ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 191154RT1
FREEDOM FAMILY HOMES

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: E13657129 thru E13657153

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844

October 18,2019

Gilbert, Eric

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

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Re: 191154RT1
FREEDOM FAMILY HOMES

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: E13657129 thru E13657153

My license renewal date for the state of South Carolina is June 30, 2020.

South Carolina COA: 923

October 18,2019

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	A01	FINK	1	1	E13657129
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:32:55 2019 Page 1
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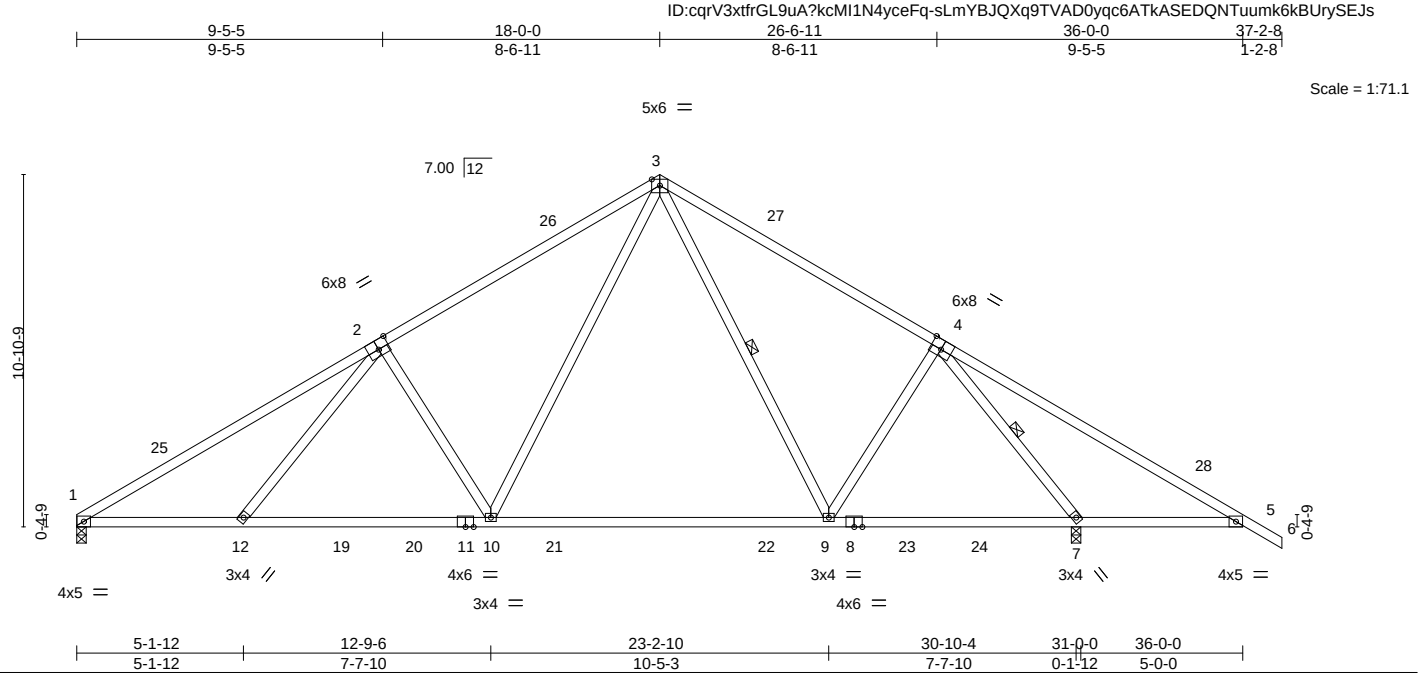

Plate Offsets (X,Y)-- [2:0-4-0,Edge], [4:0-4-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.89	Vert(LL)	-0.41	9-10	>915	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.65	9-10	>569	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 191 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 5-7.
WEBS 1 Row at midpt 3-9, 4-7

REACTIONS. (lb/size) 1=1193/0-3-8, 7=1759/0-3-8
Max Horz 1=-188(LC 9)
Max Uplift 1=-3(LC 11), 7=-48(LC 11)
Max Grav 1=1232(LC 16), 7=1759(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2076/68, 2-3=-1604/156, 3-4=-1200/114, 4-5=-284/723
BOT CHORD 1-12=0/1831, 10-12=0/1685, 9-10=0/948, 7-9=0/781, 5-7=-497/329
WEBS 2-10=-605/175, 3-10=-31/940, 4-9=0/349, 4-7=-1939/295

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 18-0-0, Exterior(2) 18-0-0 to 21-0-0, Interior(1) 21-0-0 to 37-2-8 zone; cantilever left and right exposed ; 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) * 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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.

October 18,2019

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES	E13657130
191154RT1	A02	FINK	1	1	Job Reference (optional)	

Carolina Structural Systems, Star, NC 27356 — 8.240 s Jul 27 2019 MiTek Industries, Inc. Fri Oct 18 09:38:22 2019 Page 1

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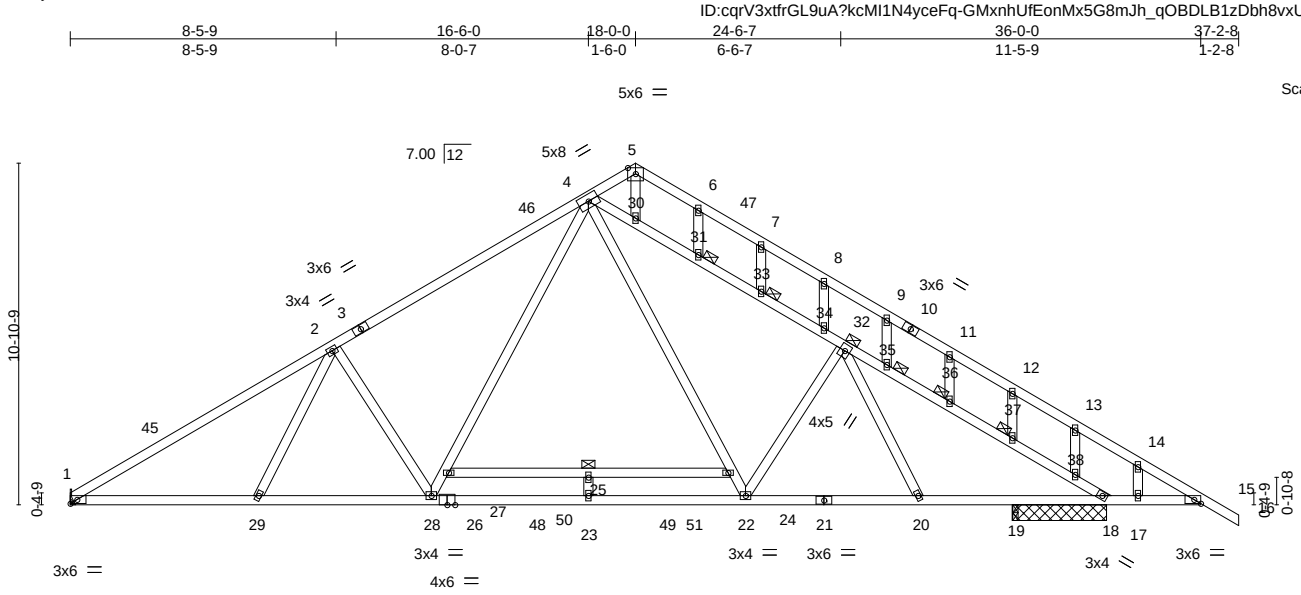

Plate Offsets (X,Y)-- [15:0-2-9,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.86	Vert(LL)	-0.44	25	>814	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.80	25	>452	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.08	18	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 245 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 6-0-0 oc bracing: 24-27
WEBS	1 Row at midpt 32-36
JOINTS	1 Brace at Jt(s): 31, 32, 33, 36, 37

REACTIONS. (lb/size) 18=1660/3-0-0 (min. 0-1-15), 1=1391/Mechanical, 19=86/0-2-0 (min. 0-1-8)
Max Horz 1=-188(LC 9)
Max Grav 18=1660(LC 1), 1=1419(LC 16), 19=181(LC 22)

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

TOP CHORD	1-45=-2389/0, 2-45=-2298/0, 2-3=-2092/19, 3-46=-1987/42, 4-46=-1910/63, 14-15=-233/273
BOT CHORD	1-29=0/2110, 28-29=0/2068, 26-28=0/1467, 26-48=0/1467, 23-48=0/1467, 23-49=0/1467, 22-49=0/1467, 21-22=0/1871, 20-21=0/1871, 19-20=0/1816, 18-19=0/1816
WEBS	4-30=-2010/45, 30-31=-2031/12, 31-33=-2066/32, 33-34=-2073/35, 32-34=-2169/87, 32-35=-2074/67, 35-36=-2144/94, 36-37=-2173/105, 37-38=-2168/104, 18-38=-2225/134, 2-28=-534/163, 22-32=-463/150, 27-28=-10/808, 4-27=0/967, 4-24=0/921, 22-24=0/760, 8-34=-285/103, 14-17=-489/120

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 18-0-0, Exterior(2) 18-0-0 to 21-0-0, Interior(1) 21-0-0 to 37-2-8 zone; cantilever left and right exposed ; 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) All plates are 2x4 MT20 unless otherwise indicated.
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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 19.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

October 18,2019

ENGINEERING BY TRENCO
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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	A03	FINK	5	1	E13657131
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:32:57 2019 Page 1
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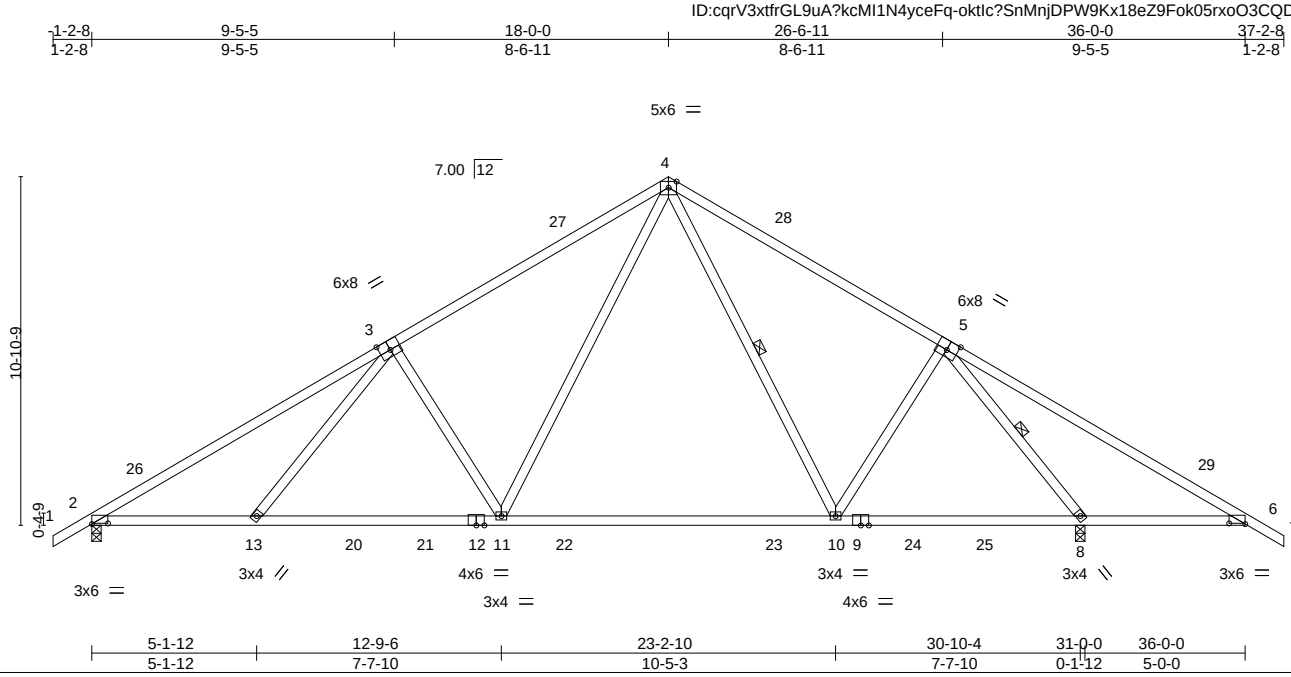

Plate Offsets (X,Y)-- [2:0-6-0,0-0-4], [3:0-4-0,Edge], [5:0-4-0,Edge], [6:0-6-0,0-0-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.89	Vert(LL)	-0.41	10-11	>915	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.65	10-11	>570	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 193 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 6-8.
WEBS 1 Row at midpt 4-10, 5-8

REACTIONS. (lb/size) 2=1267/0-3-8, 8=1758/0-3-8
Max Horz 2=-191(LC 9)
Max Uplift 2=-34(LC 11), 8=-47(LC 11)
Max Grav 2=1297(LC 16), 8=1758(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2063/51, 3-4=-1600/151, 4-5=-1198/112, 5-6=-284/723
BOT CHORD 2-13=0/1819, 11-13=0/1679, 10-11=0/946, 8-10=0/780, 6-8=-497/329
WEBS 3-11=-599/173, 4-11=-30/936, 5-10=0/349, 5-8=-1937/295

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 18-0-0, Exterior(2) 18-0-0 to 21-0-0, Interior(1) 21-0-0 to 37-2-8 zone; cantilever left and right exposed ; 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) * 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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.

October 18,2019

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	A04	FINK	2	1	E13657132
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:32:58 2019 Page 1
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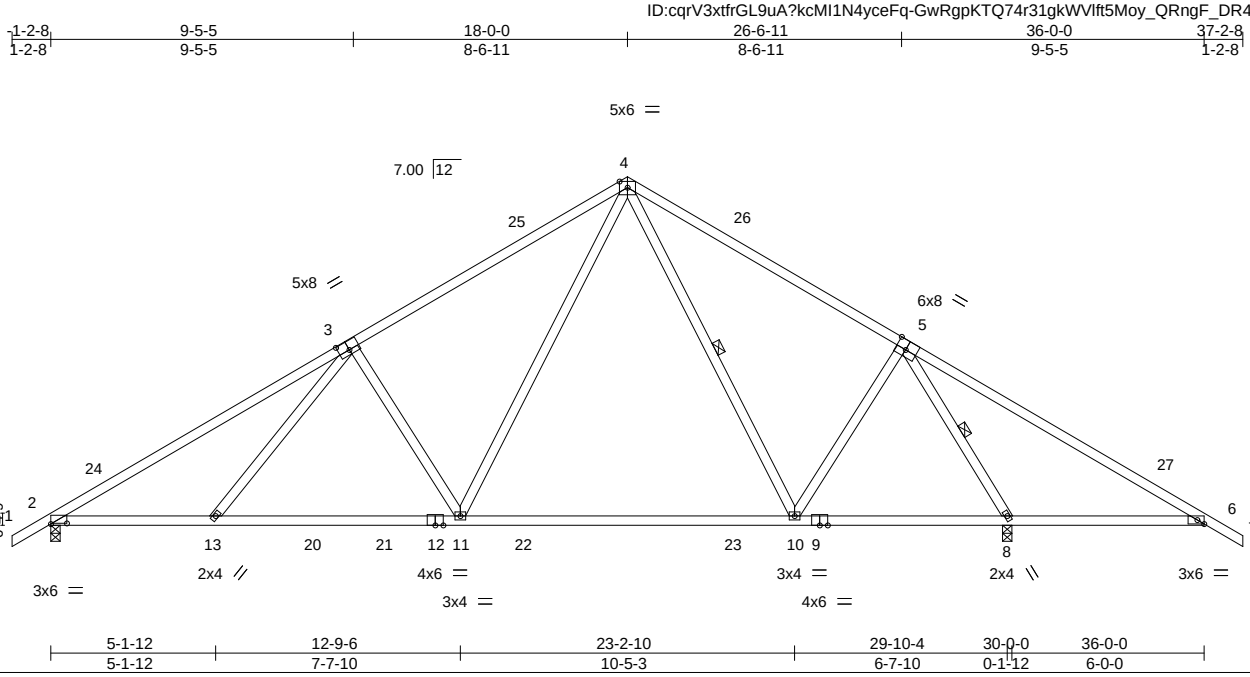

Plate Offsets (X,Y)-- [2:0-6-0,0-0-4], [3:0-4-0,0-3-4], [5:0-3-12,Edge], [6:0-2-9,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.92	Vert(LL)	-0.44	10-11	>825	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.68	10-11	>525	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 192 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 6-8.
WEBS 1 Row at midpt 4-10, 5-8

REACTIONS. (lb/size) 2=1207/0-3-8, 8=1818/0-3-8
Max Horz 2=-191(LC 9)
Max Uplift 2=-32(LC 11), 8=-49(LC 11)
Max Grav 2=1233(LC 16), 8=1818(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1937/35, 3-4=-1475/134, 4-5=-966/108, 5-6=-303/780
BOT CHORD 2-13=0/1711, 11-13=0/1570, 10-11=0/835, 8-10=0/486, 6-8=-544/344
WEBS 3-11=-600/174, 4-11=-30/943, 5-10=0/515, 5-8=-1871/294

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 18-0-0, Exterior(2) 18-0-0 to 21-0-0, Interior(1) 21-0-0 to 37-2-8 zone; cantilever left and right exposed ; 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) * 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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.

October 18,2019

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	A05	FINK	1	1	E13657133
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:32:59 2019 Page 1
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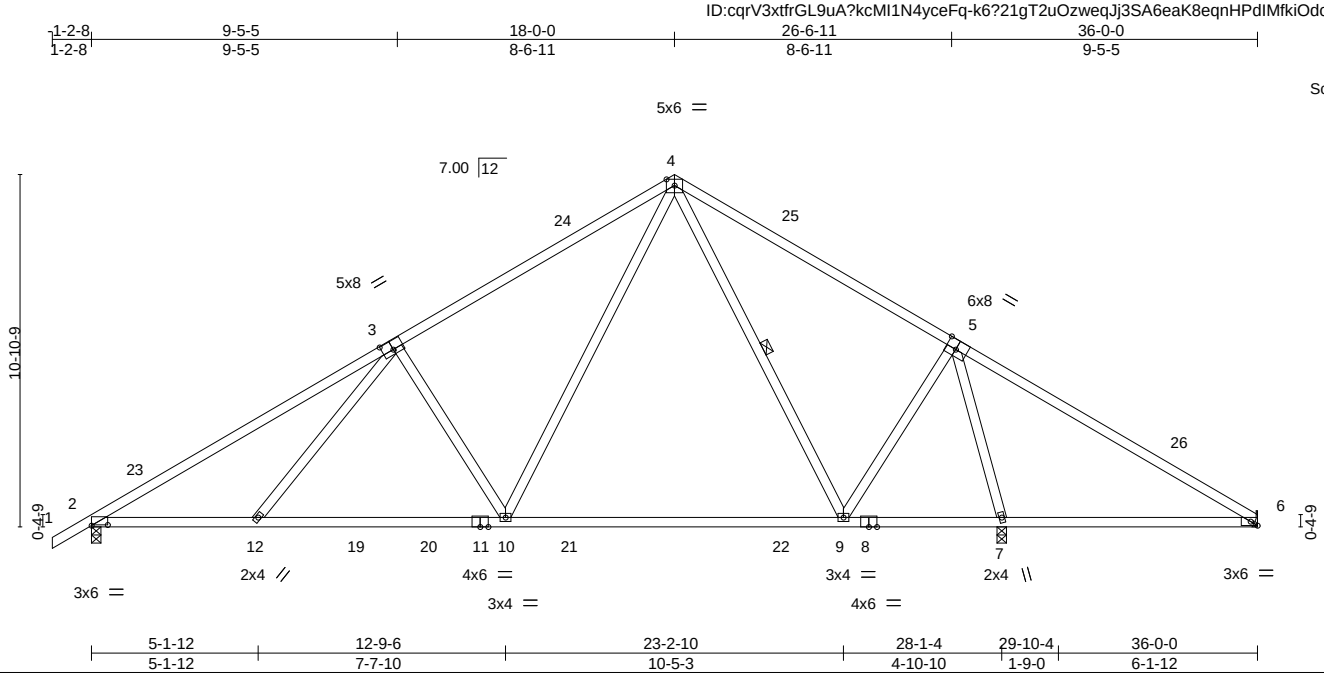

Plate Offsets (X,Y)-- [2:0-6-0,0-0-4], [3:0-4-0,0-3-4], [5:0-3-12,Edge], [6:0-2-9,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.86	Vert(LL)	-0.41	9-10	>820	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.66	9-10	>508	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 189 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 6-7.
WEBS 1 Row at midpt 4-9

REACTIONS. (lb/size) 2=1172/0-3-8, 7=1567/0-3-8, 6=213/Mechanical
Max Horz 2=188(LC 10)
Max Uplift 2=-41(LC 11), 7=-1(LC 11), 6=-9(LC 11)
Max Grav 2=1176(LC 16), 7=1567(LC 1), 6=270(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1828/76, 3-4=-1363/174, 4-5=-786/170, 5-6=-103/323
BOT CHORD 2-12=0/1610, 10-12=-8/1468, 9-10=0/731, 7-9=0/269
WEBS 3-10=-601/174, 4-10=-26/943, 4-9=-326/1, 5-9=0/687, 5-7=-1475/84

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 18-0-0, Exterior(2) 18-0-0 to 21-0-0, Interior(1) 21-0-0 to 36-0-0 zone; cantilever left and right exposed ; 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) * 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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
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) 2, 7, 6.

October 18,2019

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	A06	FINK	9	1	E13657134
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:00 2019 Page 1
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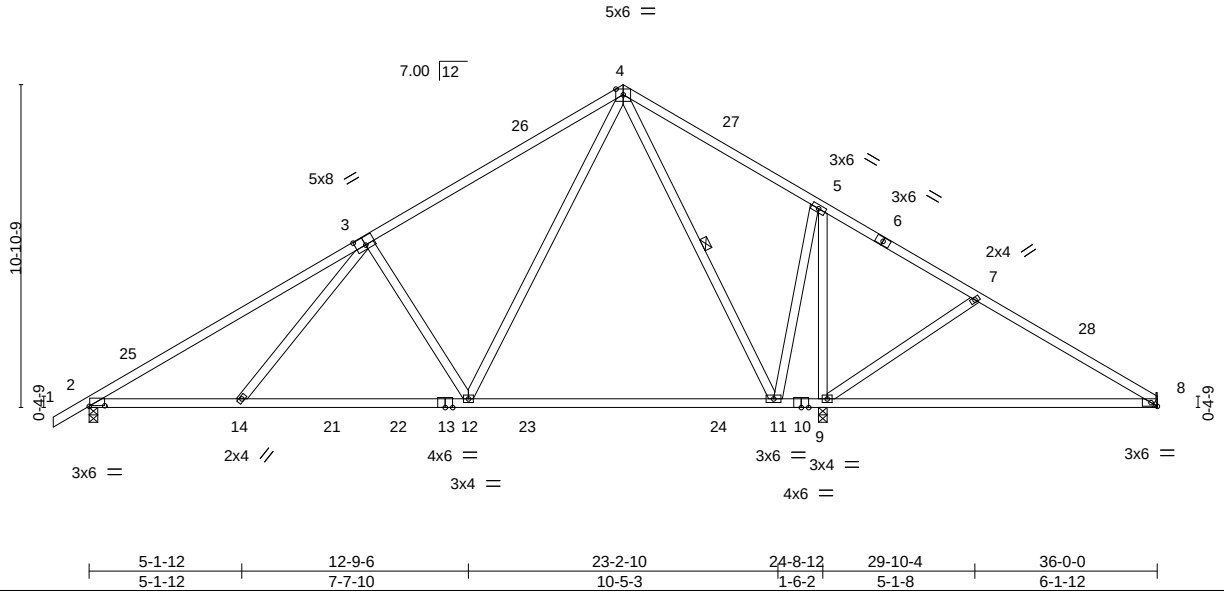
-1-2-8 | 9-5-5 | 18-0-0 | 24-8-12 | 26-6-11 | 29-10-4 | 36-0-0
1-2-8 | 9-5-5 | 8-6-11 | 6-8-12 | 1-9-15 | 3-3-9 | 6-1-12

Scale = 1:77.7



5-1-12 | 12-9-6 | 23-2-10 | 24-8-12 | 29-10-4 | 36-0-0
5-1-12 | 7-7-10 | 10-5-3 | 1-6-2 | 5-1-8 | 6-1-12

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.77	Vert(LL)	-0.35	11-12	>849	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.32	9-20	>428	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 200 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1 *Except* 3-4,4-6: 2x4 SP DSS
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-5-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 9-11.
WEBS 1 Row at midpt 4-11

REACTIONS. (lb/size) 2=1030/0-3-8, 9=1545/0-3-8, 8=378/Mechanical
Max Horz 2=188(LC 10)
Max Uplift 2=-32(LC 11), 9=-30(LC 11)
Max Grav 2=1043(LC 16), 9=1545(LC 1), 8=400(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1575/52, 3-4=-1099/150, 4-5=-286/137, 7-8=-369/51
BOT CHORD 2-14=0/1392, 12-14=0/1243, 11-12=0/507, 8-9=0/284
WEBS 3-12=-602/175, 4-12=-28/934, 4-11=-697/17, 5-11=0/946, 5-9=-1284/93, 7-9=-369/105

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 18-0-0, Exterior(2) 18-0-0 to 21-0-0, Interior(1) 21-0-0 to 36-0-0 zone; cantilever left and right exposed ; 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) * 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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
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) 2, 9.

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 28481 ERIC A. GILBERT

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

October 18,2019

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

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	A07	Common Supported Gable	1	1	E13657135
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:02 2019 Page 1
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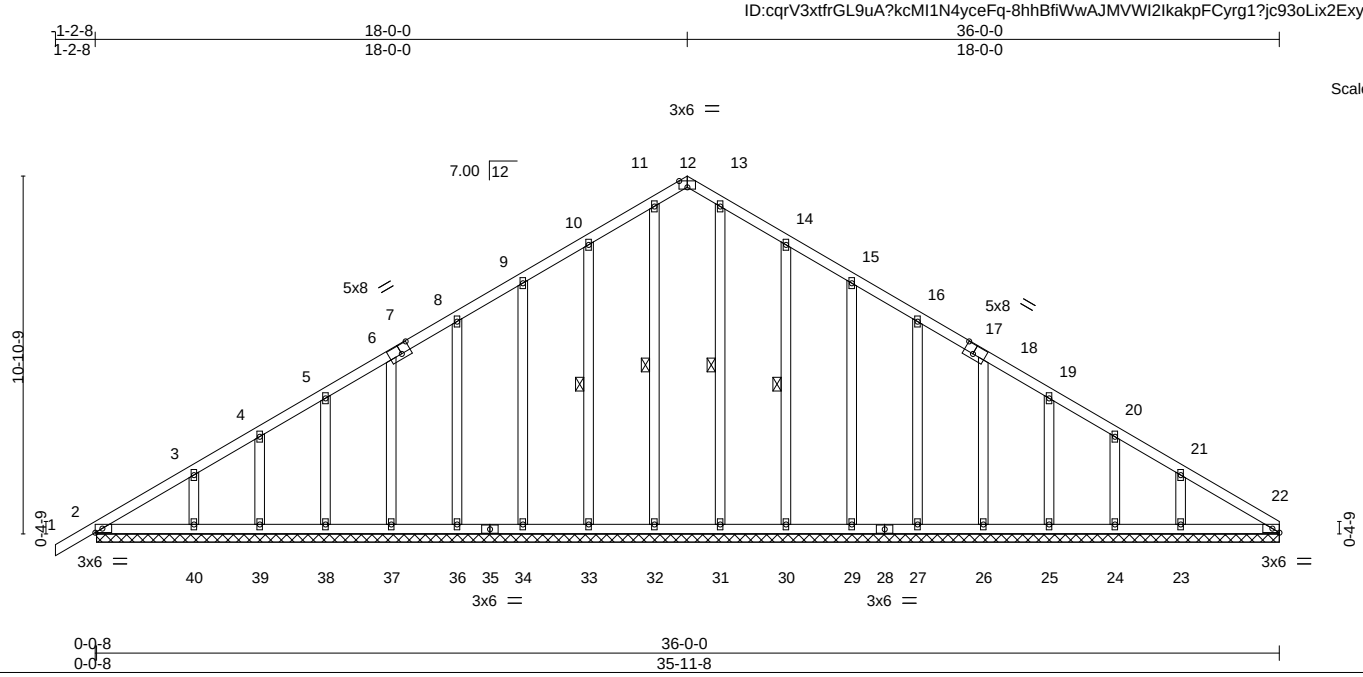

Plate Offsets (X,Y)-- [6:0-2-0,0-0-0], [7:0-3-8,0-3-4], [7:0-0-0,0-1-12], [12:0-3-0,Edge], [17:0-3-8,0-3-4], [17:0-0-0,0-1-12], [18:0-2-0,0-0-0], [22:0-2-9,Edge]

LOADING (psf)		SPACING- 2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0		Plate Grip DOL 1.00	TC	0.11	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL 10.0		Lumber DOL 1.15	BC	0.05	Vert(CT)	0.00	1	n/r	120		
BCLL 0.0	*	Rep Stress Incr YES	WB	0.12	Horz(CT)	0.01	22	n/a	n/a		
BCDL 10.0		Code IRC2015/TPI2014	Matrix-S							Weight: 253 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 11-32, 10-33, 13-31, 14-30

REACTIONS. All bearings 35-11-8.
(lb) - Max Horz 2=188(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 33, 34, 36, 37, 38, 39, 40, 30, 29, 27, 26, 25, 24, 23
Max Grav All reactions 250 lb or less at joint(s) 22, 32, 33, 34, 36, 37, 38, 39, 40, 31, 30, 29, 27, 26, 25, 24, 23, 2

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) -1-2-8 to 1-9-8, Exterior(2) 1-9-8 to 18-0-0, Corner(3) 18-0-0 to 21-0-0, Exterior(2) 21-0-0 to 36-0-0 zone; cantilever left and right exposed ; 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) 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 33, 34, 36, 37, 38, 39, 40, 30, 29, 27, 26, 25, 24, 23.
8) Non Standard bearing condition. Review required.

October 18,2019

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

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	B01	FINK	6	1	E13657136
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:03 2019 Page 1
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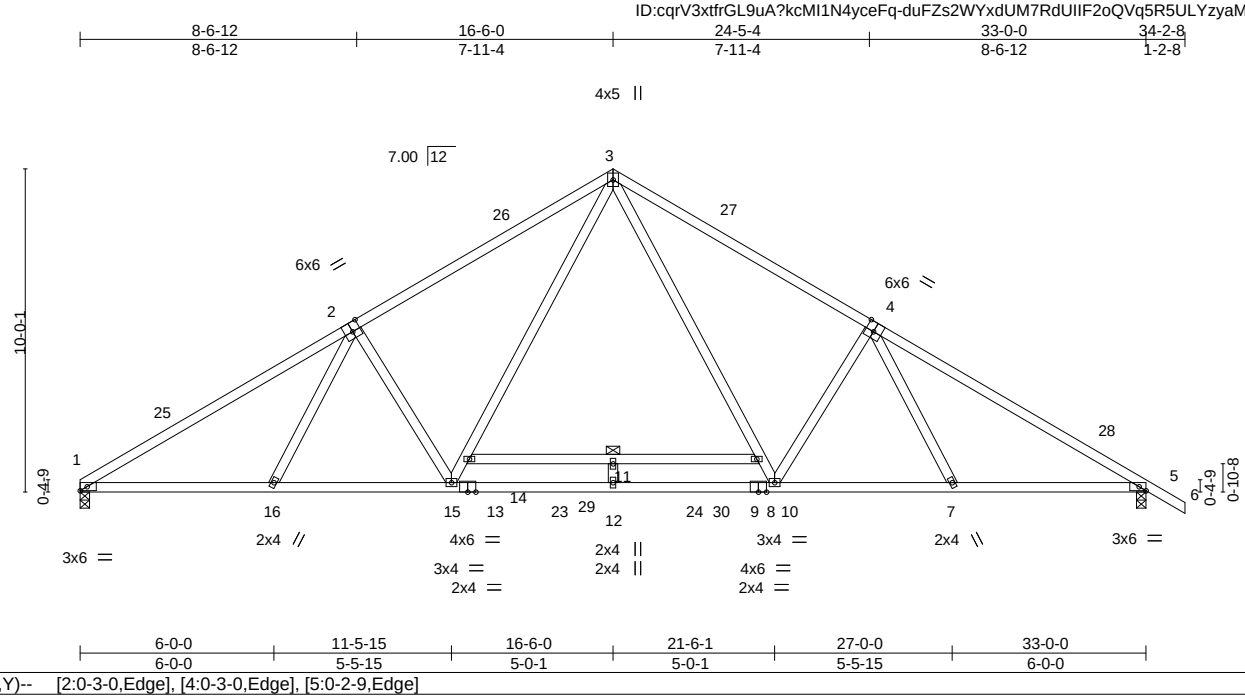

Plate Offsets (X,Y)-- [2:0-3-0,Edge], [4:0-3-0,Edge], [5:0-2-9,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.90	Vert(LL)	-0.45	11	>887	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.81	11	>490	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.08	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 187 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except:
6-0-0 oc bracing: 10-14

REACTIONS. (lb/size) 1=1411/0-3-8, 5=1486/0-3-8
Max Horz 1=-173(LC 9)
Max Grav 1=1434(LC 16), 5=1500(LC 17)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2421/6, 2-3=-2129/70, 3-4=-2126/63, 4-5=-2411/0
BOT CHORD 1-16=0/2130, 15-16=0/2091, 12-15=0/1462, 8-12=0/1462, 7-8=0/1954, 5-7=0/1989
WEBS 2-15=-555/162, 14-15=-9/834, 3-14=0/996, 3-10=0/993, 8-10=-8/830, 4-8=-548/159

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 16-6-0, Exterior(2) 16-6-0 to 19-6-0, Interior(1) 19-6-0 to 34-2-8 zone; cantilever left and right exposed ; 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) * 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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	B02	Common Supported Gable	1	1	E13657137
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:05 2019 Page 1
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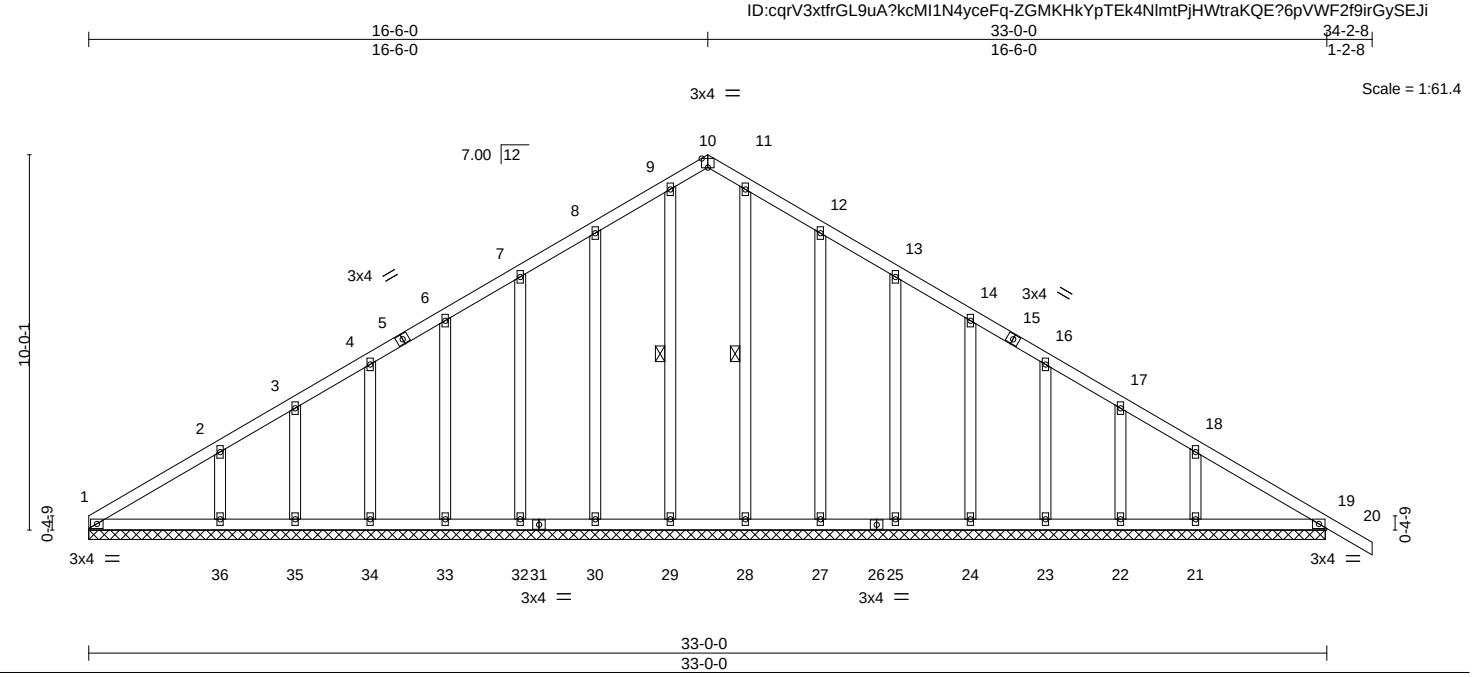

Plate Offsets (X,Y)-- [10:0-2-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.14	Vert(LL)	0.00	19	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	20	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	19	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 220 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 9-29, 11-28

REACTIONS. All bearings 32-11-8.
(lb) - Max Horz 1=-173(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 30, 32, 33, 34, 35, 36, 27, 25, 24, 23, 22, 21
Max Grav All reactions 250 lb or less at joint(s) 19, 29, 30, 32, 33, 34, 35, 28, 27, 25, 24, 23, 22, 1 except 36=285(LC 20), 21=259(LC 21)

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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) 0-0-0 to 3-0-0, Exterior(2) 3-0-0 to 16-6-0, Corner(3) 16-6-0 to 19-6-0, Exterior(2) 19-6-0 to 34-2-8 zone; cantilever left and right exposed ; 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) 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 30, 32, 33, 34, 35, 36, 27, 25, 24, 23, 22, 21.
8) Non Standard bearing condition. Review required.

October 18,2019

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	C01	FINK	5	1	E13657138
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:06 2019 Page 1
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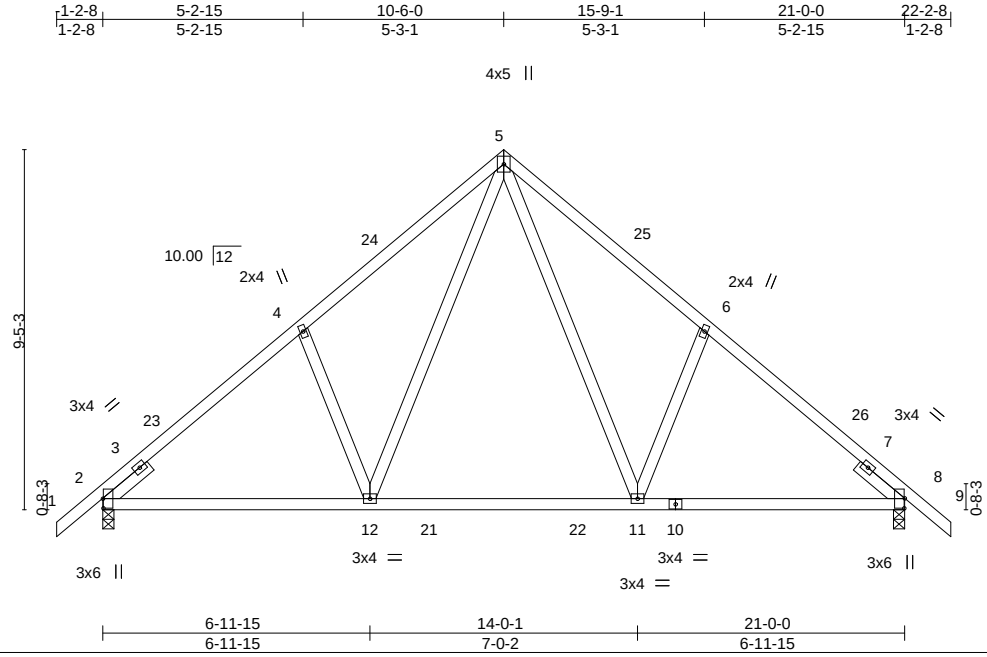

Plate Offsets (X,Y)-- [2:0-3-0,0-0-3], [8:0-3-2,0-0-3]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.33	Vert(LL)	-0.13	11-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.18	11-12	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 124 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-7-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=913/0-3-8, 8=913/0-3-8
Max Horz 2=-176(LC 9)
Max Uplift 2=-36(LC 11), 8=-36(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1006/82, 4-5=-926/168, 5-6=-926/168, 6-8=-1006/82
BOT CHORD 2-12=0/816, 11-12=0/544, 8-11=0/729
WEBS 4-12=-286/150, 5-12=-63/488, 5-11=-63/488, 6-11=-286/150

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 10-6-0, Exterior(2) 10-6-0 to 13-6-0, Interior(1) 13-6-0 to 22-2-8 zone; cantilever left and right exposed ; 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) * 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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.

October 18,2019

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	C02	Common Supported Gable	1	1	E13657139
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:07 2019 Page 1
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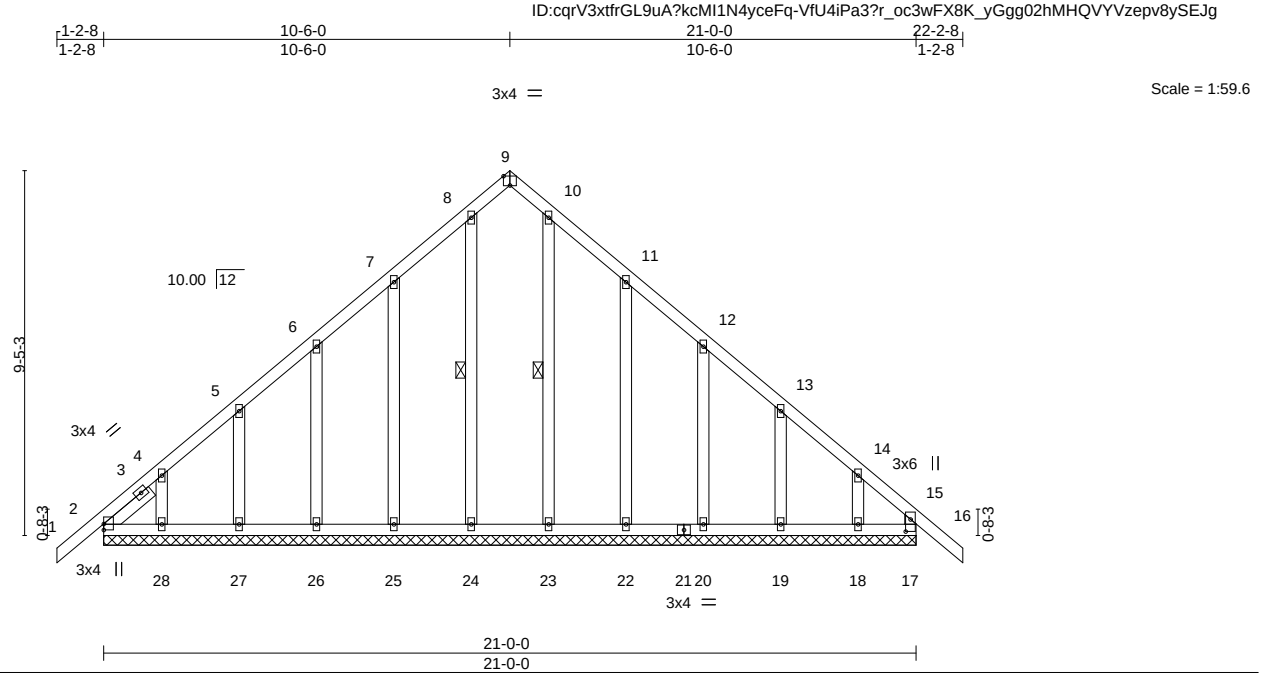

Plate Offsets (X,Y)-- [9:0-2-0,Edge], [15:0-3-12,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.13	Vert(LL)	-0.01	16	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	16	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	17	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 150 lb	FT = 20%

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

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.
WEBS 1 Row at midpt 8-24, 10-23

REACTIONS. All bearings 21-0-0.
(lb) - Max Horz 2=184(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 25, 26, 27, 28, 22, 20, 19, 18, 2
Max Grav All reactions 250 lb or less at joint(s) 17, 24, 25, 26, 27, 28, 23, 22, 20, 19, 18, 2

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) -1-2-8 to 1-6-0, Exterior(2) 1-6-0 to 10-6-0, Corner(3) 10-6-0 to 13-6-0, Exterior(2) 13-6-0 to 22-2-8 zone; cantilever left and right exposed ; 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) 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 26, 27, 28, 22, 20, 19, 18, 2.

October 18,2019

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	C03	HOWE	1	2	E13657140
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:08 2019 Page 1
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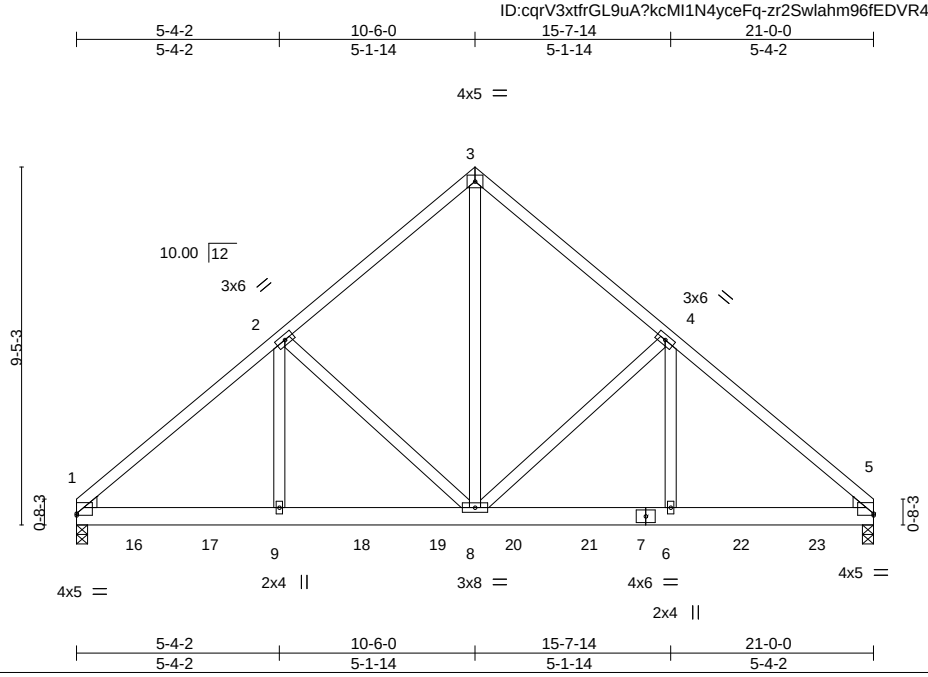

Plate Offsets (X,Y)-- [1:0-0-0,0-0-9], [5:Edge,0-0-9]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.20	Vert(LL)	-0.05	6-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.09	6-8	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.31	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 274 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=2727/0-3-8, 5=2622/0-3-8
Max Horz 1=-158(LC 5)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3334/0, 2-3=-2312/0, 3-4=-2311/0, 4-5=-3299/0
BOT CHORD 1-9=0/2486, 8-9=0/2486, 6-8=0/2457, 5-6=0/2457
WEBS 2-9=0/1070, 3-8=0/2532, 4-6=0/1025, 2-8=-1084/0, 4-8=-1046/0

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) * 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 2-0-0 wide will fit between the bottom chord and any other members.
6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 380 lb down at 1-6-4, 380 lb down at 3-6-4, 380 lb down at 5-6-4, 380 lb down at 7-6-4, 380 lb down at 9-6-4, 380 lb down at 11-6-4, 380 lb down at 13-6-4, 380 lb down at 15-6-4, and 380 lb down at 17-6-4, and 250 lb down and 29 lb up at 19-6-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (plf)
Vert: 10-13=-20, 1-3=-60, 3-5=-60
Concentrated Loads (lb)
Vert: 9=-380(F) 6=-380(F) 16=-380(F) 17=-380(F) 18=-380(F) 19=-380(F) 20=-380(F) 21=-380(F) 22=-380(F) 23=-250(F)

October 18,2019

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

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	D01	KINGPOST	1	1	E13657141
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:09 2019 Page 1
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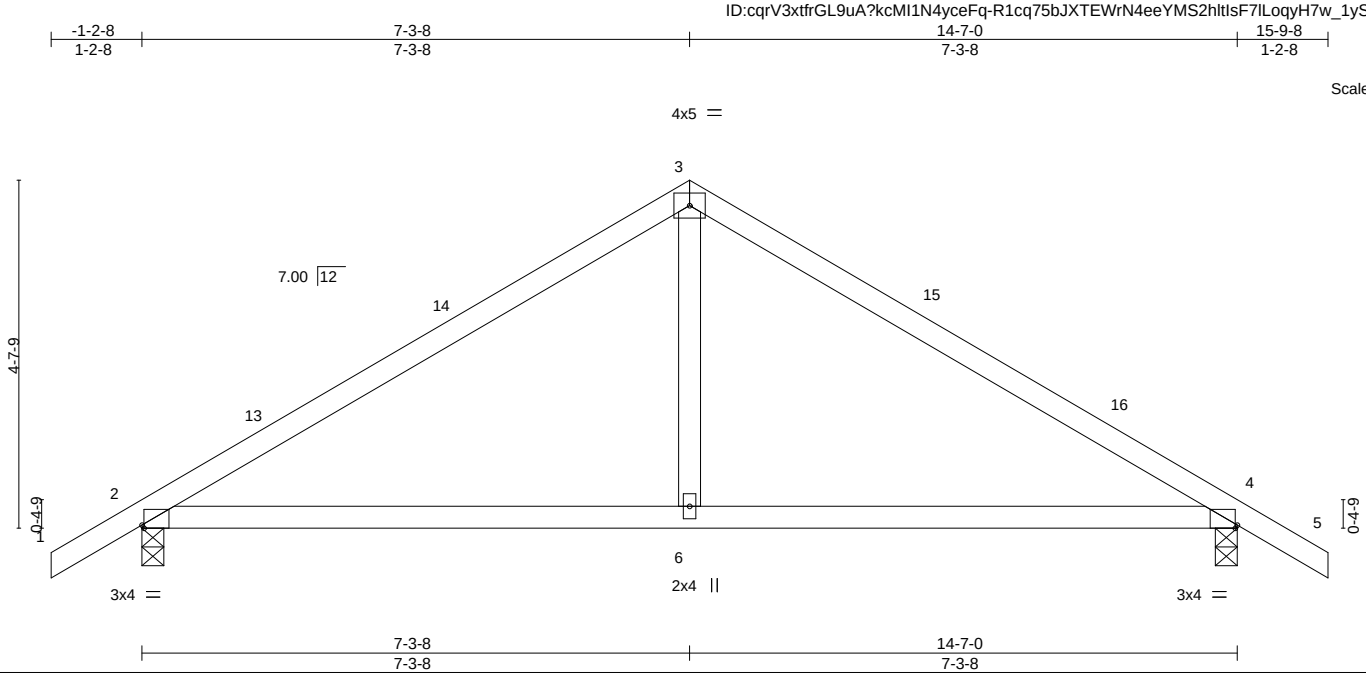

Plate Offsets (X,Y)-- [2:0-0-5,Edge], [4:0-0-5,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.72	Vert(LL)	-0.09	6-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.17	6-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 57 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-10-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=656/0-3-8, 4=656/0-3-8
Max Horz 2=-84(LC 9)
Max Uplift 2=-34(LC 11), 4=-34(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-756/67, 3-4=-756/67
BOT CHORD 2-6=0/567, 4-6=0/567

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 7-3-8, Exterior(2) 7-3-8 to 10-3-8, Interior(1) 10-3-8 to 15-9-8 zone; cantilever left and right exposed ; 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) * 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 2-0-0 wide will fit 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) 2, 4.

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	D02	Common Supported Gable	1	1	E13657142
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:10 2019 Page 1
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-1-2-8 1-2-8 | 7-3-8 7-3-8 | 14-7-0 7-3-8 | 15-9-8 1-2-8

Scale = 1:29.9

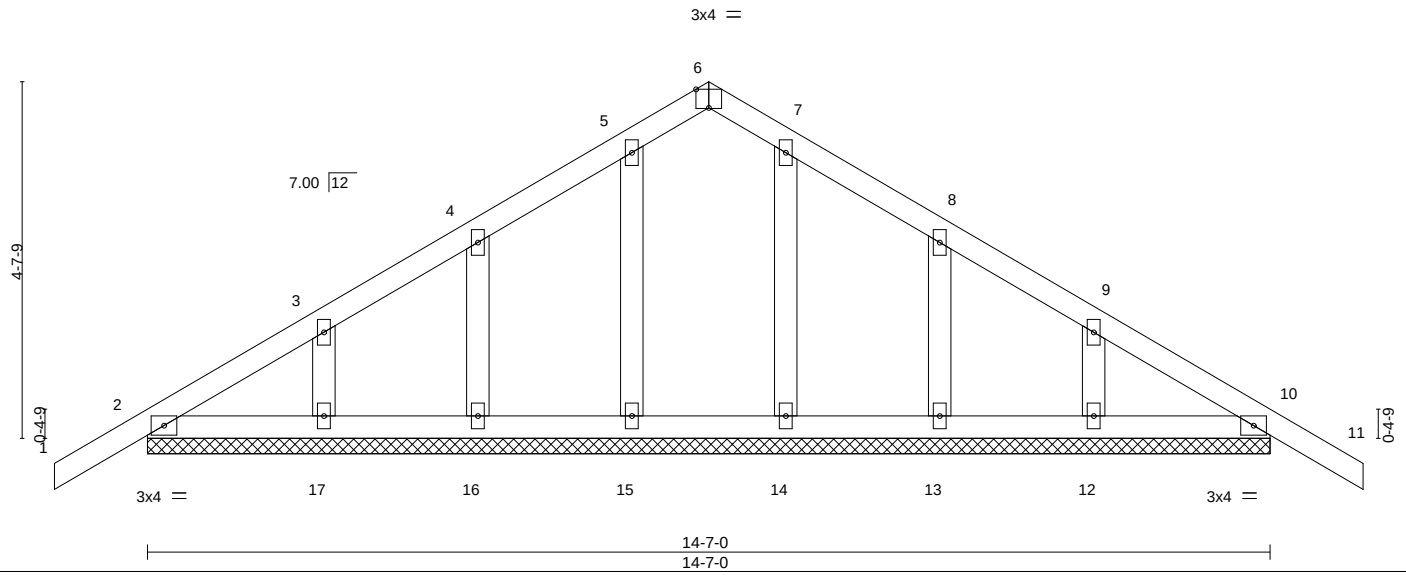

Plate Offsets (X,Y)-- [6:0-2-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.10	Vert(LL)	-0.00	11	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	11	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: 72 lb	FT = 20%

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

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

REACTIONS. All bearings 14-7-0.
(lb) - Max Horz 2=84(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 16, 17, 13, 12
Max Grav All reactions 250 lb or less at joint(s) 2, 10, 15, 16, 17, 14, 13, 12

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) -1-2-8 to 1-9-8, Exterior(2) 1-9-8 to 7-3-8, Corner(3) 7-3-8 to 10-3-8, Exterior(2) 10-3-8 to 15-9-8 zone; cantilever left and right exposed ; 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) 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 16, 17, 13, 12.

October 18,2019

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	D03	FINK	1	2	E13657143
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:12 2019 Page 1
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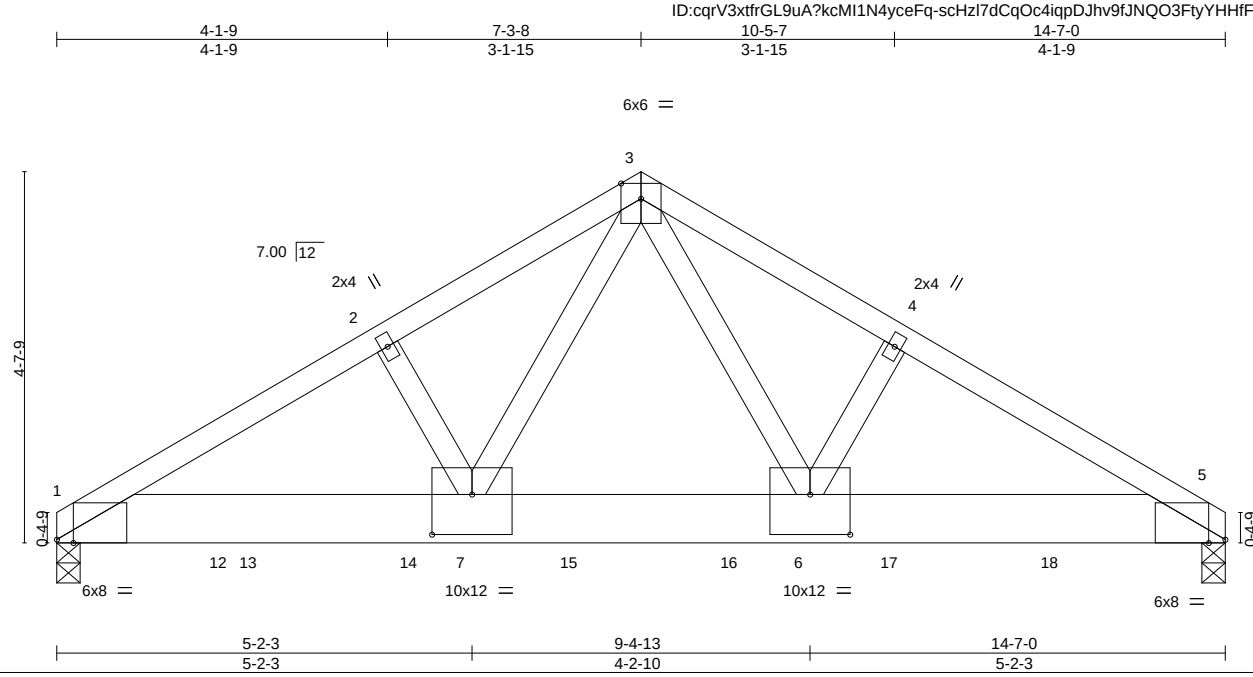

Plate Offsets (X,Y)-- [1:0-2-8,Edge], [5:0-2-8,Edge], [6:0-6-0,0-6-0], [7:0-6-0,0-6-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.60	Vert(LL)	-0.07	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.15	6-7	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.59	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 179 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2

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

REACTIONS. (lb/size) 1=5825/0-3-8, 5=5043/0-3-8
Max Horz 1=71(LC 6)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-8249/0, 2-3=-8168/0, 3-4=-7690/0, 4-5=-7773/0
BOT CHORD 1-7=0/7118, 6-7=0/4866, 5-6=0/6690
WEBS 3-7=0/4789, 3-6=0/3882

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-3-0 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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) * 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 2-0-0 wide will fit between the bottom chord and any other members.
6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1379 lb down at 2-1-4, 1391 lb down at 2-5-12, 1391 lb down at 4-5-12, 1391 lb down at 6-5-12, 1391 lb down at 8-5-12, and 1391 lb down at 10-5-12, and 1391 lb down at 12-5-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-5=-20, 1-3=-60, 3-5=-60
Concentrated Loads (lb)
Vert: 12=-1379(B) 13=-1391(B) 14=-1391(B) 15=-1391(B) 16=-1391(B) 17=-1391(B) 18=-1391(B)

October 18,2019

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V01	Valley	1	1	E13657144
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:12 2019 Page 1
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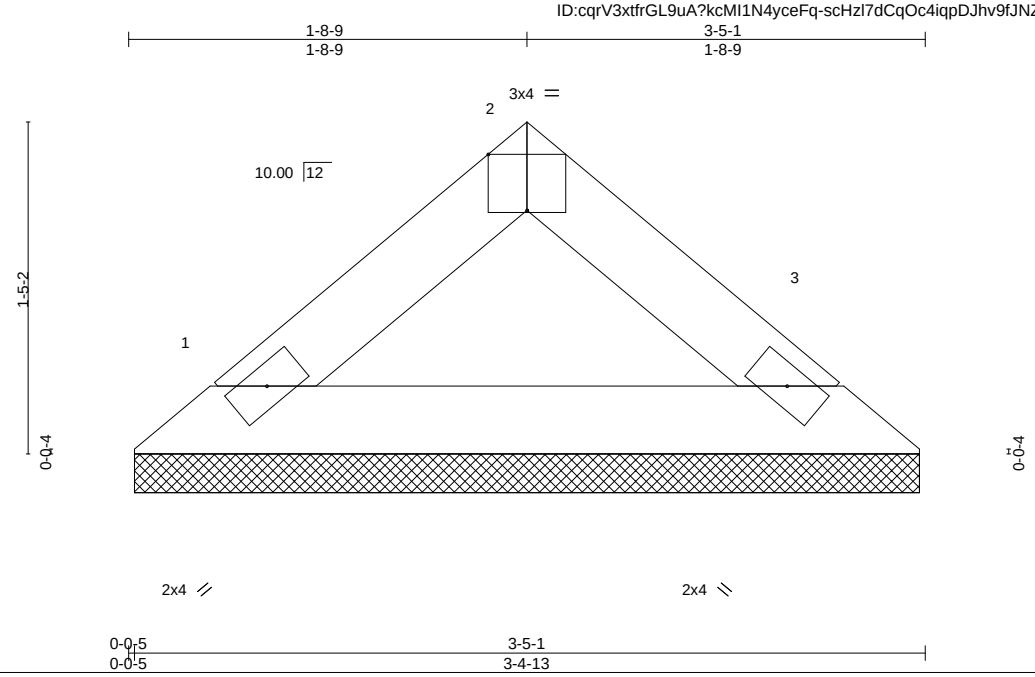

Plate Offsets (X,Y)-- [2:0-2-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 10 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-5-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=105/3-4-8, 3=105/3-4-8
Max Horz 1=20(LC 10)
Max Uplift 1=-1(LC 11), 3=-1(LC 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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

October 18,2019

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

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V02	Valley	1	1	E13657145
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:13 2019 Page 1
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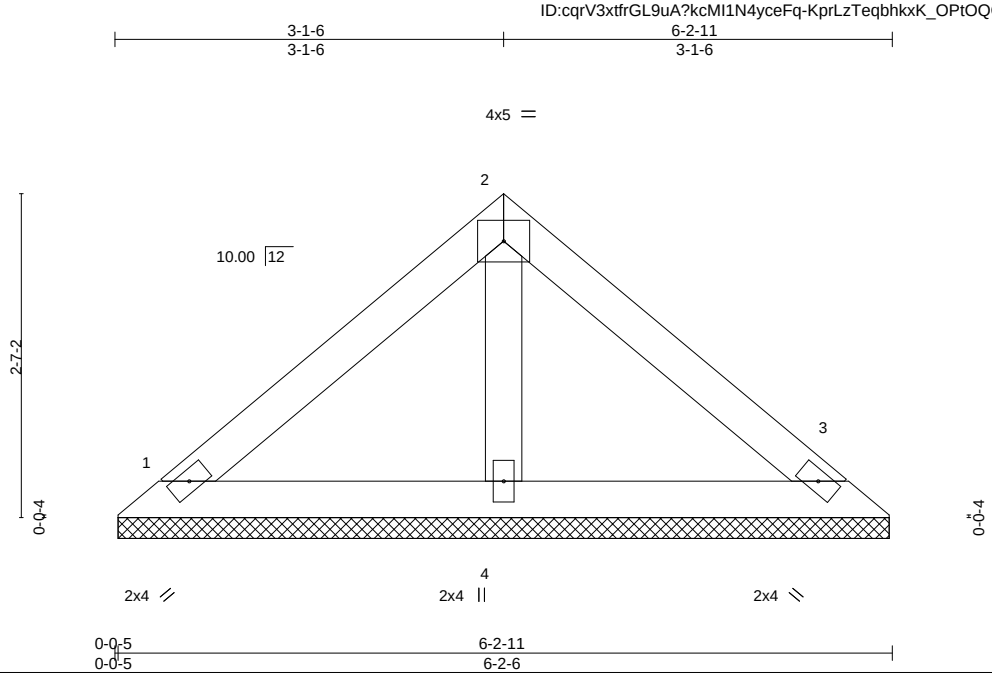

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 23 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=123/6-2-1, 3=123/6-2-1, 4=187/6-2-1
Max Horz 1=41(LC 10)
Max Uplift 1=-15(LC 11), 3=-15(LC 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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

October 18,2019

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V03	Valley	1	1	E13657146
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:14 2019 Page 1
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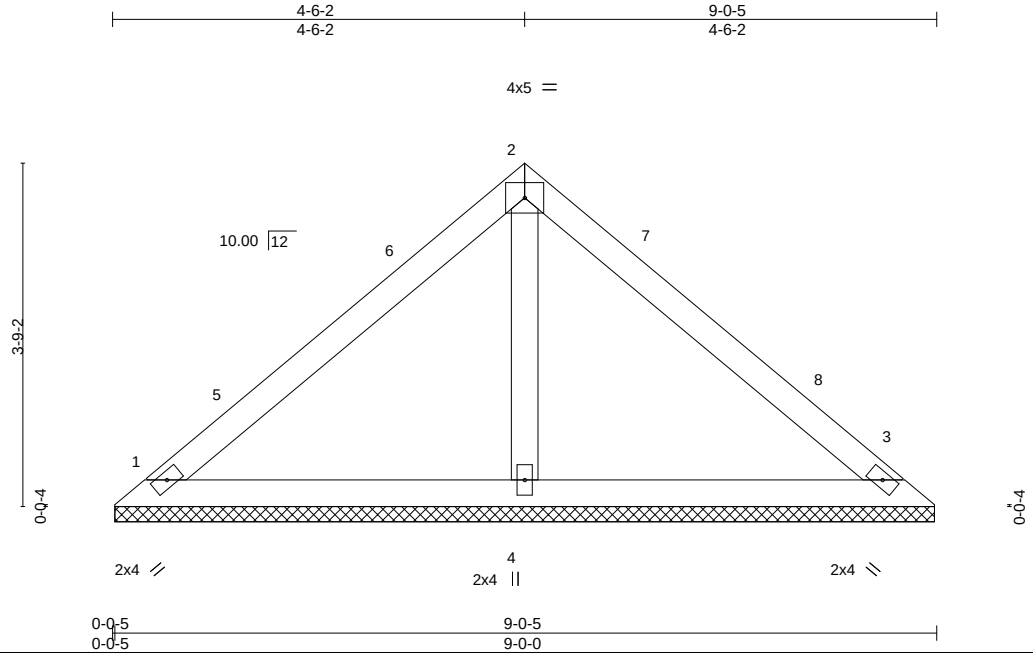

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 34 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=187/8-11-11, 3=187/8-11-11, 4=284/8-11-11
Max Horz 1=62(LC 10)
Max Uplift 1=-22(LC 11), 3=-22(LC 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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 4-6-2, Exterior(2) 4-6-2 to 7-6-2, Interior(1) 7-6-2 to 8-7-7 zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

October 18,2019

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V04	Valley	1	1	E13657147
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:16 2019 Page 1
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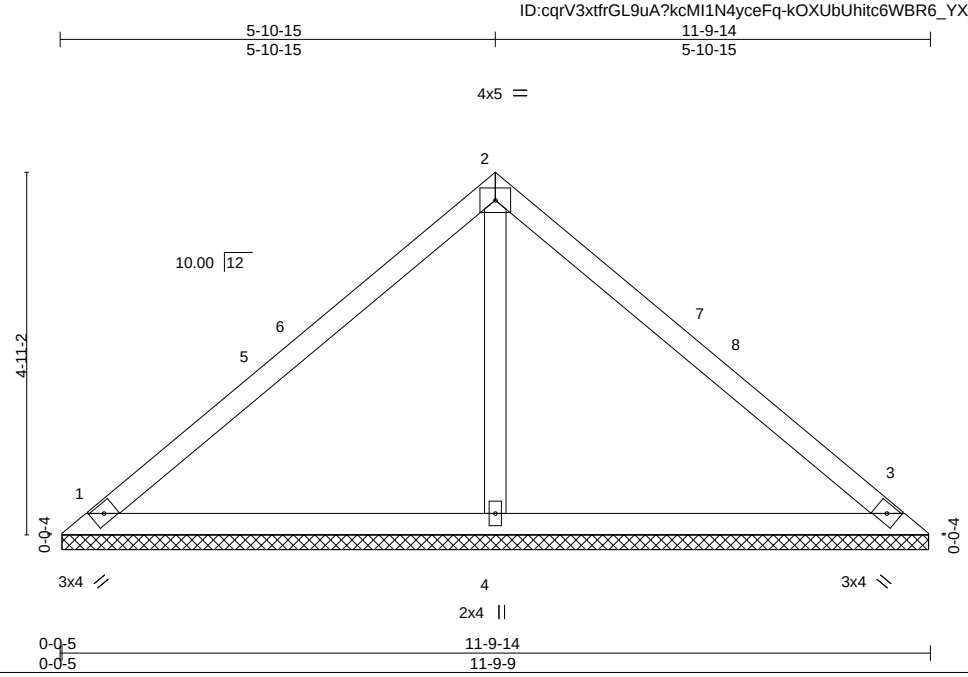

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.45	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 45 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=231/11-9-5, 3=231/11-9-5, 4=420/11-9-5
Max Horz 1=-83(LC 9)
Max Uplift 1=-18(LC 11), 3=-18(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-4=-256/53

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 5-10-15, Exterior(2) 5-10-15 to 8-10-15, Interior(1) 8-10-15 to 11-5-1 zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

October 18,2019

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

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V05	Valley	1	1	E13657148
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:17 2019 Page 1
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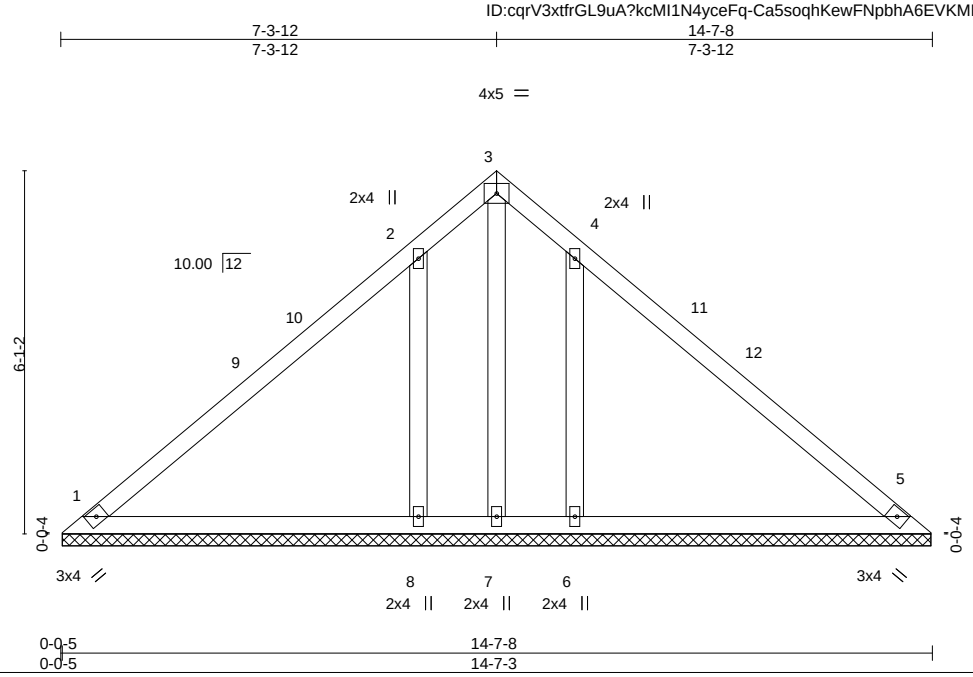

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 70 lb	FT = 20%

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

REACTIONS. All bearings 14-6-14.
(lb) - Max Horz 1=-104(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) except 7=-322(LC 1), 6=-109(LC 11), 8=-109(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 6=578(LC 17), 8=579(LC 16)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-7=-215/289, 4-6=-407/224, 2-8=-407/224

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 7-3-12, Exterior(2) 7-3-12 to 10-3-12, Interior(1) 10-3-12 to 14-2-11 zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 322 lb uplift at joint 7, 109 lb uplift at joint 6 and 109 lb uplift at joint 8.

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V06	Valley	1	1	E13657149
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:18 2019 Page 1
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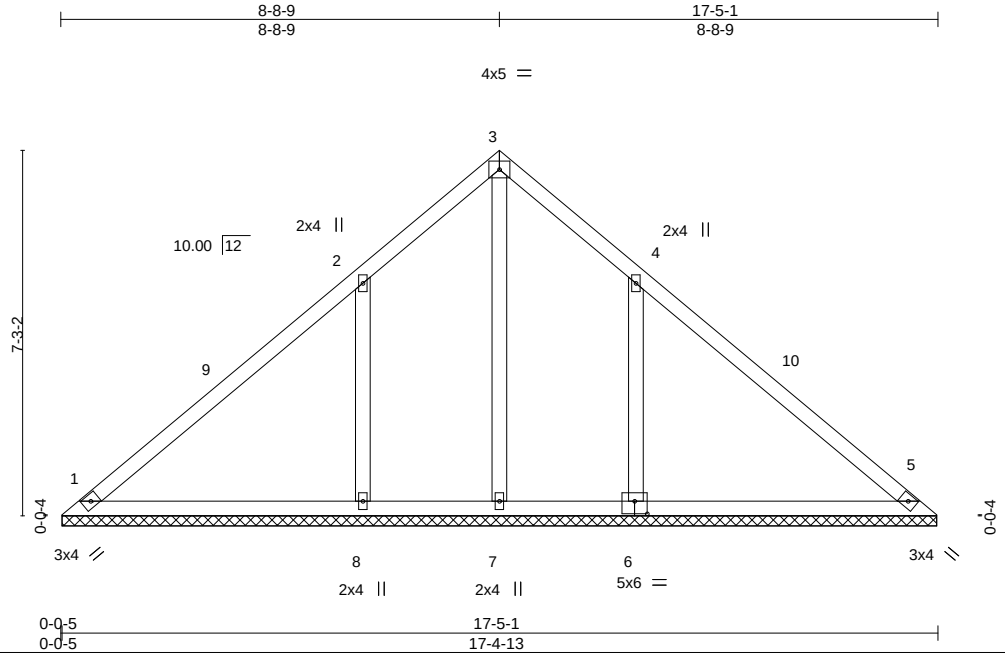

Plate Offsets (X,Y)-- [6:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 81 lb	FT = 20%

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

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

REACTIONS. All bearings 17-4-8.
(lb) - Max Horz 1=-125(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 7 except 6=-101(LC 11), 8=-102(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 6=520(LC 17), 8=522(LC 16)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 4-6=-354/183, 2-8=-356/184

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 8-8-9, Exterior(2) 8-8-9 to 11-5-1 , Interior(1) 11-5-1 to 17-0-4 zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7 except (jt=lb) 6=101, 8=102.

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V07	Valley	1	1	E13657150
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:19 2019 Page 1
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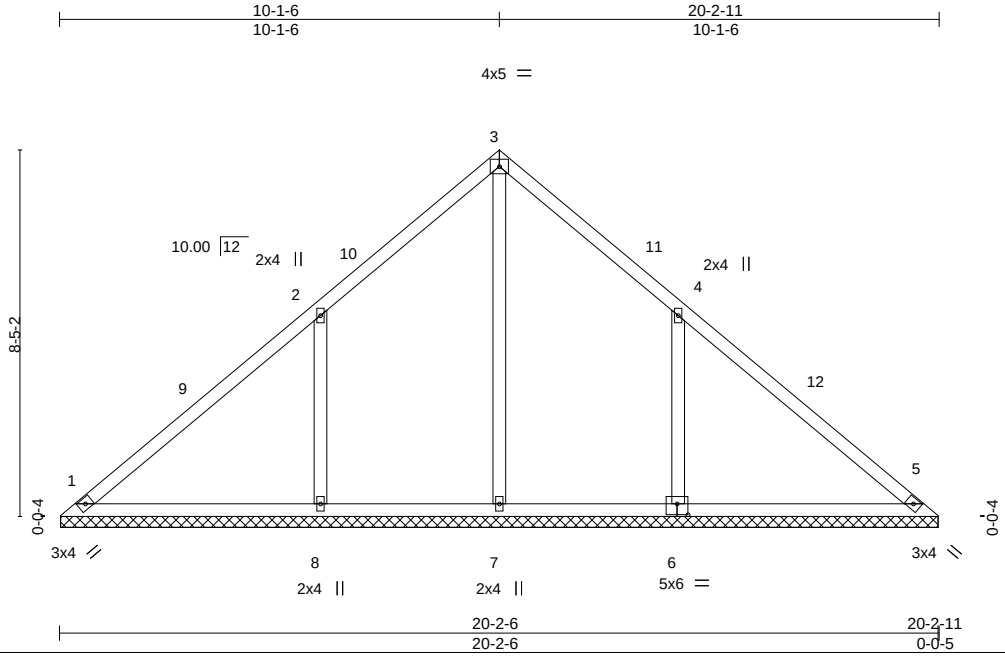

Plate Offsets (X,Y)-- [6:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 92 lb	FT = 20%

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

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

REACTIONS. All bearings 20-2-1.
(lb) - Max Horz 1=-146(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) except 6=-107(LC 11), 8=-108(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=320(LC 16), 6=553(LC 17), 8=555(LC 16)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 4-6=-371/191, 2-8=-372/192

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 10-1-6, Exterior(2) 10-1-6 to 13-1-6, Interior(1) 13-1-6 to 19-9-14 zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 107 lb uplift at joint 6 and 108 lb uplift at joint 8.

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V08	Valley	1	1	E13657151
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:20 2019 Page 1
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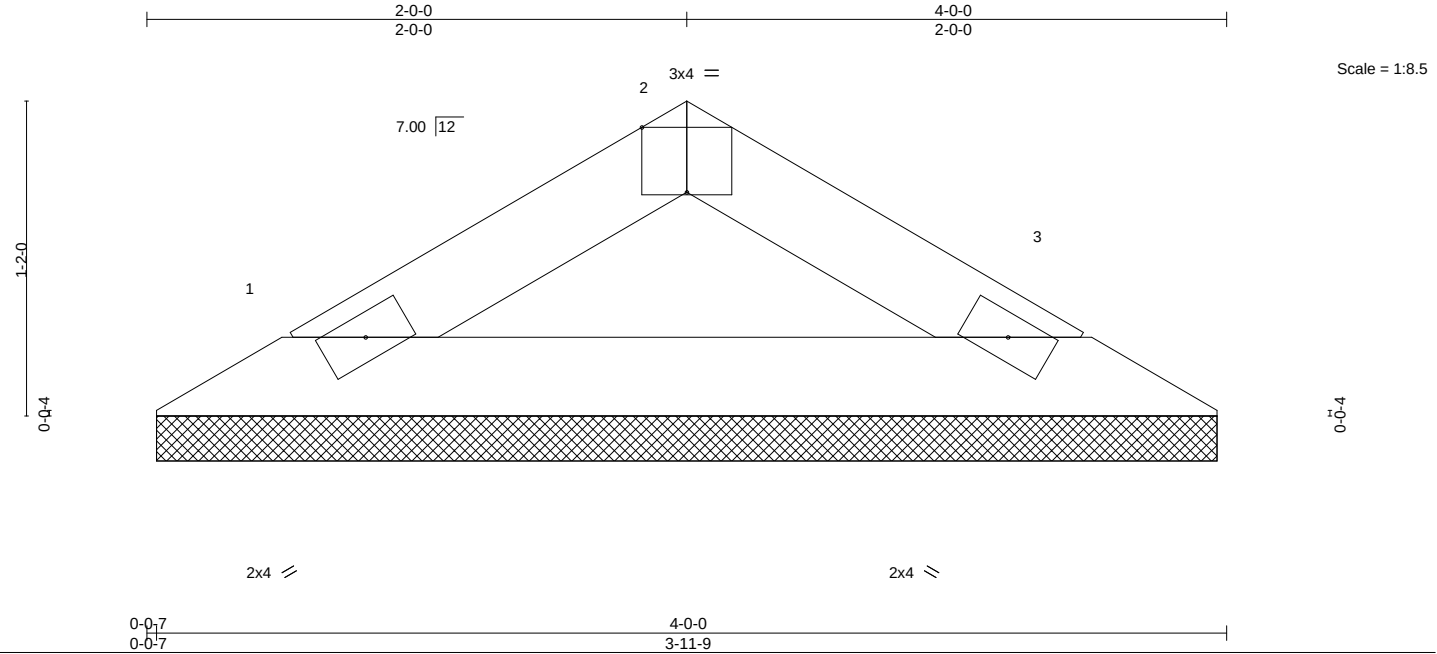

Plate Offsets (X,Y)-- [2:0-2-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 11 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=117/3-11-2, 3=117/3-11-2
Max Horz 1=-14(LC 9)
Max Uplift 1=-1(LC 11), 3=-1(LC 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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 1 and 1 lb uplift at joint 3.

October 18,2019

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V09	Valley	1	1	E13657152
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:21 2019 Page 1
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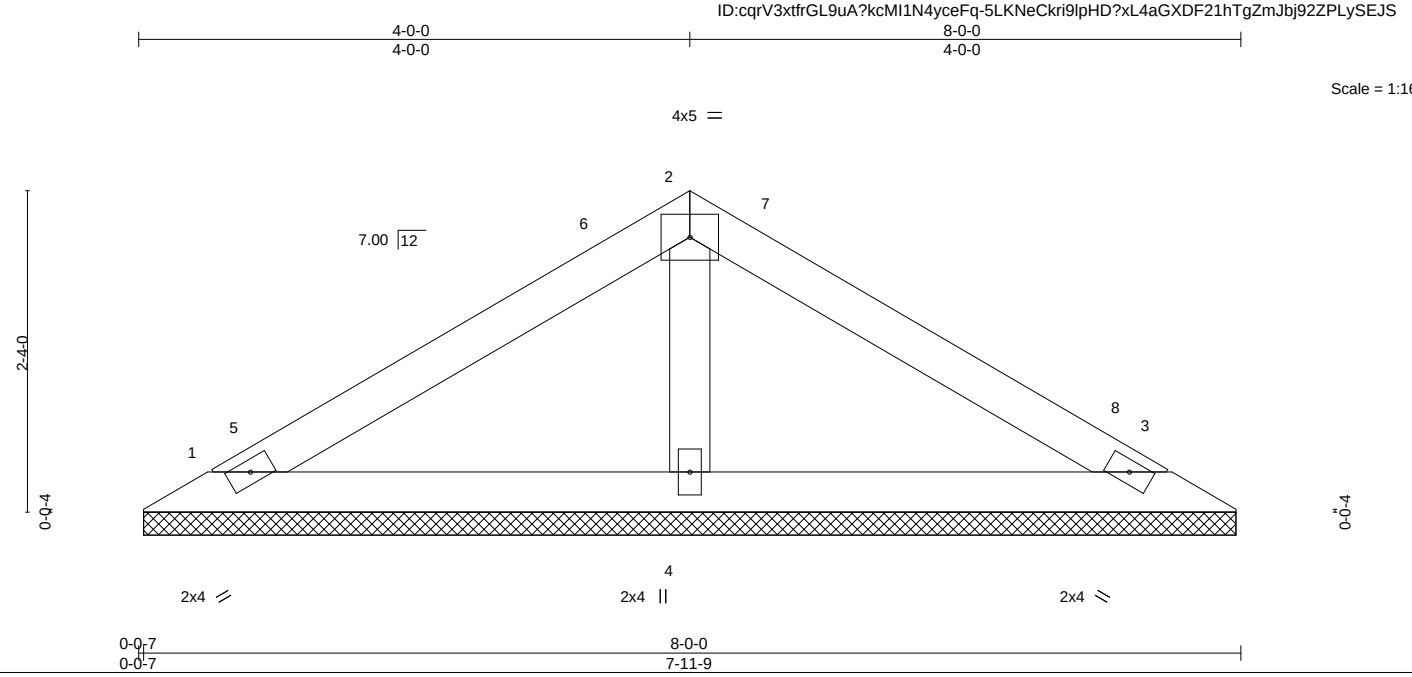

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 26 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=144/7-11-2, 3=144/7-11-2, 4=266/7-11-2
Max Horz 1=-34(LC 9)
Max Uplift 1=-14(LC 11), 3=-14(LC 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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 4-0-0, Exterior(2) 4-0-0 to 7-0-0, Interior(1) 7-0-0 to 7-5-8 zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1 and 14 lb uplift at joint 3.

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Job	Truss	Truss Type	Qty	Ply	FREEDOM FAMILY HOMES
191154RT1	V10	Valley	1	1	E13657153
					Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247, 8.240 s Jul 14 2019 MiTek Industries, Inc. Fri Oct 18 08:33:22 2019 Page 1
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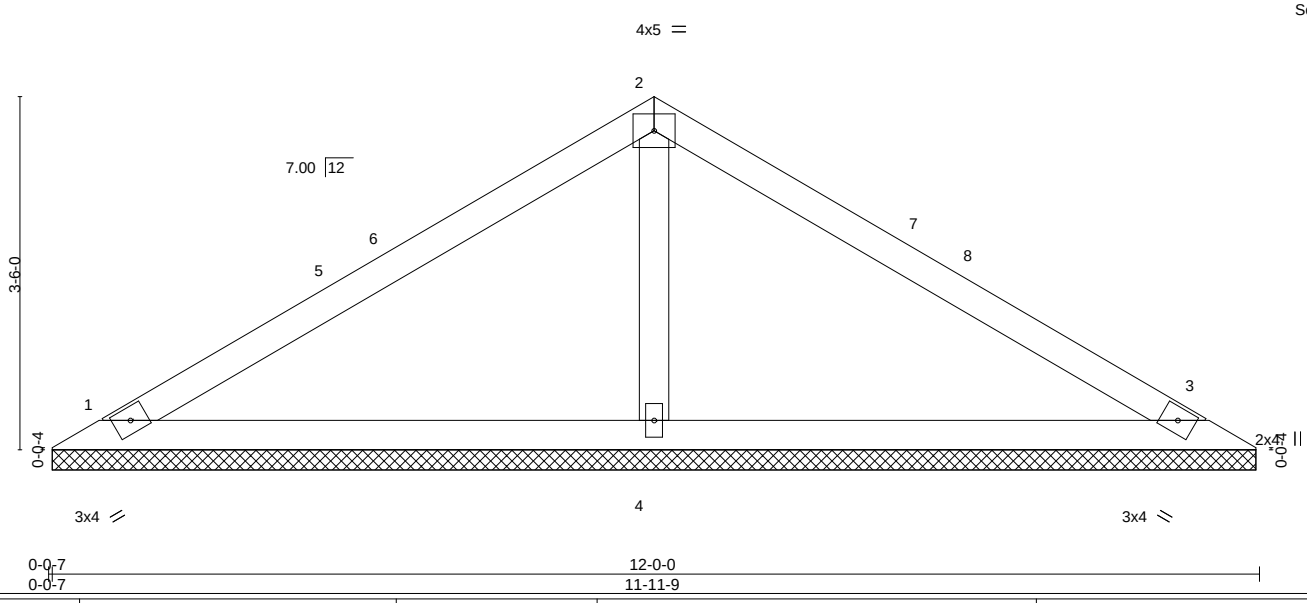
6-0-0
6-0-0
12-0-0
6-0-0

Scale = 1:22.8



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 41 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=205/11-11-2, 3=205/11-11-2, 4=463/11-11-2
Max Horz 1=-54(LC 9)
Max Uplift 1=-14(LC 11), 3=-14(LC 11)
Max Grav 1=205(LC 20), 3=205(LC 21), 4=463(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-4=-302/73

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 6-0-0, Exterior(2) 6-0-0 to 9-0-0, Interior(1) 9-0-0 to 11-5-8 zone; cantilever left and right exposed ; 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) Gable requires continuous bottom chord bearing.
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 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1 and 14 lb uplift at joint 3.

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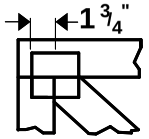
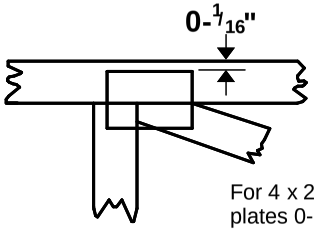
Symbols

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.

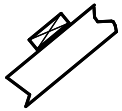
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

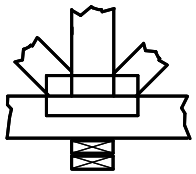
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

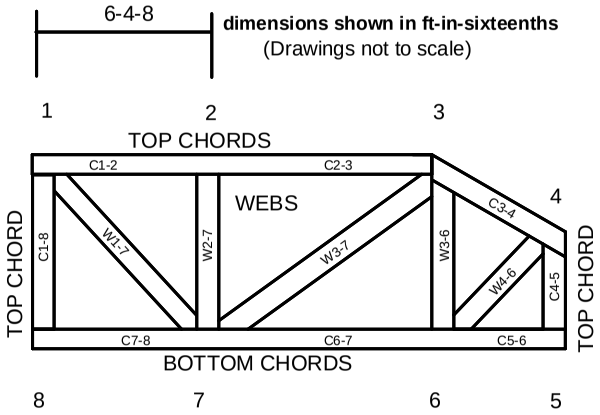


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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 BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

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.