

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: Q2501647
Singler 25-FAY-SAN-019

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: I74804391 thru I74804400

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844



July 10, 2025

Gilbert, Eric

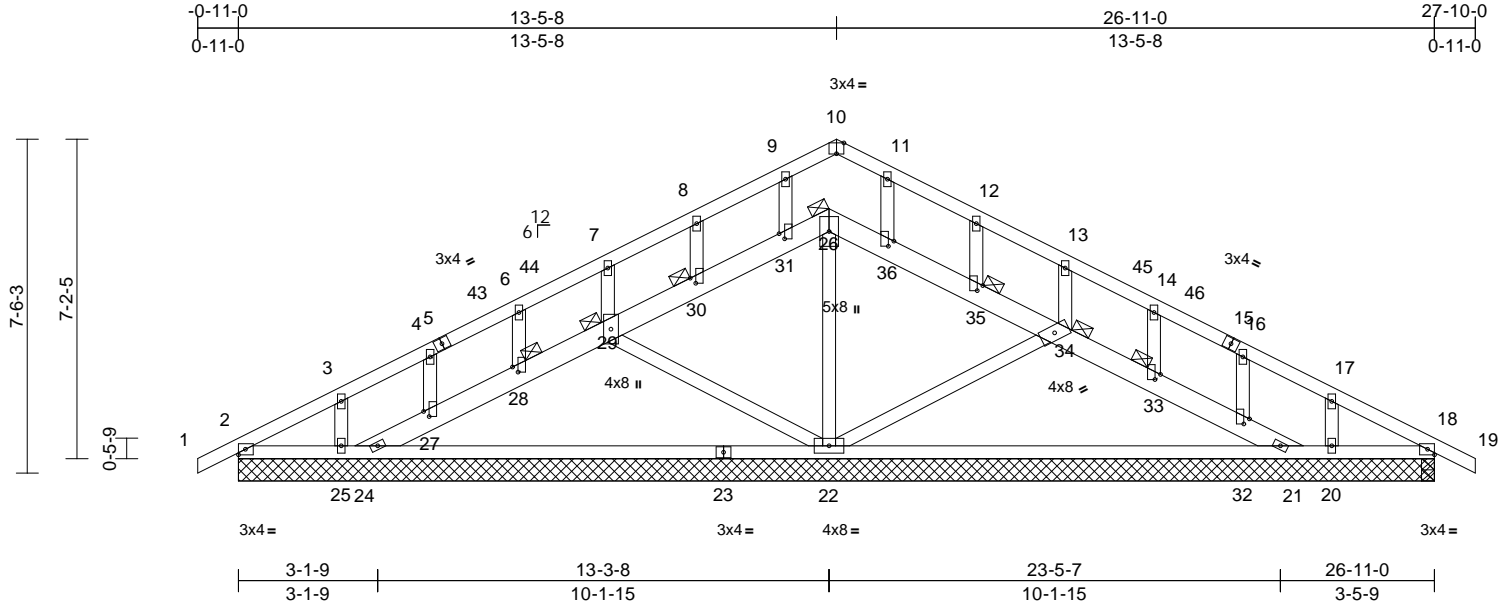
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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	Singler 25-FAY-SAN-019	I74804391
Q2501647	A01	Common Structural Gable	1	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:33
ID:13cYUUD7eRaawR1?xloCkyzWrl-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:51.9

Plate Offsets (X, Y): [10:0-2-0,Edge], [27:0-1-6,0-1-8], [28:0-1-6,0-1-8], [30:0-1-6,0-1-8], [31:0-1-6,0-1-8], [32:0-1-6,0-1-8], [33:0-1-6,0-1-8], [35:0-1-6,0-1-8], [36:0-1-6,0-1-8]

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	0.12	Vert(LL)	-0.16	21-22	>795	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.32	21-22	>398	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.00	18	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 191 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 21-26,26-24:2x6 SP No.1
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): 26, 28, 29, 30, 33, 34, 35

REACTIONS (size) 2=26-11-0, 18=0-3-8, 20=26-11-0, 21=26-11-0, 22=26-11-0, 24=26-11-0, 25=26-11-0
Max Horiz 2=-131 (LC 10)
Max Uplift 20=-322 (LC 3), 22=-118 (LC 12), 25=-576 (LC 3)
Max Grav 2=184 (LC 1), 18=191 (LC 1), 20=-34 (LC 18), 21=685 (LC 3), 22=1089 (LC 1), 24=928 (LC 3), 25=-149 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-138/66, 3-4=-152/35, 4-6=-132/32, 6-7=-116/29, 7-8=-128/66, 8-9=-114/96, 9-10=-102/98, 10-11=-97/95, 11-12=-113/92, 12-13=-122/61, 13-14=-96/25, 14-16=-117/2, 16-17=-128/11, 17-18=-117/36, 18-19=0/25
BOT CHORD 2-25=-51/122, 24-25=-35/122, 22-24=-56/183, 21-22=-34/205, 20-21=-35/122, 18-20=-35/122

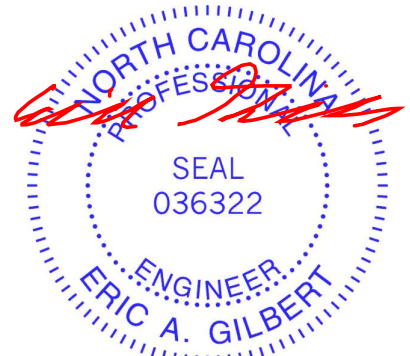
WEBS
22-26=-464/79, 22-34=-425/193, 22-29=-413/189, 26-36=-81/391, 35-36=-80/353, 34-35=-59/318, 33-34=-115/111, 32-33=-162/115, 21-32=-210/132, 24-27=-188/122, 27-28=-148/111, 28-29=-98/129, 29-30=-61/319, 30-31=-79/353, 26-31=-80/397, 3-25=-180/75, 4-27=-91/41, 6-28=-93/41, 7-29=-170/85, 8-30=-97/64, 9-31=-100/7, 17-20=-165/67, 16-32=-107/49, 14-33=-87/37, 13-34=-169/85, 12-35=-102/66, 11-36=-84/2

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft; B=32ft; L=66ft; eave=8ft; Ke=1.00; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 5-8-3, Interior (1) 5-8-3 to 13-5-8, Exterior(2R) 13-5-8 to 20-0-11, Interior (1) 20-0-11 to 27-10-0 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 studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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 118 lb uplift at joint 22, 576 lb uplift at joint 25 and 322 lb uplift at joint 20.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10, 2025

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

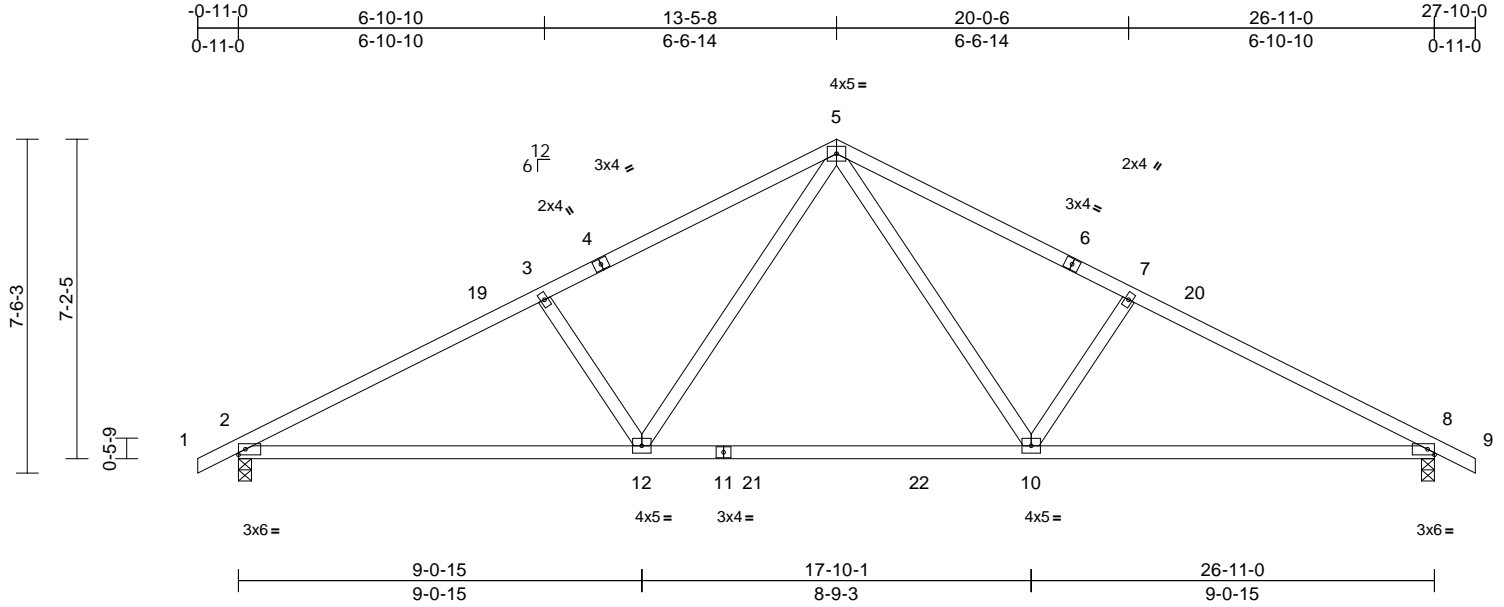
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Singler 25-FAY-SAN-019	174804392
Q2501647	A02	Common	14	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:34
ID:oRJK9qccOK1R6FfRzb_hyFyzWti-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

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	0.46	Vert(LL)	-0.22	10-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.35	10-12	>926	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 124 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, 8=0-3-8
Max Horiz 2=-131 (LC 10)
Max Uplift 2=-123 (LC 12), 8=-123 (LC 12)
Max Grav 2=1261 (LC 17), 8=1261 (LC 18)

FORCES

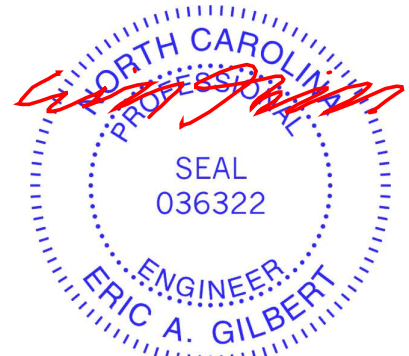
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-2047/203, 3-5=-1861/221,
5-7=-1861/221, 7-8=-2047/203, 8-9=0/25
BOT CHORD 2-12=-100/1860, 10-12=0/1217,
8-10=-95/1762
WEBS 5-10=-40/807, 7-10=-400/168, 5-12=-40/807,
3-12=-400/168

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft;
B=32ft; L=66ft; eave=8ft; Ke=1.00; Cat. II; Exp B;
Enclosed; MWFRS (directional) and C-C Exterior(2E)
-0-11-0 to 5-8-3, Interior (1) 5-8-3 to 13-5-8, Exterior(2R)
13-5-8 to 20-1-6, Interior (1) 20-1-6 to 27-10-0 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
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SP No.2 .

- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 123 lb uplift at joint
2 and 123 lb uplift at joint 8.
- This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10,2025

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

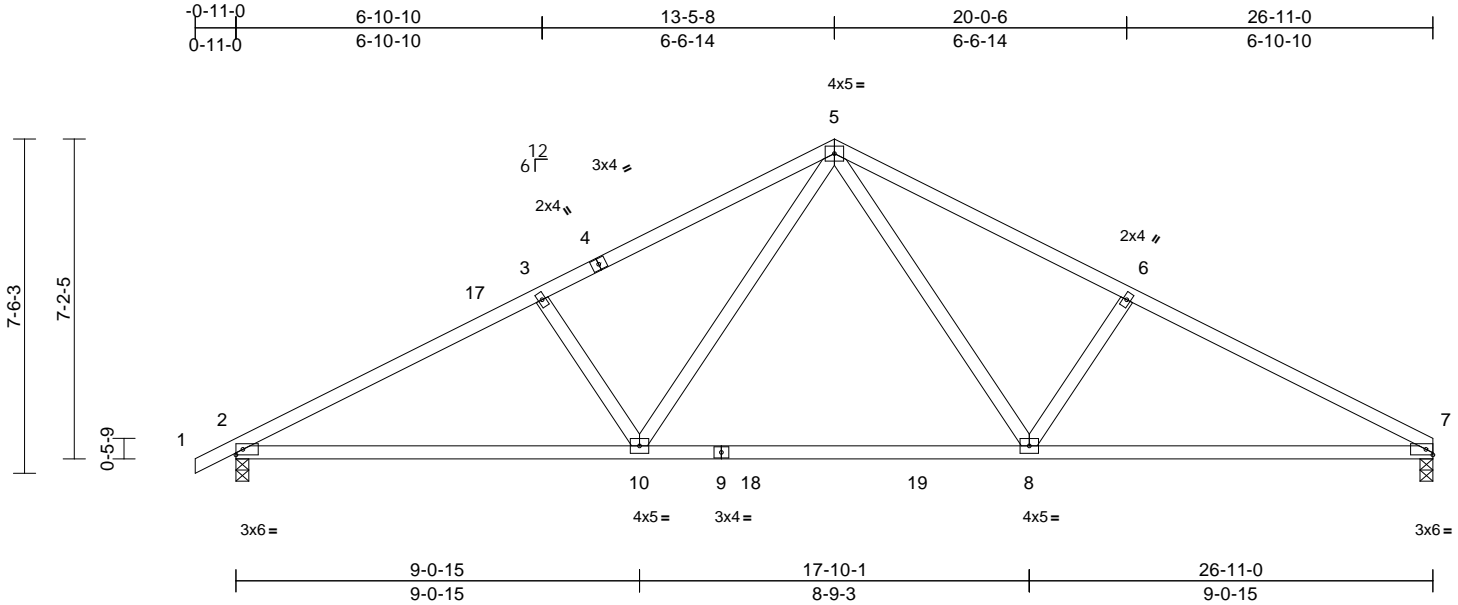
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Singler 25-FAY-SAN-019	174804393
Q2501647	A03	Common	6	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:35
ID:SUVR67YUZoP8?UnTB1OWFCyzWtn-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?f

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	0.47	Vert(LL)	-0.22	8-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.35	8-10	>931	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 122 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, 7=0-3-8
Max Horiz 2=129 (LC 11)
Max Uplift 2=-123 (LC 12), 7=-93 (LC 12)
Max Grav 2=1262 (LC 17), 7=1211 (LC 18)

FORCES

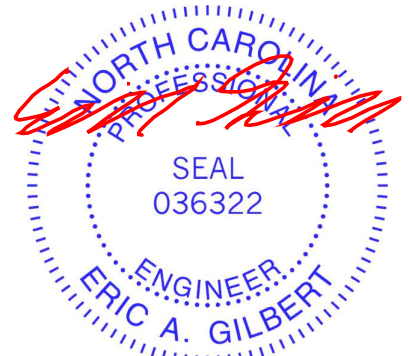
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-2048/204, 3-5=-1862/222,
5-6=-1866/224, 6-7=-2052/206
BOT CHORD 2-10=-125/1857, 8-10=-14/1213,
7-8=-115/1769
WEBS 5-8=-40/811, 6-8=-403/168, 5-10=-39/807,
3-10=-400/168

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft;
B=32ft; L=66ft; eave=8ft; Ke=1.00; Cat. II; Exp B;
Enclosed; MWFRS (directional) and C-C Exterior(2E)
-0-11-0 to 5-8-3, Interior (1) 5-8-3 to 13-5-8, Exterior(2R)
13-5-8 to 20-1-6, Interior (1) 20-1-6 to 26-11-0 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
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SP No.2.

- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 93 lb uplift at joint
7 and 123 lb uplift at joint 2.
- This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10, 2025

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

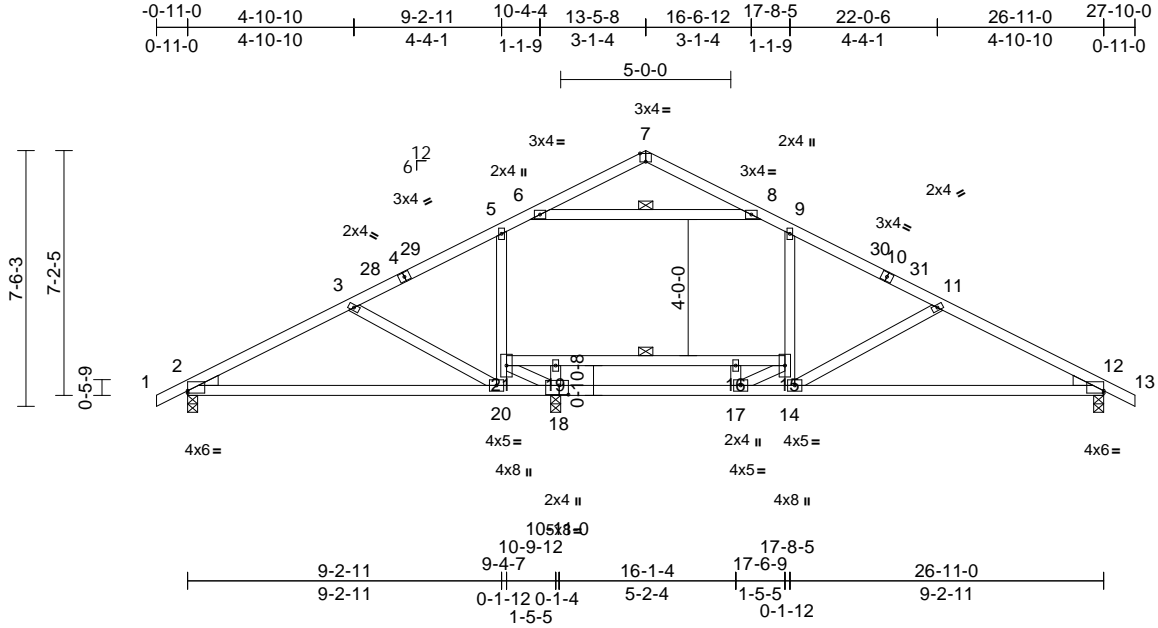
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Singler 25-FAY-SAN-019	174804394
Q2501647	A04	Common	6	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:35
ID:493PDLT1m83vCfuAv8nPcDyzWvB-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcD0i7J4zJC?7f

Page: 1

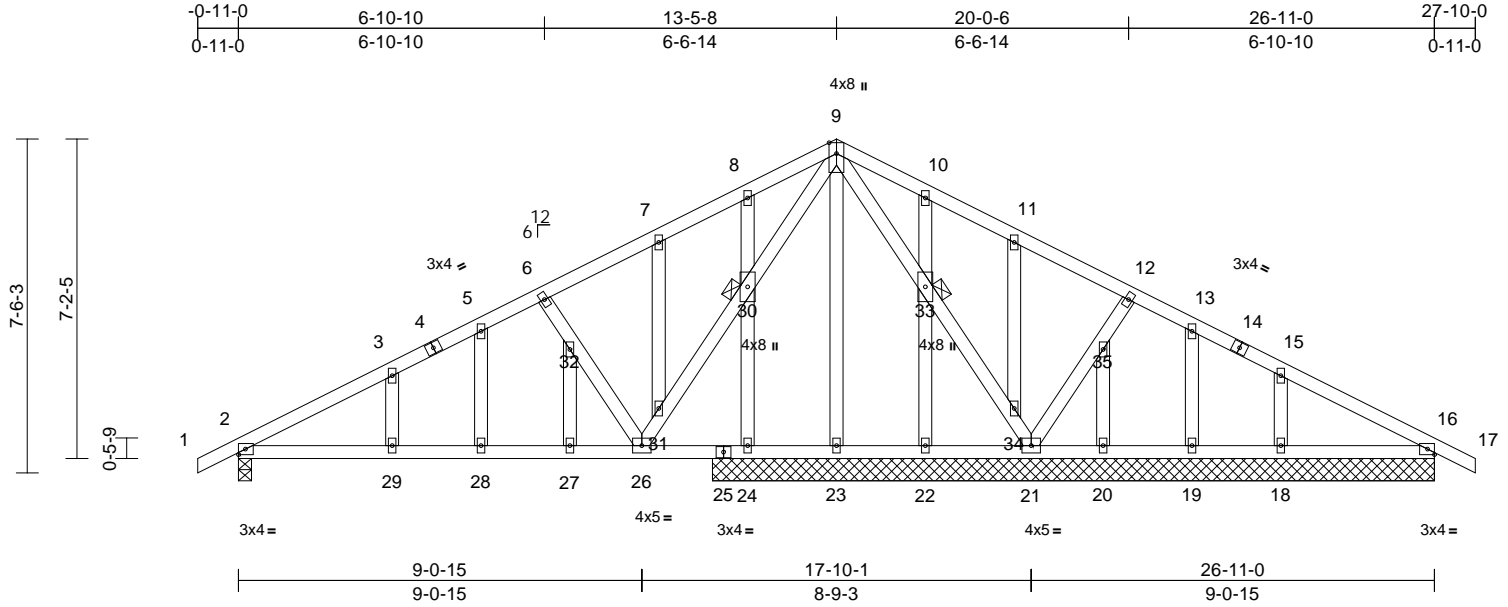


Job	Truss	Truss Type	Qty	Ply	Singler 25-FAY-SAN-019	174804395
Q2501647	A05	Common	1	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:35
ID:z0QdKzKBpG8irjP07F4IXPyzWu3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:51.9

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	0.51	Vert(LL)	0.10	29-38	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.15	29-38	>943	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 181 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.2 *Except* 29-3,18-15:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 30, 33

REACTIONS (size)
2=0-3-8, 16=16-3-0, 18=16-3-0, 19=16-3-0, 20=16-3-0, 21=16-3-0, 22=16-3-0, 23=16-3-0, 24=16-3-0
Max Horiz 2=130 (LC 10)
Max Uplift 2=185 (LC 12), 16=22 (LC 12), 18=52 (LC 12), 21=90 (LC 12), 22=44 (LC 12), 24=90 (LC 12)
Max Grav 2=532 (LC 1), 16=188 (LC 24), 18=275 (LC 1), 19=74 (LC 24), 20=67 (LC 3), 21=332 (LC 1), 22=229 (LC 1), 23=334 (LC 1), 24=289 (LC 23)

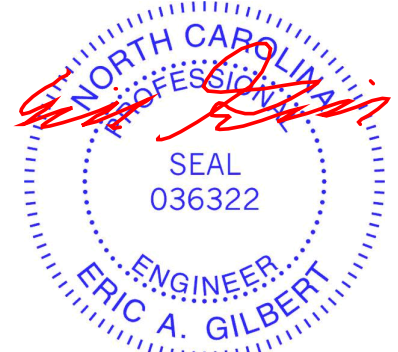
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=581/210, 3-5=534/238, 5-6=442/225, 6-7=309/196, 7-8=228/198, 8-9=267/245, 9-10=49/111, 10-11=28/128, 11-12=12/130, 12-13=28/53, 13-15=59/43, 15-16=60/60, 16-17=0/25
BOT CHORD 2-29=130/466, 28-29=130/466, 27-28=130/466, 26-27=130/466, 24-26=55/109, 23-24=55/109, 22-23=57/109, 21-22=57/109, 20-21=37/85, 19-20=37/85, 18-19=37/85, 16-18=37/85

WEBS
9-33=88/18, 33-34=65/10, 21-34=173/64, 21-35=144/77, 12-35=140/72, 26-31=218/464, 30-31=226/450, 9-30=225/452, 6-32=402/178, 26-32=521/229, 9-23=319/54, 8-30=207/99, 24-30=204/100, 7-31=21/75, 27-32=66/142, 5-28=49/124, 3-29=102/44, 10-33=150/70, 22-33=177/86, 11-34=127/67, 20-35=6/8, 13-19=49/21, 15-18=194/80

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft; B=32ft; L=66ft; eave=8ft; Ke=1.00; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 5-5-8, Interior (1) 5-5-8 to 13-4-6, Exterior(2R) 13-4-6 to 20-1-6, Interior (1) 20-1-6 to 27-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch 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 studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * 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 185 lb uplift at joint 2, 90 lb uplift at joint 21, 90 lb uplift at joint 24, 44 lb uplift at joint 22, 52 lb uplift at joint 18, 22 lb uplift at joint 16 and 22 lb uplift at joint 16.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10, 2025

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

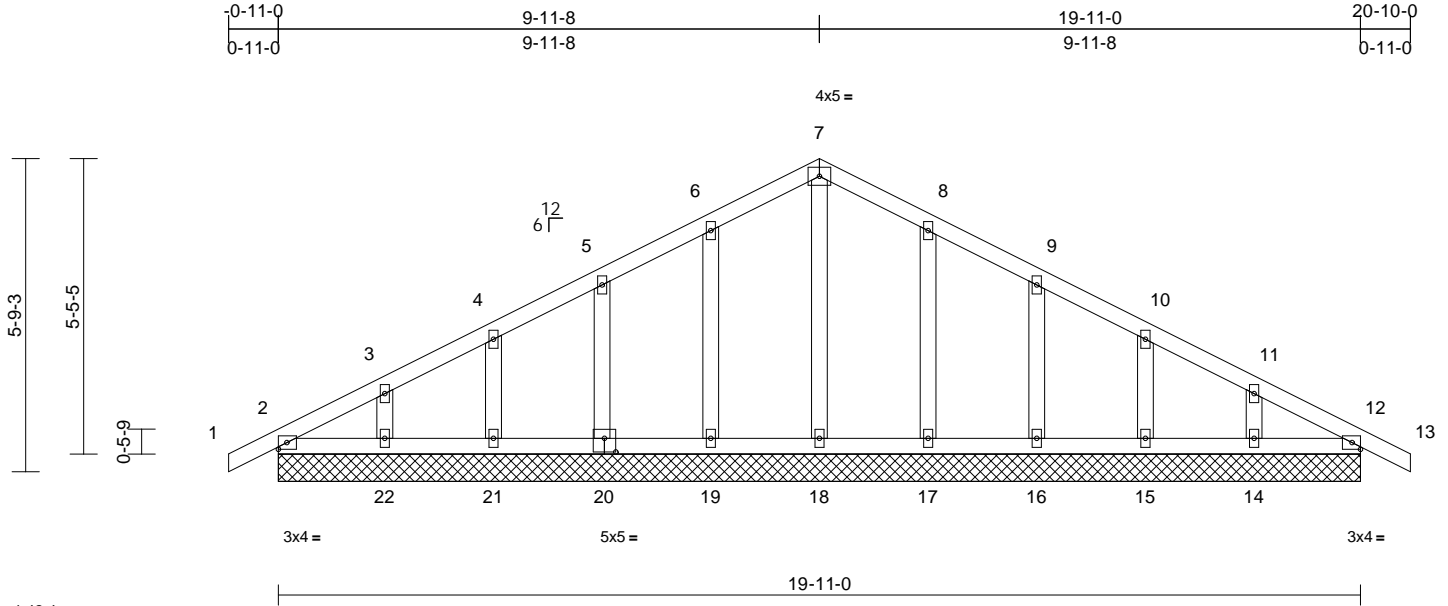
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Singler 25-FAY-SAN-019	174804396
Q2501647	B01	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:35
ID:ANvVSUX2AKDB8ILKDVQjkyzWqI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:42.4

Plate Offsets (X, Y): [20:0-2-8,0-3-0]

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	0.06	Vert(LL)	n/a	-	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	12	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							
Weight: 102 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.2 *Except*
	21-4,22-3,15-10,14-11:2x4 SP No.3

BRACING

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

REACTIONS	(size)	2=19-11-0, 12=19-11-0, 14=19-11-0, 15=19-11-0, 16=19-11-0, 17=19-11-0, 18=19-11-0, 19=19-11-0, 20=19-11-0, 21=19-11-0, 22=19-11-0
	Max Horiz	2=99 (LC 11)
	Max Uplift	2=-24 (LC 12), 12=-24 (LC 12), 14=-26 (LC 12), 15=-30 (LC 12), 16=-31 (LC 12), 17=-27 (LC 12), 19=-28 (LC 12), 20=-30 (LC 12), 21=-29 (LC 12), 22=-26 (LC 12)
	Max Grav	2=141 (LC 1), 12=140 (LC 1), 14=160 (LC 18), 15=161 (LC 24), 16=159 (LC 1), 17=167 (LC 24), 18=141 (LC 1), 19=166 (LC 23), 20=158 (LC 1), 21=161 (LC 1), 22=163 (LC 17)

FORCES	(lb) - Maximum Compression/Maximum Tension
--------	--

TOP CHORD	1-2=0/25, 2-3=-78/71, 3-4=-77/59, 4-5=-70/75, 5-6=-62/116, 6-7=-67/156, 7-8=-67/156, 8-9=-49/117, 9-10=-41/67, 10-11=-45/22, 11-12=-55/32, 12-13=0/25
BOT CHORD	2-22=-38/99, 21-22=-25/99, 19-21=-26/100, 18-19=-26/100, 17-18=-26/100, 16-17=-26/100, 15-16=-26/100, 14-15=-26/100, 12-14=-26/100

WEBS

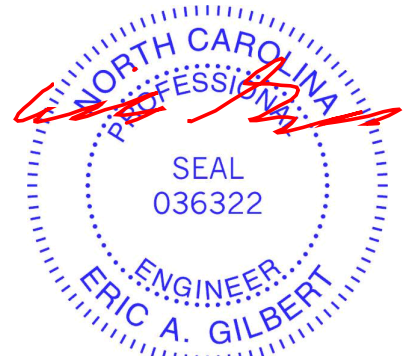
7-18=-101/0, 6-19=-127/66, 5-20=-118/87, 4-21=-121/106, 3-22=-117/100, 8-17=-127/66, 9-16=-119/88, 10-15=-121/106, 11-14=-116/99

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft; B=32ft; L=66ft; eave=2ft; Ke=1.00; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-11-0 to 5-11-8, Exterior(2N) 5-11-8 to 9-11-8, Corner (3R) 9-11-8 to 16-6-11, Exterior(2N) 16-6-11 to 20-10-0 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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, 28 lb uplift at joint 19, 30 lb uplift at joint 20, 29 lb uplift at joint 21, 26 lb uplift at joint 22, 27 lb uplift at joint 17, 31 lb uplift at joint 16, 30 lb uplift at joint 15, 26 lb uplift at joint 14, 24 lb uplift at joint 2 and 24 lb uplift at joint 12.

- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10,2025

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

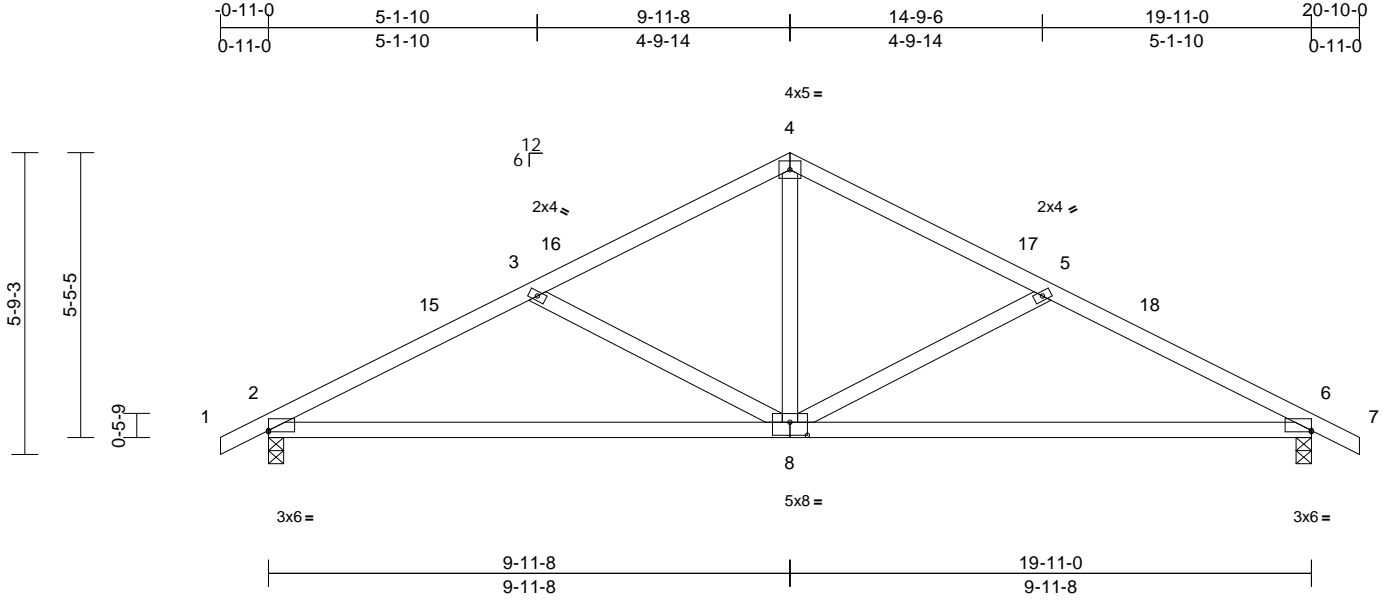
818 Soundside Road
Edenton, NC 27932

Job Q2501647	Truss B02	Truss Type Common	Qty 5	Ply 1	Singler 25-FAY-SAN-019 Job Reference (optional)	174804397
-----------------	--------------	----------------------	----------	----------	--	-----------

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:35
ID:?Gll8jo9mxqJ3?D45k8oQyzWqt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:44

Plate Offsets (X, Y): [2:Edge,0-0-5], [6:Edge,0-0-5], [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	0.31	Vert(LL)	-0.15	8-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.31	8-11	>768	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 89 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=99 (LC 11)
Max Uplift 2=99 (LC 12), 6=99 (LC 12)
Max Grav 2=852 (LC 1), 6=852 (LC 1)

FORCES

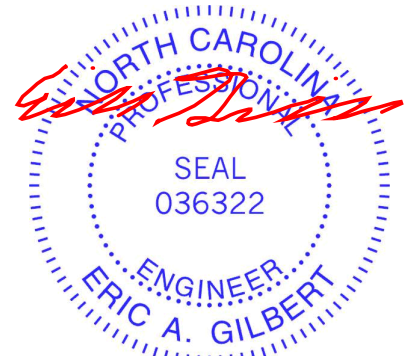
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-1304/223, 3-4=-986/162,
4-5=-986/162, 5-6=-1304/223, 6-7=0/25
BOT CHORD 2-6=-131/1131
WEBS 4-8=-17/578, 5-8=-372/165, 3-8=-372/165

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft;
B=32ft; L=66ft; eave=8ft; Ke=1.00; Cat. II; Exp B;
Enclosed; MWFRS (directional) and C-C Exterior(2E)
-0-11-0 to 5-8-3, Interior (1) 5-8-3 to 9-11-8, Exterior(2R)
9-11-8 to 16-6-11, Interior (1) 16-6-11 to 20-10-0 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
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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 99 lb uplift at joint 2 and 99 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10,2025

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

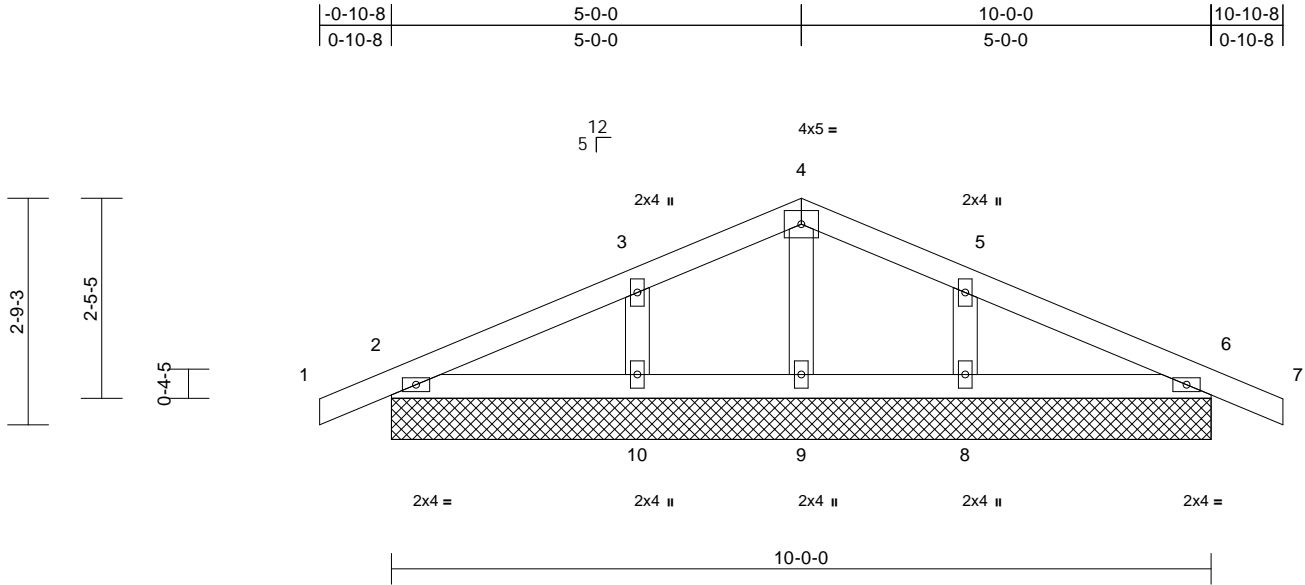
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Singler 25-FAY-SAN-019	174804398
Q2501647	C01	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:35
ID:bD7TfJBbTTkMXqsBO6nPzYzWqO-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?fi

Page: 1



Scale = 1:28.1

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 40 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) 2=10-0-0, 6=10-0-0, 8=10-0-0,
9=10-0-0, 10=10-0-0
Max Horiz 2=-40 (LC 10)
Max Uplift 2=-44 (LC 12), 6=-44 (LC 12),
8=-30 (LC 12), 10=-30 (LC 12)
Max Grav 2=168 (LC 1), 6=168 (LC 1), 8=240
(LC 24), 9=91 (LC 1), 10=240 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/20, 2-3=-45/34, 3-4=-49/93,
4-5=-49/91, 5-6=-35/28, 6-7=0/20
BOT CHORD 2-10=-5/46, 9-10=-5/46, 8-9=-5/46, 6-8=-5/46
WEBS 4-9=-75/11, 3-10=-167/141, 5-8=-167/142

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft;
B=32ft; L=66ft; eave=2ft; Ke=1.00; Cat. II; Exp B;
Enclosed; MWFRS (directional) and C-C Corner(3E)
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 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * 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 44 lb uplift at joint
2, 44 lb uplift at joint 6, 30 lb uplift at joint 10, 30 lb uplift
at joint 8, 44 lb uplift at joint 2 and 44 lb uplift at joint 6.
- This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10,2025

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

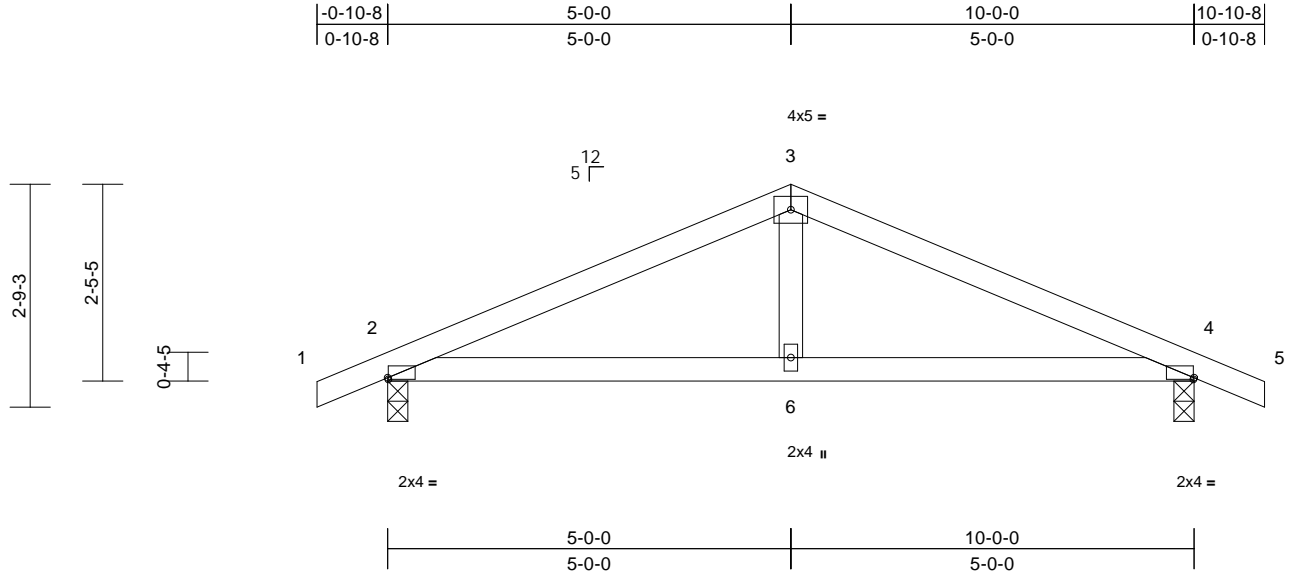
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Singler 25-FAY-SAN-019	174804399
Q2501647	C02	Common	2	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:35
ID:mLHdy4JVtr7oMWCIXwU_VHyZWqD-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?i

Page: 1



Scale = 1:28.6

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

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)	0.03	6-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.04	6-12	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 37 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 2=0-3-0, 4=0-3-0
Max Horiz 2=40 (LC 11)
Max Uplift 2=-150 (LC 12), 4=-150 (LC 12)
Max Grav 2=453 (LC 1), 4=452 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

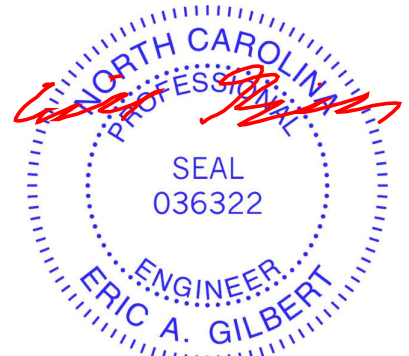
TOP CHORD 1-2=0/20, 2-3=-616/379, 3-4=-616/387,
4-5=0/20
BOT CHORD 2-6=-278/538, 4-6=-278/538
WEBS 3-6=-95/222

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft;
B=32ft; L=66ft; eave=8ft; Ke=1.00; Cat. II; Exp B;
Enclosed; MWFRS (directional) and C-C Exterior(2E)
zone; cantilever left and right exposed; end vertical left
and right exposed; porch left and right exposed; C-C for
members and forces & MWFRS for reactions shown;
Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * 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 150 lb uplift at joint
2 and 150 lb uplift at joint 4.

- This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10, 2025

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

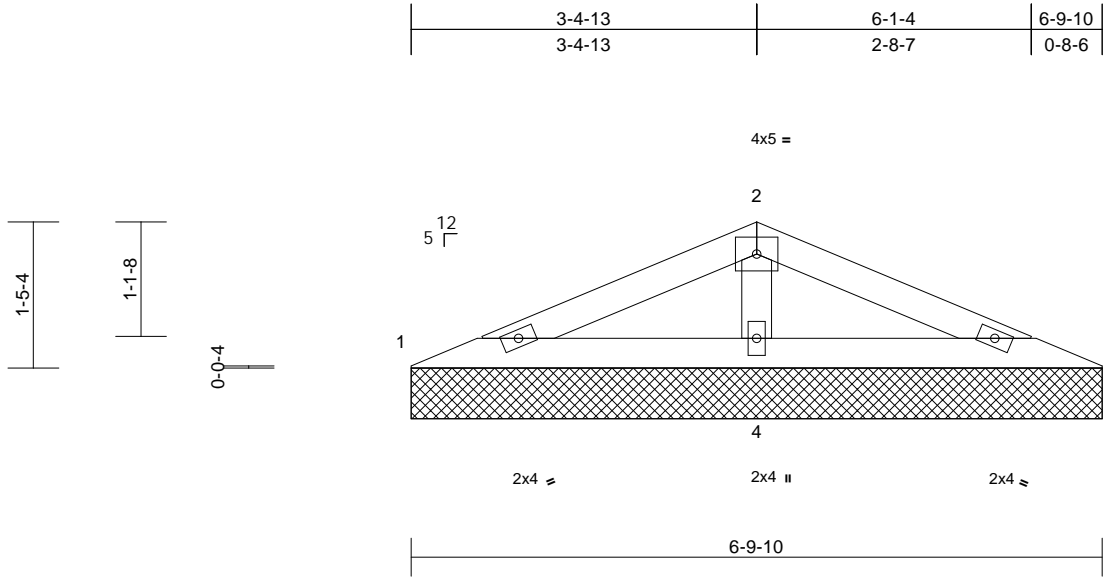
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Singler 25-FAY-SAN-019	174804400
Q2501647	V01	Valley	1	1	Job Reference (optional)	

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Thu Jul 10 08:41:35
ID:?4K1r9Q8lcGWxvO1ZJ85MByzWq4-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:22.7

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	0.11	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 20 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=6-9-10, 3=6-9-10, 4=6-9-10
Max Horiz 1=-21 (LC 10)
Max Uplift 1=-6 (LC 12), 3=-6 (LC 12), 4=-36 (LC 12)
Max Grav 1=84 (LC 23), 3=84 (LC 24), 4=411 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-101/192, 2-3=-101/192
BOT CHORD 1-4=-159/150, 3-4=-159/150
WEBS 2-4=-261/189

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=28ft; B=32ft; L=66ft; eave=2ft; Ke=1.00; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * 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 6 lb uplift at joint 1, 6 lb uplift at joint 3 and 36 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



July 10, 2025

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

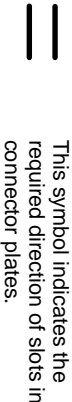
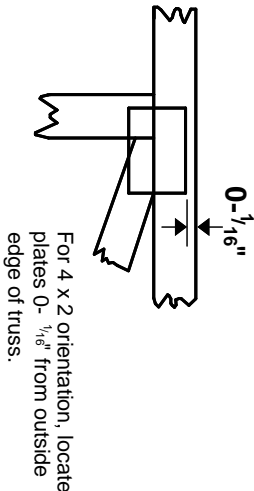
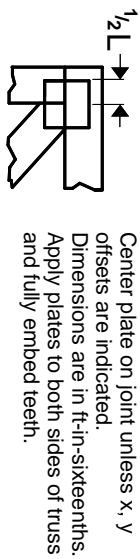
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

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

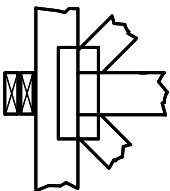
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

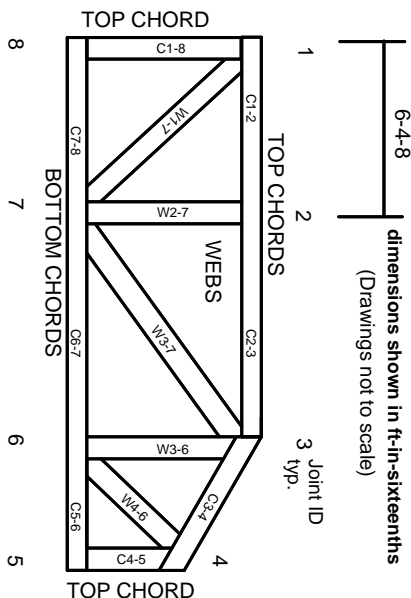


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.

© 2023 MITek® All Rights Reserved

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.

MITek

ENGINEERING BY
TRENCO
A MITek Affiliate

MITek Engineering Reference Sheet: MII-7473 rev. 1/2/2023