ENGINEERING BY TRENCO
A MiTek Affiliate

RE: J1024-5867
Lot 29 Magnolia Hills

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:
Customer: Project Name: J1024-5867
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 27 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I67838733	A1	8/28/2024	21	I67838753	G1	8/28/2024
2	I67838734	A1GE	8/28/2024	22	I67838754	G1GE	8/28/2024
3	I67838735	A2	8/28/2024	23	I67838755	M1	8/28/2024
4	I67838736	A2-GR	8/28/2024	24	I67838756	M2	8/28/2024
5	I67838737	A2SG	8/28/2024	25	I67838757	PB1	8/28/2024
6	I67838738	A3	8/28/2024	26	I67838758	PB1GE	8/28/2024
7	I67838739	A4	8/28/2024	27	I67838759	PB2	8/28/2024
8	I67838740	A4A	8/28/2024				
9	I67838741	A4SG	8/28/2024				
10	I67838742	A5	8/28/2024				
11	I67838743	A6	8/28/2024				
12	I67838744	A6GE	8/28/2024				
13	I67838745	B1	8/28/2024				
14	I67838746	B1GE	8/28/2024				
15	I67838747	B2	8/28/2024				
16	I67838748	B2-GR	8/28/2024				
17	I67838749	C1	8/28/2024				
18	I67838750	C1GE	8/28/2024				
19	I67838751	D1	8/28/2024				
20	I67838752	D1GE	8/28/2024				

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

Truss Design Engineer's Name: Gilbert, Eric

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

North Carolina COA: C-0844

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

August 28, 2024

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills	I67838733
J1024-5867	A1	ATTIC	6	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:26 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

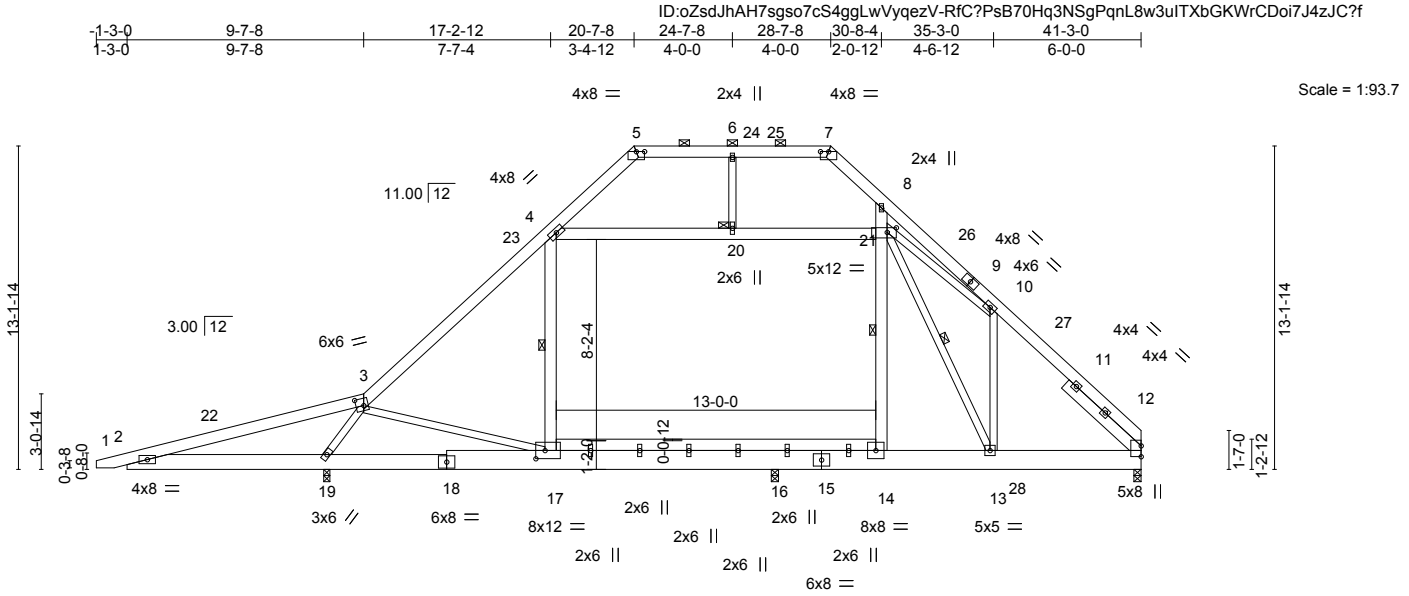


Plate Offsets (X,Y)-- [3:0-3-12,0-3-8], [5:0-4-0,0-0-1], [7:0-4-0,0-0-1], [17:0-4-8,0-4-0], [21:0-4-8,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.10	16-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.14	16-17	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.02	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	-0.13	17	>999	240	Weight: 439 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x10 SP No.1 *Except* 2-18: 2x8 SP No.1, 14-17: 2x6 SP No.1
WEBS	2x4 SP No.2 *Except* 4-17,4-21,8-14: 2x6 SP No.1
SLIDER	Right 2x6 SP No.1 4-1-3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-7-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 4-17, 14-21, 13-21
JOINTS	1 Brace at Jt(s): 20

REACTIONS. (size) 12=0-3-8, 19=0-3-0, 16=0-3-8
Max Horz 19=305(LC 9)
Max Uplift 16=-126(LC 8)
Max Grav 12=1462(LC 20), 19=2219(LC 1), 16=1173(LC 21)

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

TOP CHORD	2-3=-1202/1409, 3-4=-1683/0, 4-5=-712/163, 5-6=-486/148, 6-7=-486/148, 7-8=-646/160, 8-10=-728/39, 10-12=-1782/30
BOT CHORD	2-19=-1297/1214, 17-19=-180/966, 16-17=-6/1308, 14-16=-6/1308, 13-14=-7/1304, 12-13=0/1177
WEBS	3-19=-2309/562, 3-17=-479/905, 4-17=-142/343, 4-20=-850/94, 20-21=-854/95, 14-21=-351/790, 10-13=-177/340, 13-21=-670/456, 10-21=-1037/249

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-11 to 3-6-2, Interior(1) 3-6-2 to 20-8-9, Exterior(2) 20-8-9 to 25-1-6, Interior(1) 25-1-6 to 28-6-7, Exterior(2) 28-6-7 to 32-11-4, Interior(1) 32-11-4 to 41-3-0 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
6) Ceiling dead load (10.0 psf) on member(s). 4-20, 20-21; Wall dead load (5.0psf) on member(s).4-17, 14-21
7) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 16-17, 14-16
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 126 lb uplift at joint 16.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Attic room checked for L/360 deflection.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A1GE	GABLE	1	1	I67838734
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:27 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

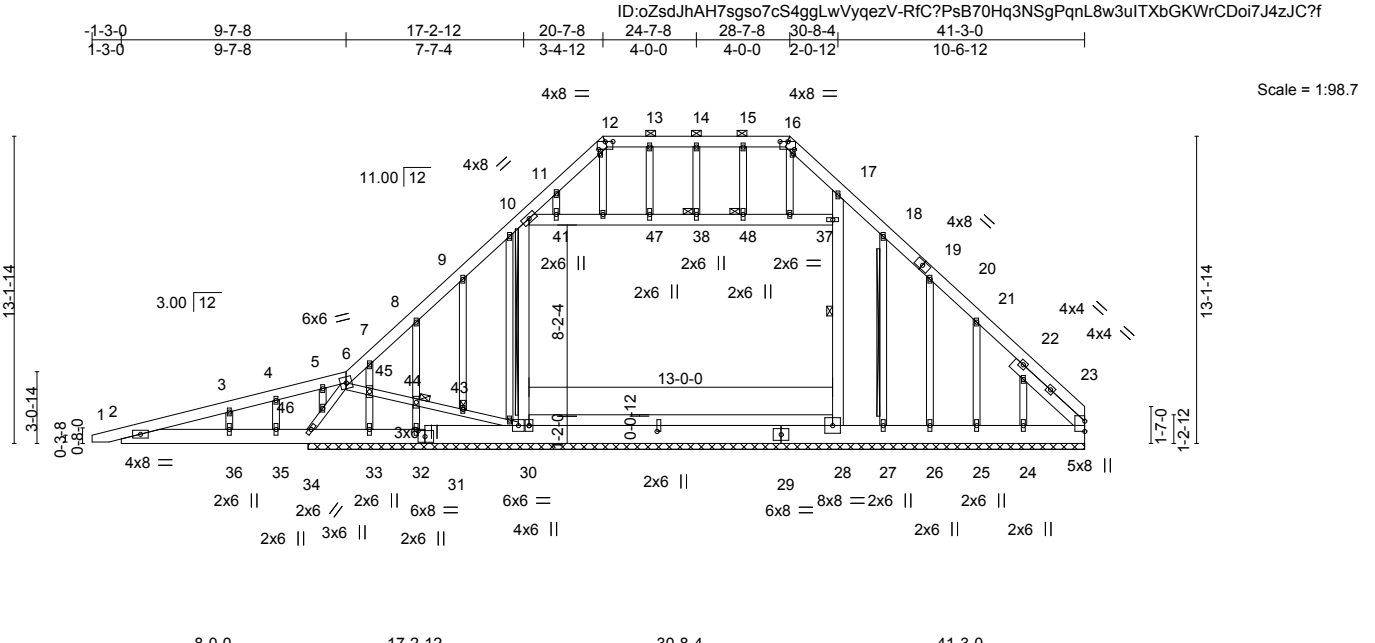


Plate Offsets (X,Y)-- [12:0-4-0,0-0-1], [16:0-4-0,0-0-1], [30:0-3-0,5-5-12], [31:0-3-8,0-3-0], [40:0-2-6,0-0-8], [50:0-2-6,0-0-8]

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	0.25	Vert(LL)	-0.00	1-2	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.00	1-2	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.01	23	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 493 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x10 SP No.1 *Except* 2-31: 2x8 SP No.1, 28-30: 2x6 SP No.1
WEBS	2x6 SP No.1 *Except* 6-34,6-30,14-38: 2x4 SP No.2
OTHERS	2x4 SP No.2
SLIDER	Right 2x6 SP No.1 4-1-3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 12-16.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 17-28 T-Brace: 2x4 SPF No.2 - 10-30, 18-27 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.
JOINTS	1 Brace at Jt(s): 38, 43, 44, 48

REACTIONS. All bearings 33-3-0.
(lb) - Max Horz 34=389(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 26, 24 except 34=-1080(LC 8), 30=-149(LC 12), 23=-213(LC 9), 32=-357(LC 12), 33=-619(LC 1), 27=-569(LC 18), 25=-308(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 24 except 34=1870(LC 1), 30=836(LC 20), 28=1103(LC 18), 23=539(LC 23), 32=410(LC 1), 33=528(LC 8), 26=384(LC 21), 25=269(LC 21)

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

TOP CHORD	2-3=-1032/1121, 3-4=-1002/1131, 4-5=-943/1086, 5-6=-929/1092, 6-7=-531/303, 7-8=-490/267, 8-9=-498/265, 9-10=-388/256, 10-11=-615/314, 11-12=-492/299, 12-13=-369/288, 13-14=-369/288, 14-15=-369/288, 15-16=-369/288, 16-17=-512/307, 17-18=-439/273, 18-20=-454/273, 20-21=-458/265, 21-23=-664/332
BOT CHORD	2-36=-1057/1034, 35-36=-1057/1034, 34-35=-1057/1034, 33-34=-479/657, 32-33=-479/657, 30-32=-479/658, 28-30=-238/444, 27-28=-241/455, 26-27=-241/455, 25-26=-241/455, 24-25=-241/455, 23-24=-241/455
WEBS	34-46=-1261/733, 6-46=-1226/712, 6-45=-476/761, 44-45=-413/672, 43-44=-424/681, 30-43=-427/694, 10-30=-379/292, 8-44=-329/284, 32-44=-384/335, 33-45=-243/253, 4-35=-294/219, 21-25=-353/358

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

Continued on page 2

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

August 28,2024

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

NOTES-

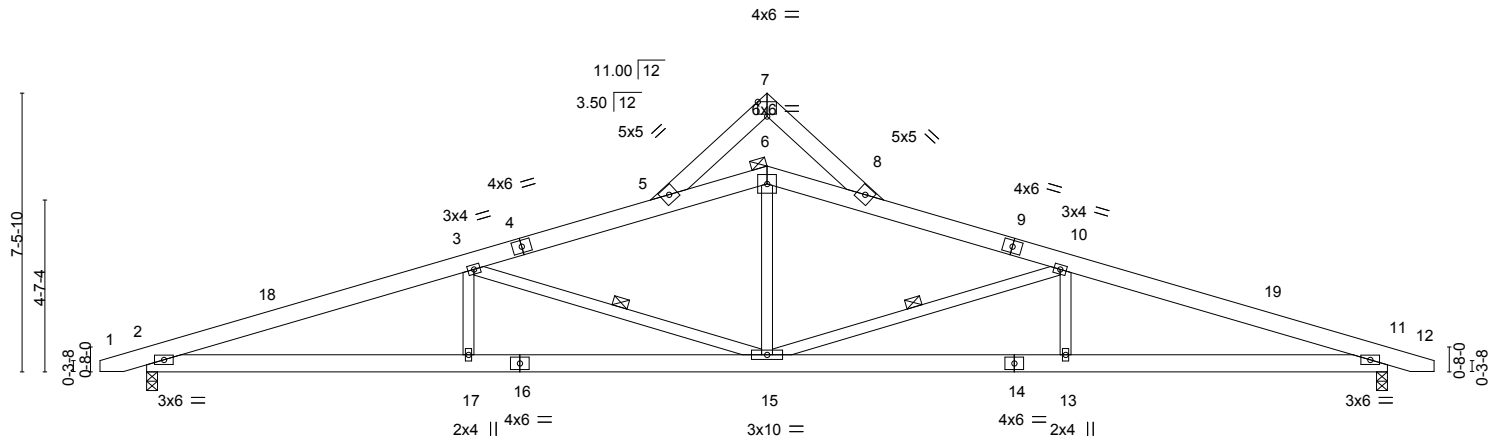
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 26, 24 except (jt=lb) 34=1080, 30=149, 23=213, 32=357, 33=619, 27=569, 25=308.
10) Non Standard bearing condition. Review required.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
13) Attic room checked for L/360 deflection.

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A2	ROOF SPECIAL	6	1	I67838735
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309, RSDGTFD 8.630 s Jun 15 2023 MiTek Industries, Inc. Tue Aug 27 14:57:46 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-Q_emeFSMu8RKlI7cX0DjQhQxy?0QyRTO4pFw5Kyjcf3

-1-3-0	8-7-8	13-6-0	16-7-8	19-9-0	24-7-8	33-3-0	34-6-0
1-3-0	8-7-8	4-10-8	3-1-8	3-1-8	4-10-8	8-7-8	1-3-0

Scale = 1:61.7



8-7-8	16-7-8	24-7-8	33-3-0
8-7-8	8-0-0	8-0-0	8-7-8

Plate Offsets (X,Y)-- [7:0-3-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	-0.15	15-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.32	15-17	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.10	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.11	15-17	>999	240	Weight: 222 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-9-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-15, 10-15
JOINTS 1 Brace at Jt(s): 6

REACTIONS. (size) 2=0-3-8, 11=0-3-8
Max Horz 2=-84(LC 13)
Max Uplift 2=-99(LC 12), 11=-99(LC 13)
Max Grav 2=1383(LC 1), 11=1383(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3408/620, 3-5=-2368/465, 5-6=-2122/434, 6-8=-2122/434, 8-10=-2368/465, 10-11=-3408/620
BOT CHORD 2-17=-508/3180, 15-17=-508/3180, 13-15=-509/3180, 11-13=-509/3180
WEBS 6-15=-68/848, 3-15=-1084/247, 3-17=0/341, 10-15=-1084/247, 10-13=0/341

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-3 to 3-5-10, Interior(1) 3-5-10 to 16-7-8, Exterior(2) 16-7-8 to 19-7-10, Interior(1) 19-7-10 to 34-2-3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 99 lb uplift at joint 2 and 99 lb uplift at joint 11.
6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S)
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-60, 5-7=-60, 7-8=-60, 8-12=-60, 2-11=-20
2) Dead + 0.75 Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-50, 5-7=-50, 7-8=-50, 8-12=-50, 2-11=-20
3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-5=-20, 5-7=-20, 7-8=-20, 8-12=-20, 2-11=-40
4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

August 28,2024

Continued on page 2

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

LOAD CASE(S)

Uniform Loads (plf)
Vert: 1-2=70, 2-18=40, 5-18=25, 5-7=25, 7-8=32, 8-11=25, 11-12=18, 2-11=-12
Horz: 1-2=-82, 2-18=-52, 5-18=-37, 5-7=-37, 7-8=44, 8-11=37, 11-12=30

5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=18, 2-5=25, 5-7=32, 7-8=25, 8-19=25, 11-19=40, 11-12=70, 2-11=-12
Horz: 1-2=-30, 2-5=-37, 5-7=-44, 7-8=37, 8-19=37, 11-19=52, 11-12=82

6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-9, 2-5=-38, 5-7=-57, 7-8=-57, 8-11=-38, 11-12=-31, 2-11=-20
Horz: 1-2=-11, 2-5=18, 5-7=37, 7-8=-37, 8-11=-18, 11-12=-11

7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-5=-38, 5-7=-57, 7-8=-57, 8-11=-38, 11-12=-9, 2-11=-20
Horz: 1-2=11, 2-5=18, 5-7=37, 7-8=-37, 8-11=-18, 11-12=11

8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=36, 2-5=21, 5-7=-13, 7-8=11, 8-11=12, 11-12=5, 2-11=-12
Horz: 1-2=-48, 2-5=-33, 5-7=1, 7-8=23, 8-11=24, 11-12=17

9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=5, 2-5=12, 5-7=11, 7-8=-13, 8-11=21, 11-12=36, 2-11=-12
Horz: 1-2=-17, 2-5=-24, 5-7=-23, 7-8=-1, 8-11=33, 11-12=48

10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=6, 2-5=-1, 5-7=-35, 7-8=-11, 8-11=-10, 11-12=-3, 2-11=-20
Horz: 1-2=-26, 2-5=-19, 5-7=15, 7-8=9, 8-11=10, 11-12=17

11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-3, 2-5=-10, 5-7=-11, 7-8=-35, 8-11=-1, 11-12=6, 2-11=-20
Horz: 1-2=-17, 2-5=-10, 5-7=-9, 7-8=-15, 8-11=19, 11-12=26

12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=14, 2-5=21, 5-7=21, 7-8=9, 8-11=9, 11-12=2, 2-11=-12
Horz: 1-2=-26, 2-5=-33, 5-7=-33, 7-8=21, 8-11=21, 11-12=14

13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=2, 2-5=9, 5-7=9, 7-8=21, 8-11=21, 11-12=14, 2-11=-12
Horz: 1-2=-14, 2-5=-21, 5-7=-21, 7-8=33, 8-11=33, 11-12=26

14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=14, 2-5=21, 5-7=21, 7-8=9, 8-11=9, 11-12=2, 2-11=-12
Horz: 1-2=-26, 2-5=-33, 5-7=-33, 7-8=21, 8-11=21, 11-12=14

15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=2, 2-5=9, 5-7=9, 7-8=21, 8-11=21, 11-12=14, 2-11=-12
Horz: 1-2=-14, 2-5=-21, 5-7=-21, 7-8=33, 8-11=33, 11-12=26

16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=6, 2-5=-1, 5-7=-1, 7-8=-13, 8-11=-13, 11-12=-6, 2-11=-20
Horz: 1-2=-26, 2-5=-19, 5-7=-19, 7-8=7, 8-11=7, 11-12=14

17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-6, 2-5=-13, 5-7=-13, 7-8=-1, 8-11=-1, 11-12=6, 2-11=-20
Horz: 1-2=-14, 2-5=-7, 5-7=-7, 7-8=19, 8-11=19, 11-12=26

18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-5=-20, 5-7=-20, 7-8=-20, 8-12=-20, 2-11=-20

19) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-5=-36, 5-7=-61, 7-8=-43, 8-11=-42, 11-12=-37, 2-11=-20
Horz: 1-2=-19, 2-5=-14, 5-7=11, 7-8=7, 8-11=8, 11-12=13

20) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-37, 2-5=-42, 5-7=-43, 7-8=-61, 8-11=-36, 11-12=-31, 2-11=-20
Horz: 1-2=-13, 2-5=-8, 5-7=-7, 7-8=-11, 8-11=14, 11-12=19

21) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-5=-36, 5-7=-36, 7-8=-45, 8-11=-45, 11-12=-40, 2-11=-20
Horz: 1-2=-19, 2-5=-14, 5-7=-14, 7-8=5, 8-11=5, 11-12=10

22) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-40, 2-5=-45, 5-7=-45, 7-8=-36, 8-11=-36, 11-12=-31, 2-11=-20
Horz: 1-2=-10, 2-5=-5, 5-7=-5, 7-8=14, 8-11=14, 11-12=19

23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-60, 5-7=-60, 7-8=-20, 8-12=-20, 2-11=-20

Continued on page 3

LOAD CASE(S)

24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-20, 5-7=-20, 7-8=-60, 8-12=-60, 2-11=-20

25) 3rd Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-50, 5-7=-50, 7-8=-20, 8-12=-20, 2-11=-20

26) 4th Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-20, 5-7=-20, 7-8=-50, 8-12=-50, 2-11=-20

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills	I67838736
J1024-5867	A2-GR	ROOF SPECIAL	1	2	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309, RSDGTFD 8.630 s Jun 15 2023 MiTek Industries, Inc. Tue Aug 27 14:58:11 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-BofDtol2?panobYPVm9axzyEm4YwJlM4qCplSOyjceg

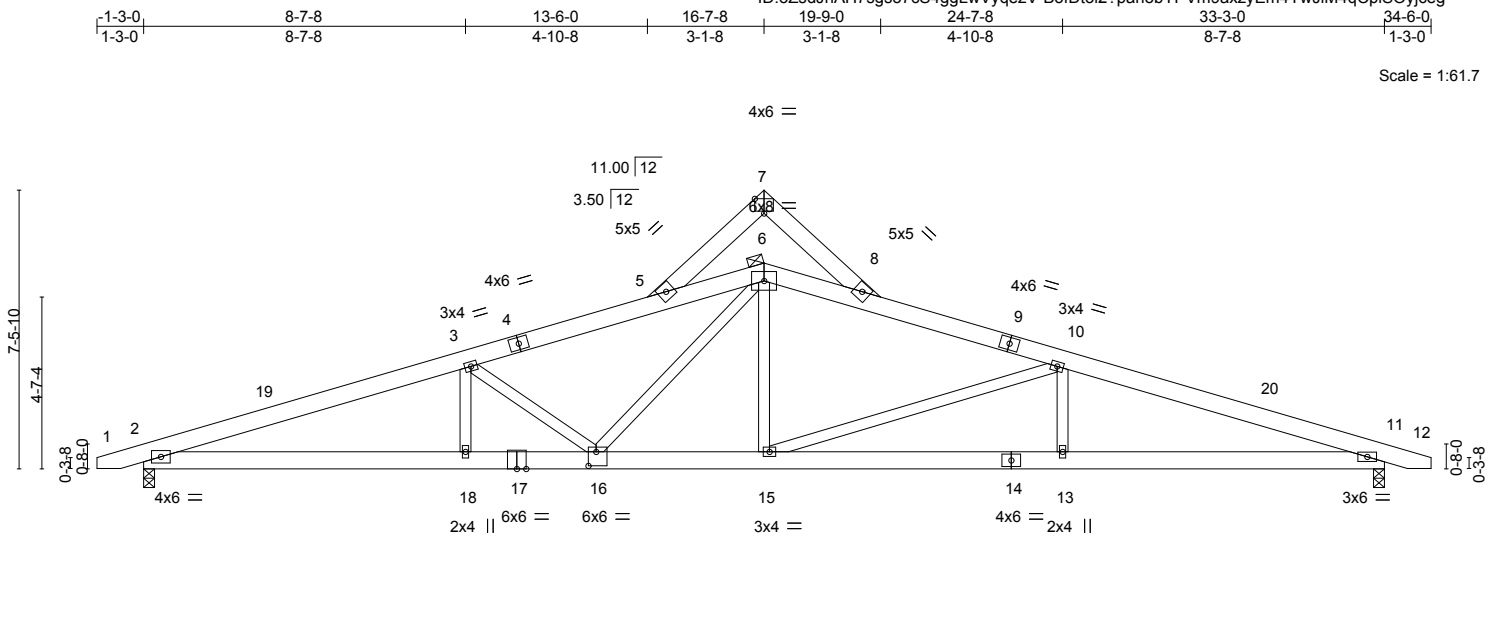


Plate Offsets (X,Y)-- [7:0-3-0,Edge], [16:0-2-8,0-4-8]

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	0.31	Vert(LL)	-0.16	16	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.32	16	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.38	Horz(CT)	0.09	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.16	16	>999	240	Weight: 452 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-10-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 6

REACTIONS. (size) 2=0-3-8, 11=0-3-8
Max Horz 2=84(LC 16)
Max Uplift 2=-228(LC 12), 11=-173(LC 13)
Max Grav 2=2656(LC 1), 11=2110(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-7500/2005, 3-5=-6987/1969, 5-6=-6715/1930, 6-8=-4571/1265, 8-10=-4843/1305, 10-11=-5742/1405
BOT CHORD 2-18=-1825/7073, 16-18=-1825/7073, 15-16=-1082/4581, 13-15=-1256/5400, 11-13=-1256/5400
WEBS 6-15=-3/545, 3-18=0/303, 10-15=-1095/183, 10-13=0/329, 3-16=-764/134, 6-16=-959/3095

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-3 to 3-5-10, Interior(1) 3-5-10 to 16-7-8, Exterior(2) 16-7-8 to 19-7-10, Interior(1) 19-7-10 to 34-2-3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 228 lb uplift at joint 2 and 173 lb uplift at joint 11.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2000 lb down and 675 lb up at 12-1-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

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

August 28,2024

Continued on page 2

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

LOAD CASE(S)

Uniform Loads (plf)
Vert: 1-5=-60, 5-7=-60, 7-8=-60, 8-12=-60, 2-11=-20
Concentrated Loads (lb)
Vert: 16=-2000(F)

2) Dead + 0.75 Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-50, 5-7=-50, 7-8=-50, 8-12=-50, 2-11=-20

3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-5=-20, 5-7=-20, 7-8=-20, 8-12=-20, 2-11=-40
Concentrated Loads (lb)
Vert: 16=-1500(F)

4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=70, 2-19=40, 5-19=25, 5-7=25, 7-8=32, 8-11=25, 11-12=18, 2-11=-12
Horz: 1-2=-82, 2-19=-52, 5-19=-37, 5-7=-37, 7-8=44, 8-11=37, 11-12=30
Concentrated Loads (lb)
Vert: 16=675(F)

5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=18, 2-5=25, 5-7=32, 7-8=25, 8-20=25, 11-20=40, 11-12=70, 2-11=-12
Horz: 1-2=-30, 2-5=-37, 5-7=-44, 7-8=37, 8-20=37, 11-20=52, 11-12=82
Concentrated Loads (lb)
Vert: 16=675(F)

6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-9, 2-5=-38, 5-7=-57, 7-8=-57, 8-11=-38, 11-12=-31, 2-11=-20
Horz: 1-2=-11, 2-5=18, 5-7=37, 7-8=-37, 8-11=-18, 11-12=-11

7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-5=-38, 5-7=-57, 7-8=-57, 8-11=-38, 11-12=-9, 2-11=-20
Horz: 1-2=11, 2-5=18, 5-7=37, 7-8=-37, 8-11=-18, 11-12=11

8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=36, 2-5=21, 5-7=-13, 7-8=11, 8-11=12, 11-12=5, 2-11=-12
Horz: 1-2=-48, 2-5=-33, 5-7=1, 7-8=23, 8-11=24, 11-12=17
Concentrated Loads (lb)
Vert: 16=204(F)

9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=5, 2-5=12, 5-7=11, 7-8=-13, 8-11=21, 11-12=36, 2-11=-12
Horz: 1-2=-17, 2-5=-24, 5-7=-23, 7-8=-1, 8-11=33, 11-12=48
Concentrated Loads (lb)
Vert: 16=204(F)

10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=6, 2-5=-1, 5-7=-35, 7-8=-11, 8-11=-10, 11-12=-3, 2-11=-20
Horz: 1-2=-26, 2-5=-19, 5-7=15, 7-8=9, 8-11=10, 11-12=17

11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-3, 2-5=-10, 5-7=-11, 7-8=-35, 8-11=-1, 11-12=6, 2-11=-20
Horz: 1-2=-17, 2-5=-10, 5-7=-9, 7-8=-15, 8-11=19, 11-12=26

12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=14, 2-5=21, 5-7=21, 7-8=9, 8-11=9, 11-12=2, 2-11=-12
Horz: 1-2=-26, 2-5=-33, 5-7=-33, 7-8=21, 8-11=21, 11-12=14
Concentrated Loads (lb)
Vert: 16=204(F)

13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=2, 2-5=9, 5-7=9, 7-8=21, 8-11=21, 11-12=14, 2-11=-12
Horz: 1-2=-14, 2-5=-21, 5-7=-21, 7-8=33, 8-11=33, 11-12=26
Concentrated Loads (lb)
Vert: 16=204(F)

14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=14, 2-5=21, 5-7=21, 7-8=9, 8-11=9, 11-12=2, 2-11=-12
Horz: 1-2=-26, 2-5=-33, 5-7=-33, 7-8=21, 8-11=21, 11-12=14
Concentrated Loads (lb)
Vert: 16=204(F)

15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=2, 2-5=9, 5-7=9, 7-8=21, 8-11=21, 11-12=14, 2-11=-12
Horz: 1-2=-14, 2-5=-21, 5-7=-21, 7-8=33, 8-11=33, 11-12=26
Concentrated Loads (lb)
Vert: 16=204(F)

Continued on page 3

LOAD CASE(S)

16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=6, 2-5=-1, 5-7=-1, 7-8=-13, 8-11=-13, 11-12=-6, 2-11=-20
Horz: 1-2=-26, 2-5=-19, 5-7=-19, 7-8=7, 8-11=7, 11-12=14

17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-6, 2-5=-13, 5-7=-13, 7-8=-1, 8-11=-1, 11-12=6, 2-11=-20
Horz: 1-2=-14, 2-5=-7, 5-7=-7, 7-8=19, 8-11=19, 11-12=26

18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-5=-20, 5-7=-20, 7-8=-20, 8-12=-20, 2-11=-20

19) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-5=-36, 5-7=-61, 7-8=-43, 8-11=-42, 11-12=-37, 2-11=-20
Horz: 1-2=-19, 2-5=-14, 5-7=11, 7-8=7, 8-11=8, 11-12=13

20) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-37, 2-5=-42, 5-7=-43, 7-8=-61, 8-11=-36, 11-12=-31, 2-11=-20
Horz: 1-2=-13, 2-5=-8, 5-7=-7, 7-8=-11, 8-11=14, 11-12=19

21) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-5=-36, 5-7=-36, 7-8=-45, 8-11=-45, 11-12=-40, 2-11=-20
Horz: 1-2=-19, 2-5=-14, 5-7=-14, 7-8=5, 8-11=5, 11-12=10

22) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-40, 2-5=-45, 5-7=-45, 7-8=-36, 8-11=-36, 11-12=-31, 2-11=-20
Horz: 1-2=-10, 2-5=-5, 5-7=-5, 7-8=14, 8-11=14, 11-12=19

23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-60, 5-7=-60, 7-8=-20, 8-12=-20, 2-11=-20

24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-20, 5-7=-20, 7-8=-60, 8-12=-60, 2-11=-20

25) 3rd Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-50, 5-7=-50, 7-8=-20, 8-12=-20, 2-11=-20

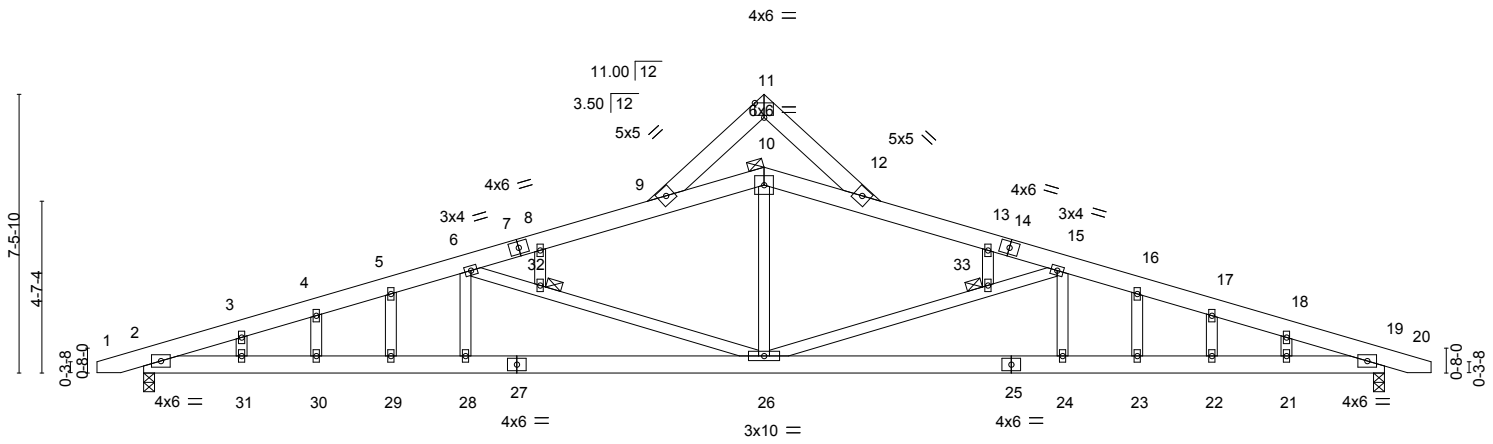
26) 4th Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-20, 5-7=-20, 7-8=-50, 8-12=-50, 2-11=-20

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills	I67838737
J1024-5867	A2SG	GABLE	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309, RSDGTFD 8.630 s Jun 15 2023 MiTek Industries, Inc. Tue Aug 27 14:58:33 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-Y1_XVJ0rpaMfRzDenOYkqct?Gx4RTbfJud8vE6yjceK

-1-3-0	8-7-8	13-6-0	16-7-8	19-9-0	24-7-8	33-3-0	34-6-0
1-3-0	8-7-8	4-10-8	3-1-8	3-1-8	4-10-8	8-7-8	1-3-0

Scale = 1:61.7



8-7-8	16-7-8	24-7-8	33-3-0
8-7-8	8-0-0	8-0-0	8-7-8

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	-0.15	26-28	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.31	26-28	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.09	19	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.14	26-28	>999	240	Weight: 235 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-2-12 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 8-0-13 oc bracing.
JOINTS	1 Brace at Jt(s): 10, 32, 33

REACTIONS. (size) 2=0-3-8, 19=0-3-8
Max Horz 2=142(LC 16)
Max Uplift 2=-309(LC 12), 19=-309(LC 13)
Max Grav 2=1383(LC 1), 19=1383(LC 1)

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

TOP CHORD	2-3=-3364/1053, 3-4=-3275/1065, 4-5=-3254/1092, 5-6=-3210/1088, 6-8=-2384/784, 8-9=-2344/794, 9-10=-2142/770, 10-12=-2142/770, 12-13=-2344/794, 13-15=-2384/784, 15-16=-3210/1088, 16-17=-3254/1092, 17-18=-3275/1065, 18-19=-3364/1053
BOT CHORD	2-31=-943/3110, 30-31=-943/3110, 29-30=-943/3110, 28-29=-943/3110, 26-28=-943/3110, 24-26=-946/3110, 23-24=-946/3110, 22-23=-946/3110, 21-22=-946/3110, 19-21=-946/3110
WEBS	10-26=-176/811, 6-32=-1010/411, 26-32=-1007/412, 6-28=0/258, 26-33=-1007/412, 15-33=-1010/411, 15-24=0/258

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 309 lb uplift at joint 2 and 309 lb uplift at joint 19.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S)

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-9=-60, 9-11=-60, 11-12=-60, 12-20=-60, 2-19=-20

August 28,2024

Continued on page 2

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

LOAD CASE(S)

2) Dead + 0.75 Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-9=-50, 9-11=-50, 11-12=-50, 12-20=-50, 2-19=-20
3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-9=-20, 9-11=-20, 11-12=-20, 12-20=-20, 2-19=-40
4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=70, 2-9=40, 9-11=32, 11-12=32, 12-19=40, 19-20=33, 2-19=-12
Horz: 1-2=-82, 2-9=-52, 9-11=-44, 11-12=44, 12-19=52, 19-20=45
5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=33, 2-9=40, 9-11=32, 11-12=32, 12-19=40, 19-20=70, 2-19=-12
Horz: 1-2=-45, 2-9=-52, 9-11=-44, 11-12=44, 12-19=52, 19-20=82
6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-9, 2-9=-38, 9-11=-57, 11-12=-57, 12-19=-38, 19-20=-31, 2-19=-20
Horz: 1-2=-11, 2-9=18, 9-11=37, 11-12=-37, 12-19=-18, 19-20=-11
7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-9=-38, 9-11=-57, 11-12=-57, 12-19=-38, 19-20=-9, 2-19=-20
Horz: 1-2=11, 2-9=18, 9-11=37, 11-12=-37, 12-19=-18, 19-20=11
8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=50, 2-9=35, 9-11=-15, 11-12=15, 12-19=19, 19-20=12, 2-19=-12
Horz: 1-2=-62, 2-9=-47, 9-11=3, 11-12=27, 12-19=31, 19-20=24
9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=12, 2-9=19, 9-11=15, 11-12=-15, 12-19=35, 19-20=50, 2-19=-12
Horz: 1-2=-24, 2-9=-31, 9-11=-27, 11-12=-3, 12-19=47, 19-20=62
10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=20, 2-9=13, 9-11=-37, 11-12=-7, 12-19=-2, 19-20=4, 2-19=-20
Horz: 1-2=-40, 2-9=-33, 9-11=17, 11-12=13, 12-19=18, 19-20=24
11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=4, 2-9=-2, 9-11=-7, 11-12=-37, 12-19=13, 19-20=20, 2-19=-20
Horz: 1-2=-24, 2-9=-18, 9-11=-13, 11-12=-17, 12-19=33, 19-20=40
12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=28, 2-9=35, 9-11=35, 11-12=15, 12-19=15, 19-20=8, 2-19=-12
Horz: 1-2=-40, 2-9=-47, 9-11=-47, 11-12=27, 12-19=27, 19-20=20
13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=8, 2-9=15, 9-11=15, 11-12=35, 12-19=35, 19-20=28, 2-19=-12
Horz: 1-2=-20, 2-9=-27, 9-11=-27, 11-12=47, 12-19=47, 19-20=40
14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=28, 2-9=35, 9-11=35, 11-12=15, 12-19=15, 19-20=8, 2-19=-12
Horz: 1-2=-40, 2-9=-47, 9-11=-47, 11-12=27, 12-19=27, 19-20=20
15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=8, 2-9=15, 9-11=15, 11-12=35, 12-19=35, 19-20=28, 2-19=-12
Horz: 1-2=-20, 2-9=-27, 9-11=-27, 11-12=47, 12-19=47, 19-20=40
16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=20, 2-9=13, 9-11=13, 11-12=-7, 12-19=-7, 19-20=-0, 2-19=-20
Horz: 1-2=-40, 2-9=-33, 9-11=-33, 11-12=13, 12-19=13, 19-20=20
17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-0, 2-9=-7, 9-11=-7, 11-12=13, 12-19=13, 19-20=20, 2-19=-20
Horz: 1-2=-20, 2-9=-13, 9-11=-13, 11-12=33, 12-19=33, 19-20=40
18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-9=-20, 9-11=-20, 11-12=-20, 12-20=-20, 2-19=-20
19) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-20, 2-9=-25, 9-11=-63, 11-12=-40, 12-19=-37, 19-20=-32, 2-19=-20
Horz: 1-2=-30, 2-9=-25, 9-11=13, 11-12=10, 12-19=13, 19-20=18
20) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-32, 2-9=-37, 9-11=-40, 11-12=-63, 12-19=-25, 19-20=-20, 2-19=-20
Horz: 1-2=-18, 2-9=-13, 9-11=-10, 11-12=-13, 12-19=25, 19-20=30
21) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Continued on page 3

LOAD CASE(S)

Uniform Loads (plf)
Vert: 1-2=-20, 2-9=-25, 9-11=-25, 11-12=-40, 12-19=-40, 19-20=-35, 2-19=-20
Horz: 1-2=-30, 2-9=-25, 9-11=-25, 11-12=10, 12-19=10, 19-20=15

22) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-35, 2-9=-40, 9-11=-40, 11-12=-25, 12-19=-25, 19-20=-20, 2-19=-20
Horz: 1-2=-15, 2-9=-10, 9-11=-10, 11-12=25, 12-19=25, 19-20=30

23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-9=-60, 9-11=-60, 11-12=-20, 12-20=-20, 2-19=-20

24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-9=-20, 9-11=-20, 11-12=-60, 12-20=-60, 2-19=-20

25) 3rd Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-9=-50, 9-11=-50, 11-12=-20, 12-20=-20, 2-19=-20

26) 4th Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-9=-20, 9-11=-20, 11-12=-50, 12-20=-50, 2-19=-20

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A3	ROOF SPECIAL	3	1	I67838738
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:29 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

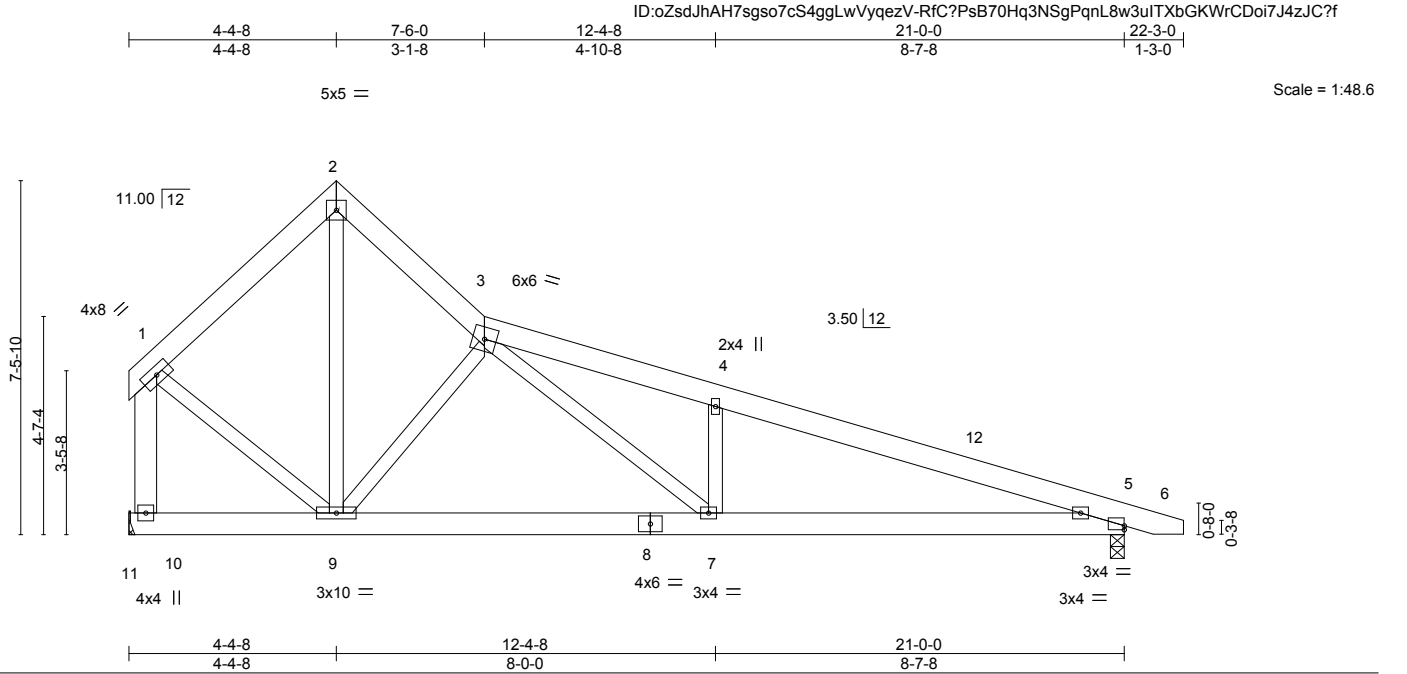


Plate Offsets (X,Y)-- [5:Edge,0-1-0]

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	0.33	Vert(LL)	-0.05	5-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.12	5-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.04	5-7	>999	240	Weight: 153 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except*
1-10: 2x6 SP No.1

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-3-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 10=Mechanical, 5=0-3-8
Max Horz 10=-167(LC 8)
Max Uplift 10=-59(LC 13), 5=-104(LC 9)
Max Grav 10=825(LC 1), 5=886(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-619/178, 2-3=-591/193, 3-4=-1764/387, 4-5=-1797/307, 1-10=-789/192
BOT CHORD 7-9=-84/914, 5-7=-213/1643
WEBS 2-9=-104/506, 3-9=-849/261, 3-7=-188/955, 4-7=-420/220, 1-9=-33/491

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-4-4 to 7-6-0, Interior(1) 7-6-0 to 21-11-3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10 except (jt=lb) 5=104.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A4	ROOF SPECIAL	1	1	I67838739
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:30 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

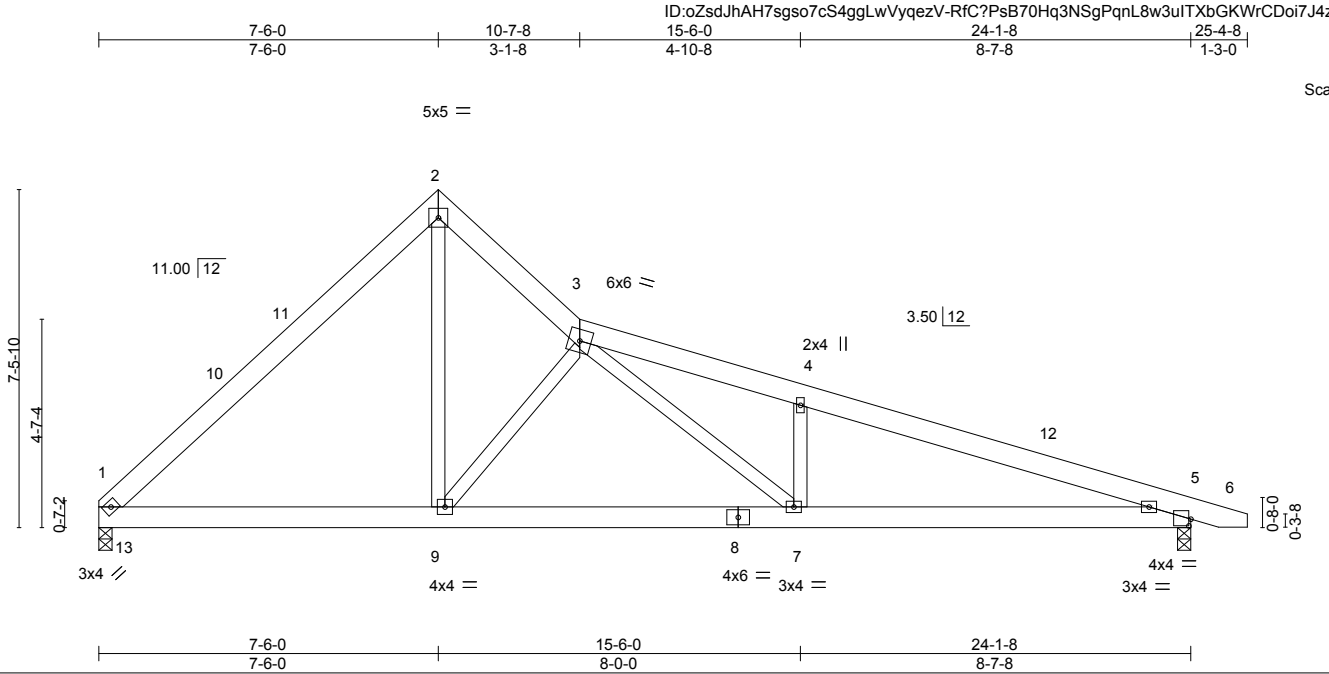


Plate Offsets (X,Y)-- [5:0-0-9,0-1-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.07	7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.15	5-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.05	5-7	>999	240	Weight: 156 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-8-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=0-3-8, 5=0-3-8
Max Horz 1=-171(LC 8)
Max Uplift 1=-40(LC 13), 5=-104(LC 9)
Max Grav 1=1016(LC 19), 5=1019(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1160/240, 2-3=-1036/298, 3-4=-2184/497, 4-5=-2220/418
BOT CHORD 1-9=-15/807, 7-9=-178/1348, 5-7=-315/2046
WEBS 2-9=-143/1042, 3-9=-1003/272, 3-7=-183/923, 4-7=-410/220

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 7-6-0, Exterior(2) 7-6-0 to 10-7-8, Interior(1) 10-7-8 to 25-0-11 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 5=104.

August 28,2024

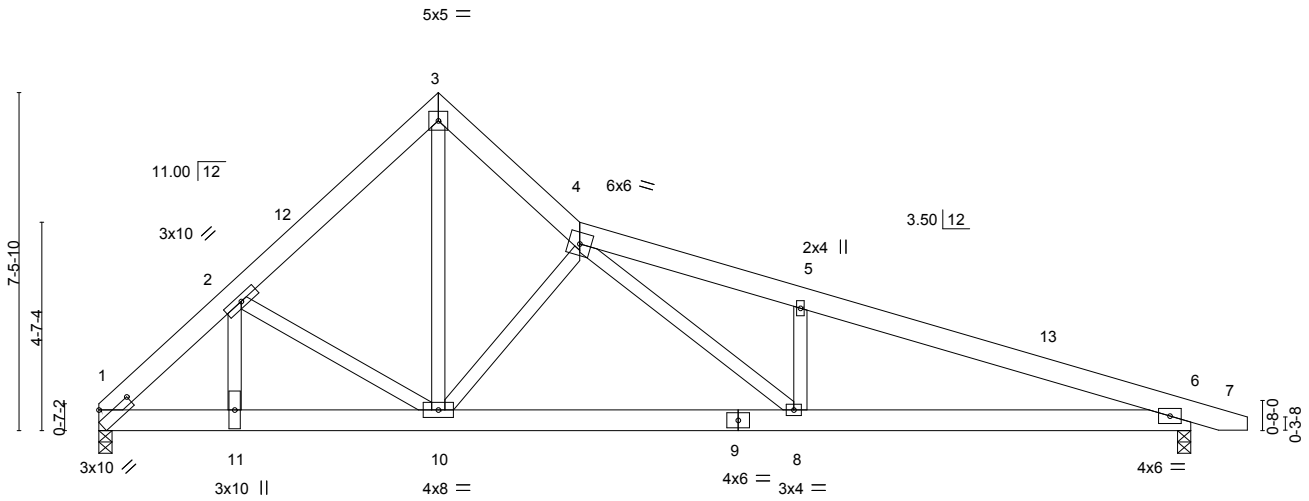
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A4A	ROOF SPECIAL	1	1	I67838740
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:30 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

3-0-0	7-6-0	10-7-8	15-6-0	24-1-8	25-4-8
3-0-0	4-6-0	3-1-8	4-10-8	8-7-8	1-3-0

Scale = 1:50.9



3-0-0	7-6-0	15-6-0	24-1-8
3-0-0	4-6-0	8-0-0	8-7-8

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.09	8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.19	8-10	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.05	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.08	8	>999	240	Weight: 167 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-1-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-9-0 oc bracing.

REACTIONS. (size) 1=0-3-8, 6=0-3-8
Max Horz 1=-171(LC 8)
Max Uplift 1=-200(LC 13), 6=-126(LC 9)
Max Grav 1=2448(LC 1), 6=1223(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3288/959, 2-3=-1698/499, 3-4=-1657/527, 4-5=-2833/720, 5-6=-2876/644
BOT CHORD 1-11=-647/2336, 10-11=-648/2341, 8-10=-406/2003, 6-8=-531/2671
WEBS 3-10=-545/1908, 4-10=-1304/391, 4-8=-163/881, 5-8=-386/209, 2-11=-514/1675, 2-10=-1359/564

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 7-6-0, Exterior(2) 7-6-0 to 10-7-8, Interior(1) 10-7-8 to 25-0-11 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=200, 6=126.
6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1720 lb down and 589 lb up at 3-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-60, 3-4=-60, 4-7=-60, 1-6=-20
Concentrated Loads (lb)
Vert: 11=-1700(B)

August 28,2024

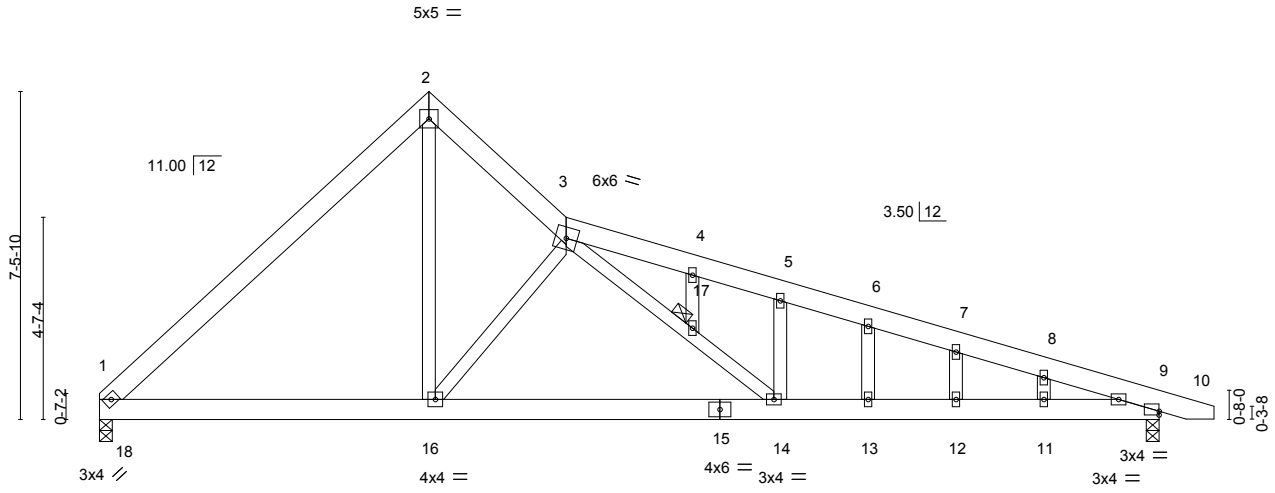
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A4SG	GABLE	1	1	I67838741
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:31 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

7-6-0	10-7-8	15-6-0	24-1-8	25-4-8
7-6-0	3-1-8	4-10-8	8-7-8	1-3-0

Scale = 1:52.5



7-6-0	15-6-0	24-1-8
7-6-0	8-0-0	8-7-8

Plate Offsets (X,Y)-- [9:Edge,0-1-0]

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	0.29	Vert(LL)	-0.07	13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.14	13	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.08	12-13	>999	240	Weight: 163 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

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-3-3 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 17

REACTIONS. (size) 1=0-3-8, 9=0-3-8
Max Horz 1=-228(LC 8)
Max Uplift 1=-166(LC 13), 9=-260(LC 13)
Max Grav 1=1008(LC 2), 9=1019(LC 1)

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

TOP CHORD	1-2=-1159/338, 2-3=-1012/404, 3-4=-2086/780, 4-5=-2119/770, 5-6=-2063/693, 6-7=-2082/683, 7-8=-2106/659, 8-9=-2181/641
BOT CHORD	1-16=-53/817, 14-16=-310/1351, 13-14=-557/1995, 12-13=-557/1995, 11-12=-557/1995, 9-11=-557/1995
WEBS	2-16=-272/1044, 3-16=-1009/446, 3-17=-325/860, 14-17=-319/849, 5-14=-322/249

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=166, 9=260.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A5	COMMON	2	1	I67838742
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:31 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

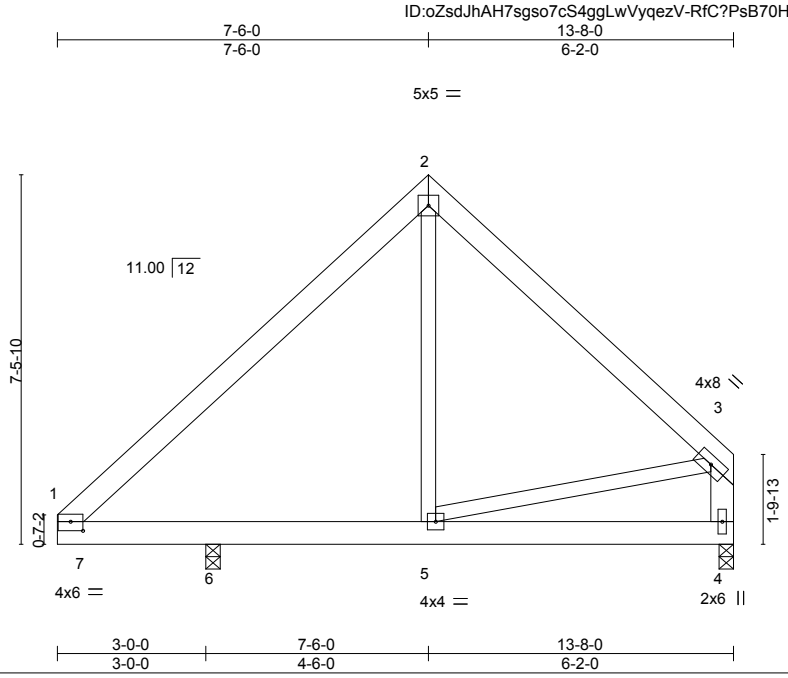


Plate Offsets (X,Y)-- [1:0-3-0,0-2-3]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	-0.05	4-5	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.10	4-5	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	4-5	>999	240	Weight: 97 lb	FT = 20%

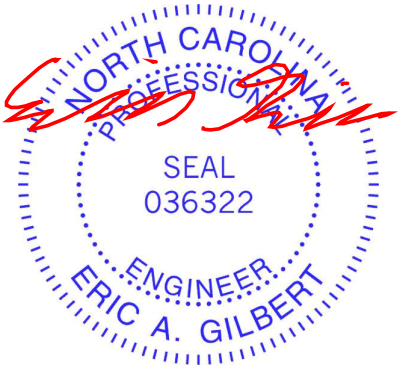
LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except*
3-4: 2x6 SP No.1

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

REACTIONS. (size) 4=0-3-8, 6=0-3-8
Max Horz 6=164(LC 9)
Max Uplift 4=-20(LC 12), 6=-25(LC 12)
Max Grav 4=373(LC 1), 6=830(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-308/68, 2-3=-256/89, 3-4=-255/88

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

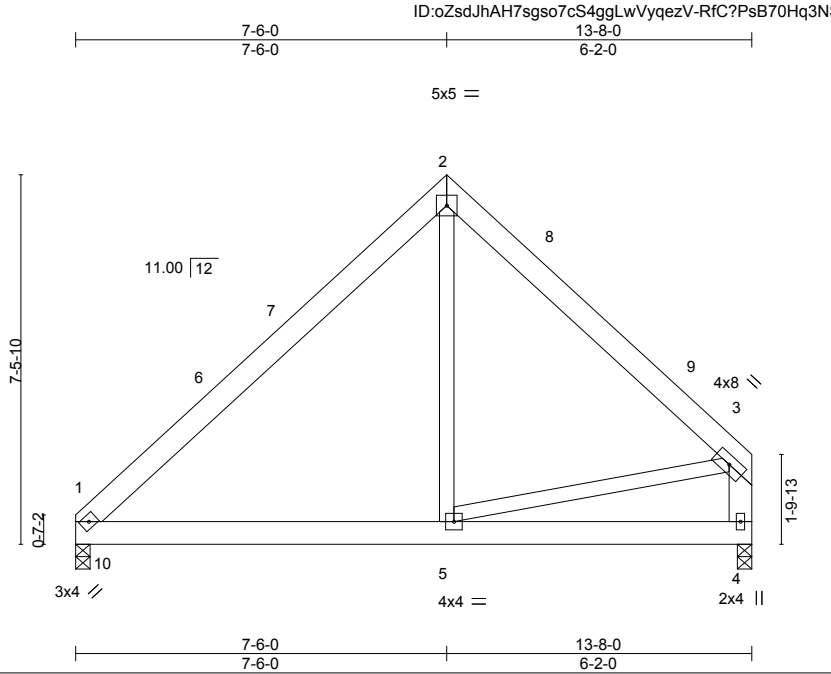


August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A6	COMMON	7	1	I67838743
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:32 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.05	1-5	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.07	1-5	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.02	1-5	>999	240	Weight: 97 lb	FT = 20%

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

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

REACTIONS. (size) 1=0-3-8, 4=0-3-8
Max Horz 1=164(LC 9)
Max Uplift 1=-18(LC 12), 4=-25(LC 12)
Max Grav 1=630(LC 19), 4=548(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-583/144, 2-3=-579/173, 3-4=-528/175
BOT CHORD 1-5=-2/383
WEBS 2-5=0/294, 3-5=-40/365

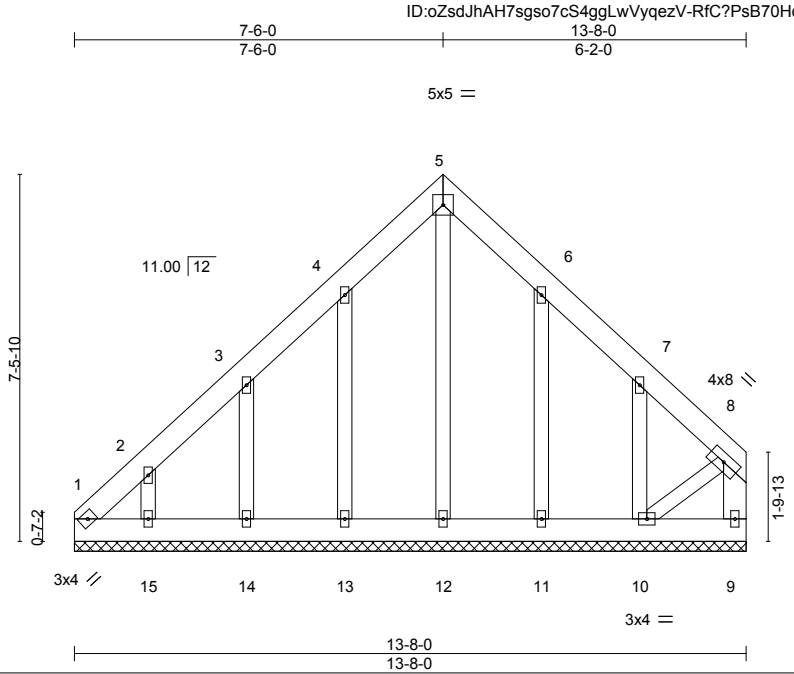
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 7-6-0, Exterior(2) 7-6-0 to 11-10-13, Interior(1) 11-10-13 to 13-5-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	A6GE	COMMON SUPPORTED GAB	1	1	I67838744
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:32 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 115 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x6 SP No.1 *Except* 8-10: 2x4 SP No.2
OTHERS	2x4 SP No.2

BRACING-

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

REACTIONS. All bearings 13-8-0.
(lb) - Max Horz 1=231(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1, 9 except 13=-110(LC 12), 14=-134(LC 12), 15=-141(LC 12), 11=-109(LC 13), 10=-233(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 9, 12, 13, 14, 15, 11, 10

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-269/172

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9 except (jt=lb) 13=110, 14=134, 15=141, 11=109, 10=233.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	B1	ATTIC	3	1	I67838745
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:33 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

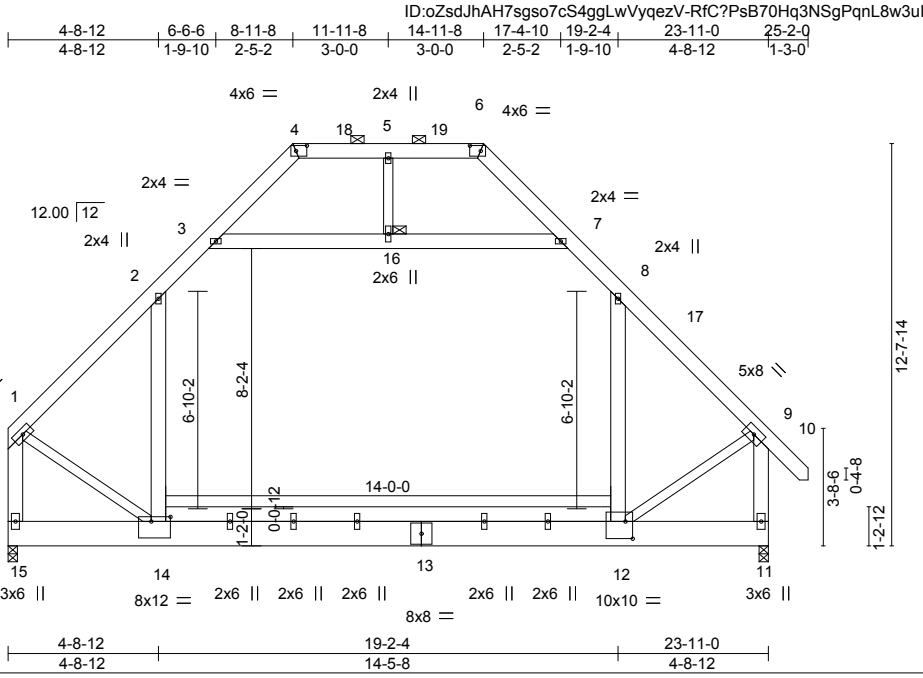


Plate Offsets (X,Y)-- [4:0-4-2,0-2-0], [6:0-4-2,0-2-0], [12:0-2-12,0-6-8], [14:0-7-4,0-1-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.23	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.36	12-14	>783	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.01	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.08	12-14	>999	240	Weight: 297 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x10 SP No.1 *Except*
12-14: 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
5-16,1-14,9-12: 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-6-15 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 8-7-7 oc bracing.
JOINTS 1 Brace at Jt(s): 16

REACTIONS. (size) 15=0-3-8, 11=0-3-8
Max Horz 15=-345(LC 10)
Max Grav 15=1619(LC 2), 11=1690(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1600/0, 2-3=-1048/173, 3-4=-493/152, 6-7=-493/152, 7-8=-1047/170, 8-9=-1605/0, 1-15=-1957/0, 9-11=-2020/13, 4-5=-294/150, 5-6=-294/150
BOT CHORD 14-15=-321/343, 12-14=0/1070
WEBS 8-12=-91/645, 2-14=-103/631, 3-16=-937/89, 7-16=-937/89, 1-14=0/1262, 9-12=0/1266

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-8-12, Interior(1) 4-8-12 to 9-0-10, Exterior(2) 9-0-10 to 13-5-7, Interior(1) 13-5-7 to 14-10-6, Exterior(2) 14-10-6 to 19-2-4, Interior(1) 19-2-4 to 25-0-6 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-16, 7-16; Wall dead load (5.0psf) on member(s).8-12, 2-14
7) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Attic room checked for L/360 deflection.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	B1GE	GABLE	1	1	I67838746
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:33 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

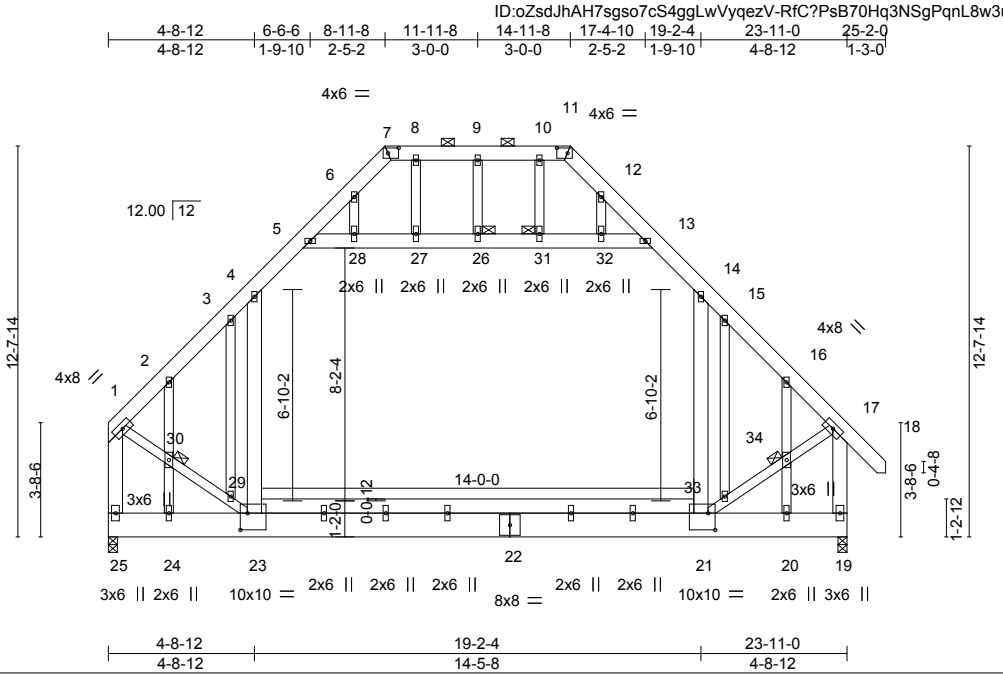


Plate Offsets (X,Y)-- [7:0-4-2,0-2-0], [11:0-4-2,0-2-0], [21:0-2-12,0-6-8], [23:0-2-12,0-6-8]

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 0.43	Vert(LL) -0.21 21-23 >999 360	MT20 244/190
TCDL 10.0		Lumber DOL 1.15	BC 0.78	Vert(CT) -0.32 21-23 >881 240	
BCLL 0.0	*	Rep Stress Incr YES	WB 0.63	Horz(CT) 0.01 19 n/a n/a	
BCDL 10.0		Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.09 21-23 >999 240	Weight: 338 lb FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x10 SP No.1 *Except* 21-23: 2x6 SP No.1
WEBS	2x6 SP No.1 *Except* 9-26,1-23,17-21: 2x4 SP No.2
OTHERS	2x4 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-6-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-11.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 9-3-11 oc bracing: 21-23.
JOINTS	1 Brace at Jt(s): 26, 30, 31, 34

REACTIONS. (size) 25=0-3-8, 19=0-3-8
Max Horz 25=-432(LC 8)
Max Grav 25=1619(LC 2), 19=1690(LC 2)

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

TOP CHORD	1-2=-1388/0, 2-3=-1664/17, 3-4=-1505/67, 4-5=-1052/201, 5-6=-585/181, 6-7=-423/174, 11-12=-423/175, 12-13=-587/180, 13-14=-1052/202, 14-15=-1496/69, 15-16=-1659/16, 16-17=-1383/0, 1-25=-1565/0, 17-19=-1623/2, 7-8=-337/171, 8-9=-337/171, 9-10=-337/171, 10-11=-337/171
BOT CHORD	24-25=-419/427, 23-24=-419/427, 21-23=0/1089
WEBS	14-21=-59/747, 4-23=-54/749, 5-28=-898/113, 27-28=-896/114, 26-27=-896/114, 26-31=-896/114, 31-32=-896/114, 13-32=-898/113, 1-30=0/1253, 29-30=0/1336, 23-29=-25/1412, 21-33=-8/1446, 33-34=0/1366, 17-34=0/1281, 6-28=-73/274, 2-30=-479/110, 24-30=-635/100, 12-32=-70/276, 16-34=-480/58, 20-34=-637/46

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
9) Ceiling dead load (10.0 psf) on member(s). 4-5, 13-14, 5-28, 27-28, 26-27, 26-31, 31-32, 13-32; Wall dead load (5.0psf) on member(s).14-21, 4-23
10) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 21-23
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Attic room checked for L/360 deflection.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	B2	ATTIC	5	1	I67838747
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:34 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

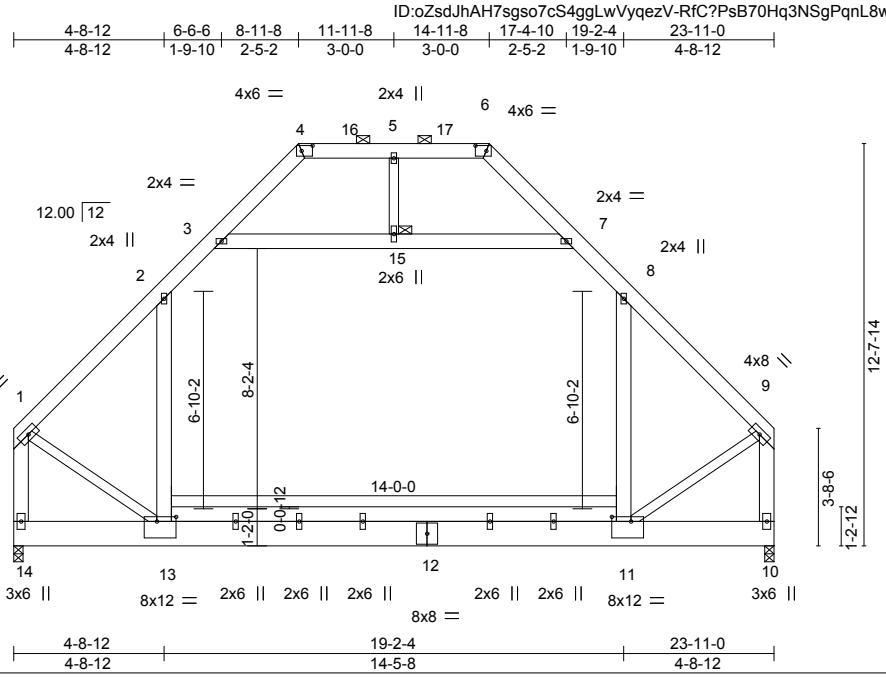


Plate Offsets (X,Y)-- [4:0-4-2,0-2-0], [6:0-4-2,0-2-0], [11:0-7-4,0-1-12], [13:0-7-4,0-1-12]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.23	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.36	11-13	>781	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.08	11-13	>999	240	Weight: 293 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x10 SP No.1 *Except*
11-13: 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
5-15,1-13,9-11: 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-6-14 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 8-6-15 oc bracing.
JOINTS 1 Brace at Jt(s): 15

REACTIONS. (size) 14=0-3-8, 10=0-3-8
Max Horz 14=-324(LC 8)
Max Grav 14=1621(LC 2), 10=1621(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1603/0, 2-3=-1050/169, 3-4=-491/152, 6-7=-491/152, 7-8=-1050/169, 8-9=-1603/0, 1-14=-1961/0, 9-10=-1961/0, 4-5=-291/148, 5-6=-291/148
BOT CHORD 13-14=-311/321, 11-13=0/1059
WEBS 8-11=-102/633, 2-13=-102/633, 3-15=-941/84, 7-15=-941/84, 1-13=0/1265, 9-11=0/1266

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-8-12, Interior(1) 4-8-12 to 9-0-10, Exterior(2) 9-0-10 to 13-5-7, Interior(1) 13-5-7 to 14-10-6, Exterior(2) 14-10-6 to 19-2-4, Interior(1) 19-2-4 to 23-8-4 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-15, 7-15; Wall dead load (5.0psf) on member(s).8-11, 2-13
7) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 11-13
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Attic room checked for L/360 deflection.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	B2-GR	ATTIC	1	3	I67838748

Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:34 2024 Page 1

ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

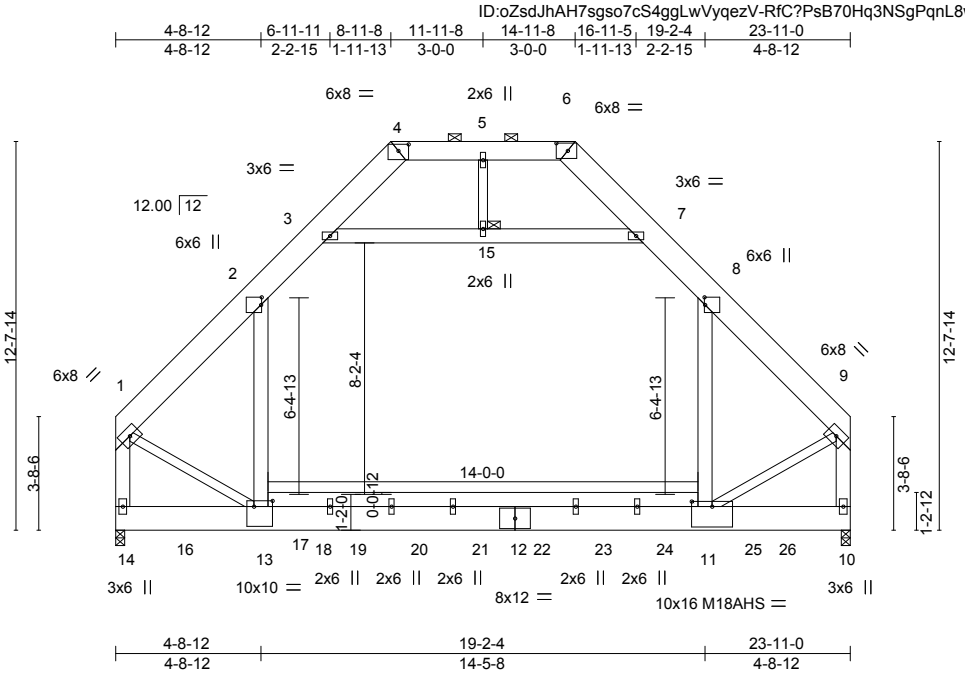


Plate Offsets (X,Y)-- [2:0-3-0,0-0-4], [4:0-4-0,0-2-9], [6:0-4-7,0-3-0], [8:0-3-0,0-0-4], [11:0-8-0,0-2-0], [13:0-7-4,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.36	11-13	>778	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.47	11-13	>601	240	M18AHS	186/179
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.53	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.01	13	>999	240	Weight: 1004 lb	FT = 20%

LUMBER-

TOP CHORD 2x10 SP 2400F 2.0E *Except* 4-6: 2x8 SP No.1

BOT CHORD 2x10 SP 2400F 2.0E *Except* 11-13: 2x6 SP No.1

WEBS 2x6 SP No.1 *Except* 5-15,1-13,9-11: 2x4 SP No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

JOINTS 1 Brace at Jt(s): 15

REACTIONS. (size) 14=0-3-8, 10=0-3-8
Max Horz 14=-216(LC 4)
Max Grav 14=8042(LC 14), 10=7698(LC 14)

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

TOP CHORD 1-2=-7471/0, 2-3=-3592/0, 3-4=-337/695, 6-7=-336/709, 7-8=-3577/0, 8-9=-7494/0, 1-14=-8898/0, 9-10=-8948/0, 4-5=-124/1173, 5-6=-124/1173

BOT CHORD 11-13=0/4778

WEBS 8-11=0/5473, 2-13=0/5420, 3-15=-5952/0, 7-15=-5952/0, 1-13=0/5651, 9-11=0/5683

NOTES-

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

August 28,2024

Continued on page 2

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

NOTES-

7) N/A
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
10) Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-15, 7-15; Wall dead load (5.0psf) on member(s).8-11, 2-13
11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 11-13
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1666 lb down at 2-1-12, 1666 lb down at 4-1-12, 456 lb down and 355 lb up at 5-9-4, 831 lb down and 220 lb up at 7-9-4, 1185 lb down at 9-9-4, 1185 lb down at 11-9-4, 1185 lb down at 13-9-4, 1185 lb down at 15-9-4, 1185 lb down at 17-9-4, and 1185 lb down at 19-9-4, and 1185 lb down at 21-9-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
14) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-60, 2-3=-80, 3-4=-60, 6-7=-60, 7-8=-80, 8-9=-60, 13-14=-20, 11-13=-40, 10-11=-20, 3-7=-20, 4-6=-60
   Drag: 8-11=-10, 2-13=-10
   Concentrated Loads (lb)
   Vert: 16=-401(B) 17=-401(B) 18=-10(B) 19=-120(B) 20=-249(B) 21=-249(B) 22=-249(B) 23=-249(B) 24=-249(B) 25=-249(B) 26=-249(B)

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	C1	ROOF SPECIAL	5	1	I67838749
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:35 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

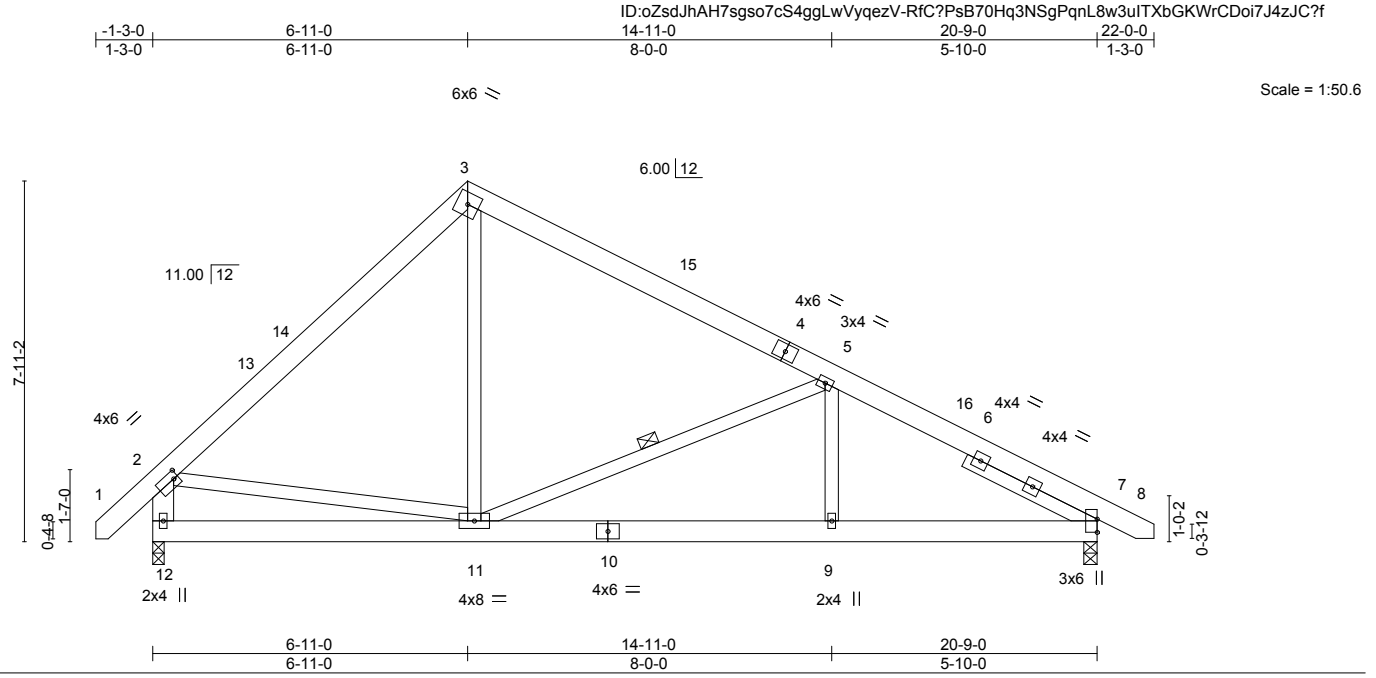


Plate Offsets (X,Y)-- [2:0-1-4,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.03	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.06	9-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.02	9-11	>999	240	Weight: 158 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except*
2-12: 2x6 SP No.1
SLIDER Right 2x4 SP No.2 3-2-6

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.
WEBS 1 Row at midpt 5-11

REACTIONS. (size) 12=0-3-0, 7=0-3-8
Max Horz 12=-174(LC 10)
Max Uplift 12=-40(LC 13), 7=-74(LC 13)
Max Grav 12=903(LC 1), 7=883(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-862/250, 3-5=-709/227, 5-7=-1288/277, 2-12=-843/307
BOT CHORD 11-12=-176/367, 9-11=-167/1059, 7-9=-167/1059
WEBS 3-11=-19/433, 5-11=-591/214, 5-9=0/275, 2-11=-26/390

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-1-6 to 3-3-7, Interior(1) 3-3-7 to 6-11-0, Exterior(2) 6-11-0 to 11-3-13, Interior(1) 11-3-13 to 21-9-10 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 7.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	C1GE	ROOF SPECIAL SUPPORT	1	1	I67838750
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:35 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

-1-3-0 1-3-0 | 6-11-0 6-11-0 | 20-9-0 13-10-0 | 22-0-0 1-3-0

Scale = 1:50.7

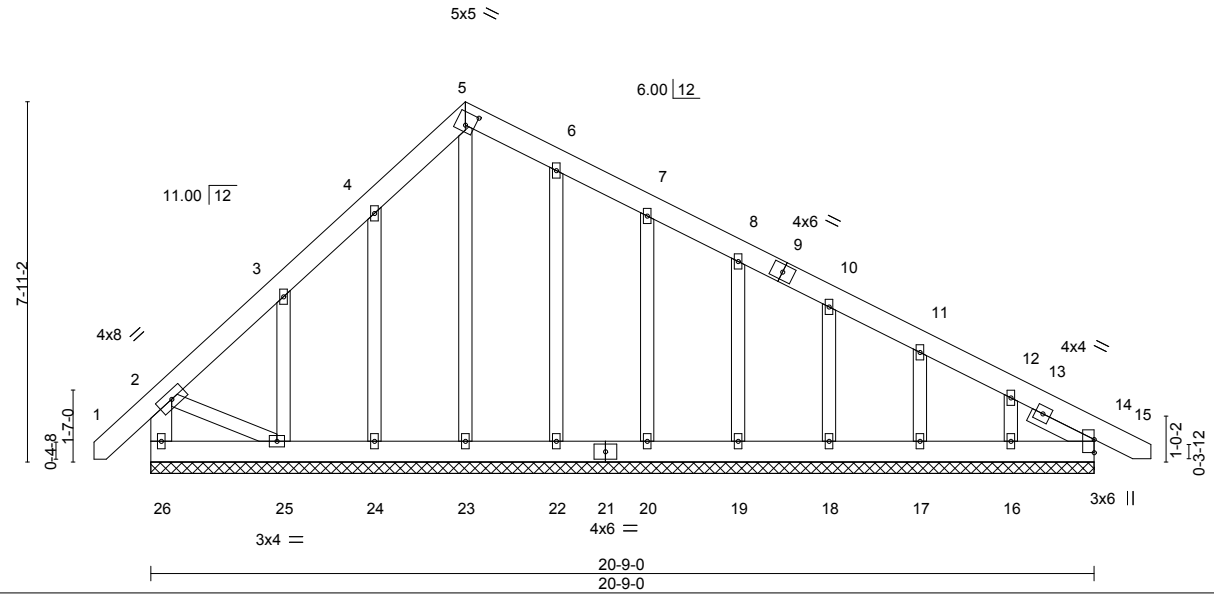


Plate Offsets (X,Y)-- [5:0-2-6,0-3-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	-0.00	14	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	14	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 177 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x6 SP No.1 *Except* 2-25: 2x4 SP No.2
OTHERS	2x4 SP No.2
SLIDER	Right 2x4 SP No.2 1-6-6

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 20-9-0.
(lb) - Max Horz 26=-229(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 26, 22, 20, 19, 18, 17, 14 except 24=-106(LC 12), 25=-240(LC 12), 16=-119(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 26, 23, 24, 22, 20, 19, 18, 17, 16, 14 except 25=257(LC 19)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 26, 22, 20, 19, 18, 17, 14 except (jt=lb) 24=106, 25=240, 16=119.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	D1	COMMON	6	1	I67838751
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:36 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

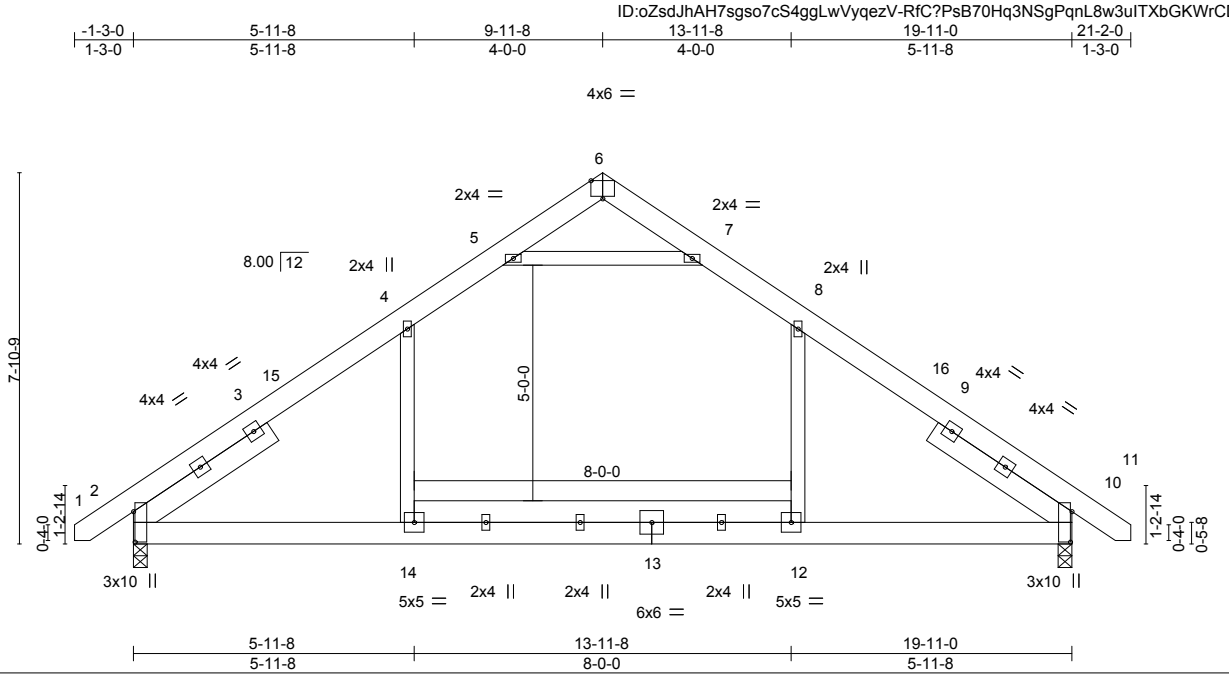


Plate Offsets (X,Y)-- [2:0-7-12,0-0-6], [6:0-3-0,Edge], [10:0-7-12,0-0-6]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.09	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.13	12-14	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.08	2-14	>999	240	Weight: 164 lb	FT = 20%

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

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

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=177(LC 9)
Max Uplift 2=-55(LC 12), 10=-55(LC 13)
Max Grav 2=923(LC 19), 10=923(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1171/197, 4-5=-787/259, 7-8=-787/259, 8-10=-1170/197
BOT CHORD 2-14=-29/832, 12-14=-29/832, 10-12=-29/832
WEBS 4-14=0/355, 8-12=0/355, 5-7=-1023/333

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-1-1 to 3-3-12, Interior(1) 3-3-12 to 9-11-8, Exterior(2) 9-11-8 to 14-1-4, Interior(1) 14-1-4 to 21-0-1 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	D1GE	GABLE	1	1	I67838752
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:36 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

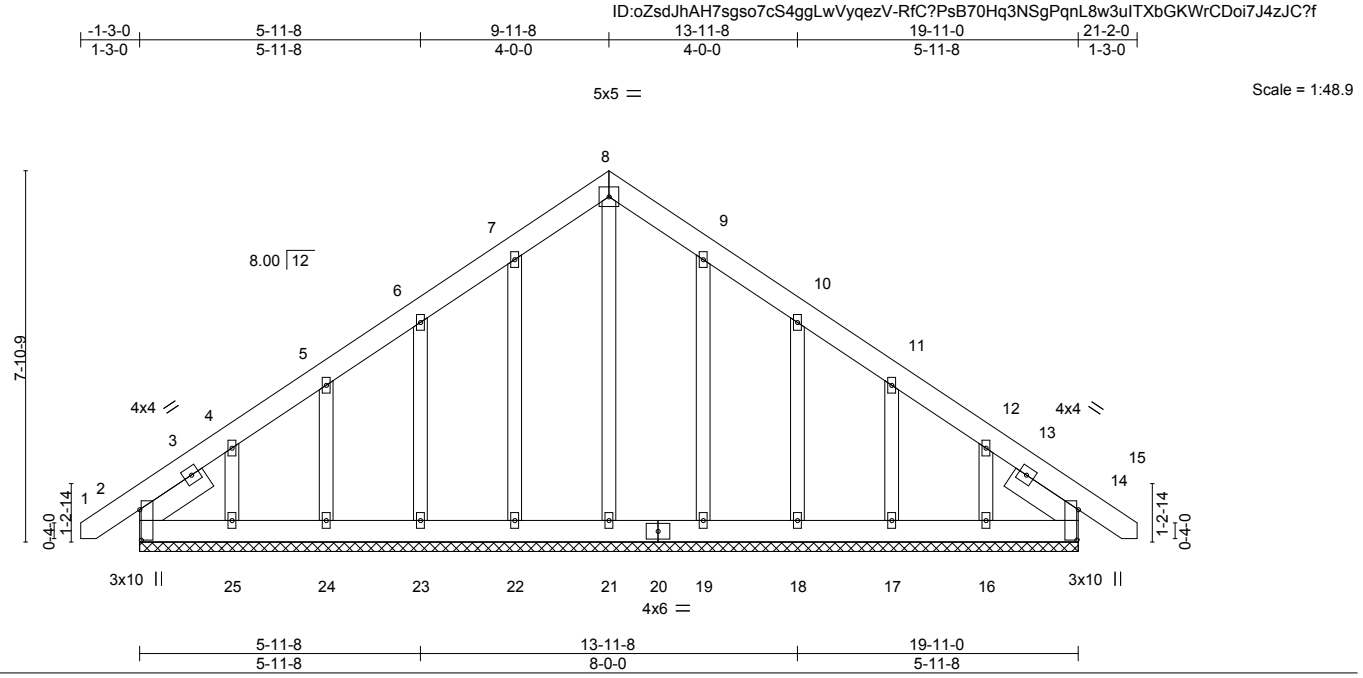


Plate Offsets (X,Y)-- [2:0-7-12,0-0-6], [14:0-7-12,0-0-6]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	-0.00	14	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	-0.00	14	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 172 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2
SLIDER Left 2x6 SP No.1 1-8-9, Right 2x6 SP No.1 1-8-9

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

REACTIONS. All bearings 19-11-0.
(lb) - Max Horz 2=221(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 14, 22, 23, 24, 19, 18, 17 except 25=-169(LC 12), 16=-151(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 14, 21, 22, 23, 24, 25, 19, 18, 17, 16

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 14, 22, 23, 24, 19, 18, 17 except (jt=lb) 25=169, 16=151.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	G1	COMMON	6	1	I67838753
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:37 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

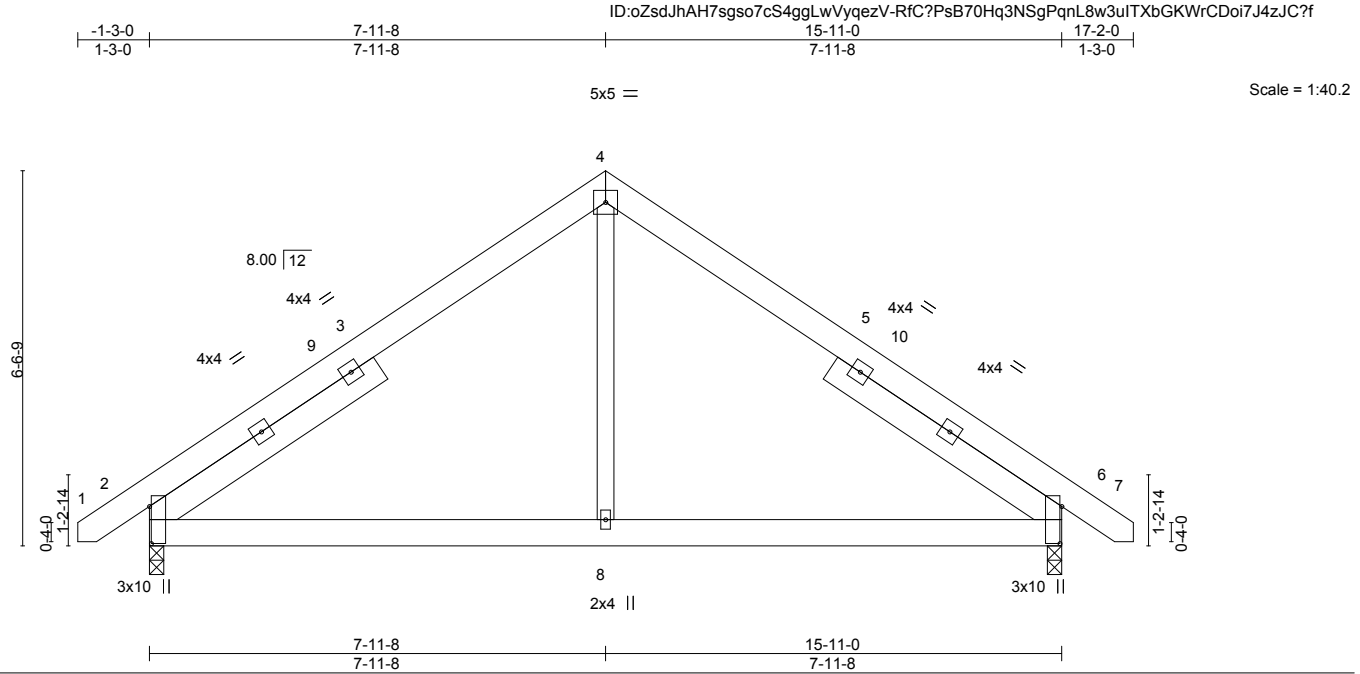


Plate Offsets (X,Y)-- [2:0-7-12,0-0-6], [6:0-7-12,0-0-6]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	0.04	6-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.04	6-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 121 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2
SLIDER Left 2x6 SP No.1 4-9-14, Right 2x6 SP No.1 4-9-14

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

REACTIONS. (size) 2=0-3-0, 6=0-3-0
Max Horz 2=145(LC 9)
Max Uplift 2=-98(LC 9), 6=-98(LC 8)
Max Grav 2=702(LC 1), 6=702(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-704/637, 4-6=-703/637
BOT CHORD 2-8=-358/467, 6-8=-358/467
WEBS 4-8=-459/365

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-1-1 to 3-3-12, Interior(1) 3-3-12 to 7-11-8, Exterior(2) 7-11-8 to 12-4-5, Interior(1) 12-4-5 to 17-0-1 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	G1GE	COMMON SUPPORTED GAB	1	1	I67838754
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:37 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

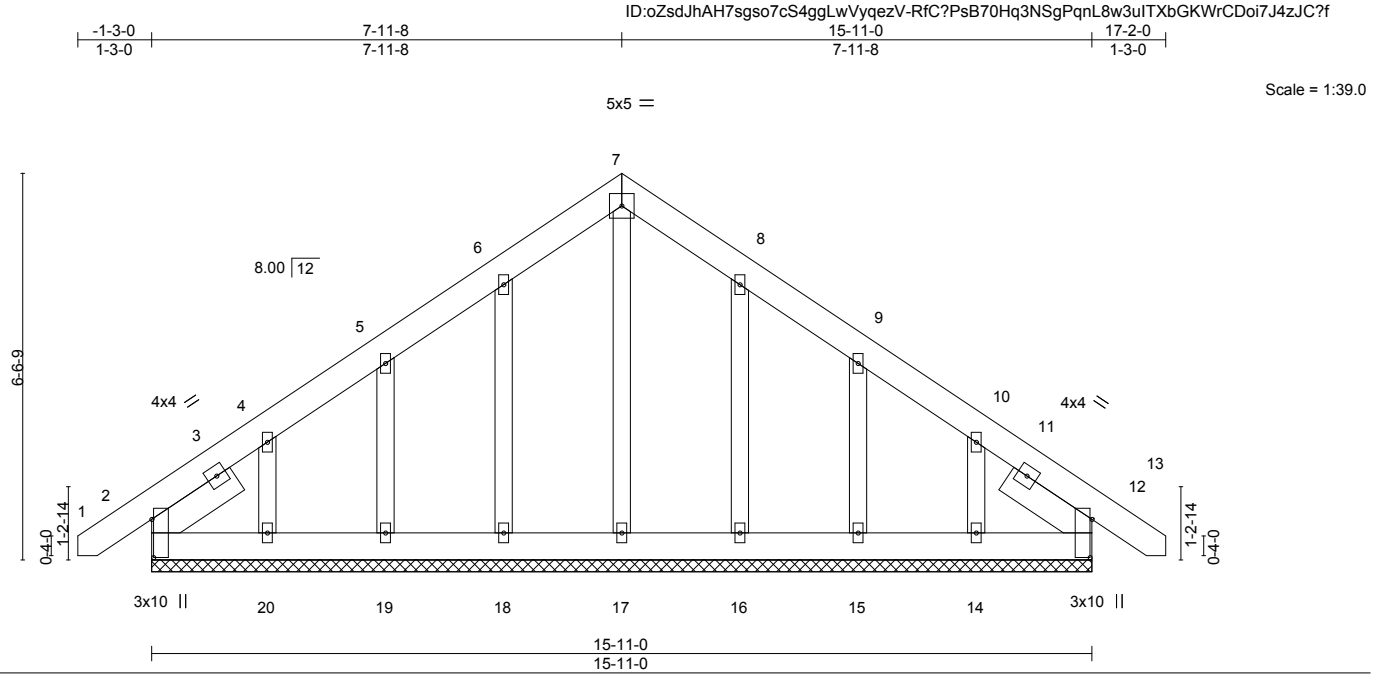


Plate Offsets (X,Y)-- [2:0-7-12,0-0-6], [12:0-7-12,0-0-6]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	-0.00	12	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	-0.00	12	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 132 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2
SLIDER Left 2x6 SP No.1 1-8-9, Right 2x6 SP No.1 1-8-9

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

REACTIONS. All bearings 15-11-0.
(lb) - Max Horz 2=181(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 18, 19, 16, 15 except 20=-149(LC 12), 14=-135(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 12, 17, 18, 19, 20, 16, 15, 14

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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, 12, 18, 19, 16, 15 except (jt=lb) 20=149, 14=135.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 12.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	M1	MONOPITCH	7	1	I67838755
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:38 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

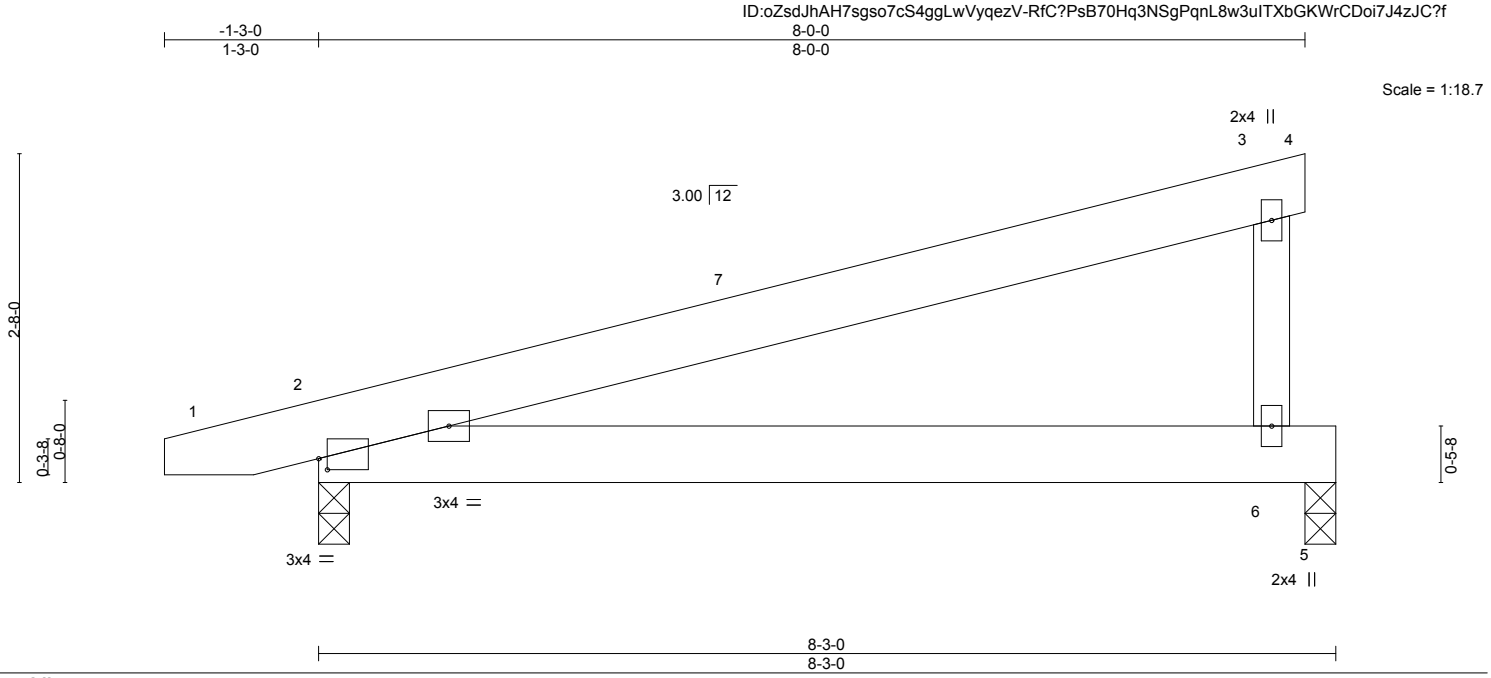


Plate Offsets (X,Y)-- [2:0-0-13,0-1-1]

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	0.36	Vert(LL)	-0.06	2-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.12	2-6	>818	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00		n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P		Wind(LL)	0.14	2-6	>706	240	Weight: 44 lb	FT = 20%

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

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

REACTIONS. (size) 2=0-3-0, 5=0-3-0
Max Horz 2=72(LC 8)
Max Uplift 2=-153(LC 8), 5=-127(LC 8)
Max Grav 2=384(LC 1), 5=298(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-11 to 3-6-2, Interior(1) 3-6-2 to 8-0-0 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=153, 5=127.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	M2	ROOF SPECIAL	3	1	I67838756
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:38 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

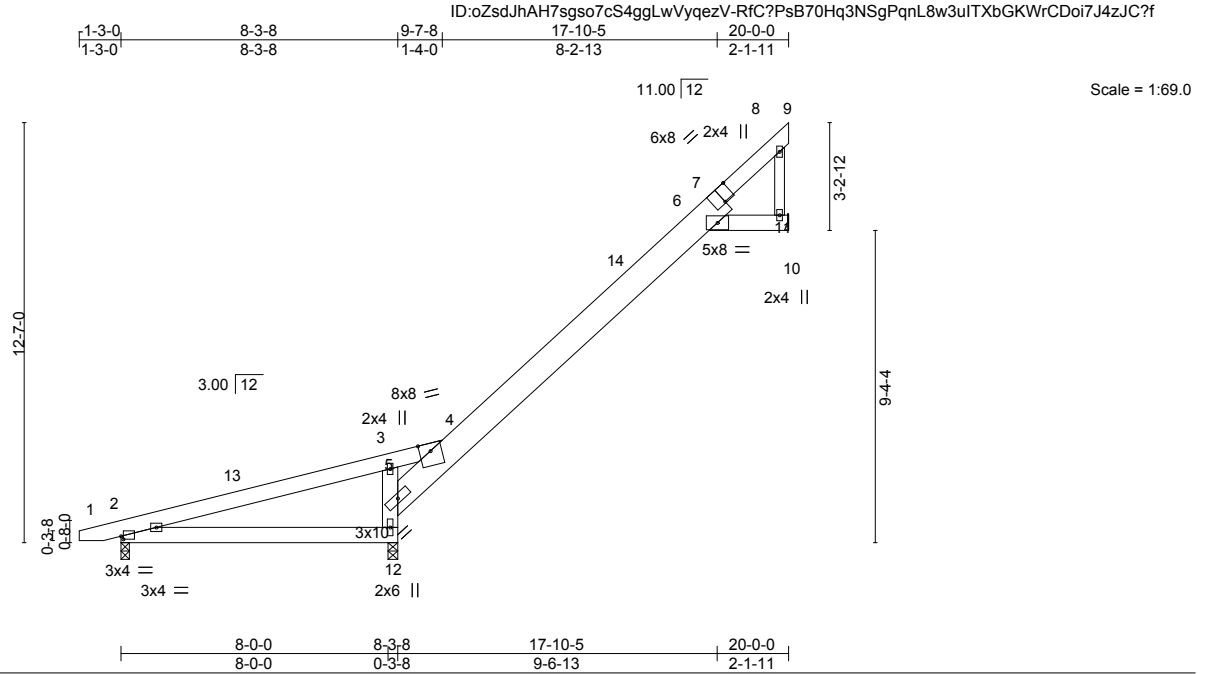


Plate Offsets (X,Y)-- [2:0-0-13,0-1-1], [7:0-4-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.04	2-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.09	2-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.05	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.09	2-12	>999	240	Weight: 119 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1 *Except*
5-7: 2x10 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
8-11: 2x4 SP No.2

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

REACTIONS. (size) 11=Mechanical, 2=0-3-0, 12=0-3-8
Max Horz 2=459(LC 12)
Max Uplift 11=-191(LC 12), 2=-173(LC 8), 12=-301(LC 12)
Max Grav 11=349(LC 19), 2=208(LC 1), 12=1196(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-725/937, 3-4=-733/1125, 4-5=-970/279, 4-6=-298/231, 8-11=-277/196
BOT CHORD 2-12=-484/169
WEBS 5-12=-1113/442, 3-5=-617/375

NOTES-
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-11 to 3-6-2, Interior(1) 3-6-2 to 20-0-0 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=191, 2=173, 12=301.
6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	PB1	Piggyback	6	1	I67838757
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309, RSDGTFD 8.630 s Jun 15 2023 MiTek Industries, Inc. Tue Aug 27 14:57:10 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-U3T94x0nM4vR_DNhQSZHz6xrAUrvWEn5pDX0pQyjcfd

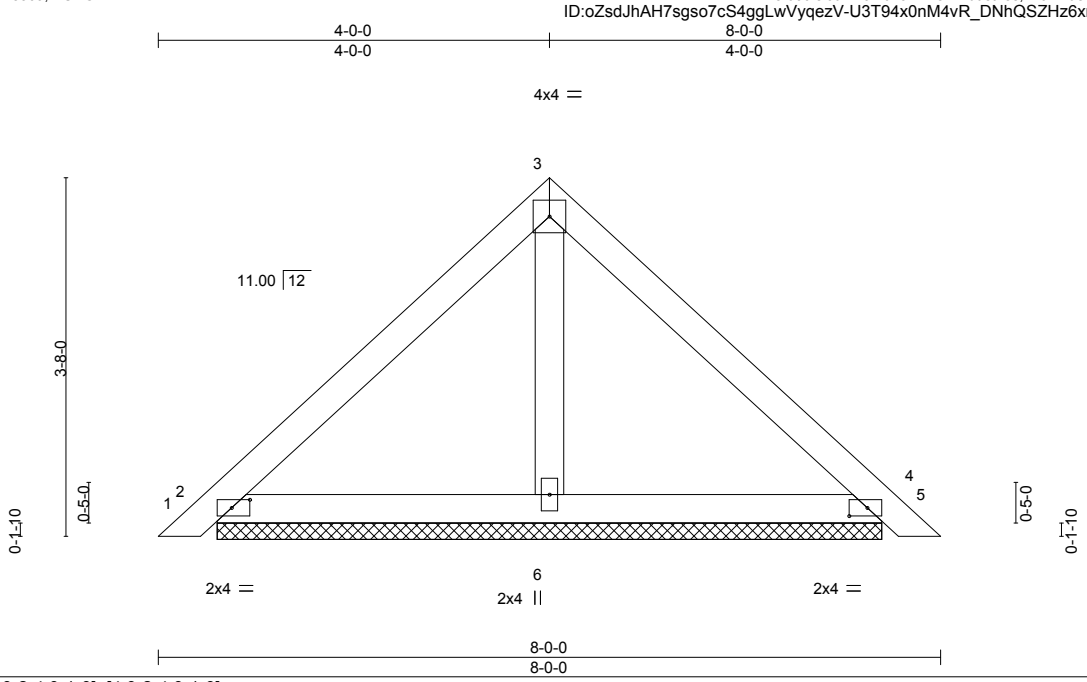


Plate Offsets (X,Y)-- [2:0-2-4,0-1-0], [4:0-2-4,0-1-0]

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	0.19	Vert(LL)	0.00	5	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.01	5	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 30 lb	FT = 20%

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

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

REACTIONS. (size) 2=6-9-9, 4=6-9-9, 6=6-9-9
Max Horz 2=-104(LC 10)
Max Uplift 2=-60(LC 12), 4=-72(LC 13)
Max Grav 2=186(LC 1), 4=186(LC 1), 6=217(LC 1)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 2 and 72 lb uplift at joint 4.
7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S)
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-60, 3-5=-60, 2-4=-20
2) Dead + 0.75 Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-50, 3-5=-50, 2-4=-20
3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-3=-20, 3-5=-20, 2-4=-40
4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=62, 2-3=38, 3-4=38, 4-5=32, 2-4=-12
Horz: 1-2=-74, 2-3=-50, 3-4=50, 4-5=44

August 28,2024

Continued on page 2

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

LOAD CASE(S)

5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=32, 2-3=38, 3-4=38, 4-5=62, 2-4=-12
Horz: 1-2=-44, 2-3=-50, 3-4=50, 4-5=74

6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=13, 2-3=-60, 3-4=-60, 4-5=-53, 2-4=-20
Horz: 1-2=-33, 2-3=40, 3-4=-40, 4-5=-33

7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-53, 2-3=-60, 3-4=-60, 4-5=13, 2-4=-20
Horz: 1-2=33, 2-3=40, 3-4=-40, 4-5=33

8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=0, 2-3=-15, 3-4=15, 4-5=8, 2-4=-12
Horz: 1-2=-12, 2-3=3, 3-4=27, 4-5=20

9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=8, 2-3=15, 3-4=-15, 4-5=0, 2-4=-12
Horz: 1-2=-20, 2-3=-27, 3-4=-3, 4-5=12

10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-30, 2-3=-37, 3-4=-7, 4-5=-0, 2-4=-20
Horz: 1-2=10, 2-3=17, 3-4=13, 4-5=20

11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-0, 2-3=-7, 3-4=-37, 4-5=-30, 2-4=-20
Horz: 1-2=-20, 2-3=-13, 3-4=-17, 4-5=-10

12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=28, 2-3=35, 3-4=15, 4-5=8, 2-4=-12
Horz: 1-2=-40, 2-3=-47, 3-4=27, 4-5=20

13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=8, 2-3=15, 3-4=35, 4-5=28, 2-4=-12
Horz: 1-2=-20, 2-3=-27, 3-4=47, 4-5=40

14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=14, 2-3=21, 3-4=9, 4-5=2, 2-4=-12
Horz: 1-2=-26, 2-3=-33, 3-4=21, 4-5=14

15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=2, 2-3=9, 3-4=21, 4-5=14, 2-4=-12
Horz: 1-2=-14, 2-3=-21, 3-4=33, 4-5=26

16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=20, 2-3=13, 3-4=-7, 4-5=-0, 2-4=-20
Horz: 1-2=-40, 2-3=-33, 3-4=13, 4-5=20

17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-0, 2-3=-7, 3-4=13, 4-5=20, 2-4=-20
Horz: 1-2=-20, 2-3=-13, 3-4=33, 4-5=40

18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-3=-20, 3-5=-20, 2-4=-20

19) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-58, 2-3=-63, 3-4=-40, 4-5=-35, 2-4=-20
Horz: 1-2=8, 2-3=13, 3-4=10, 4-5=15

20) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-35, 2-3=-40, 3-4=-63, 4-5=-58, 2-4=-20
Horz: 1-2=-15, 2-3=-10, 3-4=-13, 4-5=-8

21) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-25, 3-4=-40, 4-5=-35, 2-4=-20
Horz: 1-2=-30, 2-3=-25, 3-4=10, 4-5=15

22) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-35, 2-3=-40, 3-4=-25, 4-5=-20, 2-4=-20
Horz: 1-2=-15, 2-3=-10, 3-4=25, 4-5=30

23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-60, 3-5=-20, 2-4=-20

24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-20, 3-5=-60, 2-4=-20

Continued on page 3

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

LOAD CASE(S)

25) 3rd Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-50, 3-5=-20, 2-4=-20

26) 4th Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-20, 3-5=-50, 2-4=-20

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	PB1GE	GABLE	1	1	I67838758
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:39 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

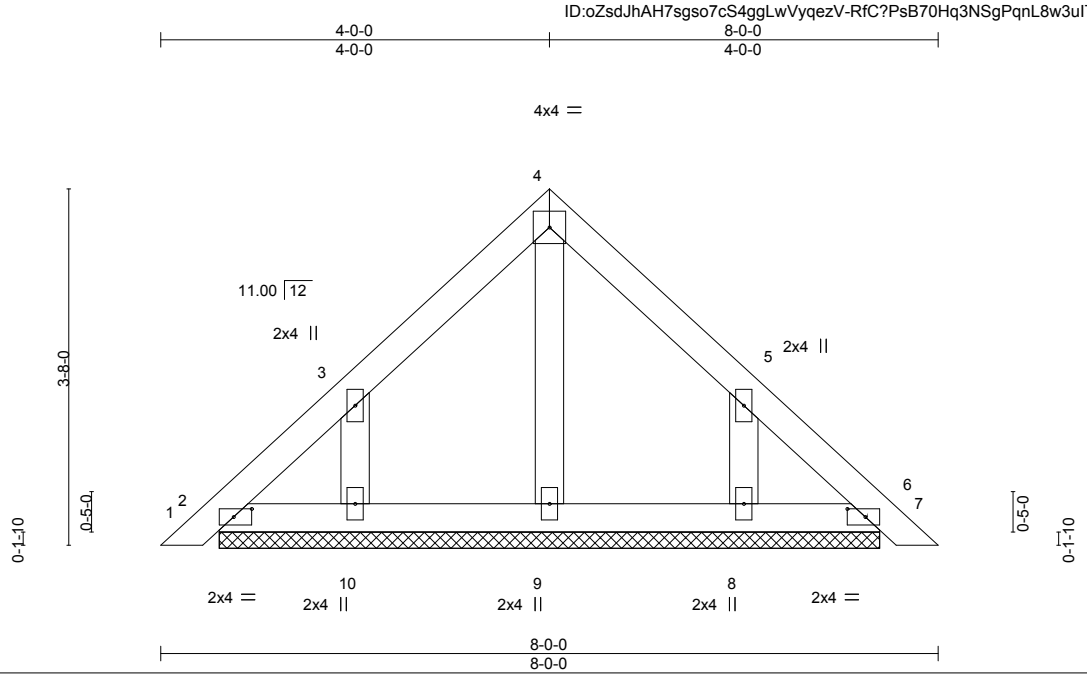


Plate Offsets (X,Y)-- [2:0-2-4,0-1-0], [6:0-2-4,0-1-0]

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	0.04	Vert(LL)	0.00	6	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	6	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 34 lb	FT = 20%

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

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

REACTIONS. All bearings 6-9-9.
(lb) - Max Horz 2=-104(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 6 except 10=-138(LC 12), 8=-137(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9, 10, 8

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6 except (jt=lb) 10=138, 8=137.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

August 28,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5867	PB2	Piggyback	10	1	I67838759
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.630 s Jul 12 2024 MiTek Industries, Inc. Tue Aug 27 13:15:39 2024 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

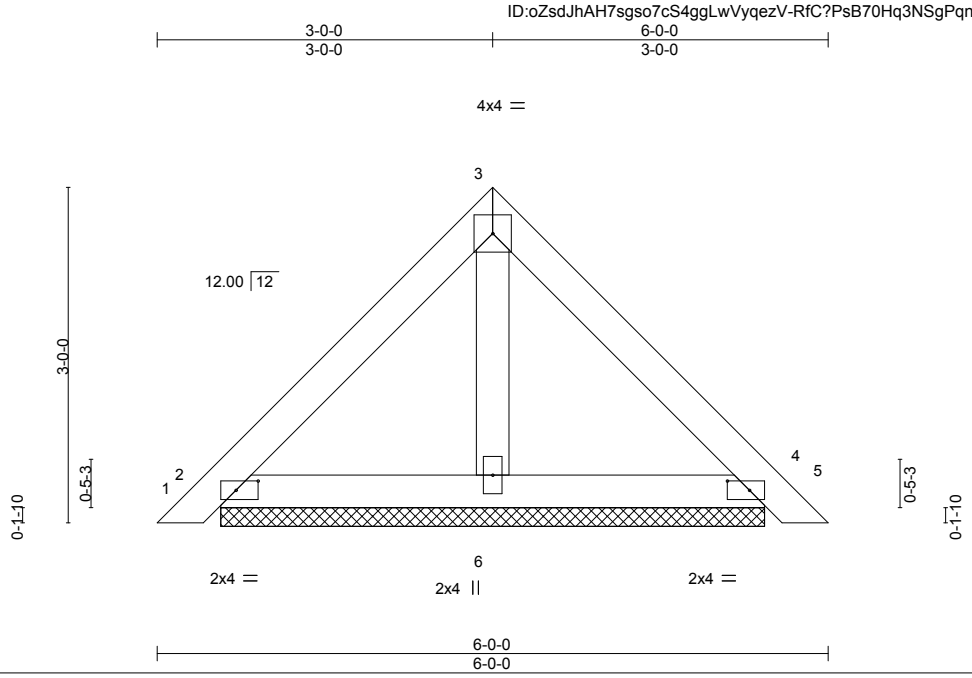


Plate Offsets (X,Y)-- [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

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	0.10	Vert(LL)	0.00	5	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	5	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 23 lb	FT = 20%

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

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

REACTIONS. (size) 2=4-10-6, 4=4-10-6, 6=4-10-6
Max Horz 2=-84(LC 10)
Max Uplift 2=-48(LC 13), 4=-54(LC 13)
Max Grav 2=142(LC 1), 4=142(LC 1), 6=151(LC 3)

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

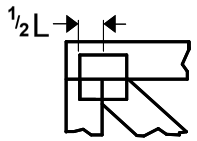
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60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

August 28,2024

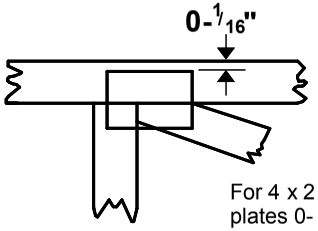
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

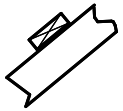
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

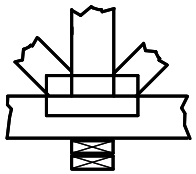
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

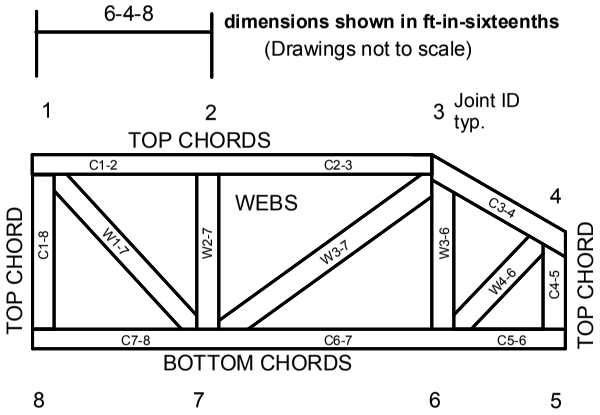


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: 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.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

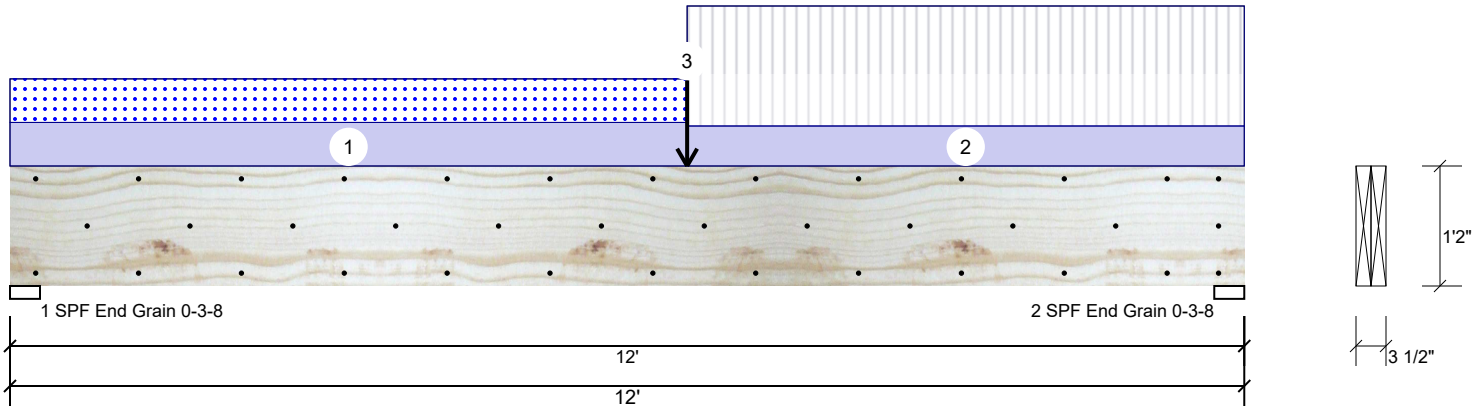
Failure to Follow Could Cause Property Damage or Personal Injury

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.

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2515	2325	1421	0	0
2	Vertical	5367	2369	514	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	51%	2325 / 2952	5277	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	75%	2369 / 5367	7736	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	24155 ft-lb	6'7"	26999 ft-lb	0.895 (89%)	D+L	L
Unbraced	24155 ft-lb	6'7"	24188 ft-lb	0.999 (100%)	D+L	L
Shear	6158 lb	10'6 1/2"	10453 lb	0.589 (59%)	D+L	L
LL Defl inch	0.242 (L/573)	6'7"	0.289 (L/480)	0.838 (84%)	L	L
TL Defl inch	0.373 (L/371)	6'6"	0.385 (L/360)	0.970 (97%)	D+L	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 6-7-0		Top	294 PLF	0 PLF	294 PLF	0 PLF	0 PLF	A1
2	Part. Uniform	6-7-0 to 12-0-0		Top	270 PLF	810 PLF	0 PLF	0 PLF	0 PLF	F1
3	Point	6-7-0		Top	1165 lb	3495 lb	0 lb	0 lb	0 lb	F1A
	Bearing Length	0-3-8								
	Self Weight				11 PLF					

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 6/28/2026

Manufacturer Info

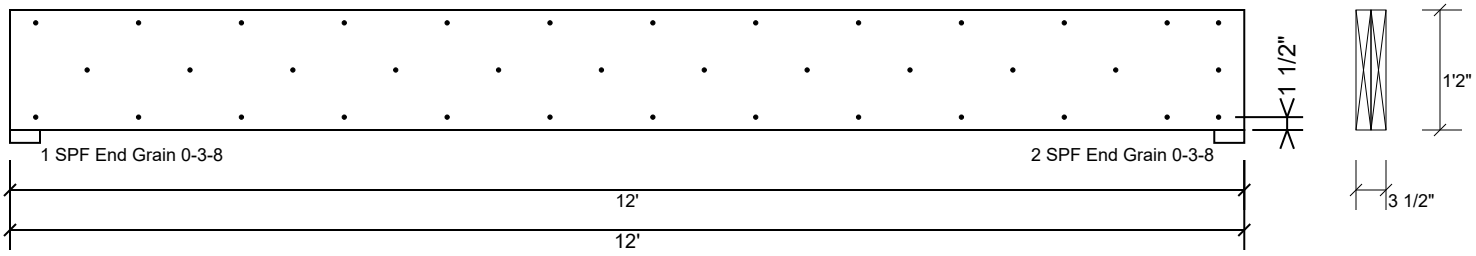
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

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

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

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

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

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 6/28/2026

Manufacturer Info

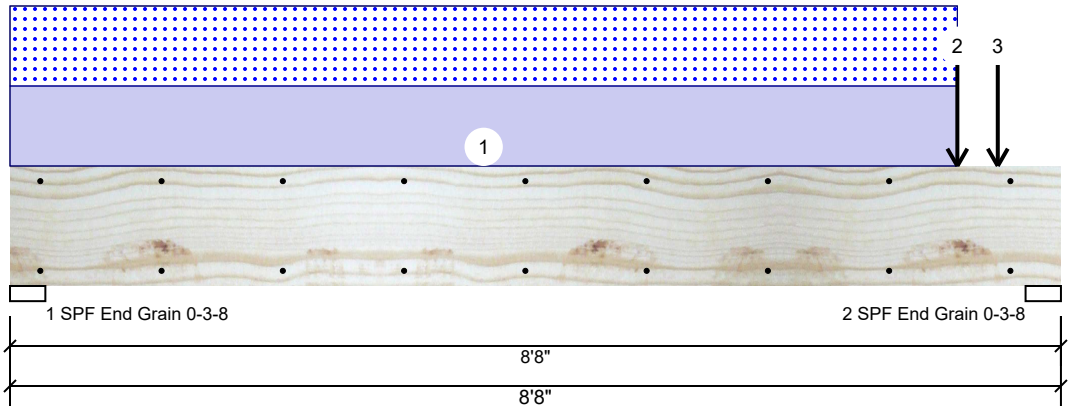
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

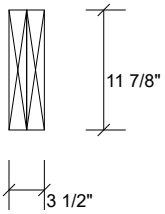
Comtech, Inc.
1001 S Reilly Rd., NC
28314
(910) 864-8787

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

BM2 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level





Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2091	2042	0	0
2	Vertical	0	5243	4972	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	40%	2091 / 2042	4133	L	D+S
2 - SPF End Grain	3.500"	Vert	99%	5243 / 4972	10215	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9474 ft-lb	5' 3/8"	22897 ft-lb	0.414 (41%)	D+S	L
Unbraced	9474 ft-lb	5' 3/8"	22897 ft-lb	0.414 (41%)	D+S	L
Shear	6365 lb	7'4 5/8"	10197 lb	0.624 (62%)	D+S	L
LL Defl inch	0.073 (L/1357)	4'6 13/16"	0.274 (L/360)	0.265 (27%)	S	L
TL Defl inch	0.147 (L/670)	4'6 13/16"	0.410 (L/240)	0.358 (36%)	D+S	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 7-9-12		Top	406 PLF	0 PLF	406 PLF	0 PLF	0 PLF	B2
2	Point	7-9-12		Top	3842 lb	0 lb	3842 lb	0 lb	0 lb	B2-GR
	Bearing Length	0-3-8								
3	Point	8-1-12		Top	240 lb	0 lb	0 lb	0 lb	0 lb	Wall Above
	Bearing Length	0-3-8								
	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

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

Handling & Installation

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

This design is valid until 6/28/2026

Manufacturer Info

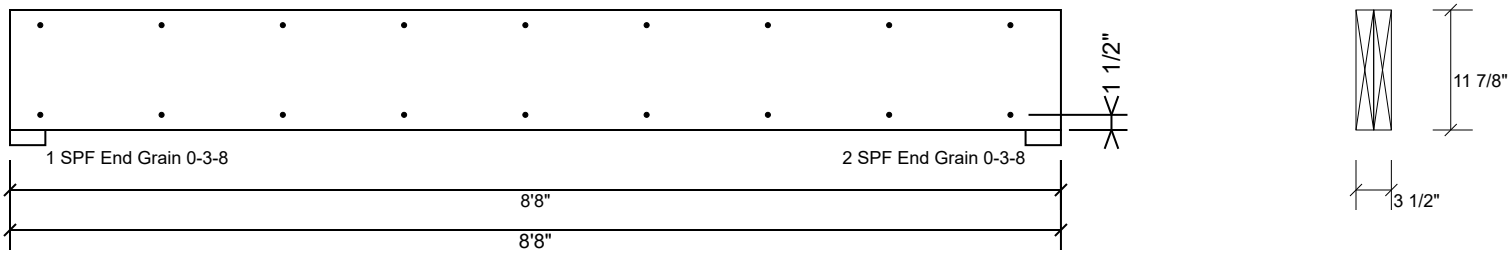
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

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

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

BM2 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 Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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

Handling & Installation

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

This design is valid until 6/28/2026

Manufacturer Info

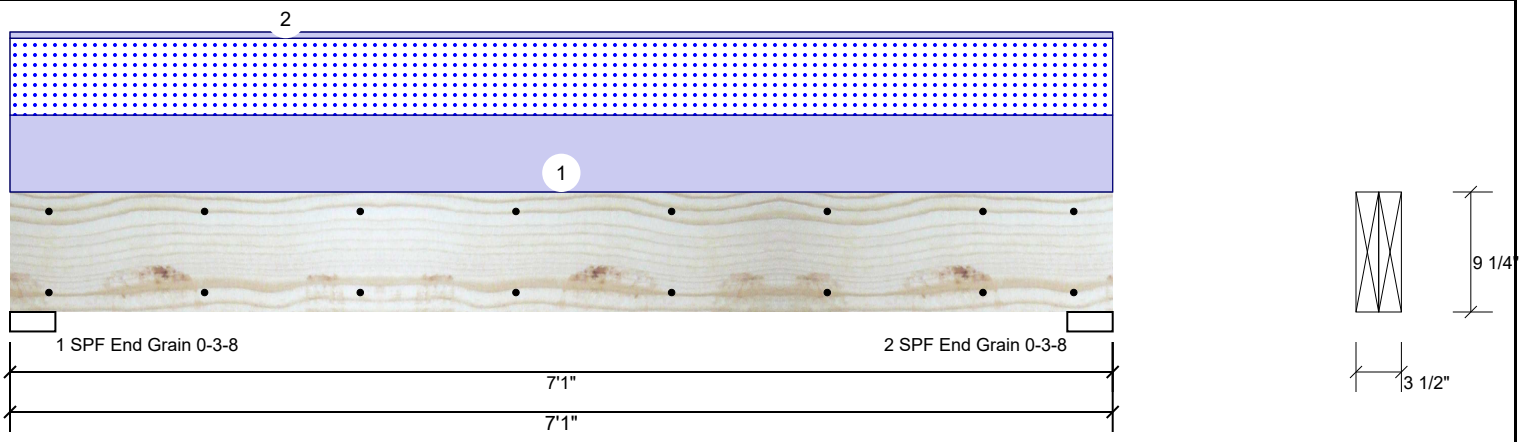
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

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

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

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

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2150	1966	0	0
2	Vertical	0	2150	1966	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	40%	2150 / 1966	4116	L	D+S
2 - SPF End Grain	3.500"	Vert	40%	2150 / 1966	4116	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6376 ft-lb	3'6 1/2"	14423 ft-lb	0.442 (44%)	D+S	L
Unbraced	6376 ft-lb	3'6 1/2"	9973 ft-lb	0.639 (64%)	D+S	L
Shear	2887 lb	1' 3/4"	7943 lb	0.363 (36%)	D+S	L
LL Defl inch	0.063 (L/1263)	3'6 1/2"	0.221 (L/360)	0.285 (29%)	S	L
TL Defl inch	0.132 (L/603)	3'6 1/2"	0.331 (L/240)	0.398 (40%)	D+S	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	555 PLF	0 PLF	555 PLF	0 PLF	0 PLF	A1
2	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
	Self Weight				7 PLF					

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 6/28/2026

Manufacturer Info

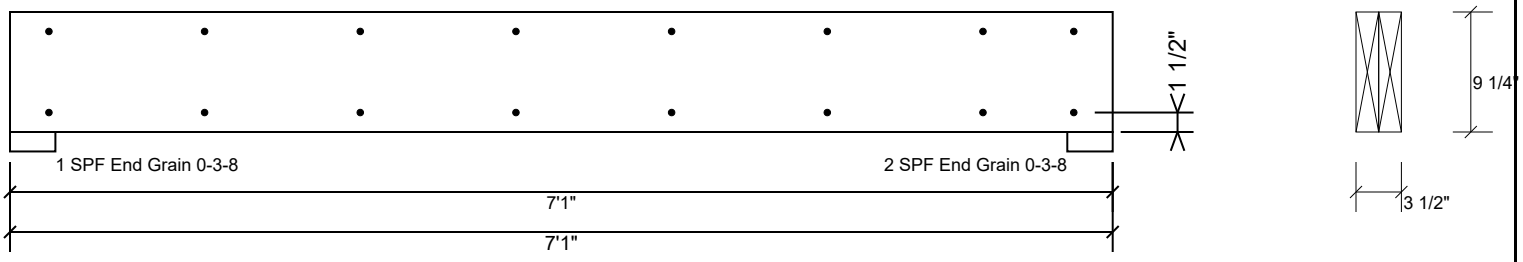
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

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

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

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

Level: Level



Multi-Ply Analysis

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

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

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 6/28/2026

Manufacturer Info

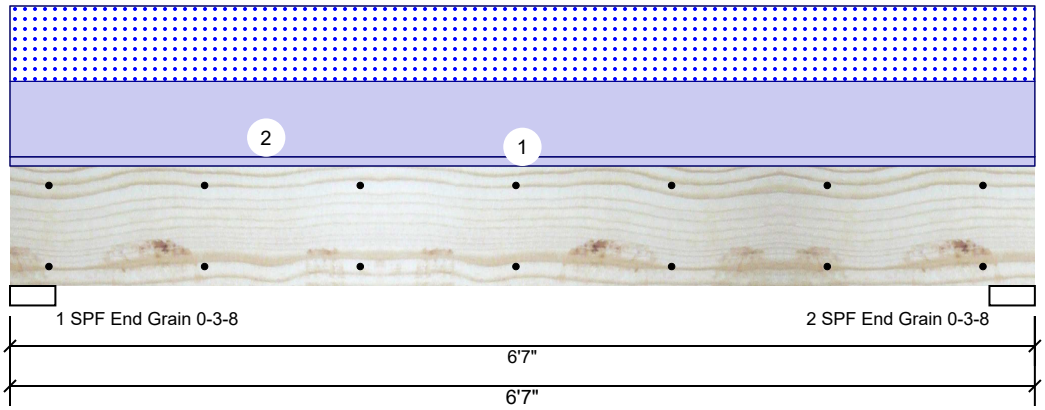
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

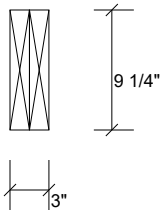
Comtech, Inc.
1001 S Reilly Rd., NC
28314
(910) 864-8787

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

BM4 S-P-F #2 2.000" X 10.000" 2-Ply - PASSED

Level: Level





Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1353	1205	0	0
2	Vertical	0	1353	1205	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	57%	1353 / 1205	2558	L	D+S
2 - SPF End Grain	3.500"	Vert	57%	1353 / 1205	2558	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3644 ft-lb	3'3 1/2"	3946 ft-lb	0.923 (92%)	D+S	L
Unbraced	3644 ft-lb	3'3 1/2"	3946 ft-lb	0.923 (92%)	D+S	L
Shear	1732 lb	1' 3/4"	2872 lb	0.603 (60%)	D+S	L
LL Defl inch	0.042 (L/1757)	3'3 1/2"	0.153 (L/480)	0.273 (27%)	S	L
TL Defl inch	0.089 (L/827)	3'3 1/2"	0.204 (L/360)	0.435 (44%)	D+S	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
2	Uniform			Top	366 PLF	0 PLF	366 PLF	0 PLF	0 PLF	A1

This design is valid until 6/28/2026

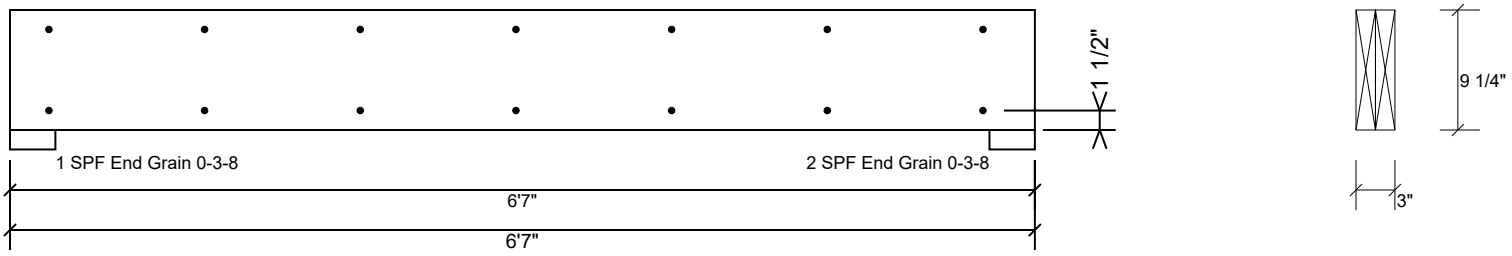
Manufacturer Info

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

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

BM4 S-P-F #2 2.000" X 10.000" 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	157.4 PLF
Yield Limit per Fastener	78.7 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

This design is valid until 6/28/2026

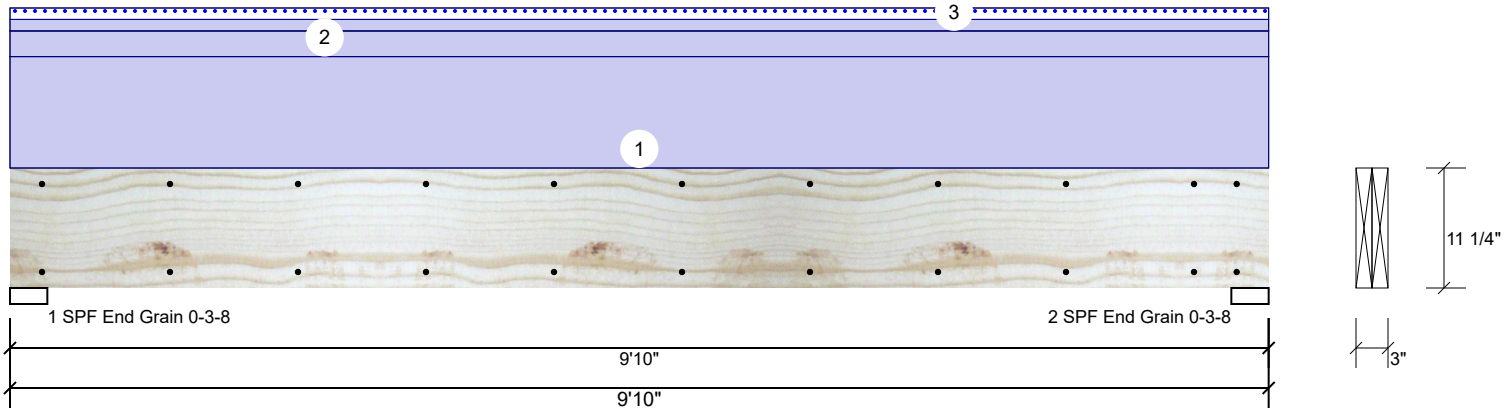
Manufacturer Info

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

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

GDH S-P-F #2 2.000" X 12.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1278	98	0	0
2	Vertical	0	1278	98	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	31%	1278 / 98	1377	L	D+S
2 - SPF End Grain	3.500"	Vert	31%	1278 / 98	1377	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2856 ft-lb	4'11"	4153 ft-lb	0.688 (69%)	D	Uniform
Unbraced	2856 ft-lb	4'11"	4153 ft-lb	0.688 (69%)	D	Uniform
Shear	959 lb	1'2 3/4"	2734 lb	0.351 (35%)	D	Uniform
LL Defl inch	0.007 (L/16128)	4'11"	0.312 (L/360)	0.022 (2%)	S	L
TL Defl inch	0.098 (L/1152)	4'11"	0.469 (L/240)	0.208 (21%)	D+S	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	195 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1GE
2	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
3	Tie-In	0-0-0 to 9-10-0	1-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof Load

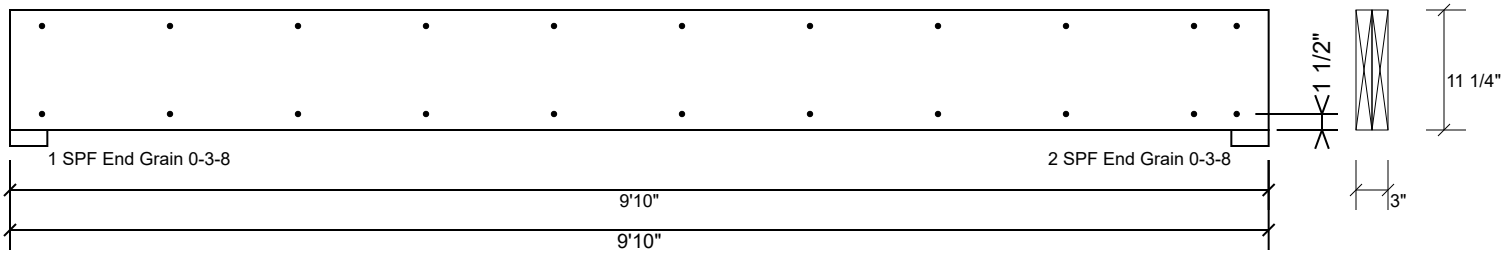
This design is valid until 6/28/2026

Manufacturer Info

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

GDH S-P-F #2 2.000" X 12.000" 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	157.4 PLF
Yield Limit per Fastener	78.7 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

This design is valid until 6/28/2026

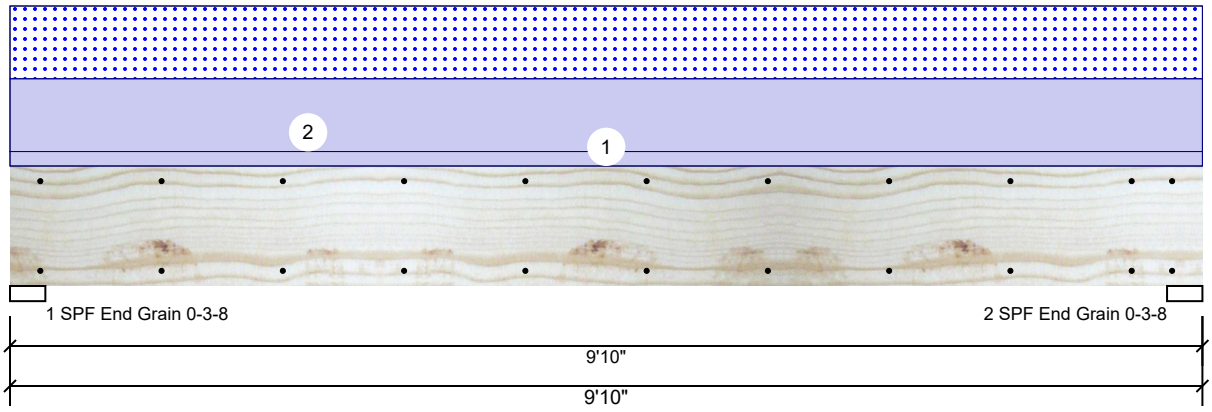
Manufacturer Info

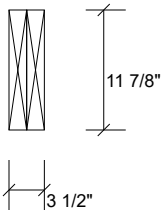
Comtech, Inc.
1001 S Reilly Rd., NC
28314
(910) 864-8787

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

GDH2 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level





Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1378	1111	0	0
2	Vertical	0	1378	1111	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	24%	1378 / 1111	2489	L	D+S
2 - SPF End Grain	3.500"	Vert	24%	1378 / 1111	2489	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5562 ft-lb	4'11"	22897 ft-lb	0.243 (24%)	D+S	L
Unbraced	5562 ft-lb	4'11"	22897 ft-lb	0.243 (24%)	D+S	L
Shear	1850 lb	1'3 3/8"	10197 lb	0.181 (18%)	D+S	L
LL Defl inch	0.047 (L/2389)	4'11"	0.312 (L/360)	0.151 (15%)	S	L
TL Defl inch	0.105 (L/1066)	4'11"	0.469 (L/240)	0.225 (23%)	D+S	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
2	Uniform			Top	226 PLF	0 PLF	226 PLF	0 PLF	0 PLF	C1
	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

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

Handling & Installation

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

This design is valid until 6/28/2026

Manufacturer Info

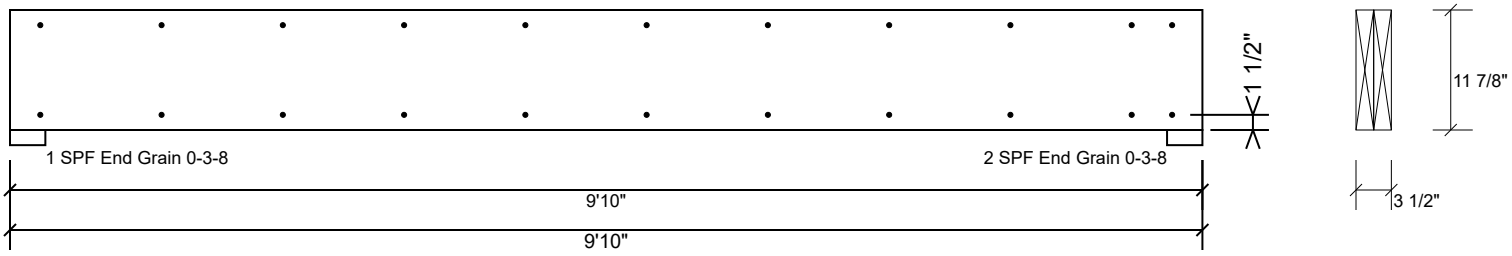
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

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

Client:	Precision Custom Homes	Date:	12/3/2024
Project:	Sarah	Input by:	David Landry
Address:		Job Name:	Lot 29 Magnolia Hills
		Project #:	J1024-5868

GDH2 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 Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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

Handling & Installation

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

This design is valid until 6/28/2026

Manufacturer Info

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

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

ENGINEERING BY
TRENCO
A MiTek Affiliate

RE: J1024-5868
Lot 29 Magnolia Hills

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J1024-5868
Lot/Block: Model:
Address: Subdivision:
City: State:

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

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

This package includes 13 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I62777436	ET1	12/29/2023
2	I62777437	F1	12/29/2023
3	I62777438	F1A	12/29/2023
4	I62777439	F2	12/29/2023
5	I62777440	F2A	12/29/2023
6	I62777441	F3	12/29/2023
7	I62777442	F4	12/29/2023
8	I62777443	F5	12/29/2023
9	I62777444	F5A	12/29/2023
10	I62777445	F6	12/29/2023
11	I62777446	F6A	12/29/2023
12	I62777447	FG1	12/29/2023
13	I62777448	FG2	12/29/2023

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: Johnson, Andrew

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

North Carolina COA: C-0844

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

December 29, 2023

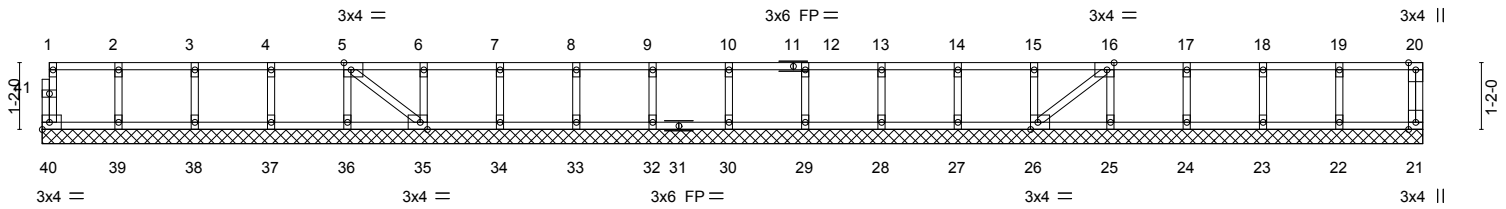
Johnson, Andrew

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	ET1	GABLE	1	1	I62777436
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:20 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

0-1-8

Scale = 1:40.3



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	14-8-0	16-0-0	17-4-0	18-8-0	20-0-0	21-4-0	22-8-0	24-1-8
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-5-8

Plate Offsets (X,Y)-- [5:0-1-8,Edge], [16:0-1-8,Edge], [26:0-1-8,Edge], [35:0-1-8,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	YES	WB	0.03	Horz(CT)	-0.00	21	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 104 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 24-1-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 40, 21, 39, 38, 37, 36, 35, 34, 33, 32, 30, 29, 28, 27, 26, 25, 24, 23, 22

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

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

December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F1	Floor	4	1	I62777437
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:22 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

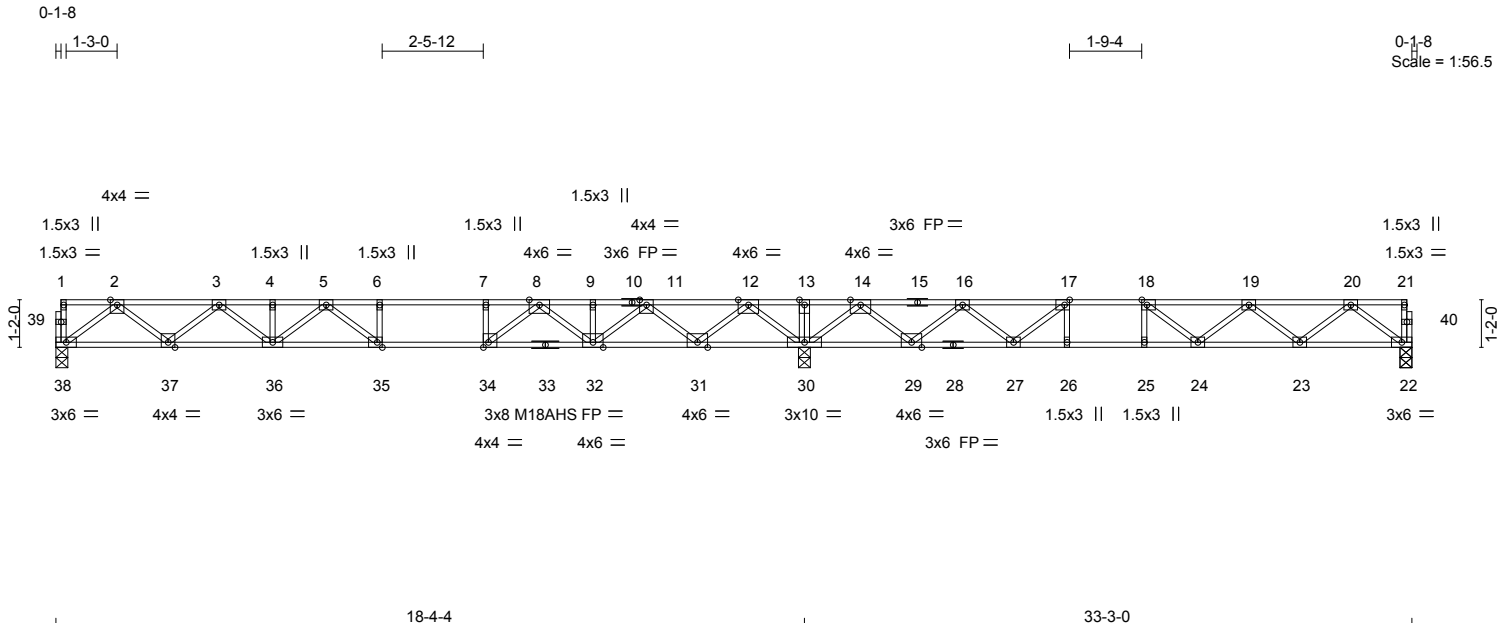


Plate Offsets (X,Y)-- [17:0-1-8,Edge], [18:0-1-8,Edge], [34:0-1-8,Edge], [35:0-1-8,Edge]

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	0.75	Vert(LL)	-0.28	35-36	>780	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	1.00	Vert(CT)	-0.38	35-36	>569	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.05	22	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 165 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP 2400F 2.0E(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 2-2-0 oc bracing.

REACTIONS. All bearings 0-3-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) except 38=879(LC 2), 22=704(LC 3), 22=612(LC 1), 30=2166(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1826/0, 3-4=-2993/0, 4-5=-2993/0, 5-6=-3302/0, 6-7=-3302/0, 7-8=-3302/0, 8-9=-2097/60, 9-11=-2097/60, 11-12=-373/647, 12-13=0/2712, 13-14=0/2712, 14-16=-464/1230, 16-17=-1636/622, 17-18=-2137/245, 18-19=-2064/14, 19-20=-1398/0
BOT CHORD 37-38=0/1097, 36-37=0/2531, 35-36=0/3283, 34-35=0/3302, 32-34=0/2687, 31-32=-336/1342, 30-31=-1353/0, 29-30=-1582/0, 27-29=-917/1195, 26-27=-245/2137, 25-26=-245/2137, 24-25=-245/2137, 23-24=0/1910, 22-23=0/859
WEBS 2-38=-1374/0, 2-37=0/949, 3-37=-917/0, 3-36=0/591, 5-36=-370/0, 5-35=-371/279, 12-30=-1802/0, 20-22=-1075/0, 20-23=0/702, 19-23=-665/0, 14-30=-1551/0, 14-29=0/1132, 16-29=-1081/0, 16-27=0/742, 12-31=0/1373, 11-31=-1321/0, 11-32=0/1025, 8-32=-820/0, 8-34=0/1108, 7-34=-524/0, 17-27=-961/0, 17-26=0/298, 18-24=-93/370, 18-25=-270/0

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) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F1A	Floor	1	1	I62777438
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:24 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

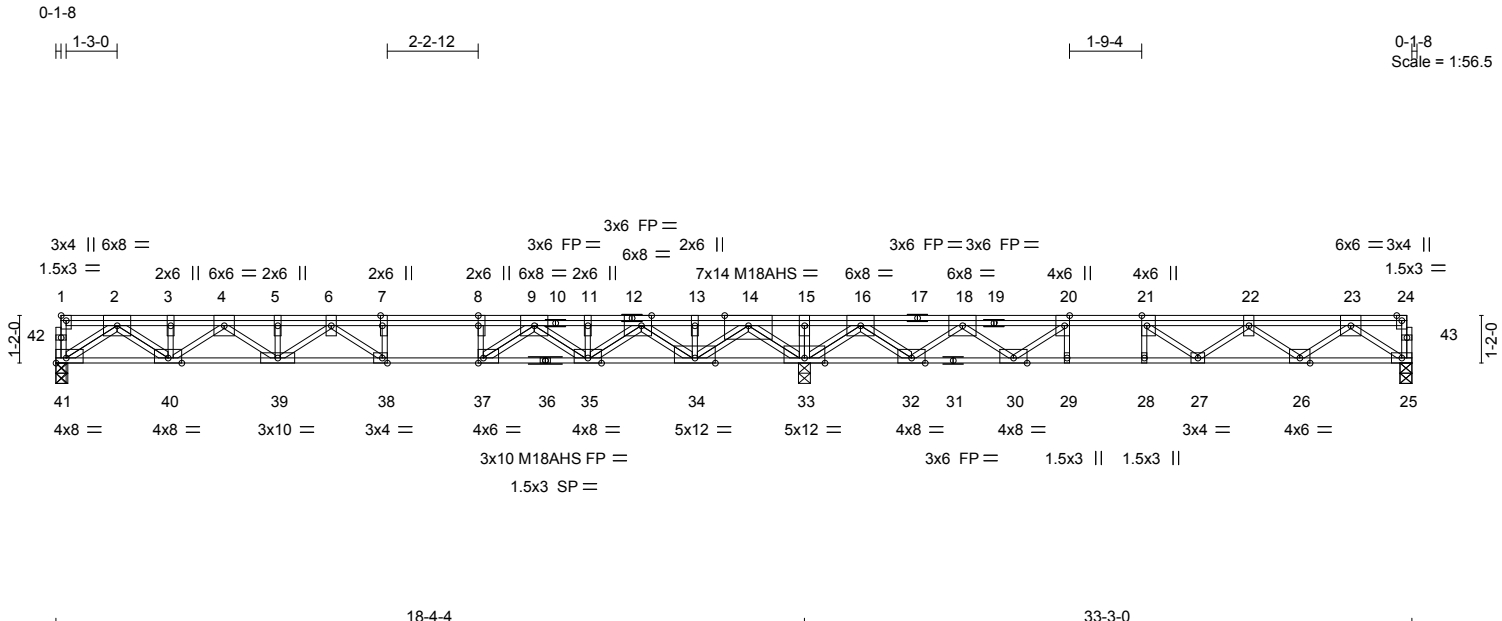


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [7:0-3-0,Edge], [8:0-3-0,0-0-0], [12:0-3-0,Edge], [20:0-3-0,Edge], [21:0-3-0,Edge], [37:0-1-8,Edge], [38:0-1-8,Edge], [41:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.98	Vert(LL)	-0.19	38	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.91	Vert(CT)	-0.50	38-39	>440	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.08	25	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 234 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

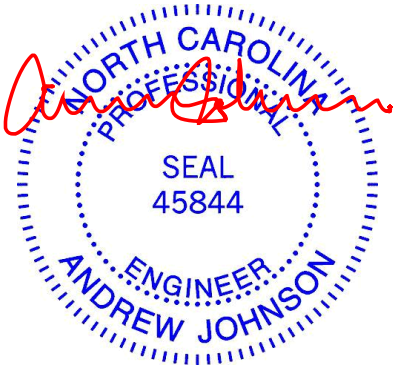
BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-10-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 33-34,32-33,30-32.

REACTIONS. All bearings 0-3-8 except (jt=length) 41=0-3-0, 41=0-3-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) except 41=1742(LC 2), 25=1207(LC 1), 33=4660(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3918/0, 3-4=-3939/0, 4-5=-6200/0, 5-6=-6200/0, 6-7=-6452/0, 7-8=-6452/0, 8-9=-6452/0, 9-11=-3582/0, 11-12=-3582/0, 12-13=0/1512, 13-14=0/1512, 14-15=0/7049, 15-16=0/7049, 16-18=0/2860, 18-20=-2141/306, 20-21=-3554/0, 21-22=-3682/0, 22-23=-2673/0
BOT CHORD 40-41=0/2233, 39-40=0/5244, 38-39=0/6694, 37-38=0/6452, 35-37=0/4888, 34-35=0/2068, 33-34=-3873/0, 32-33=-4251/0, 30-32=-1424/888, 29-30=0/3554, 28-29=0/3554, 27-28=0/3554, 26-27=0/3655, 25-26=0/1671
WEBS 2-41=-2731/0, 2-40=0/2138, 3-40=-363/0, 4-40=-1603/0, 4-39=0/1192, 5-39=-285/0, 6-39=-617/0, 6-38=-762/0, 7-38=-23/365, 14-33=-3899/0, 14-34=0/3358, 13-34=-340/0, 12-34=-3062/0, 12-35=0/2105, 11-35=-410/0, 9-35=-1704/0, 9-37=0/2330, 8-37=-1254/0, 23-25=-2043/0, 23-26=0/1274, 22-26=-1247/0, 22-27=-360/34, 18-32=-2518/0, 18-30=0/1840, 20-30=-2105/0, 21-27=0/650, 21-28=-277/0, 20-29=0/301, 15-33=-351/0, 16-33=-3476/0, 16-32=0/2432

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 3x6 MT20 unless otherwise indicated.
4) The Fabrication Tolerance at joint 36 = 11%
5) Plates checked for a plus or minus 1 degree rotation about its center.
6) n/a
7) Load case(s) 1, 2, 3, 4, 5, 6, 7 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
8) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
9) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00



December 29,2023

Continued on page 2

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

LOAD CASE(S) Standard

Uniform Loads (plf)
Vert: 1-24=-220, 25-41=-10

2) 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-15=-220, 15-24=-140, 25-41=-10

3) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-15=-140, 15-24=-220, 25-41=-10

4) 1st chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-8=-220, 8-15=-140, 15-24=-220, 25-41=-10

5) 2nd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-7=-140, 7-24=-220, 25-41=-10

6) 3rd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-21=-220, 21-24=-140, 25-41=-10

7) 4th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-15=-220, 15-20=-140, 20-24=-220, 25-41=-10

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F2	FLOOR	3	1	I62777439
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:25 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

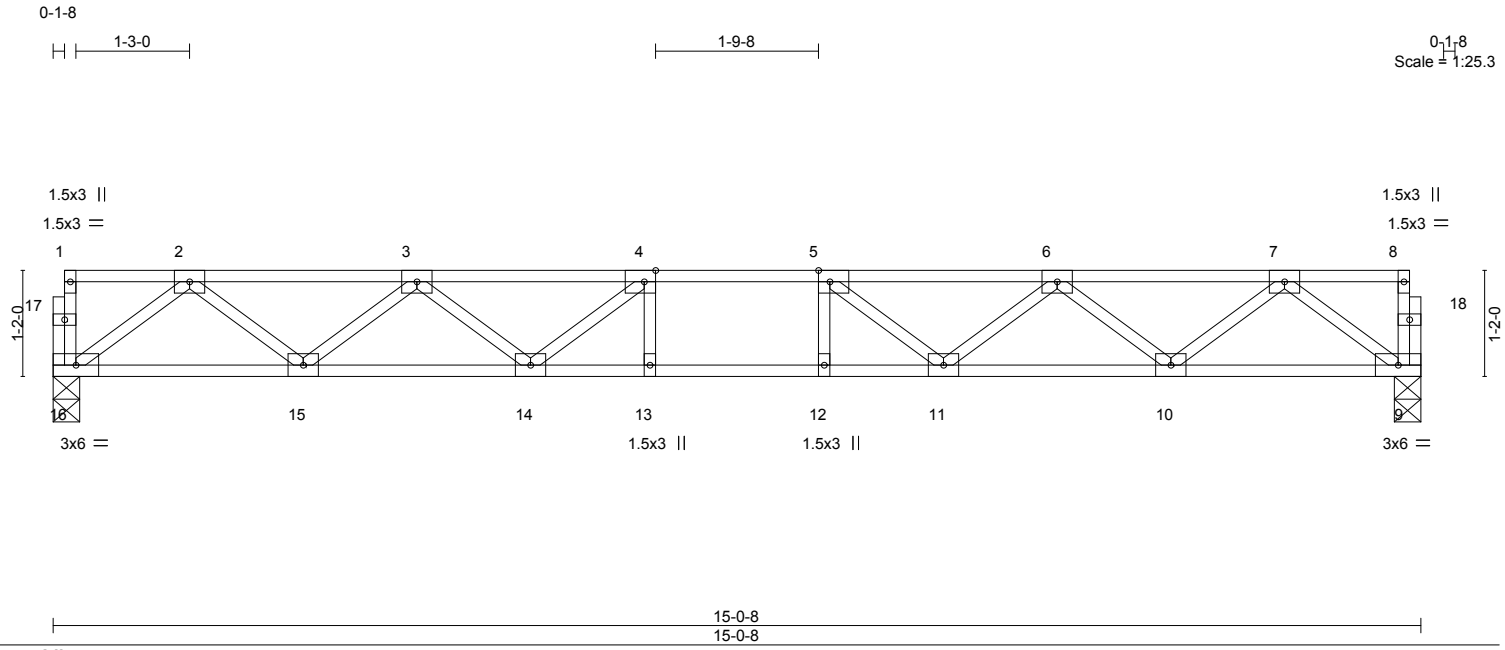


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge]

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	0.34	Vert(LL)	-0.15	12-13	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.72	Vert(CT)	-0.20	12-13	>886	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 75 lb	FT = 20%F, 11%E

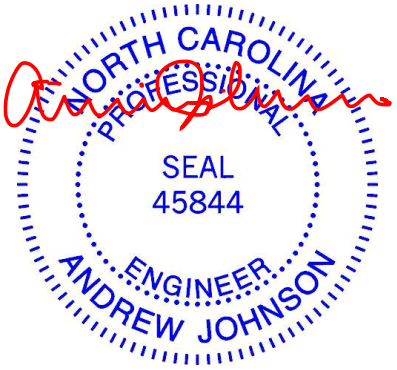
LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

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) 16=0-3-8, 9=0-3-8
Max Grav 16=807(LC 1), 9=807(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1656/0, 3-4=-2575/0, 4-5=-2865/0, 5-6=-2575/0, 6-7=-1656/0
BOT CHORD 15-16=0/1000, 14-15=0/2277, 13-14=0/2865, 12-13=0/2865, 11-12=0/2865, 10-11=0/2277, 9-10=0/1000
WEBS 2-16=-1252/0, 2-15=0/853, 3-15=-809/0, 3-14=0/447, 4-14=-545/0, 7-9=-1252/0, 7-10=0/853, 6-10=-809/0, 6-11=0/447, 5-11=-545/0

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.



December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F2A	FLOOR GIRDER	1	1	I62777440
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:26 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

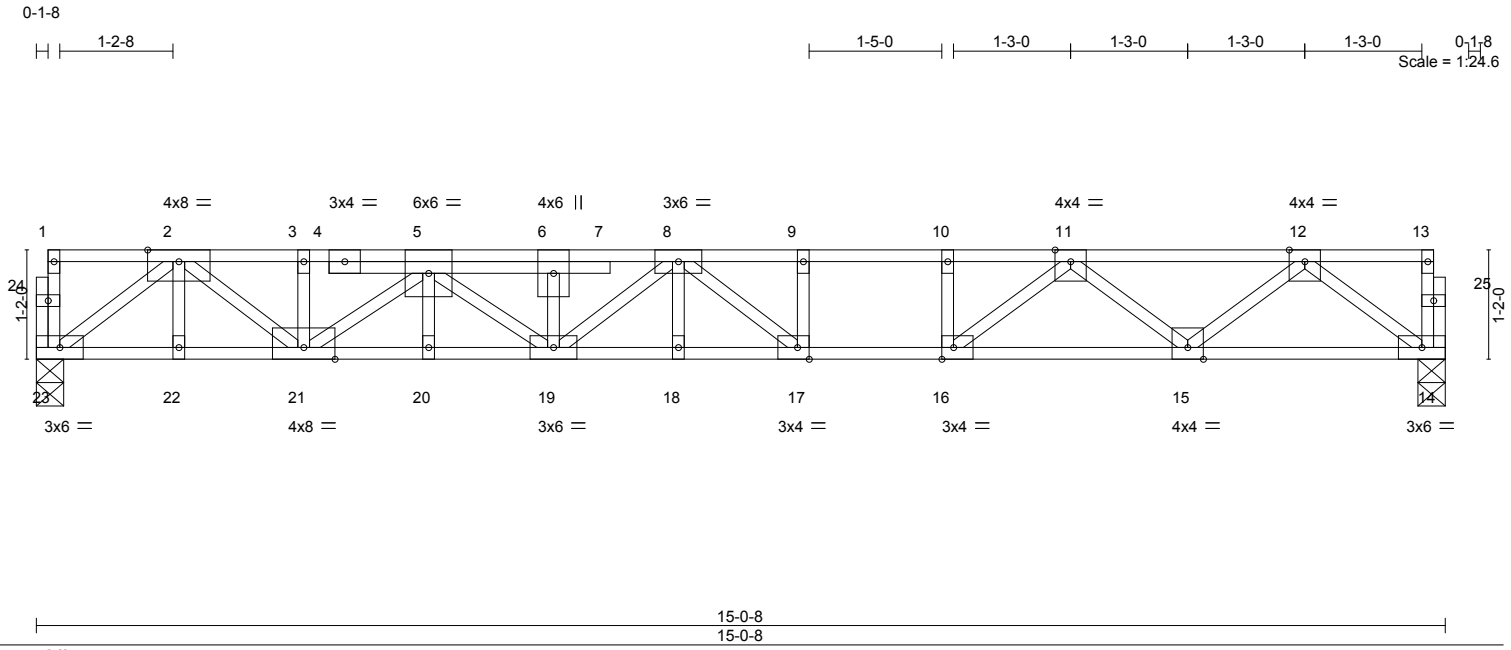


Plate Offsets (X,Y)-- [16:0-1-8,Edge], [17:0-1-8,Edge]

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	0.70	Vert(LL)	-0.19	17-18	>912	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.75	Vert(CT)	-0.27	17-18	>658	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.60	Horz(CT)	0.04	14	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 85 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

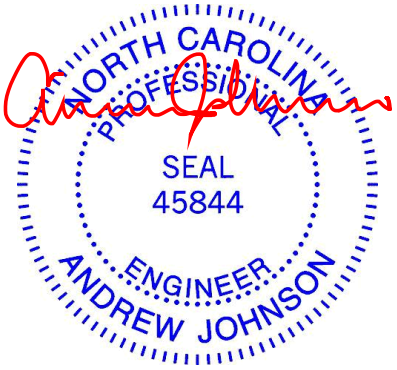
BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 14=0-3-8, 23=0-3-8
Max Grav 14=882(LC 1), 23=1005(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2255/0, 3-5=-2259/0, 5-6=-3456/0, 6-8=-3456/0, 8-9=-3166/0, 9-10=-3166/0, 10-11=-3166/0, 11-12=-1814/0
BOT CHORD 22-23=0/1266, 21-22=0/1266, 20-21=0/3230, 19-20=0/3230, 18-19=0/3473, 17-18=0/3473, 16-17=0/3166, 15-16=0/2550, 14-15=0/1100
WEBS 12-14=-1377/0, 12-15=0/930, 11-15=-958/0, 11-16=0/920, 10-16=-343/0, 2-23=-1575/0, 2-21=0/1255, 5-21=-1210/0, 5-19=0/281, 8-17=-600/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 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) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 353 lb down at 4-4-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
6) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 14-23=-10, 1-13=-100
Concentrated Loads (lb)
Vert: 5=-273(F)



December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F3	Floor	1	1	I62777441
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:27 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

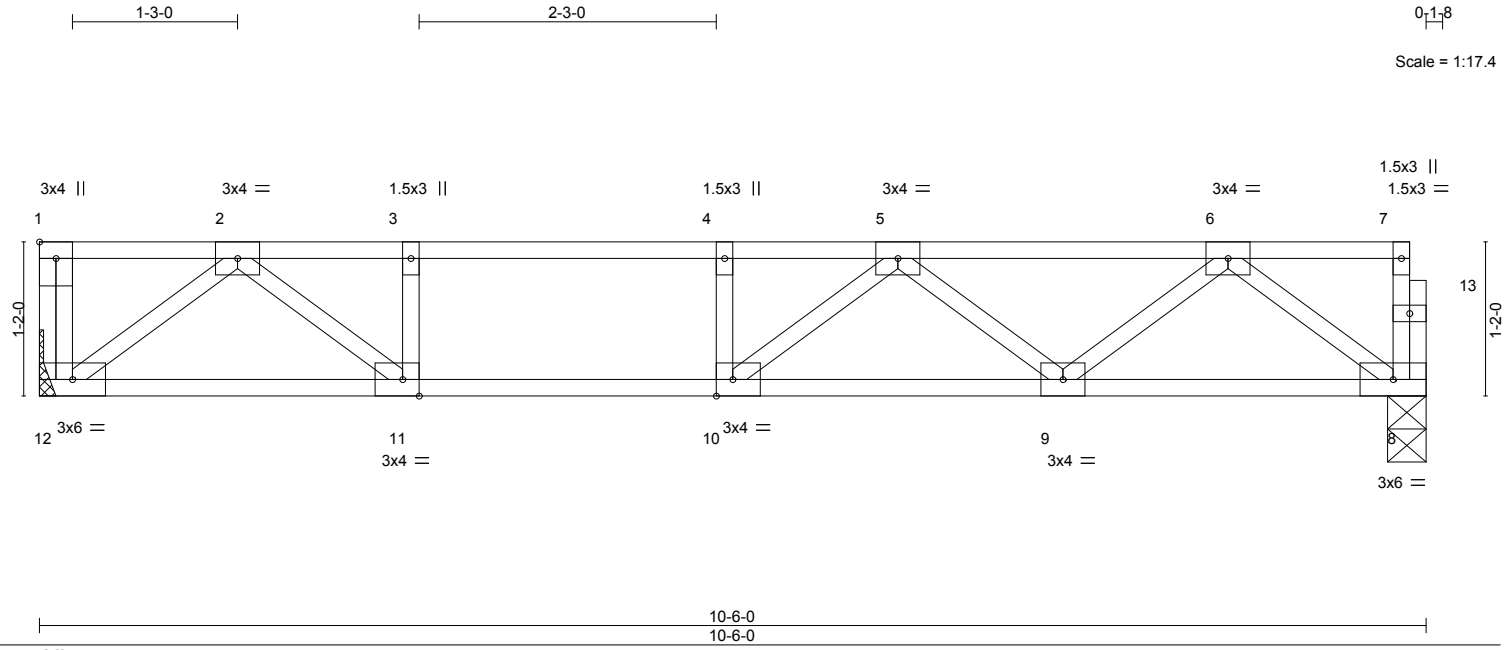


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [10:0-1-8,Edge], [11:0-1-8,Edge]

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	0.66	Vert(LL)	-0.14	9-10	>904	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.61	Vert(CT)	-0.18	9-10	>684	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.01	8	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 53 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) 12=Mechanical, 8=0-3-8
Max Grav 12=564(LC 1), 8=558(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1261/0, 3-4=-1261/0, 4-5=-1261/0, 5-6=-1043/0
BOT CHORD 11-12=0/656, 10-11=0/1261, 9-10=0/1325, 8-9=0/682
WEBS 2-12=-822/0, 2-11=0/791, 6-8=-852/0, 6-9=0/471, 5-9=-367/0, 3-11=-377/0

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

December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F4	FLOOR	5	1	I62777442
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:28 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

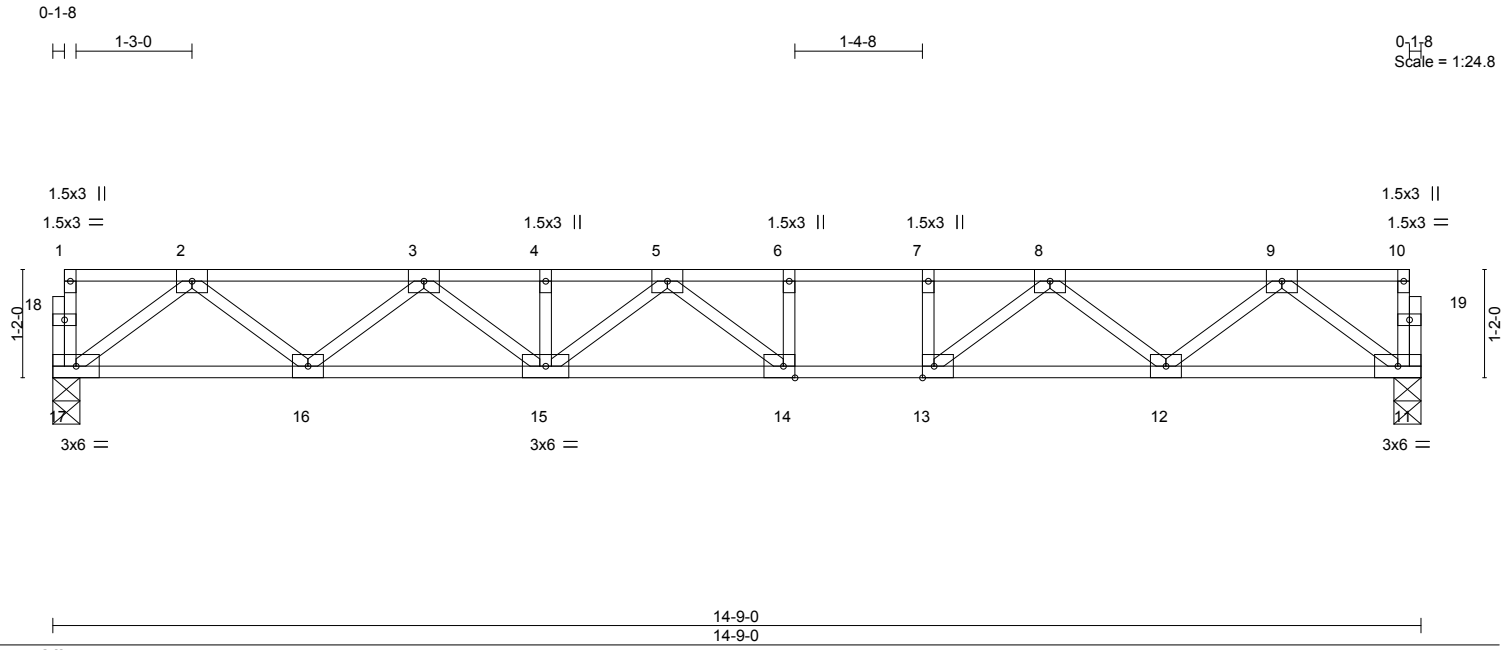


Plate Offsets (X,Y)-- [13:0-1-8,Edge], [14:0-1-8,Edge]

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	0.51	Vert(LL)	-0.17	14-15	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.73	Vert(CT)	-0.24	14-15	>732	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.04	11	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 76 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) 17=0-3-8, 11=0-3-8
Max Grav 17=791(LC 1), 11=791(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1607/0, 3-4=-2556/0, 4-5=-2556/0, 5-6=-2657/0, 6-7=-2657/0, 7-8=-2657/0, 8-9=-1596/0
BOT CHORD 16-17=0/983, 15-16=0/2207, 14-15=0/2744, 13-14=0/2657, 12-13=0/2204, 11-12=0/984
WEBS 2-17=-1230/0, 2-16=0/813, 3-16=-780/0, 3-15=0/446, 5-15=-253/0, 5-14=-298/246, 9-11=-1232/0, 9-12=0/797, 8-12=-791/0, 8-13=0/722, 7-13=-312/0

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.

December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F5	Floor	3	1	I62777443
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:29 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

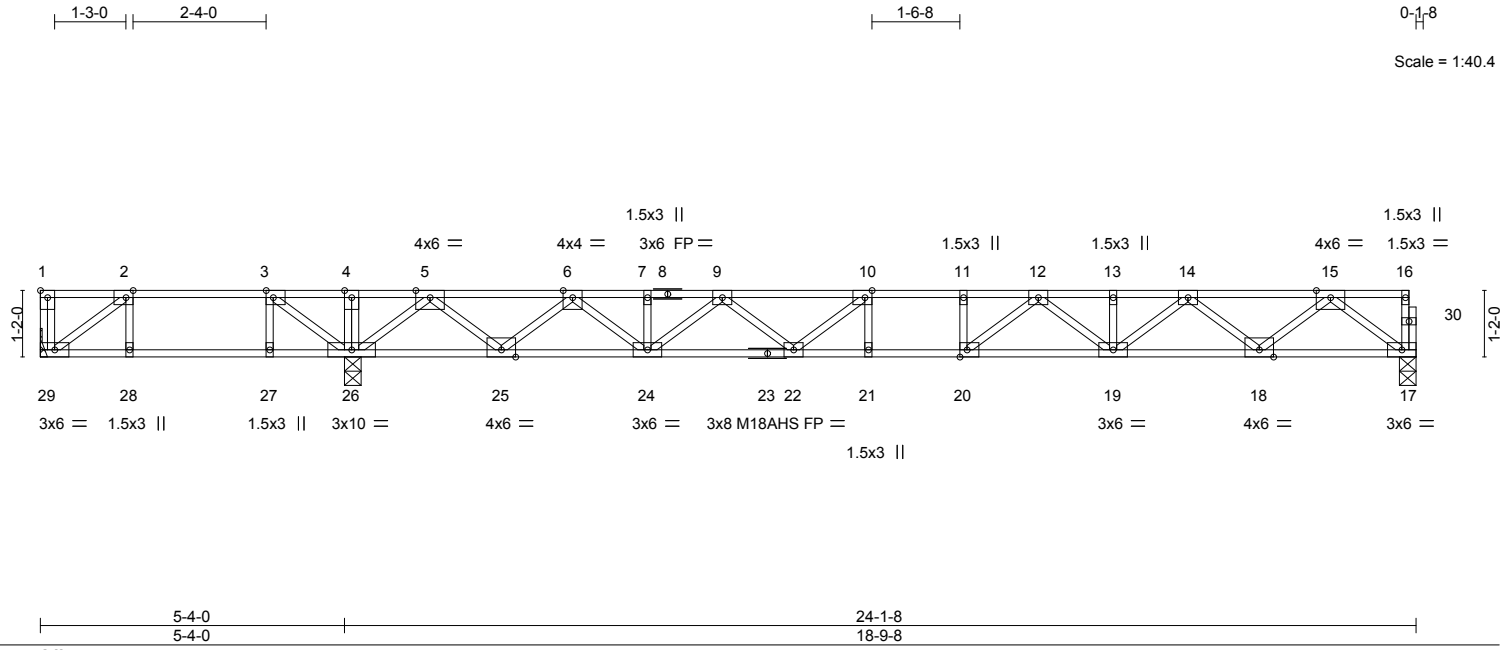


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [2:0-1-8,Edge], [3:0-1-8,Edge], [10:0-1-8,Edge], [20:0-1-8,Edge]

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	0.67	Vert(LL)	-0.28	21	>784	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.39	21	>574	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	NO	WB	0.60	Horz(CT)	0.07	17	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 122 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

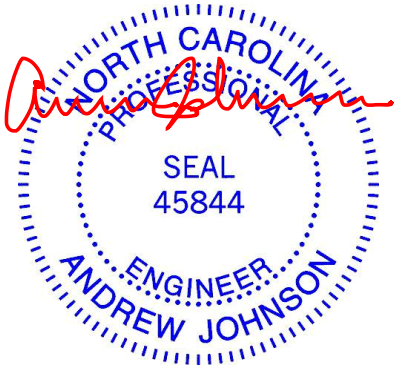
BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 28-29,27-28,26-27.

REACTIONS. (size) 29=Mechanical, 26=0-3-8, 17=0-3-8
Max Grav 29=1686(LC 3), 26=1573(LC 8), 17=960(LC 7)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-29=-1588/0, 2-3=-193/410, 3-4=0/1116, 4-5=0/1116, 5-6=-1352/0, 6-7=-2954/0, 7-9=-2954/0, 9-10=-3806/0, 10-11=-4043/0, 11-12=-4043/0, 12-13=-3383/0, 13-14=-3383/0, 14-15=-2032/0
BOT CHORD 28-29=-410/193, 27-28=-410/193, 26-27=-410/193, 25-26=0/394, 24-25=0/2268, 22-24=0/3536, 21-22=0/4043, 20-21=0/4043, 19-20=0/3787, 18-19=0/2823, 17-18=0/1206
WEBS 3-26=-1086/0, 2-29=-238/506, 5-26=-1742/0, 5-25=0/1259, 6-25=-1206/0, 6-24=0/888, 9-24=-753/0, 9-22=0/487, 10-22=-557/48, 15-17=-1510/0, 15-18=0/1076, 14-18=-1029/0, 14-19=0/715, 12-19=-516/0, 12-20=-93/621, 11-20=-260/0

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.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 17-29=-10, 1-16=-100
Concentrated Loads (lb)
Vert: 1=-1450



December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F5A	Floor	1	1	I62777444
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:30 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

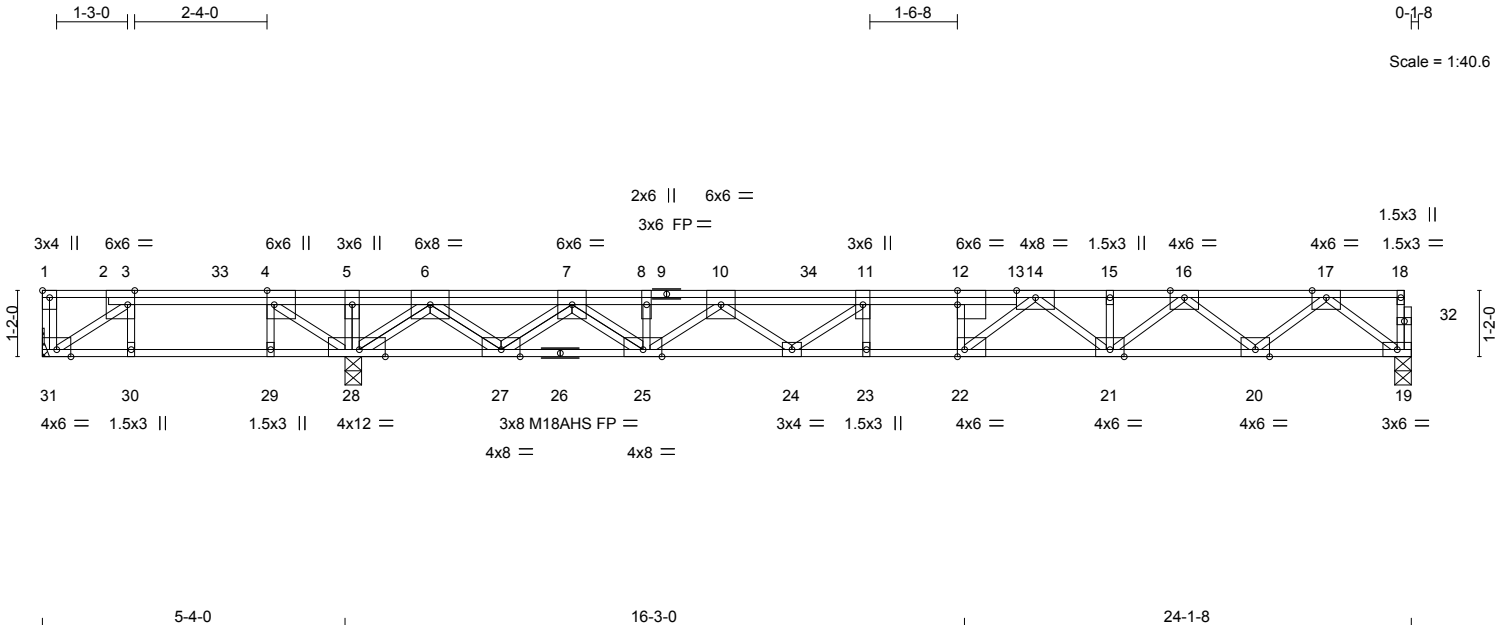


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [3:0-1-8,Edge], [4:0-3-0,Edge], [22:0-1-8,Edge], [28:0-5-8,Edge]

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	0.95	Vert(LL)	-0.35	23-24	>632	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.48	23-24	>466	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.07	19	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 153 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-8-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (size) 31=Mechanical, 28=0-3-8, 19=0-3-8
Max Uplift 31=-335(LC 3)
Max Grav 31=476(LC 2), 28=3059(LC 5), 19=1210(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-31=-258/0, 3-4=-603/1007, 4-5=0/3329, 5-6=0/3329, 6-7=-1061/84, 7-8=-4111/0, 8-10=-4106/0, 10-11=-6189/0, 11-12=-6524/0, 12-14=-6547/0, 14-15=-4621/0, 15-16=-4621/0, 16-17=-2663/0
BOT CHORD 30-31=-1007/603, 29-30=-1007/603, 28-29=-1007/603, 27-28=-1013/0, 25-27=0/2710, 24-25=0/5739, 23-24=0/6524, 22-23=0/6524, 21-22=0/5319, 20-21=0/3745, 19-20=0/1537
WEBS 5-28=0/614, 3-31=-730/1218, 4-28=-3566/0, 6-28=-2854/0, 6-27=0/2180, 7-27=-2132/0, 7-25=0/1815, 10-25=-2038/0, 10-24=0/656, 11-24=-648/0, 17-19=-1925/0, 17-20=0/1466, 16-20=-1408/0, 16-21=0/1119, 14-21=-891/0, 14-22=0/1730, 12-22=-907/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 335 lb uplift at joint 31.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 19-31=-10, 1-18=-100
Concentrated Loads (lb)
Vert: 33=-940 34=-800

December 29,2023

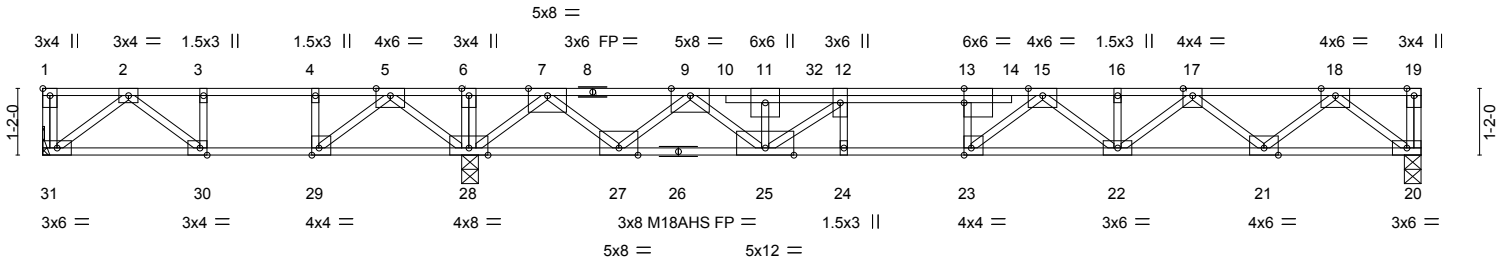
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F6	Floor	7	1	I62777445
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:32 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

1-3-0 1-10-0 2-0-8

Scale = 1:40.3



7-4-0 24-1-8
7-4-0 16-9-8

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [23:0-1-8,Edge], [29:0-1-8,Edge], [30:0-1-8,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	0.80	Vert(LL)	-0.23	24	>854	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.67	Vert(CT)	-0.32	23-24	>625	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.05	20	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 129 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(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) 31=Mechanical, 28=0-3-8, 20=0-3-8
Max Grav 31=1205(LC 2), 28=2281(LC 1), 20=1071(LC 4)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-31=-947/0, 2-3=-341/888, 3-4=-341/888, 4-5=-341/888, 5-6=0/2320, 6-7=0/2320, 7-9=-1403/0, 9-11=-4413/0, 11-12=-4411/0, 12-13=-5183/0, 13-15=-5196/0, 15-16=-3908/0, 16-17=-3908/0, 17-18=-2297/0
BOT CHORD 30-31=-303/307, 29-30=-888/341, 28-29=-1640/0, 27-28=-357/0, 25-27=0/2880, 24-25=0/5183, 23-24=0/5183, 22-23=0/4409, 21-22=0/3210, 20-21=0/1346
WEBS 2-31=-385/380, 2-30=-747/43, 3-30=-52/333, 7-28=-2463/0, 7-27=0/2006, 9-27=-1952/0, 9-25=0/1966, 11-25=-738/7, 18-20=-1688/0, 18-21=0/1238, 17-21=-1188/0, 17-22=0/892, 15-22=-639/0, 5-28=-1047/0, 5-29=0/1213, 4-29=-560/0, 15-23=0/1297, 13-23=-705/0, 12-25=-1064/0

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

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 20-31=-10, 1-19=-100
Concentrated Loads (lb)
Vert: 1=-900 32=-800

NORTH CAROLINA PROFESSIONAL SEAL 45844 ENGINEER ANDREW JOHNSON

December 29,2023

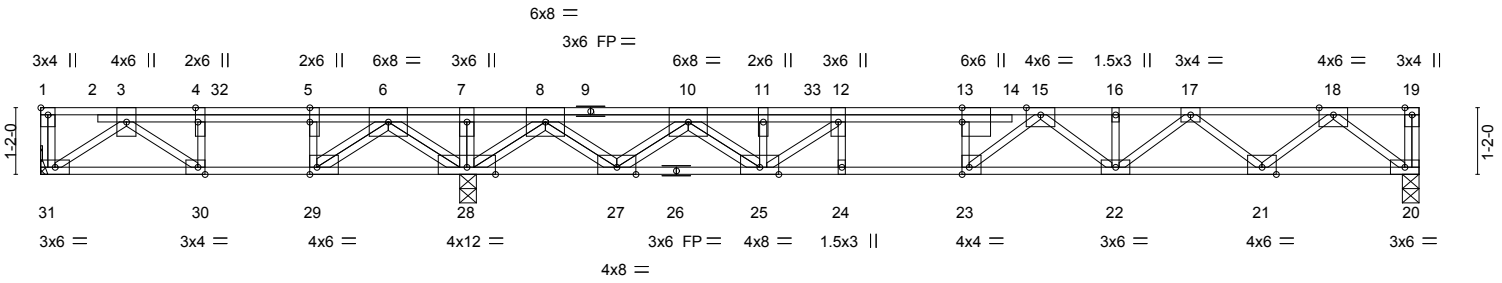
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	F6A	Floor	1	1	I62777446
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:33 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

1-3-0 1-10-0 2-0-8

Scale = 1:40.3



7-4-0 24-1-8
7-4-0 16-9-8

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [4:0-3-0,Edge], [5:0-3-0,0-0-0], [13:0-3-0,0-0-0], [23:0-1-8,Edge], [29:0-1-8,Edge], [30:0-1-8,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	0.75	Vert(LL)	-0.21	23-24	>964	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.98	Vert(CT)	-0.28	23-24	>703	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.70	Horz(CT)	0.05	20	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 157 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP 2400F 2.0E(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) 31=Mechanical, 28=0-3-8, 20=0-3-8
Max Uplift 31=-200(LC 3)
Max Grav 31=851(LC 2), 28=2925(LC 1), 20=997(LC 4)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 3-4=-1646/1142, 4-5=-1646/1142, 5-6=-1646/1142, 6-7=0/3508, 7-8=0/3508, 8-10=-431/0, 10-11=-3614/0, 11-12=-3649/0, 12-13=-4508/0, 13-15=-4517/0, 15-16=-3542/0, 16-17=-3542/0, 17-18=-2109/0
BOT CHORD 30-31=-275/1106, 29-30=-1142/1646, 28-29=-2620/108, 27-28=-1386/0, 25-27=0/2081, 24-25=0/4508, 23-24=0/4508, 22-23=0/3953, 21-22=0/2935, 20-21=0/1247
WEBS 7-28=-352/0, 3-31=-1357/337, 3-30=-1083/674, 4-30=-434/601, 8-28=-2633/0, 8-27=0/2161, 10-27=-2111/0, 10-25=0/1955, 11-25=-725/47, 12-25=-1132/0, 18-20=-1565/0, 18-21=0/1122, 17-21=-1076/0, 17-22=0/775, 15-22=-525/0, 15-23=-79/1070, 13-23=-593/42, 6-28=-1850/0, 6-29=0/2954, 5-29=-1637/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 200 lb uplift at joint 31.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

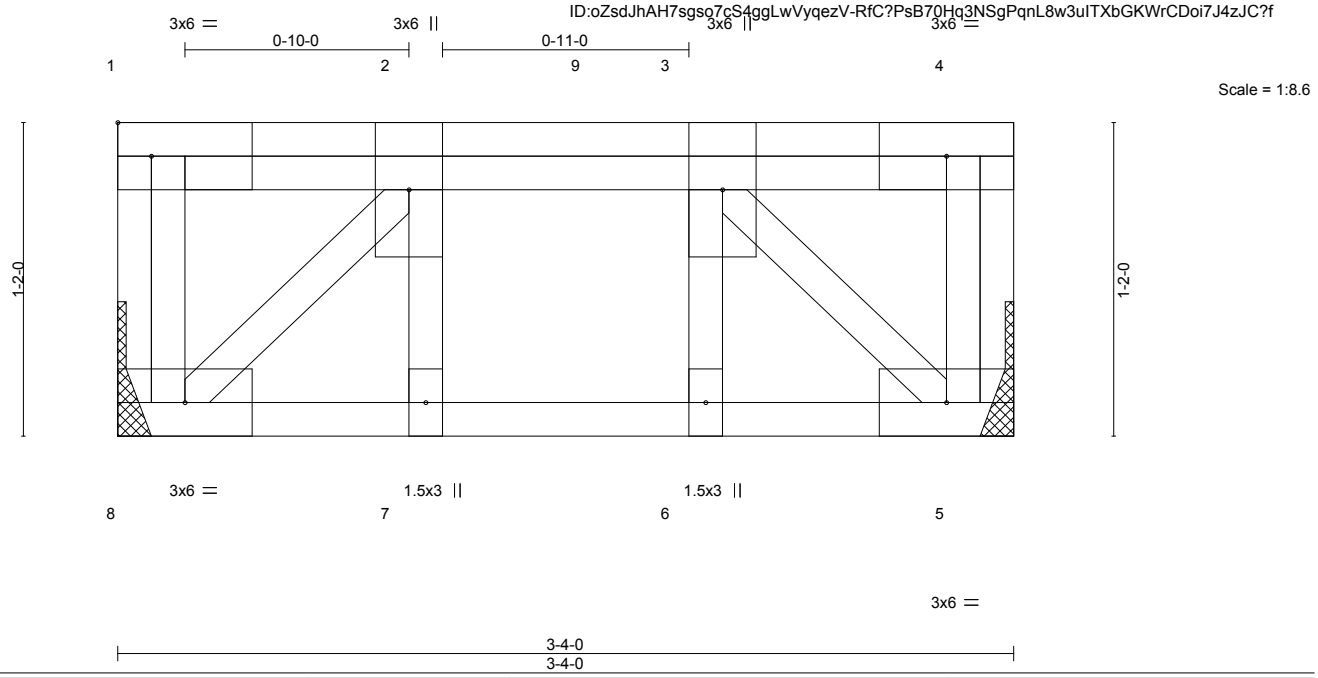
LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 20-31=-10, 1-19=-100
Concentrated Loads (lb)
Vert: 32=-1000 33=-800

December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	FG1	Floor Girder	1	1	I62777447
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:34 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



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	0.16	Vert(LL)	-0.00	6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.12	Vert(CT)	-0.00	6	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 25 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)

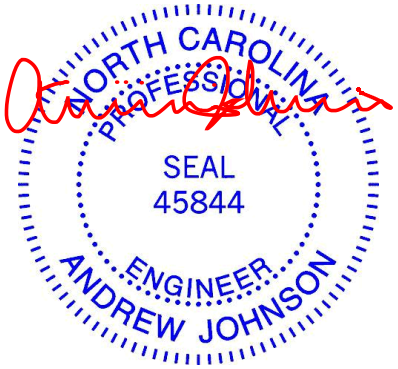
BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-4-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 8=Mechanical, 5=Mechanical
Max Grav 8=373(LC 1), 5=430(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-386/0
BOT CHORD 7-8=0/386, 6-7=0/386, 5-6=0/386
WEBS 2-8=-535/0, 3-5=-535/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 490 lb down at 1-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
6) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 5-8=-10, 1-4=-100
Concentrated Loads (lb)
Vert: 9=-464(B)



December 29,2023

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

Job	Truss	Truss Type	Qty	Ply	Lot 29 Magnolia Hills
J1024-5868	FG2	FLOOR GIRDER	1	1	I62777448
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Dec 28 15:39:35 2023 Page 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

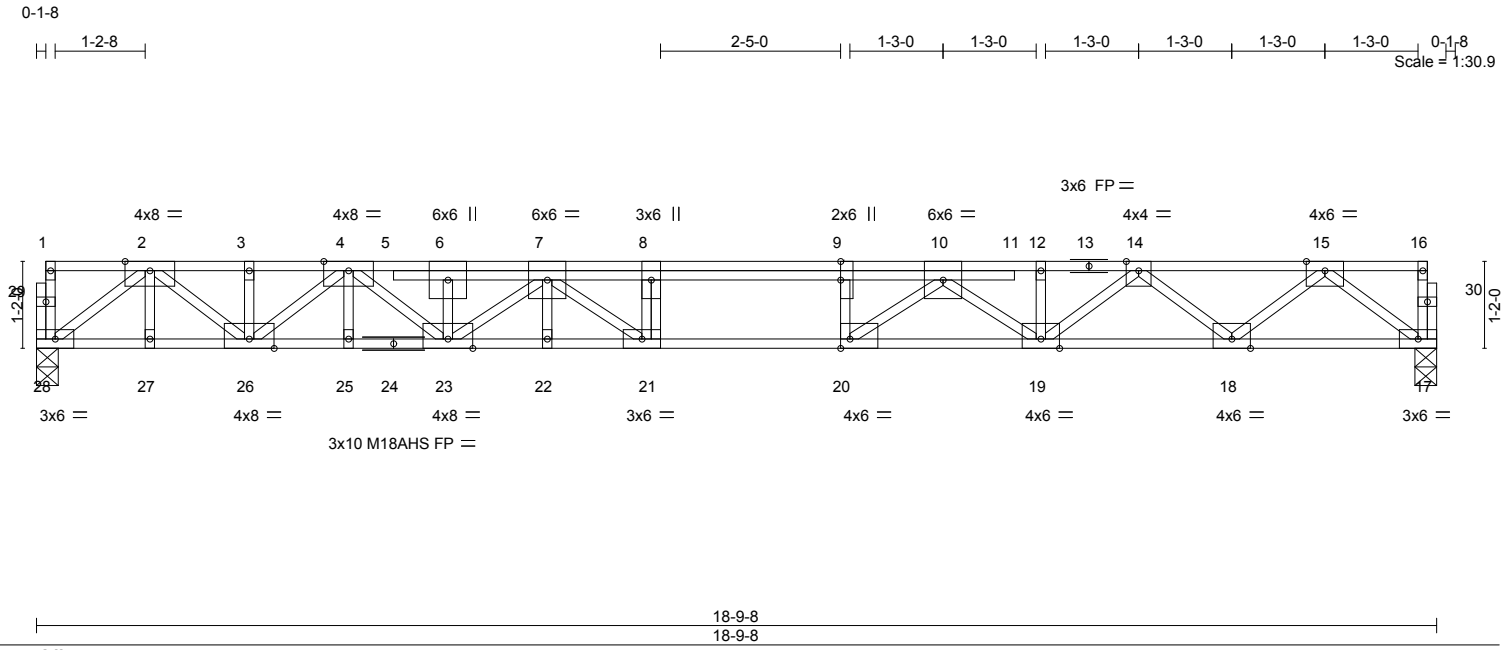


Plate Offsets (X,Y)-- [9:0-3-0,0-0-0], [20:0-1-8,Edge]

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)	-0.36	21	>621	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.77	Vert(CT)	-0.50	21	>446	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	NO	WB	0.75	Horz(CT)	0.08	17	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 111 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-4-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 17=0-3-8, 28=0-3-8
Max Grav 17=1158(LC 1), 28=1199(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2766/0, 3-4=-2766/0, 4-6=-4883/0, 6-7=-4882/0, 7-8=-6060/0, 8-9=-6060/0, 9-10=-6060/0, 10-12=-4351/0, 12-14=-4348/0, 14-15=-2532/0
BOT CHORD 27-28=0/1522, 26-27=0/1522, 25-26=0/3804, 23-25=0/3804, 22-23=0/5727, 21-22=0/5727, 20-21=0/6060, 19-20=0/5229, 18-19=0/3559, 17-18=0/1466
WEBS 15-17=-1837/0, 15-18=0/1387, 14-18=-1337/0, 14-19=0/1007, 10-19=-1099/0, 10-20=0/1397, 9-20=-727/0, 2-28=-1895/0, 2-26=0/1578, 4-26=-1318/0, 4-23=0/1368, 7-23=-1049/0, 7-21=-84/851, 8-21=-478/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 1.5x3 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 374 lb down at 8-1-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

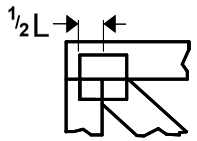
LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-16=-100, 17-28=-10
Concentrated Loads (lb)
Vert: 8=-330(B)

December 29,2023

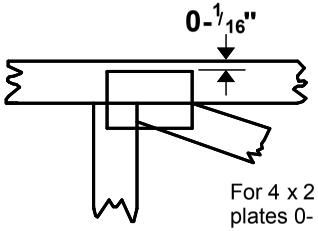
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

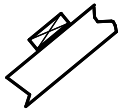
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

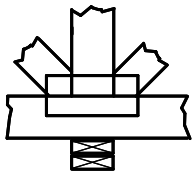
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

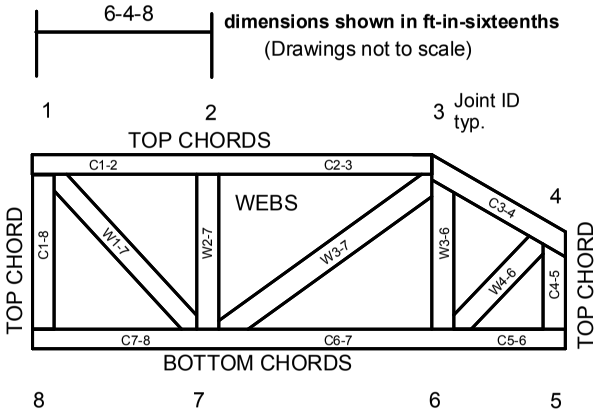


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: 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.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

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.