ENGINEERING BY TRENCO
A MiTek Affiliate

RE: J0121-0103
Lot 1 Sierra Villas

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J0121-0103
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 8.1
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 17 individual, dated Truss Design Drawings and 0 Additional Drawings.

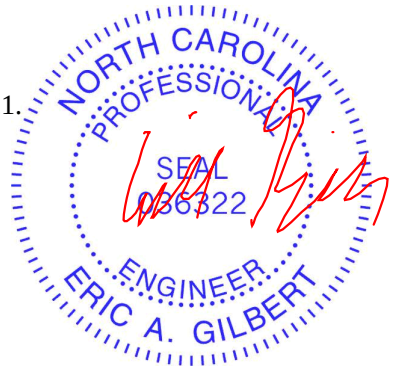
No.	Seal#	Truss Name	Date
1	E14133403	A1	1/7/2021
2	E14133404	A1GE	1/7/2021
3	E14133405	A1SG	1/7/2021
4	E14133406	B1	1/7/2021
5	E14133407	B1SG	1/7/2021
6	E14133408	B2	1/7/2021
7	E14133409	C1	1/7/2021
8	E14133410	C1GE	1/7/2021
9	E14133411	D1	1/7/2021
10	E14133412	D1GE	1/7/2021
11	E14133413	D2	1/7/2021
12	E14133414	D2-GR	1/7/2021
13	E14133415	D2GE	1/7/2021
14	E14133416	J1	1/7/2021
15	E14133417	J1GE	1/7/2021
16	E14133418	M1	1/7/2021
17	E14133419	M1GE	1/7/2021

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, 2021.

North Carolina COA: C-0844



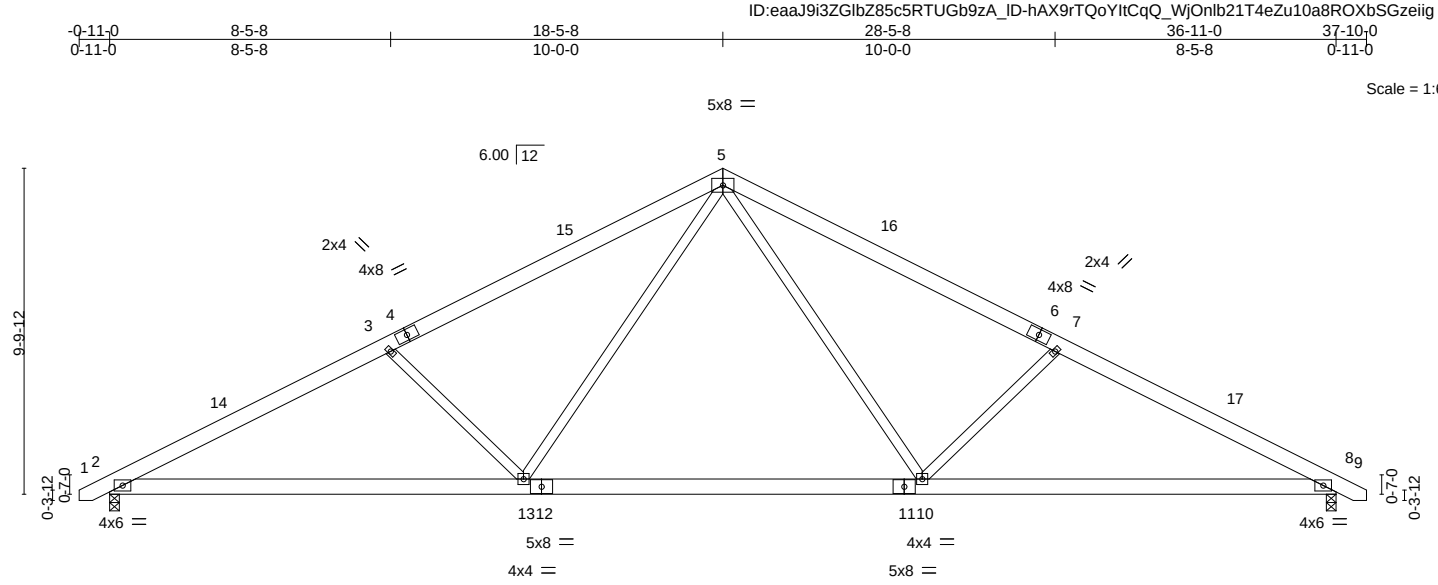
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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.

January 07, 2021

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	A1	COMMON	8	1	E14133403
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:23 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-hAX9rTQoYItCqQ_WjOnlb21T4eZu10a8ROXbSGzeiig



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	-0.40	10-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.49	10-13	>891	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.05	13	>999	240	Weight: 237 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-11-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-125(LC 10)
Max Uplift 2=-100(LC 12), 8=-100(LC 13)
Max Grav 2=1595(LC 2), 8=1595(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2911/591, 3-5=-2610/548, 5-7=-2610/548, 7-8=-2911/591
BOT CHORD 2-13=-406/2584, 10-13=-119/1678, 8-10=-414/2532
WEBS 5-10=-106/1068, 7-10=-577/339, 5-13=-106/1068, 3-13=-577/339

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-10 to 3-8-3, Interior(1) 3-8-3 to 18-5-8, Exterior(2) 18-5-8 to 22-10-5, Interior(1) 22-10-5 to 37-7-10 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 30.0psf 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 2 and 100 lb uplift at joint 8.

March 3,2020

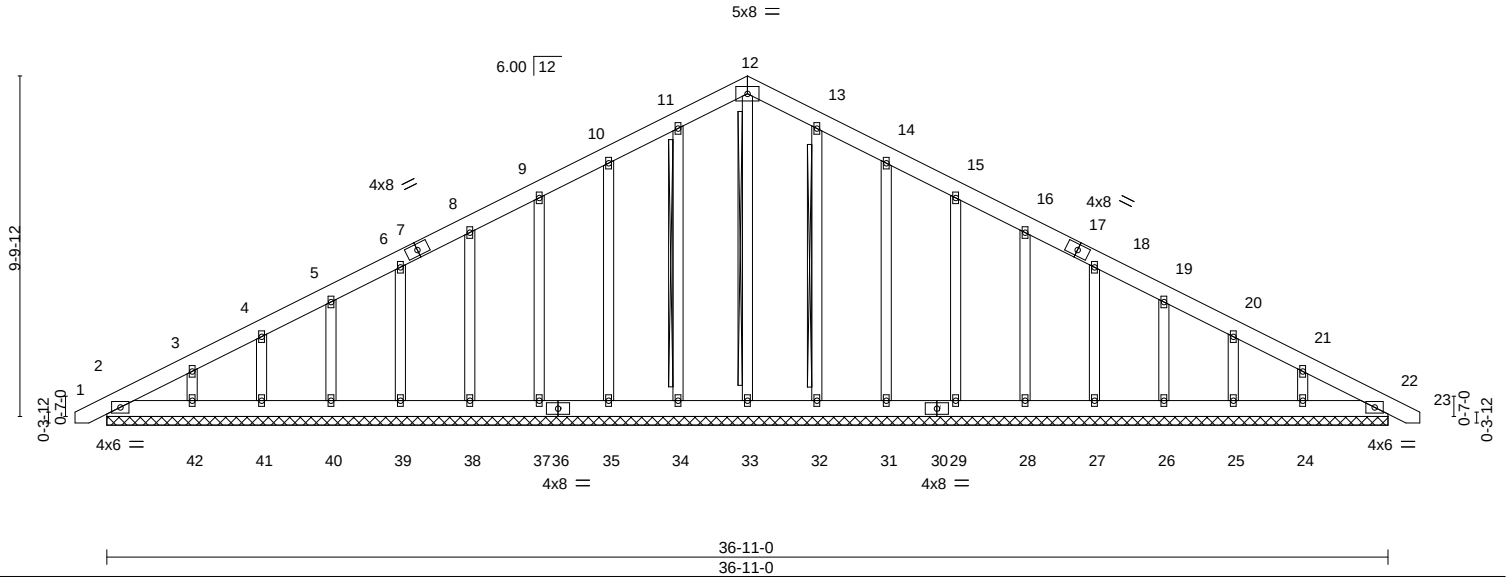
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	A1GE	COMMON SUPPORTED GAB	1	1	E14133404
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:25 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-dYfwG9S24w7w4k8uqppDgT7rXRLcV_lRui0iW8zeiie

-0-11-0 18-5-8 36-11-0 37-10-0
0-11-0 18-5-8 18-5-8 0-11-0

Scale = 1:66.4



36-11-0
36-11-0

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	0.05	Vert(LL)	0.00	22	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	22	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	22	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 306 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS T-Brace: 2x4 SPF No.2 - 12-33, 11-34, 13-32
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance.
Brace must cover 90% of web length.

REACTIONS. All bearings 36-11-0.
(lb) - Max Horz 2=-194(LC 17)
Max Uplift All uplift 100 lb or less at joint(s) 2, 34, 35, 37, 38, 39, 40, 41, 42, 32, 31, 29, 28, 27, 26, 25, 24
Max Grav All reactions 250 lb or less at joint(s) 2, 34, 35, 37, 38, 39, 40, 41, 42, 32, 31, 29, 28, 27, 26, 25, 24, 22 except 33=280(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-254/87, 10-11=-112/281, 11-12=-126/322, 12-13=-126/322, 13-14=-112/281

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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 30.0psf 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, 34, 35, 37, 38, 39, 40, 41, 42, 32, 31, 29, 28, 27, 26, 25, 24.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

March 3,2020

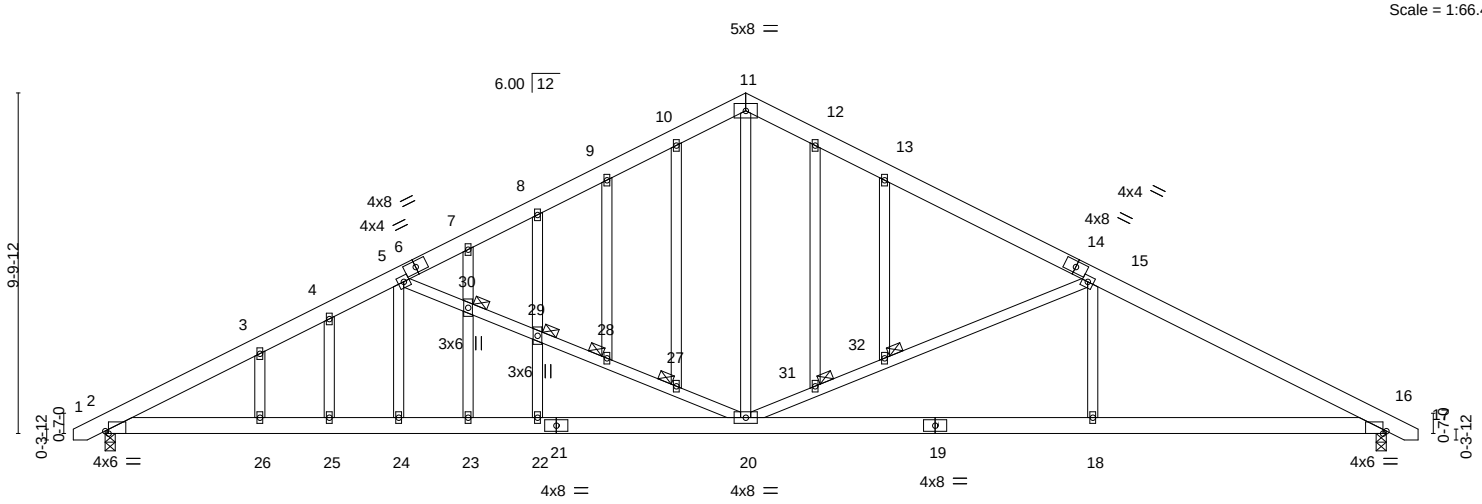
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	A1SG	GABLE	1	1	E14133405
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:26 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-5lDITVTgrDFnhti5OWLSDhfxurbREHka7MmF2bzeiid

-0-11-0 8-5-8 18-5-8 28-5-8 36-11-0 37-10-0
0-11-0 8-5-8 10-0-0 10-0-0 8-5-8 0-11-0

Scale = 1:66.4



8-5-8 18-5-8 28-5-8 36-11-0
8-5-8 10-0-0 10-0-0 8-5-8

Plate Offsets (X,Y)-- [2:0-1-2,Edge], [16:0-1-2,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	0.33	Vert(LL)	-0.12	20-22	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL 1.15	BC	0.43	Vert(CT)	-0.24	20-22	>999	240		
BCLL	0.0 *	Rep Stress Incr YES	WB	0.77	Horz(CT)	0.08	16	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014	Matrix-S		Wind(LL)	0.15	20-22	>999	240	Weight: 303 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 4-5-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-3-8 oc bracing.
JOINTS 1 Brace at Jt(s): 27, 28, 29, 30, 31, 32

REACTIONS. (size) 2=0-3-8, 16=0-3-8
Max Horz 2=-194(LC 13)
Max Uplift 2=-326(LC 12), 16=-326(LC 13)
Max Grav 2=1517(LC 1), 16=1517(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2671/887, 3-4=-2566/953, 4-5=-2516/978, 5-7=-1784/644, 7-8=-1719/665, 8-9=-1698/725, 9-10=-1672/752, 10-11=-1614/763, 11-12=-1613/752, 12-13=-1666/740, 13-15=-1807/712, 15-16=-2683/929
BOT CHORD 2-26=-691/2286, 25-26=-691/2286, 24-25=-691/2286, 23-24=-691/2286, 22-23=-691/2286, 20-22=-691/2286, 18-20=-694/2294, 16-18=-694/2294
WEBS 11-20=-327/982, 20-31=-920/469, 31-32=-910/468, 15-32=-896/455, 15-18=0/391, 5-30=-903/465, 29-30=-879/453, 28-29=-881/452, 27-28=-898/465, 20-27=-910/466, 5-24=-120/324

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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 30.0psf 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) except (jt=lb) 2=326, 16=326.

March 3,2020

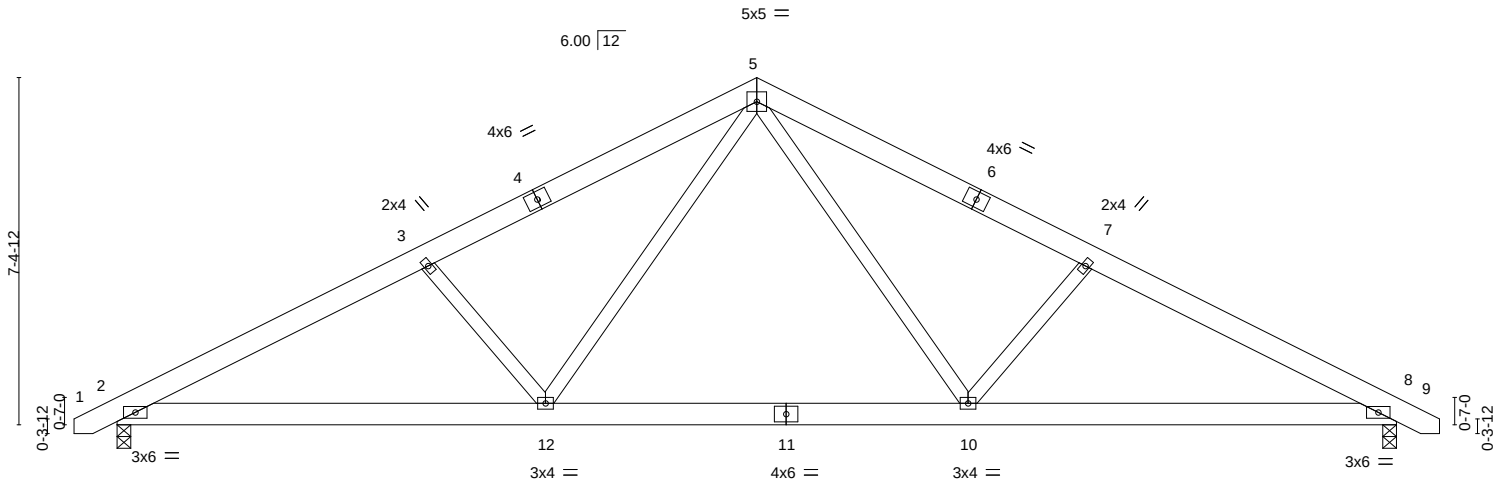
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	B1	COMMON	7	1	E14133406
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:27 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-ZxnghrUIcXNeJ1HHyDshmuC8iFwPzsTjM0Vpb1zeiic

0-11-0	6-7-8	13-7-8	20-7-8	27-3-0	28-2-0
0-11-0	6-7-8	7-0-0	7-0-0	6-7-8	0-11-0

Scale = 1:49.1



9-1-8	18-1-8	27-3-0
9-1-8	9-0-0	9-1-8

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	0.20	Vert(LL)	-0.17	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.23	10-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.05	12	>999	240	Weight: 175 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 5-3-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=145(LC 12)
Max Uplift 2=-246(LC 12), 8=-246(LC 13)
Max Grav 2=1189(LC 2), 8=1189(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2121/698, 3-5=-1916/668, 5-7=-1916/668, 7-8=-2121/698
BOT CHORD 2-12=-510/1820, 10-12=-194/1217, 8-10=-513/1820
WEBS 5-10=-192/786, 7-10=-395/345, 5-12=-192/786, 3-12=-395/345

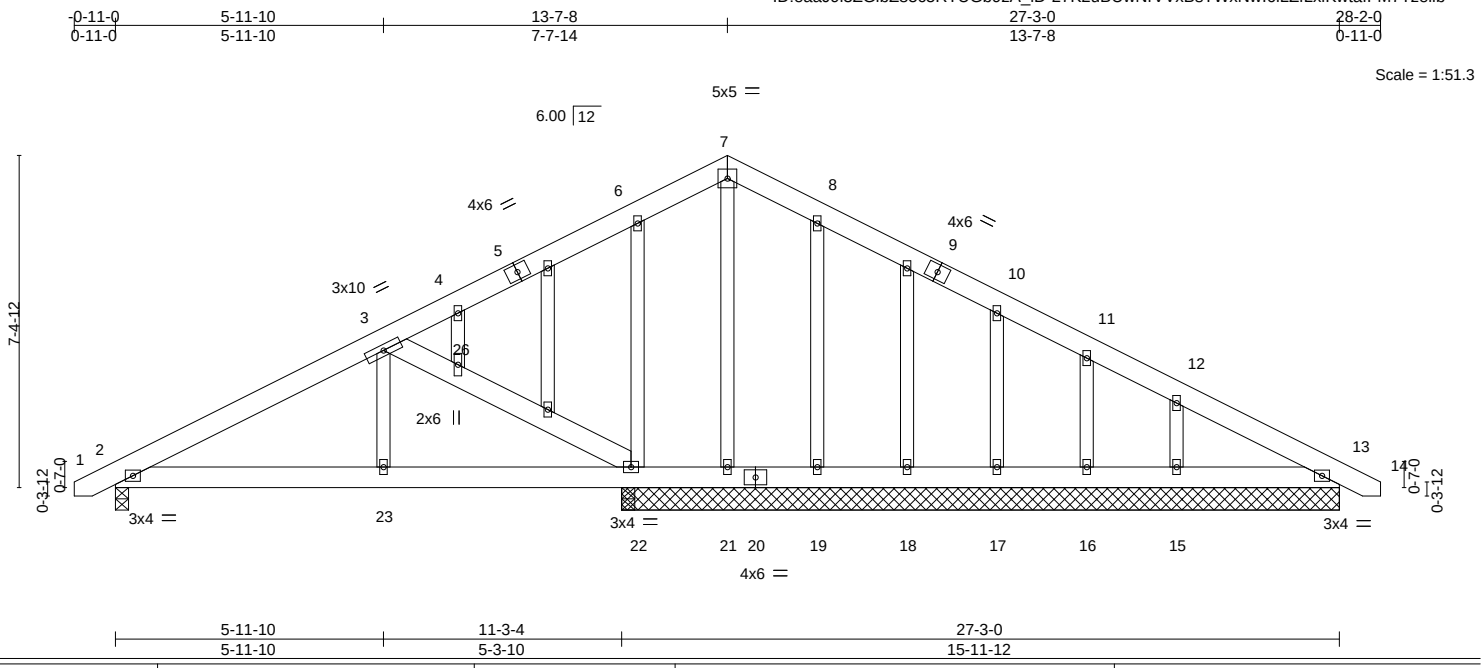
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas 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) except (jt=lb) 2=246, 8=246.

March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	B1SG	GABLE	1	1	E14133407
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:28 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-27K2uBUwNrVVxBsTWxNwI6lLZfLxiKwtafFM7Tzeiib



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	-0.01	2-23	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.02	2-23	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	22	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.01	2-23	>999	240	Weight: 209 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x6 SP No.1 *Except* 3-23: 2x4 SP No.2
OTHERS	2x4 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 2-23,22-23.

REACTIONS. All bearings 15-11-12 except (jt=length) 2=0-3-8.
(lb) - Max Horz 2=145(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 2, 16 except 22=-254(LC 12), 19=-115(LC 13), 17=-143(LC 13), 15=-127(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 13, 18, 16 except 2=441(LC 1), 22=634(LC 23), 22=633(LC 1), 21=283(LC 22), 19=272(LC 2), 17=255(LC 24), 15=289(LC 1)

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

TOP CHORD	2-3=-485/172
BOT CHORD	2-23=-108/364, 22-23=-108/364
WEBS	3-26=-528/276, 22-26=-551/295, 3-23=0/253, 6-22=-254/198

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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 30.0psf 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) 2, 16 except (jt=lb) 22=254, 19=115, 17=143, 15=127.

March 3,2020

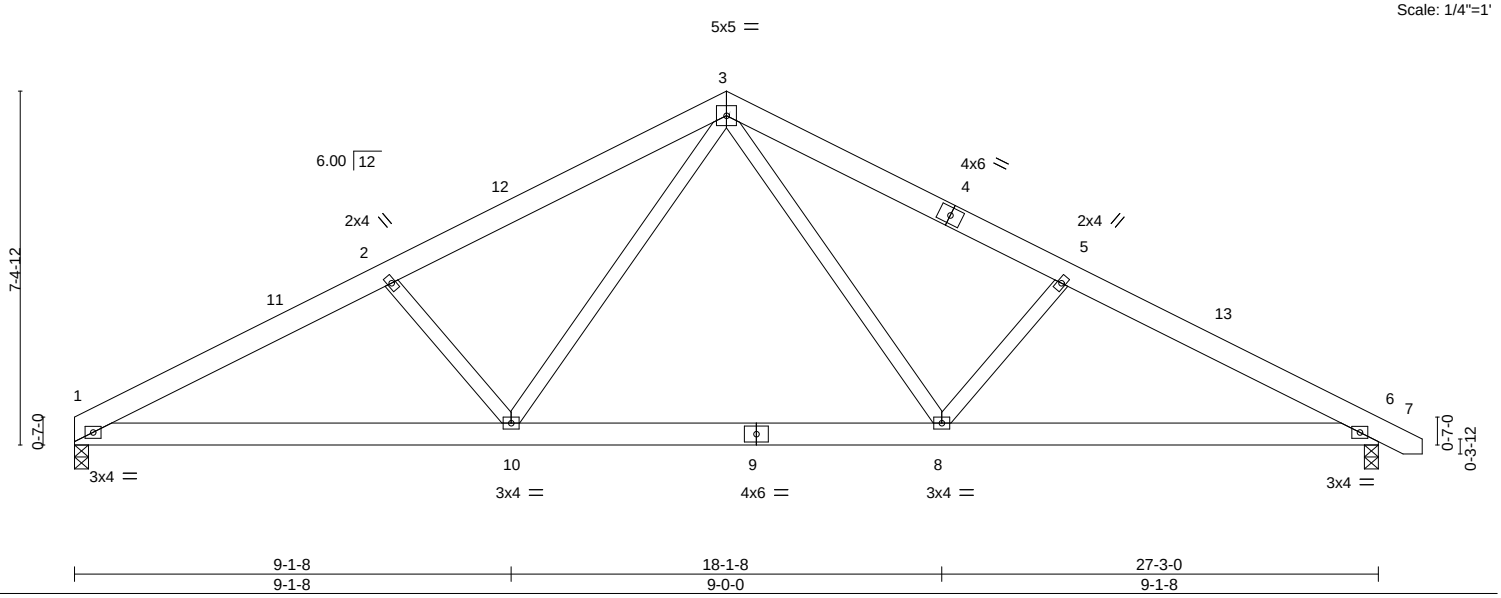
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	B2	COMMON	2	1	E14133408
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:29 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_lD-WKuQ6XVZ88dLYLRg3eu9rJHUA3btRmR0pJ_vfvzeiia

6-7-8	13-7-8	20-7-8	27-3-0	28-2-0
6-7-8	7-0-0	7-0-0	6-7-8	0-11-0

Scale: 1/4"=1'



9-1-8	18-1-8	27-3-0
9-1-8	9-0-0	9-1-8

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	0.20	Vert(LL)	-0.17	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.23	8-10	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	8-10	>999	240	Weight: 173 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 5-3-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=0-3-8, 6=0-3-8
Max Horz 1=-94(LC 8)
Max Uplift 1=-65(LC 12), 6=-77(LC 13)
Max Grav 1=1145(LC 2), 6=1190(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2110/469, 2-3=-1920/458, 3-5=-1917/437, 5-6=-2122/445
BOT CHORD 1-10=-314/1863, 8-10=-100/1229, 6-8=-317/1821
WEBS 3-8=-105/797, 5-8=-395/256, 3-10=-105/800, 2-10=-398/256

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 13-7-8, Exterior(2) 13-7-8 to 18-0-5, Interior(1) 18-0-5 to 27-11-10 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 30.0psf 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, 6.

March 3,2020

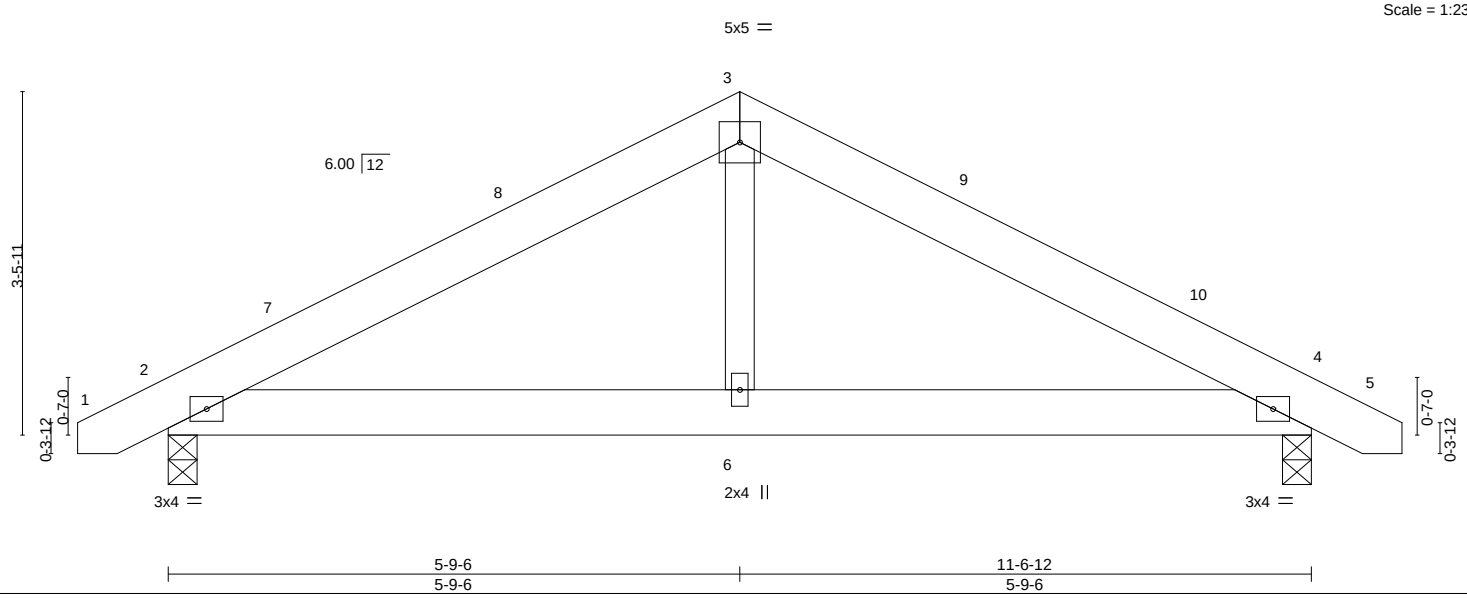
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	C1	COMMON	1	1	E14133409
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:30 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-_WSpJtWBuSlCAV0sdMPONXqgsS19AGlA2zkTCMzeiiZ

-0-11-0 5-9-6 11-6-12 12-5-12
0-11-0 5-9-6 5-9-6 0-11-0

Scale = 1:23.3



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	0.14	Vert(LL)	-0.01	2-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	2-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.01	4-6	>999	240	Weight: 66 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.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 4=0-3-8
Max Horz 2=-42(LC 10)
Max Uplift 2=-39(LC 12), 4=-39(LC 13)
Max Grav 2=503(LC 1), 4=503(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-620/217, 3-4=-620/217
BOT CHORD 2-6=-77/481, 4-6=-77/481
WEBS 3-6=0/268

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-10 to 3-8-3, Interior(1) 3-8-3 to 5-9-6, Exterior(2) 5-9-6 to 10-2-3, Interior(1) 10-2-3 to 12-3-6 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas 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, 4.

March 3,2020

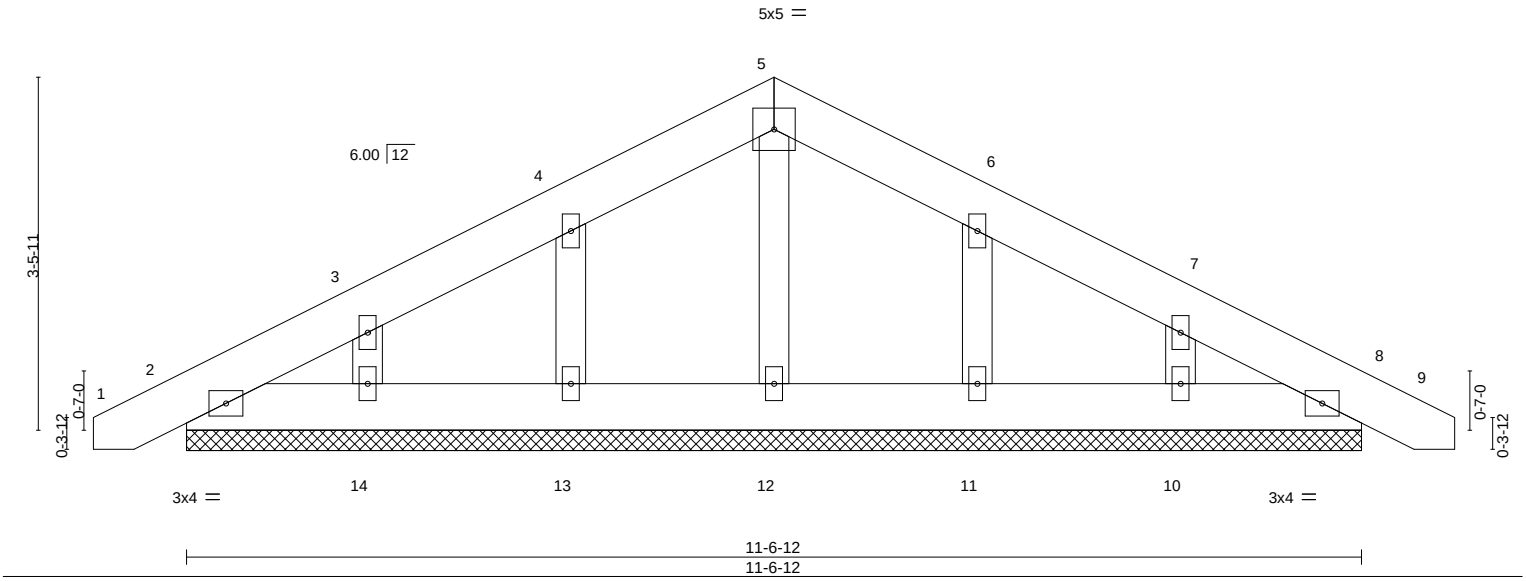
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	C1GE	COMMON SUPPORTED GAB	1	1	E14133410
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:31 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-Si0BXDXpfmt3ofb2B3wdwkMtUsOCvicJGdT0kozeiiY

-0-11-0 5-9-6 11-6-12 12-5-12
0-11-0 5-9-6 5-9-6 0-11-0

Scale = 1:22.7



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	0.02	Vert(LL)	-0.00	8	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	8	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 73 lb	FT = 20%

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

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

REACTIONS. All bearings 11-6-12.
(lb) - Max Horz 2=-66(LC 17)
Max Uplift All uplift 100 lb or less at joint(s) 2, 8, 13, 14, 11, 10
Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 14, 11, 10

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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 30.0psf 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, 8, 13, 14, 11, 10.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8.

March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	D1	MONOPITCH	7	1	E14133411
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:32 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-wvaZkYXRQ30wPoAElnRsTyv1dGiFe4DSVHDaGEzeiiX

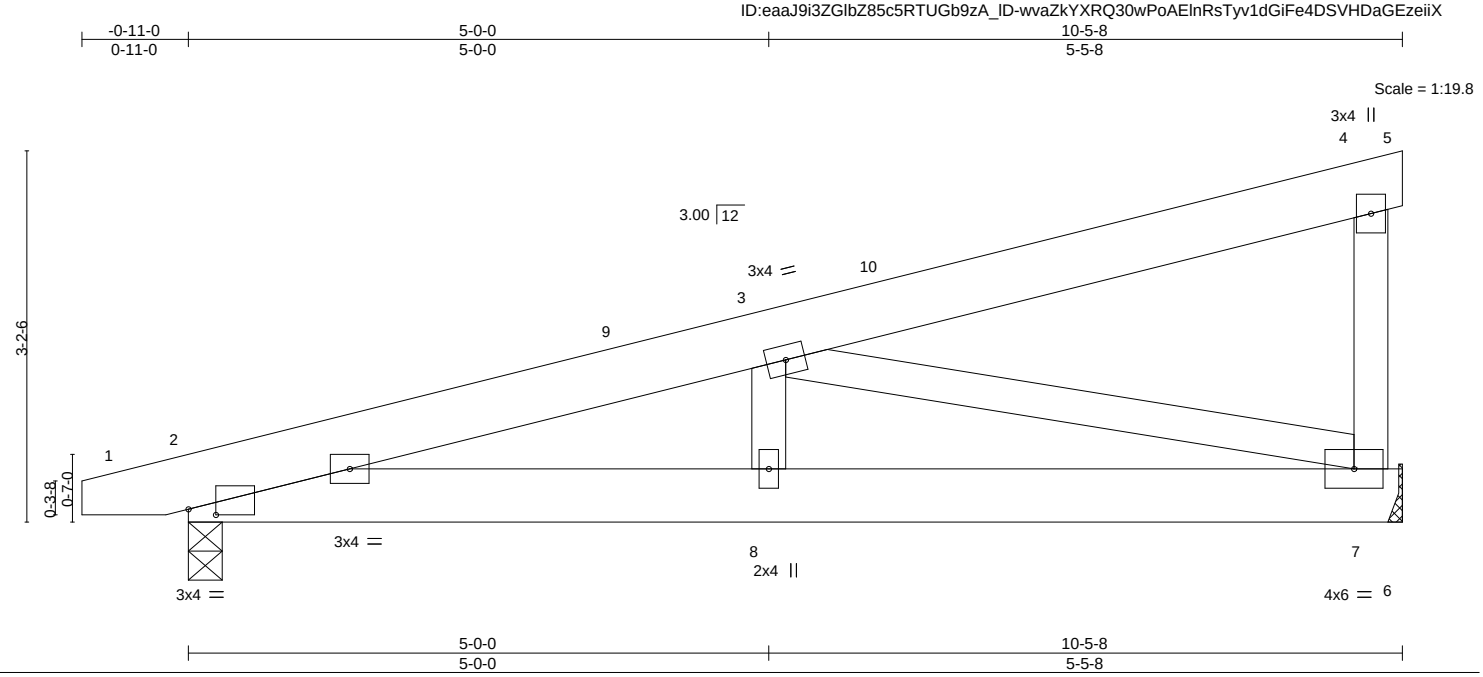


Plate Offsets (X,Y)-- [2:0-2-13,0-0-9]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	-0.02	8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.03	8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.01	8	>999	240	Weight: 64 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) 7=Mechanical, 2=0-3-8
Max Horz 2=90(LC 8)
Max Uplift 7=-55(LC 12), 2=-57(LC 8)
Max Grav 7=411(LC 1), 2=445(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-855/165
BOT CHORD 2-8=-254/789, 7-8=-254/789
WEBS 3-7=-787/250

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-6-11 to 3-10-2, Interior(1) 3-10-2 to 10-5-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas 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) 7, 2.

March 3,2020

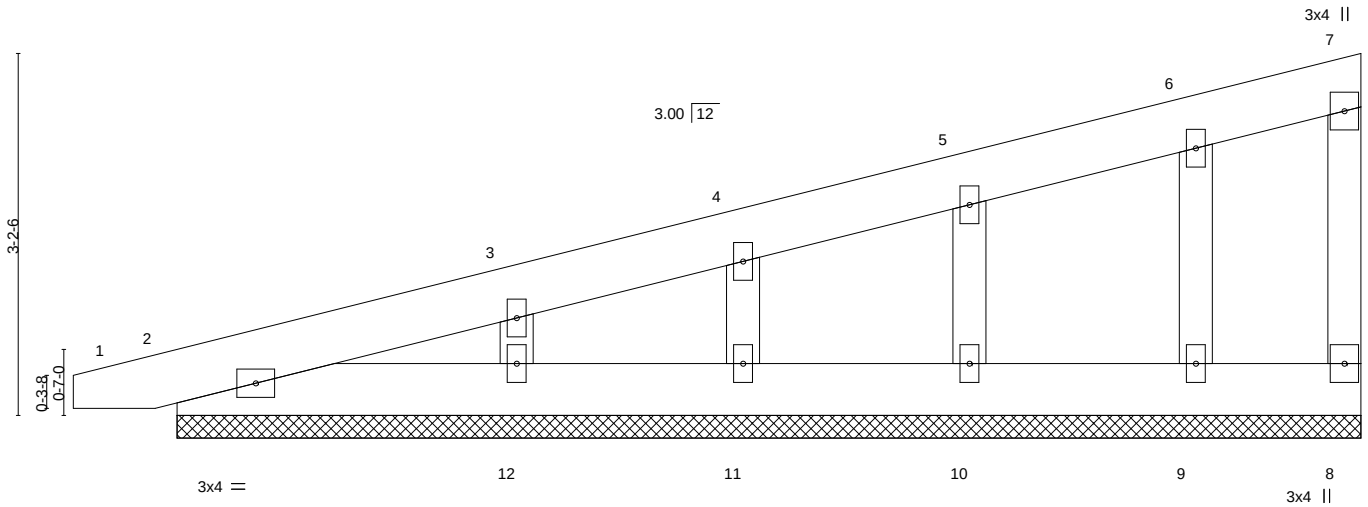
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	D1GE	MONOPITCH SUPPORTED	1	1	E14133412
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:33 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-O58xxuY3BN8n1ylRIUz5?9SDkg4VNc1ckxy7ohzeiiW

-0-11-0 10-5-8
0-11-0 10-5-8

Scale = 1:20.4



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	0.03	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	-0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 62 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 10-5-8.
(lb) - Max Horz 2=128(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 8, 2, 9, 10, 11, 12
Max Grav All reactions 250 lb or less at joint(s) 8, 2, 9, 10, 11, 12

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

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas 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) 8, 2, 9, 10, 11, 12.
9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	D2	HALF HIP	5	1	E14133413
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:34 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-sHiJ9EZhyhGef6KdsCUKYN_Jq4KO605lzbigL7zeiiV

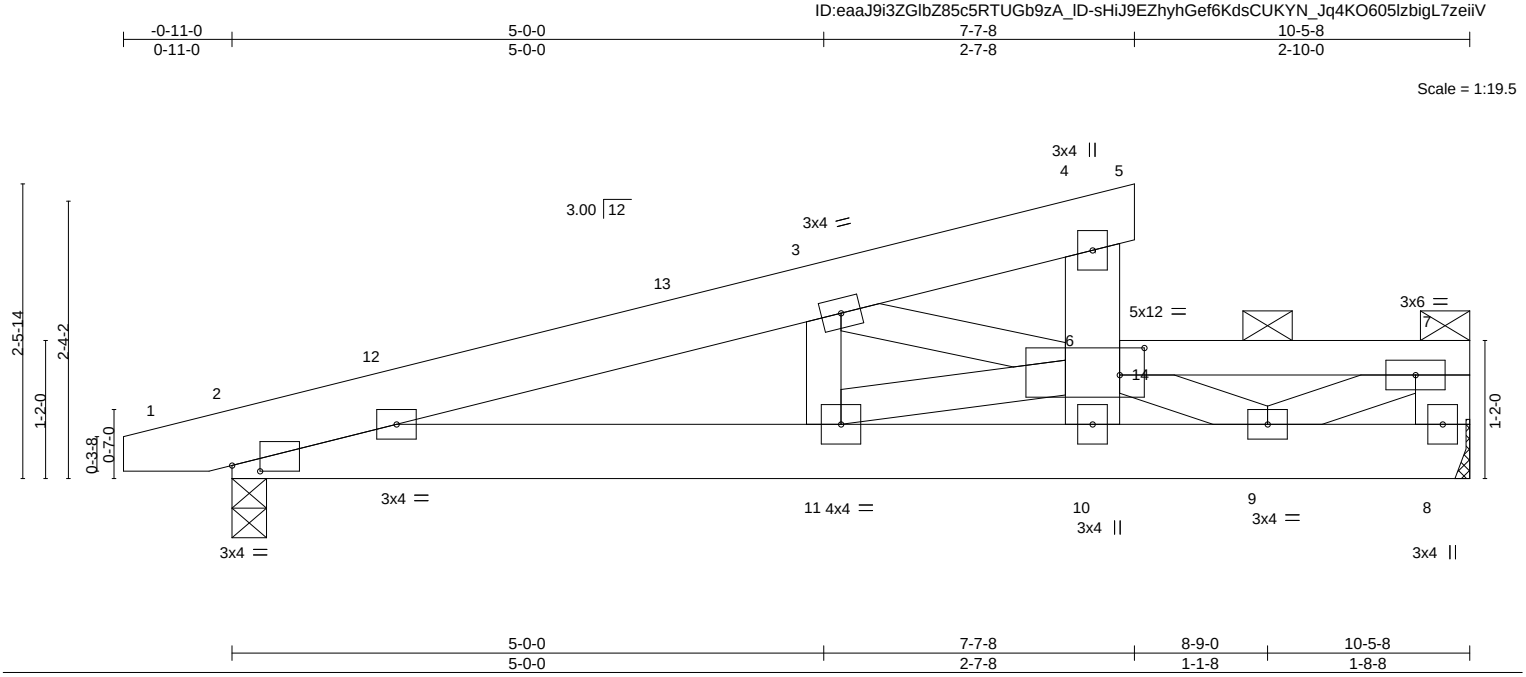


Plate Offsets (X,Y)-- [2:0-2-13,0-0-9], [6:0-2-8,0-2-12]

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	0.33	Vert(LL)	-0.02	10-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.05	10-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.23	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	10-11	>999	240	Weight: 65 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1 *Except*
6-7: 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except*
4-10,7-8: 2x6 SP No.1

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-7-12 max.): 4-10, 6-7.
Except:
6-0-0 oc bracing: 4-6
BOT CHORD Rigid ceiling directly applied or 8-6-11 oc bracing.

REACTIONS. (size) 8=Mechanical, 2=0-3-8
Max Horz 2=111(LC 12)
Max Uplift 8=-17(LC 9), 2=-62(LC 8)
Max Grav 8=846(LC 19), 2=554(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1230/434, 3-4=-307/81, 6-7=-1087/428, 7-8=-715/258
BOT CHORD 2-11=-548/1145, 10-11=-662/1504, 9-10=-839/1992
WEBS 3-11=-25/328, 3-6=-886/408, 6-11=-476/133, 6-9=-1027/466, 7-9=-394/960

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-6-11 to 3-10-2, Interior(1) 3-10-2 to 10-2-12 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2.
8) Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) . The design/selection of such connection device(s) is the responsibility of others.
11) 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: 1-4=-60, 4-5=-60, 6-14=-40(F=-20), 7-14=-80(F=-20), 2-8=-20

March 3,2020

Continued on page 2

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

LOAD CASE(S) Standard

Concentrated Loads (lb)
Vert: 14=-400

2) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-50, 4-5=-50, 6-14=-100(F=-80), 7-14=-130(F=-80), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-350

3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-20, 4-5=-20, 6-7=-40(F=-20), 2-8=-40
Concentrated Loads (lb)
Vert: 14=-300

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, 2-13=48, 4-13=26, 4-5=153, 6-7=10(F=-20), 2-8=-12
Horz: 1-2=-82, 2-13=-60, 4-13=-38, 4-5=-165, 4-6=-51
Concentrated Loads (lb)
Vert: 14=180

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=20, 2-12=26, 4-12=48, 4-5=41, 6-7=27(F=-20), 2-8=-12
Horz: 1-2=-32, 2-12=-38, 4-12=-60, 4-5=-53, 4-6=-51
Concentrated Loads (lb)
Vert: 14=180

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=-5, 2-4=-41, 4-5=9, 6-7=-56(F=-20), 2-8=-20
Horz: 1-2=-15, 2-4=21, 4-5=-29, 4-6=47
Concentrated Loads (lb)
Vert: 14=-402

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=-35, 2-4=-41, 4-5=-35, 6-7=-56(F=-20), 2-8=-20
Horz: 1-2=15, 2-4=21, 4-5=15, 4-6=47
Concentrated Loads (lb)
Vert: 14=-402

8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=36, 2-4=21, 4-5=14, 6-7=-11(F=-20), 2-8=-12
Horz: 1-2=-48, 2-4=-33, 4-5=-26, 4-6=7
Concentrated Loads (lb)
Vert: 14=43

9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=4, 2-4=11, 4-5=27, 6-7=1(F=-20), 2-8=-12
Horz: 1-2=-16, 2-4=-23, 4-5=-39, 4-6=-27
Concentrated Loads (lb)
Vert: 14=43

10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=6, 2-4=-1, 4-5=6, 6-7=-33(F=-20), 2-8=-20
Horz: 1-2=-26, 2-4=-19, 4-5=-26, 4-6=34
Concentrated Loads (lb)
Vert: 14=-339

11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-4, 2-4=-10, 4-5=-4, 6-7=-21(F=-20), 2-8=-20
Horz: 1-2=-16, 2-4=-10, 4-5=-16, 4-6=-0
Concentrated Loads (lb)
Vert: 14=-234

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, 2-4=21, 4-5=14, 6-7=-11(F=-20), 2-8=-12
Horz: 1-2=-26, 2-4=-33, 4-5=-26, 4-6=-39
Concentrated Loads (lb)
Vert: 14=43

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, 2-4=9, 4-5=2, 6-7=1(F=-20), 2-8=-12
Horz: 1-2=-14, 2-4=-21, 4-5=-14, 4-6=-27
Concentrated Loads (lb)
Vert: 14=43

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

Continued on page 3

LOAD CASE(S) Standard

Uniform Loads (plf)
Vert: 1-2=14, 2-4=21, 4-5=14, 6-7=-11(F=-20), 2-8=-12
Horz: 1-2=-26, 2-4=-33, 4-5=-26, 4-6=-39
Concentrated Loads (lb)
Vert: 14=43

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, 2-4=9, 4-5=2, 6-7=1(F=-20), 2-8=-12
Horz: 1-2=-14, 2-4=-21, 4-5=-14, 4-6=-27
Concentrated Loads (lb)
Vert: 14=43

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, 2-4=-1, 4-5=6, 6-7=-33(F=-20), 2-8=-20
Horz: 1-2=-26, 2-4=-19, 4-5=-26, 4-6=-12
Concentrated Loads (lb)
Vert: 14=-234

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, 2-4=-13, 4-5=-6, 6-7=-21(F=-20), 2-8=-20
Horz: 1-2=-14, 2-4=-7, 4-5=-14, 4-6=-0
Concentrated Loads (lb)
Vert: 14=-234

18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-4=-20, 4-5=-20, 6-7=-120(F=-100), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-200

19) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-4=-36, 4-5=-31, 6-14=-95(F=-80), 7-14=-125(F=-80), 2-8=-20
Horz: 1-2=-19, 2-4=-14, 4-5=-19, 4-6=26
Concentrated Loads (lb)
Vert: 14=-454

20) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-38, 2-4=-43, 4-5=-38, 6-14=-86(F=-80), 7-14=-116(F=-80), 2-8=-20
Horz: 1-2=-12, 2-4=-7, 4-5=-12, 4-6=-0
Concentrated Loads (lb)
Vert: 14=-375

21) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-4=-36, 4-5=-31, 6-14=-95(F=-80), 7-14=-125(F=-80), 2-8=-20
Horz: 1-2=-19, 2-4=-14, 4-5=-19, 4-6=-9
Concentrated Loads (lb)
Vert: 14=-375

22) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-40, 2-4=-45, 4-5=-40, 6-14=-86(F=-80), 7-14=-116(F=-80), 2-8=-20
Horz: 1-2=-10, 2-4=-5, 4-5=-10, 4-6=-0
Concentrated Loads (lb)
Vert: 14=-375

23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-60, 4-5=-60, 6-7=-40(F=-20), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-400

24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-20, 4-5=-20, 6-14=-40(F=-20), 7-14=-80(F=-20), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-400

25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-50, 4-5=-50, 6-7=-100(F=-80), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-350

26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-20, 4-5=-20, 6-14=-100(F=-80), 7-14=-130(F=-80), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-350

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	D2-GR	HALF HIP	1	2	E14133414
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:36 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_lD-pgp4awbyUlWMuQT0_cWodo4g4t2gaxx2QvBnP?zeiiT

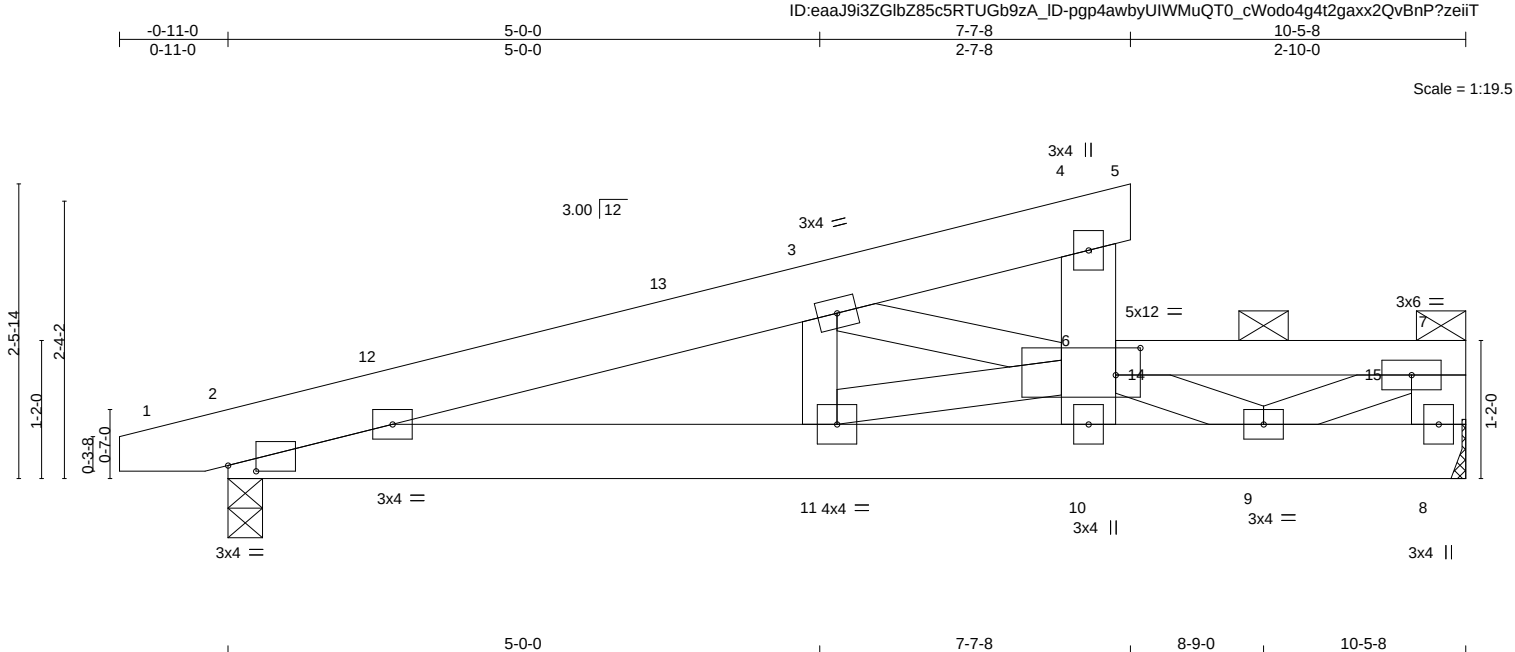


Plate Offsets (X,Y)-- [2:0-2-13,0-0-9], [6:0-2-8,0-2-12]

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	0.28	Vert(LL)	-0.01	11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.03	10-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.14	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.01	11	>999	240	Weight: 130 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1 *Except*
6-7: 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except*
4-10,7-8: 2x6 SP No.1

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.): 4-10, 6-7.
Except:
6-0-0 oc bracing: 4-6
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 8=Mechanical, 2=0-3-8
Max Horz 2=111(LC 12)
Max Uplift 2=-12(LC 8)
Max Grav 8=1690(LC 19), 2=628(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1495/95, 3-4=-385/0, 6-7=-1536/0, 7-8=-1506/0
BOT CHORD 2-11=-222/1399, 10-11=-48/2011, 9-10=0/2731, 8-9=0/481
WEBS 3-11=0/449, 3-6=-1067/184, 6-11=-732/0, 6-9=-1356/31, 7-9=-13/1196

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, 2x4 - 1 row at 0-8-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 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 (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-6-11 to 3-10-2, Interior(1) 3-10-2 to 10-2-12 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2.
10) Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) . The design/selection of such connection device(s) is the responsibility of others.

March 3,2020

LOAD CASE(S) Standard

Continued on page 2

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

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-60, 4-5=-60, 6-14=-160(F=-140), 7-14=-200(F=-140), 2-8=-20
   Concentrated Loads (lb)
   Vert: 14=-400 15=-500
2) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-50, 4-5=-50, 6-14=-220(F=-200), 7-14=-250(F=-200), 2-8=-20
   Concentrated Loads (lb)
   Vert: 14=-350 15=-438
3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-4=-20, 4-5=-20, 6-7=-160(F=-140), 2-8=-40
   Concentrated Loads (lb)
   Vert: 14=-300 15=-375
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, 2-13=48, 4-13=26, 4-5=153, 6-7=-110(F=-140), 2-8=-12
   Horz: 1-2=-82, 2-13=-60, 4-13=-38, 4-5=-165, 4-6=-51
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=20, 2-12=26, 4-12=48, 4-5=41, 6-7=-93(F=-140), 2-8=-12
   Horz: 1-2=-32, 2-12=-38, 4-12=-60, 4-5=-53, 4-6=-51
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=-5, 2-4=-41, 4-5=9, 6-7=-176(F=-140), 2-8=-20
   Horz: 1-2=-15, 2-4=21, 4-5=-29, 4-6=47
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=-35, 2-4=-41, 4-5=-35, 6-7=-176(F=-140), 2-8=-20
   Horz: 1-2=15, 2-4=21, 4-5=15, 4-6=47
8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=36, 2-4=21, 4-5=14, 6-7=-131(F=-140), 2-8=-12
   Horz: 1-2=-48, 2-4=-33, 4-5=-26, 4-6=7
   Concentrated Loads (lb)
   Vert: 14=43 15=54
9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=4, 2-4=11, 4-5=27, 6-7=-119(F=-140), 2-8=-12
   Horz: 1-2=-16, 2-4=-23, 4-5=-39, 4-6=-27
   Concentrated Loads (lb)
   Vert: 14=43 15=54
10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=6, 2-4=-1, 4-5=6, 6-7=-153(F=-140), 2-8=-20
    Horz: 1-2=-26, 2-4=-19, 4-5=-26, 4-6=34
    Concentrated Loads (lb)
    Vert: 14=-339 15=-423
11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=-4, 2-4=-10, 4-5=-4, 6-7=-141(F=-140), 2-8=-20
    Horz: 1-2=-16, 2-4=-10, 4-5=-16, 4-6=-0
    Concentrated Loads (lb)
    Vert: 14=-234 15=-292
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, 2-4=21, 4-5=14, 6-7=-131(F=-140), 2-8=-12
    Horz: 1-2=-26, 2-4=-33, 4-5=-26, 4-6=-39
    Concentrated Loads (lb)
    Vert: 14=43 15=54
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, 2-4=9, 4-5=2, 6-7=-119(F=-140), 2-8=-12
    Horz: 1-2=-14, 2-4=-21, 4-5=-14, 4-6=-27
    Concentrated Loads (lb)
    Vert: 14=43 15=54
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, 2-4=21, 4-5=14, 6-7=-131(F=-140), 2-8=-12
    Horz: 1-2=-26, 2-4=-33, 4-5=-26, 4-6=-39
    Concentrated Loads (lb)
    Vert: 14=43 15=54
15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60

Continued on page 3

LOAD CASE(S) Standard

Uniform Loads (plf)
Vert: 1-2=2, 2-4=9, 4-5=2, 6-7=-119(F=-140), 2-8=-12
Horz: 1-2=-14, 2-4=-21, 4-5=-14, 4-6=-27
Concentrated Loads (lb)
Vert: 14=43 15=54

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, 2-4=-1, 4-5=6, 6-7=-153(F=-140), 2-8=-20
Horz: 1-2=-26, 2-4=-19, 4-5=-26, 4-6=-12
Concentrated Loads (lb)
Vert: 14=-234 15=-292

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, 2-4=-13, 4-5=-6, 6-7=-141(F=-140), 2-8=-20
Horz: 1-2=-14, 2-4=-7, 4-5=-14, 4-6=-0
Concentrated Loads (lb)
Vert: 14=-234 15=-292

18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-4=-20, 4-5=-20, 6-7=-240(F=-220), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-200 15=-250

19) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-4=-36, 4-5=-31, 6-14=-215(F=-200), 7-14=-245(F=-200), 2-8=-20
Horz: 1-2=-19, 2-4=-14, 4-5=-19, 4-6=26
Concentrated Loads (lb)
Vert: 14=-454 15=-567

20) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-38, 2-4=-43, 4-5=-38, 6-14=-206(F=-200), 7-14=-236(F=-200), 2-8=-20
Horz: 1-2=-12, 2-4=-7, 4-5=-12, 4-6=-0
Concentrated Loads (lb)
Vert: 14=-375 15=-469

21) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-31, 2-4=-36, 4-5=-31, 6-14=-215(F=-200), 7-14=-245(F=-200), 2-8=-20
Horz: 1-2=-19, 2-4=-14, 4-5=-19, 4-6=-9
Concentrated Loads (lb)
Vert: 14=-375 15=-469

22) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-40, 2-4=-45, 4-5=-40, 6-14=-206(F=-200), 7-14=-236(F=-200), 2-8=-20
Horz: 1-2=-10, 2-4=-5, 4-5=-10, 4-6=-0
Concentrated Loads (lb)
Vert: 14=-375 15=-469

23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-60, 4-5=-60, 6-7=-160(F=-140), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-400 15=-500

24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-20, 4-5=-20, 6-14=-160(F=-140), 7-14=-200(F=-140), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-400 15=-500

25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-50, 4-5=-50, 6-7=-220(F=-200), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-350 15=-438

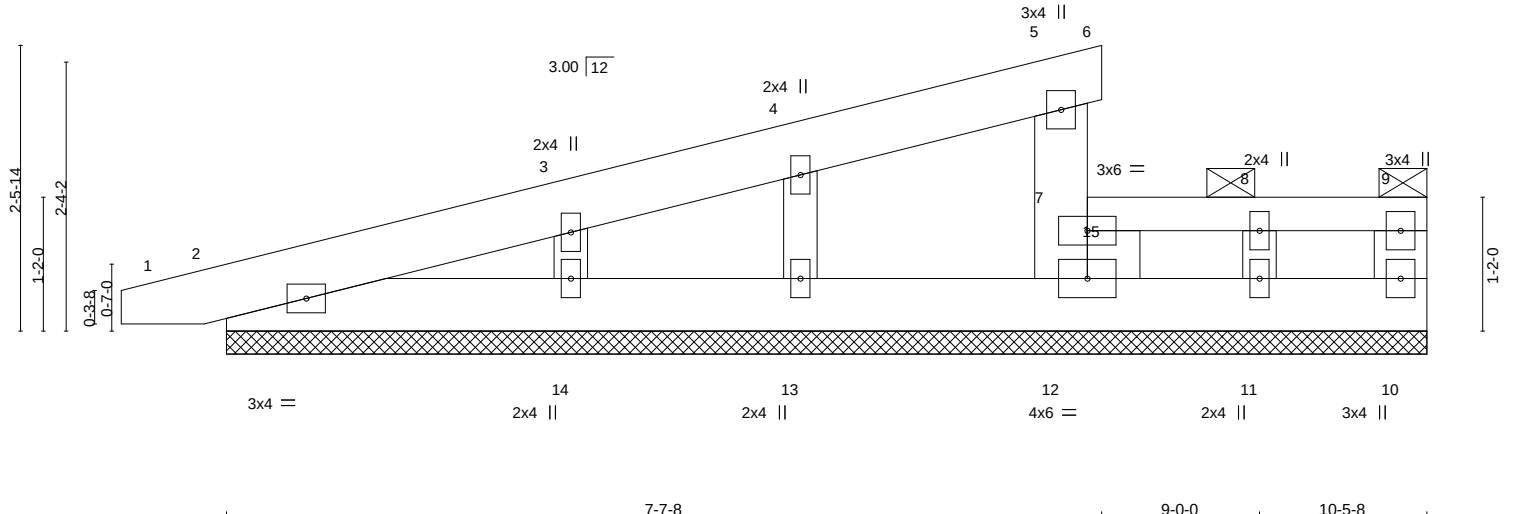
26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-20, 4-5=-20, 6-14=-220(F=-200), 7-14=-250(F=-200), 2-8=-20
Concentrated Loads (lb)
Vert: 14=-350 15=-438

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	D2GE	GABLE COMMON	1	1	E14133415
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:35 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-KTFiMaaJj_OVGGupQv?Z4aXZITlzrWYvBFREtZzeiiU

-0-11-0 7-7-8 9-0-0 10-5-8
0-11-0 7-7-8 1-4-8 1-5-8

Scale = 1:20.1



7-7-8 9-0-0 10-5-8
7-7-8 1-4-8 1-5-8

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	0.00	5	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	5	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	-0.00	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 58 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1 *Except* 7-9: 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except* 8-11: 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, and 2-0-0 oc purlins (6-0-0 max.): 5-12, 7-9. Except: 6-0-0 oc bracing: 5-7
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 10-5-8.
(lb) - Max Horz 2=149(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 12, 10, 2, 14, 13, 11
Max Grav All reactions 250 lb or less at joint(s) 12, 10, 2, 14, 13, 11

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

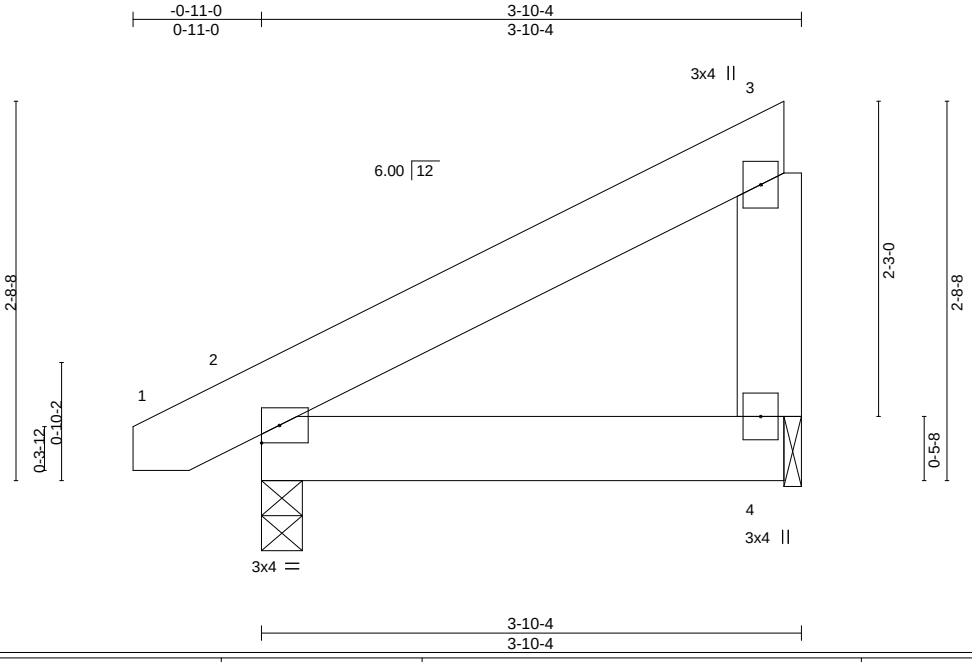
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-6-11 to 10-2-12 zone;C-C for members and forces & 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) Provide adequate drainage to prevent water ponding.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas 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) 12, 10, 2, 14, 13, 11.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	J1	MONOPITCH	8	1	E14133416
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:36 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_lD-pgp4awbyUlWMuQT0_cWodo4jSt44azA2QvBnP?zeiiT



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	-0.00	2-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.00	2-4	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00		n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P		Wind(LL)	0.00	2	****	240	Weight: 25 lb	FT = 20%

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

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

REACTIONS. (size) 2=0-3-8, 4=0-1-8
Max Horz 2=71(LC 12)
Max Uplift 2=-6(LC 12), 4=-36(LC 12)
Max Grav 2=197(LC 1), 4=133(LC 1)

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

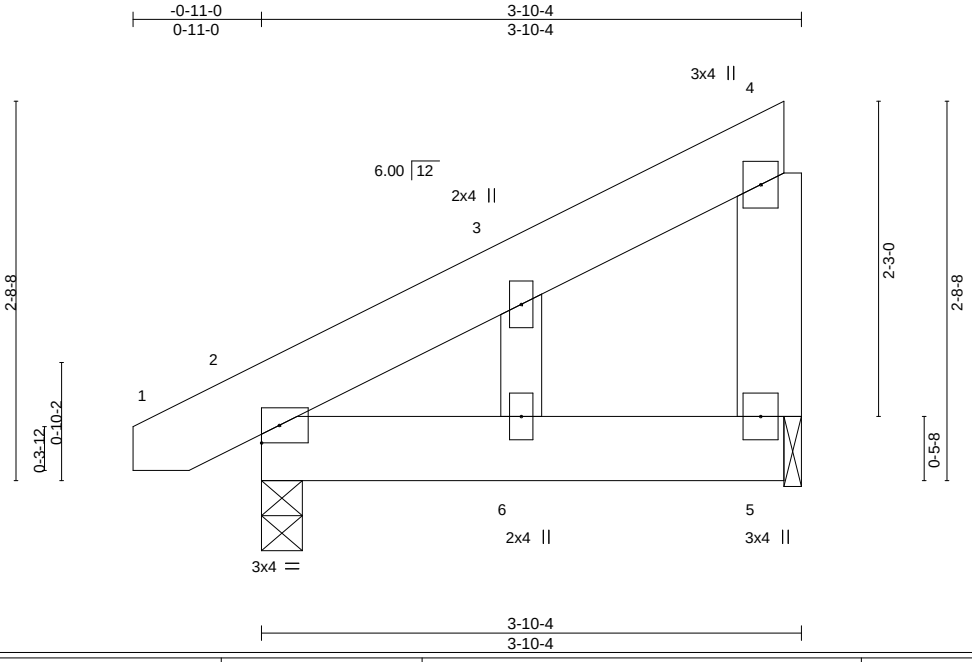
NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0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

March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	J1GE	GABLE	2	1	E14133417
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:37 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_lD-HsNSnGbaFceDWa2CXK11A?cvlHR?JQ9CfZwKxSzeiiS



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	6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.00	6	>999	240	Weight: 27 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS. (size) 2=0-3-8, 5=0-1-8
Max Horz 2=102(LC 12)
Max Uplift 2=-35(LC 12), 5=-68(LC 12)
Max Grav 2=197(LC 1), 5=133(LC 1)

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

NOTES-

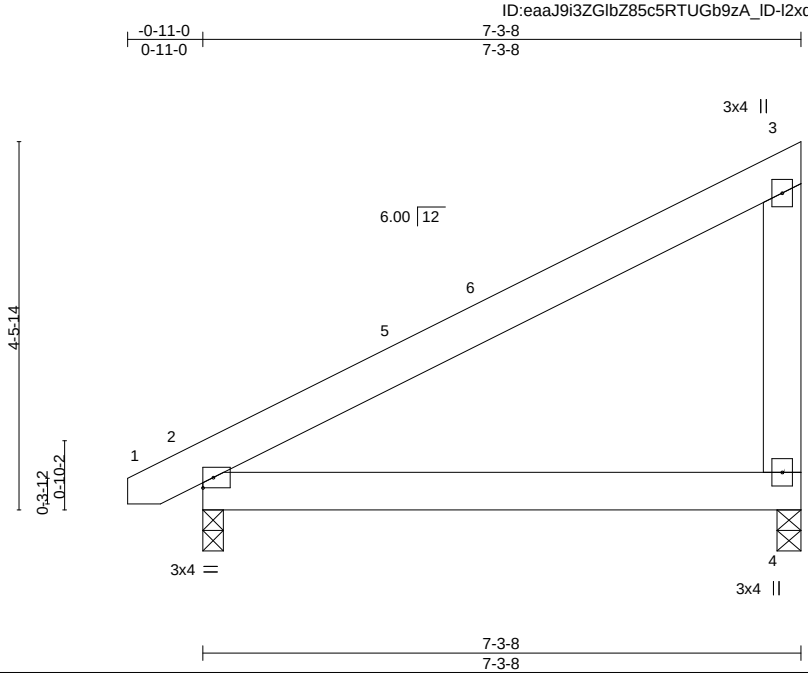
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable studs spaced at 2-0-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.

March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	M1	MONOPITCH	4	1	E14133418
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:38 2020 Page 1
ID:eaaJ9i3ZGIbZ85c5RTUGb9zA_ID-l2xq?ccC0vm47jdO51YGiD90IhjW2tgLtDguUuzeiiR



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)	-0.03	2-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.06	2-4	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00		n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P		Wind(LL)	0.07	2-4	>999	240	Weight: 47 lb	FT = 20%

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

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

REACTIONS. (size) 4=0-3-8, 2=0-3-0
Max Horz 2=127(LC 12)
Max Uplift 4=-65(LC 12), 2=-31(LC 8)
Max Grav 4=274(LC 1), 2=331(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 (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-10 to 3-8-3, Interior(1) 3-8-3 to 7-0-12 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas 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) 4, 2.

March 3,2020

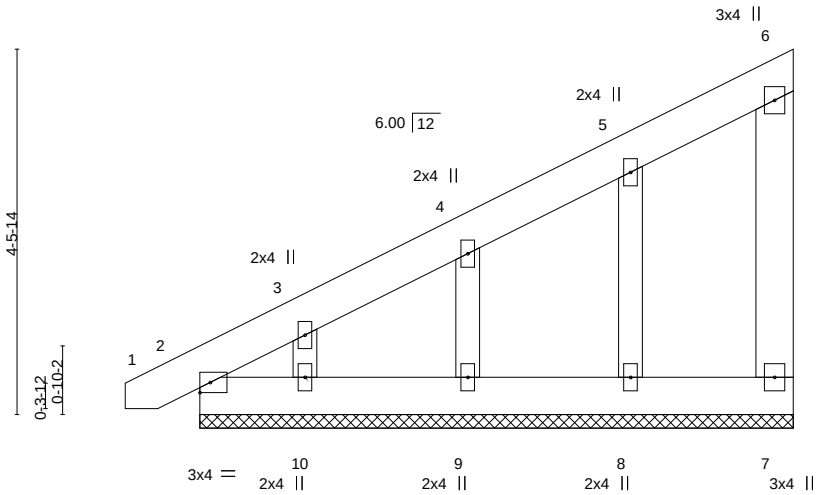
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 1 Sierra Villas
J0121-0103	M1GE	MONOPITCH SUPPORTED	1	1	E14133419
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:38 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-l2xq?ccC0vm47jdO51YGiD94ihnr2tBLtDguUuzeiiR

-0-11-0 7-3-8
0-11-0 7-3-8

Scale = 1:28.3



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	0.02	Vert(LL)	0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00		n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 54 lb	FT = 20%

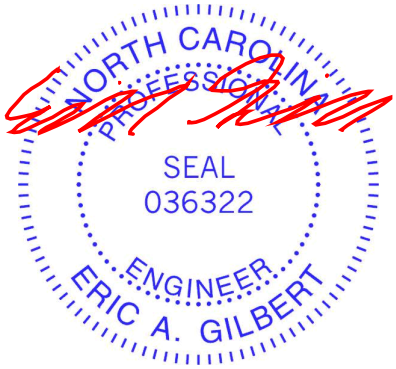
LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1
OTHERS 2x4 SP No.2

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

REACTIONS. All bearings 7-3-8.
(lb) - Max Horz 2=182(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 7, 8, 9 except 10=-101(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 7, 2, 8, 9, 10

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-288/115

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas 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 100 lb uplift at joint(s) 7, 8, 9 except (jt=lb) 10=101.
8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

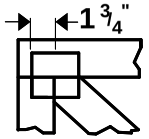


March 3,2020

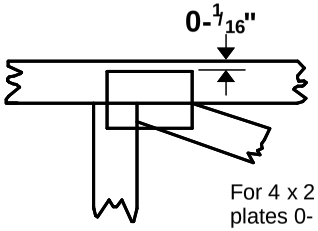
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

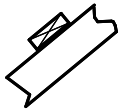
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

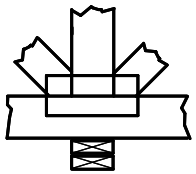
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

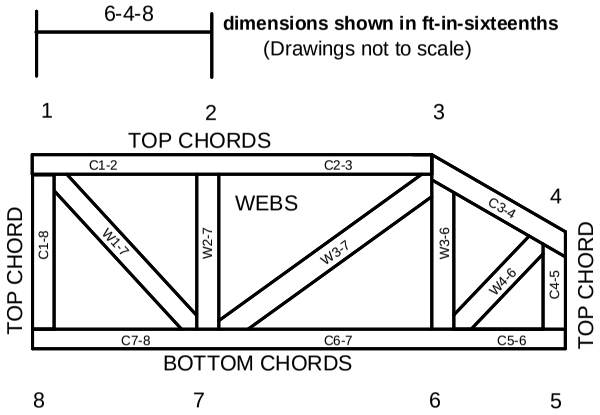


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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 Reference Sheet: MII-7473 rev. 5/19/2020

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.