 PSF	0 PSF	27 PSF	0 PSF	0 PSF	J3
	Self Weight				12 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

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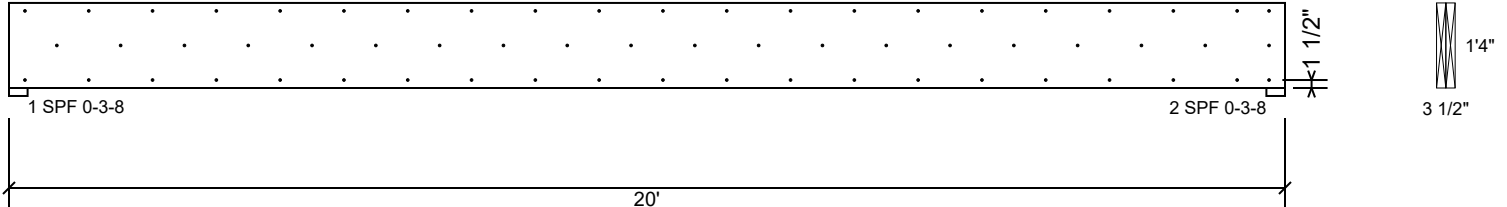
Client: Precision Custom Homes
Project:
Address:

Date: 10/14/2025
Input by: Hampton Horrocks
Job Name: Lot 45 Magnolia Hills
Project #: 251710-B

Page 4 of 10

BM2 Kerto-S LVL 1.750" X 16.000" 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	11.2 %
Load	27.5 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C _m	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
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

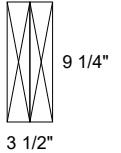
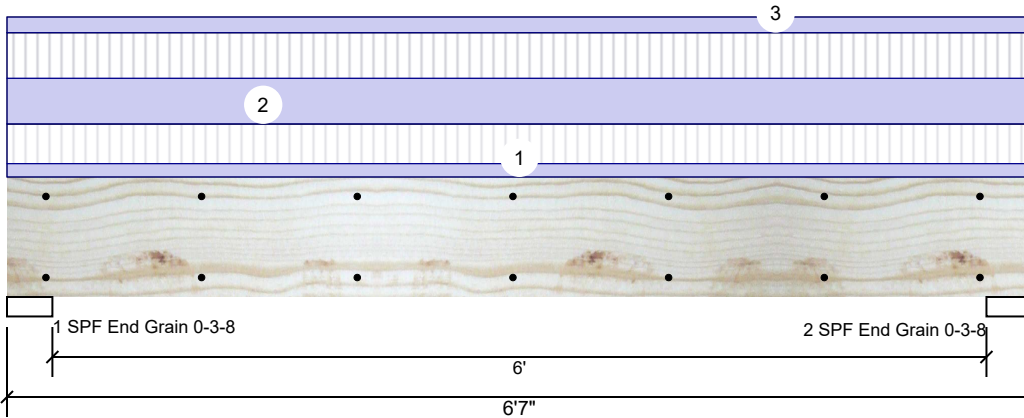
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BM4 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Information

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

Application: Floor
Design Method: ASD
Building Code: IBC 2012
Load Sharing: No
Deck: Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2149	1903	0	0	0
2	Vertical	2149	1903	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	39%	1903 / 2149	4053	L	D+L
2 - SPF End Grain	3.500"	Vert	39%	1903 / 2149	4053	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5774 ft-lb	3'3 1/2"	12542 ft-lb	46%	D+L	L
Unbraced	5774 ft-lb	3'3 1/2"	9934 ft-lb	58%	D+L	L
Shear	2745 lb	1' 3/4"	6907 lb	40%	D+L	L
LL Defl inch	0.056 (L/1320)	3'3 1/2"	0.153 (L/480)	36%	L	L
TL Defl inch	0.105 (L/700)	3'3 1/2"	0.204 (L/360)	51%	D+L	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	102 PLF	304 PLF	0 PLF	0 PLF	0 PLF	F2
2	Uniform			Top	349 PLF	349 PLF	0 PLF	0 PLF	0 PLF	A1
3	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
	Self Weight				7 PLF					

Notes

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

Lumber

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

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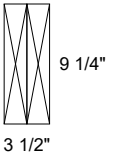
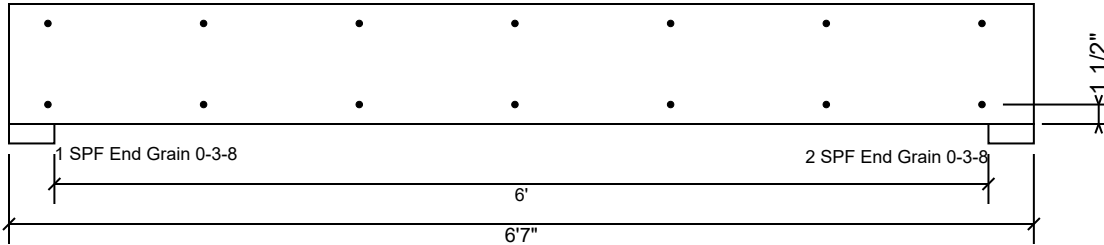
Client: Precision Custom Homes
Project:
Address:

Date: 10/14/2025
Input by: Hampton Horrocks
Job Name: Lot 45 Magnolia Hills
Project #: 251710-B

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BM4 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

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

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C _m	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

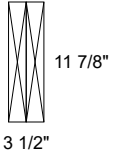
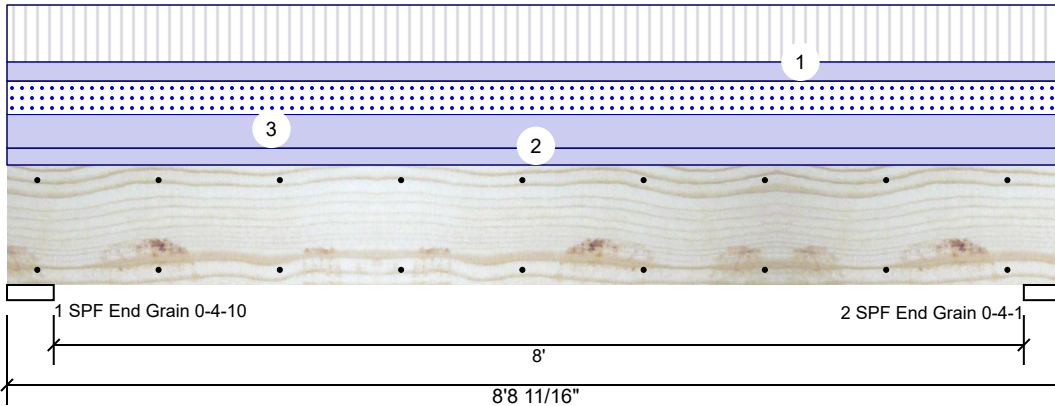
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BM5 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

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 2012
Load Sharing: No
Deck: Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1772	2203	1044	0	0
2	Vertical	1753	2179	1033	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.625"	Vert	32%	2203 / 2112	4314	L	D+0.75(L+S)
2 - SPF End Grain	4.063"	Vert	36%	2179 / 2089	4268	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7478 ft-lb	4'4 5/8"	19911 ft-lb	38%	D+L	L
Unbraced	8118 ft-lb	4'4 5/8"	11006 ft-lb	74%	D+0.75(L+S)	L
Shear	2728 lb	1'4 1/2"	8867 lb	31%	D+L	L
LL Defl inch	0.059 (L/1643)	4'4 11/16"	0.203 (L/480)	29%	0.75(L+S)	L
TL Defl inch	0.121 (L/804)	4'4 11/16"	0.406 (L/240)	30%	D+0.75(L+S)	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 8-8-11		Top	135 PLF	404 PLF	0 PLF	0 PLF	0 PLF	F3
2	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
3	Uniform			Top	238 PLF	0 PLF	238 PLF	0 PLF	0 PLF	C1
	Self Weight				9 PLF					

Notes

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

Lumber

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

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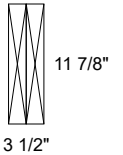
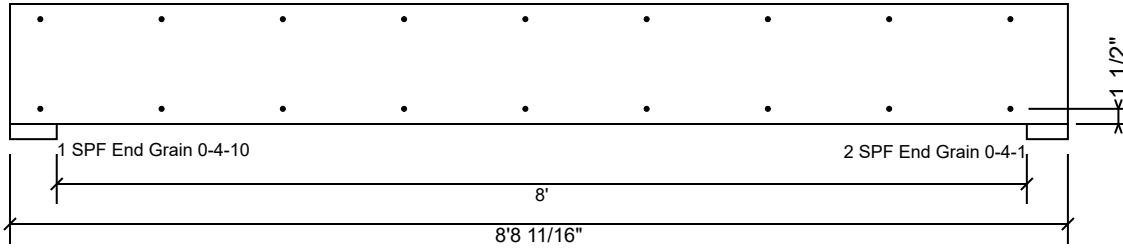
Client: Precision Custom Homes
Project:
Address:

Date: 10/14/2025
Input by: Hampton Horrocks
Job Name: Lot 45 Magnolia Hills
Project #: 251710-B

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BM5 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

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

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

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

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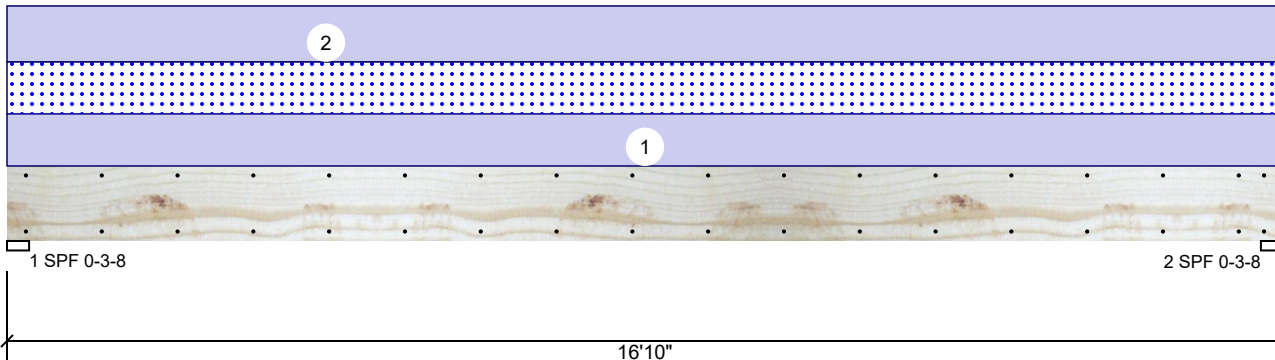
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GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



11 7/8"
3 1/2"

Member Information

Type: Girder
Plies: 2
Moisture Condition: Dry
Deflection LL: 480
Deflection TL: 240
Importance: Normal - II
Temperature: Temp <= 100°F

Application: Floor
Design Method: ASD
Building Code: IBC 2012
Load Sharing: No
Deck: Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1054	471	0	0
2	Vertical	0	1054	471	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	29%	1054 / 471	1525	L	D+S
2 - SPF	3.500"	Vert	29%	1054 / 471	1525	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6075 ft-lb	8'5"	22897 ft-lb	27%	D+S	L
Unbraced	6075 ft-lb	8'5"	6086 ft-lb	100%	D+S	L
Shear	1404 lb	1'3 3/8"	10197 lb	14%	D+S	L
LL Defl inch	0.098 (L/2006)	8'5 1/16"	0.409 (L/480)	24%	S	L
TL Defl inch	0.317 (L/620)	8'5 1/16"	0.819 (L/240)	39%	D+S	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Near Face	56 PLF	0 PLF	56 PLF	0 PLF	0 PLF	J3
2	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
	Self Weight				9 PLF					

Notes

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

Lumber

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

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
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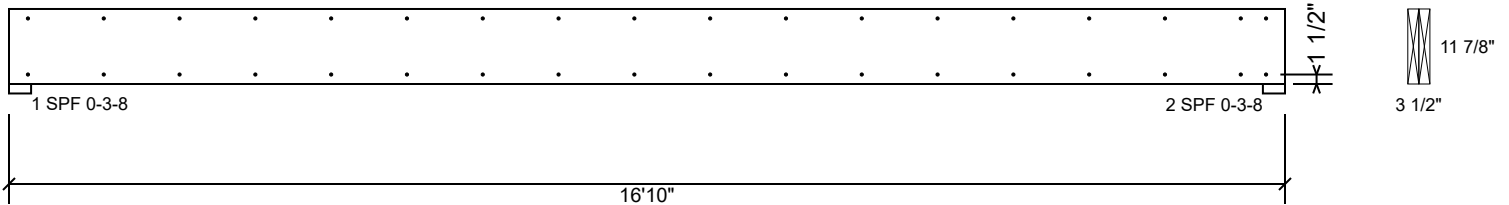
Client: Precision Custom Homes
Project:
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Input by: Hampton Horrocks
Job Name: Lot 45 Magnolia Hills
Project #: 251710-B

Page 10 of 10

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

Level: Level



Multi-Ply Analysis

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

Capacity	29.7 %
Load	56.0 PLF
Yield Limit per Foot	188.3 PLF
Yield Limit per Fastener	94.1 lb.
C _m	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

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