ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 2100795-2100795A
Freedom Solar Clayton Plan

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I48131521 thru I48131538

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844

September 30,2021

Sevier, Scott

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 Solar Clayton Plan
2100795-2100795A	A	Common	6	1	I48131521
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:35 2021 Page 1
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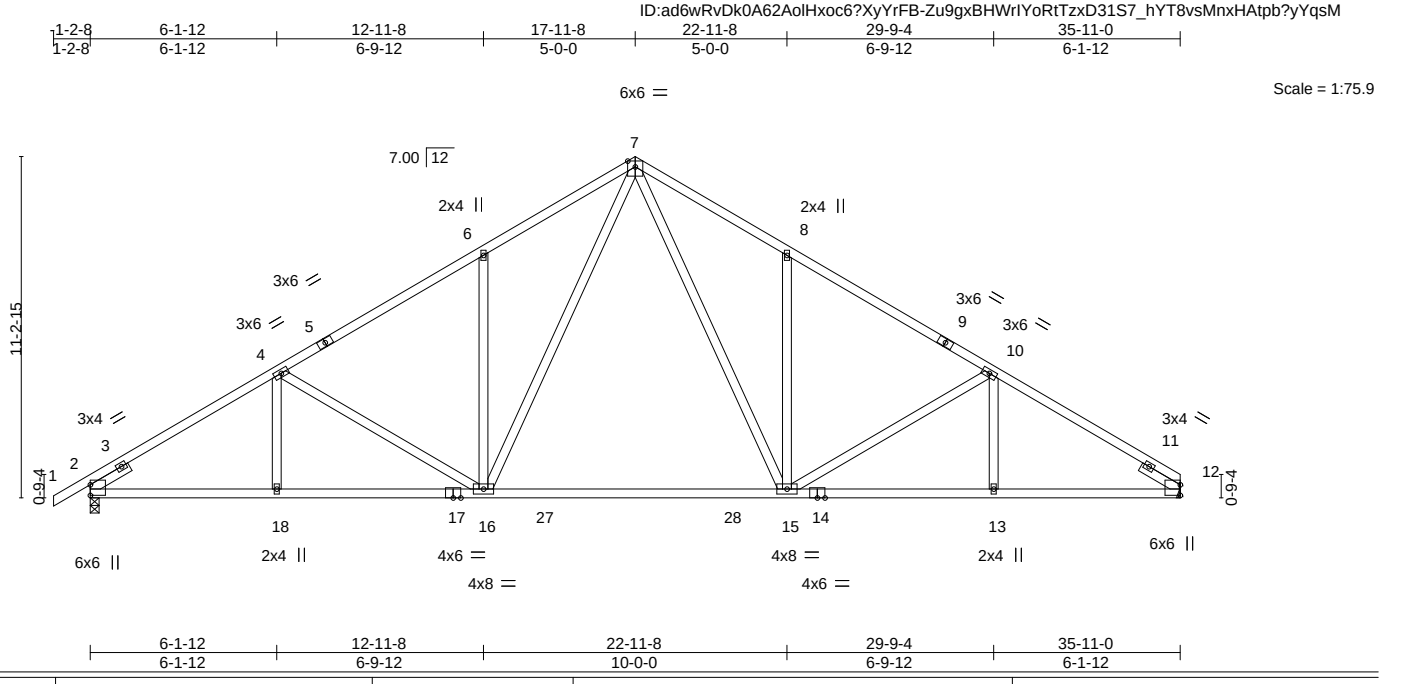

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.41	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.68	15-16	>632	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.10	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 214 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*
1-5: 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 1-6-0, Right 2x4 SP No.3 1-6-0

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

REACTIONS. (size) 2=0-3-8, 12=Mechanical
Max Horz 2=271(LC 11)
Max Uplift 2=-186(LC 12), 12=-160(LC 13)
Max Grav 2=1510(LC 1), 12=1435(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-2203/380, 4-6=-1865/378, 6-7=-1909/527, 7-8=-1911/528, 8-10=-1867/379, 10-12=-2210/381
BOT CHORD 2-18=-315/1974, 16-18=-315/1974, 15-16=-36/1258, 13-15=-246/1830, 12-13=-246/1830
WEBS 7-15=-270/1014, 8-15=-428/256, 10-15=-385/197, 7-16=-269/1011, 6-16=-428/255, 4-16=-388/194

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 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 capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=160.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	A1	ROOF TRUSS	6	1	I48131522
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:37 2021 Page 1
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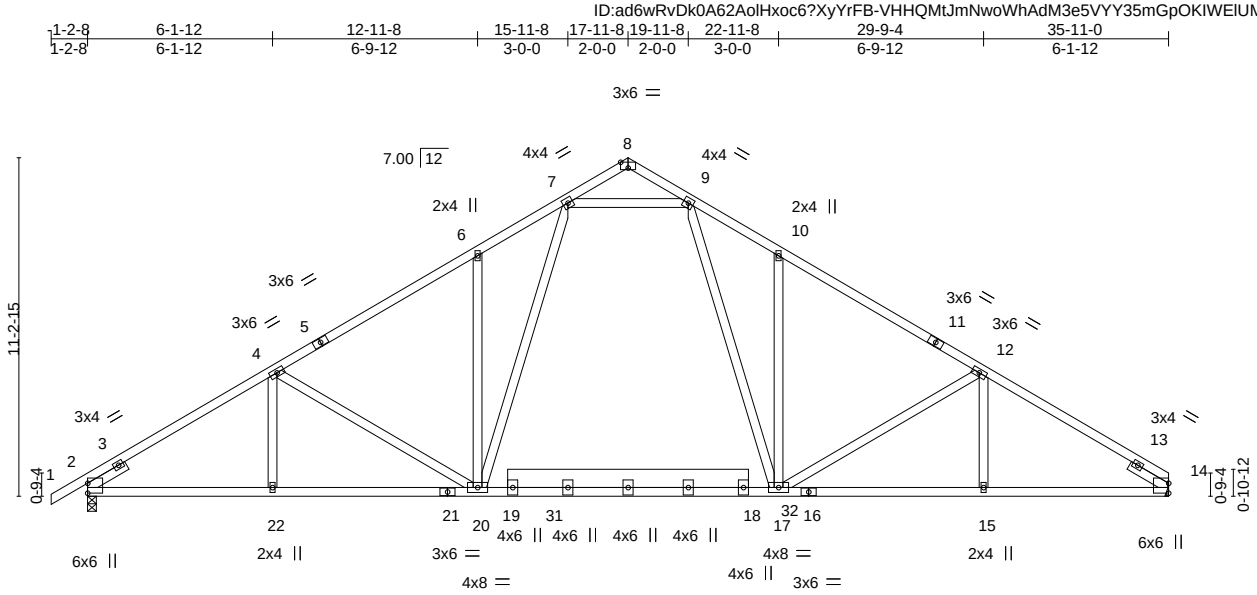

Plate Offsets (X,Y)-- [8:0-3-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.26	20-22	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.40	20-22	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.10	14	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 239 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* 1-5,11-14: 2x4 SP No.1
BOT CHORD 2x4 SP No.1 *Except* 18-19: 2x8 SP No.2, 16-21: 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 1-6-0, Right 2x4 SP No.3 1-6-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-6-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 14=Mechanical
Max Horz 2=271(LC 9)
Max Uplift 2=-186(LC 12), 14=-160(LC 13)
Max Grav 2=1510(LC 1), 14=1435(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-2208/377, 4-6=-1856/384, 6-7=-1921/508, 9-10=-1922/508, 10-12=-1858/384, 12-14=-2218/379
BOT CHORD 2-22=-315/2003, 20-22=-315/2003, 17-20=-63/1380, 15-17=-246/1836, 14-15=-246/1836
WEBS 9-17=-290/992, 10-17=-488/297, 12-17=-407/198, 7-20=-289/989, 6-20=-489/298, 4-20=-404/194, 7-9=-1187/357

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 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 capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=160.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
8) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan	
2100795-2100795A	A2	Common	4	1	Job Reference (optional)	I48131523

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:38 2021 Page 1
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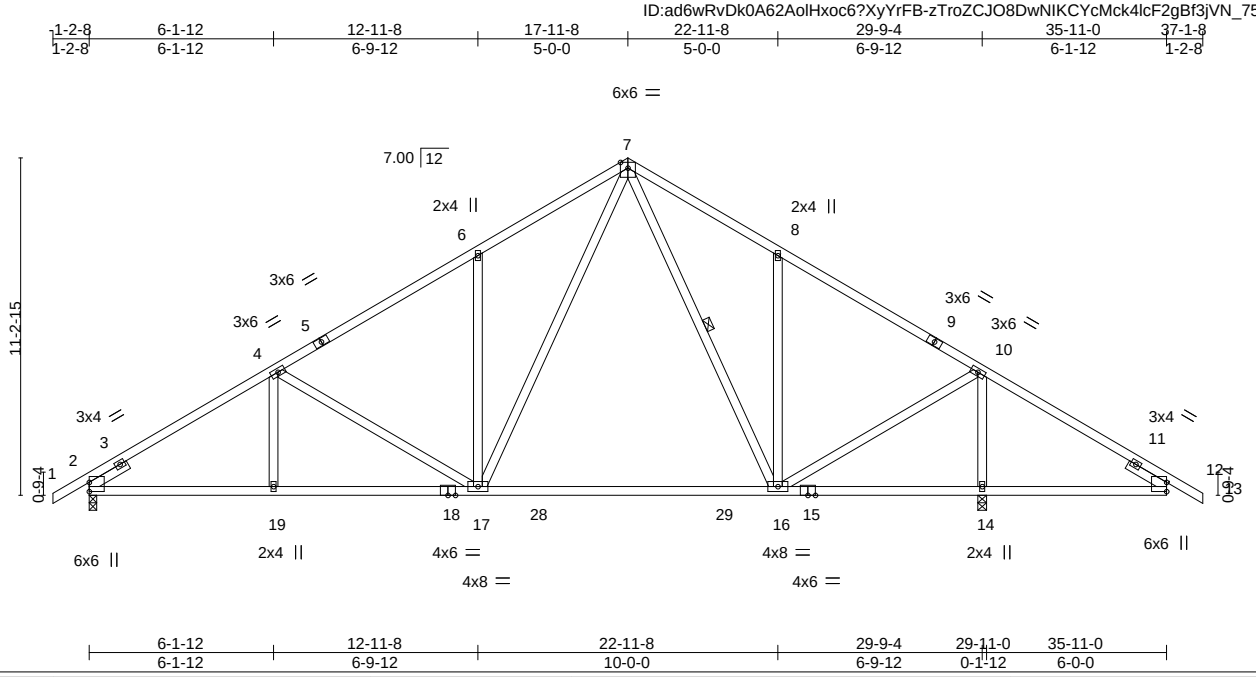

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.41	16-17	>874	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.63	16-17	>565	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.03	14	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 216 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2 *Except* 15-18: 2x4 SP No.1
WEBS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 1-6-0, Right 2x4 SP No.3 1-6-0

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 2-11-6 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 7-16

REACTIONS. (size) 2=0-3-0, 14=0-3-8
Max Horz 2=-277(LC 10)
Max Uplift 2=-171(LC 12), 14=-225(LC 13)
Max Grav 2=1210(LC 19), 14=1821(LC 1)

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

TOP CHORD	2-4=-1671/246, 4-6=-1338/240, 6-7=-1379/389, 7-8=-936/275, 8-10=-906/167, 10-12=-304/573
BOT CHORD	2-19=-281/1566, 17-19=-281/1566, 16-17=-0/801, 14-16=-394/345, 12-14=-394/345
WEBS	8-16=-394/251, 10-16=-204/1203, 10-14=-1647/496, 7-17=-270/1031, 6-17=-423/256, 4-17=-432/196

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 14. This connection is for uplift only and does not consider lateral forces.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	A3	Common	5	1	I48131524
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:39 2021 Page 1
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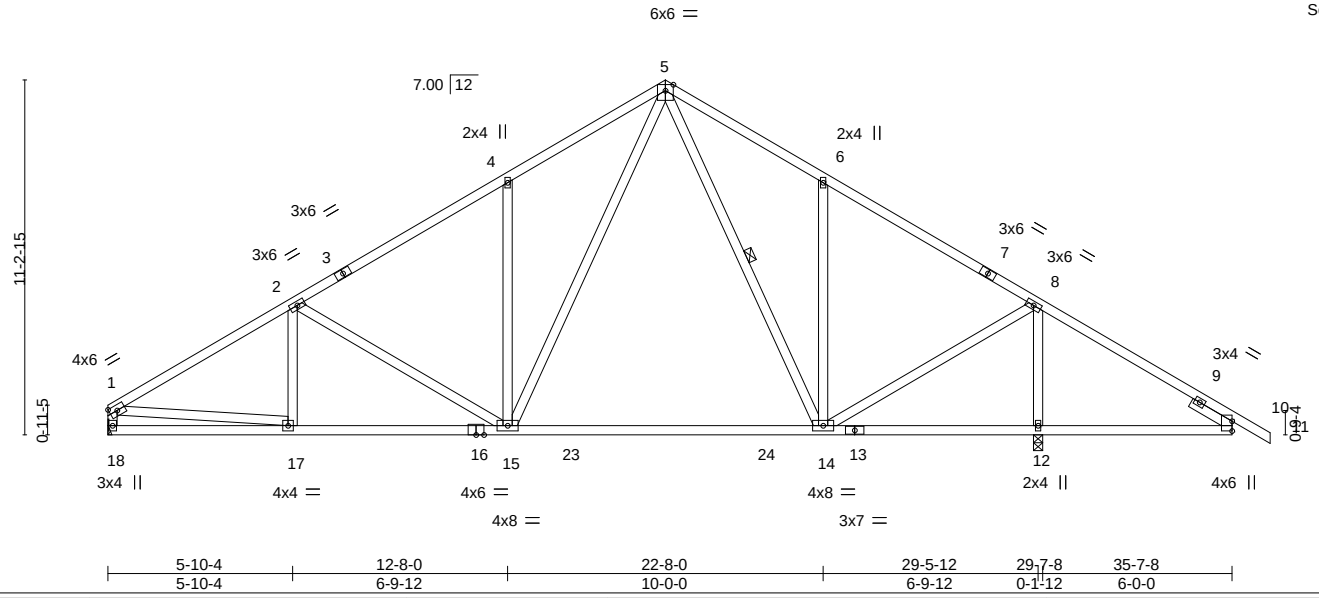
5-10-4	12-8-0	17-8-0	22-8-0	29-5-12	35-7-8	36-10-0
5-10-4	6-9-12	5-0-0	5-0-0	6-9-12	6-1-12	1-2-8

Scale = 1:73.0



5-10-4	12-8-0	22-8-0	29-5-12	29-7-8	35-7-8
5-10-4	6-9-12	10-0-0	6-9-12	0-1-12	6-0-0

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.41	14-15	>862	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.63	14-15	>561	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.02	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 220 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2 *Except* 13-16: 2x4 SP No.1
WEBS	2x4 SP No.3
SLIDER	Right 2x4 SP No.3 1-6-0

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-2-3 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-14

REACTIONS. (size) 18=Mechanical, 12=0-3-8
Max Horz 18=-286(LC 10)
Max Uplift 18=-142(LC 12), 12=-224(LC 13)
Max Grav 18=1122(LC 19), 12=1806(LC 1)

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

TOP CHORD	1-2=-1589/232, 2-4=-1303/237, 4-5=-1336/384, 5-6=-923/273, 6-8=-892/165, 8-10=-305/573, 1-18=-1054/177
BOT CHORD	17-18=-238/407, 15-17=-269/1505, 14-15=0/785, 12-14=-394/345, 10-12=-394/345
WEBS	2-15=-394/187, 4-15=-406/254, 5-15=-265/985, 6-14=-393/251, 8-14=-203/1189, 8-12=-1633/495, 1-17=-97/1122

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 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 capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 18=142.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12. This connection is for uplift only and does not consider lateral forces.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	A4E	GABLE	1	1	I48131525
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:42 2021 Page 1
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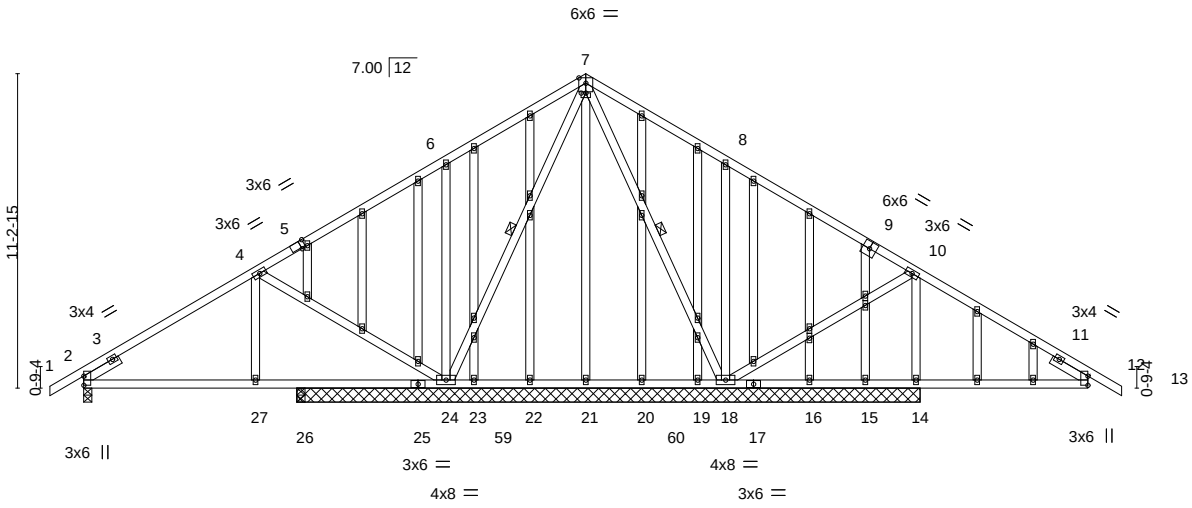
1-2-8 6-1-12 12-11-8 17-11-8 22-11-8 29-9-4 35-11-0 37-1-8
1-2-8 6-1-12 6-9-12 5-0-0 5-0-0 6-9-12 6-1-12 1-2-8

Scale = 1:82.4



6-1-12 7-7-8 12-11-8 22-11-8 29-9-4 29-11-0 35-11-0
6-1-12 1-5-12 5-4-0 10-0-0 6-9-12 0-1-12 6-0-0

Plate Offsets (X,Y)-- [2:Edge,0-0-0], [5:0-1-12,Edge], [7:0-2-0,0-0-0], [12:Edge,0-0-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.03	27-53	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.06	27-53	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 335 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 1-6-0, Right 2x4 SP No.3 1-6-0

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 2-27,26-27,24-26.
WEBS	1 Row at midpt 7-18, 7-24

REACTIONS. All bearings 22-3-8 except (jt=length) 2=0-3-8, 26=0-3-8.
(lb) - Max Horz 2=-277(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 23, 15 except 18=-234(LC 13), 14=-147(LC 13), 24=-242(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 21, 22, 20, 19, 16, 15, 26 except 2=514(LC 23), 18=531(LC 20), 14=976(LC 24), 24=864(LC 19)

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

TOP CHORD	2-4=-361/104, 8-10=-54/261, 10-12=-285/564
BOT CHORD	2-27=-155/480, 26-27=-155/480, 24-26=-155/480, 23-24=-191/266, 22-23=-191/266, 21-22=-191/266, 20-21=-191/266, 19-20=-191/266, 18-19=-191/266, 16-18=-388/331, 15-16=-388/331, 14-15=-388/331, 12-14=-388/331
WEBS	7-18=-279/41, 8-18=-400/252, 10-18=-64/295, 10-14=-743/348, 6-24=-410/255, 4-24=-522/243

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas 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 Solar Clayton Plan
2100795-2100795A	AE	Common Supported Gable	1	1	I48131526
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:44 2021 Page 1
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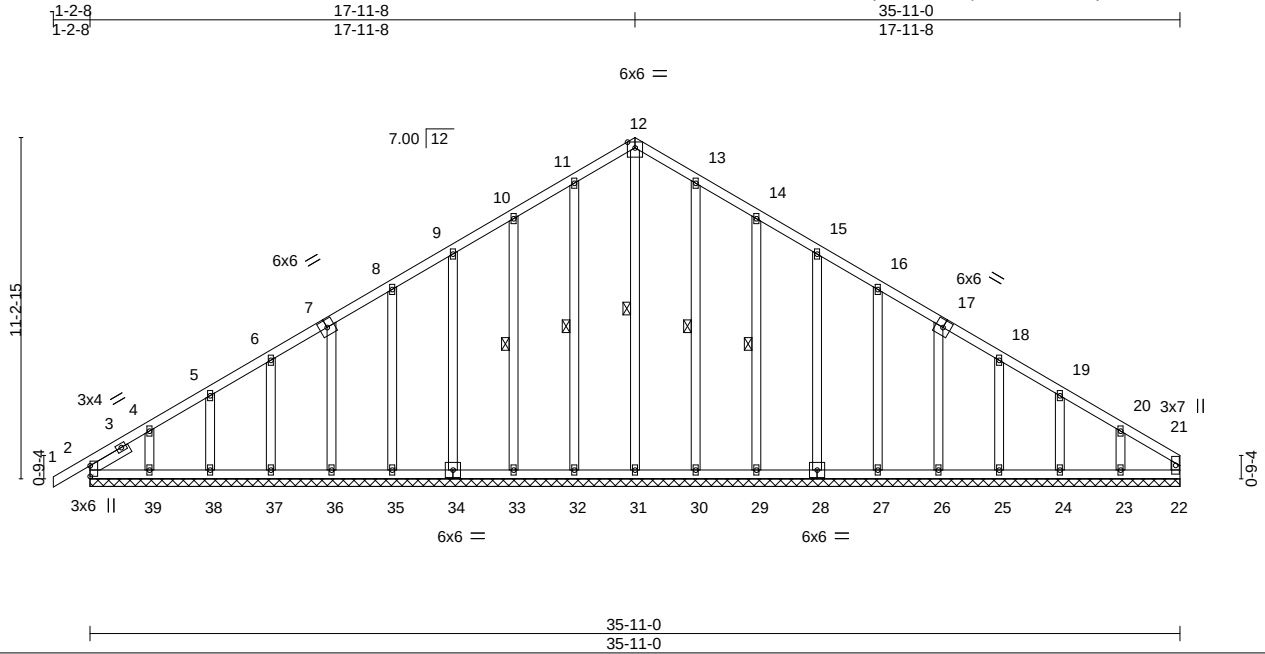

Plate Offsets (X,Y)-- [2:Edge,0-0-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.00	1	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	22	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 266 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 1-6-0

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 12-31, 11-32, 10-33, 13-30, 14-29

REACTIONS. All bearings 35-11-0.
(lb) - Max Horz 2=281(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 22, 31, 32, 33, 34, 35, 36, 37, 38, 30, 29, 28, 27, 26, 25, 24 except 2=-109(LC 8), 39=-115(LC 12), 23=-121(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 22, 2, 32, 33, 34, 35, 36, 37, 38, 39, 30, 29, 28, 27, 26, 25, 24, 23 except 31=251(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-283/239, 10-11=-223/262, 11-12=-260/292, 12-13=-260/292

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) N/A
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

September 30,2021

ENGINEERING BY
TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	B	Common	1	1	I48131527
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:46 2021 Page 1
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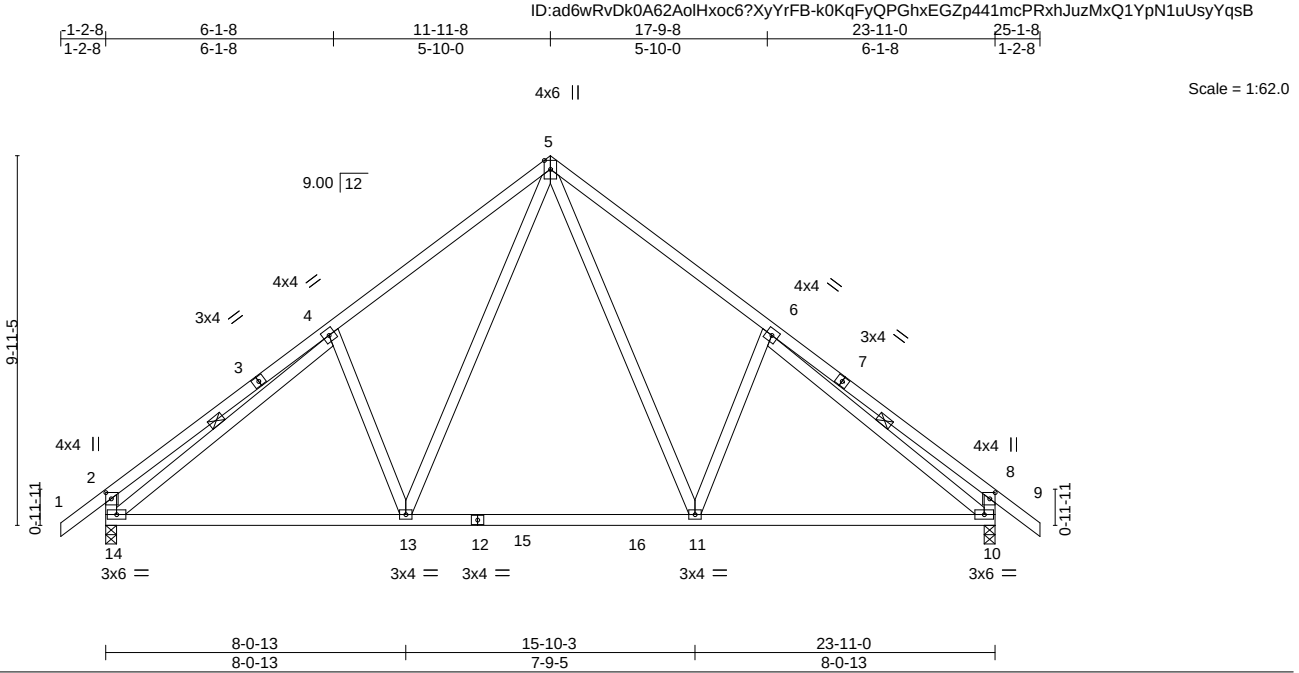

Plate Offsets (X,Y)-- [2:0-2-0,0-1-12], [8:0-2-0,0-1-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.19	11-13	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.25	11-13	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 155 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-14, 6-10

REACTIONS. (size) 14=0-3-8, 10=0-3-8
Max Horz 14=271(LC 11)
Max Uplift 14=-121(LC 12), 10=-121(LC 13)
Max Grav 14=1026(LC 1), 10=1026(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-452/214, 4-5=-1061/330, 5-6=-1061/330, 6-8=-452/214, 2-14=-447/220, 8-10=-446/220
BOT CHORD 13-14=-135/988, 11-13=0/675, 10-11=-43/856
WEBS 5-11=-161/546, 6-11=-309/268, 5-13=-161/546, 4-13=-309/268, 4-14=-882/47, 6-10=-882/47

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14 and 10. This connection is for uplift only and does not consider lateral forces.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan I48131528
2100795-2100795A	BE	GABLE	1	1	Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:48 2021 Page 1
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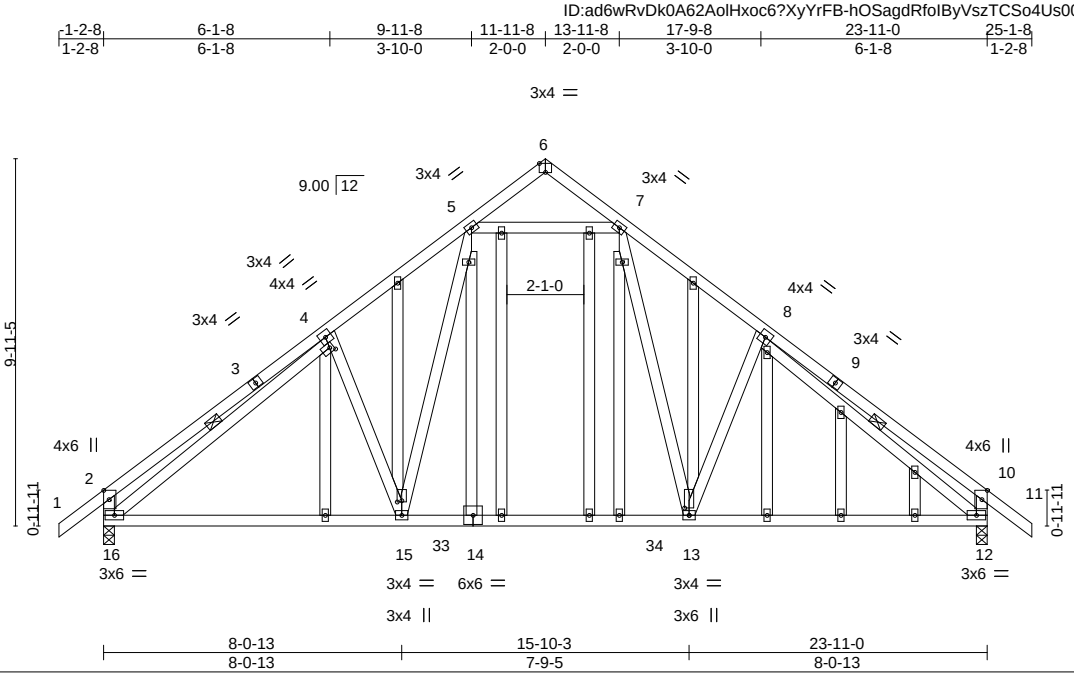

Plate Offsets (X,Y)-- [2:0-3-0,0-1-12], [4:0-1-4,0-1-8], [6:0-2-0,Edge], [10:0-3-0,0-1-12], [13:0-2-6,0-1-8], [15:0-0-7,0-1-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.22	13-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.27	13-15	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.03	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 236 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-4-15 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 4-16, 8-12

REACTIONS. (size) 16=0-3-8, 12=0-3-8
Max Horz 16=271(LC 11)
Max Uplift 16=-121(LC 12), 12=-121(LC 13)
Max Grav 16=1026(LC 1), 12=1026(LC 1)

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

TOP CHORD	2-4=-499/245, 4-5=-1070/300, 7-8=-1070/300, 8-10=-499/245, 2-16=-485/246, 10-12=-485/246
BOT CHORD	15-16=-125/997, 13-15=0/785, 12-13=-35/872
WEBS	7-13=-129/499, 8-13=-262/260, 5-15=-129/499, 4-15=-261/260, 4-16=-885/11, 8-12=-885/10, 5-7=-694/264

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas 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.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 16 and 12. This connection is for uplift only and does not consider lateral forces.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan	
2100795-2100795A	BGR	COMMON GIRDER	1	3	Job Reference (optional)	I48131529

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:50 2021 Page 1
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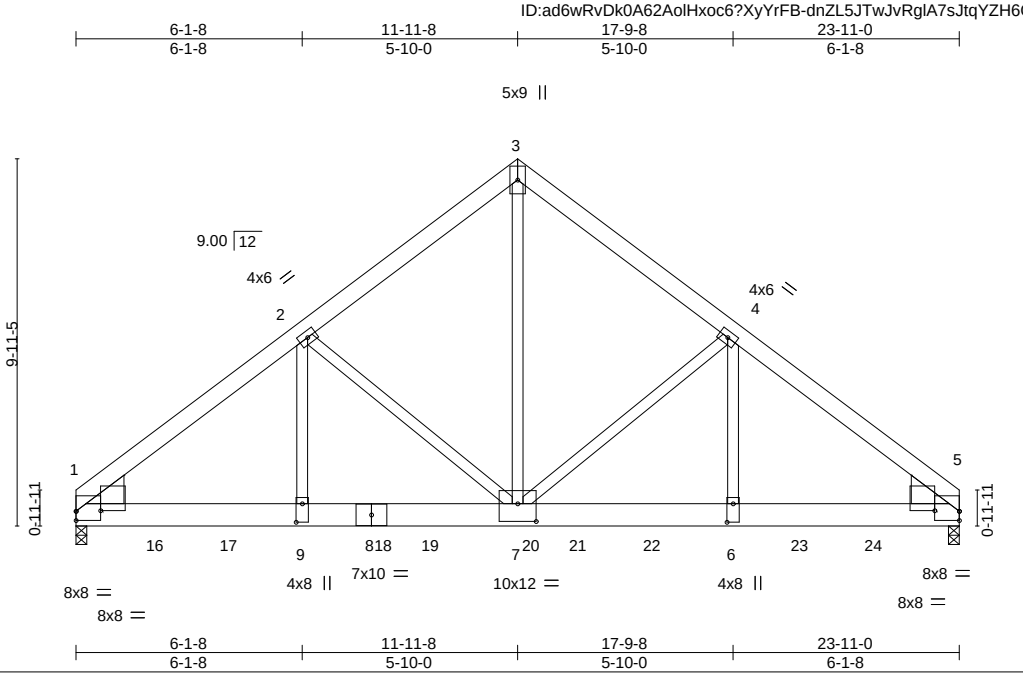


Plate Offsets (X,Y)-- [1:0-0-0,0-3-0], [1:0-8-0,0-0-3], [5:0-0-0,0-3-0], [5:0-8-0,0-0-3], [6:0-6-0,0-2-0], [7:0-6-0,0-5-12], [9:0-6-0,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.10	7-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.20	7-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.06	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 602 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP No.2
WEBS 2x4 SP No.3 *Except*
3-7: 2x4 SP No.2 or 2x4 SPF No.2
WEDGE
Left: 2x10 SP No.2 , Right: 2x10 SP No.2

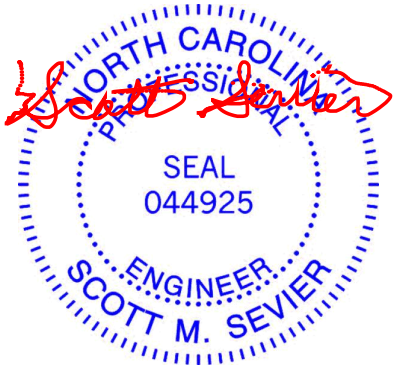
BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=0-3-8, 5=0-3-8 (req. 0-3-15)
Max Horz 1=-222(LC 10)
Max Uplift 1=-1065(LC 12), 5=-1188(LC 13)
Max Grav 1=8927(LC 1), 5=9978(LC 1)

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-11583/1486, 2-3=-8027/1136, 3-4=-8031/1136, 4-5=-11327/1455
BOT CHORD 1-9=-1157/9105, 7-9=-1157/9105, 6-7=-1057/8909, 5-6=-1057/8909
WEBS 3-7=-1198/9066, 4-7=-3321/575, 4-6=-415/3916, 2-7=-3578/605, 2-9=-455/4255

NOTES-
1) 3-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-4-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) WARNING: Required bearing size at joint(s) 5 greater than input bearing size.
8) Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
9) One HTS20 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.



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Continued on page 2

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NOTES-

10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1415 lb down and 180 lb up at 2-0-12, 1415 lb down and 180 lb up at 4-0-12, 1415 lb down and 180 lb up at 6-0-12, 1415 lb down and 180 lb up at 7-6-4, 1415 lb down and 180 lb up at 9-6-4, 1415 lb down and 180 lb up at 11-6-4, 1415 lb down and 180 lb up at 13-6-4, 1415 lb down and 180 lb up at 15-6-4, 1415 lb down and 180 lb up at 17-6-4, 1415 lb down and 180 lb up at 19-6-4, and 1415 lb down and 180 lb up at 21-6-4, and 1421 lb down and 174 lb up at 23-6-4 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=1.15
   Uniform Loads (plf)
   Vert: 1-3=-60, 3-5=-60, 10-13=-20
   Concentrated Loads (lb)
   Vert: 6=-1415(B) 9=-1415(B) 15=-1421(B) 16=-1415(B) 17=-1415(B) 18=-1415(B) 19=-1415(B) 20=-1415(B) 21=-1415(B) 22=-1415(B) 23=-1415(B) 24=-1415(B)

Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	CE	Common Supported Gable	1	1	I48131530
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:51 2021 Page 1
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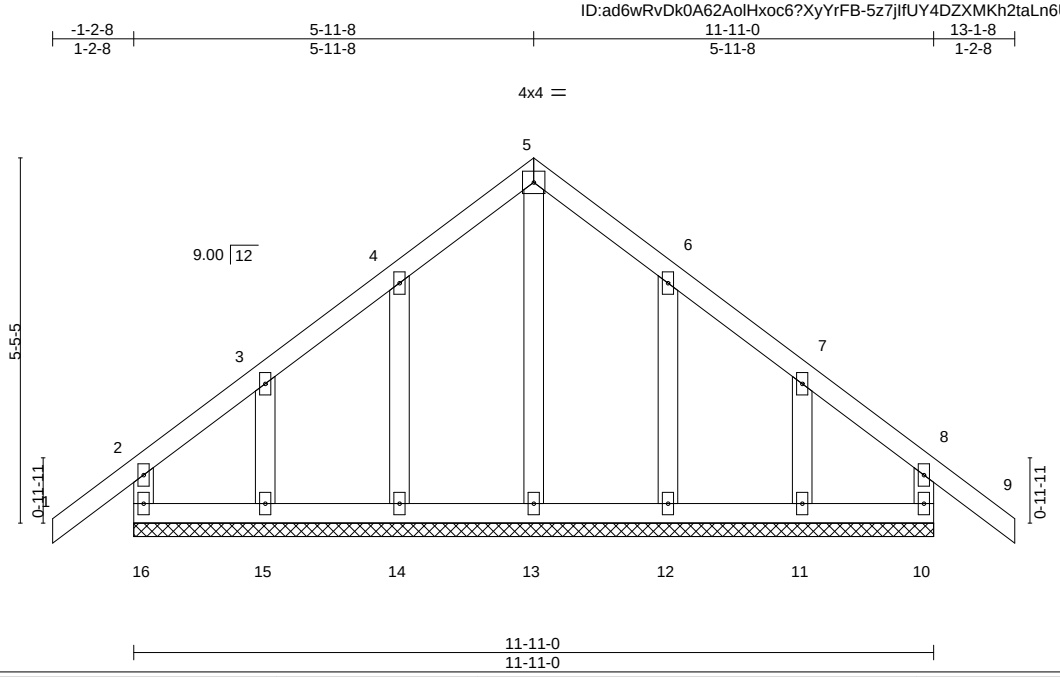

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	-0.01	9	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.01	9	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 69 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

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

REACTIONS. All bearings 11-11-0.
(lb) - Max Horz 16=-160(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 16, 10, 14, 15, 12, 11
Max Grav All reactions 250 lb or less at joint(s) 16, 10, 13, 14, 15, 12, 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 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

September 30,2021

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	D	Common	4	1	I48131531
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:52 2021 Page 1
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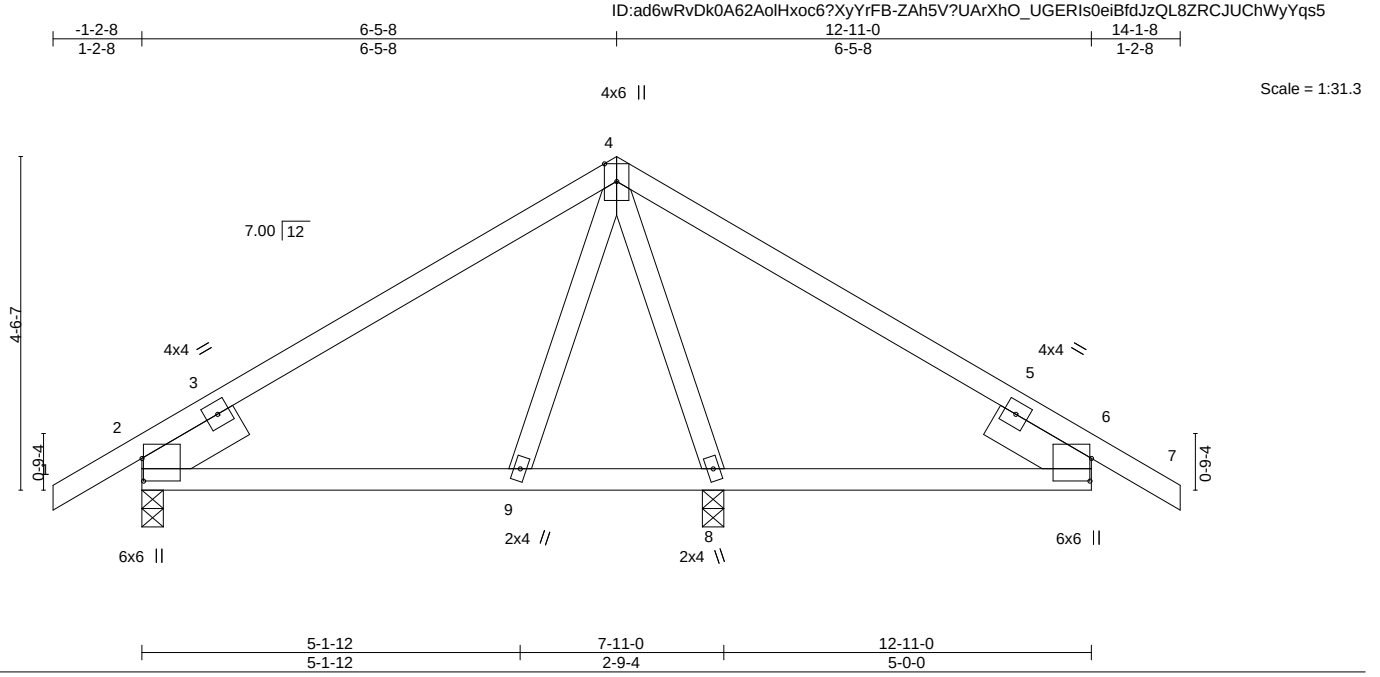

Plate Offsets (X,Y)-- [2:0-3-11,0-0-4], [6:0-3-11,0-0-4]

LOADING	(psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	0.06	9-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.09	9-12	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.03	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 66 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 1-6-0, Right 2x6 SP No.2 1-6-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-9-13 oc bracing.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-111(LC 10)
Max Uplift 2=-63(LC 12), 8=-136(LC 13)
Max Grav 2=302(LC 23), 8=973(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-349/347, 4-6=-350/554
BOT CHORD 2-9=-190/299, 8-9=-212/287, 6-8=-422/409
WEBS 4-8=-812/397

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	DE	GABLE	1	1	I48131532
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:53 2021 Page 1
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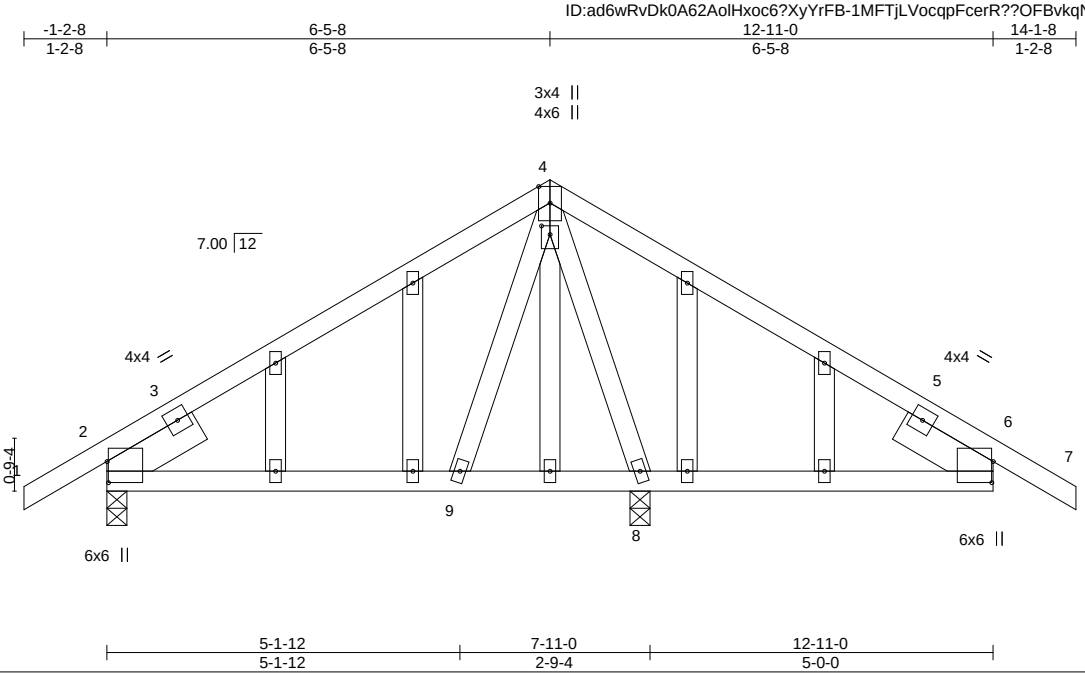

Plate Offsets (X,Y)-- [2:0-3-11,0-0-4], [4:0-1-8,0-1-8], [6:0-3-11,0-0-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	0.06	9-21	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.09	9-21	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.03	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MP							Weight: 84 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 1-6-0, Right 2x6 SP No.2 1-6-0

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 5-9-13 oc bracing.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-111(LC 10)
Max Uplift 2=-63(LC 12), 8=-136(LC 13)
Max Grav 2=302(LC 23), 8=973(LC 1)

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

TOP CHORD	2-4=-349/347, 4-6=-350/554
BOT CHORD	2-9=-190/299, 8-9=-212/287, 6-8=-422/409
WEBS	4-8=-812/397

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.

September 30,2021

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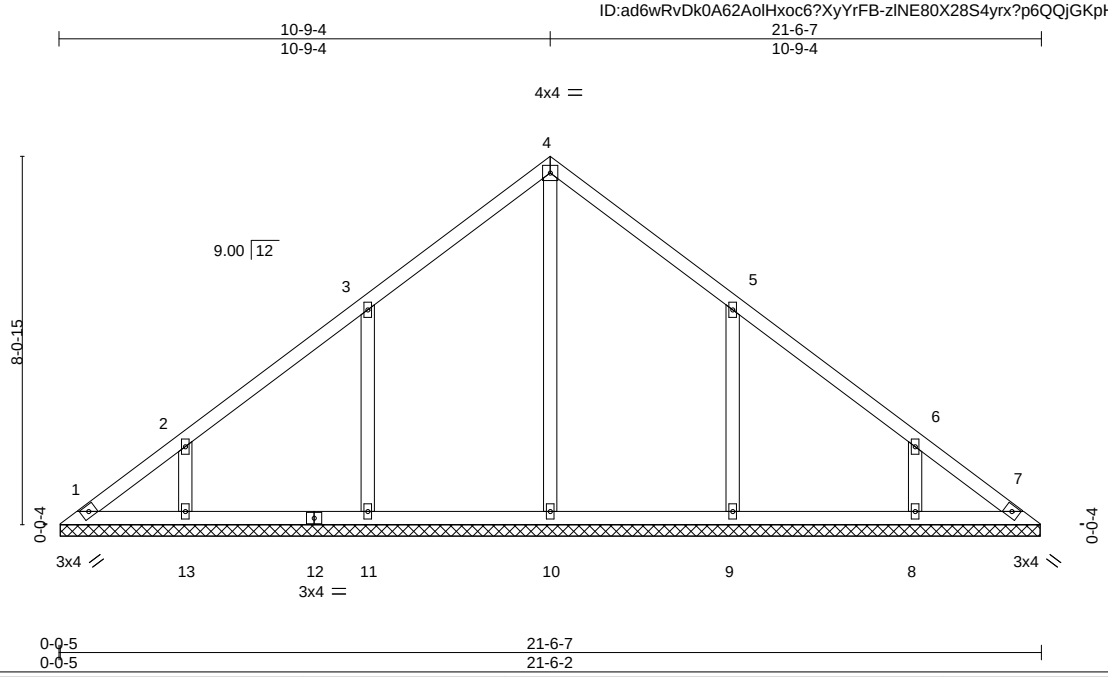
Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	V1	Valley	1	1	I48131533
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:55 2021 Page 1
ID:ad6wRvDk0A62AolHxoc6?XyYrFB-zlNE80X28S4yrx?p6QQjGKpHyX8pYXItuHjsIryYqs2



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)	n/a	-	n/a	999	MT20	197/144
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	0.20	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 99 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 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. All bearings 21-5-12.
(lb) - Max Horz 1=-192(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7 except 11=-164(LC 12), 13=-125(LC 12), 9=-163(LC 13), 8=-125(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=393(LC 22), 11=433(LC 19), 13=291(LC 19), 9=433(LC 20), 8=291(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-11=-293/213, 5-9=-292/213

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas 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 Solar Clayton Plan
2100795-2100795A	V2	Valley	1	1	I48131534
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:56 2021 Page 1
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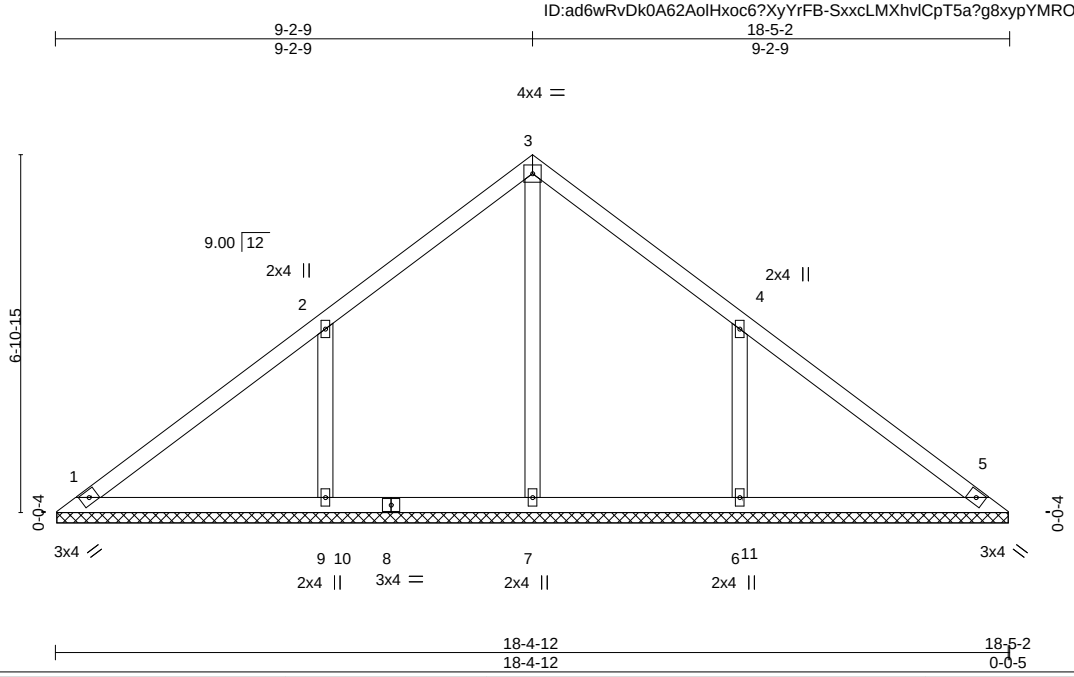

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 79 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 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. All bearings 18-4-7.
(lb) - Max Horz 1=-163(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-198(LC 12), 6=-198(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=355(LC 22), 9=506(LC 19), 6=506(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-348/248, 4-6=-348/248

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas 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 Solar Clayton Plan
2100795-2100795A	V3	Valley	1	1	I48131535
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:57 2021 Page 1
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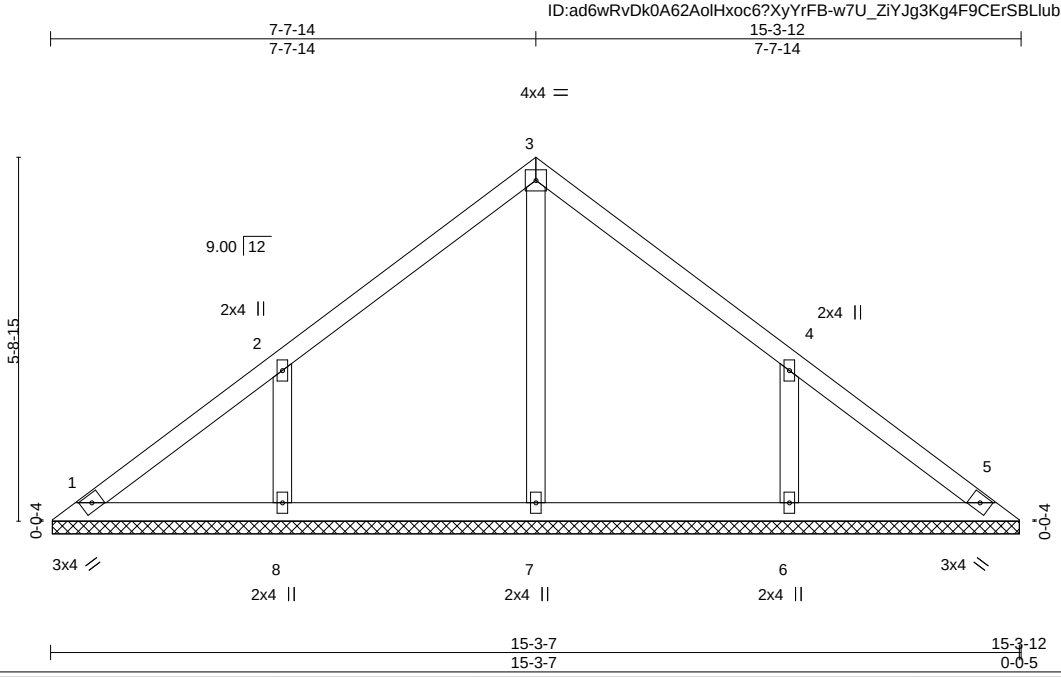

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 64 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 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. All bearings 15-3-2.
(lb) - Max Horz 1=-134(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-172(LC 12), 6=-172(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=382(LC 19), 6=382(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-309/220, 4-6=-309/220

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	V4	Valley	1	1	I48131536
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:58 2021 Page 1
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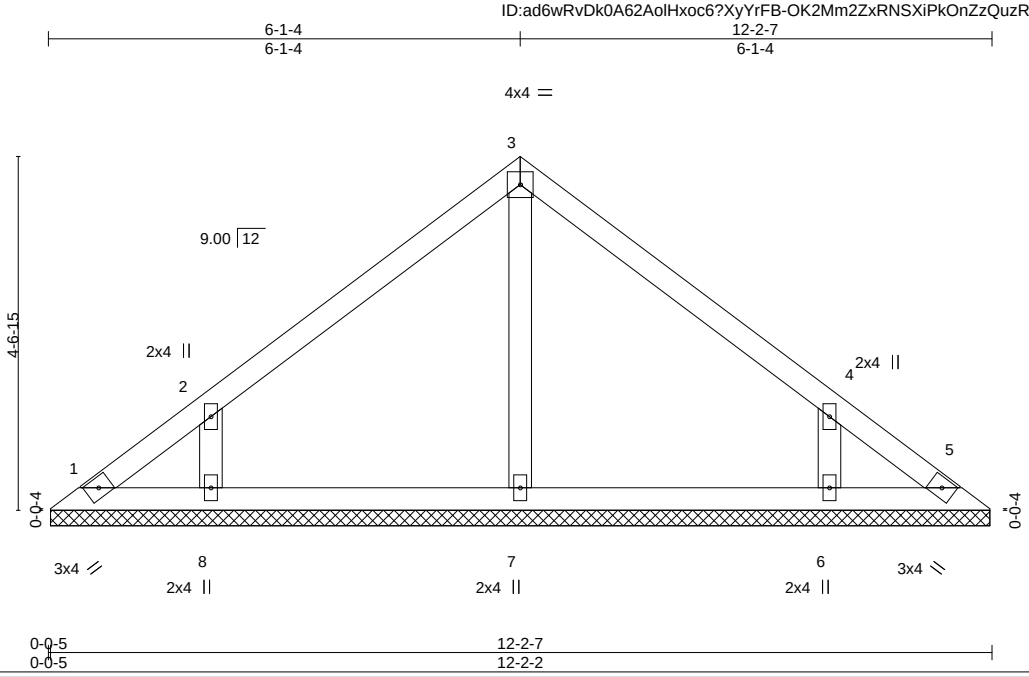

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 48 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 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. All bearings 12-1-12.
(lb) - Max Horz 1=-105(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-159(LC 12), 6=-159(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=338(LC 19), 6=338(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-283/199, 4-6=-283/198

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

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Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	V5	Valley	1	1	I48131537
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:58 2021 Page 1
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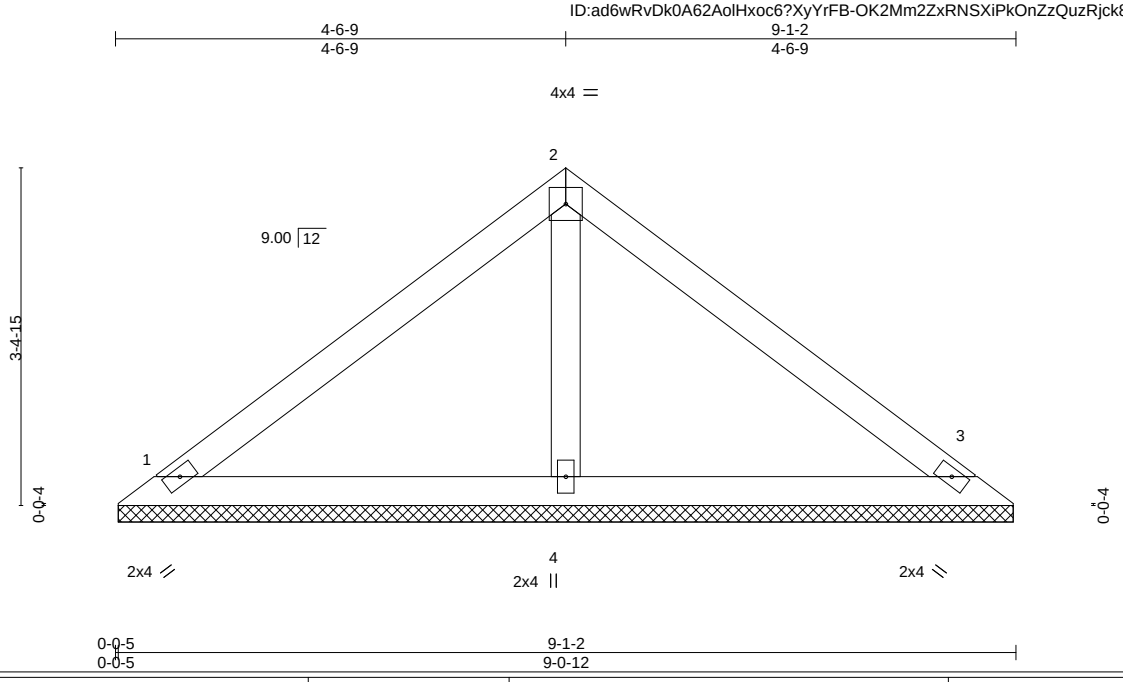

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 33 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

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

REACTIONS. (size) 1=9-0-7, 3=9-0-7, 4=9-0-7
Max Horz 1=-76(LC 10)
Max Uplift 1=-39(LC 12), 3=-49(LC 13)
Max Grav 1=181(LC 1), 3=181(LC 1), 4=294(LC 1)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Freedom Solar Clayton Plan
2100795-2100795A	V6	Valley	1	1	I48131538
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 29 07:47:59 2021 Page 1
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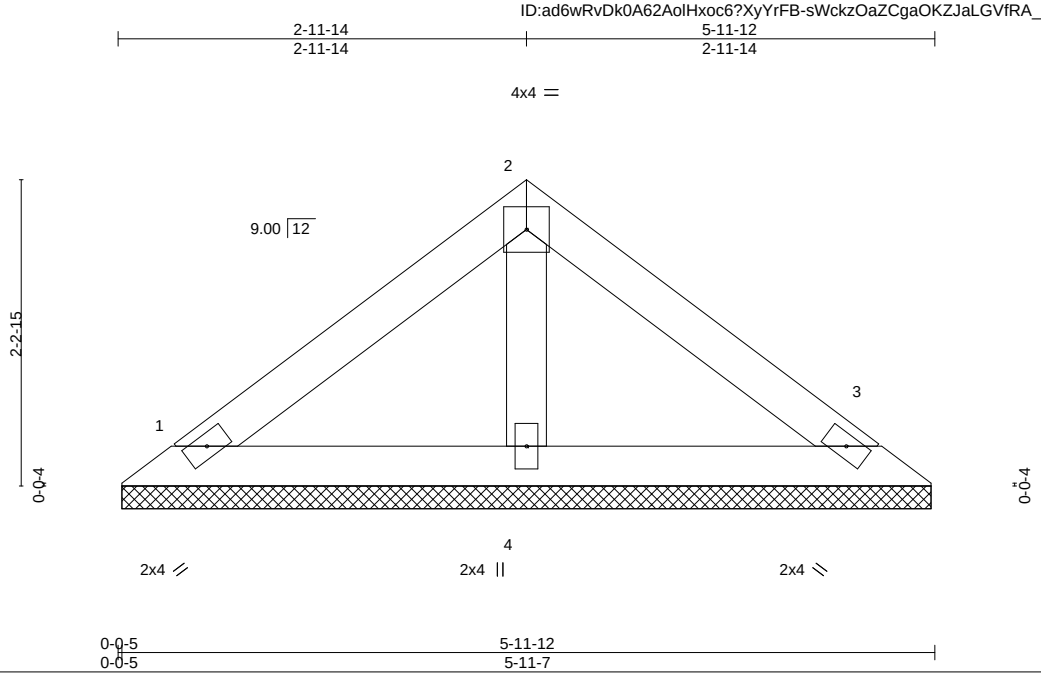

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 21 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

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) 1=5-11-2, 3=5-11-2, 4=5-11-2
Max Horz 1=-47(LC 10)
Max Uplift 1=-24(LC 12), 3=-31(LC 13)
Max Grav 1=113(LC 1), 3=113(LC 1), 4=183(LC 1)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

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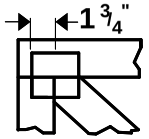
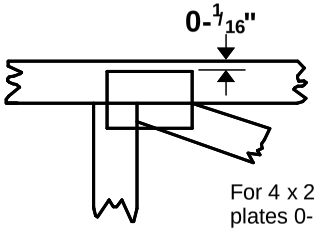
Symbols

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.

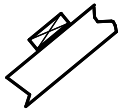
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

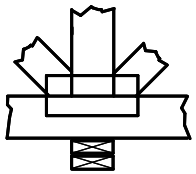
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

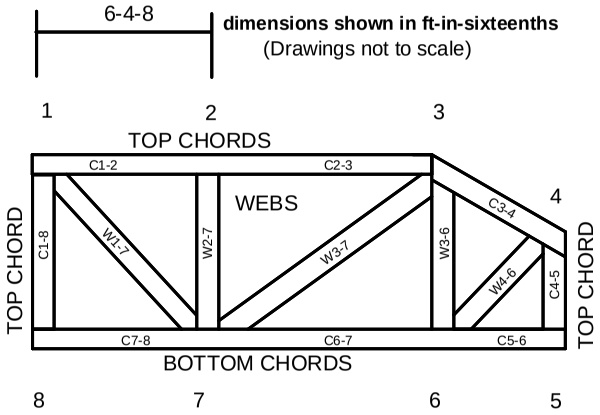


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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 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.