ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 19831-19831A
Aberdeen Vault Master

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: I46666497 thru I46666507

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

North Carolina COA: C-0844

June 22,2021

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	Aberdeen Vault Master
19831-19831A	GE1	GABLE	1	1	I46666497
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:04 2021 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-h5GH_?FuXB3IkixDyPKxBXii6a_euBie3Quxjmz421T

-0-8-0 21-6-0 41-6-0 63-0-0 63-8-0
0-8-0 21-6-0 20-0-0 21-6-0 0-8-0

Scale = 1:108.8

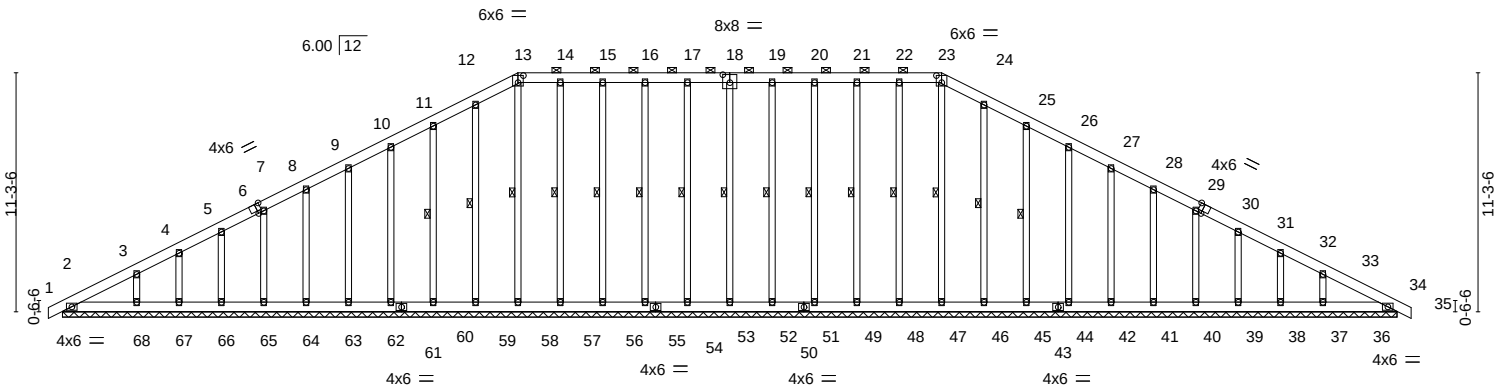

Plate Offsets (X,Y)-- [6:0-2-5,Edge], [13:0-3-0,0-4-0], [18:0-4-0,0-4-8], [23:0-3-0,0-4-0], [30:0-2-5,Edge]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	34	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	35	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	34	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 624 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 13-23.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 18-52, 17-53, 16-55, 15-56, 14-57, 13-58, 12-59, 11-60, 19-51, 20-49, 21-48, 22-47, 23-46, 24-45, 25-44

REACTIONS. All bearings 63-0-0.
(lb) - Max Horz 2=-188(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 52, 53, 55, 56, 59, 60, 62, 63, 64, 65, 66, 67, 68, 51, 49, 48, 45, 44, 42, 41, 40, 39, 38, 37, 36
Max Grav All reactions 250 lb or less at joint(s) 2, 34, 52, 53, 55, 56, 57, 58, 59, 60, 62, 63, 64, 65, 66, 67, 51, 49, 48, 47, 46, 45, 44, 42, 41, 40, 39, 38, 37 except 68=274(LC 21), 36=274(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 12-13=-105/267, 13-14=-93/257, 14-15=-93/257, 15-16=-93/257, 16-17=-93/257, 17-18=-93/257, 18-19=-93/257, 19-20=-93/257, 20-21=-93/257, 21-22=-93/257, 22-23=-93/257, 23-24=-105/267

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 3x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 52, 53, 55, 56, 59, 60, 62, 63, 64, 65, 66, 67, 68, 51, 49, 48, 45, 44, 42, 41, 40, 39, 38, 37, 36.

Continued on page 2

NORTH CAROLINA PROFESSIONAL SEAL 044925 ENGINEER SCOTT M. SEVIER
June 22,2021

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818 Soundside Road
Edenton, NC 27932

NOTES-

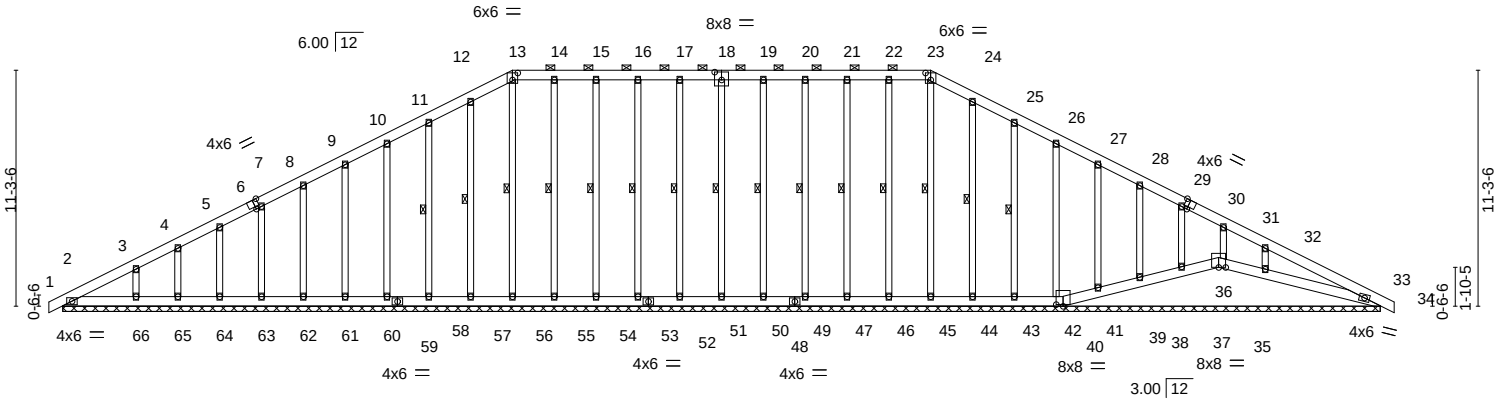
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	GE1V	GABLE	1	1	I46666498
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:07 2021 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-5gyQc0Hmq6Rtb9goeXtepAKBvn_L5YS4mO6bK4z421Q

-0-8-0 21-6-0 41-6-0 55-3-4 63-0-0 63-8-0
0-8-0 21-6-0 20-0-0 13-9-4 7-8-12 0-8-0

Scale = 1:110.2



47-10-0 55-3-4 63-0-0
47-10-0 7-5-4 7-8-12

Plate Offsets (X,Y)-- [6:0-2-5,Edge], [13:0-3-0,0-4-0], [18:0-4-0,0-4-8], [23:0-3-0,0-4-0], [30:0-2-5,Edge], [36:0-4-0,0-0-0], [40:0-0-0,0-2-12], [40:0-4-0,0-1-0], [41:0-1-12,0-0-0]

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	0.14	Vert(LL)	0.00	34	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	0.01	34	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	33	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 615 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 13-23.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 35-36.
WEBS 1 Row at midpt 18-50, 17-51, 16-53, 15-54, 14-55, 13-56, 12-57, 11-58, 19-49, 20-47, 21-46, 22-45, 23-44, 24-43, 25-42

REACTIONS. All bearings 63-0-0.
(lb) - Max Horz 2=188(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 40, 36, 33, 50, 51, 53, 54, 57, 58, 60, 61, 62, 63, 64, 65, 66, 49, 47, 46, 43, 42, 41, 39, 38, 37, 35
Max Grav All reactions 250 lb or less at joint(s) 2, 40, 36, 33, 50, 51, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 49, 47, 46, 45, 44, 43, 42, 41, 39, 38, 37 except 66=274(LC 21), 35=455(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 12-13=-106/268, 13-14=-94/257, 14-15=-94/257, 15-16=-94/257, 16-17=-94/257, 17-18=-94/257, 18-19=-94/257, 19-20=-94/257, 20-21=-94/257, 21-22=-94/257, 22-23=-94/257, 23-24=-106/268
WEBS 32-35=-322/172

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 3x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.

Continued on page 2

NORTH CAROLINA PROFESSIONAL SEAL 044925 ENGINEER SCOTT M. SEVIER
June 22,2021

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818 Soundside Road
Edenton, NC 27932

NOTES-

11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 40, 36, 33, 50, 51, 53, 54, 57, 58, 60, 61, 62, 63, 64, 65, 66, 49, 47, 46, 43, 42, 41, 39, 38, 37, 35.
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 36, 39, 38, 37, 35.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	PB1	GABLE	19	1	I46666499
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:09 2021 Page 1
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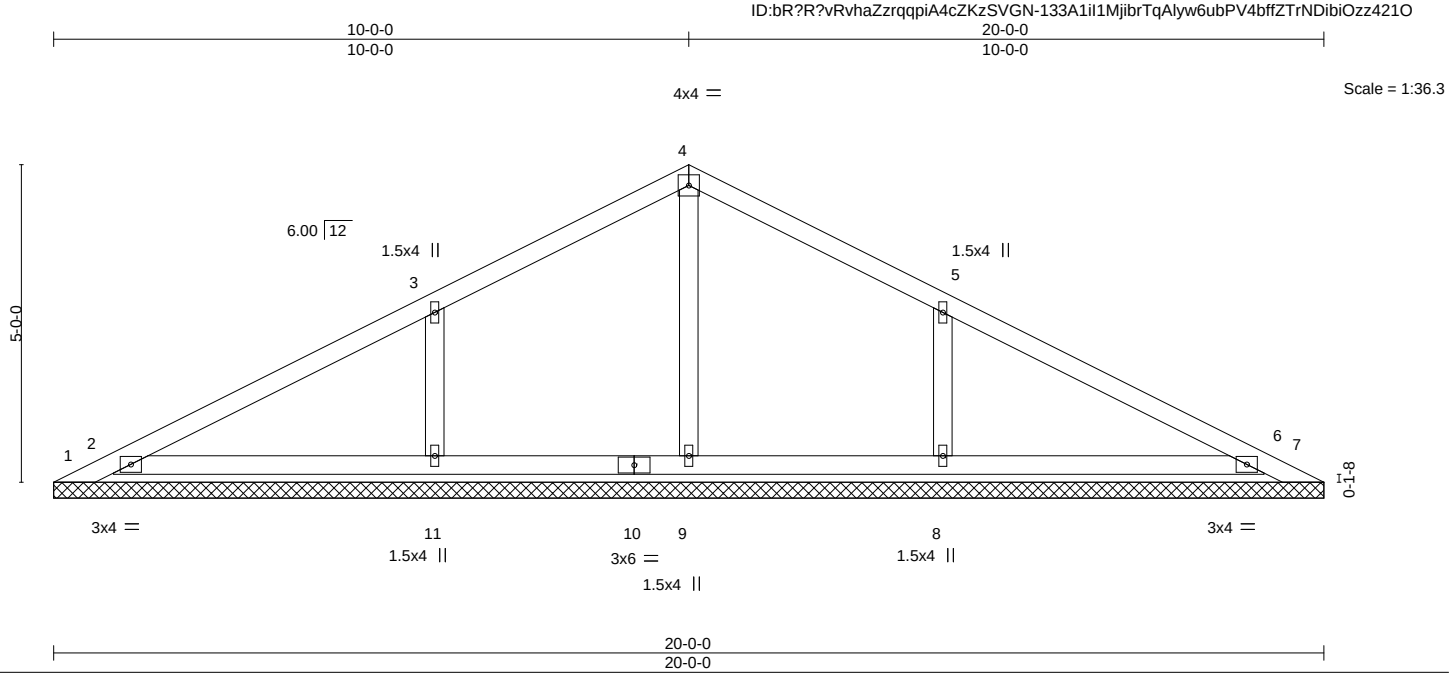

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 73 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 20-0-0.
(lb) - Max Horz 1=-82(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 11, 8, 6 except 1=-207(LC 17), 7=-187(LC 1)
Max Grav All reactions 250 lb or less at joint(s) 1, 7, 9 except 2=442(LC 1), 11=401(LC 21), 8=401(LC 22), 6=442(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-11=-298/162, 5-8=-298/162

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 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, 11, 8, 6 except (jt=lb) 1=207, 7=187.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

June 22,2021

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	PB1GE	GABLE	2	1	I46666500
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:11 2021 Page 1
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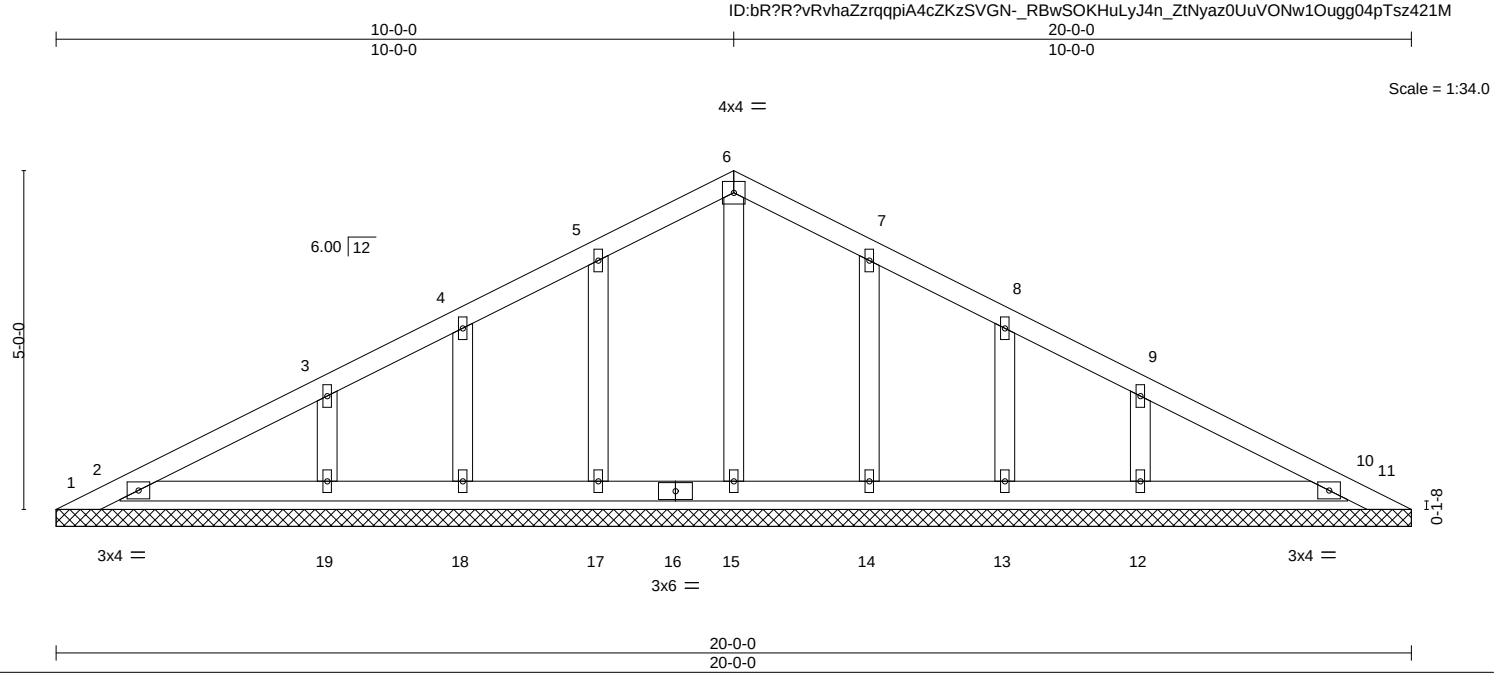

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 87 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 20-0-0.
(lb) - Max Horz 1=-82(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 1, 11, 2, 17, 10, 18, 19, 14, 13, 12
Max Grav All reactions 250 lb or less at joint(s) 1, 11, 2, 15, 17, 10, 18, 19, 14, 13, 12

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 1.5x4 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) 1, 11, 2, 17, 10, 18, 19, 14, 13, 12.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

June 22,2021

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TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	RGE1	GABLE	1	1	I46666501
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:12 2021 Page 1
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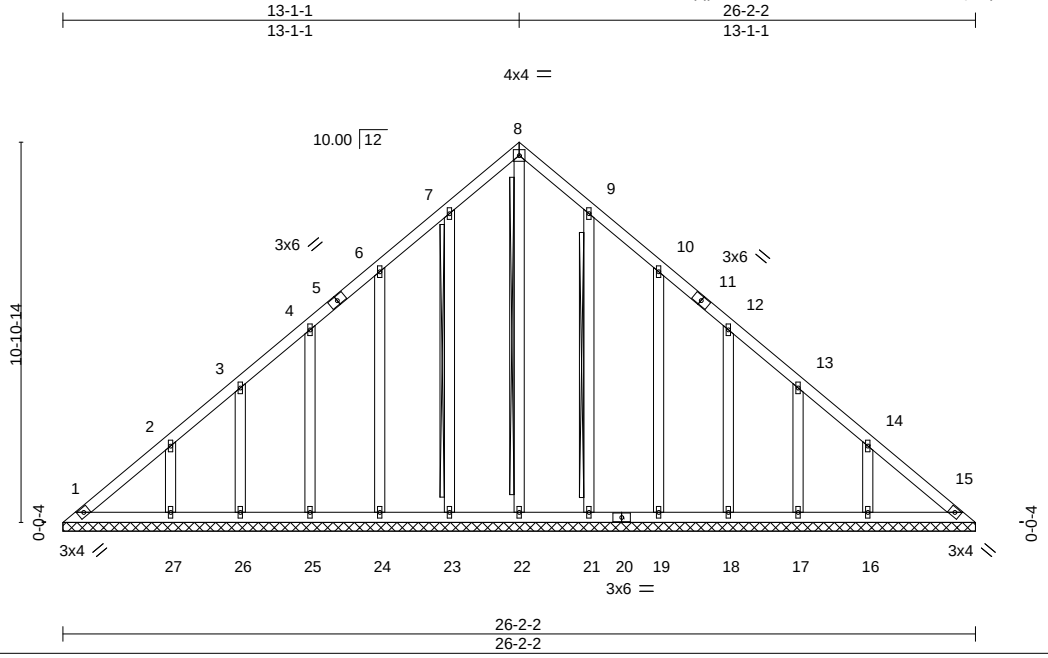


Plate Offsets (X,Y)-- [9:0-0-0,0-0-0], [10:0-0-0,0-0-0], [11:0-0-0,0-0-0], [12:0-0-0,0-0-0], [13:0-0-0,0-0-0], [14:0-0-0,0-0-0]

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	15	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 183 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.
WEBS T-Brace: 2x4 SP No.3 - 8-22, 7-23, 9-21
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS. All bearings 26-2-2.
(lb) - Max Horz 1=-217(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 1, 23, 24, 25, 26, 27, 21, 19, 18, 17, 16, 15
Max Grav All reactions 250 lb or less at joint(s) 1, 22, 23, 24, 25, 26, 27, 21, 19, 18, 17, 16, 15

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 1.5x4 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.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 23, 24, 25, 26, 27, 21, 19, 18, 17, 16, 15.
8) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

June 22,2021

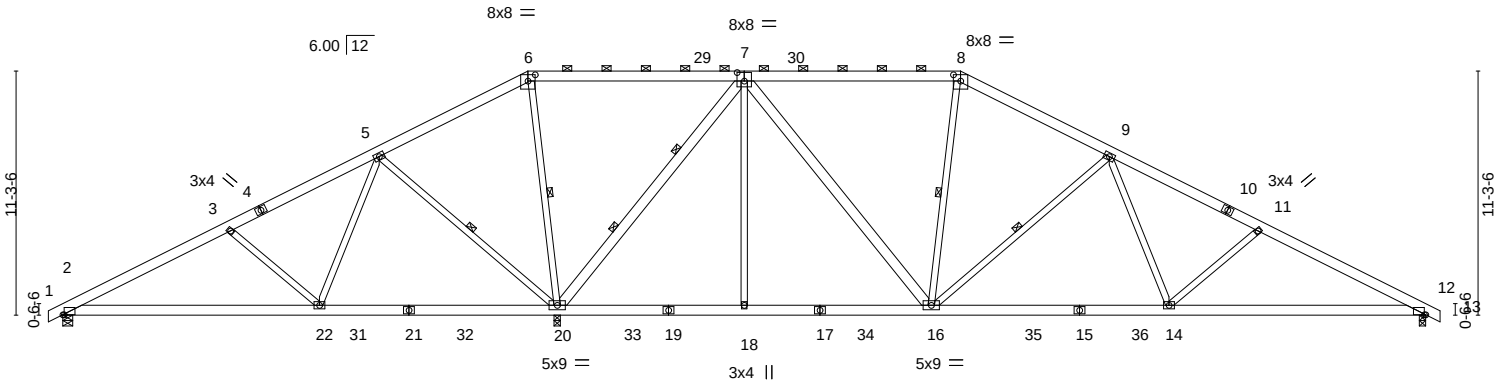
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	T1	Common	4	1	I46666502
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:14 2021 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-O0t34PM9AGKtxEi8YVVHbe6EicEIEYp6N_JT3Az421J

-0-8-0	7-9-0	14-7-8	21-6-0	31-6-0	41-6-0	48-4-8	55-3-0	63-0-0	63-8-0
0-8-0	7-9-0	6-10-8	6-10-8	10-0-0	10-0-0	6-10-8	6-10-8	7-9-0	0-8-0

Scale = 1:106.5



11-10-6	22-10-4	31-6-0	40-1-12	51-1-10	63-0-0
11-10-6	10-11-14	8-7-12	8-7-12	10-11-14	11-10-6

Plate Offsets (X,Y)-- [2:0-0-12,0-0-0], [6:0-4-0,0-3-8], [7:0-4-0,0-4-12], [8:0-4-0,0-3-8], [12:0-0-12,0-0-0]

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	0.81	Vert(LL)	-0.16	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.27	14-16	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.04	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 489 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
7-20,7-16: 2x6 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-3-12 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-20, 6-20, 8-16, 9-16
2 Rows at 1/3 pts 7-20

REACTIONS. (size) 2=0-5-8, 20=0-3-8 (req. 0-5-9), 12=0-3-8
Max Horz 2=-188(LC 10)
Max Uplift 2=-37(LC 12), 20=-164(LC 12), 12=-82(LC 12)
Max Grav 2=520(LC 21), 20=3564(LC 17), 12=1385(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-483/368, 3-5=-144/503, 5-6=-49/1287, 6-7=0/1193, 7-8=-944/287, 8-9=-1122/282, 9-11=-2106/346, 11-12=-2401/390
BOT CHORD 2-22=-283/396, 20-22=-569/190, 18-20=0/338, 16-18=0/338, 14-16=-75/1538, 12-14=-247/2099
WEBS 3-22=-482/226, 5-22=-17/705, 5-20=-896/248, 6-20=-986/185, 7-20=-2286/320, 7-18=0/440, 7-16=-124/1074, 9-16=-894/248, 9-14=-14/685, 11-14=-461/223

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 4x6 MT20 unless otherwise indicated.
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) WARNING: Required bearing size at joint(s) 20 greater than input bearing size.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12 except (jt=lb) 20=164.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

June 22,2021

ENGINEERING BY
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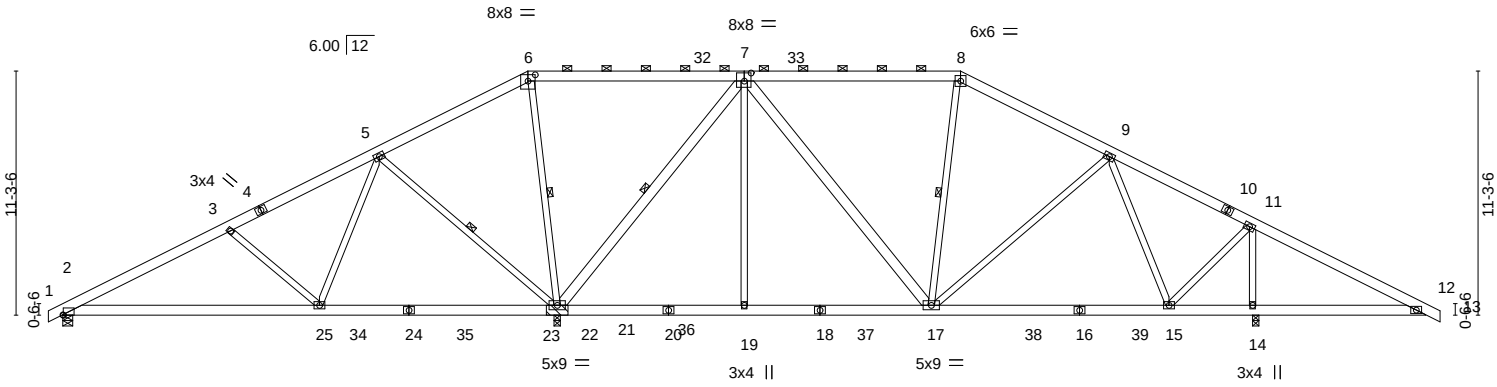
Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	T1A	COMMON	5	1	I46666503
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:15 2021 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-sDRRHlNoxZSkZOHK6D0W8sfQc0d4z_hFbe20cdz421I

-0-8-0	7-9-0	14-7-8	21-6-0	31-6-0	41-6-0	48-4-8	55-3-0	63-0-0	63-8-0
0-8-0	7-9-0	6-10-8	6-10-8	10-0-0	10-0-0	6-10-8	6-10-8	7-9-0	0-8-0

Scale = 1:106.5



11-10-6	22-10-4	31-6-0	40-1-12	51-1-10	55-3-8	63-0-0
11-10-6	10-11-14	8-7-12	8-7-12	10-11-14	4-1-14	7-8-8

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

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	0.74	Vert(LL)	-0.11	22-25	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.21	25-28	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.02	14	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 497 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3 *Except* 7-22,7-17: 2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-22, 6-22, 7-22, 8-17

REACTIONS. (size) 2=0-5-8, 22=0-3-8 (req. 0-4-9), 14=0-3-8
Max Horz 2=188(LC 11)
Max Uplift 2=-49(LC 12), 22=-123(LC 12), 14=-111(LC 12)
Max Grav 2=651(LC 21), 22=2921(LC 17), 14=1894(LC 22)

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	2-3=-771/178, 3-5=-433/133, 5-6=0/831, 6-7=0/760, 7-8=-655/192, 8-9=-811/180, 9-11=-492/64, 11-12=-362/763
BOT CHORD	2-25=-55/659, 19-22=0/431, 17-19=0/431, 15-17=0/541, 14-15=-578/398, 12-14=-578/398
WEBS	3-25=-477/226, 5-25=-17/701, 5-22=-895/248, 6-22=-765/151, 7-22=-1651/188, 7-19=0/439, 7-17=0/441, 9-15=-755/278, 11-15=-139/1189, 11-14=-1701/418

NOTES-

1) 2x6 SP No.2 bearing block 12" long at jt. 22 attached to front face with 3 rows of 10d (0.120"x3") nails spaced 3" o.c. 12 Total fasteners. User Defined Bearing crushing capacity= 425psi.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 4x6 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
9) WARNING: Required bearing size at joint(s) 22 greater than input bearing size.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 22=123, 14=111.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

June 22,2021

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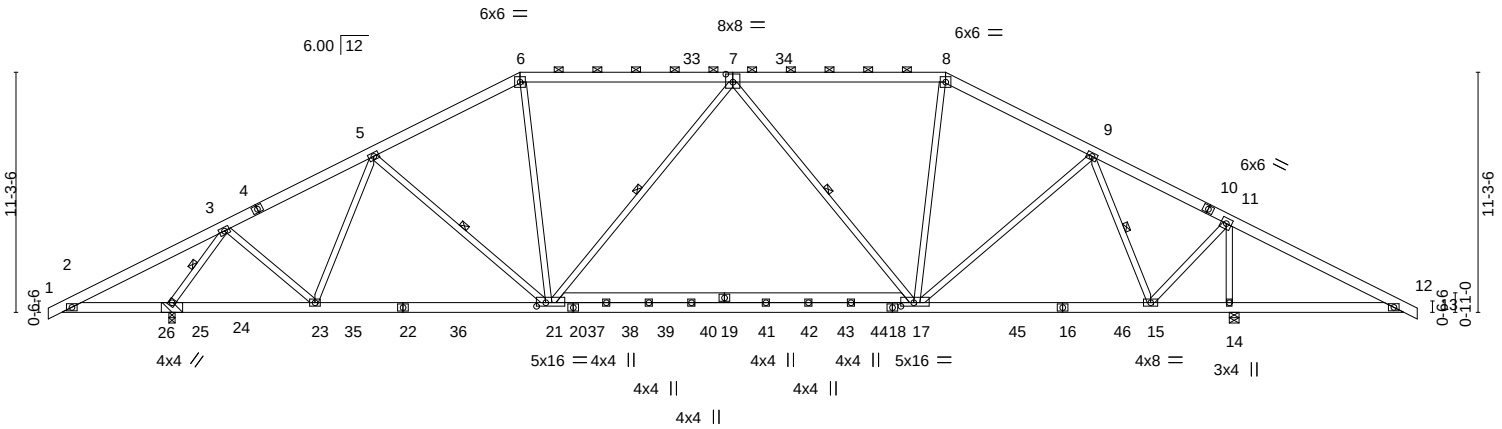
Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	T1B	ROOF TRUSS	3	1	I46666504
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:19 2021 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-I_gy77QI?oyA1?b5L25Sliq65dvXvo6rWF0ElOz421E

-0-8-0	7-9-0	14-7-8	21-6-0	31-6-0	41-6-0	48-4-8	55-3-0	63-0-0	63-8-0
0-8-0	7-9-0	6-10-8	6-10-8	10-0-0	10-0-0	6-10-8	6-10-8	7-9-0	0-8-0

Scale = 1:108.3



5-0-0	11-10-6	22-10-4	31-6-0	40-1-12	51-1-10	55-3-8	63-0-0
5-0-0	6-10-6	10-11-14	8-7-12	8-7-12	10-11-14	4-1-14	7-8-8

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.33	17-21	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.58	17-21	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.08	14	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 504 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2 *Except* 16-18,20-22: 2x6 SP DSS
WEBS	2x4 SP No.3 *Except* 7-21,7-17: 2x4 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-7-9 oc purlins, except 2-0-0 oc purlins (4-5-0 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-21, 7-21, 7-17, 9-15, 3-25

REACTIONS. (size) 14=0-5-8, 25=0-3-8 (req. 0-3-13)
Max Horz 25=188(LC 11)
Max Uplift 14=-146(LC 12), 25=-226(LC 12)
Max Grav 14=2772(LC 58), 25=2433(LC 51)

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	2-3=-296/590, 3-5=-2235/274, 5-6=-2436/370, 6-7=-2198/372, 7-8=-1928/317, 8-9=-2150/311, 9-11=-1051/94, 11-12=-369/765
BOT CHORD	2-25=-438/337, 23-25=0/1276, 21-23=-59/2208, 17-21=-43/2340, 15-17=0/1339, 14-15=-578/406, 12-14=-578/406
WEBS	3-23=-42/1033, 5-23=-569/155, 6-21=0/665, 7-21=-360/113, 7-17=-704/207, 8-17=0/566, 9-17=-42/755, 9-15=-1468/341, 11-15=-239/1944, 11-14=-2546/529, 3-25=-2681/539

NOTES-

1) 2x6 SP No.2 bearing block 12" long at jt. 25 attached to front face with 3 rows of 10d (0.120"x3") nails spaced 3" o.c. 12 Total fasteners. User Defined Bearing crushing capacity= 425psi.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 4x6 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
9) WARNING: Required bearing size at joint(s) 25 greater than input bearing size.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=146, 25=226.

Continued on page 2

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NOTES-

11) Load case(s) 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
12) MULTIPLE LOADCASES – This design is the composite result of multiple load cases.
13) User moving load cases exist: Review the load cases for details.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.
16) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard Except:

50) Reversal: User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-30=-20(F)
51) Reversal: 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 21-27=-20(F), 21-37=-50(F=-20), 30-37=-20(F)
52) Reversal: 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-37=-20(F), 37-39=-50(F=-20), 30-39=-20(F)
53) Reversal: 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-39=-20(F), 39-40=-50(F=-20), 30-40=-20(F)
54) Reversal: 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-40=-20(F), 19-40=-50(F=-20), 19-30=-20(F)
55) Reversal: 5th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 19-27=-20(F), 19-41=-50(F=-20), 30-41=-20(F)
56) Reversal: 6th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-41=-20(F), 41-42=-50(F=-20), 30-42=-20(F)
57) Reversal: 7th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-42=-20(F), 42-43=-50(F=-20), 30-43=-20(F)
58) Reversal: 8th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-43=-20(F), 18-43=-50(F=-20), 18-30=-20(F)
59) Reversal: 9th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-44=-20(F), 17-44=-50(F=-20), 17-30=-20(F)
60) User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-30=-20(F)
61) 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 21-27=-20(F), 21-37=-50(F=-20), 30-37=-20(F)
62) 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-37=-20(F), 37-39=-50(F=-20), 30-39=-20(F)
63) 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-39=-20(F), 39-40=-50(F=-20), 30-40=-20(F)
64) 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-40=-20(F), 19-40=-50(F=-20), 19-30=-20(F)
65) 5th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 19-27=-20(F), 19-41=-50(F=-20), 30-41=-20(F)
66) 6th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-41=-20(F), 41-42=-50(F=-20), 30-42=-20(F)
67) 7th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-42=-20(F), 42-43=-50(F=-20), 30-43=-20(F)
68) 8th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-43=-20(F), 18-43=-50(F=-20), 18-30=-20(F)
69) 9th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 27-44=-20(F), 17-44=-50(F=-20), 17-30=-20(F)

Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	T1CV	ROOF TRUSS	2	1	I46666505
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:22 2021 Page 1
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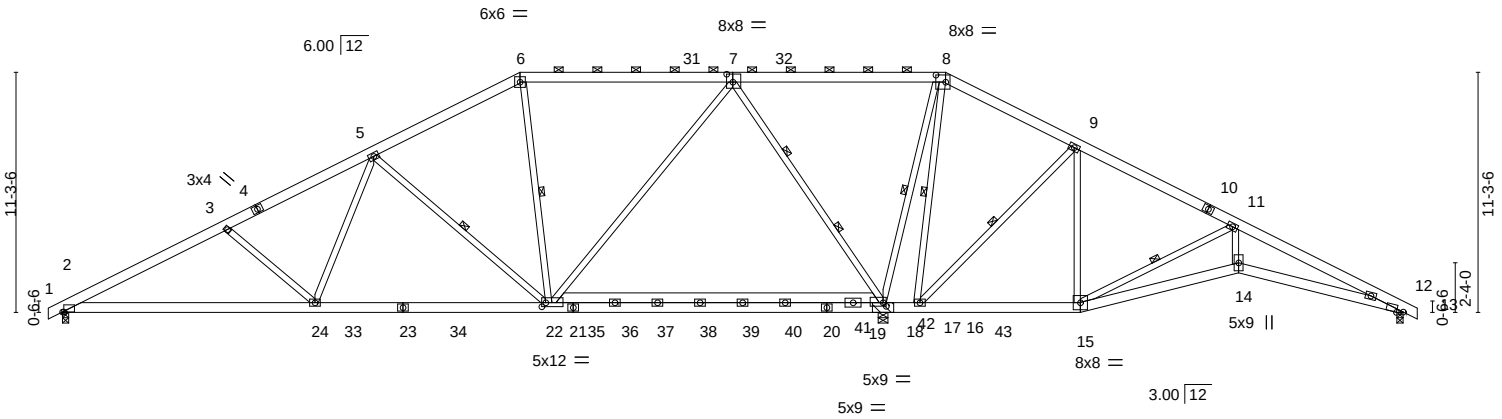
-0-8-0 7-9-0 14-7-8 21-6-0 31-6-0 41-6-0 47-10-0 55-3-4 63-0-0 63-8-0
0-8-0 7-9-0 6-10-8 6-10-8 10-0-0 10-0-0 6-4-0 7-5-4 7-8-12 0-8-0

Scale = 1:108.3



11-10-6 22-10-4 31-6-0 38-4-0 40-1-12 47-10-0 55-3-4 63-0-0
11-10-6 10-11-14 8-7-12 6-10-0 38-6-12 0-2-12 1-7-0 7-8-4 7-5-4 7-8-12

Plate Offsets (X,Y)-- [2:0-0-12,0-0-0], [7:0-3-8,0-4-8], [8:0-5-8,0-4-0], [12:0-3-11,Edge], [18:0-1-12,0-2-0], [22:0-1-12,0-0-0], [22:0-2-4,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.14	18-22	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.26	24-27	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.05	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 511 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2 *Except* 15-20,20-21: 2x6 SP DSS
WEBS	2x4 SP No.3 *Except* 7-22: 2x4 SP No.2, 7-18: 2x4 SP No.1

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-5-1 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 2-24,22-24.
WEBS	1 Row at midpt 5-22, 9-16, 11-15, 6-22, 8-16, 8-18 2 Rows at 1/3 pts 7-18

REACTIONS. (size) 2=0-3-8, 12=0-3-8, 18=0-5-8 (req. 0-5-11)
Max Horz 2=-188(LC 10)
Max Uplift 2=-80(LC 12), 12=-44(LC 12), 18=-159(LC 12)
Max Grav 2=1332(LC 22), 12=476(LC 23), 18=3620(LC 58)

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	2-3=-2266/363, 3-5=-1933/318, 5-6=-1005/244, 6-7=-831/252, 7-8=-18/1331, 8-9=-26/1249, 9-11=0/578, 11-12=-744/170
BOT CHORD	2-24=-217/1997, 22-24=-44/1436, 18-22=-416/221, 16-18=-1053/344, 15-16=-442/198, 14-15=-141/630, 12-14=-122/670
WEBS	3-24=-464/222, 5-24=-23/667, 5-22=-880/255, 7-22=-91/1364, 7-18=-1983/381, 9-16=-913/232, 9-15=-13/588, 11-15=-1024/193, 11-14=0/479, 8-18=-1201/300

NOTES-

1) 2x6 SP DSS bearing block 12" long at jt. 18 attached to front face with 3 rows of 10d (0.120"x3") nails spaced 3" o.c. 12 Total fasteners. User Defined Bearing crushing capacity= 425psi.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 4x6 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
9) WARNING: Required bearing size at joint(s) 18 greater than input bearing size.
10) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

Continued on page 2

June 22,2021

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

NOTES-

11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12 except (jt=lb) 18=159.
12) Load case(s) 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
13) MULTIPLE LOADCASES – This design is the composite result of multiple load cases.
14) User moving load cases exist: Review the load cases for details.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
16) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.
17) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard Except:

50) Reversal: User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
51) Reversal: 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 22-34=-20(F), 22-35=-50(F=-20), 35-36=-20(F), 36-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
52) Reversal: 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-35=-20(F), 35-36=-50(F=-20), 36-37=-80(F=-50), 37-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
53) Reversal: 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-37=-50(F), 37-38=-80(F=-50), 38-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
54) Reversal: 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-38=-50(F), 38-39=-80(F=-50), 39-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
55) Reversal: 5th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-39=-50(F), 39-40=-80(F=-50), 40-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
56) Reversal: 6th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-40=-50(F), 40-41=-80(F=-50), 41-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
57) Reversal: 7th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-41=-50(F), 41-42=-80(F=-50), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
58) Reversal: 8th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-42=-50(F), 17-42=-50(F=-20), 17-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
59) Reversal: 9th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-42=-50(F), 19-42=-20(F), 16-19=-50(F=-20), 16-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
60) User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
61) 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 22-34=-20(F), 22-35=-50(F=-20), 35-36=-20(F), 36-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
62) 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-35=-20(F), 35-36=-50(F=-20), 36-37=-80(F=-50), 37-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
63) 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-37=-50(F), 37-38=-80(F=-50), 38-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
64) 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-38=-50(F), 38-39=-80(F=-50), 39-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
65) 5th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-39=-50(F), 39-40=-80(F=-50), 40-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)
66) 6th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15

Continued on page 3

LOAD CASE(S)

Uniform Loads (plf)

Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-40=-50(F), 40-41=-80(F=-50), 41-42=-50(F), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)

67) 7th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-41=-50(F), 41-42=-80(F=-50), 42-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)

68) 8th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-42=-50(F), 17-42=-50(F=-20), 17-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)

69) 9th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

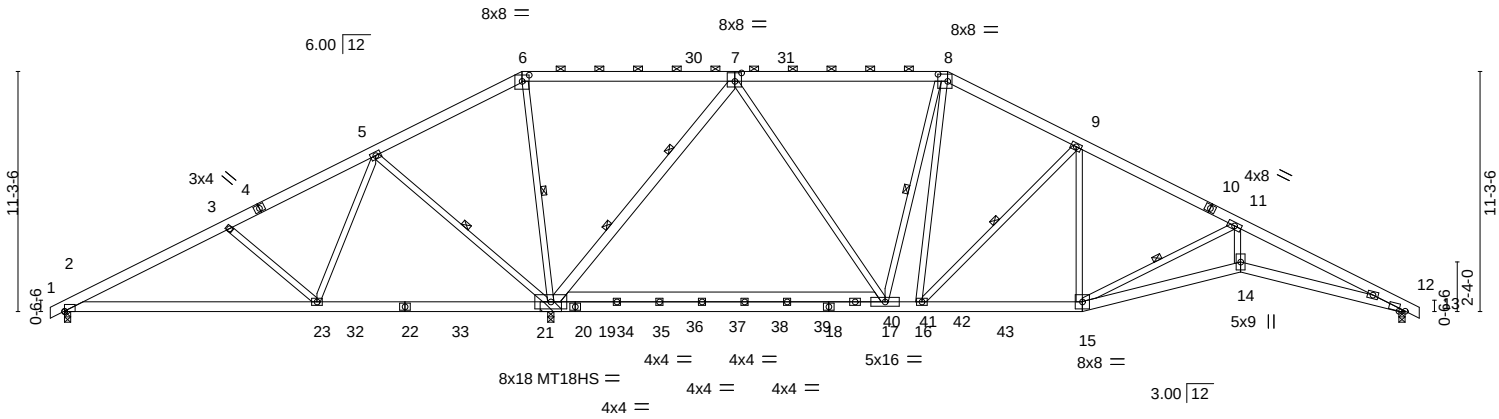
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 25-33=-20(F), 33-34=-50(F), 34-36=-20(F), 36-42=-50(F), 19-42=-20(F), 16-19=-50(F=-20), 16-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-28=-20(F)

Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	T1CVA	ROOF TRUSS	1	1	I46666506
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:26 2021 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-2KbbbWWhMyrAN4dRF0j54AcFcRG52yAt7rD5VUz4217

-0-8-0	7-9-0	14-7-8	21-6-0	31-6-0	41-6-0	47-10-0	55-3-4	63-0-0	63-8-0
0-8-0	7-9-0	6-10-8	6-10-8	10-0-0	10-0-0	6-4-0	7-5-4	7-8-12	0-8-0

Scale = 1:108.3



11-10-6	22-8-8	22-10-4	31-6-0	38-6-12	40-1-12	47-10-0	55-3-4	63-0-0
11-10-6	10-10-2	0-1-12	8-7-12	7-0-12	1-7-0	7-8-4	7-5-4	7-8-12

Plate Offsets (X,Y)-- [2:0-0-0,0-0-4], [6:0-4-0,0-3-8], [7:0-3-12,0-4-12], [8:0-5-8,0-4-0], [12:0-3-7,0-0-13]

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	0.94	Vert(LL)	-0.20	14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.40	14-15	>999	180	MT18HS	244/190
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.13	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 522 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
7-20: 2x6 SP No.2, 7-17: 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-6-0 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 5-20, 9-16, 11-15, 6-20, 8-17
2 Rows at 1/3 pts 7-20

REACTIONS. (size) 2=0-3-8, 12=0-3-8, 20=0-3-8 (req. 0-4-13)
Max Horz 2=188(LC 11)
Max Uplift 2=-349(LC 23), 12=-74(LC 12), 20=-185(LC 12)
Max Grav 2=319(LC 22), 12=1176(LC 23), 20=4053(LC 54)

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 2-3=-39/1174, 3-5=-86/1312, 5-6=-161/2021, 6-7=-98/1893, 7-8=-425/203, 8-9=-627/229, 9-11=-1314/269, 11-12=-3576/472
BOT CHORD 2-23=-1001/104, 20-23=-1292/282, 17-20=-477/252, 16-17=0/531, 15-16=0/1085, 14-15=-332/3133, 12-14=-338/3254
WEBS 3-23=-491/226, 5-23=-27/682, 5-20=-875/255, 7-20=-2333/405, 7-17=-81/1482, 9-16=-925/232, 9-15=-7/553, 11-15=-2204/356, 11-14=-84/1676, 6-20=-1333/235, 8-16=-151/427, 8-17=-666/222

NOTES-
1) 2x6 SP No.2 bearing block 12" long at jt. 20 attached to front face with 3 rows of 10d (0.120"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SP No.2.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) All plates are 4x6 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
10) WARNING: Required bearing size at joint(s) 20 greater than input bearing size.
11) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

Continued on page 2

NORTH CAROLINA PROFESSIONAL
Scott Sevier
SEAL 044925
ENGINEER
SCOTT M. SEVIER

June 22,2021

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

NOTES-

12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12 except (jt=lb) 2=349, 20=185.
13) Load case(s) 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
14) MULTIPLE LOADCASES – This design is the composite result of multiple load cases.
15) User moving load cases exist: Review the load cases for details.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.
18) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard Except:

50) Reversal: User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
51) Reversal: 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 20-33=-20(F), 20-34=-50(F=-20), 34-35=-20(F), 35-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
52) Reversal: 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-34=-20(F), 34-35=-50(F=-20), 35-36=-80(F=-50), 36-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
53) Reversal: 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-36=-50(F), 36-37=-80(F=-50), 37-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
54) Reversal: 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-37=-50(F), 37-38=-80(F=-50), 38-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
55) Reversal: 5th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-38=-50(F), 38-39=-80(F=-50), 39-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
56) Reversal: 6th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-39=-50(F), 39-40=-80(F=-50), 40-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
57) Reversal: 7th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-40=-50(F), 40-41=-80(F=-50), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
58) Reversal: 8th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-41=-50(F), 17-41=-50(F=-20), 17-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
59) Reversal: 9th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-41=-50(F), 41-42=-20(F), 16-42=-50(F=-20), 16-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
60) User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
61) 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 20-33=-20(F), 20-34=-50(F=-20), 34-35=-20(F), 35-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
62) 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-34=-20(F), 34-35=-50(F=-20), 35-36=-80(F=-50), 36-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
63) 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-36=-50(F), 36-37=-80(F=-50), 37-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
64) 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-37=-50(F), 37-38=-80(F=-50), 38-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
65) 5th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-38=-50(F), 38-39=-80(F=-50), 39-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)
66) 6th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15

Continued on page 3

LOAD CASE(S)

Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-39=-50(F), 39-40=-80(F=-50), 40-41=-50(F), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)

67) 7th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-40=-50(F), 40-41=-80(F=-50), 41-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)

68) 8th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-41=-50(F), 17-41=-50(F=-20), 17-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)

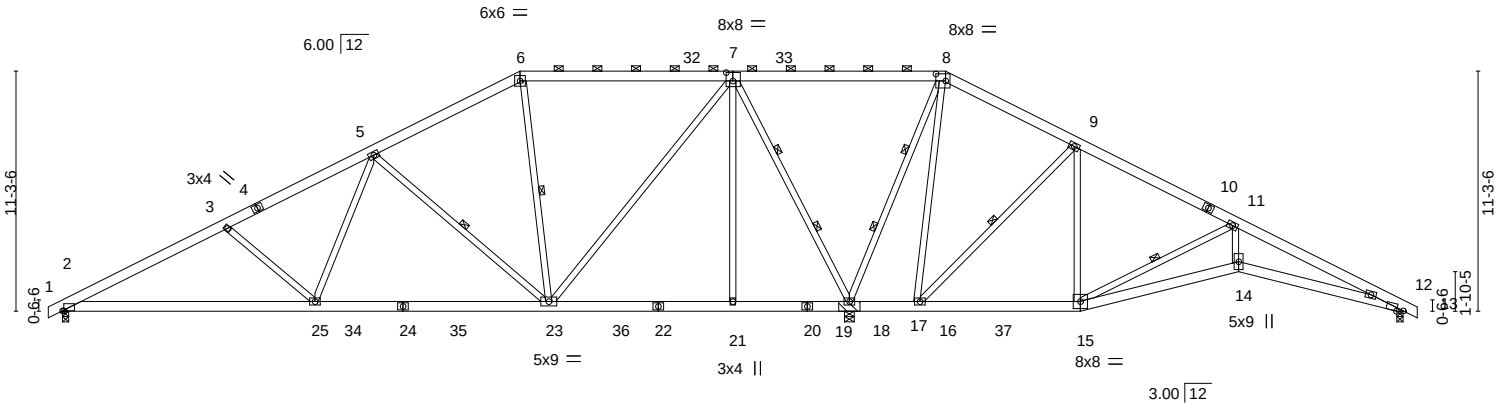
69) 9th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-50(F), 6-8=-50(F), 8-13=-50(F), 24-32=-20(F), 32-33=-50(F), 33-35=-20(F), 35-41=-50(F), 41-42=-20(F), 16-42=-50(F=-20), 16-43=-20(F), 15-43=-50(F), 14-15=-20(F), 14-27=-20(F)

Job	Truss	Truss Type	Qty	Ply	Aberdeen Vault Master
19831-19831A	T1V	COMMON	4	1	I46666507
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.330 s Oct 7 2020 MiTek Industries, Inc. Mon Jun 21 13:49:27 2021 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-WW9_psWJ7Fz1?ECepkEKdO9RTrh0nP_0MVyf1wz4216

-0-8-0	7-9-0	14-7-8	21-6-0	31-6-0	41-6-0	47-10-0	55-3-4	63-0-0	63-8-0
0-8-0	7-9-0	6-10-8	6-10-8	10-0-0	10-0-0	6-4-0	7-5-4	7-8-12	0-8-0

Scale = 1:108.3



11-10-6	22-10-4	31-6-0	36-9-0	40-1-12	47-10-0	55-3-4	63-0-0
11-10-6	10-11-14	8-7-12	5-3-0	3-2-12	7-8-4	7-5-4	7-8-12

Plate Offsets (X,Y)-- [2:0-0-12,0-0-0], [7:0-3-12,0-4-12], [8:0-5-8,0-4-0], [12:0-3-11,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	0.87	Vert(LL)	-0.15	23-25	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.25	23-25	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.05	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 491 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3 *Except*
	7-23: 2x4 SP No.2, 7-18: 2x4 SP No.1

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-7-10 oc purlins, except
	2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-23, 9-16, 11-15, 6-23
	2 Rows at 1/3 pts 7-18, 8-18

REACTIONS. (size) 2=0-3-8, 12=0-3-8, 18=0-5-8 (req. 0-5-9)
Max Horz 2=-188(LC 10)
Max Uplift 2=-77(LC 12), 12=-49(LC 12), 18=-157(LC 12)
Max Grav 2=1247(LC 21), 12=556(LC 22), 18=3556(LC 18)

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

TOP CHORD	2-3=-2081/336, 3-5=-1748/291, 5-6=-810/225, 6-7=-638/234, 7-8=-9/1427, 8-9=0/1061, 9-11=0/405, 11-12=-1067/136
BOT CHORD	2-25=-194/1821, 23-25=-22/1265, 21-23=-500/272, 18-21=-500/272, 16-18=-794/322, 15-16=-299/171, 14-15=-34/916, 12-14=-31/966
WEBS	3-25=-466/224, 5-25=-15/687, 5-23=-895/249, 7-23=-155/1361, 7-18=-2183/313, 9-16=-907/229, 9-15=-8/578, 11-15=-1160/216, 11-14=0/617, 6-23=-274/79, 8-16=-72/741, 7-21=0/375, 8-18=-1659/239

NOTES-

1) 2x6 SP No.2 bearing block 12" long at jt. 18 attached to front face with 3 rows of 10d (0.120"x3") nails spaced 3" o.c. 12 Total fasteners. User Defined Bearing crushing capacity= 425psi.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 4x6 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
9) WARNING: Required bearing size at joint(s) 18 greater than input bearing size.
10) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

Continued on page 2

June 22,2021

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

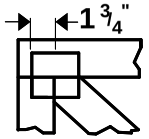
NOTES-

11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12 except (jt=lb) 18=157.

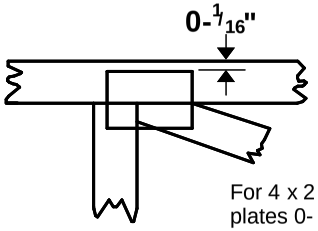
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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.

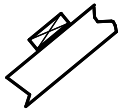
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

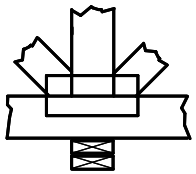
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

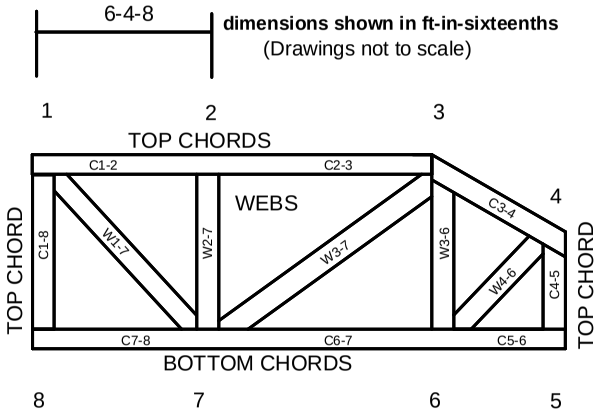


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.