ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 35946-359646A
Wilmington A Vault

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: I58699562 thru I58699572

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

North Carolina COA: C-0844

June 2,2023

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault	I58699562
35946-359646A	A	Hip	1	1	Job Reference (optional)	

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Fri Jun 02 05:44:23

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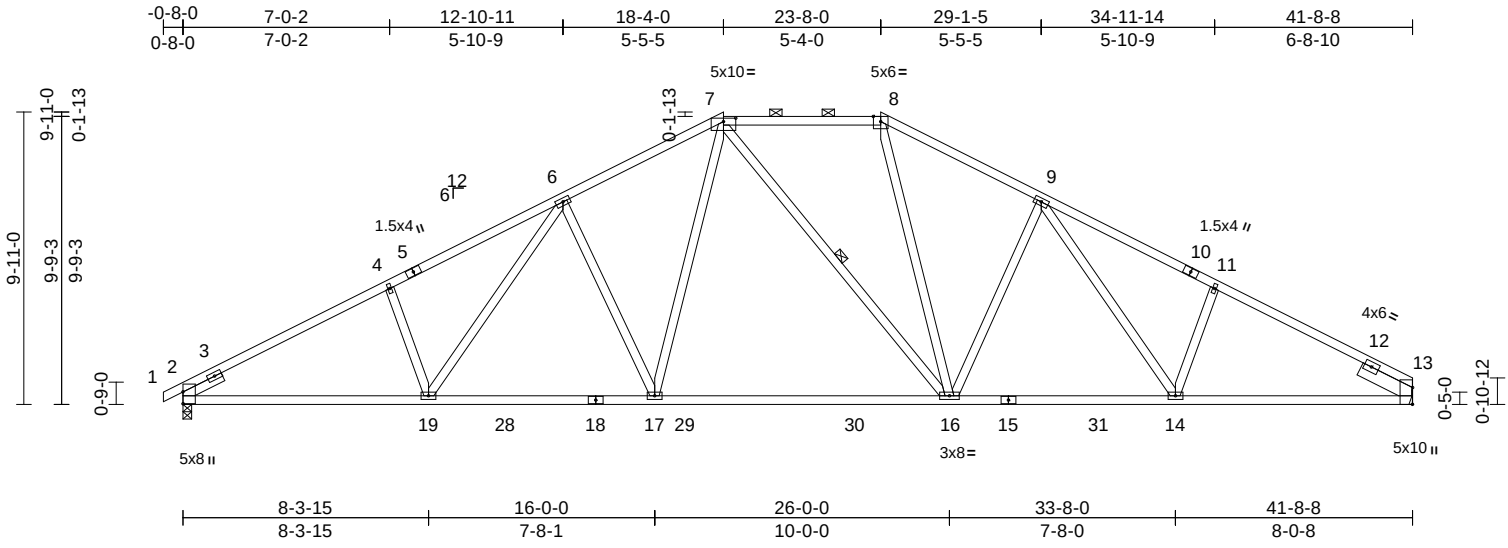

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Plate Offsets (X, Y): [7:0-5-0,0-1-7], [13:0-6-13,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.37	16-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.70	16-17	>715	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.18	13	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 242 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 1-5,10-13:2x4 SP DSS
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.2 *Except* 19-4,14-11:2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x6 SP No.2 -- 2-0-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-10 oc purlins, except 2-0-0 oc purlins (3-8-4 max.): 7-8.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 7-16

REACTIONS (size) 2=0-3-8, 13= Mechanical
Max Horiz 2=166 (LC 12)
Max Uplift 2=-192 (LC 12), 13=-175 (LC 13)
Max Grav 2=1709 (LC 1), 13=1668 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/18, 2-4=-2869/695, 4-6=-2745/755, 6-7=-2350/680, 7-8=-1840/612, 8-9=-2319/679, 9-11=-2636/732, 11-13=-2764/675
BOT CHORD	2-19=-527/2477, 17-19=-384/2233, 16-17=-232/1862, 14-16=-379/2190, 13-14=-503/2370
WEBS	7-17=-152/806, 7-16=-222/200, 8-16=-150/759, 4-19=-258/216, 6-19=-130/416, 6-17=-527/282, 9-16=-498/275, 9-14=-118/328, 11-14=-200/197

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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) All plates are 3x6 MT20 unless otherwise indicated.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 175 lb uplift at joint 13.
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) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

June 2,2023

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

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault	I58699563
35946-359646A	A1	Common	3	1	Job Reference (optional)	

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Fri Jun 02 05:44:25

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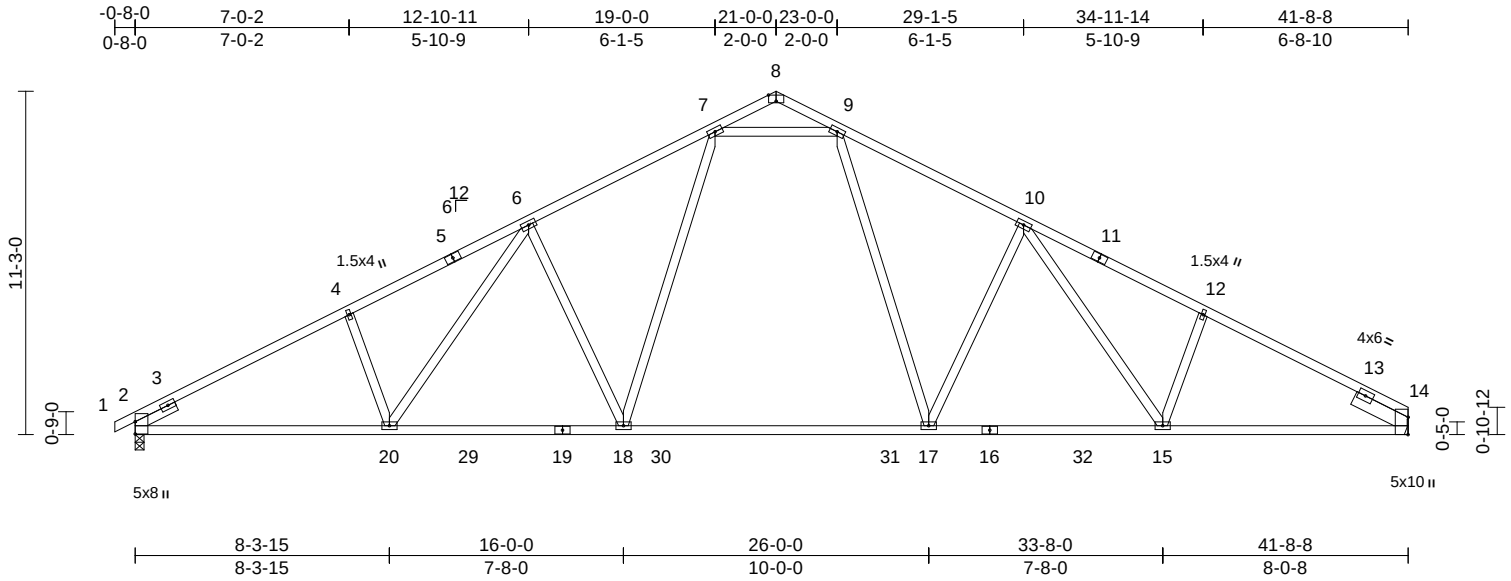

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Plate Offsets (X, Y): [8:0-3-0,Edge], [14:0-6-13,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.45	18-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.74	17-18	>677	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.17	14	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 233 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP DSS *Except* 5-8,11-8:2x4 SP No.1
BOT CHORD	2x4 SP No.1 *Except* 16-14:2x4 SP DSS
WEBS	2x4 SP No.2 *Except* 20-4,15-12,7-9:2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x6 SP No.2 -- 2-0-0

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, Except: 9-6-0 oc bracing: 14-15.

REACTIONS (size) 2=0-3-8, 14= Mechanical
Max Horiz 2=190 (LC 12)
Max Uplift 2=-210 (LC 12), 14=-193 (LC 13)
Max Grav 2=1709 (LC 1), 14=1668 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/18, 2-4=-2905/710, 4-6=-2782/769, 6-7=-2403/705, 7-8=-102/79, 8-9=-107/71, 9-10=-2390/702, 10-12=-2686/745, 12-14=-2801/689
BOT CHORD	2-20=-540/2509, 18-20=-401/2277, 17-18=-231/1834, 15-17=-395/2249, 14-15=-514/2409
WEBS	4-20=-231/211, 7-18=-168/892, 10-17=-622/306, 12-15=-178/193, 6-20=-125/417, 9-17=-161/865, 10-15=-110/333, 6-18=-659/309, 7-9=-1822/693

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 193 lb uplift at joint 14.
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) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

June 2,2023

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

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault	I58699564
35946-359646A	A2	Common	5	1	Job Reference (optional)	

84 Components (Dunn, NC), Dunn, NC - 28334,

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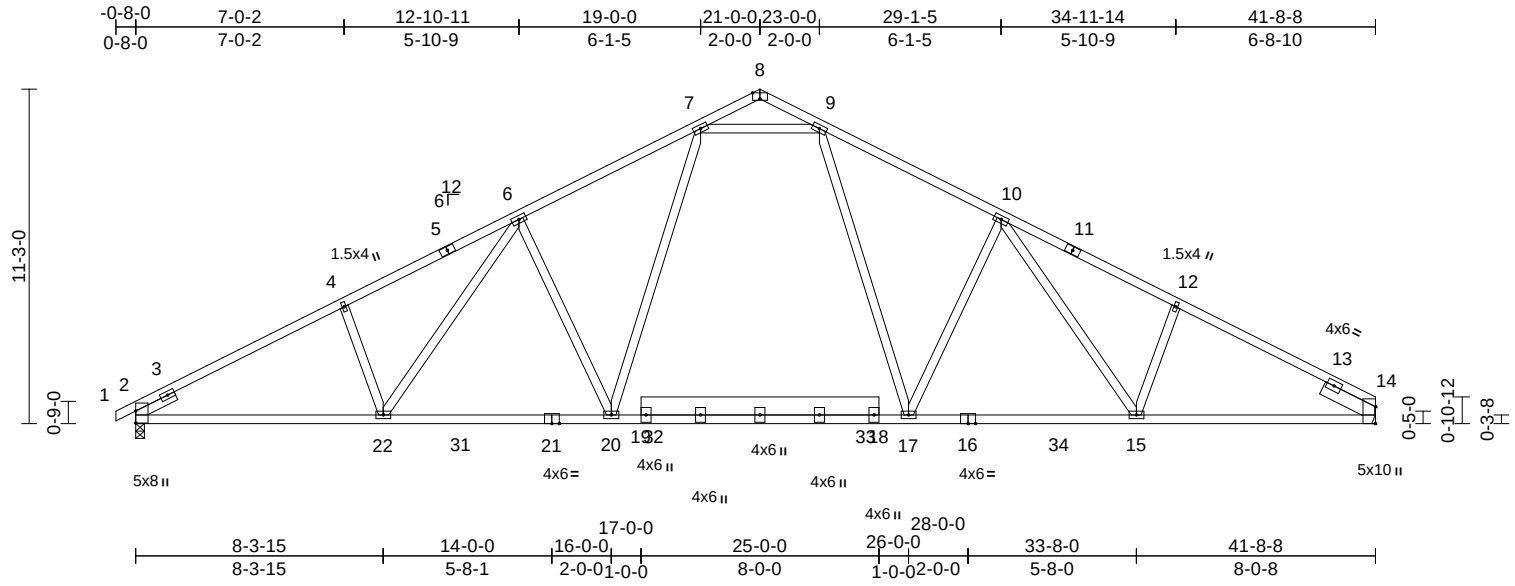

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Plate Offsets (X, Y): [8:0-3-0,Edge], [14:0-6-13,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.45	20-22	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.68	20-22	>736	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.15	14	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 257 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.1 *Except* 1-5,11-14:2x4 SP DSS
BOT CHORD	2x4 SP No.1 *Except* 19-18:2x8 SP DSS, 16-14:2x4 SP DSS
WEBS	2x4 SP No.2 *Except* 15-12,22-4,7-9:2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x6 SP No.2 -- 2-0-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-14 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-3-8, 14= Mechanical
Max Horiz 2=190 (LC 12)
Max Uplift 2=-210 (LC 12), 14=-193 (LC 13)
Max Grav 2=1709 (LC 1), 14=1668 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/18, 2-4=-2902/708, 4-6=-2778/767, 6-7=-2373/710, 7-8=-99/77, 8-9=-104/70, 9-10=-2361/707, 10-12=-2683/743, 12-14=-2798/687
BOT CHORD	2-22=-538/2505, 20-22=-403/2257, 17-20=-234/1812, 15-17=-398/2230, 14-15=-513/2405
WEBS	9-17=-163/844, 10-17=-629/302, 10-15=-106/350, 12-15=-176/194, 7-20=-170/872, 6-20=-665/305, 6-22=-118/434, 4-22=-230/212, 7-9=-1802/697

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 193 lb uplift at joint 14.
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) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

LOAD CASE(S) Standard

June 2,2023

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

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault
35946-359646A	A3	Roof Special	1	1	I58699565 Job Reference (optional)

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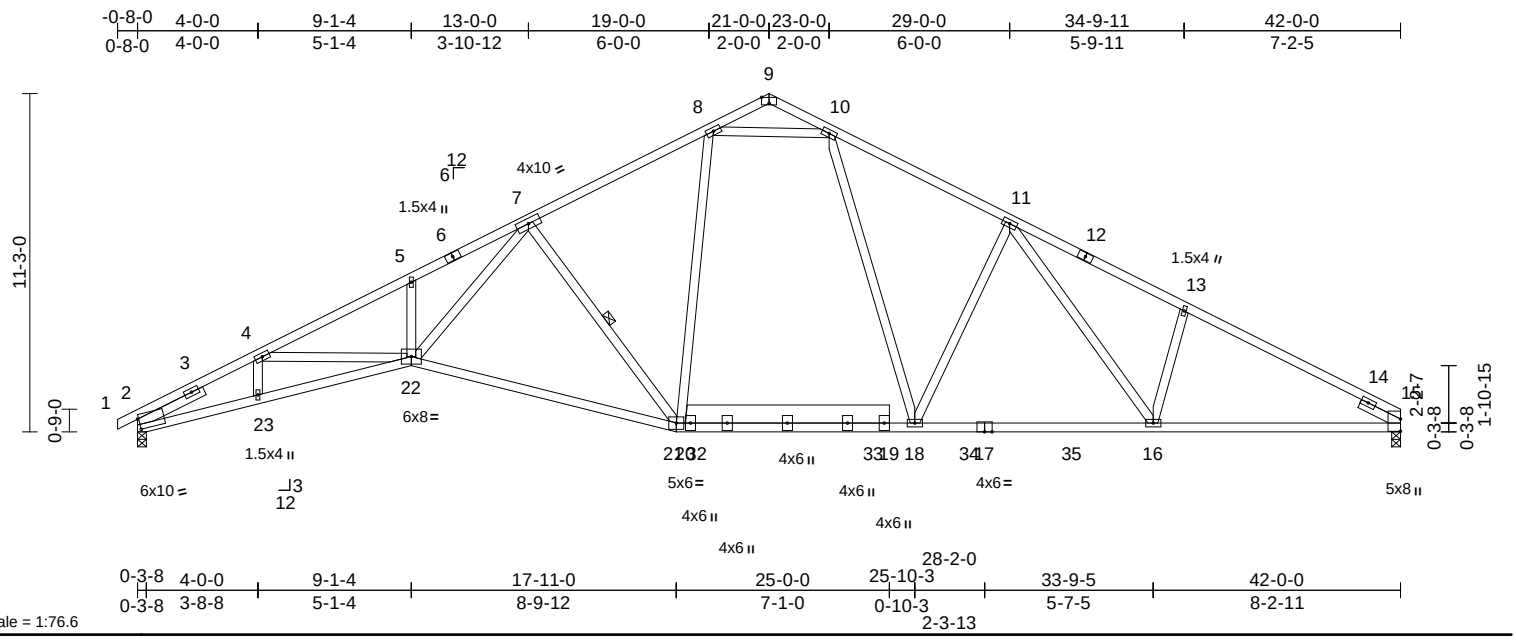

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Plate Offsets (X, Y): [2:0-0-7,0-4-5], [9:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.48	16-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.94	21-22	>536	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.32	15	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 260 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP DSS
BOT CHORD 2x4 SP No.1 *Except* 2-22:2x4 SP DSS, 20-19:2x8 SP DSS
WEBS 2x4 SP No.2 *Except* 16-13,4-23,4-22,5-22,8-10:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 2-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-3-3 oc bracing.
WEBS 1 Row at midpt 7-21

REACTIONS (size) 2=0-3-8, 15=0-3-8
Max Horiz 2=186 (LC 12)
Max Uplift 2=-210 (LC 12), 15=-196 (LC 13)
Max Grav 2=1720 (LC 1), 15=1680 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-4358/1034, 4-5=-4903/1119, 5-7=-4923/1226, 7-8=-2137/667, 8-9=-93/83, 9-10=-101/79, 10-11=-2305/712, 11-13=-2778/786, 13-15=-2892/710
BOT CHORD 2-23=-863/3824, 22-23=-879/3893, 21-22=-515/2746, 18-21=-229/1768, 16-18=-400/2200, 15-16=-532/2488
WEBS 8-21=-127/686, 10-18=-180/856, 11-18=-657/310, 11-16=-133/463, 13-16=-244/220, 4-23=-185/106, 4-22=-11/635, 5-22=-319/192, 7-22=-576/2703, 7-21=-1391/423, 8-10=-1781/701

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 15. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

LOAD CASE(S) Standard

June 2,2023

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault
35946-359646A	A4	Roof Special	7	1	I58699566 Job Reference (optional)

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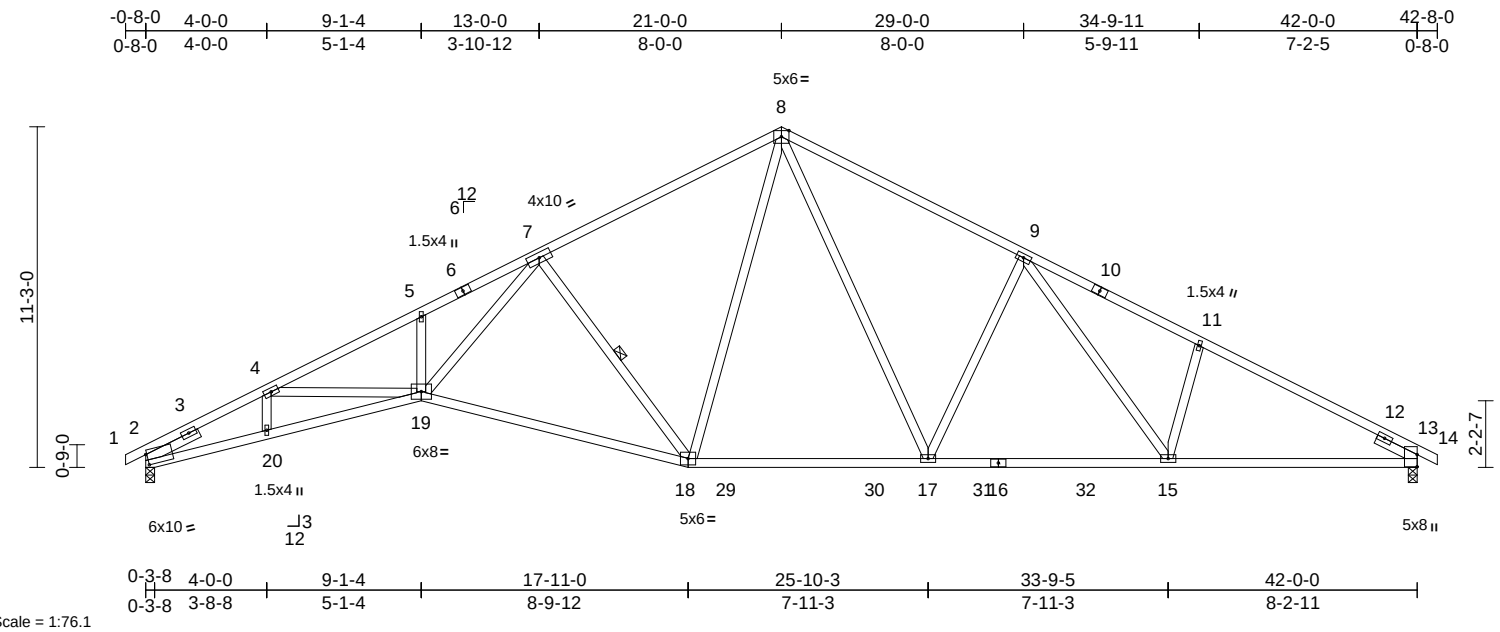

Scale = 1:76.1

Plate Offsets (X, Y): [2:0-0-7,0-4-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.36	17-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.81	18-19	>622	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.34	13	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 238 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 1-6,10-14:2x4 SP DSS
BOT CHORD 2x4 SP No.1 *Except* 2-19:2x4 SP DSS
WEBS 2x4 SP No.2 *Except* 11-15,4-19,5-19,20-4:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 2-0-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 7-18

REACTIONS (size) 2=0-3-8, 13=0-3-8
Max Horiz 2=181 (LC 12)
Max Uplift 2=-210 (LC 12), 13=-210 (LC 13)
Max Grav 2=1720 (LC 1), 13=1720 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-4=-4336/1020, 4-5=-4891/1100, 5-7=-4888/1189, 7-8=-2145/681, 8-9=-2296/732, 9-11=-2749/779, 11-13=-2883/706, 13-14=0/18
BOT CHORD 2-20=-837/3795, 19-20=-854/3873, 18-19=-517/2770, 17-18=-164/1624, 15-17=-397/2206, 13-15=-515/2478
WEBS 8-18=-177/738, 8-17=-230/917, 9-17=-641/338, 9-15=-116/420, 11-15=-235/202, 4-19=-1/628, 5-19=-269/152, 7-19=-523/2643, 7-18=-1467/479, 4-20=-219/115

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

June 2,2023

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

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault
35946-359646A	A5	Hip	1	1	I58699567
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

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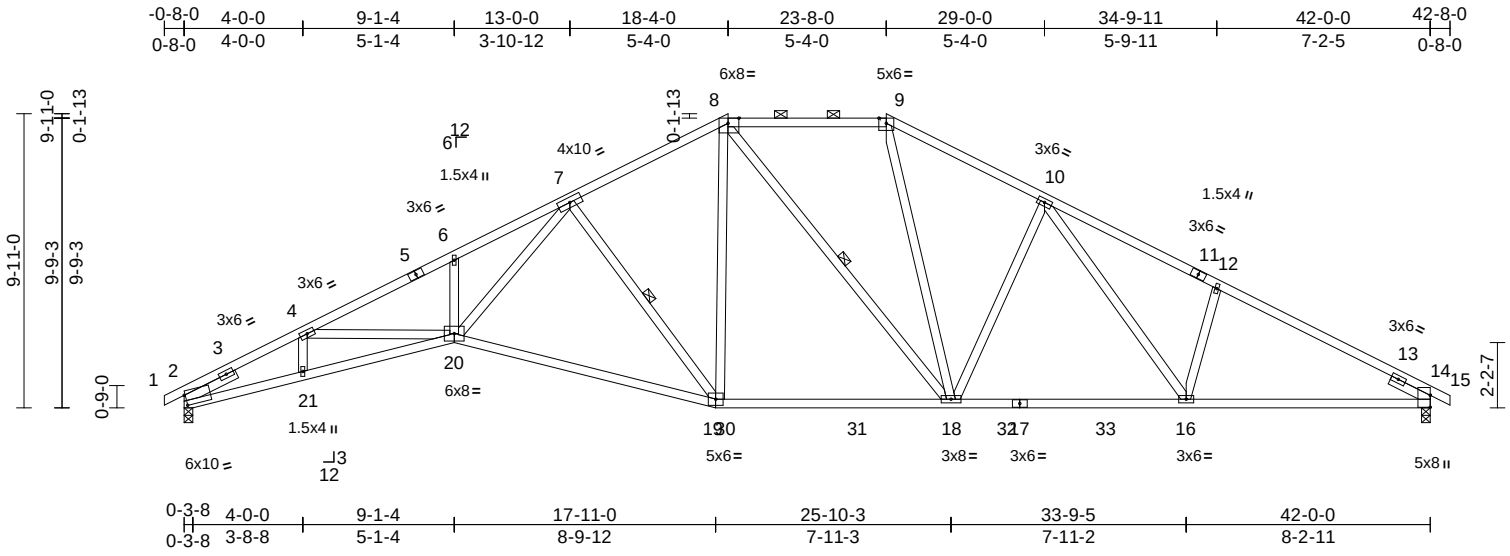

Scale = 1:77.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.35	18-19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.84	19-20	>603	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.35	14	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 248 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 5-1,11-15:2x4 SP DSS
BOT CHORD	2x4 SP No.1 *Except* 2-20:2x4 SP DSS
WEBS	2x4 SP No.2 *Except* 16-12,21-4,4-20,6-20:2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 2-0-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-1-8 oc purlins, except 2-0-0 oc purlins (3-8-5 max.): 8-9.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 7-19, 8-18

REACTIONS (size) 2=0-3-8, 14=0-3-8
Max Horiz 2=157 (LC 12)
Max Uplift 2=-192 (LC 12), 14=-192 (LC 13)
Max Grav 2=1720 (LC 1), 14=1720 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/18, 2-4=-4333/994, 4-6=-4898/1075, 6-7=-4920/1181, 7-8=-2140/644, 8-9=-1824/620, 9-10=-2278/686, 10-12=-2779/771, 12-14=-2891/695, 14-15=0/18
BOT CHORD	2-21=-814/3792, 20-21=-831/3870, 19-20=-478/2741, 18-19=-214/1834, 16-18=-369/2189, 14-16=-506/2488
WEBS	9-18=-154/727, 10-18=-528/279, 12-16=-267/224, 10-16=-141/448, 4-21=-217/112, 4-20=-4/635, 6-20=-324/190, 7-20=-551/2702, 7-19=-1346/403, 8-19=-117/621, 8-18=-227/195

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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) All plates are 3x6 MT20 unless otherwise indicated.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 14. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

June 2,2023

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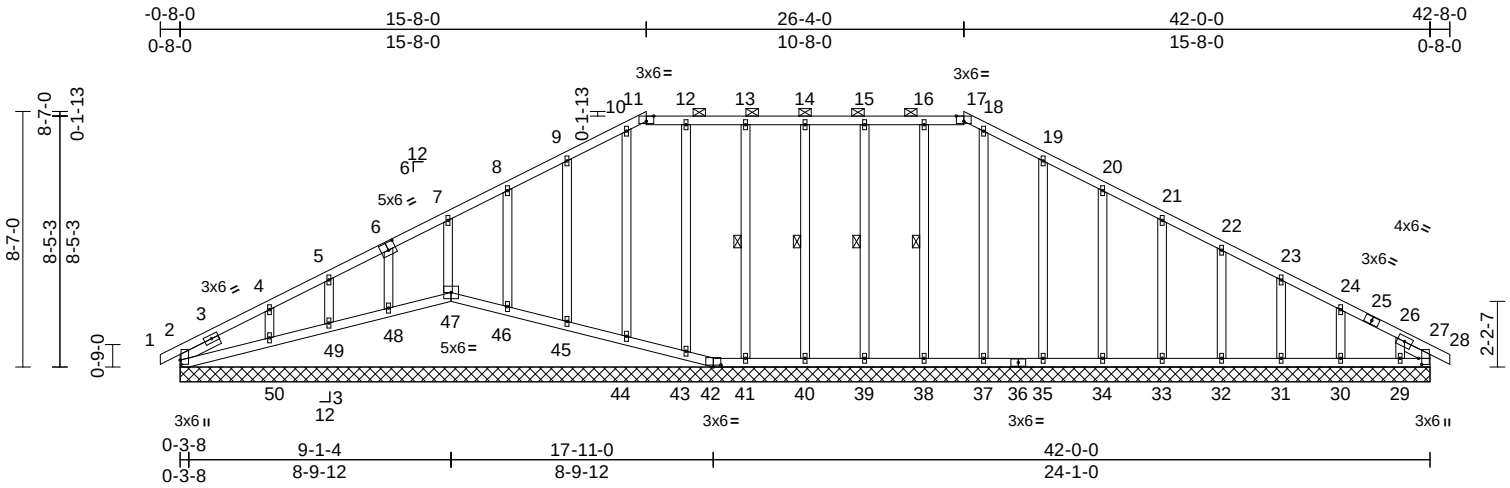
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault	I58699568
35946-359646A	A5E	Hip Supported Gable	1	1	Job Reference (optional)	



Scale = 1:77.4

Plate Offsets (X, Y): [2:0-1-11,0-0-6], [6:0-3-0,0-3-0], [11:0-3-0,Edge], [17:0-3-0,Edge], [27:0-2-8,0-1-5], [42:0-3-0,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	27	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 281 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 40-14,41-13,43-12,44-10,39-15,38-16,37-18, 35-19:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-0-3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 11-17.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 14-40, 13-41, 15-39, 16-38

REACTIONS (size) 2=42-0-0, 27=42-0-0, 29=42-0-0, 30=42-0-0, 31=42-0-0, 32=42-0-0, 33=42-0-0, 34=42-0-0, 35=42-0-0, 37=42-0-0, 38=42-0-0, 39=42-0-0, 40=42-0-0, 41=42-0-0, 42=42-0-0, 43=42-0-0, 44=42-0-0, 45=42-0-0, 46=42-0-0, 47=42-0-0, 48=42-0-0, 49=42-0-0, 50=42-0-0, 51=42-0-0, 55=42-0-0
Max Horiz 2=135 (LC 12), 51=135 (LC 12)
Max Uplift 2=-47 (LC 13), 29=-96 (LC 13), 30=-48 (LC 13), 31=-49 (LC 13), 32=-49 (LC 13), 33=-49 (LC 13), 34=-47 (LC 13), 35=-59 (LC 13), 38=-17 (LC 9), 39=-35 (LC 8), 40=-27 (LC 9), 41=-38 (LC 8), 42=-27 (LC 13), 43=-22 (LC 9), 45=-58 (LC 12), 46=-45 (LC 12), 47=-34 (LC 12), 48=-54 (LC 12), 49=-20 (LC 12), 50=-123 (LC 12), 51=-47 (LC 13)
Max Grav 2=157 (LC 1), 27=119 (LC 22), 29=115 (LC 24), 30=165 (LC 1), 31=159 (LC 24), 32=160 (LC 1), 33=160 (LC 1), 34=160 (LC 24), 35=161 (LC 1), 37=153 (LC 24), 38=158 (LC 24), 39=161 (LC 23), 40=161 (LC 1), 41=156 (LC 24), 42=16 (LC 3), 43=151 (LC 23), 44=156 (LC 22), 45=159 (LC 1), 46=163 (LC 1), 47=169 (LC 1), 48=168 (LC 23), 49=131 (LC 1), 50=231 (LC 23), 51=157 (LC 1), 55=119 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/18, 2-4=-154/62, 4-5=-108/66, 5-7=-85/114, 7-8=-66/138, 8-9=-82/181, 9-10=-100/233, 10-11=-97/228, 11-12=-92/231, 12-13=-91/230, 13-14=-91/230, 14-15=-91/230, 15-16=-91/230, 16-17=-92/231, 17-18=-97/228, 18-19=-100/233, 19-20=-82/181, 20-21=-65/134, 21-22=-54/86, 22-23=-54/45, 23-24=-74/24, 24-26=-97/23, 26-27=-57/32, 27-28=0/18
BOT CHORD 2-50=-35/139, 49-50=-32/137, 48-49=-29/138, 47-48=-33/138, 46-47=-32/137, 45-46=-32/139, 44-45=-33/138, 43-44=-32/139, 42-43=-28/138, 41-42=-27/131, 40-41=-27/131, 39-40=-27/131, 38-39=-27/131, 37-38=-27/131, 35-37=-27/131, 34-35=-27/131, 33-34=-27/131, 32-33=-27/131, 31-32=-27/131, 30-31=-27/131, 29-30=-27/131, 27-29=-27/131
WEBS 14-40=-120/52, 13-41=-121/66, 12-43=-117/42, 10-44=-114/3, 9-45=-120/95, 8-46=-119/81, 7-47=-122/84, 6-48=-122/86, 5-49=-103/66, 4-50=-161/124, 15-39=-122/66, 16-38=-118/41, 18-37=-113/0, 19-35=-121/95, 20-34=-120/81, 21-33=-120/83, 22-32=-120/83, 23-31=-119/82, 24-30=-124/85, 26-29=-81/105

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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.

June 2,2023

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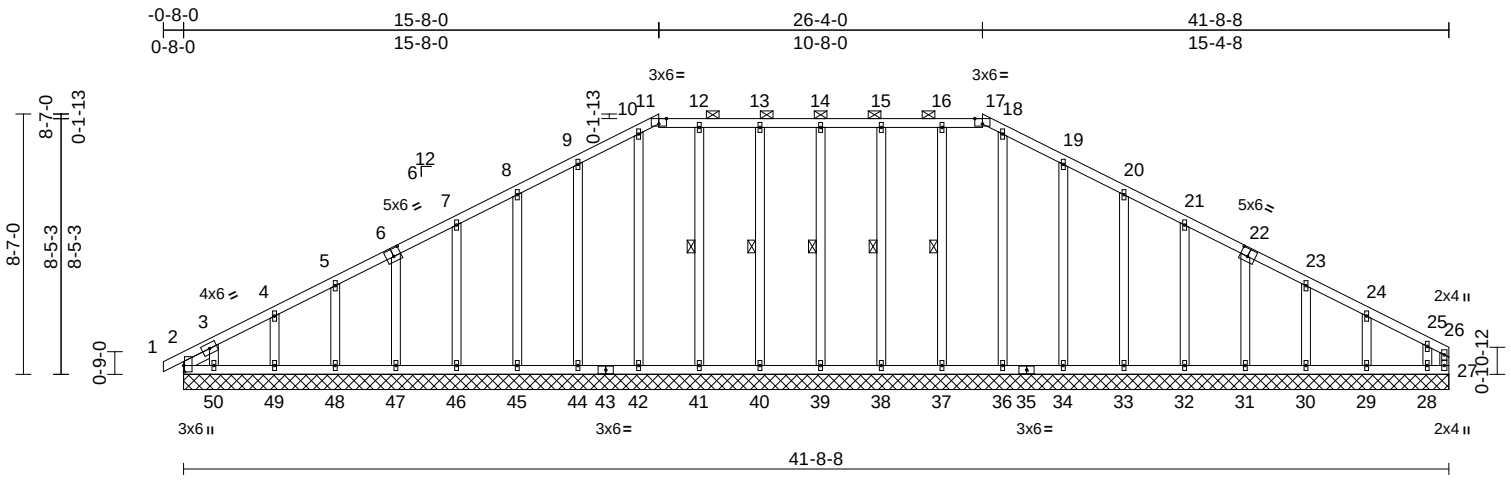
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 47 lb uplift at joint 2, 34 lb uplift at joint 47, 27 lb uplift at joint 42, 27 lb uplift at joint 40, 38 lb uplift at joint 41, 22 lb uplift at joint 43, 58 lb uplift at joint 45, 45 lb uplift at joint 46, 54 lb uplift at joint 48, 20 lb uplift at joint 49, 123 lb uplift at joint 50, 35 lb uplift at joint 39, 17 lb uplift at joint 38, 59 lb uplift at joint 35, 47 lb uplift at joint 34, 49 lb uplift at joint 33, 49 lb uplift at joint 32, 49 lb uplift at joint 31, 48 lb uplift at joint 30, 96 lb uplift at joint 29 and 47 lb uplift at joint 2.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 47, 43, 44, 45, 46, 48, 49, 50.
12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault	I58699569
35946-359646A	AE	Hip Supported Gable	1	1	Job Reference (optional)	



Scale = 1:76

Plate Offsets (X, Y): [2:0-2-8,0-0-5], [6:0-3-0,0-3-0], [11:0-3-0,Edge], [17:0-3-0,Edge], [22:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	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	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	27	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 292 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except* 39-14,40-13,41-12,42-10,44-9,38-15,37-16,36-18,34-19:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-0-3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-17.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 14-39, 13-40, 12-41, 15-38, 16-37

REACTIONS (size) 2=41-8-8, 27=41-8-8, 28=41-8-8, 29=41-8-8, 30=41-8-8, 31=41-8-8, 32=41-8-8, 33=41-8-8, 34=41-8-8, 36=41-8-8, 37=41-8-8, 38=41-8-8, 39=41-8-8, 40=41-8-8, 41=41-8-8, 42=41-8-8, 44=41-8-8, 45=41-8-8, 46=41-8-8, 47=41-8-8, 48=41-8-8, 49=41-8-8, 50=41-8-8, 51=41-8-8
Max Horiz 2=145 (LC 12), 51=145 (LC 12)
Max Uplift 2=-31 (LC 8), 27=-19 (LC 11), 28=-173 (LC 13), 29=-47 (LC 13), 30=-44 (LC 13), 31=-49 (LC 13), 32=-52 (LC 13), 33=-46 (LC 13), 34=-60 (LC 13), 37=-19 (LC 9), 38=-35 (LC 8), 39=-28 (LC 9), 40=-35 (LC 8), 41=-19 (LC 9), 44=-57 (LC 12), 45=-47 (LC 12), 46=-52 (LC 12), 47=-48 (LC 12), 48=-44 (LC 12), 49=-49 (LC 12), 50=-120 (LC 12), 51=-31 (LC 8)
Max Grav 2=148 (LC 21), 27=184 (LC 13), 28=118 (LC 24), 29=167 (LC 1), 30=152 (LC 24), 31=159 (LC 24), 32=166 (LC 1), 33=158 (LC 24), 34=160 (LC 1), 36=157 (LC 24), 37=159 (LC 24), 38=161 (LC 23), 39=160 (LC 1), 40=161 (LC 24), 41=159 (LC 23), 42=161 (LC 22), 44=160 (LC 1), 45=158 (LC 23), 46=166 (LC 1), 47=159 (LC 23), 48=152 (LC 1), 49=167 (LC 1), 50=122 (LC 19), 51=148 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-80/46, 3-4=-155/69, 4-5=-111/81, 5-7=-83/121, 7-8=-53/147, 8-9=-69/170, 9-10=-88/220, 10-11=-86/218, 11-12=-81/220, 12-13=-80/219, 13-14=-80/219, 14-15=-80/219, 15-16=-80/219, 16-17=-81/220, 17-18=-86/218, 18-19=-88/220, 19-20=-69/168, 20-21=-53/122, 21-23=-39/72, 23-24=-56/19, 24-25=-86/29, 25-26=-143/47, 26-27=-115/36
BOT CHORD 2-50=-29/104, 49-50=-29/104, 48-49=-29/104, 47-48=-29/104, 46-47=-32/105, 45-46=-32/105, 44-45=-32/105, 42-44=-32/105, 41-42=-32/105, 40-41=-32/105, 39-40=-32/105, 38-39=-32/105, 37-38=-32/105, 36-37=-32/105, 34-36=-32/105, 33-34=-32/105, 32-33=-32/105, 31-32=-32/105, 30-31=-29/102, 29-30=-29/102, 28-29=-29/102, 27-28=-29/102
WEBS 14-39=-120/52, 13-40=-121/65, 12-41=-119/43, 10-42=-121/7, 9-44=-120/94, 8-45=-118/80, 7-46=-126/87, 6-47=-119/82, 5-48=-112/77, 4-49=-126/86, 3-50=-84/123, 15-38=-121/65, 16-37=-119/43, 18-36=-117/0, 19-34=-120/94, 20-33=-118/80, 21-32=-126/86, 22-31=-119/83, 23-30=-112/77, 24-29=-126/86, 25-28=-92/125

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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.

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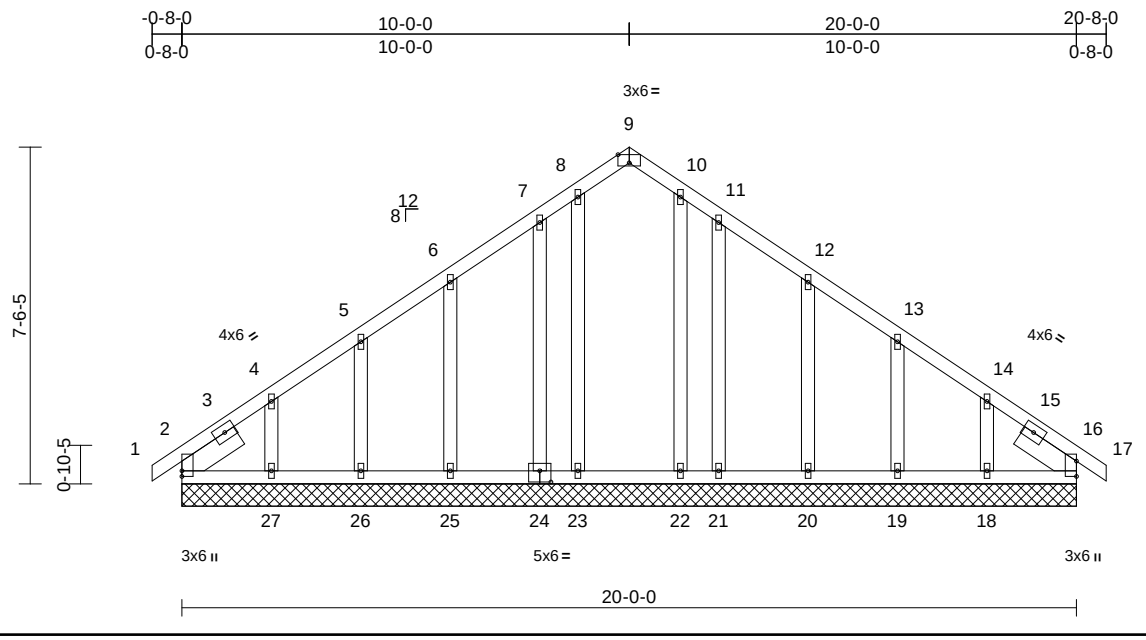
Edenton, NC 27932

5) All plates are 1.5x4 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 27, 2, 39, 40, 41, 44, 45, 46, 47, 48, 49, 50, 38, 37, 34, 33, 32, 31, 30, 29, and 28. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault
35946-359646A	BE	Common Supported Gable	1	1	I58699570
					Job Reference (optional)



Scale = 1:51.5

Plate Offsets (X, Y): [2:Edge,0-0-0], [9:0-3-0,Edge], [16:Edge,0-0-0], [24:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 137 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 23-8,22-10:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

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

REACTIONS (size) 2=20-0-0, 16=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0, 25=20-0-0, 26=20-0-0, 27=20-0-0, 28=20-0-0, 32=20-0-0
Max Horiz 2=-176 (LC 10), 28=-176 (LC 10)
Max Uplift 2=-31 (LC 8), 16=-5 (LC 9), 18=-133 (LC 13), 19=-47 (LC 13), 20=-72 (LC 13), 21=-77 (LC 13), 24=-70 (LC 12), 25=-72 (LC 12), 26=-46 (LC 12), 27=-140 (LC 12), 28=-31 (LC 8), 32=-5 (LC 9)
Max Grav 2=178 (LC 21), 16=164 (LC 22), 18=195 (LC 20), 19=162 (LC 20), 20=181 (LC 20), 21=109 (LC 24), 22=157 (LC 21), 23=171 (LC 22), 24=109 (LC 23), 25=181 (LC 19), 26=161 (LC 19), 27=203 (LC 19), 28=178 (LC 21), 32=164 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-199/120, 4-5=-121/83, 5-6=-111/64, 6-7=-99/78, 7-8=-118/115, 8-9=-106/95, 9-10=-106/95, 10-11=-118/114, 11-12=-76/59, 12-13=-86/32, 13-14=-103/51, 14-16=-174/113, 16-17=0/22
BOT CHORD 2-27=-101/170, 26-27=-101/170, 25-26=-101/170, 23-25=-101/170, 22-23=-101/170, 21-22=-101/170, 20-21=-101/170, 19-20=-101/170, 18-19=-101/170, 16-18=-101/170
WEBS 8-23=-87/9, 10-22=-73/5, 7-24=-115/89, 6-25=-136/95, 5-26=-127/78, 4-27=-157/131, 11-21=-116/92, 12-20=-136/95, 13-19=-127/79, 14-18=-157/126

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 2, 5 lb uplift at joint 16, 70 lb uplift at joint 24, 72 lb uplift at joint 25, 46 lb uplift at joint 26, 140 lb uplift at joint 27, 77 lb uplift at joint 21, 72 lb uplift at joint 20, 47 lb uplift at joint 19, 133 lb uplift at joint 18, 31 lb uplift at joint 2 and 5 lb uplift at joint 16.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

June 2,2023

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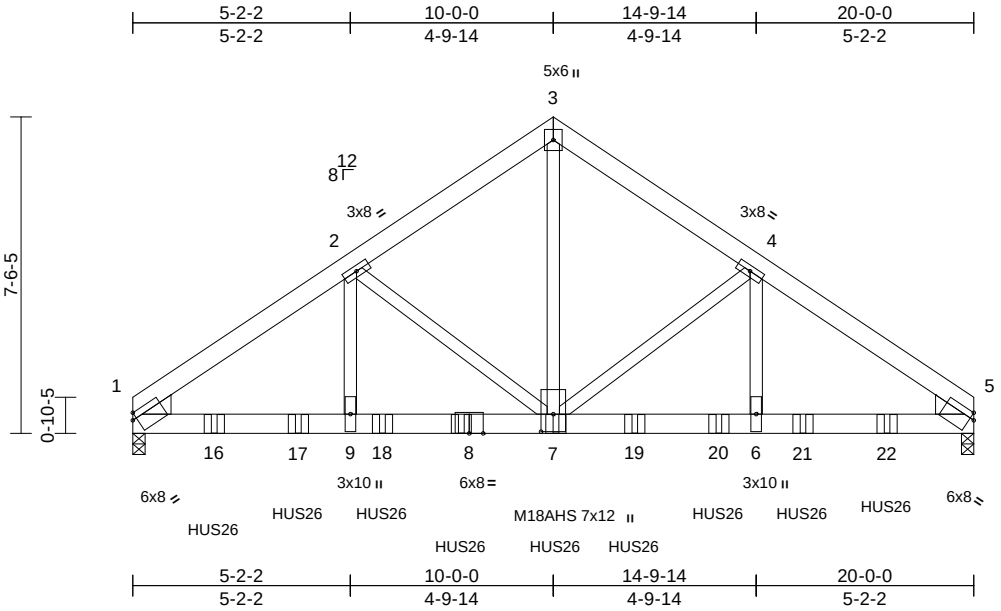
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault	
35946-359646A	BGR	Common Girder	1	3	Job Reference (optional)	I58699571

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.63 E May 9 2023 Print: 8.630 E May 9 2023 MiTek Industries, Inc. Fri Jun 02 05:59:23 Page: 1
ID:A7nrEjpZBnR0LhEjR1grTlzuBok-RiM8agttms3_U2gxXzs5upraDvK1QU_B3aoFHQzAPhq



Scale = 1:54.8

Plate Offsets (X, Y): [1:Edge,0-1-13], [5:Edge,0-1-13], [7:0-5-0,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.08	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.16	6-7	>999	180	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.05	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 433 lb	FT = 20%

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

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

REACTIONS (lb/size) 1=8252/0-3-8, 5=8180/0-3-8
Max Horiz 1=165 (LC 11)
Max Uplift 1=-1011 (LC 12), 5=-987 (LC 13)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-11249/1458, 2-3=-8065/1119, 3-4=-8064/1118, 4-5=-11272/1453
BOT CHORD 1-16=-1175/9181, 16-17=-1175/9181, 9-17=-1175/9181, 9-18=-1175/9181, 8-18=-1175/9181, 7-8=-1175/9181, 7-19=-1120/9196, 19-20=-1120/9196, 6-20=-1120/9196, 6-21=-1120/9196, 21-22=-1120/9196, 5-22=-1120/9196
WEBS 2-9=-406/3698, 2-7=-3167/520, 3-7=-1093/8361, 4-7=-3186/515, 4-6=-403/3731

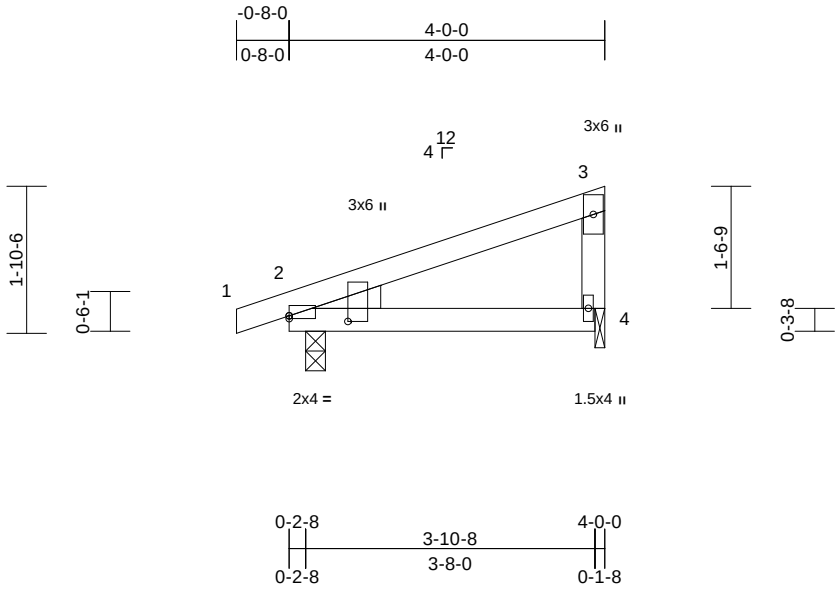
NOTES
1) 3-ply truss to be connected together with 10d (0.148"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc,
Except member 3-7 2x4 - 1 row at 0-8-0 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 (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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) All plates are MT20 plates 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) 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.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-3-0 oc max. starting at 1-11-4 from the left end to 17-11-4 to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-5=-60, 10-13=-20
Concentrated Loads (lb)
Vert: 8=-1648 (B), 7=-1648 (B), 16=-1648 (B), 17=-1648 (B), 18=-1648 (B), 19=-1648 (B), 20=-1648 (B), 21=-1648 (B), 22=-1648 (B)

June 2,2023

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

Job	Truss	Truss Type	Qty	Ply	Wilmington A Vault
35946-359646A	P	Monopitch	10	1	I58699572
					Job Reference (optional)



Scale = 1:29.2

Plate Offsets (X, Y): [2:Edge,0-0-7], [2:0-0-14,0-8-15]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.02	4-7	>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: 16 lb	FT = 20%

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

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

REACTIONS (lb/size) 2=198/0-3-0, 4=151/0-1-8
Max Horiz 2=61 (LC 8)
Max Uplift 2=-46 (LC 8), 4=-38 (LC 12)

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

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior 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 3-06-00 tall by 2-00-00 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 4.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

June 2,2023

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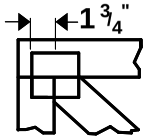
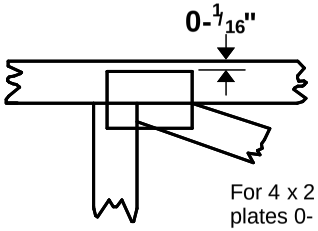
Edenton, NC 27932

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.

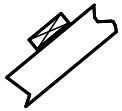
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

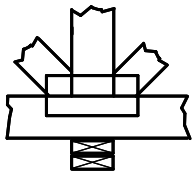
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

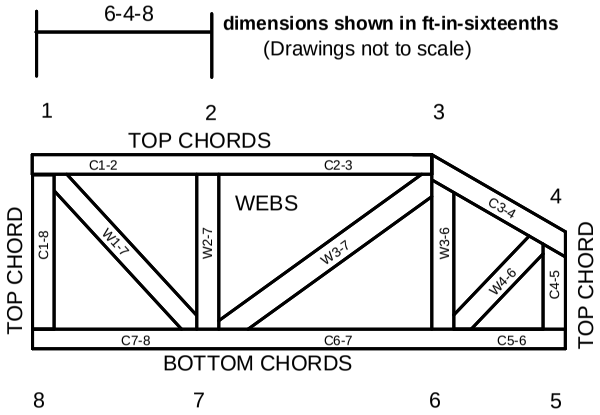


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.