

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: Q-2402834
VASQUEZ: 2024-SAN-063

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: I70065047 thru I70065061

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844



December 10, 2024

Tony Miller

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.

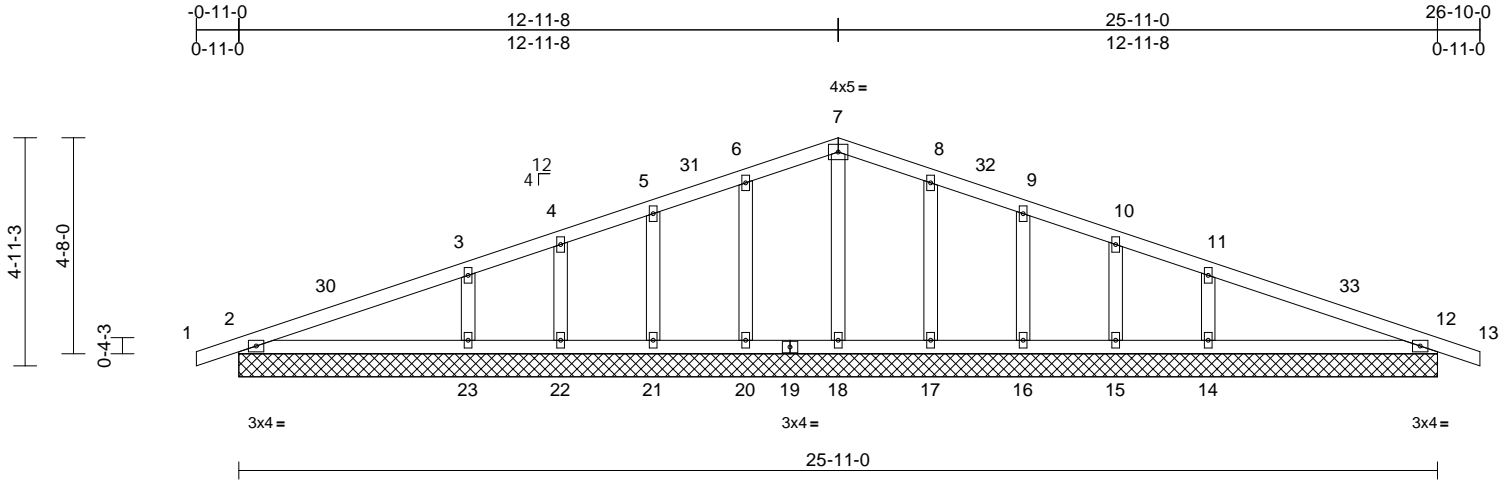
Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065047
Q-2402834	A01	Common Supported Gable	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1

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Scale = 1:49.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.22	Vert(LL)	n/a	-	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS						Weight: 118 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.2 *Except* 23-3,14-11:2x4 SP No.3

WEBS	7-18=97/0, 6-20=123/101, 5-21=136/66, 4-22=52/33, 3-23=270/120, 8-17=123/101, 9-16=136/66, 10-15=52/33, 11-14=270/120
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BRACING	
TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

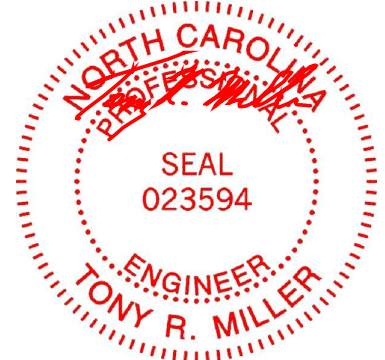
REACTIONS	(size)
	2=25-11-0, 12=25-11-0, 14=25-11-0, 15=25-11-0, 16=25-11-0, 17=25-11-0, 18=25-11-0, 20=25-11-0, 21=25-11-0, 22=25-11-0, 23=25-11-0, 24=25-11-0, 27=25-11-0
Max Horiz	2=42 (LC 10), 24=42 (LC 10)
Max Uplift	2=24 (LC 11), 12=24 (LC 11), 14=11 (LC 11), 15=5 (LC 11), 16=7 (LC 11), 17=6 (LC 11), 20=6 (LC 11), 21=7 (LC 11), 22=5 (LC 11), 23=11 (LC 11), 24=24 (LC 11), 27=24 (LC 11)
Max Grav	2=233 (LC 1), 12=233 (LC 1), 14=401 (LC 21), 15=44 (LC 21), 16=188 (LC 1), 17=160 (LC 21), 18=139 (LC 1), 20=160 (LC 20), 21=188 (LC 1), 22=44 (LC 20), 23=401 (LC 20), 24=233 (LC 1), 27=233 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/17, 2-3=71/36, 3-4=66/66, 4-5=42/83, 5-6=54/111, 6-7=63/135, 7-8=63/137, 8-9=54/113, 9-10=41/85, 10-11=66/68, 11-12=70/27, 12-13=0/17
BOT CHORD	2-23=0/62, 22-23=0/53, 21-22=0/53, 20-21=0/53, 18-20=0/53, 17-18=0/53, 16-17=0/53, 15-16=0/53, 14-15=0/53, 12-14=0/58

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=26ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 12-11-8, Corner (3) 12-11-8 to 15-11-8, Exterior (2) 15-11-8 to 26-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * 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.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 2, 24 lb uplift at joint 12, 6 lb uplift at joint 20, 7 lb uplift at joint 21, 5 lb uplift at joint 22, 11 lb uplift at joint 23, 6 lb uplift at joint 17, 7 lb uplift at joint 16, 5 lb uplift at joint 15, 11 lb uplift at joint 14, 24 lb uplift at joint 2 and 24 lb uplift at joint 12.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 10, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompoments.com)

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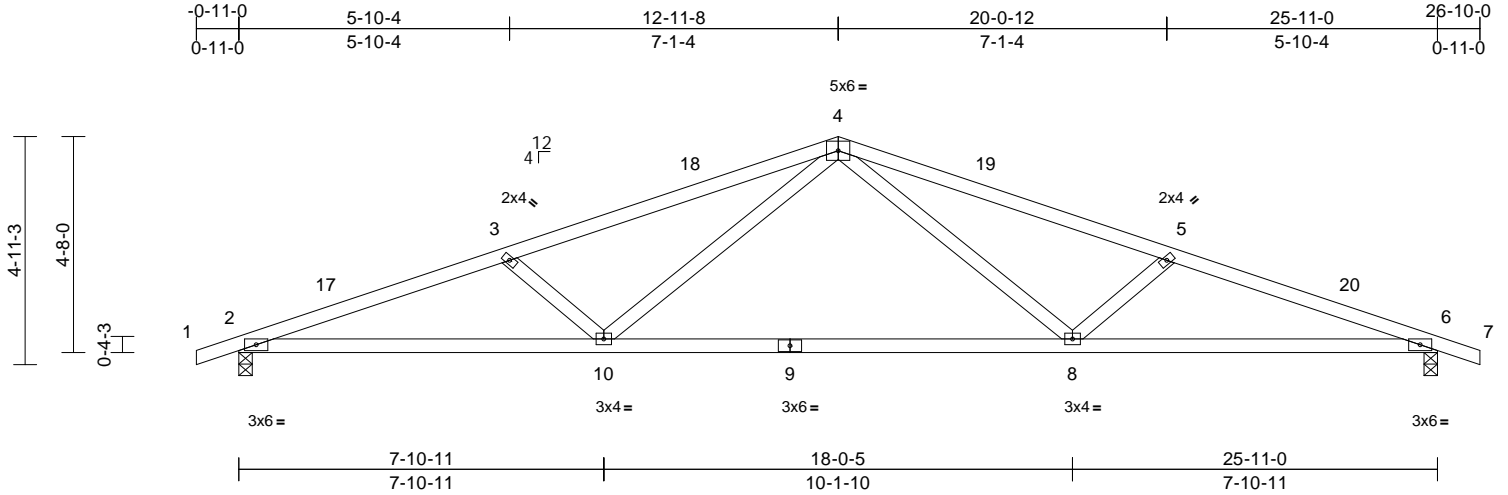
Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065048
Q-2402834	A02	Common	4	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Scale = 1:49.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.69	Vert(LL)	-0.15	8-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.50	8-10	>628	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.08	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 110 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 6=0-3-8
Max Horiz 2=42 (LC 10)
Max Uplift 2=-30 (LC 11), 6=-30 (LC 11)
Max Grav 2=1092 (LC 1), 6=1092 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-2604/150, 3-4=-2301/115,
4-5=-2301/115, 5-6=-2604/150, 6-7=0/17
BOT CHORD 2-10=-93/2446, 8-10=-38/1550,
6-8=-101/2446
WEBS 4-8=0/773, 5-8=-465/128, 4-10=0/773,
3-10=-465/128

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed;
MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-11-8, Exterior (2) 12-11-8 to 15-11-8, Interior (1) 15-11-8 to 26-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) * This truss has been designed for a 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) All bearings are assumed to be SP No.2 .

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 2 and 30 lb uplift at joint 6.
- 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 10,2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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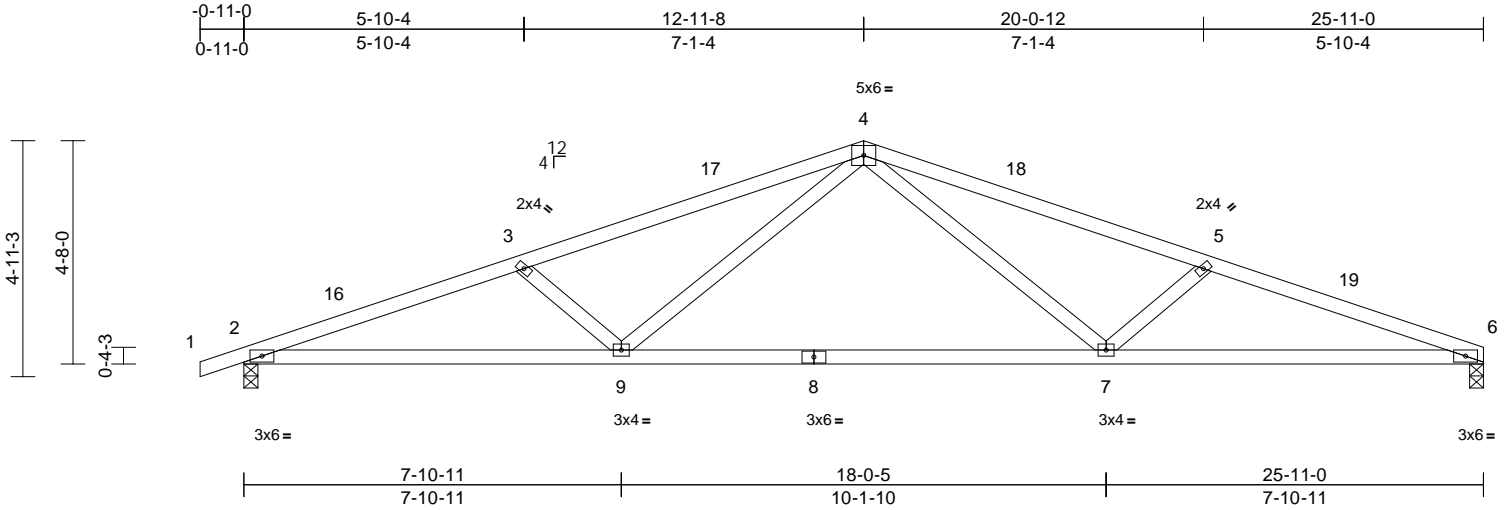
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065049
Q-2402834	A03	Common	5	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:48.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.69	Vert(LL)	-0.15	7-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.49	7-9	>630	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.08	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 108 lb	FT = 20%

LUMBER

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

6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

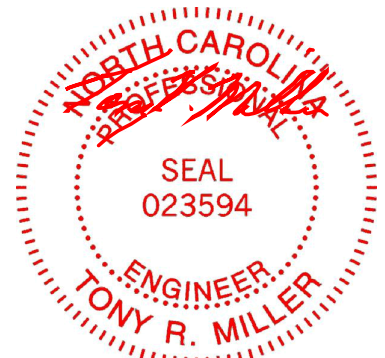
(size) 2=0-3-8, 6=0-3-8
Max Horiz 2=43 (LC 10)
Max Uplift 2=-31 (LC 11), 6=-7 (LC 11)
Max Grav 2=1093 (LC 1), 6=1036 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-2606/155, 3-4=-2304/119, 4-5=-2310/131, 5-6=-2615/166
BOT CHORD 2-9=-113/2449, 7-9=-50/1553, 6-7=-114/2457
WEBS 4-7=0/780, 5-7=-470/129, 4-9=0/772, 3-9=-465/128

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-11-8, Exterior (2) 12-11-8 to 15-11-8, Interior (1) 15-11-8 to 25-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) * This truss has been designed for a 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) All bearings are assumed to be SP No.2.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 6 and 31 lb uplift at joint 2.



December 10, 2024

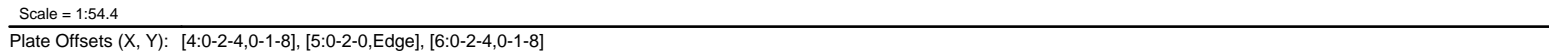
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)
 Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft;
 B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed;
 MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-11-8, Exterior (2) 12-11-8 to 15-11-8, Interior (1) 15-11-8 to 25-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are 2x4 MT20 unless otherwise indicated.

- LOAD CASE(S) Standard

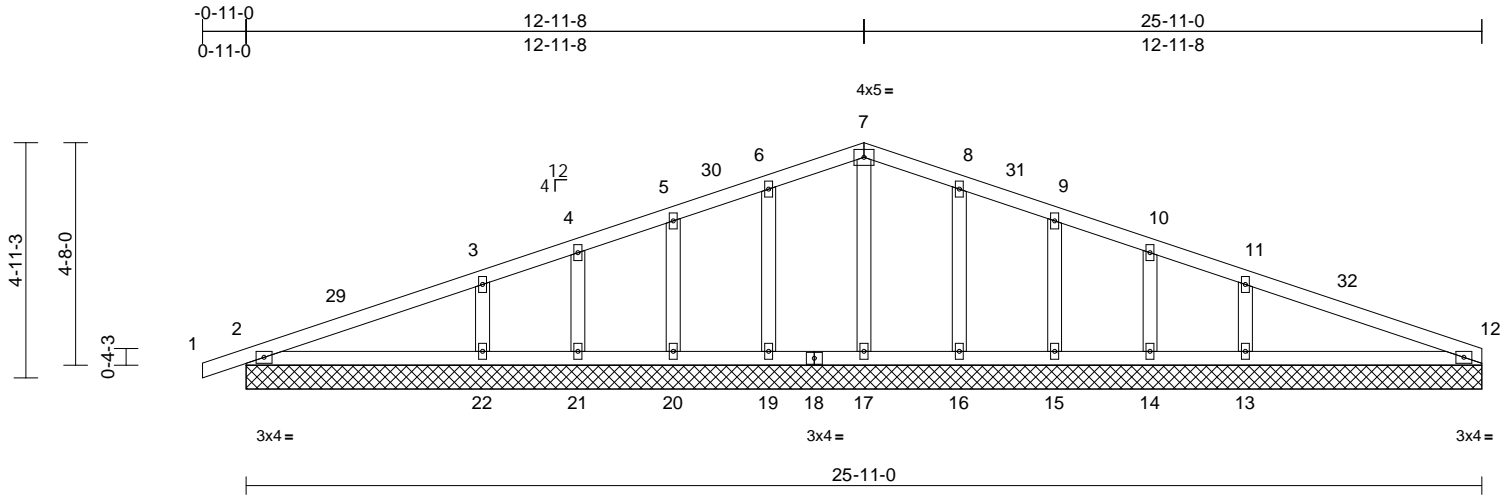


Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065051
Q-2402834	A05	Common	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:48.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 116 lb FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.2 *Except* 22-3,13-11:2x4 SP No.3

WEBS	7-17=-96/0, 6-19=-123/101, 5-20=-136/66, 4-21=-52/33, 3-22=-270/120, 8-16=-123/101, 9-15=-136/67, 10-14=-48/32, 11-13=-276/143
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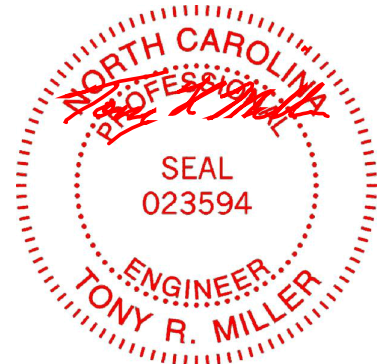
BRACING	
TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS	(size)	2=25-11-0, 12=25-11-0, 13=25-11-0, 14=25-11-0, 15=25-11-0, 16=25-11-0, 17=25-11-0, 19=25-11-0, 20=25-11-0, 21=25-11-0, 22=25-11-0, 23=25-11-0, 26=25-11-0
	Max Horiz	2=43 (LC 10), 23=43 (LC 10)
	Max Uplift	2=-22 (LC 11), 13=-17 (LC 11), 14=-2 (LC 11), 15=-8 (LC 11), 16=-6 (LC 11), 19=-6 (LC 11), 20=-7 (LC 11), 21=-5 (LC 11), 22=-12 (LC 11), 23=-22 (LC 11)
	Max Grav	2=233 (LC 1), 12=171 (LC 1), 13=414 (LC 21), 14=37 (LC 21), 15=190 (LC 1), 16=159 (LC 21), 17=138 (LC 1), 19=160 (LC 20), 20=188 (LC 1), 21=44 (LC 20), 22=401 (LC 20), 23=233 (LC 1), 26=171 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/17, 2-3=-71/34, 3-4=-67/62, 4-5=-43/79, 5-6=-54/107, 6-7=-62/131, 7-8=-62/132, 8-9=-54/109, 9-10=-41/80, 10-11=-67/67, 11-12=-101/28
BOT CHORD	2-22=0/61, 21-22=0/45, 20-21=0/45, 19-20=0/45, 17-19=0/45, 16-17=0/45, 15-16=0/45, 14-15=0/45, 13-14=0/45, 12-13=-29/91

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=26ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 12-11-8, Corner (3) 12-11-8 to 15-11-8, Exterior (2) 15-11-8 to 25-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 4) All plates are 2x4 MT20 unless otherwise indicated.
 - 5) Gable requires continuous bottom chord bearing.
 - 6) Gable studs spaced at 2-0-0 oc.
 - 7) * This truss has been designed for a 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) All bearings are assumed to be SP No.2.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2, 6 lb uplift at joint 19, 7 lb uplift at joint 20, 5 lb uplift at joint 21, 12 lb uplift at joint 22, 6 lb uplift at joint 16, 8 lb uplift at joint 15, 2 lb uplift at joint 14, 17 lb uplift at joint 13 and 22 lb uplift at joint 2.
 - 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 10, 2024

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ENGINEERING BY
TRENCO
A MiTek Affiliate

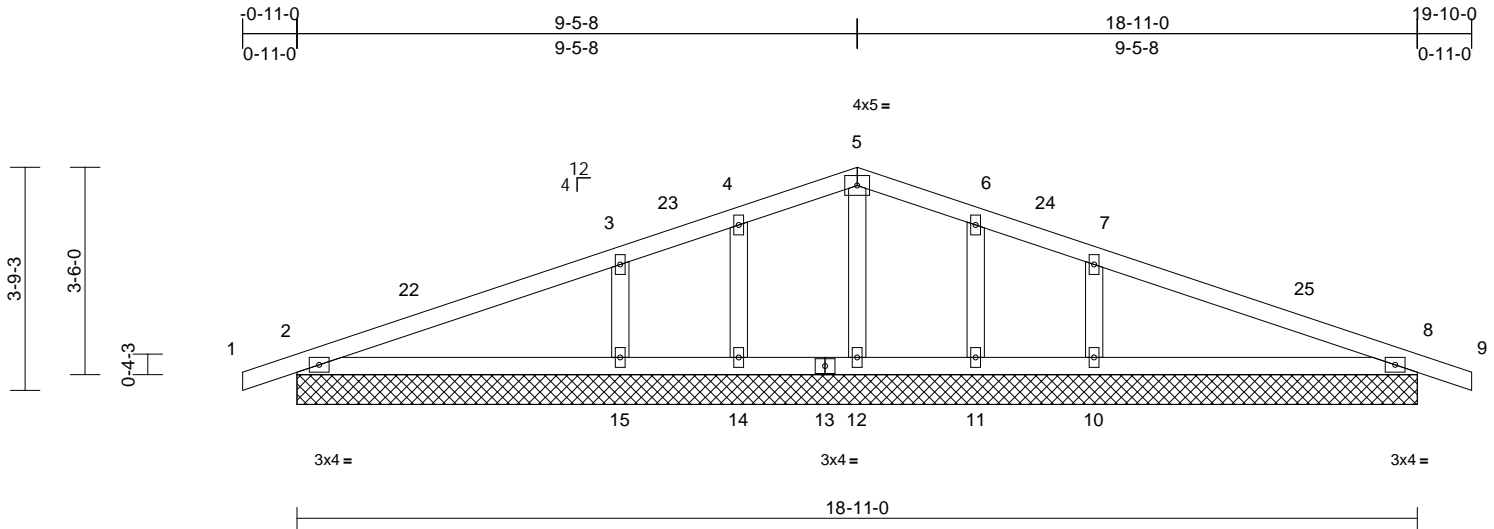
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065052
Q-2402834	B01	Common Supported Gable	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Mon Dec 09 09:08:15
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	19	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 77 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.2 *Except* 15-3,10-7:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size)
2=18-11-0, 8=18-11-0, 10=18-11-0,
11=18-11-0, 12=18-11-0,
14=18-11-0, 15=18-11-0,
16=18-11-0, 19=18-11-0
Max Horiz 2=-31 (LC 9), 16=-31 (LC 9)
Max Uplift 2=-28 (LC 11), 8=-28 (LC 11),
10=-13 (LC 11), 11=-5 (LC 20),
14=-5 (LC 21), 15=-13 (LC 11),
16=-28 (LC 11), 19=-28 (LC 11)
Max Grav 2=255 (LC 1), 8=255 (LC 1),
10=452 (LC 1), 11=16 (LC 21),
12=191 (LC 1), 14=16 (LC 20),
15=452 (LC 1), 16=255 (LC 1),
19=255 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-85/43, 3-4=-94/93,
4-5=-63/107, 5-6=-63/108, 6-7=-94/95,
7-8=-85/45, 8-9=0/17
BOT CHORD 2-15=0/73, 14-15=0/52, 12-14=0/52,
11-12=0/52, 10-11=0/52, 8-10=0/73
WEBS 5-12=-119/18, 4-14=-38/73, 3-15=-303/134,
6-11=-38/73, 7-10=-303/134

NOTES
1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft;
B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed;
MWFRS (directional) and C-C Corner (3) -0-11-0 to
2-1-0, Exterior (2) 2-1-0 to 9-5-8, Corner (3) 9-5-8 to
12-5-8, Exterior (2) 12-5-8 to 19-10-0 zone; cantilever
left and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) * This truss has been designed for a 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) All bearings are assumed to be SP No.2.
- 9) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 28 lb uplift at joint
2, 28 lb uplift at joint 8, 5 lb uplift at joint 14, 13 lb uplift at
joint 15, 5 lb uplift at joint 11, 13 lb uplift at joint 10, 28 lb
uplift at joint 2 and 28 lb uplift at joint 8.
- 10) This truss design requires that a minimum of 7/16"
structural wood sheathing be applied directly to the top
chord and 1/2" gypsum sheetrock be applied directly to
the bottom chord.

LOAD CASE(S) Standard



December 10, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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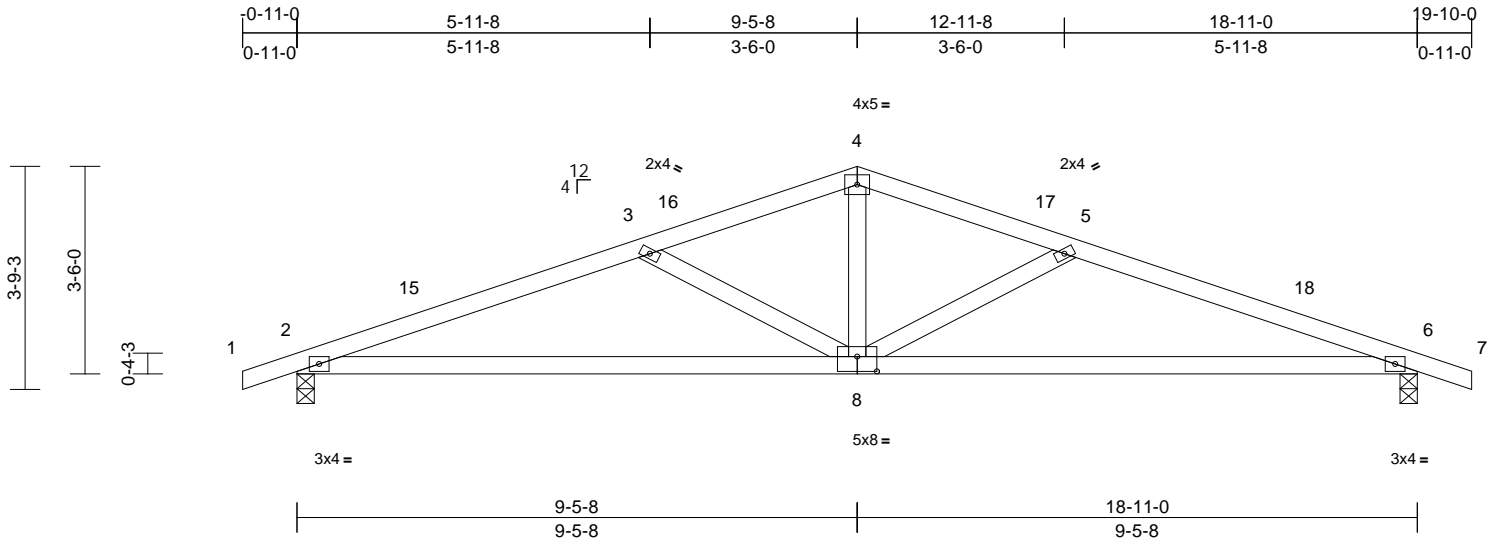
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065053
Q-2402834	B02	Common	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Mon Dec 09 09:08:15
ID:fxaf7KvXrHPm4reGxvXahqyCjmy-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:38.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.43	Vert(LL)	-0.08	8-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.24	8-14	>927	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 77 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 6=0-3-8
Max Horiz 2=-31 (LC 9)
Max Uplift 2=-28 (LC 11), 6=-28 (LC 11)
Max Grav 2=812 (LC 1), 6=812 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-1664/136, 3-4=-1279/85,
4-5=-1279/85, 5-6=-1664/135, 6-7=0/17
BOT CHORD 2-6=-82/1555
WEBS 4-8=0/626, 5-8=-450/103, 3-8=-450/103

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;
MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 9-5-8, Exterior (2) 9-5-8 to 12-5-8, Interior (1) 12-5-8 to 19-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) * This truss has been designed for a 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) All bearings are assumed to be SP No.2.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 2 and 28 lb uplift at joint 6.

- 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 10, 2024

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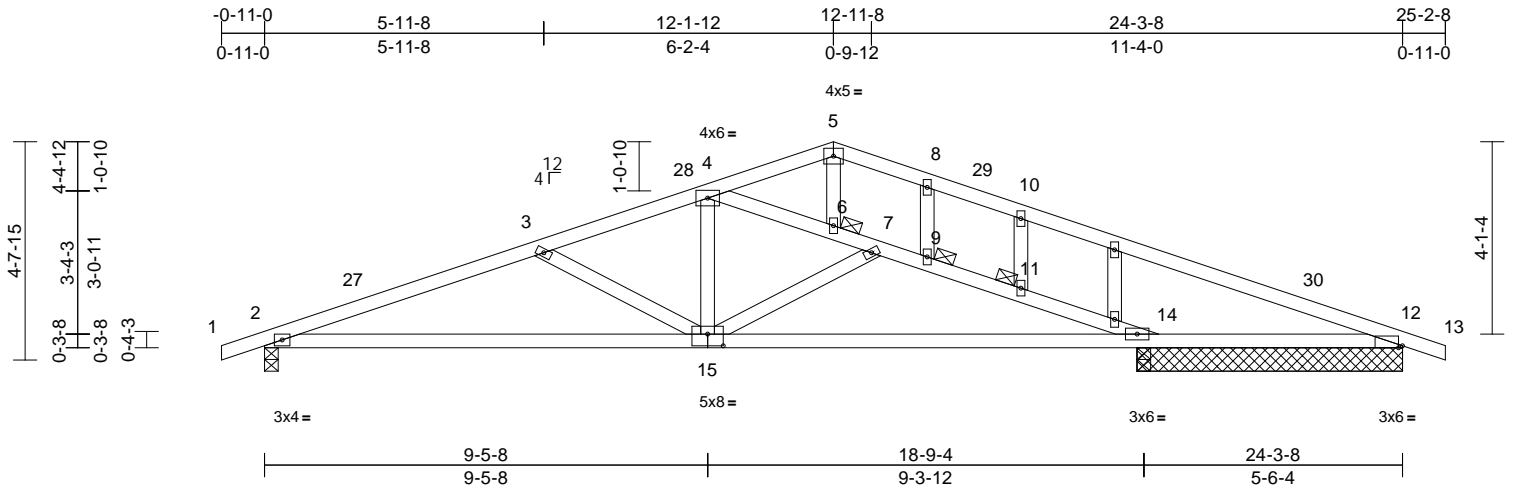
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065054
Q-2402834	C01	Common Structural Gable	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Mon Dec 09 09:08:15
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Page: 1



Scale = 1:49.2

Plate Offsets (X, Y): [12:0-1-0,Edge], [15:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.78	Vert(LL)	-0.08	15-19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.25	15-19	>909	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.05	24	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 118 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.
JOINTS	1 Brace at Jt(s): 6, 9, 11

REACTIONS	(size)	2=0-3-8, 12=5-8-0, 14=5-8-0, 20=5-8-0, 24=5-8-0
Max Horiz		2=39 (LC 10)
Max Uplift		2=-28 (LC 11), 12=-23 (LC 11), 14=-9 (LC 11), 20=-9 (LC 11), 24=-23 (LC 11)
Max Grav		2=821 (LC 1), 12=328 (LC 1), 14=905 (LC 1), 20=905 (LC 1), 24=328 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/17, 2-3=-1692/120, 3-4=-1302/78, 4-5=-250/66, 5-8=-231/69, 8-10=-289/66, 10-12=-302/23, 12-13=0/17, 4-6=-1027/45, 6-7=-1052/52, 7-9=-1217/104, 9-11=-1196/105, 11-14=-1324/141
BOT CHORD	2-14=-59/1581, 12-14=0/220
WEBS	5-6=-93/29, 8-9=-16/65, 10-11=-402/112, 4-15=0/528, 3-15=-443/87, 7-15=-282/92

NOTES

- 1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-1-12, Exterior (2) 12-1-12 to 15-1-12, Interior (1) 15-1-12 to 25-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) * This truss has been designed for a 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.
- 7) All bearings are assumed to be SP No.2.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 2, 9 lb uplift at joint 14, 23 lb uplift at joint 12, 9 lb uplift at joint 14 and 23 lb uplift at joint 12.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 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



December 10, 2024

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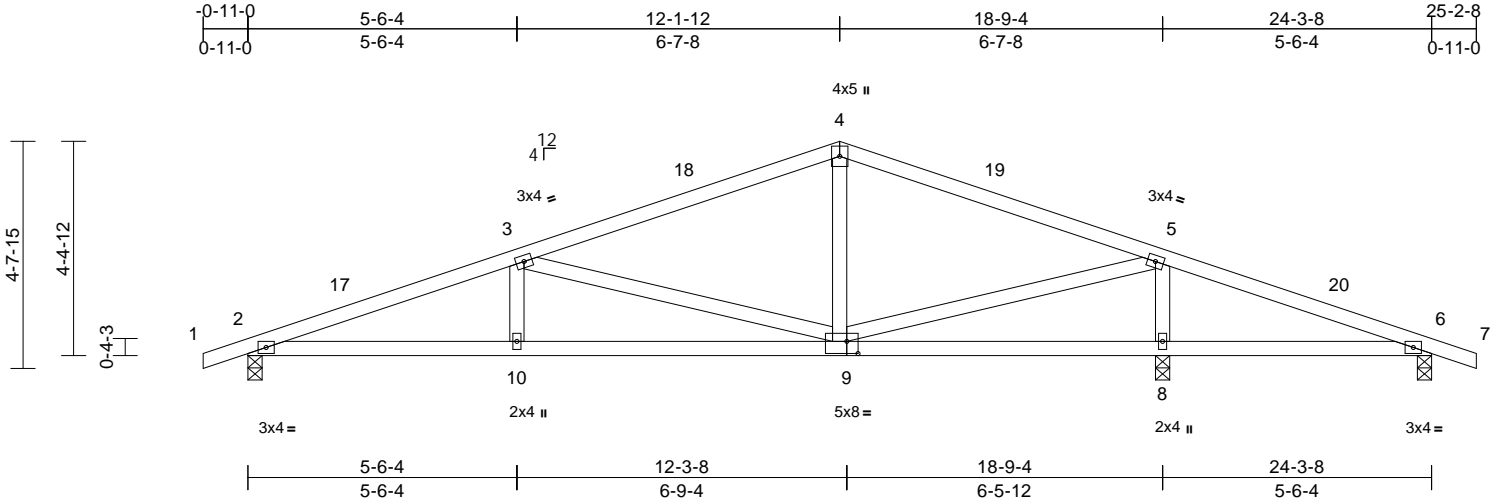
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065055
Q-2402834	C02	Common	2	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Mon Dec 09 09:08:15
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Page: 1



Scale = 1:47.3

Plate Offsets (X, Y): [9:0-2-12,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.51	Vert(LL)	-0.06	9-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.15	9-10	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 107 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 5-8,3-10:2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 6=0-3-8, 8=0-3-8
Max Horiz 2=-39 (LC 9)
Max Uplift 2=-29 (LC 11), 6=-28 (LC 11), 8=-3 (LC 11)
Max Grav 2=763 (LC 1), 6=175 (LC 21), 8=1161 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

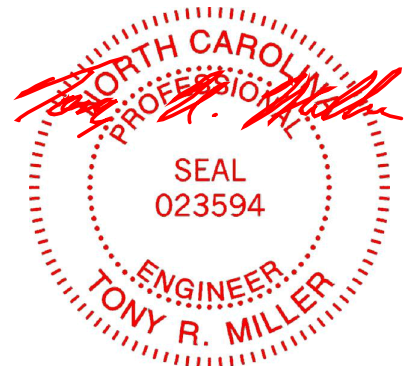
TOP CHORD 1-2=0/17, 2-3=-1638/95, 3-4=-797/88, 4-5=-803/90, 5-6=-23/341, 6-7=0/17
BOT CHORD 2-10=-43/1531, 8-10=-271/1531, 6-8=-271/38
WEBS 4-9=0/127, 5-8=-1012/119, 3-10=0/129, 5-9=-10/1002, 3-9=-890/71

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-1-12, Exterior (2) 12-1-12 to 15-1-12, Interior (1) 15-1-12 to 25-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) * This truss has been designed for a 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) All bearings are assumed to be SP No.2.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 6, 3 lb uplift at joint 8 and 29 lb uplift at joint 2.
- 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 10, 2024

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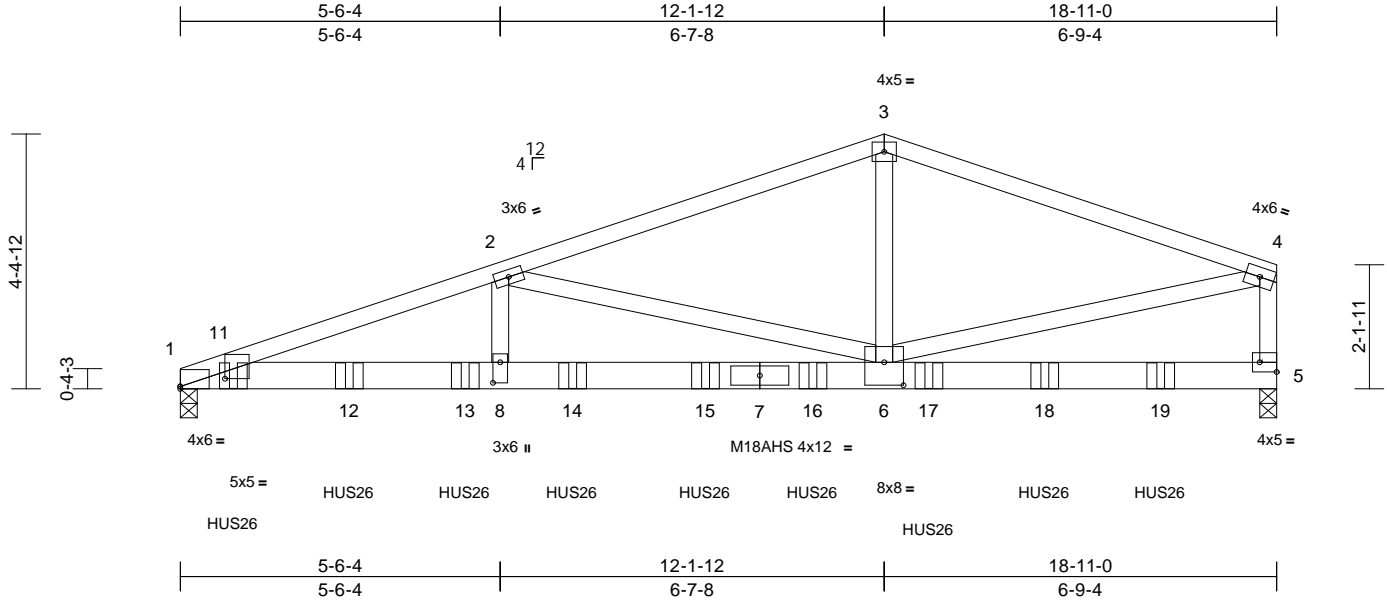
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065056
Q-2402834	C03	Common Girder	1	3	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Mon Dec 09 09:08:15
ID:TYu3FIZzRgtkXVul110YwyCjnO-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?i

Page: 1



Scale = 1:39.8												
Plate Offsets (X, Y): [1:Edge,0-0-8], [1:0-9-4,0-1-10], [5:Edge,0-2-0], [6:0-4-0,0-4-12], [8:0-4-4,0-1-8]												
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.84	Vert(LL)	-0.15	6-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.31	6-8	>716	180	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	NO	WB	0.55	Horz(CT)	0.04	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 310 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP DSS
WEBS 2x4 SP No.2 *Except* 5-4,2-8;2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=74 (LC 6)
Max Grav 1=5749 (LC 1), 5=5438 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-13851/0, 2-3=-7349/0, 3-4=-7353/0, 4-5=-4288/0
BOT CHORD 1-8=0/13075, 6-8=0/13075, 5-6=0/399
WEBS 3-6=0/4252, 2-8=0/3317, 2-6=-6407/0, 4-6=0/6755

NOTES

- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-4-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;
MWFRS (directional); cantilever left and right exposed ;
end vertical left and right exposed; Lumber DOL=1.60
plate grip DOL=1.60
- All plates are MT20 plates unless otherwise indicated.
- * 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.
- All bearings are assumed to be SP DSS .
- Use Simpson Strong-Tie HUS26 (14-16d Girder, 4-16d Truss) or equivalent spaced at 2-3-8 oc max. starting at 0-11-0 from the left end to 16-11-0 to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15,
Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-4=-60, 1-5=-20
Concentrated Loads (lb)
Vert: 11=-1017 (F), 12=-1016 (F), 13=-1016 (F),
14=-1106 (F), 15=-1106 (F), 16=-1106 (F), 17=-1106 (F), 18=-1106 (F), 19=-1106 (F)



December 10,2024

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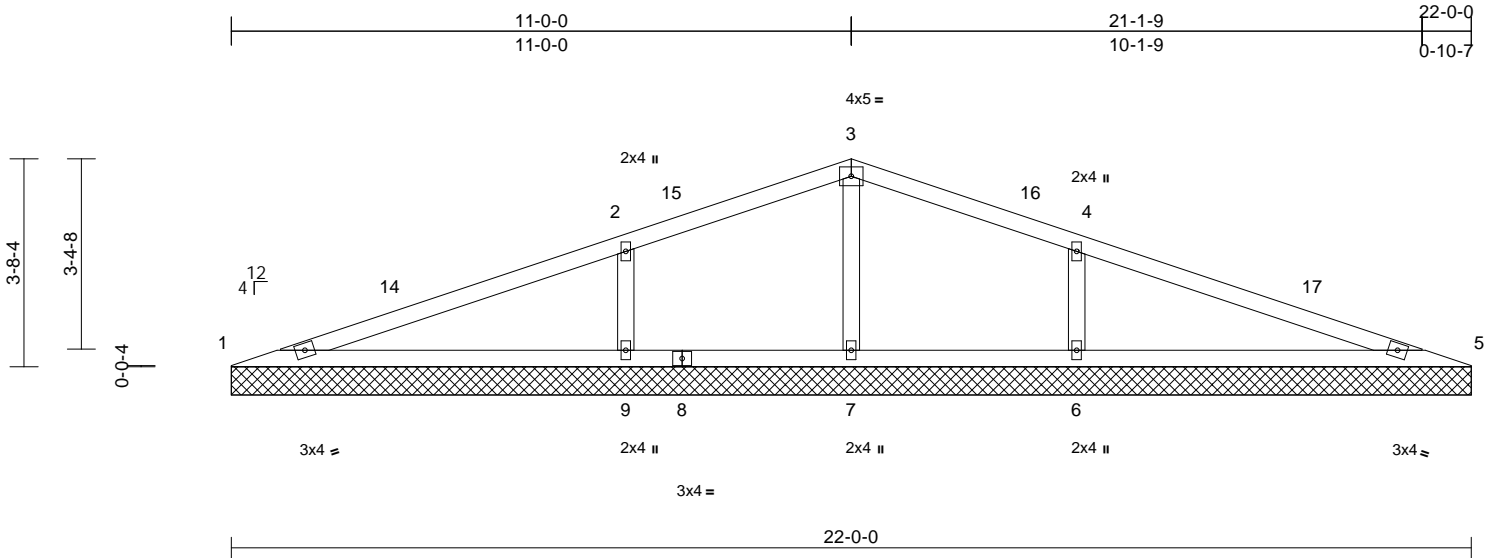
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065057
Q-2402834	V01	Valley	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Mon Dec 09 09:08:15
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Page: 1



Scale = 1:40.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.49	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.01	9	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 74 lb FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3 *Except* 7-3:2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.
REACTIONS (size)	
	1=22-0-0, 5=22-0-0, 6=22-0-0, 7=22-0-0, 9=22-0-0
Max Horiz	1=-32 (LC 9)
Max Uplift	6=-22 (LC 11), 9=-22 (LC 11)
Max Grav	1=142 (LC 20), 5=142 (LC 21), 6=562 (LC 21), 7=420 (LC 1), 9=562 (LC 20)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-259/493, 2-3=-37/442, 3-4=-35/442, 4-5=-259/493
BOT CHORD	1-9=-405/239, 7-9=-405/143, 6-7=-405/143, 5-6=-405/239
WEBS	3-7=-411/124, 2-9=-385/184, 4-6=-385/184

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-12 to 3-0-12, Exterior (2) 3-0-12 to 11-0-12, Corner (3) 11-0-12 to 14-0-12, Exterior (2) 14-0-12 to 22-0-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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.
 - Gable requires continuous bottom chord bearing.

- Gable studs spaced at 4'-0-0 oc.
 - * 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.
 - All bearings are assumed to be SP No.2 .
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 9 and 22 lb uplift at joint 6.
 - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



December 10,2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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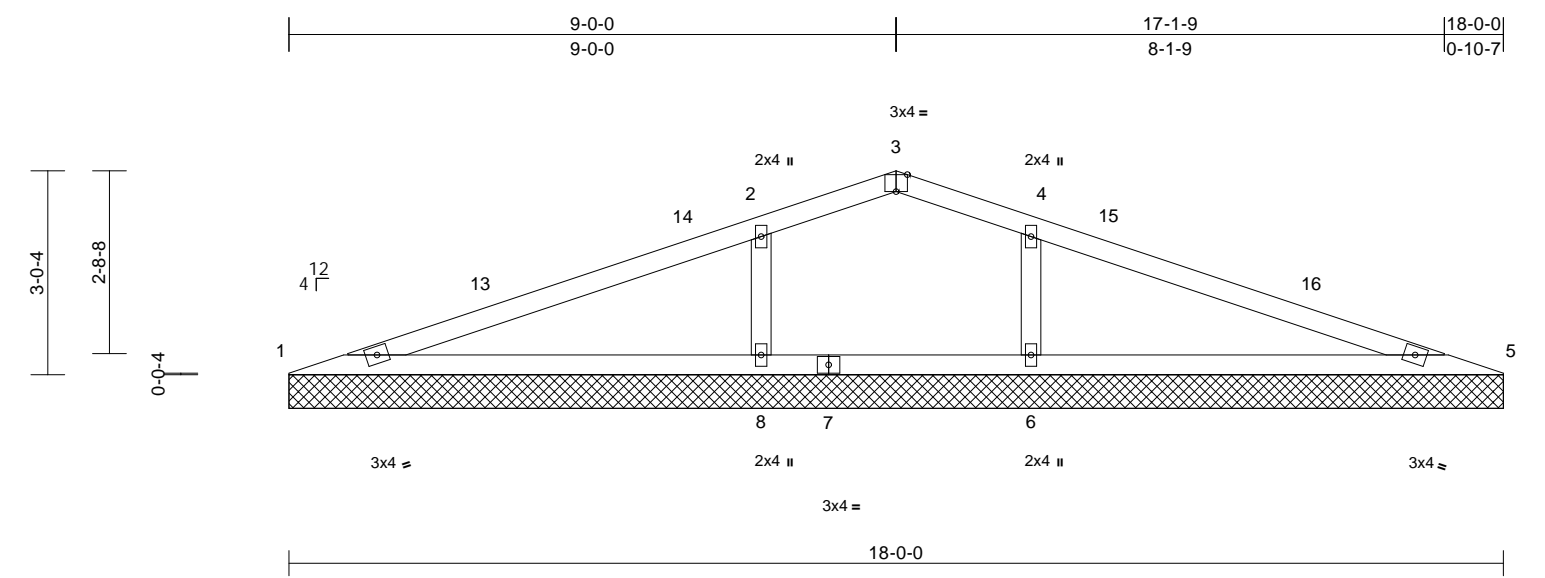
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065058
Q-2402834	V02	Valley	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Mon Dec 09 09:08:16
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Page: 1



Scale = 1:34.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.59	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(TL)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.01	5	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							
										Weight: 58 lb	FT = 20%

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

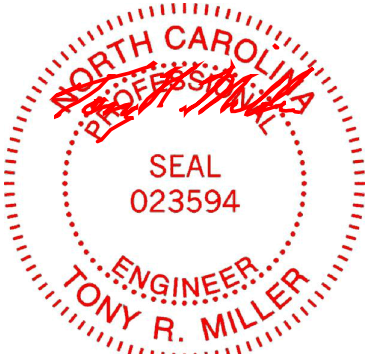
BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=18-0-0, 5=18-0-0, 6=18-0-0, 8=18-0-0
Max Horiz 1=-26 (LC 9)
Max Uplift 6=-13 (LC 11), 8=-13 (LC 11)
Max Grav 1=153 (LC 20), 5=153 (LC 21), 6=593 (LC 21), 8=593 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-293/438, 2-3=-45/331, 3-4=-44/331, 4-5=-293/438
BOT CHORD 1-8=-349/271, 6-8=-349/159, 5-6=-349/271
WEBS 2-8=-457/206, 4-6=-457/206

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-12 to 3-0-12, Exterior (2) 3-0-12 to 9-0-12, Corner (3) 9-0-12 to 12-0-12, Exterior (2) 12-0-12 to 18-0-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.

- * 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.
 - All bearings are assumed to be SP No.2 .
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 8 and 13 lb uplift at joint 6.
 - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



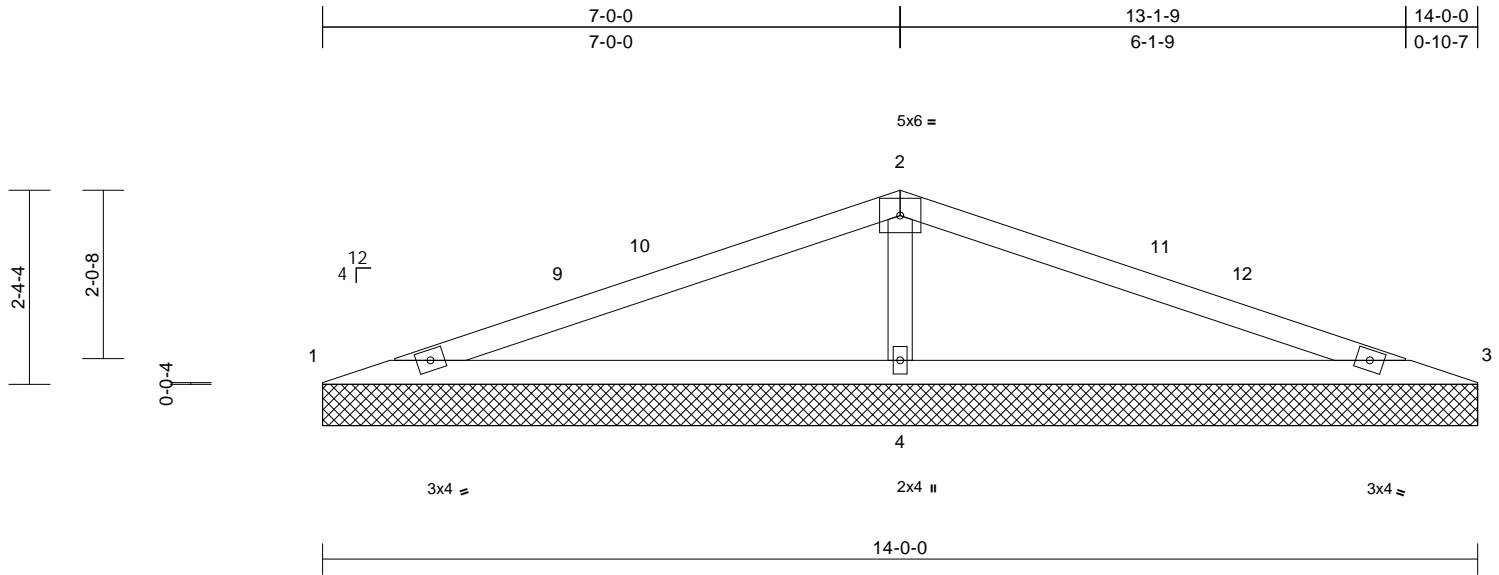
December 10,2024

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065059
Q-2402834	V03	Valley	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:27.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.49	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	4	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 43 lb FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 1=14-0-0, 3=14-0-0, 4=14-0-0
Max Horiz 1=-20 (LC 9)
Max Uplift 1=-16 (LC 21), 3=-16 (LC 20),
4=-11 (LC 11)
Max Grav 1=124 (LC 20), 3=124 (LC 21),
4=977 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-200/629, 2-3=-200/629
BOT CHORD 1-4=-537/220, 3-4=-537/220
WEBS 2-4=-755/319

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed;
MWFRS (directional) and C-C Corner (3) 0-0-12 to 3-0-12, Exterior (2) 3-0-12 to 7-0-12, Corner (3) 7-0-12 to 10-0-12, Exterior (2) 10-0-12 to 14-0-12 zone;
cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.

- * 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.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1, 16 lb uplift at joint 3 and 11 lb uplift at joint 4.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 10, 2024

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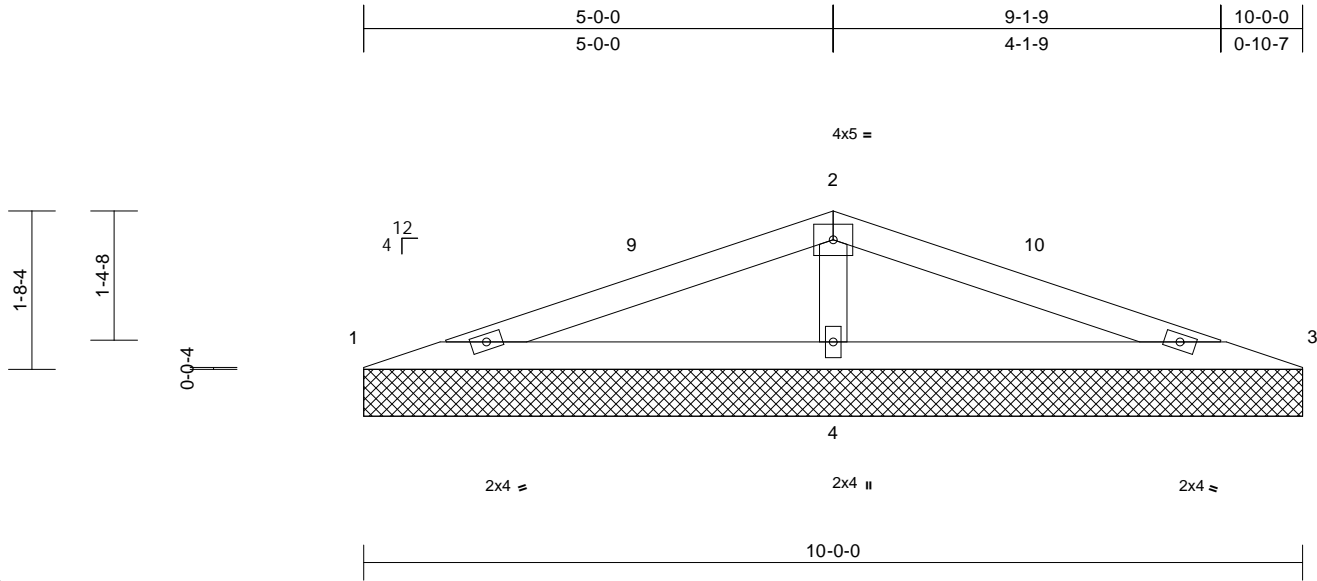
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	170065060
Q-2402834	V04	Valley	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Oct 31 2024 Print: 8.730 S Oct 31 2024 MiTek Industries, Inc. Mon Dec 09 09:08:16
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Page: 1



Scale = 1:24.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 29 lb FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 1=10-0-0, 3=10-0-0, 4=10-0-0
Max Horiz 1=-14 (LC 9)
Max Uplift 1=-1 (LC 11), 3=-1 (LC 11), 4=-5 (LC 11)
Max Grav 1=113 (LC 20), 3=113 (LC 21), 4=632 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-177/345, 2-3=-177/345
BOT CHORD 1-4=-287/162, 3-4=-287/162
WEBS 2-4=-460/121

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-12 to 3-0-12, Interior (1) 3-0-12 to 5-0-12, Exterior (2) 5-0-12 to 8-3-15, Interior (1) 8-3-15 to 10-0-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.

- * 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.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 1, 1 lb uplift at joint 3 and 5 lb uplift at joint 4.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 10, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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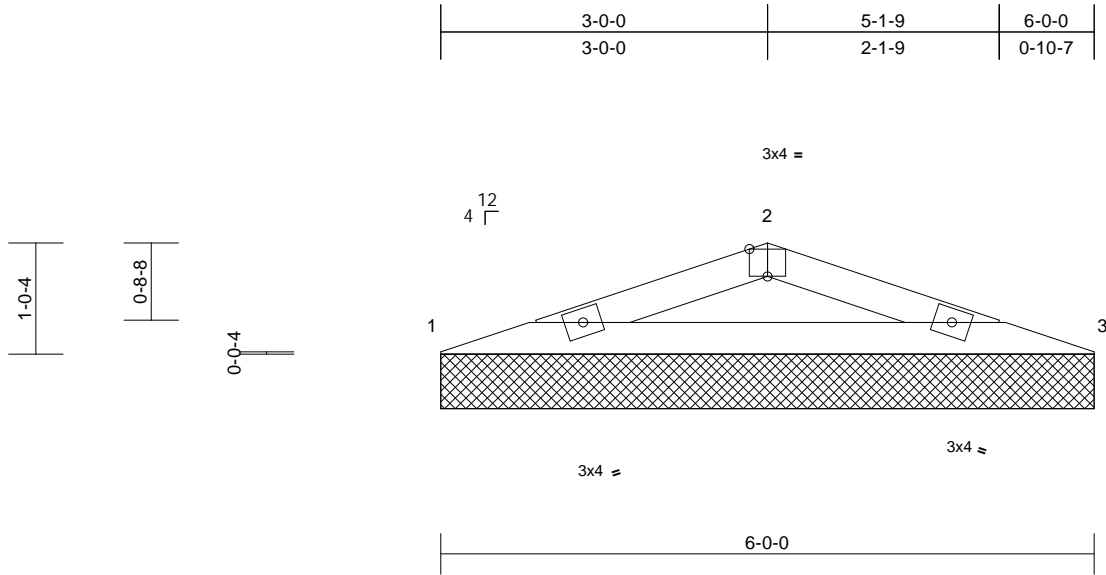
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	VASQUEZ: 2024-SAN-063	I70065061
Q-2402834	V05	Valley	1	1	Job Reference (optional)	

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:21.2

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							
										Weight: 16 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied.

BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 1=6-0-0, 3=6-0-0

Max Horiz 1=8 (LC 10)

Max Uplift 1=-2 (LC 11), 3=-2 (LC 11)

Max Grav 1=240 (LC 1), 3=240 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-578/177, 2-3=-578/177

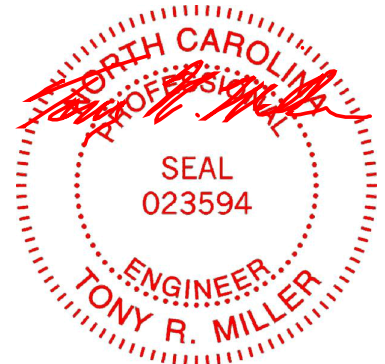
BOT CHORD 1-3=-157/540

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 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.
- 7) All bearings are assumed to be SP No.2 .

- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 1 and 2 lb uplift at joint 3.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 10,2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

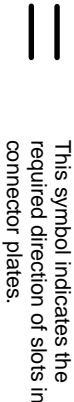
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



* Plate location details available in MITek 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

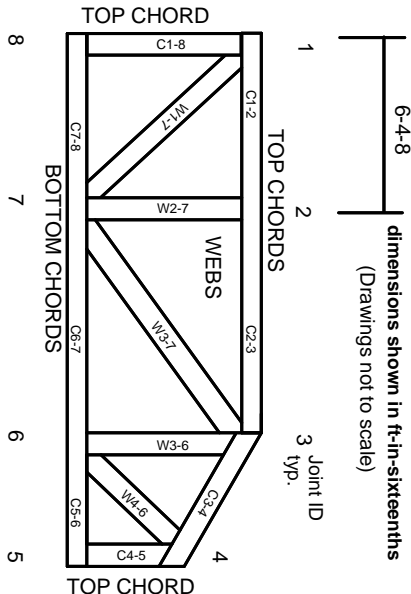


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & 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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

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