ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 35873-35873A
56 SERENITY - ROOF

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: I57060748 thru I57060774

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844

March 8,2023

Gilbert, Eric

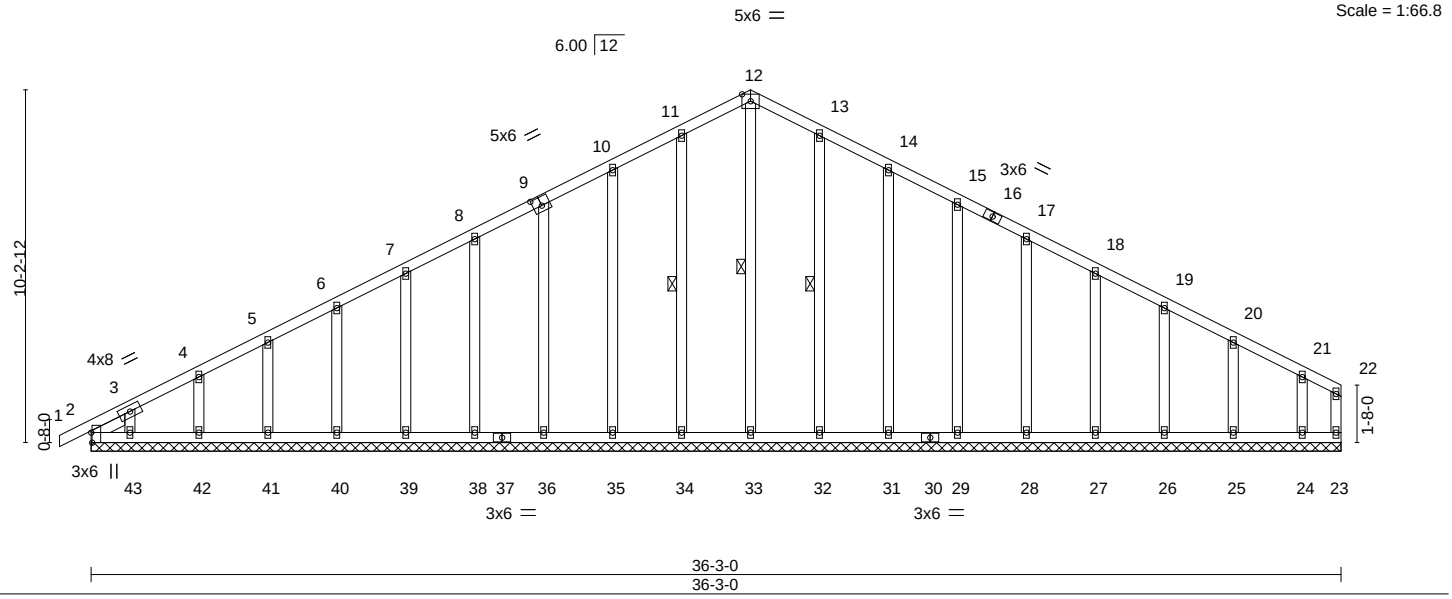
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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	56 SERENITY - ROOF
35873-35873A	A1GE	Roof Special Supported Gable	1	1	I57060748
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:19 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-iL1dccvGRraarPXqVtOdJnVtES6I0BhkFhlzuLzd?pM

-0-11-0 19-1-8 36-3-0
0-11-0 19-1-8 17-1-8

Scale = 1:66.8



36-3-0
36-3-0

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

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	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	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	23	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 258 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3 *Except* 12-33,11-34,10-35,9-36,13-32,14-31,15-29: 2x4 SP No.2
SLIDER	Left 2x4 SP No.3 1-1-6

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 12-33, 11-34, 13-32

REACTIONS. All bearings 36-3-0.
(lb) - Max Horz 2=148(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 34, 35, 36, 38, 39, 40, 41, 42, 43, 32, 31, 29, 28, 27, 26, 25, 24
Max Grav All reactions 250 lb or less at joint(s) 23, 2, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43, 32, 31, 29, 28, 27, 26, 25, 24

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 10-11=-114/272, 11-12=-127/308, 12-13=-127/308, 13-14=-114/272

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 34, 35, 36, 38, 39, 40, 41, 42, 43, 32, 31, 29, 28, 27, 26, 25, 24.

March 8,2023

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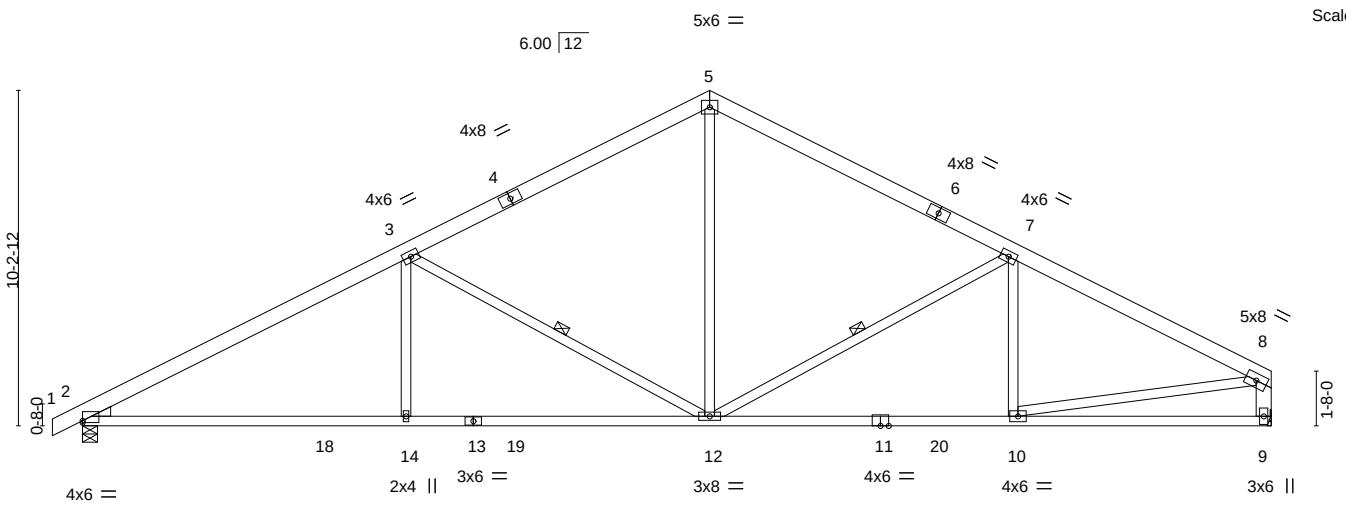
Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	A2	Roof Special	6	1	I57060749
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:20 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-AXb?pywuC9jRTZ603avss_1yXsEnlZotULUWQnzd?pL

-0-11-0	9-10-6	19-1-8	28-4-9	36-3-0
0-11-0	9-10-6	9-3-2	9-3-1	7-10-7

Scale = 1:70.3



9-10-6	19-1-8	28-4-9	36-3-0
9-10-6	9-3-2	9-3-1	7-10-7

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

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	0.49	Vert(LL)	-0.15	14-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.33	14-17	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.09	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 225 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
3-14,7-10: 2x4 SP No.3, 8-9: 2x6 SP No.2
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-2-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-12, 7-12

REACTIONS. (size) 2=0-5-8, 9=Mechanical
Max Horz 2=150(LC 14)
Max Uplift 2=-100(LC 10), 9=-71(LC 11)
Max Grav 2=1497(LC 1), 9=1440(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2470/412, 3-5=-1649/368, 5-7=-1646/367, 7-8=-2064/359, 8-9=-1371/260
BOT CHORD 2-14=-262/2099, 12-14=-262/2099, 10-12=-207/1767
WEBS 3-14=0/377, 3-12=-908/253, 5-12=-105/859, 7-12=-548/190, 8-10=-199/1635

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) 9 except (jt=lb) 2=100.

March 8,2023

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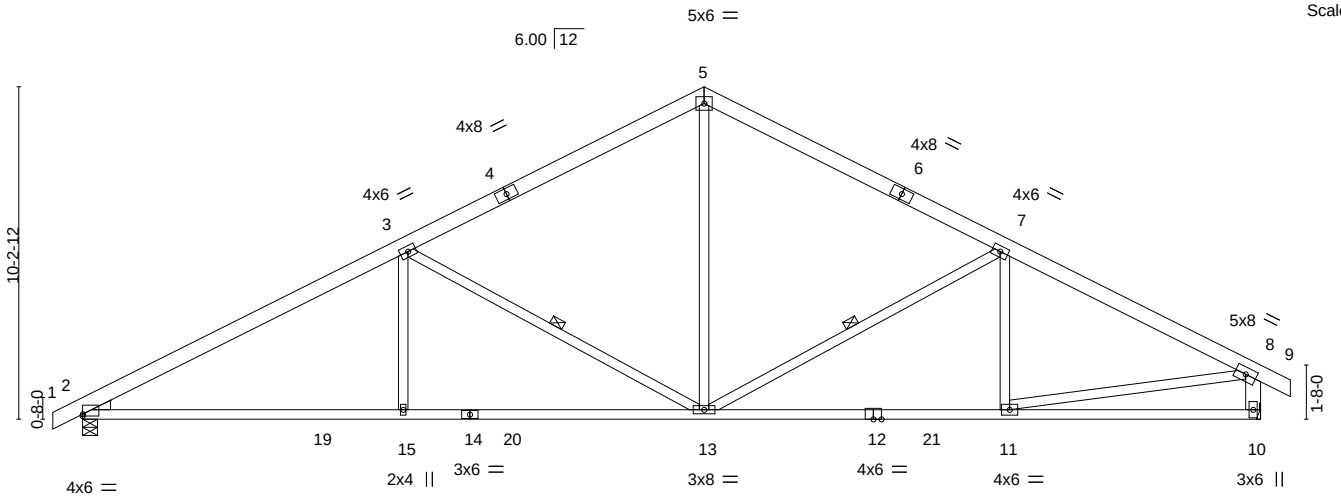
Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	A5	ROOF SPECIAL	6	1	I57060750
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:22 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-6wjlEex8kmz9isGPA?xKxP7I1gvFDSHAxfzdVfzd?pJ

-0-11-0	9-10-6	19-1-8	28-4-9	36-3-0	37-2-0
0-11-0	9-10-6	9-3-2	9-3-1	7-10-7	0-11-0

Scale = 1:70.9



9-10-6	19-1-8	28-4-9	36-3-0
9-10-6	9-3-2	9-3-1	7-10-7

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

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	0.49	Vert(LL)	-0.15	15-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.33	15-18	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.09	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 228 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
3-15,7-11: 2x4 SP No.3, 8-10: 2x6 SP No.2
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-2-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-13, 7-13

REACTIONS. (size) 2=0-5-8, 10=Mechanical
Max Horz 2=142(LC 14)
Max Uplift 2=-101(LC 10), 10=-89(LC 11)
Max Grav 2=1495(LC 1), 10=1510(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2467/412, 3-5=-1647/369, 5-7=-1643/366, 7-8=-2060/361, 8-10=-1441/313
BOT CHORD 2-15=-230/2097, 13-15=-230/2097, 11-13=-173/1757
WEBS 3-15=0/377, 3-13=-908/253, 5-13=-104/855, 7-13=-539/188, 8-11=-158/1576

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) 10 except (jt=lb) 2=101.

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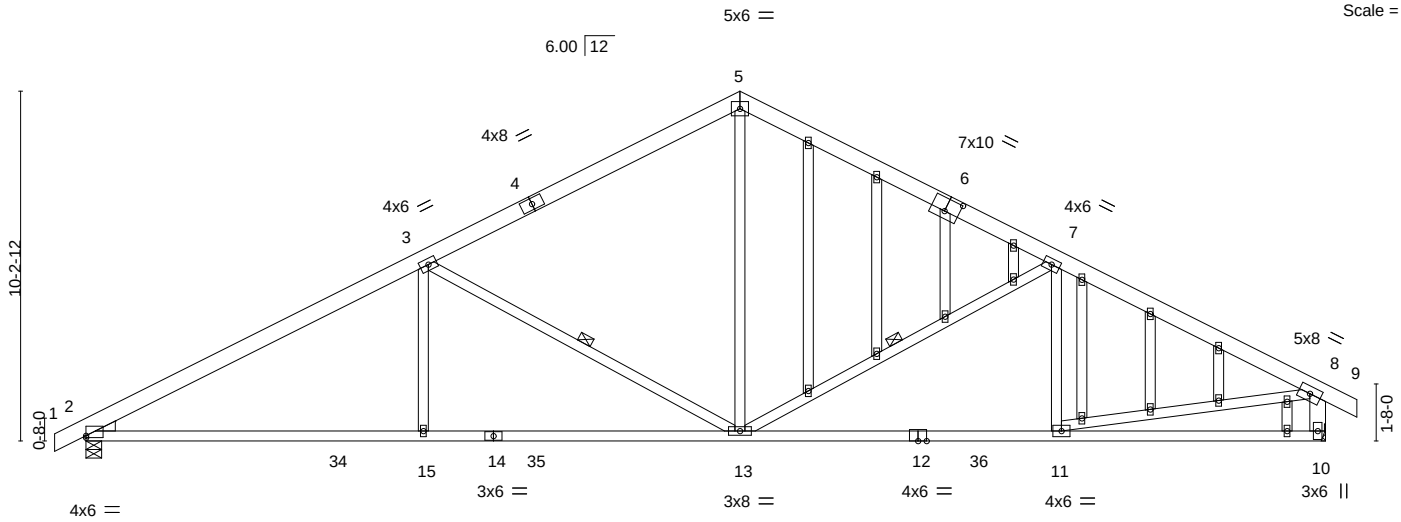
Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	A6	GABLE	1	1	I57060751
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:23 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-b6G8R_ynV450K0rbkiSZTdfTn4FUyvXKAJjA16zd?pI

-0-11-0	9-10-6	19-1-8	28-4-9	36-3-0	37-2-0
0-11-0	9-10-6	9-3-2	9-3-1	7-10-7	0-11-0

Scale = 1:67.4



9-10-6	19-1-8	28-4-9	36-3-0
9-10-6	9-3-2	9-3-1	7-10-7

Plate Offsets (X,Y)-- [2:0-0-0,0-0-11], [6:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.15	15-33	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.33	15-33	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.09	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 267 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
3-15,7-11: 2x4 SP No.3, 8-10: 2x6 SP No.2
OTHERS 2x4 SP No.3 *Except*
16-17: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-2-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-13, 7-13

REACTIONS. (size) 2=0-5-8, 10=Mechanical
Max Horz 2=142(LC 14)
Max Uplift 2=-101(LC 10), 10=-89(LC 11)
Max Grav 2=1495(LC 1), 10=1510(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2467/412, 3-5=-1647/369, 5-7=-1643/366, 7-8=-2060/361, 8-10=-1441/313
BOT CHORD 2-15=-230/2097, 13-15=-230/2097, 11-13=-173/1757
WEBS 3-15=0/377, 3-13=-908/253, 5-13=-104/855, 7-13=-539/188, 8-11=-158/1576

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10 except (jt=lb) 2=101.

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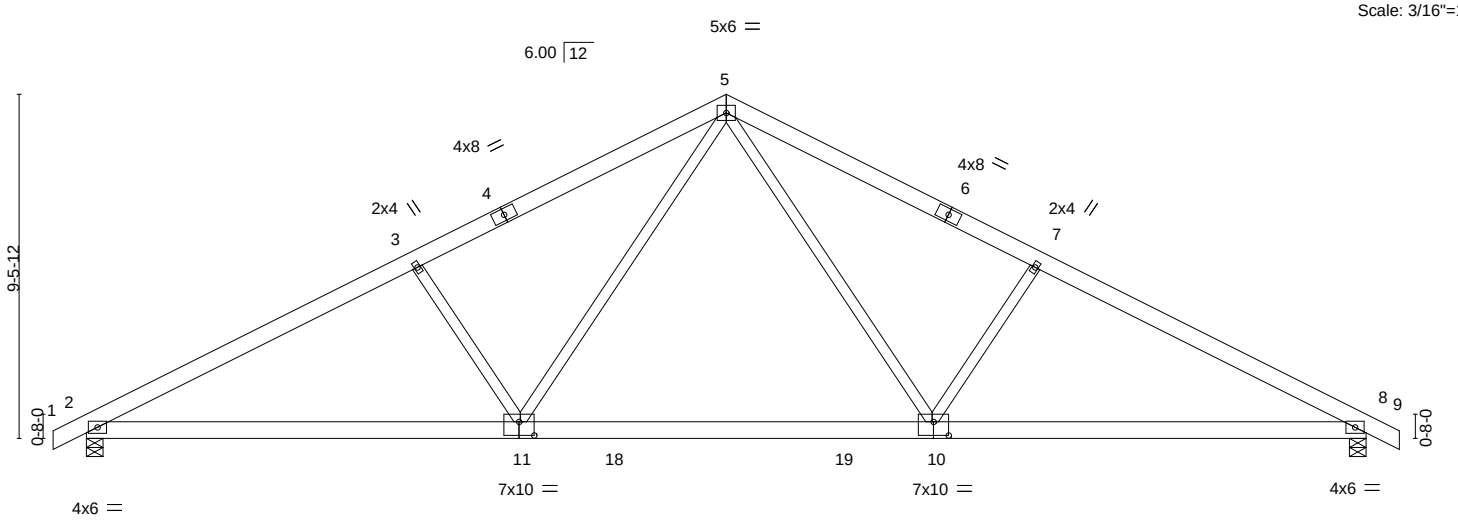
Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	A7	Common	2	1	I57060752
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:25 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-XVOusg_11hLkZK__s7V1Z2lq8t?qQsVcedCH5_zd?pG

-0-11-0	9-1-6	17-7-8	26-1-10	35-3-0	36-2-0
0-11-0	9-1-6	8-6-2	8-6-2	9-1-6	0-11-0

Scale: 3/16"=1'



11-11-7	23-3-9	35-3-0
11-11-7	11-4-2	11-11-7

Plate Offsets (X,Y)-- [10:0-5-0,0-4-8], [11:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.24	10-11	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.37	10-11	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 226 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except*
7-10,3-11: 2x4 SP No.3

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

REACTIONS. (size) 2=0-5-8, 8=0-5-8
Max Horz 2=-132(LC 15)
Max Uplift 2=-93(LC 10), 8=-93(LC 11)
Max Grav 2=1465(LC 1), 8=1465(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2435/430, 3-5=-2161/450, 5-7=-2161/450, 7-8=-2435/430
BOT CHORD 2-11=-254/2091, 10-11=-47/1390, 8-10=-254/2091
WEBS 5-10=-114/851, 7-10=-529/274, 5-11=-114/851, 3-11=-529/274

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.

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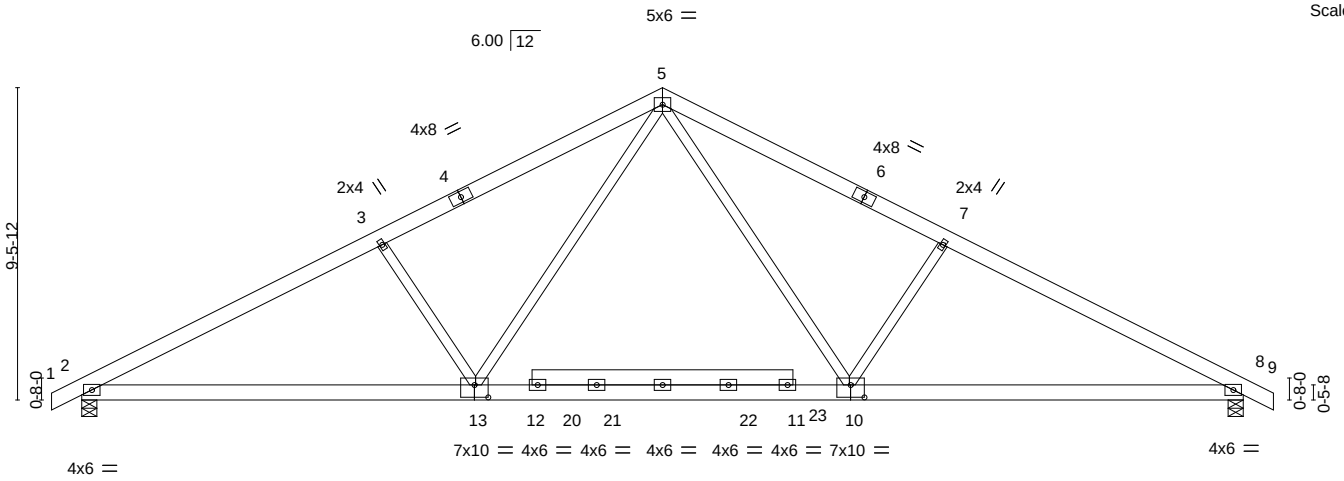
Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	A7A	Common	1	1	I57060753
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:27 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-TtWeHL?HZIbRoe8MzYXVeTq9nhfium3v5xhOAtzd?pE

-0-11-0	9-1-6	17-7-8	26-1-10	35-3-0	36-2-0
0-11-0	9-1-6	8-6-2	8-6-2	9-1-6	0-11-0

Scale = 1:69.9



11-11-7	23-3-9	35-3-0
11-11-7	11-4-2	11-11-7

Plate Offsets (X,Y)-- [10:0-5-0,0-4-8], [13:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.13	10-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.28	10-13	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 244 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except*
7-10,3-13: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-1-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-5-8, 8=0-5-8
Max Horz 2=-132(LC 15)
Max Grav 2=1565(LC 1), 8=1565(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2655/209, 3-5=-2382/228, 5-7=-2382/228, 7-8=-2655/209
BOT CHORD 2-13=-58/2285, 10-13=0/1527, 8-10=-58/2285
WEBS 5-10=0/949, 7-10=-522/282, 5-13=0/949, 3-13=-522/282

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) 200.0lb AC unit load placed on the bottom chord, 17-7-8 from left end, supported at two points, 5-0-0 apart.
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.

March 8,2023

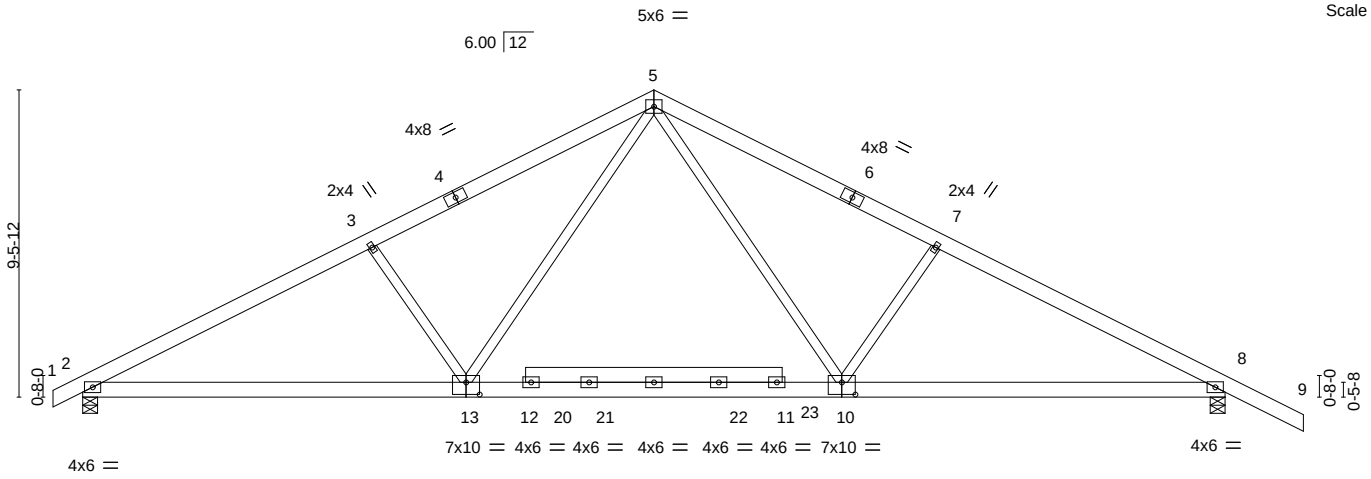
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	A8	Common	6	1	I57060754
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:28 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-x441Uh0vKcjIQnjZXG2kAgNKS5?xdDM3KbQxiJzd?pD

-0-11-0	8-11-3	17-7-8	26-3-13	35-3-0	37-8-0
0-11-0	8-11-3	8-8-5	8-8-5	8-11-3	2-5-0

Scale = 1:71.1



11-9-15	23-5-1	35-3-0
11-9-15	11-7-2	11-9-15

Plate Offsets (X,Y)-- [10:0-5-0,0-4-8], [13:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.13	10-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.30	10-13	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 248 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except*
7-10,3-13: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-2-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-5-8, 8=0-5-8
Max Horz 2=-153(LC 11)
Max Uplift 8=-19(LC 11)
Max Grav 2=1561(LC 1), 8=1659(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2657/203, 3-5=-2377/217, 5-7=-2360/200, 7-8=-2639/186
BOT CHORD 2-13=-13/2290, 10-13=0/1517, 8-10=0/2269
WEBS 5-10=0/929, 7-10=-511/271, 5-13=0/949, 3-13=-523/282

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) 200.0lb AC unit load placed on the bottom chord, 17-7-8 from left end, supported at two points, 5-0-0 apart.
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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8.

March 8,2023

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TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	A9E	Common Supported Gable	1	1	I57060755
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:30 2023 Page 1
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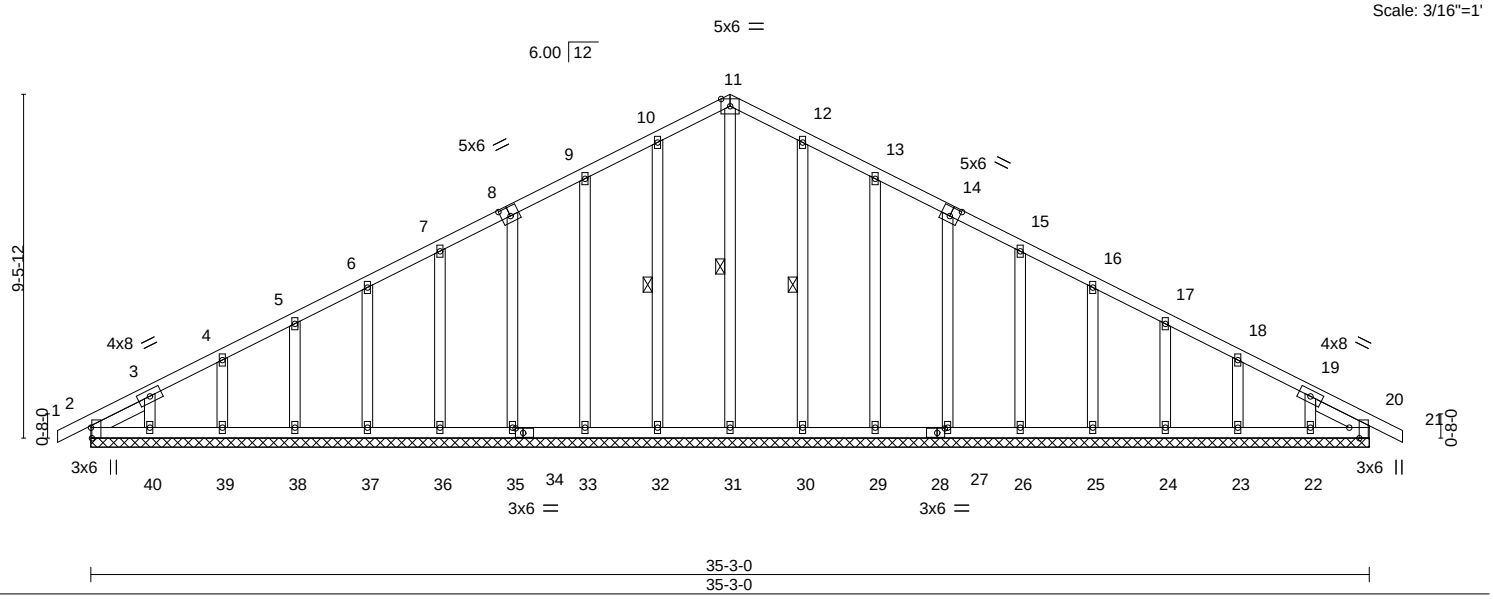
-0-11-0 17-7-8 35-3-0 36-2-0
0-11-0 17-7-8 17-7-8 0-11-0

Scale: 3/16"=1'



35-3-0
35-3-0

Plate Offsets (X,Y)-- [2:0-3-8,Edge], [8:0-3-0,0-3-0], [14:0-3-0,0-3-0], [20:0-3-8,Edge], [28:0-2-8,0-1-8], [34:0-2-8,0-1-8]

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	0.06	Vert(LL)	-0.00	20	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	21	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	20	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 238 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3 *Except* 11-31,10-32,9-33,12-30,13-29: 2x4 SP No.2
SLIDER	Left 2x4 SP No.3 1-8-2, Right 2x4 SP No.3 1-8-2

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 11-31, 10-32, 12-30

REACTIONS. All bearings 35-3-0.
(lb) - Max Horz 2=-132(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 32, 33, 35, 36, 37, 38, 39, 40, 30, 29, 27, 26, 25, 24, 23, 22
Max Grav All reactions 250 lb or less at joint(s) 2, 31, 32, 33, 35, 36, 37, 38, 39, 40, 30, 29, 27, 26, 25, 24, 23, 22, 20

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 Vasd=95mph; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 32, 33, 35, 36, 37, 38, 39, 40, 30, 29, 27, 26, 25, 24, 23, 22.

March 8,2023

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	C1E	GABLE	1	1	I57060756
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:32 2023 Page 1
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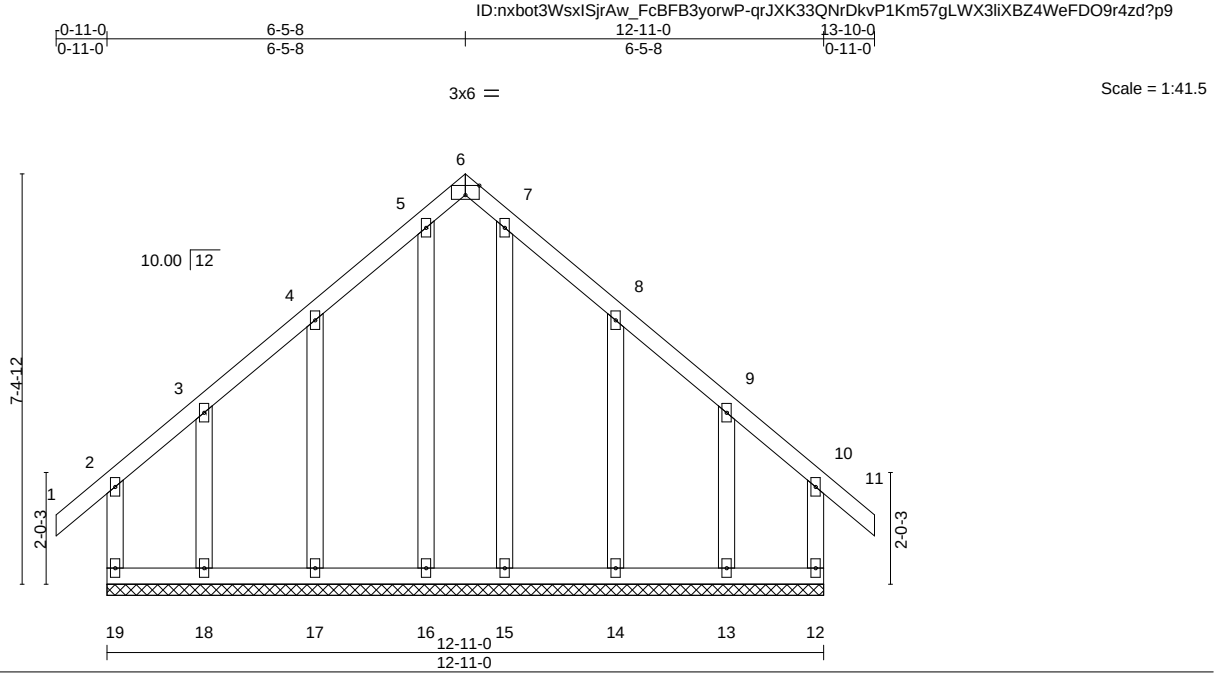

Plate Offsets (X,Y)-- [6:0-3-0,Edge]

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	0.22	Vert(LL)	-0.00	11	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.00	11	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	-0.00	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-R							Weight: 94 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except*
5-16,7-15: 2x4 SP No.2

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

REACTIONS. All bearings 12-11-0.
(lb) - Max Horz 19=-185(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 17, 14 except 19=-127(LC 6), 12=-121(LC 7), 18=-135(LC 7), 13=-130(LC 6)
Max Grav All reactions 250 lb or less at joint(s) 19, 12, 16, 17, 18, 15, 14, 13

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 Vasd=95mph; 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 14 except (jt=lb) 19=127, 12=121, 18=135, 13=130.

March 8,2023

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Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	C2	Common	3	1	I57060757
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:34 2023 Page 1
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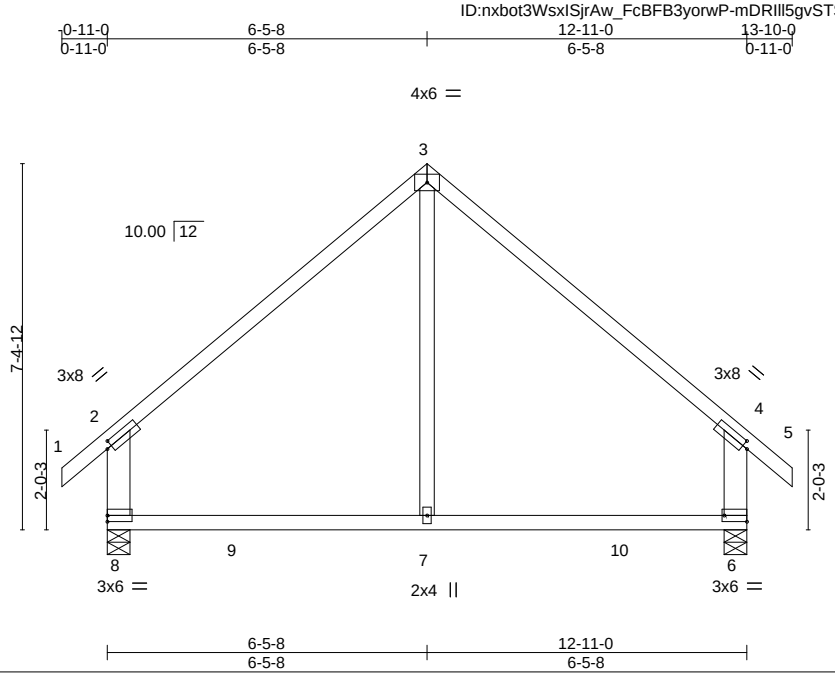

Plate Offsets (X,Y)-- [2:0-1-4,0-1-8], [4:0-1-4,0-1-8], [6:Edge,0-1-8]

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	0.72	Vert(LL)	-0.09	7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.16	6-7	>941	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MR							Weight: 67 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x6 SP No.2 *Except*
3-7: 2x4 SP No.2

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

REACTIONS. (size) 8=0-5-8, 6=0-5-8
Max Horz 8=-187(LC 8)
Max Uplift 8=-29(LC 10), 6=-29(LC 11)
Max Grav 8=613(LC 17), 6=613(LC 18)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-521/122, 3-4=-520/122, 2-8=-506/159, 4-6=-506/159
BOT CHORD 7-8=-18/334, 6-7=-18/334
WEBS 3-7=0/310

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 6.

March 8,2023

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Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	C3G	COMMON GIRDER	1	2	I57060758
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:36 2023 Page 1
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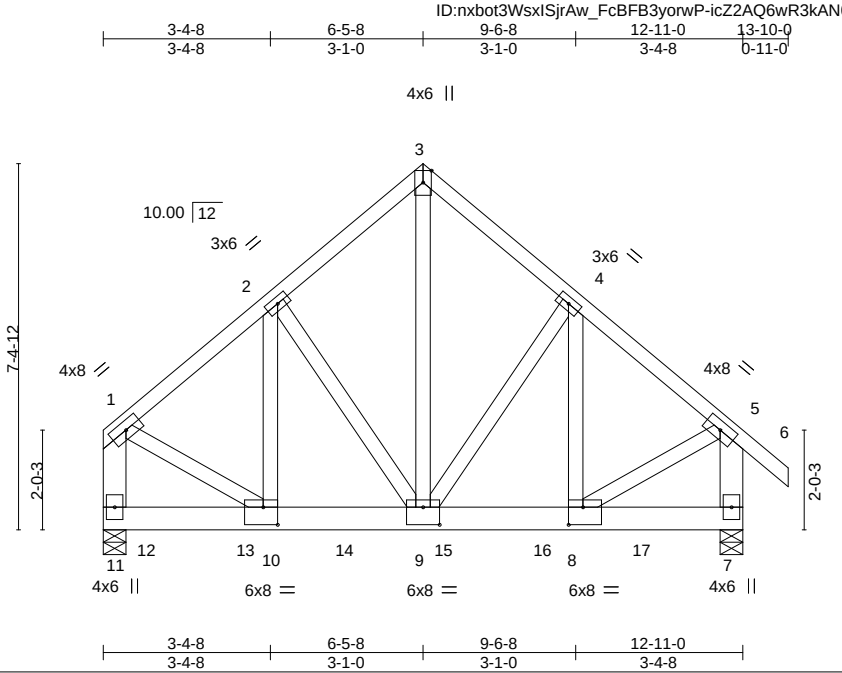

Plate Offsets (X,Y)-- [8:0-3-8,0-4-4], [9:0-4-0,0-4-4], [10:0-3-8,0-4-4]

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 0.21	Vert(LL) -0.03 9-10 >999 240	MT20 244/190
TCDL 10.0		Lumber DOL 1.15	BC 0.57	Vert(CT) -0.05 9-10 >999 180	
BCLL 0.0	*	Rep Stress Incr NO	WB 0.60	Horz(CT) 0.01 7 n/a n/a	
BCDL 10.0		Code IRC2015/TPI2014	Matrix-MS		Weight: 222 lb FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
3-9: 2x4 SP No.2, 1-11,5-7: 2x6 SP No.2

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

REACTIONS. (size) 11=0-5-8, 7=0-5-8
Max Horz 11=-178(LC 25)
Max Uplift 11=-283(LC 9), 7=-251(LC 9)
Max Grav 11=5172(LC 1), 7=4418(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3637/240, 2-3=-3001/256, 3-4=-2999/254, 4-5=-3601/241, 1-11=-3816/225, 5-7=-3878/237
BOT CHORD 10-11=-166/312, 9-10=-192/2739, 8-9=-117/2703
WEBS 3-9=-261/3568, 4-9=-762/138, 4-8=-93/885, 2-9=-823/138, 2-10=-91/945, 1-10=-140/2879, 5-8=-128/2891

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, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 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 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=283, 7=251.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1424 lb down and 87 lb up at 0-10-4, 1420 lb down and 91 lb up at 2-10-4, 1420 lb down and 91 lb up at 4-10-4, 1420 lb down and 91 lb up at 6-10-4, and 1420 lb down and 91 lb up at 8-10-4, and 1420 lb down and 91 lb up at 10-10-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

March 8,2023

Continued on page 2

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Edenton, NC 27932

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-3=-60, 3-5=-60, 5-6=-60, 7-11=-20
   Concentrated Loads (lb)
   Vert: 12=-1424(F) 13=-1420(F) 14=-1420(F) 15=-1420(F) 16=-1420(F) 17=-1420(F)

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	D1E	Common Supported Gable	1	1	I57060759
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:38 2023 Page 1
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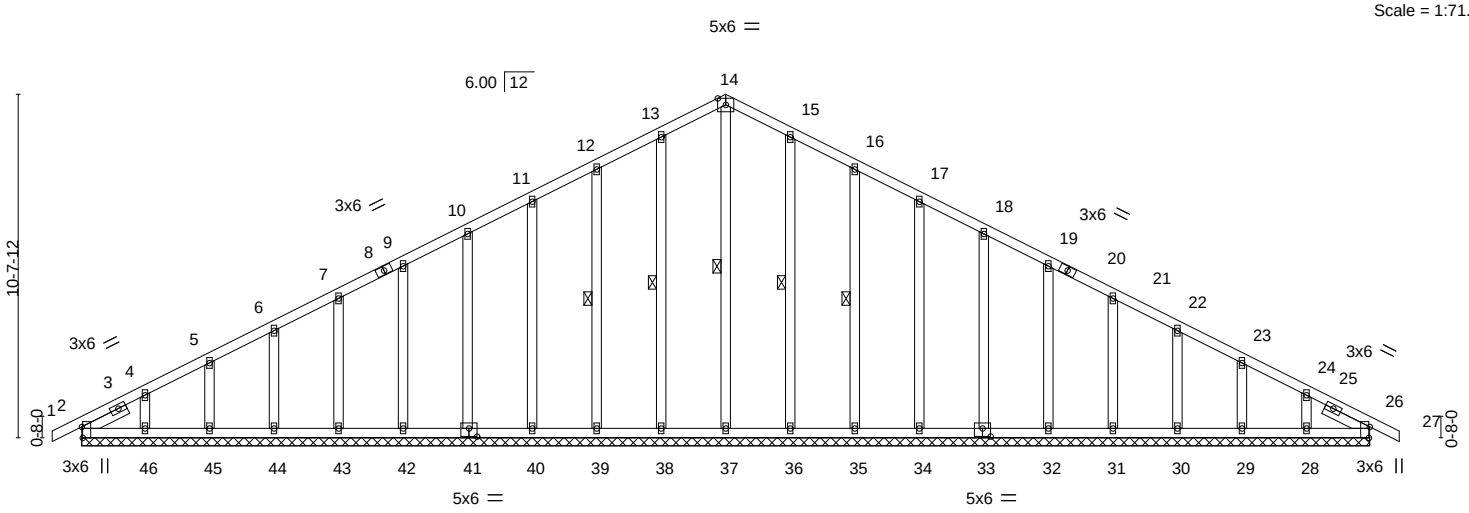
0-11-0 19-11-8 19-11-8 0-11-0

Scale = 1:71.4



39-11-0
39-11-0

Plate Offsets (X,Y)-- [2:0-4-1,Edge], [26:0-4-1,Edge], [33:0-3-0,0-3-0], [41:0-3-0,0-3-0]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	-0.00	26	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	26	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	26	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 285 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 14-37,13-38,12-39,11-40,10-41,15-36,16-35,17-34,18-33: 2x4 SP No.2
SLIDER Left 2x4 SP No.3 1-6-7, Right 2x4 SP No.3 1-6-7

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 14-37, 13-38, 12-39, 15-36, 16-35

REACTIONS. All bearings 39-11-0.
(lb) - Max Horz 2=-148(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 38, 39, 40, 41, 42, 43, 44, 45, 46, 36, 35, 34, 33, 32, 31, 30, 29, 28
Max Grav All reactions 250 lb or less at joint(s) 2, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 36, 35, 34, 33, 32, 31, 30, 29, 28, 26

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 13-14=-103/259, 14-15=-103/259

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 38, 39, 40, 41, 42, 43, 44, 45, 46, 36, 35, 34, 33, 32, 31, 30, 29, 28.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	D2	Common	4	1	I57060760
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:40 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-bNoZ0o9RVIEbsdesEnGYgCsHIw2yRcMq4SKa7dzd?p1

-0-11-0	6-10-3	13-4-13	19-11-8	26-6-3	33-0-13	39-11-0	40-10-0
0-11-0	6-10-3	6-6-11	6-6-11	6-6-11	6-6-11	6-10-3	0-11-0

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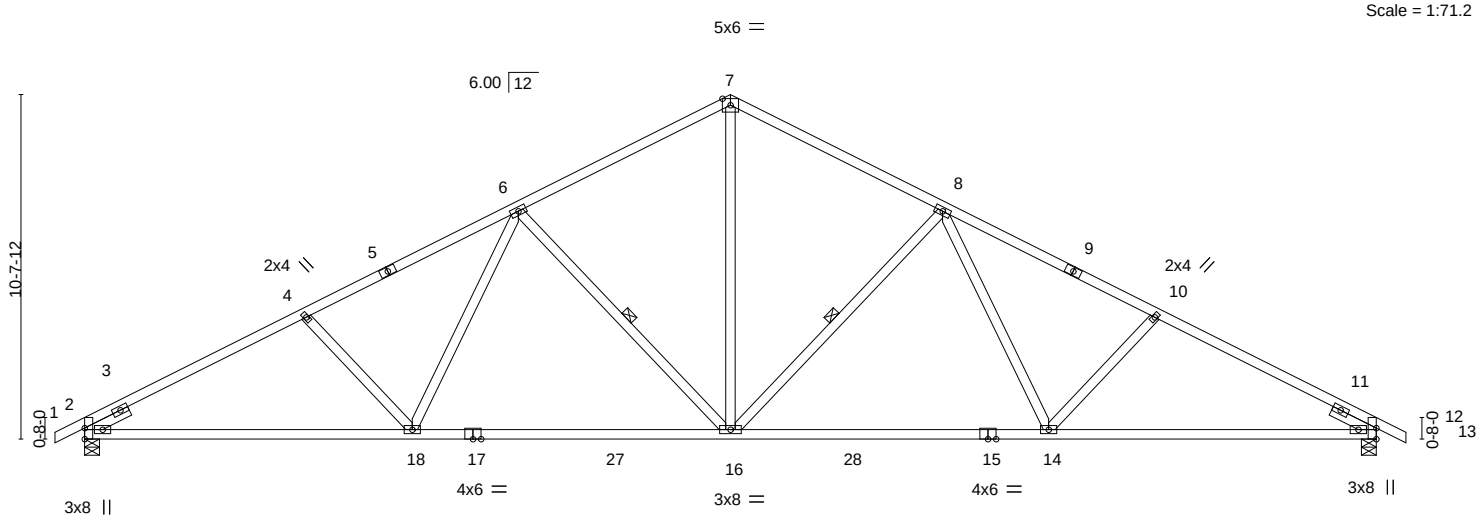

10-1-8	19-11-8	29-9-8	39-11-0
10-1-8	9-10-0	9-10-0	10-1-8

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	0.89	Vert(LL)	-0.36	16-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.62	16-18	>771	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.13	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 213 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 *Except* 1-5,9-13: 2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.2 *Except* 10-14,4-18: 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 2-2-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 8-16, 6-16

REACTIONS. (size) 2=0-5-8, 12=0-5-8
Max Horz 2=-148(LC 15)
Max Uplift 2=-103(LC 10), 12=-103(LC 11)
Max Grav 2=1652(LC 1), 12=1652(LC 1)

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

TOP CHORD	2-4=-2783/482, 4-6=-2554/468, 6-7=-1851/427, 7-8=-1851/427, 8-10=-2554/468, 10-12=-2783/482
BOT CHORD	2-18=-319/2409, 16-18=-190/2035, 14-16=-190/2035, 12-14=-319/2409
WEBS	7-16=-226/1277, 8-16=-705/233, 8-14=-14/494, 10-14=-307/183, 6-16=-705/233, 6-18=-14/494, 4-18=-307/183

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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 3x6 MT20 unless otherwise indicated.
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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=103, 12=103.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	E1E	Common Supported Gable	1	1	I57060761
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:42 2023 Page 1
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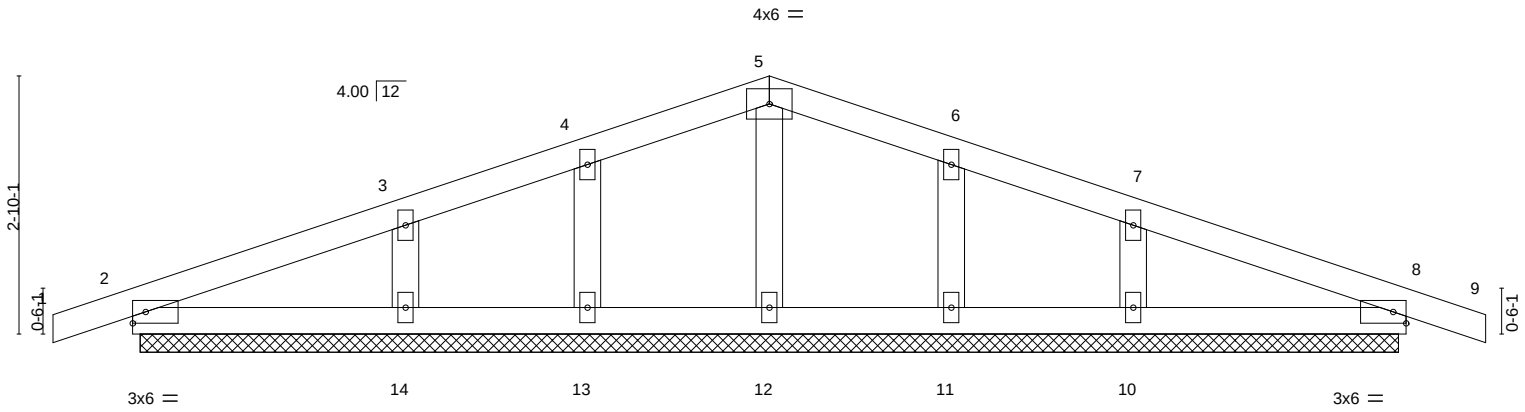

0-1-0 0-1-0 | 14-0-0 13-11-0

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	9	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	9	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 57 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 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 13-10-0.
(lb) - Max Horz 2=-37(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 8, 13, 14, 11, 10
Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 14, 11, 10

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8, 13, 14, 11, 10.
9) Non Standard bearing condition. Review required.

March 8,2023

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	E2	Common	4	1	I57060762
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:43 2023 Page 1
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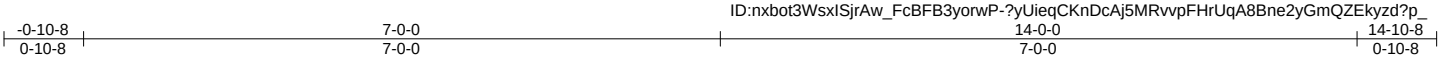

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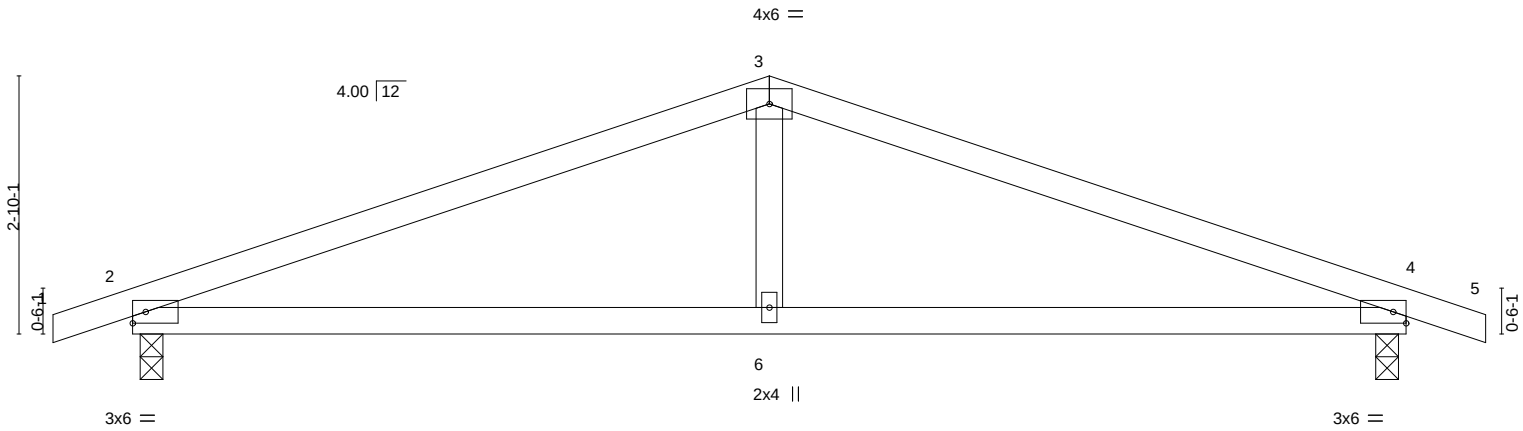

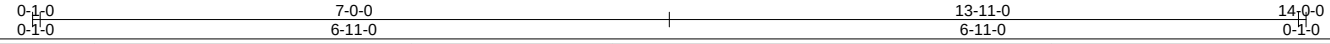

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.06	6-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.12	6-12	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 49 lb	FT = 20%

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

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.

REACTIONS. (size) 2=0-3-0, 4=0-3-0
Max Horz 2=-37(LC 15)
Max Uplift 2=-70(LC 6), 4=-70(LC 7)
Max Grav 2=613(LC 1), 4=613(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-983/183, 3-4=-983/183
BOT CHORD 2-6=-96/871, 4-6=-96/871
WEBS 3-6=0/304

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.

March 8,2023

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Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	M1	MONO TRUSS	9	1	I57060763
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:44 2023 Page 1
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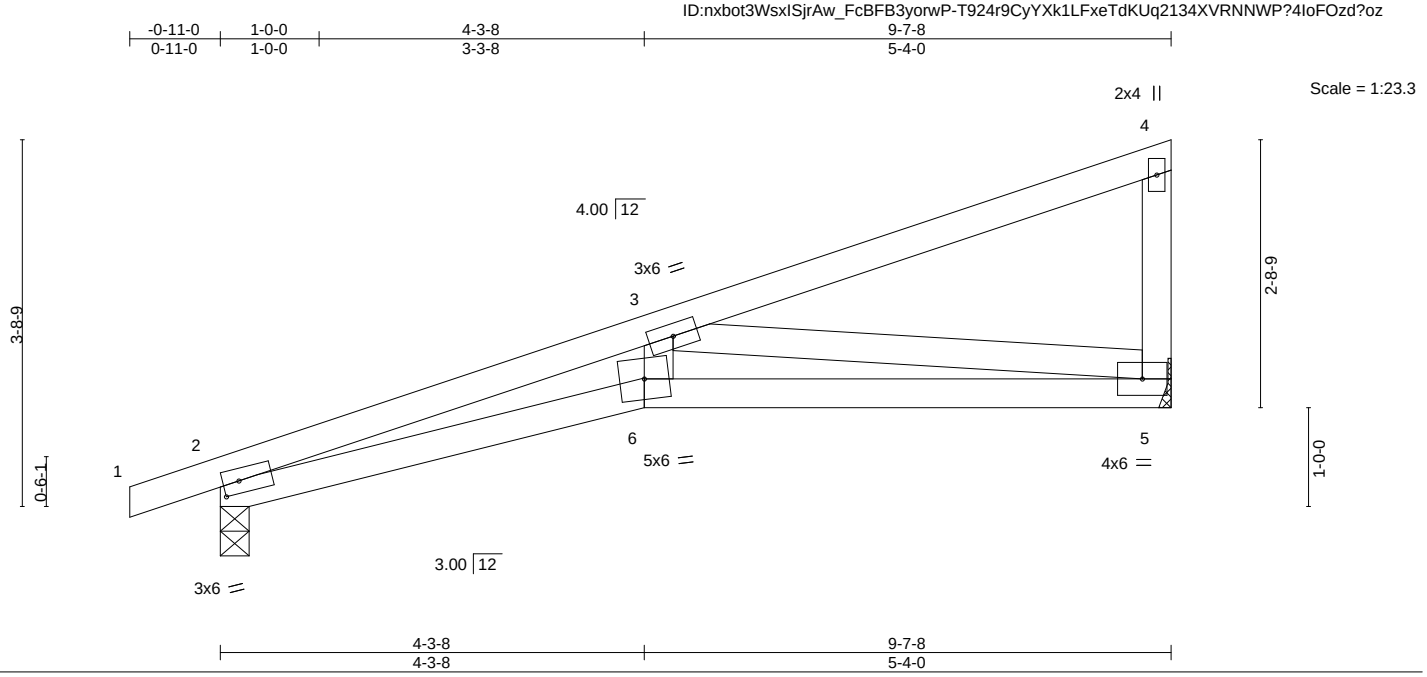

Plate Offsets (X,Y)-- [2:0-1-15,0-1-8]

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	0.39	Vert(LL)	-0.08	6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.16	5-6	>704	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.06	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 42 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-7-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-8-1 oc bracing.

REACTIONS. (size) 5=Mechanical, 2=0-3-8
Max Horz 2=108(LC 7)
Max Uplift 5=-53(LC 10), 2=-62(LC 6)
Max Grav 5=377(LC 1), 2=437(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1423/357
BOT CHORD 2-6=-370/1341, 5-6=-354/1227
WEBS 3-6=-18/392, 3-5=-1184/381

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.

March 8,2023

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Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	M1GE	GABLE	1	1	I57060764
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:46 2023 Page 1
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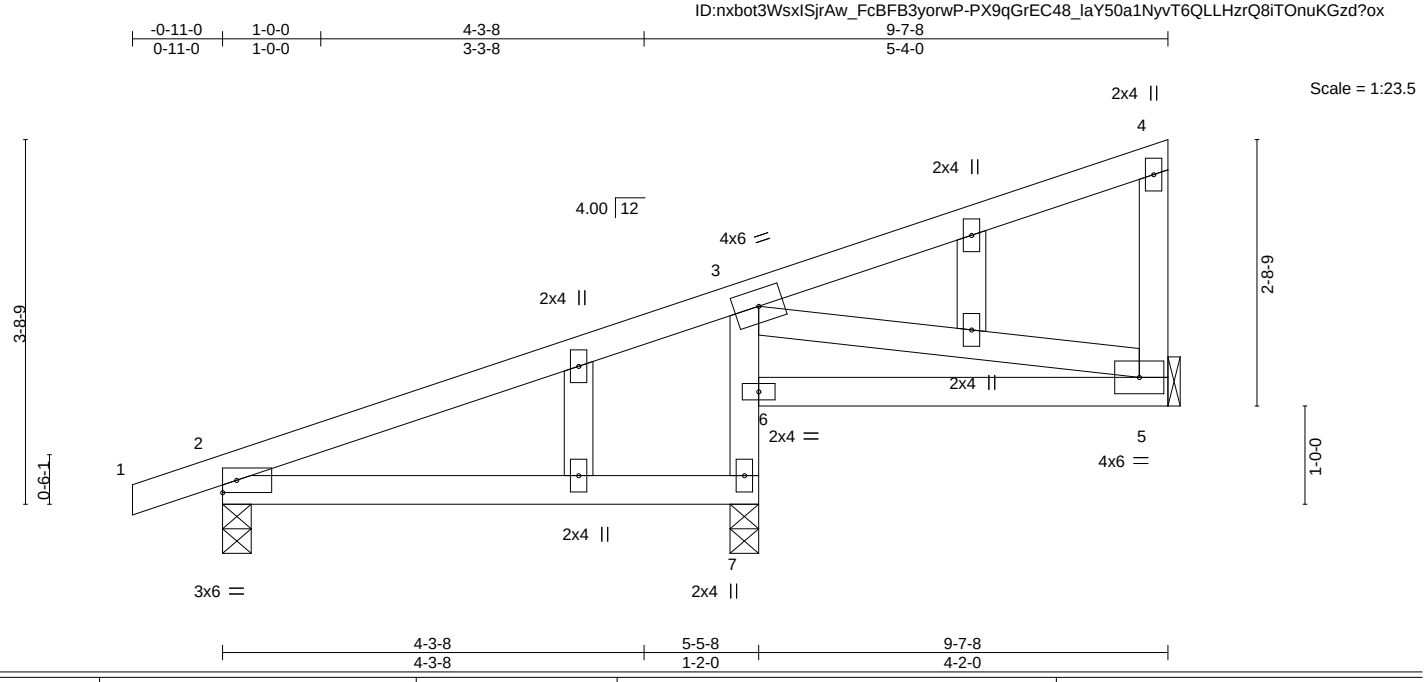

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.02	7-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	7-14	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 46 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP 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. (size) 5=Mechanical, 2=0-3-8, 7=0-3-8
Max Horz 2=108(LC 7)
Max Uplift 5=-15(LC 10), 2=-34(LC 6), 7=-68(LC 10)
Max Grav 5=148(LC 1), 2=257(LC 1), 7=408(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
BOT CHORD 6-7=-341/138, 3-6=-300/165

NOTES-

1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable studs spaced at 2-0-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 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) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2, 7.

March 8,2023

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	M2GE	GABLE	1	1	I57060765
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:47 2023 Page 1
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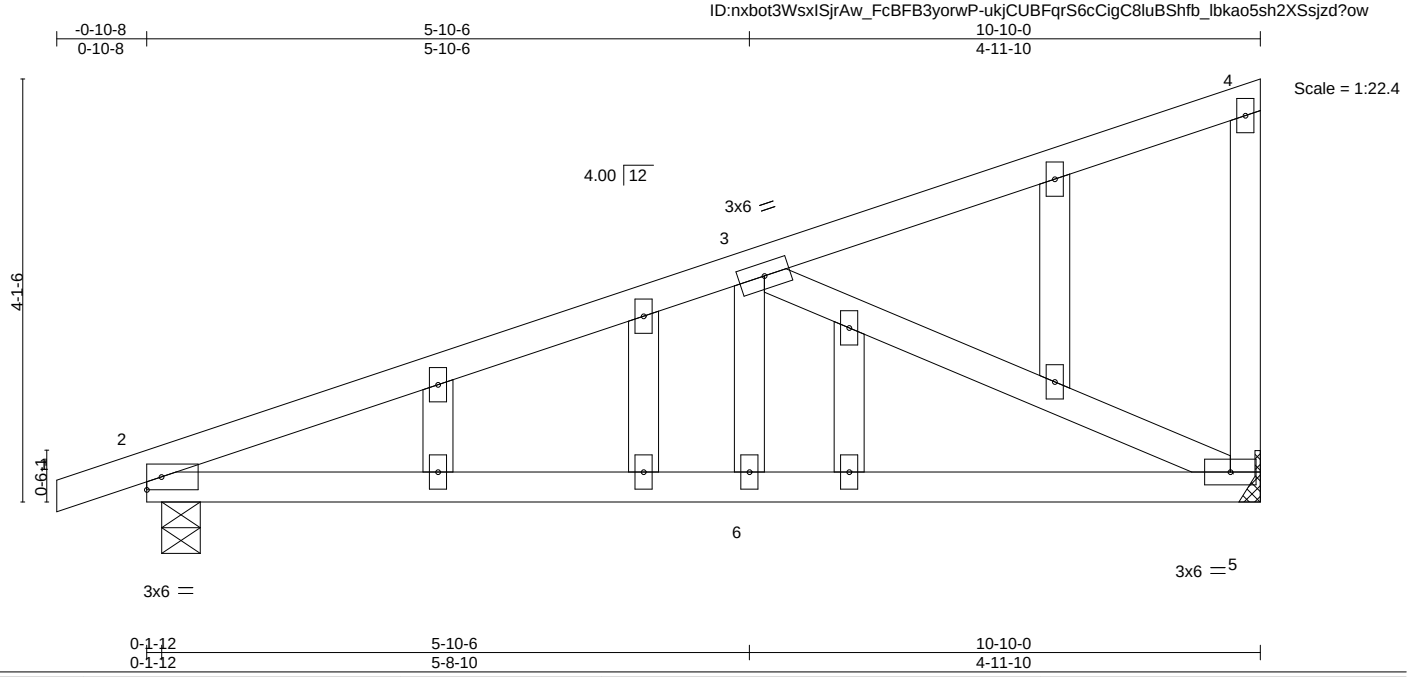

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.02	6-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.06	6-17	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 59 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP 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 10-0-0 oc bracing.

REACTIONS. (size) 2=0-4-8, 5=Mechanical
Max Horz 2=138(LC 9)
Max Uplift 2=-66(LC 6), 5=-58(LC 10)
Max Grav 2=482(LC 1), 5=425(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-704/146
BOT CHORD 2-6=-119/622, 5-6=-119/622
WEBS 3-5=-667/191

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 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) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.

March 8,2023

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	M3	Monopitch	2	1	I57060766
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:48 2023 Page 1
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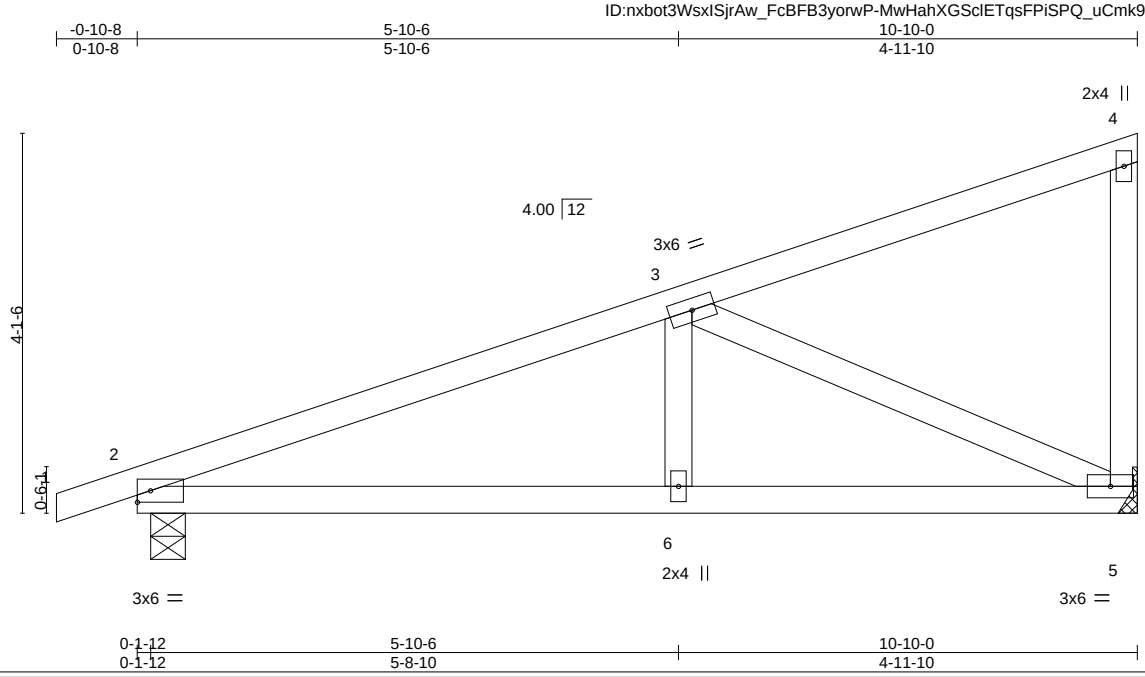

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.02	6-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.06	6-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 50 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 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 10-0-0 oc bracing.

REACTIONS. (size) 2=0-4-8, 5=Mechanical
Max Horz 2=138(LC 9)
Max Uplift 2=-66(LC 6), 5=-58(LC 10)
Max Grav 2=482(LC 1), 5=425(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-704/146
BOT CHORD 2-6=-119/622, 5-6=-119/622
WEBS 3-5=-667/191

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	M3A	MONOPITCH	4	1	I57060767
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:49 2023 Page 1
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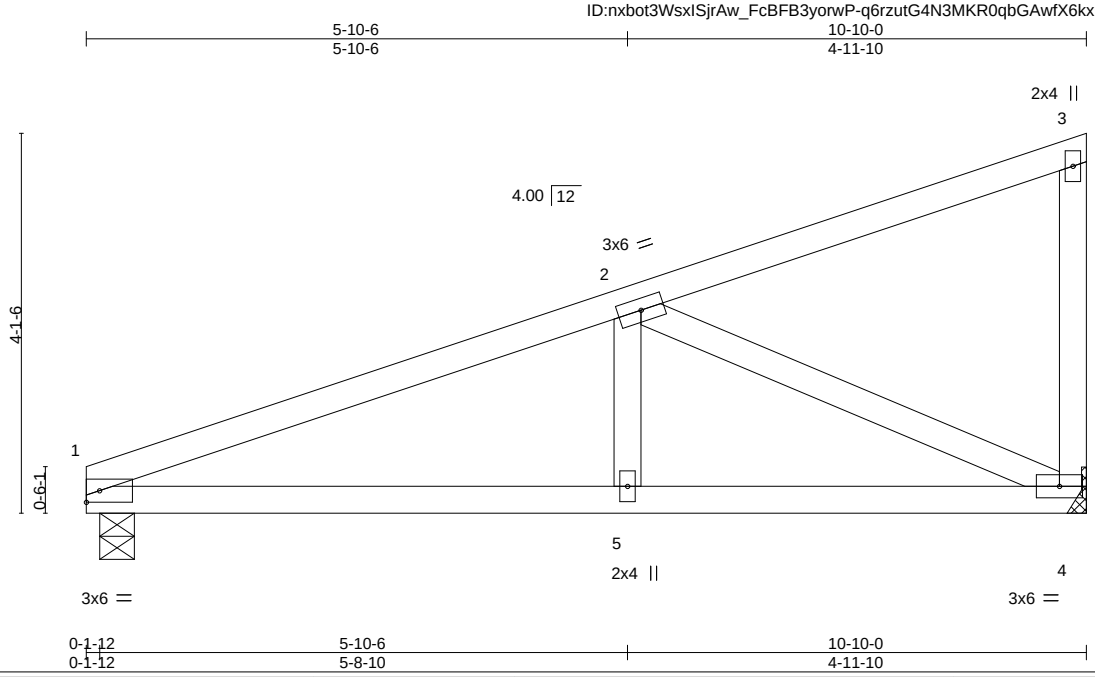


LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.02	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.06	5-8	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 49 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 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 10-0-0 oc bracing.

REACTIONS. (size) 1=0-4-8, 4=Mechanical
Max Horz 1=133(LC 9)
Max Uplift 1=-37(LC 6), 4=-59(LC 10)
Max Grav 1=428(LC 1), 4=428(LC 1)

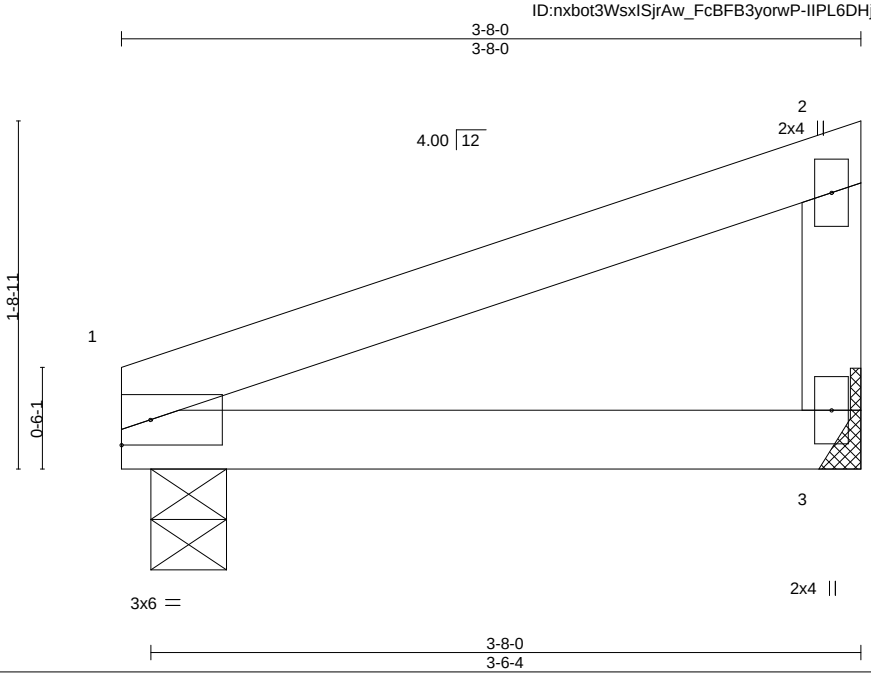
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-712/152
BOT CHORD 1-5=-125/629, 4-5=-125/629
WEBS 2-4=-676/197

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	M3GE	MONOPITCH STRUCTURAL	1	1	I57060768
					Job Reference (optional)



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	-0.01	3-6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	3-6	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	1	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 13 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-8-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=0-4-8, 3=Mechanical
Max Horz 1=47(LC 9)
Max Uplift 1=-12(LC 6), 3=-20(LC 10)
Max Grav 1=141(LC 1), 3=141(LC 1)

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

NOTES-

1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable studs spaced at 2-0-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 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) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	V1	GABLE	1	1	I57060769
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:51 2023 Page 1
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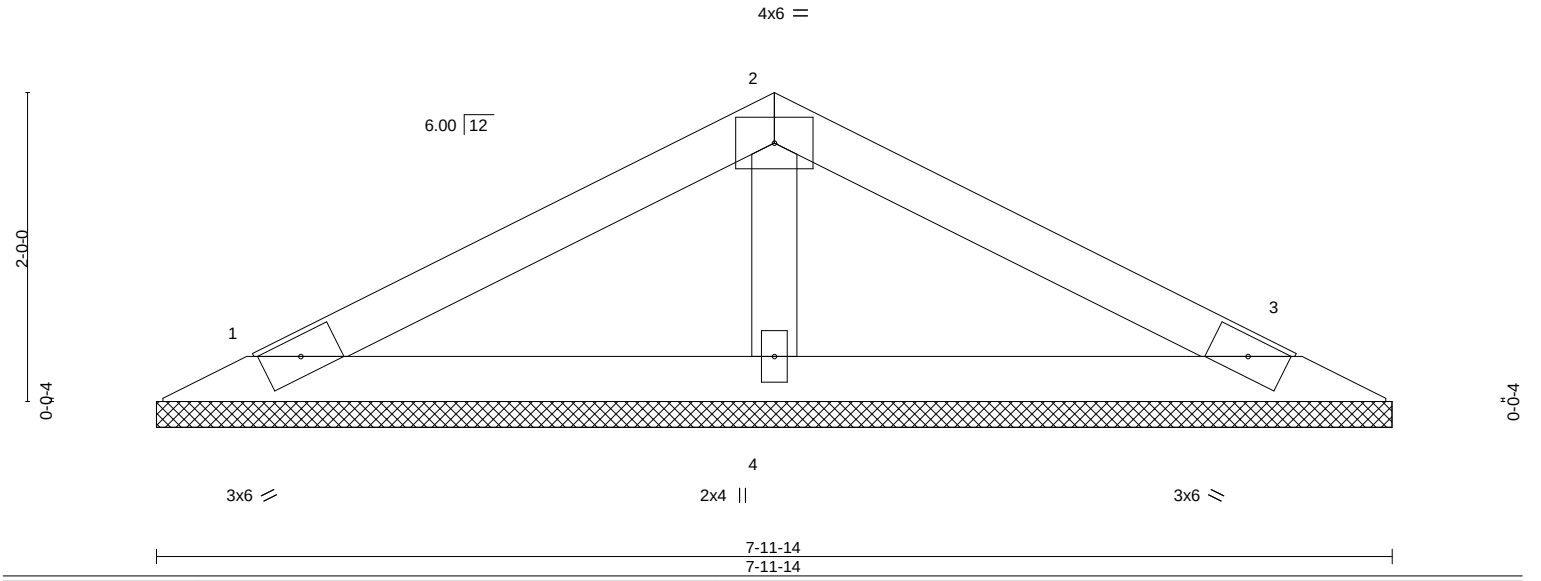
3-11-15 / 3-11-15 | 7-11-14 / 3-11-15

Scale = 1:14.9



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.36	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	0.04	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP 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. (size) 1=7-11-14, 3=7-11-14, 4=7-11-14
Max Horz 1=24(LC 14)
Max Uplift 1=-21(LC 10), 3=-25(LC 11)
Max Grav 1=136(LC 1), 3=136(LC 1), 4=266(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=120mph Vasd=95mph; 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	V2	Valley	1	1	I57060770
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:52 2023 Page 1
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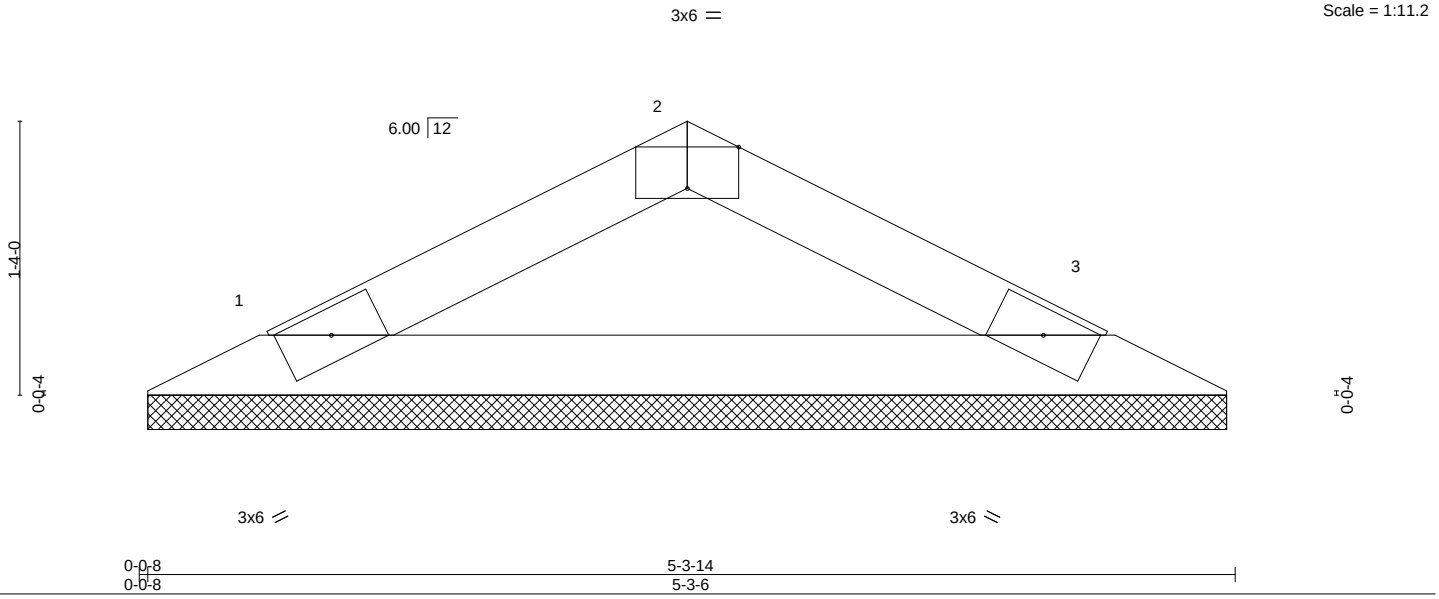

Plate Offsets (X,Y)-- [2:0-3-0,Edge]

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	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	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: 15 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-3-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-2-14, 3=5-2-14
Max Horz 1=-15(LC 11)
Max Uplift 1=-9(LC 10), 3=-9(LC 11)
Max Grav 1=163(LC 1), 3=163(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=120mph Vasd=95mph; 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	V3	Valley	1	1	I57060771
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:54 2023 Page 1
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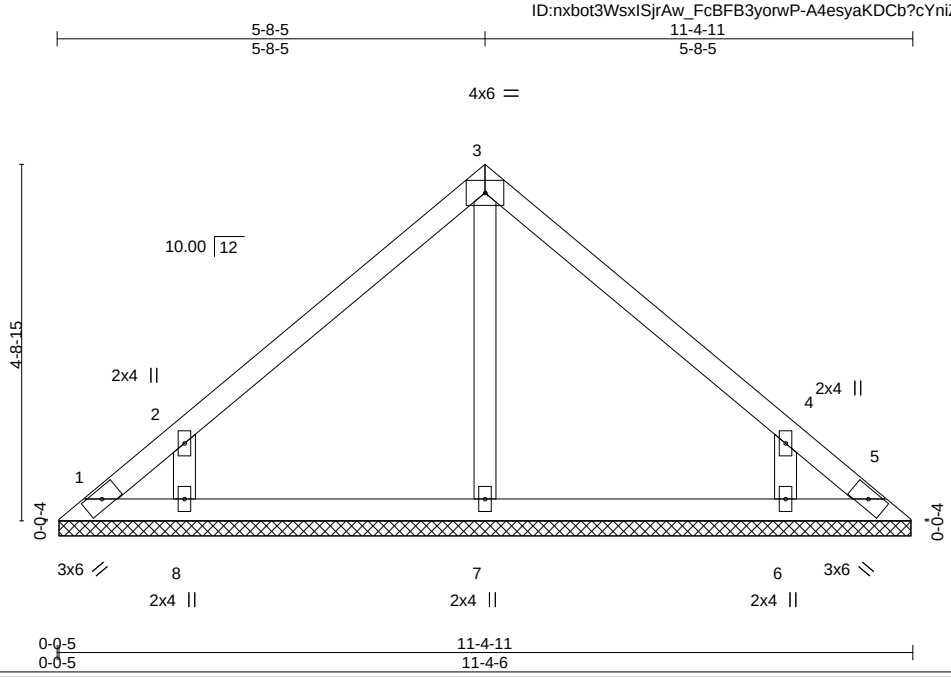

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 46 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 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 11-4-1.
(lb) - Max Horz 1=-93(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-129(LC 10), 6=-129(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=316(LC 17), 6=316(LC 18)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-257/175, 4-6=-257/175

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=129, 6=129.

March 8,2023

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	V4	Valley	1	1	I57060772
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:55 2023 Page 1
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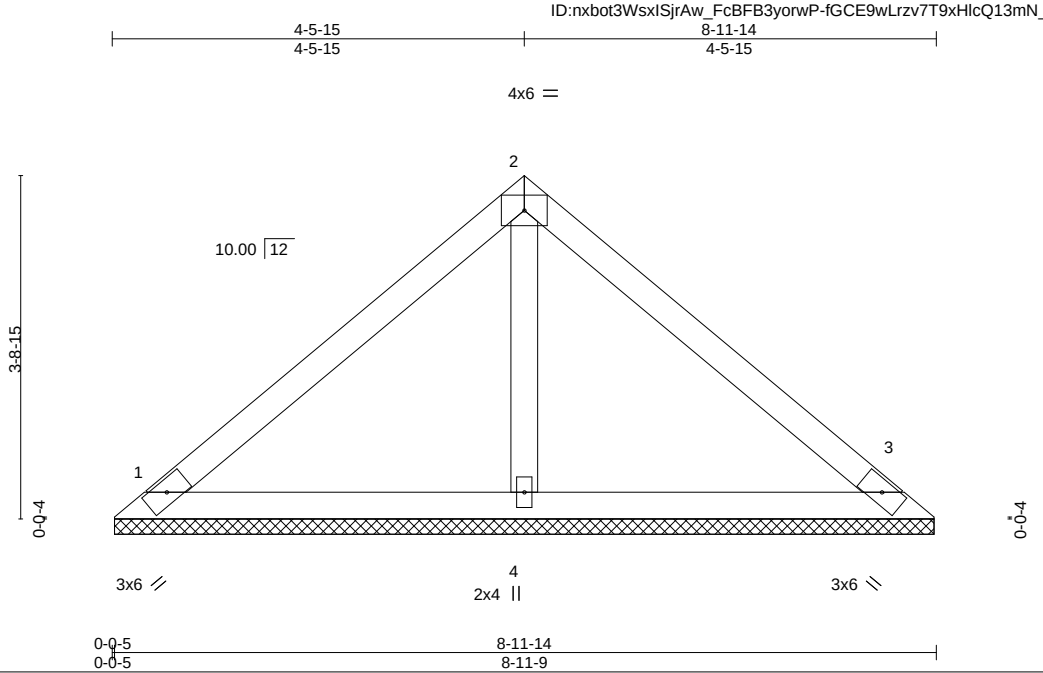

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 34 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.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=8-11-4, 3=8-11-4, 4=8-11-4
Max Horz 1=72(LC 7)
Max Uplift 1=-26(LC 11), 3=-35(LC 11)
Max Grav 1=188(LC 1), 3=188(LC 1), 4=279(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=120mph Vasd=95mph; 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	V5	Valley	1	1	I57060773
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:56 2023 Page 1
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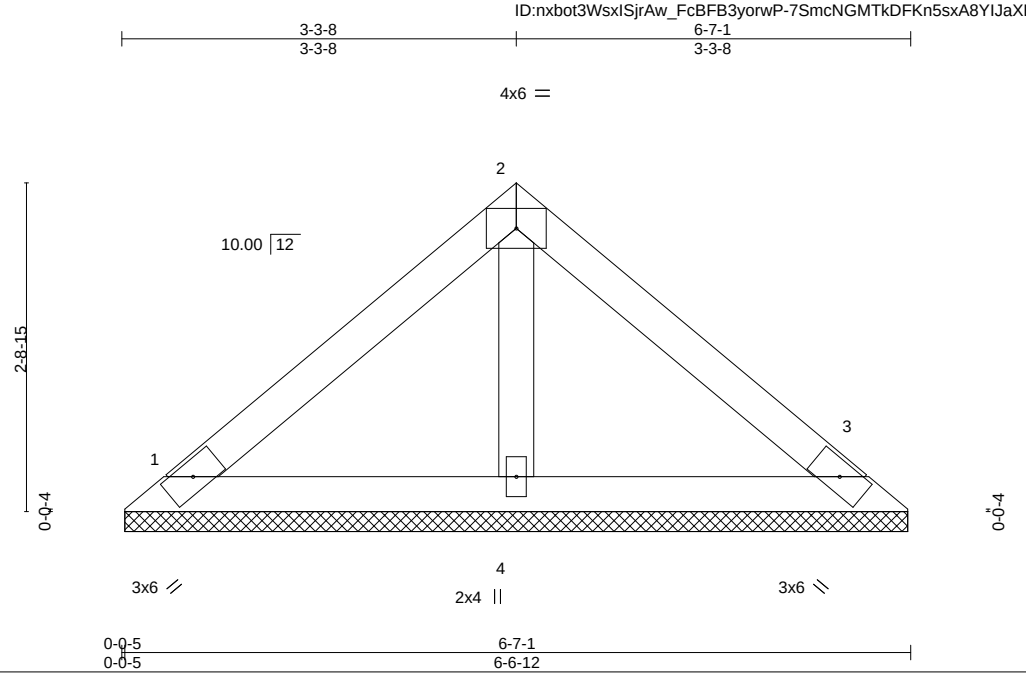

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 24 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 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. (size) 1=6-6-7, 3=6-6-7, 4=6-6-7
Max Horz 1=-51(LC 6)
Max Uplift 1=-18(LC 11), 3=-25(LC 11)
Max Grav 1=133(LC 1), 3=133(LC 1), 4=197(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=120mph Vasd=95mph; 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

March 8,2023

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

Job	Truss	Truss Type	Qty	Ply	56 SERENITY - ROOF
35873-35873A	V6	Valley	1	1	I57060774
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, 8.630 s Nov 19 2022 MiTek Industries, Inc. Wed Mar 8 10:43:57 2023 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-bfK_acN6UWNBPFR7kr3Xso4MZn2twPDK_cy_D8zd?om

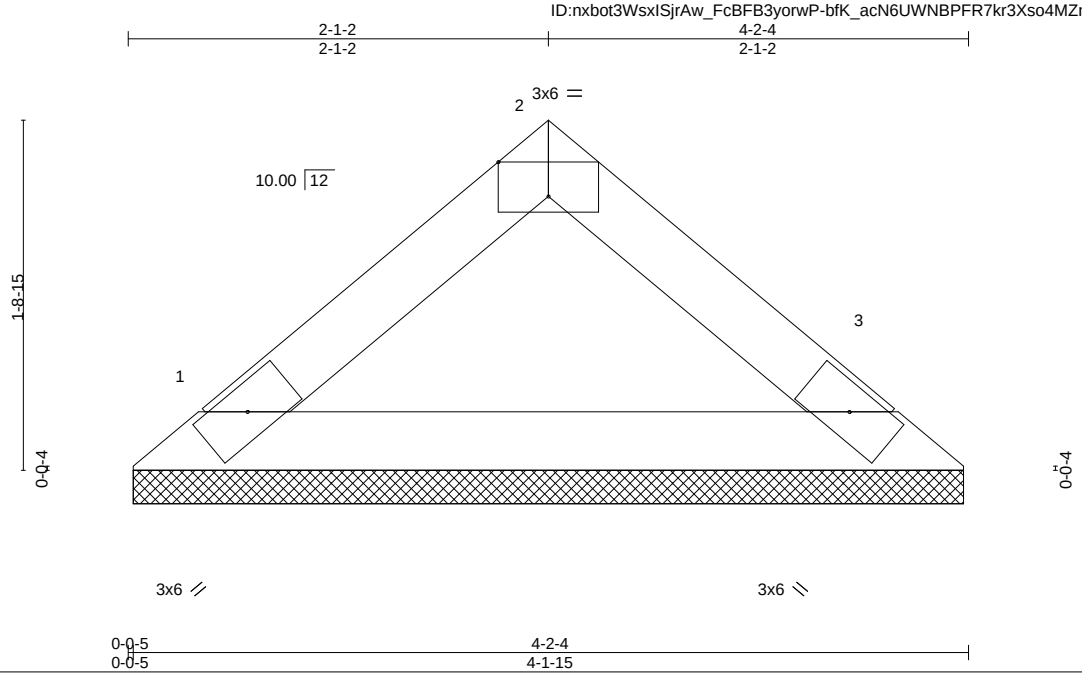

Plate Offsets (X,Y)-- [2:0-3-0,Edge]

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	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: 13 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-2-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=4-1-11, 3=4-1-11
Max Horz 1=30(LC 9)
Max Uplift 1=-5(LC 10), 3=-5(LC 11)
Max Grav 1=135(LC 1), 3=135(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=120mph Vasd=95mph; 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

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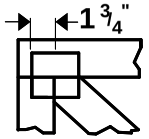
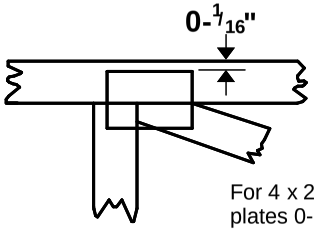
Symbols

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.

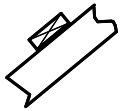
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

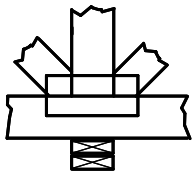
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

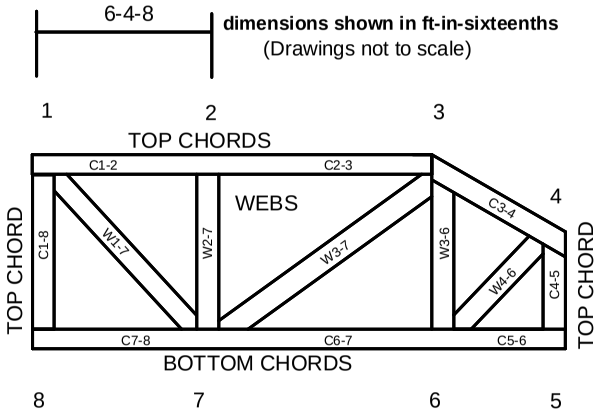


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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 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.