ENGINEERING BY TRENCO
A MiTek Affiliate

RE: Winston B Vault Master
Winston B Vault Master

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: D.R. HORTON - RAL - 055 Project Name: Winston B Vault Master
Lot/Block: Model: WINSTON / B Vault Master
Address: Subdivision:
City: FUQUAY-VARINA State: NC

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.5
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 15 individual, dated Truss Design Drawings and 0 Additional Drawings.

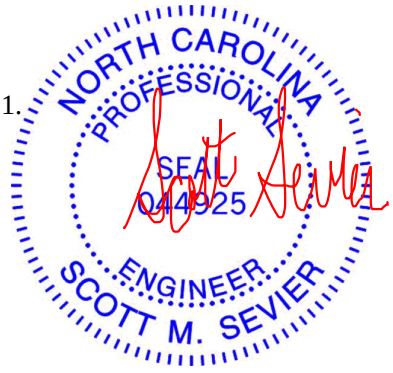
No.	Seal#	Truss Name	Date
1	I47933871	A	9/17/2021
2	I47933872	A1	9/17/2021
3	I47933873	A2	9/17/2021
4	I47933874	A3	9/17/2021
5	I47933875	A4	9/17/2021
6	I47933876	A4A	9/17/2021
7	I47933877	A5	9/17/2021
8	I47933878	A5E	9/17/2021
9	I47933879	AE	9/17/2021
10	I47933880	B	9/17/2021
11	I47933881	BE	9/17/2021
12	I47933882	BGR	9/17/2021
13	I47933883	C	9/17/2021
14	I47933884	CE	9/17/2021
15	I47933885	D	9/17/2021

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

Truss Design Engineer's Name: Sevier, Scott

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

North Carolina COA: C-0844



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

September 17, 2021

Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	A	Hip	1	1	I47933871
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:14 2021 Page 1
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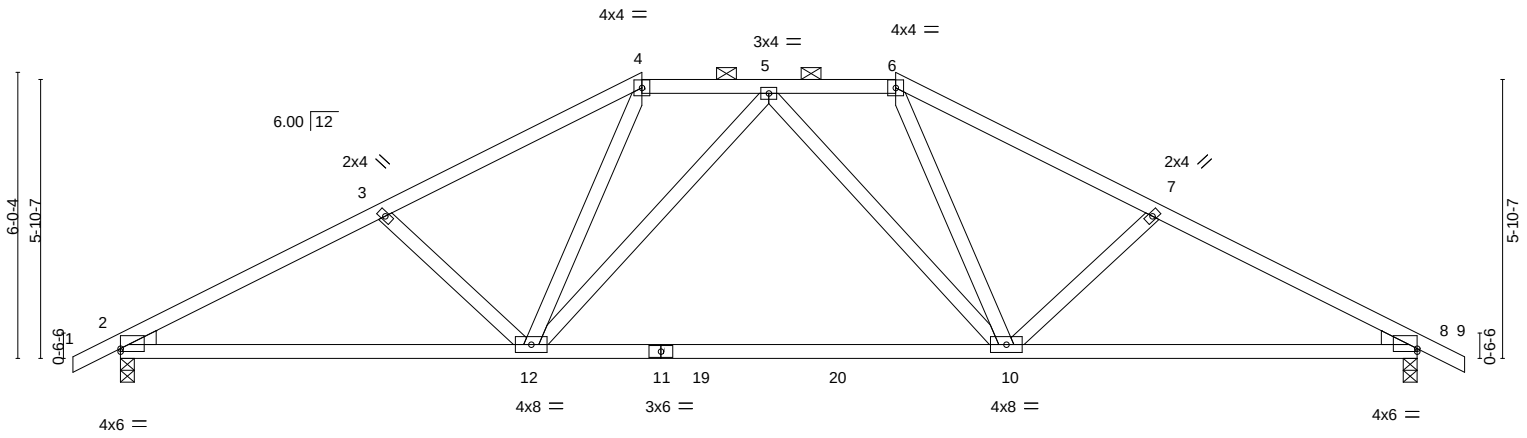
-1-0-0	5-6-14	10-11-11	13-7-12	16-3-13	21-8-10	27-3-8	28-3-8
1-0-0	5-6-14	5-4-13	2-8-1	2-8-1	5-4-13	5-6-14	1-0-0

Scale = 1:48.5



8-7-12	18-7-12	27-3-8
8-7-12	10-0-0	8-7-12

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.31	10-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.57	10-12	>571	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 141 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-9-8 oc purlins, except 2-0-0 oc purlins (5-2-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=99(LC 12)
Max Uplift 2=-130(LC 12), 8=-130(LC 13)
Max Grav 2=1152(LC 1), 8=1152(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1909/468, 3-4=-1668/422, 4-5=-1239/394, 5-6=-1239/395, 6-7=-1668/422, 7-8=-1909/468
BOT CHORD 2-12=-322/1638, 10-12=-171/1308, 8-10=-326/1638
WEBS 3-12=-294/215, 4-12=-61/518, 6-10=-61/518, 7-10=-294/215

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 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=130, 8=130.
7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	A1	Common	4	1	I47933872

Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:15 2021 Page 1

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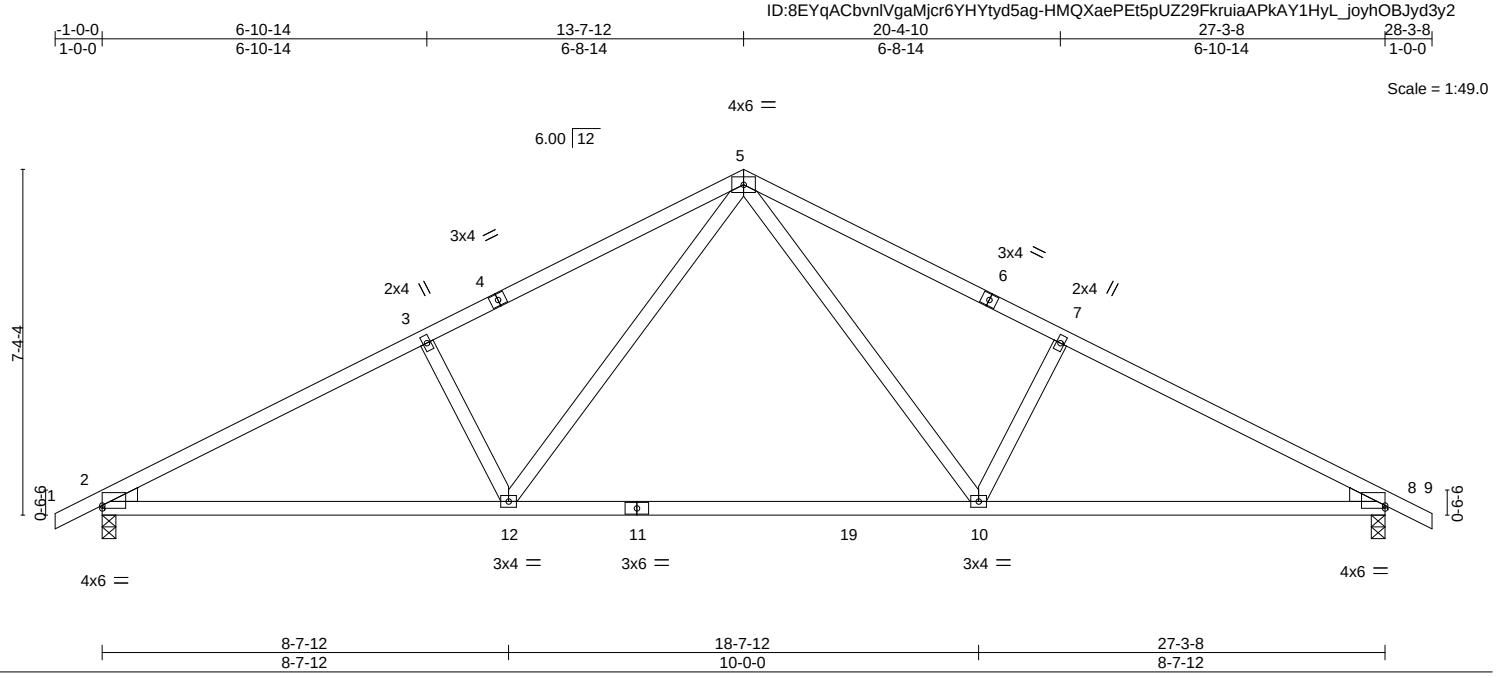

Plate Offsets (X,Y)-- [2:0-0-0,0-0-12], [8:0-0-0,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.39	10-12	>840	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.62	10-12	>530	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 128 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* 8-11: 2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-6-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=122(LC 12)
Max Uplift 2=-149(LC 12), 8=-149(LC 13)
Max Grav 2=1152(LC 1), 8=1152(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1872/467, 3-5=-1694/505, 5-7=-1695/504, 7-8=-1873/467
BOT CHORD 2-12=-308/1595, 10-12=-105/1056, 8-10=-310/1596
WEBS 5-10=-152/681, 7-10=-392/266, 5-12=-153/677, 3-12=-393/265

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;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) except (jt=lb) 2=149, 8=149.

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Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	A2	ROOF TRUSS	4	1	I47933873
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:16 2021 Page 1
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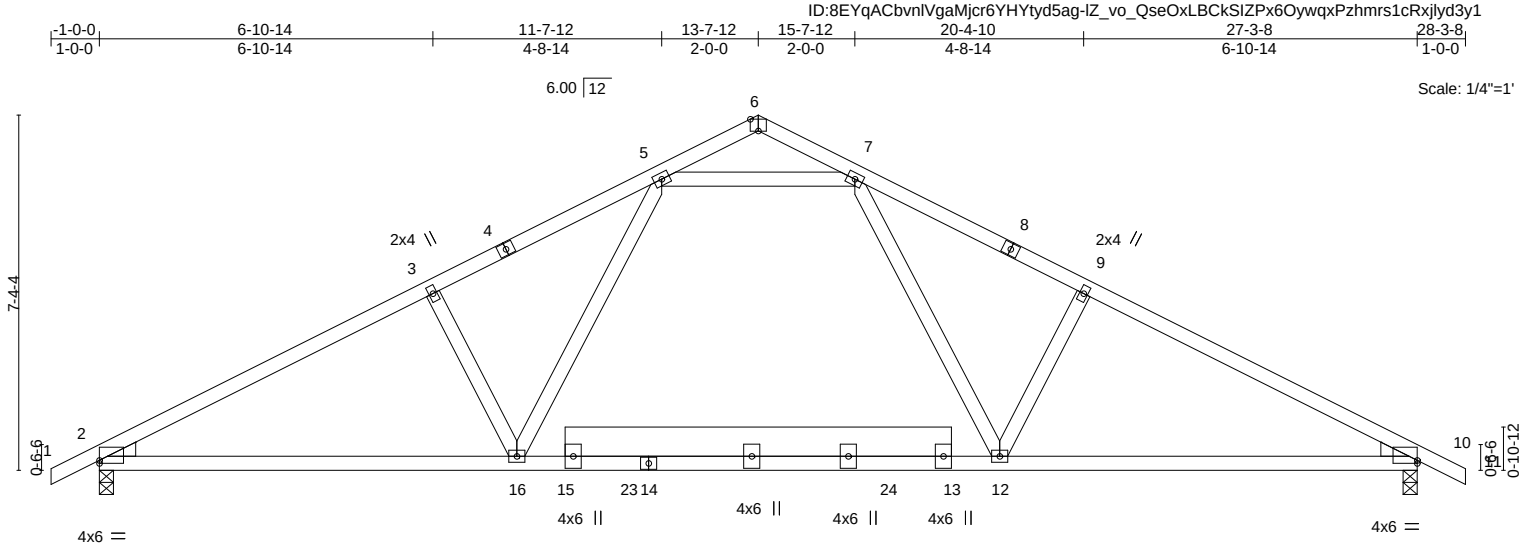

Plate Offsets (X,Y)-- [2:0-0-0,0-0-12], [6:0-2-0,Edge], [10:0-0-0,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.20	16-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.31	16-19	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.05	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 153 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*
13-15: 2x8 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-8-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=122(LC 12)
Max Uplift 2=-149(LC 12), 10=-149(LC 13)
Max Grav 2=1152(LC 1), 10=1152(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1846/462, 3-5=-1668/489, 7-9=-1668/489, 9-10=-1846/462
BOT CHORD 2-16=-299/1568, 12-16=-157/1191, 10-12=-302/1568
WEBS 7-12=-103/596, 9-12=-394/235, 5-16=-103/596, 3-16=-394/235, 5-7=-1123/424

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x4 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=149, 10=149.
7) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

September 17,2021

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Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	A3	ROOF TRUSS	2	1	I47933874
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:18 2021 Page 1
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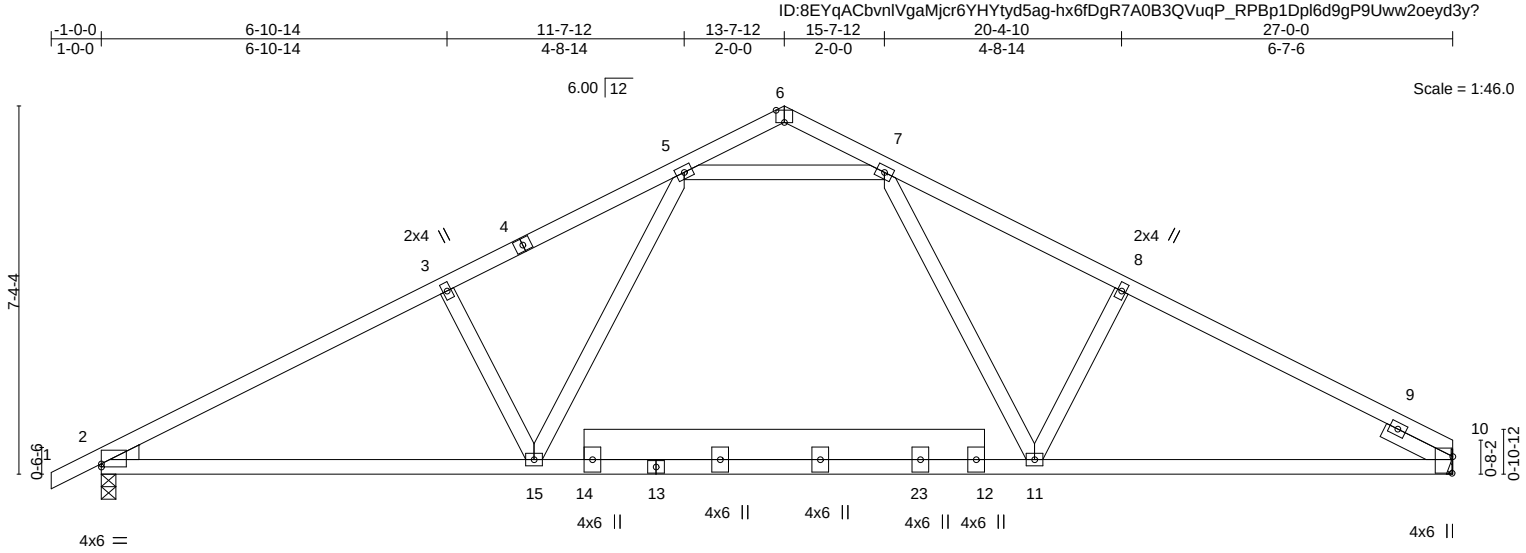

Plate Offsets (X,Y)-- [2:0-0-0,0-0-12], [6:0-2-0,Edge], [10:0-4-0,0-0-3]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.20	15-22	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.32	15-22	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.05	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 151 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* 12-14: 2x8 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 1-6-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-7-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 10=Mechanical, 2=0-3-8
Max Horz 2=134(LC 12)
Max Uplift 10=-125(LC 13), 2=-149(LC 12)
Max Grav 10=1079(LC 1), 2=1141(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1824/458, 3-5=-1646/485, 7-8=-1601/476, 8-10=-1745/449
BOT CHORD 2-15=-324/1549, 11-15=-179/1167, 10-11=-310/1493
WEBS 3-15=-398/234, 5-15=-102/598, 7-11=-96/540, 8-11=-353/224, 5-7=-1111/425

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x4 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) 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) except (jt=lb) 10=125, 2=149.
8) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

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Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	A4	Roof Special	4	1	I47933875
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:19 2021 Page 1
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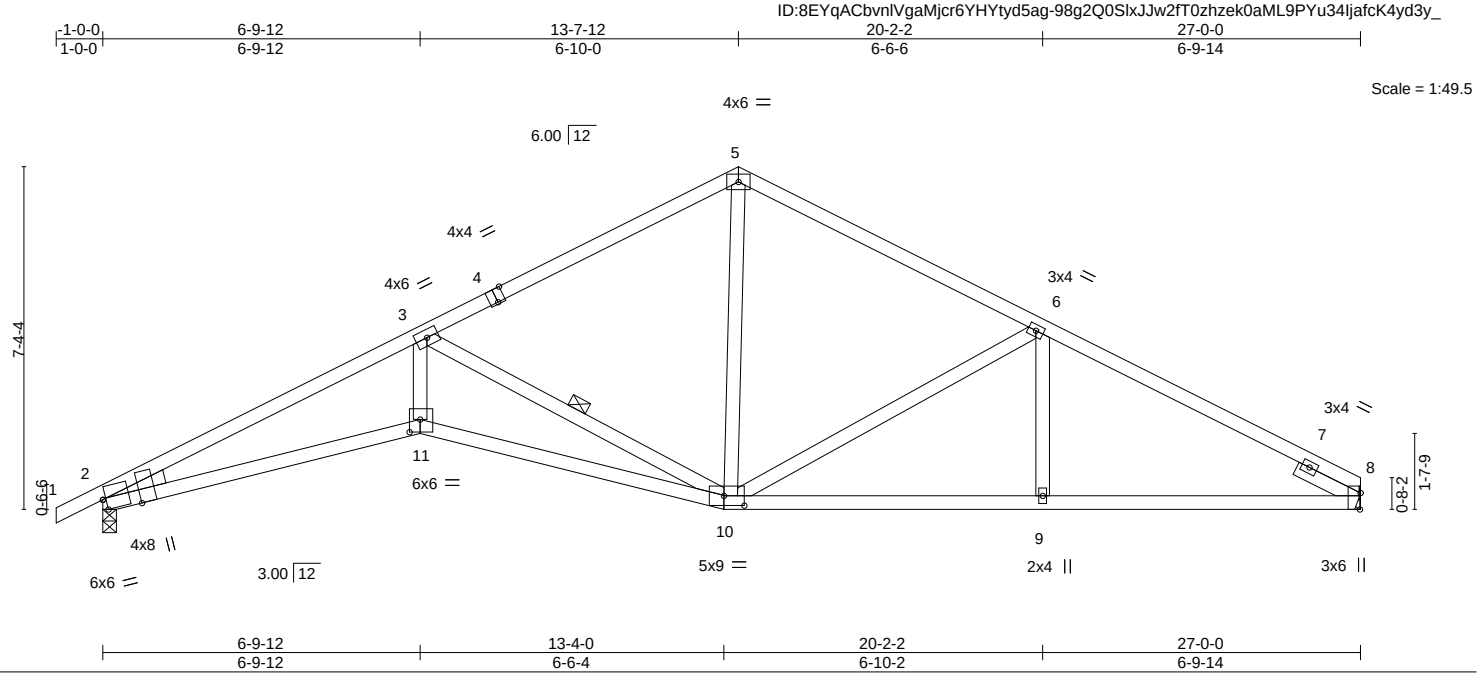

Plate Offsets (X,Y)-- [2:0-3-4,Edge], [2:0-0-13,Edge], [4:0-2-0,Edge], [8:0-4-4,Edge], [10:0-5-4,0-2-8], [11:0-2-12,0-3-4]

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	0.80	Vert(LL)	-0.20	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.45	10-11	>727	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.21	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 132 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*
2-11: 2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER 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 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-10

REACTIONS. (size) 8=Mechanical, 2=0-3-8
Max Horz 2=134(LC 12)
Max Uplift 8=-125(LC 13), 2=-148(LC 12)
Max Grav 8=1079(LC 1), 2=1141(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3208/750, 3-5=-1295/391, 5-6=-1261/388, 6-8=-1768/440
BOT CHORD 2-11=-607/2883, 10-11=-609/2892, 9-10=-303/1514, 8-9=-303/1514
WEBS 3-11=-215/1466, 3-10=-1967/531, 5-10=-143/665, 6-10=-570/219, 6-9=0/262

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;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) Refer to girder(s) for truss to truss connections.
6) 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.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=125.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

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Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	A4A	ROOF TRUSS	2	1	I47933876
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:20 2021 Page 1
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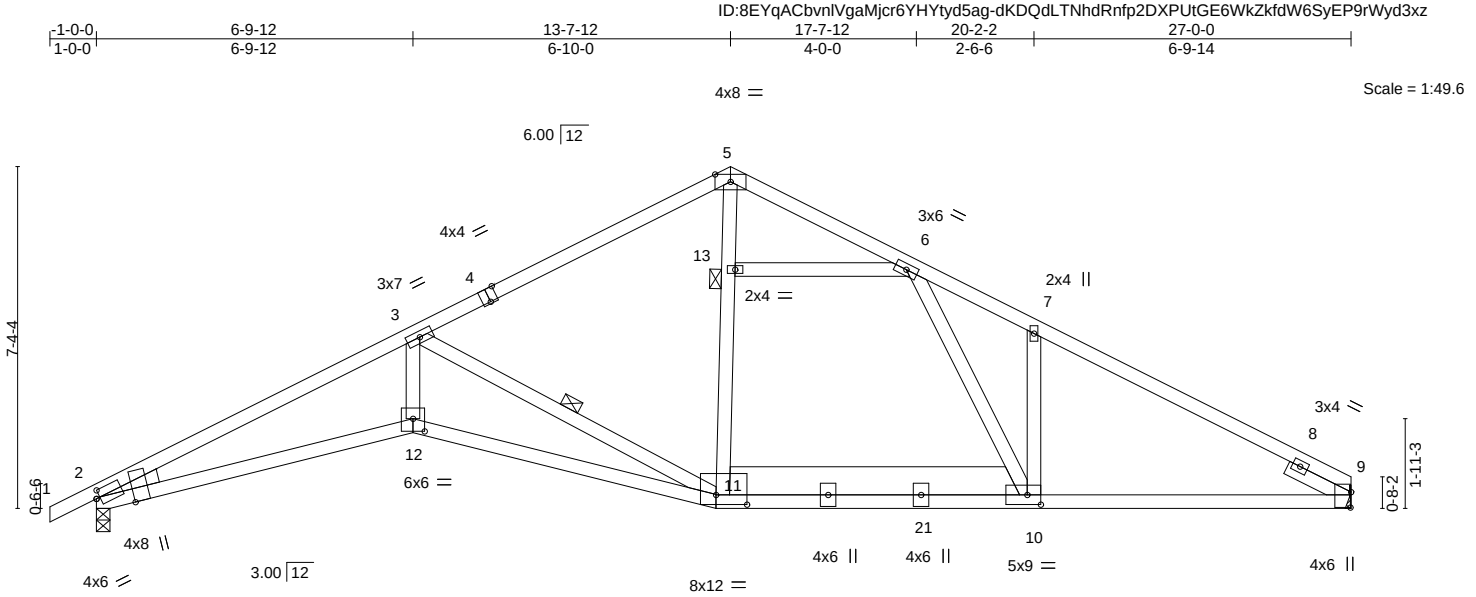


Plate Offsets (X,Y)-- [2:0-3-4,Edge], [2:0-1-0,0-2-0], [4:0-2-0,Edge], [9:0-4-0,0-0-3], [10:0-3-8,0-2-8], [11:0-8-0,0-2-8], [12:0-3-0,0-3-4]

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	0.89	Vert(LL)	0.31	10-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.51	10-16	>638	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.14	9	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 154 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*
2-12: 2x4 SP No.1, 10-11: 2x8 SP No.2
WEBS 2x4 SP No.3 *Except*
5-11: 2x4 SP DSS
WEDGE
Left: 2x4 SP No.3
SLIDER 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 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-11
JOINTS 1 Brace at Jt(s): 13

REACTIONS. (size) 9=Mechanical, 2=0-3-8
Max Horz 2=134(LC 12)
Max Uplift 9=-125(LC 13), 2=-148(LC 12)
Max Grav 9=1079(LC 1), 2=1141(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3194/742, 3-5=-1361/404, 5-6=-992/269, 6-7=-1743/561, 7-9=-1693/410
BOT CHORD 2-12=-599/2868, 11-12=-590/2842, 10-11=-183/1239, 9-10=-277/1451
WEBS 3-12=-176/1308, 3-11=-1831/493, 11-13=-59/570, 5-13=-67/585, 6-10=-209/533, 7-10=-487/306, 6-13=-373/163

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;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) 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.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=125.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
9) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

September 17,2021

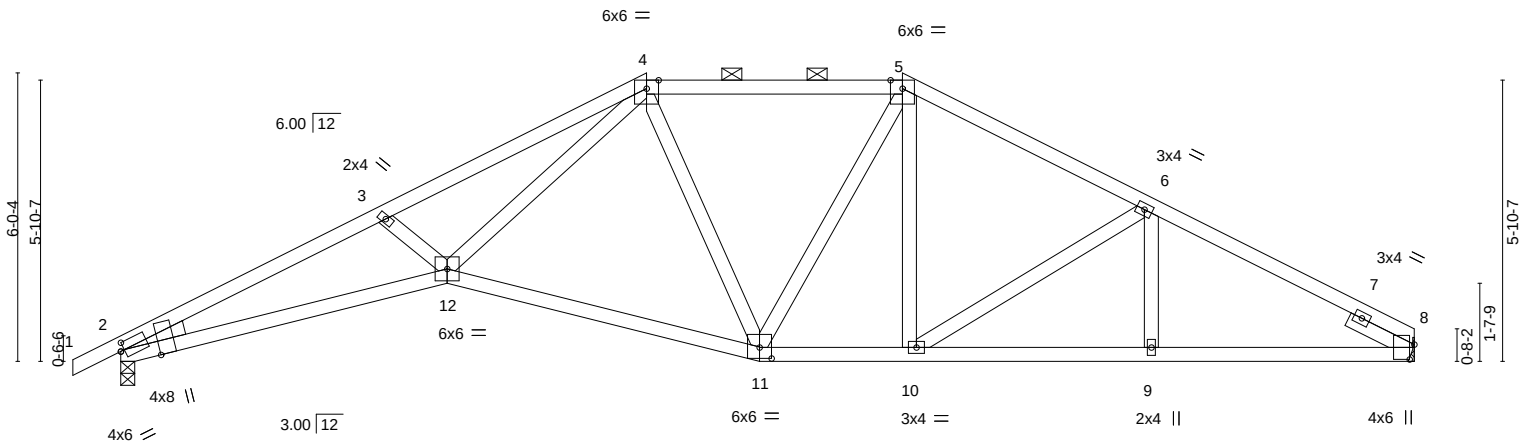
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	A5	Hip	1	1	I47933877
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:21 2021 Page 1
ID:8EYqACbvnlVgaMjcr6YHYtyd5ag-5WnorhU?SxZeHzcP46?6pRfgLy7wMyHbAt8iNzyd3xy

-1-0-0	5-6-6	10-11-11	16-3-13	21-6-2	27-0-0
1-0-0	5-6-6	5-5-6	5-4-2	5-2-6	5-5-14

Scale: 1/4"=1'



6-9-12	13-4-0	16-3-13	21-6-2	27-0-0
6-9-12	6-6-4	2-11-13	5-2-6	5-5-14

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.19	11-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.42	11-12	>776	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.18	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 140 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*
2-12: 2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 1-6-0

BRACING-
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (4-7-2 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
7-11-15 oc bracing: 2-12.

REACTIONS. (size) 8=Mechanical, 2=0-3-8
Max Horz 2=110(LC 12)
Max Uplift 8=-105(LC 13), 2=-130(LC 12)
Max Grav 8=1079(LC 1), 2=1141(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3231/750, 3-4=-3043/712, 4-5=-1279/391, 5-6=-1472/401, 6-8=-1785/428
BOT CHORD 2-12=-618/2905, 11-12=-222/1451, 10-11=-173/1257, 9-10=-307/1537, 8-9=-307/1537
WEBS 4-12=-350/1794, 4-11=-355/118, 5-10=-37/286, 6-10=-341/157

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 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) 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.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=105.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

September 17,2021

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

Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	A5E	GABLE	1	1	I47933878
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:22 2021 Page 1
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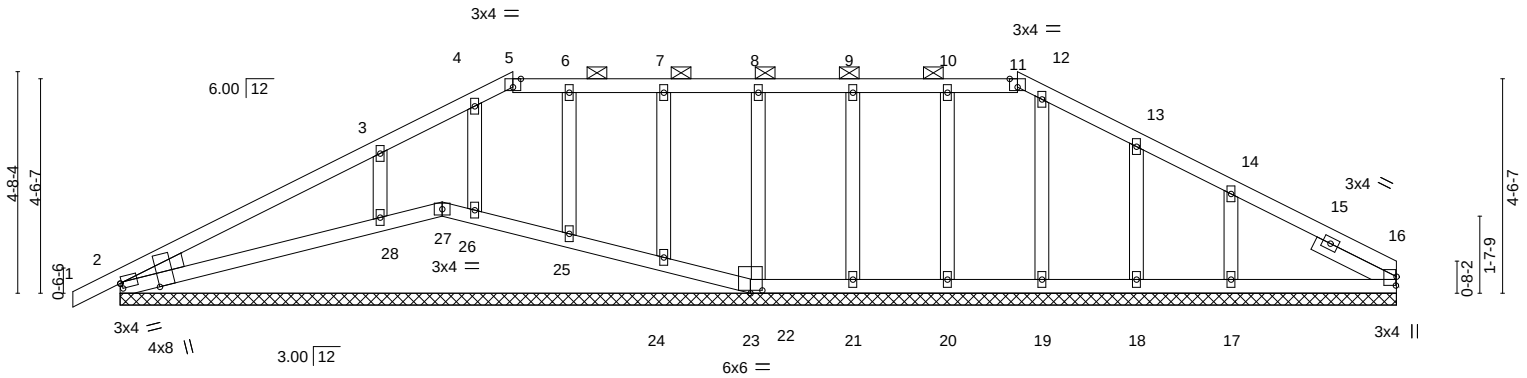
-1-0-0 8-3-11 18-11-13 27-0-0
1-0-0 8-3-11 10-8-2 8-0-3

Scale = 1:48.7



6-9-12 13-4-0 27-0-0
6-9-12 6-6-4 13-8-0

Plate Offsets (X,Y)-- [2:0-3-4,Edge], [2:0-0-6,0-1-6], [5:0-2-0,Edge], [11:0-2-0,Edge], [16:0-2-4,0-0-3], [23:0-3-0,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	0.02	1	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 137 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 1-10-13

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 27-28.

REACTIONS. All bearings 27-0-0.
(lb) - Max Horz 2=81(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 16, 2, 23, 22, 24, 25, 21, 20, 18, 17 except 27=-104(LC 3), 28=-148(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 16, 27, 22, 24, 25, 26, 21, 20, 19, 18 except 2=256(LC 1), 28=478(LC 1), 17=271(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-28=-321/227

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
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) 23, 24, 25 except (jt=lb) 27=104, 28=148.
11) N/A
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 27, 24, 25, 26, 28.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

September 17,2021

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	AE	GABLE	1	1	I47933879
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:24 2021 Page 1
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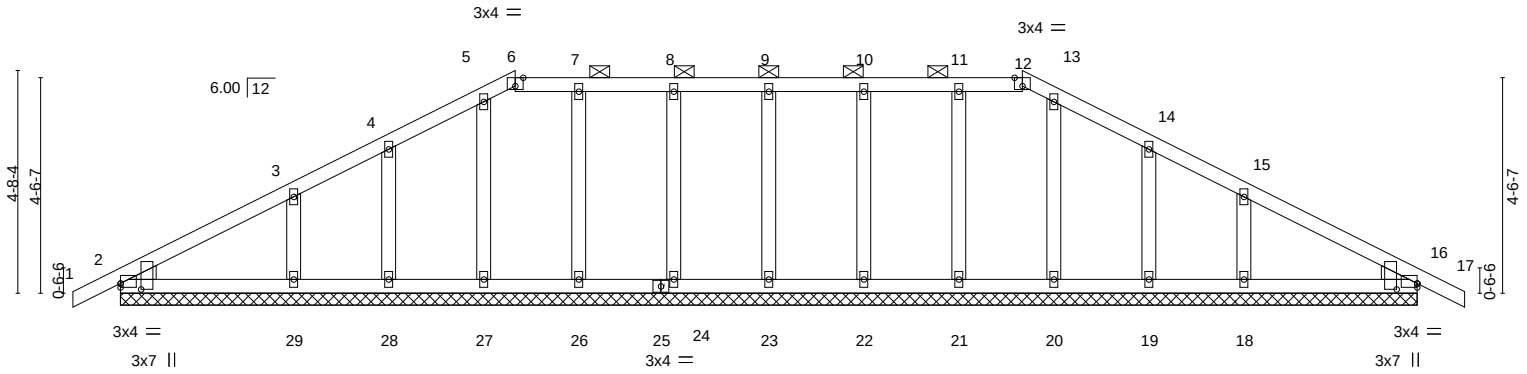
-1-0-0	8-3-11	18-11-13	27-3-8	28-3-8
1-0-0	8-3-11	10-8-2	8-3-11	1-0-0

Scale = 1:48.5



27-3-8
27-3-8

Plate Offsets (X,Y)-- [2:0-1-8,0-5-3], [2:0-0-0,0-1-0], [6:0-2-0,Edge], [12:0-2-0,Edge], [16:Edge,0-1-0], [16:0-1-8,0-5-3]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	0.00	17	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.01	17	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 144 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

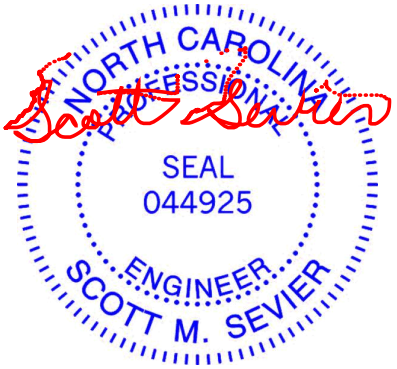
BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-12.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 27-3-8.
(lb) - Max Horz 2=-76(LC 17)
Max Uplift All uplift 100 lb or less at joint(s) 2, 23, 24, 26, 27, 28, 29, 22, 21, 19, 18, 16
Max Grav All reactions 250 lb or less at joint(s) 2, 23, 24, 26, 27, 28, 22, 21, 20, 19, 16 except 29=279(LC 23), 18=279(LC 24)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
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) N/A

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



September 17,2021

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

Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	B	Common	6	1	I47933880
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:25 2021 Page 1
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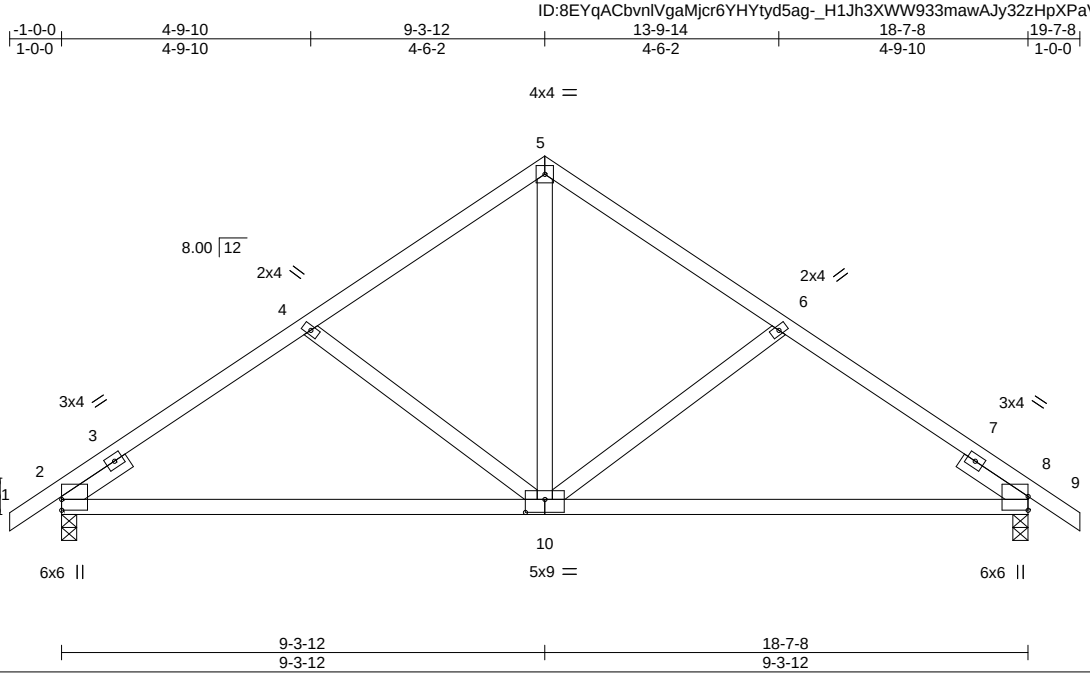

Plate Offsets (X,Y)-- [10:0-4-8,0-3-0]

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	0.25	Vert(LL)	-0.10	10-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.21	10-17	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 95 lb	FT = 20%

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

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

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-170(LC 10)
Max Uplift 2=-100(LC 12), 8=-100(LC 13)
Max Grav 2=805(LC 1), 8=805(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-839/204, 4-5=-745/182, 5-6=-745/182, 6-8=-839/204
BOT CHORD 2-10=-130/779, 8-10=-73/746
WEBS 5-10=-77/520, 6-10=-279/182, 4-10=-279/182

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.

September 17,2021

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	BE	GABLE	1	1	I47933881
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:27 2021 Page 1
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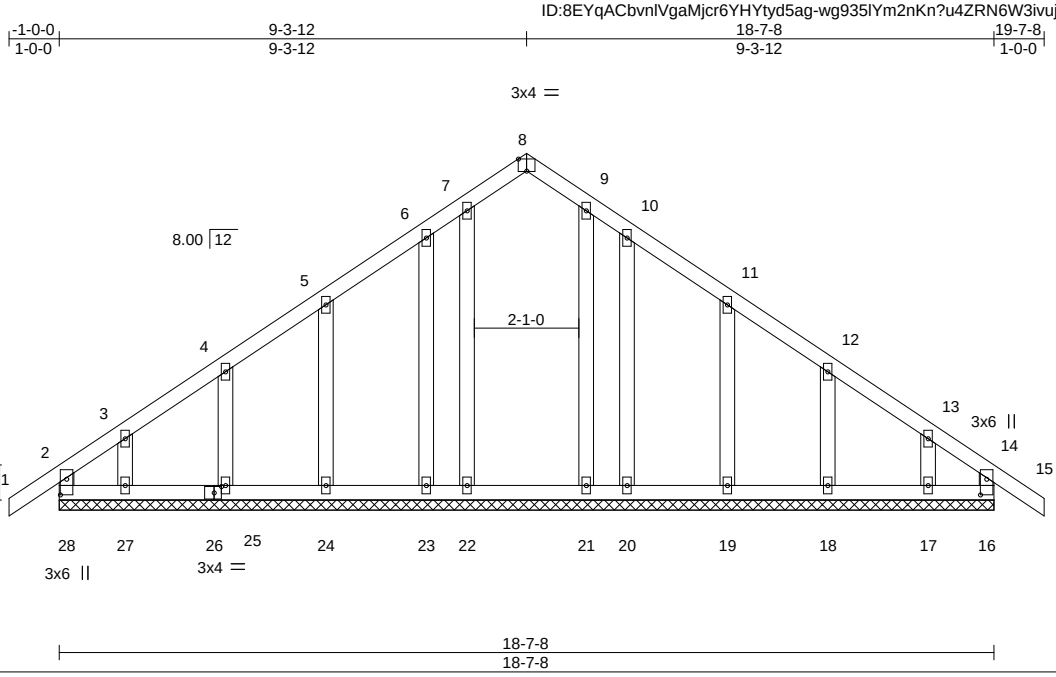

Plate Offsets (X,Y)-- [8:0-2-0,Edge], [14:0-3-12,0-1-8], [26:0-1-12,0-1-8], [28:0-3-12,0-1-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	-0.00	15	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	15	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-R							Weight: 118 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS. All bearings 18-7-8.
(lb) - Max Horz 28=-170(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 28, 16, 23, 24, 25, 20, 19, 18 except 27=-125(LC 12), 17=-117(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 28, 16, 22, 21, 23, 24, 25, 27, 20, 19, 18, 17

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;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, with BCDL = 10.0psf.

September 17,2021

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	BGR	Common Girder	1	3	I47933882

Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:29 2021 Page 1

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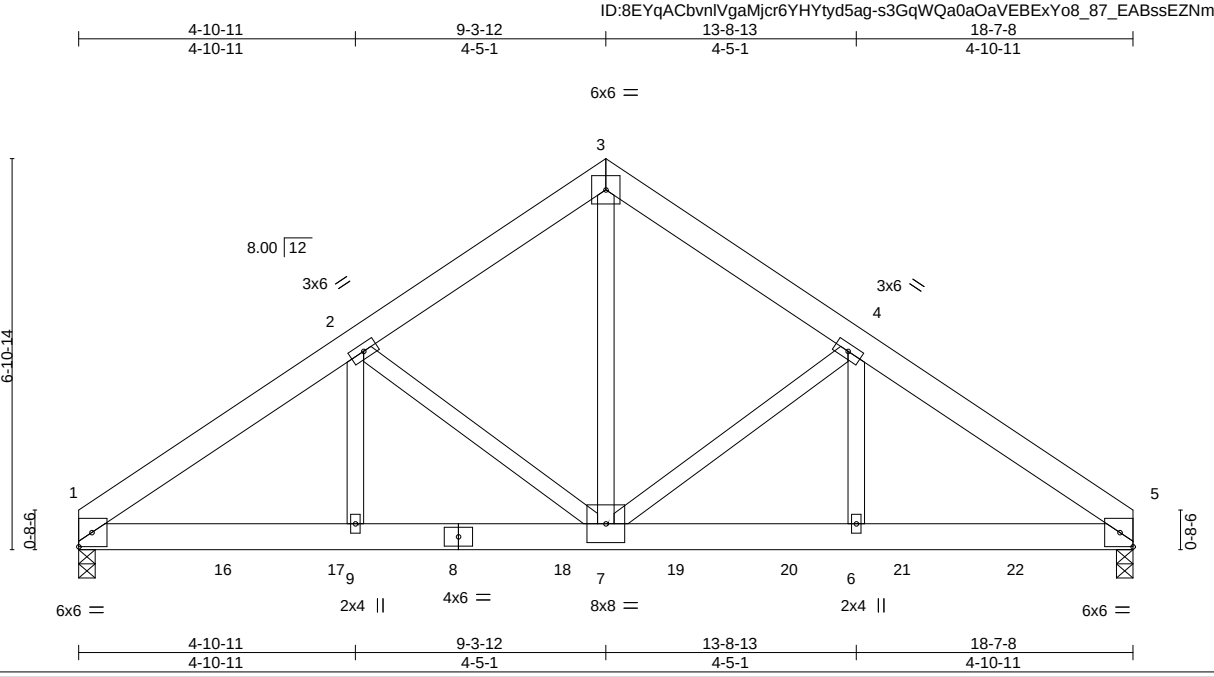

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.05	7-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.10	7-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.74	Horz(CT)	0.04	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 391 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	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=0-3-8, 5=0-3-8
Max Horz 1=154(LC 9)
Max Uplift 1=-738(LC 12), 5=-627(LC 13)
Max Grav 1=5895(LC 1), 5=5129(LC 1)

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

TOP CHORD	1-2=-7343/998, 2-3=-5186/771, 3-4=-5183/770, 4-5=-7343/990
BOT CHORD	1-9=-801/6054, 7-9=-801/6054, 6-7=-747/6043, 5-6=-747/6043
WEBS	3-7=-729/5326, 4-7=-2232/393, 4-6=-243/2378, 2-7=-2246/403, 2-9=-249/2366

NOTES-

1) 3-ply truss to be connected together with 10d (0.120"x3") nails as follows:
   Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
   Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.
   Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1063 lb down and 140 lb up at 0-6-12, 1059 lb down and 145 lb up at 2-6-12, 1059 lb down and 145 lb up at 4-6-12, 1059 lb down and 145 lb up at 6-6-12, 1059 lb down and 145 lb up at 8-6-12, 1059 lb down and 145 lb up at 10-6-12, 1059 lb down and 145 lb up at 12-6-12, and 1059 lb down and 145 lb up at 14-6-12, and 1059 lb down and 125 lb up at 16-6-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-3=-60, 3-5=-60, 10-13=-20

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Continued on page 2

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LOAD CASE(S) Standard

Concentrated Loads (lb)

Vert: 8=-1059(B) 12=-1063(B) 16=-1059(B) 17=-1059(B) 18=-1059(B) 19=-1059(B) 20=-1059(B) 21=-1059(B) 22=-1059(B)

Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	C	ROOF TRUSS	10	1	I47933883
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:30 2021 Page 1
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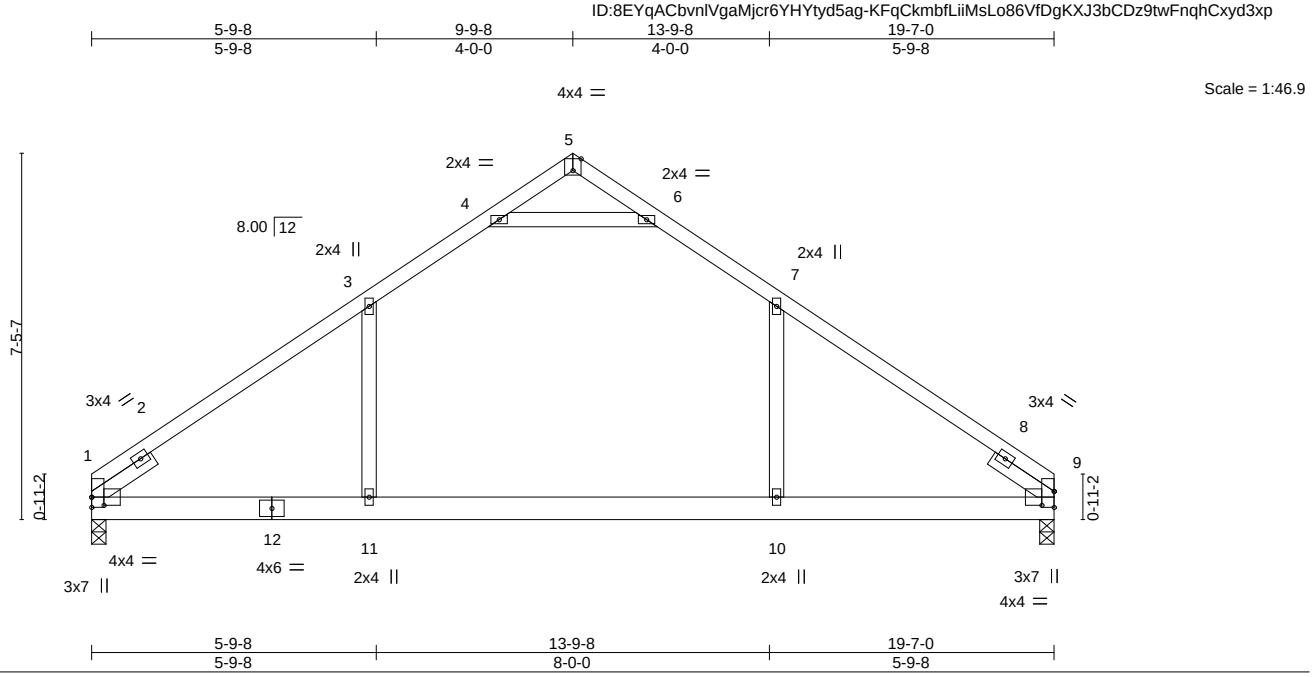

Plate Offsets (X,Y)-- [1:0-3-0,0-2-0], [5:0-2-0,Edge], [9:0-3-0,0-3-7]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.20	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.44	10-11	>538	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.04	1	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Attic	-0.11	10-11	930	360	Weight: 103 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP DSS
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 or 2x4 SPF No.2
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 5-7-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=0-3-8, 9=0-3-8
Max Horz 1=-161(LC 8)
Max Grav 1=969(LC 20), 9=969(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-1175/180, 3-4=-920/119, 4-5=-10/485, 5-6=-10/486, 6-7=-920/119, 7-9=-1175/180
BOT CHORD 1-11=0/972, 10-11=0/972, 9-10=0/972
WEBS 7-10=0/394, 3-11=0/394, 4-6=-1482/162

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;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) Ceiling dead load (5.0 psf) on member(s). 3-4, 6-7, 4-6; Wall dead load (5.0psf) on member(s).7-10, 3-11
6) Bottom chord live load (20.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 10-11
7) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

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Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	CE	GABLE	1	1	I47933884
					Job Reference (optional)

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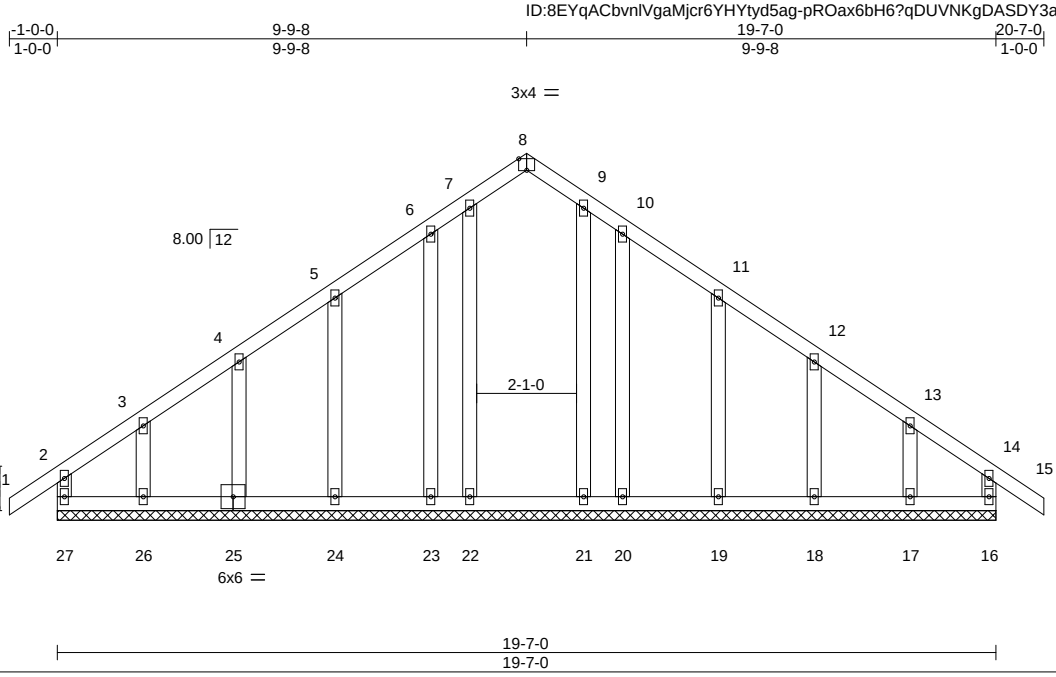

Plate Offsets (X,Y)-- [8:0-2-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	-0.00	15	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	15	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-R							Weight: 130 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS. All bearings 19-7-0.
(lb) - Max Horz 27=-178(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 27, 16, 23, 24, 25, 20, 19, 18 except 26=-146(LC 12), 17=-133(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 27, 16, 22, 21, 23, 24, 25, 26, 20, 19, 18, 17

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;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, with BCDL = 10.0psf.

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Job	Truss	Truss Type	Qty	Ply	Winston B Vault Master
Winston B Vault Master	D	Monopitch	9	1	I47933885
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Thu Sep 16 11:21:32 2021 Page 1
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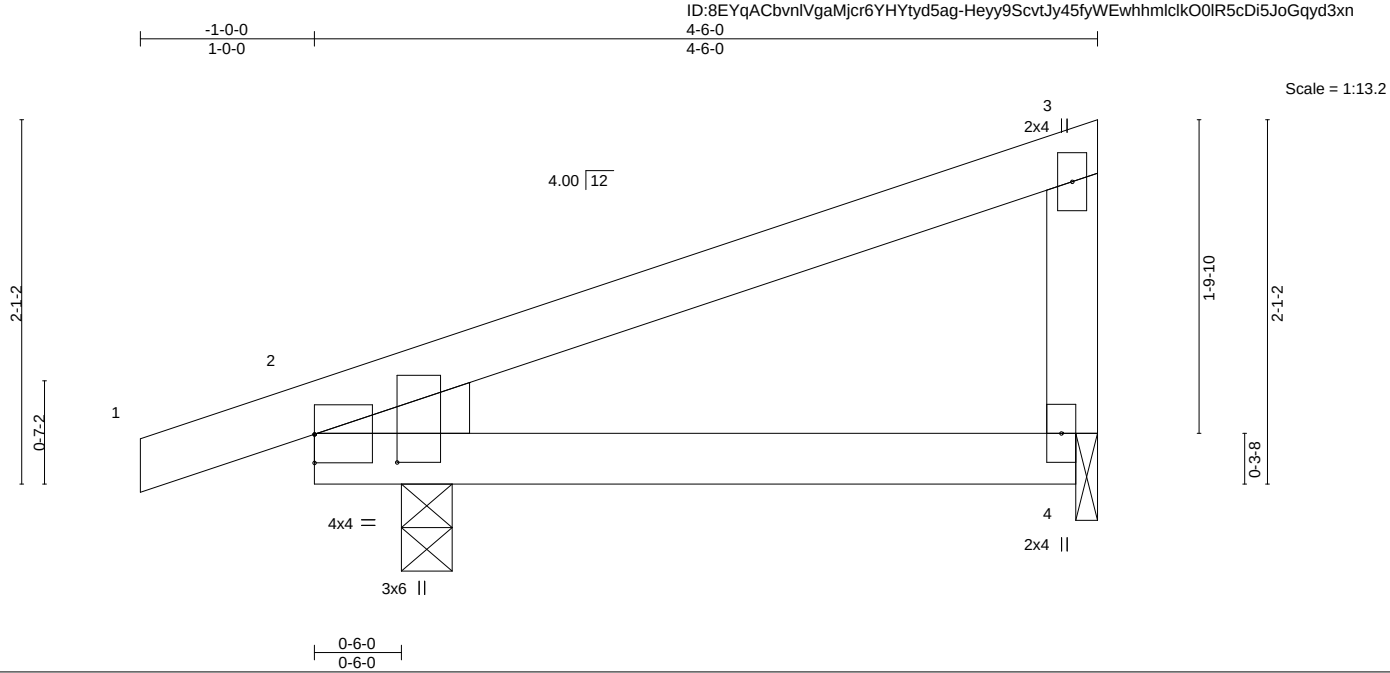

Plate Offsets (X,Y)-- [2:0-1-15,0-5-11]

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	0.18	Vert(LL)	-0.01	4-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	4-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MP							Weight: 19 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 4=0-1-8
Max Horz 2=73(LC 8)
Max Uplift 2=-70(LC 8), 4=-37(LC 12)
Max Grav 2=272(LC 1), 4=136(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;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) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.

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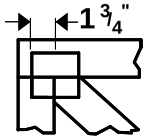
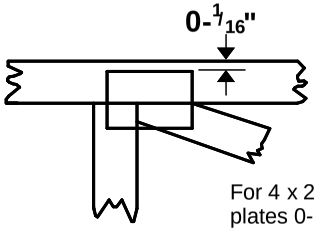
Symbols

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.

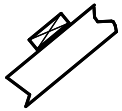
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

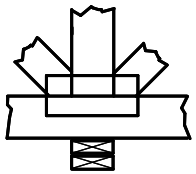
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

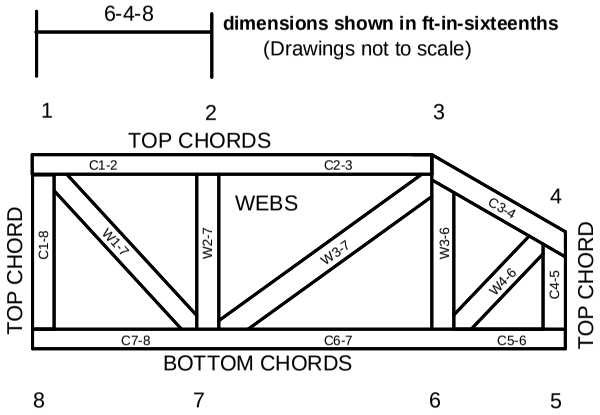


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.

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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.