

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 2502453-24781
72 Tobacco Road ** REVISED 5/14

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Lumber 2383 (Dunn, NC).

Pages or sheets covered by this seal: I75284640 thru I75284642

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

North Carolina COA: C-0844



July 30, 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.

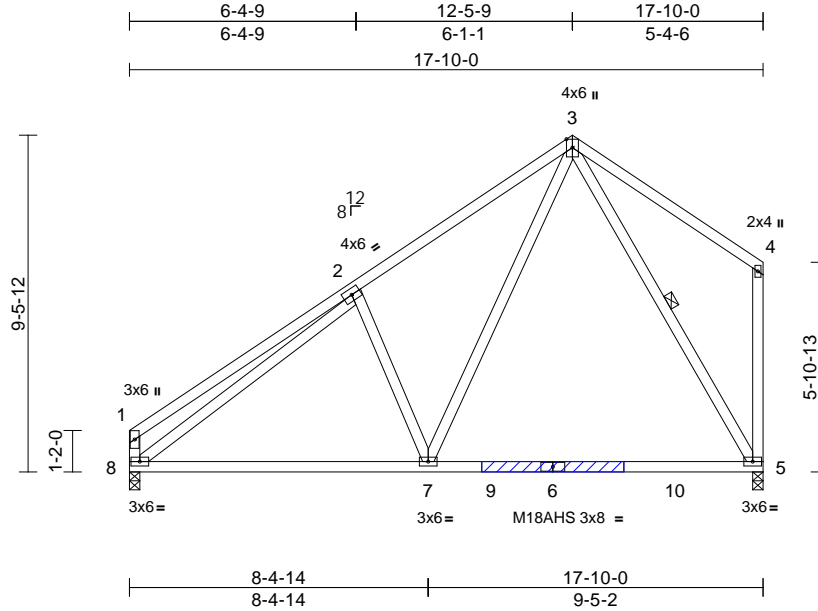
Job	Truss	Truss Type	Qty	Ply	72 Tobacco Road ** REVISED 5/14	I75284640
2502453-24781	C2	Common	4	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 30 12:00:21
ID:minGCUqRdNuhOuAvJVJ87Dz_qbA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1

REPAIR: PLATE DAMAGE JOINT 6



Scale = 1:64.8

Loading	(psf)	Spacing		CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.39	5-7	>545	240	MT20	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.57	5-7	>368	180	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 117 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 or 6'-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2'-2-0 oc bracing.
WEBS 1 Row at midpt 3-5

REACTIONS

(size) 5=0-3-8, 8=0-3-8
Max Horiz 8=255 (LC 11)
Max Uplift 5=50 (LC 12), 8=32 (LC 12)
Max Grav 5=771 (LC 23), 8=702 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-273/121, 2-3=-733/193, 3-4=-195/181,
1-8=-262/104, 4-5=-220/140
BOT CHORD 7-8=-94/726, 5-7=-55/341
WEBS 3-5=-597/52, 3-7=-87/645, 2-7=-309/218,
2-8=-681/0

NOTES

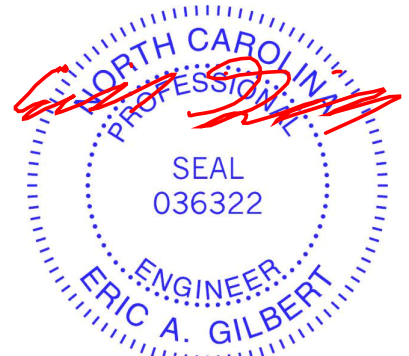
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- All plates are MT20 plates unless otherwise indicated.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 5 and 32 lb uplift at joint 8.

LOAD CASE(S) Standard



APPLY 2 X 4 X 5' SP NO.2 SCAB(S) TO EACH FACE OF TRUSS CENTERED ON SPLICE. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 4" O.C. STAGGER NAIL SPACING FROM FRONT FACE AND BACK FACE FOR A NET 2" O.C SPACING IN THE TRUSS. USE 2" MEMBER END DISTANCE.



July 30, 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	72 Tobacco Road ** REVISED 5/14	175284641
2502453-24781	B2	Roof Special	8	1	Job Reference (optional)	

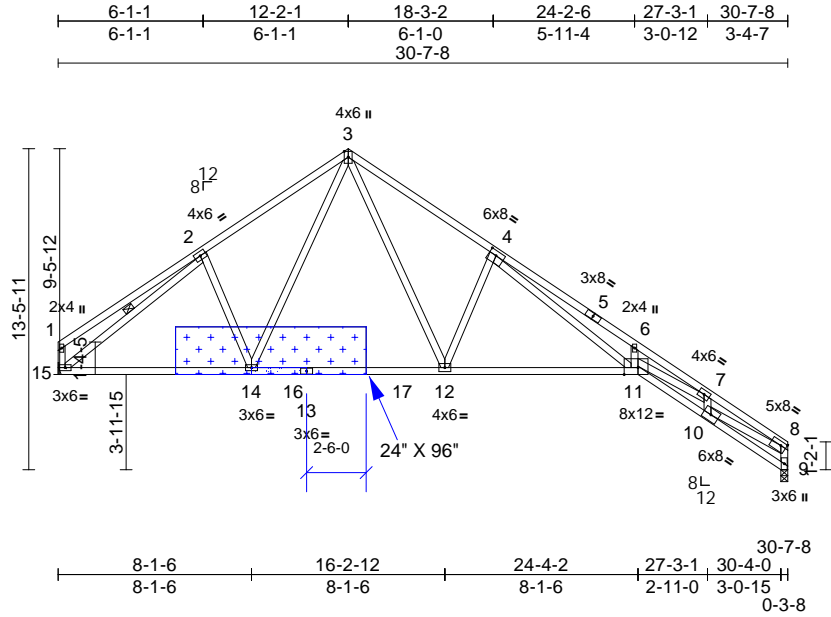
84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 30 12:00:20

Page: 1

REPAIR: REPLACE BOTTOM CHORD 13-14

ID:rBJc5F1c7Mit2WEkixG90HzM4Fd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



Scale = 1:96.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.51	11-12	>716	240	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-1.08	11-12	>336	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.74	9	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 185 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP DSS *Except* 1-3:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 11-9:2x4 SP No.1
WEBS 2x4 SP No.2 *Except* 11-4,15-2:2x4 SP No.1

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 2-15

REACTIONS

(size) 9=0-3-8, 15= Mechanical
Max Horiz 15=280 (LC 8)
Max Uplift 9=85 (LC 13), 15=33 (LC 12)
Max Grav 9=1213 (LC 2), 15=1213 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-249/109, 2-3=-1444/255,
3-4=-1852/276, 4-6=-6572/512,
6-7=-6588/372, 7-8=-4212/327,
8-9=-1234/132, 1-15=-244/94
BOT CHORD 14-15=-9/1293, 12-14=0/1031, 11-12=0/1816,
10-11=-225/3878, 9-10=-30/170
WEBS 2-14=-216/210, 3-14=-100/456,
3-12=-132/1249, 4-12=-944/243,
4-11=-319/4744, 6-11=-168/168,
2-15=-1397/73, 7-11=0/2304, 7-10=-840/82,
8-10=-216/3507

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone 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

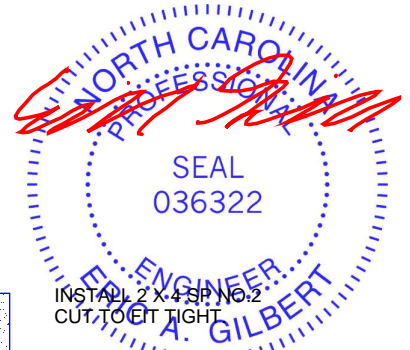
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lum DOL = 1.15 Plate DOL = 1.15); Category II; Exp B; Partially Exp.; Ct=1.10

- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 9 and 33 lb uplift at joint 15.

LOAD CASE(S) Standard



ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C. NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.



July 30,2025

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

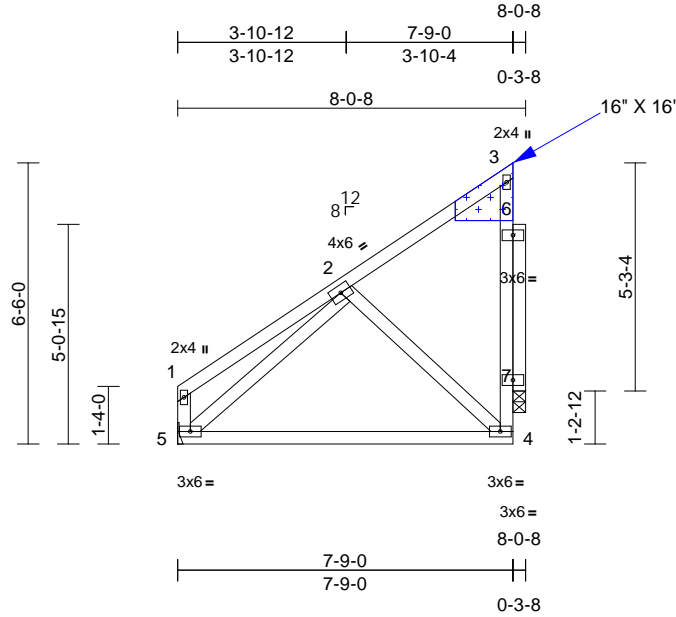
Job	Truss	Truss Type	Qty	Ply	72 Tobacco Road ** REVISED 5/14	
2502453-24781	M1	Monopitch	5	1	Job Reference (optional)	I75284642

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 30 12:00:21
ID:minGCUqRdNuhOuAvJVJ87Dz_qbA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1

REPAIR: PLATE DAMAGE JOINT 3



Scale = 1:53.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	-0.19	4-5	>482	240	MT20	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.37	4-5	>241	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 56 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

BRACING

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

REACTIONS	(size) 5= Mechanical, 7=0-3-8
	Max Horiz 5=151 (LC 12)
	Max Uplift 7=111 (LC 12)
	Max Grav 5=298 (LC 2), 7=317 (LC 23)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-60/76, 2-3=-86/45, 4-7=-69/232, 3-7=-93/56, 1-5=-91/63
BOT CHORD	4-5=-124/172
WEBS	2-4=-233/169, 2-5=-205/0

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lum DOL = 1.15 Plate DOL = 1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 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.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 111 lb uplift at joint 7.

LOAD CASE(S) Standard



ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C. NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.



July 30, 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	Truss	Truss Type	Qty	Ply	72 Tobacco Road ** REVISED 5/14	
2502453-24781	B2-1	Roof Special	8	1	Job Reference (optional)	I75284641

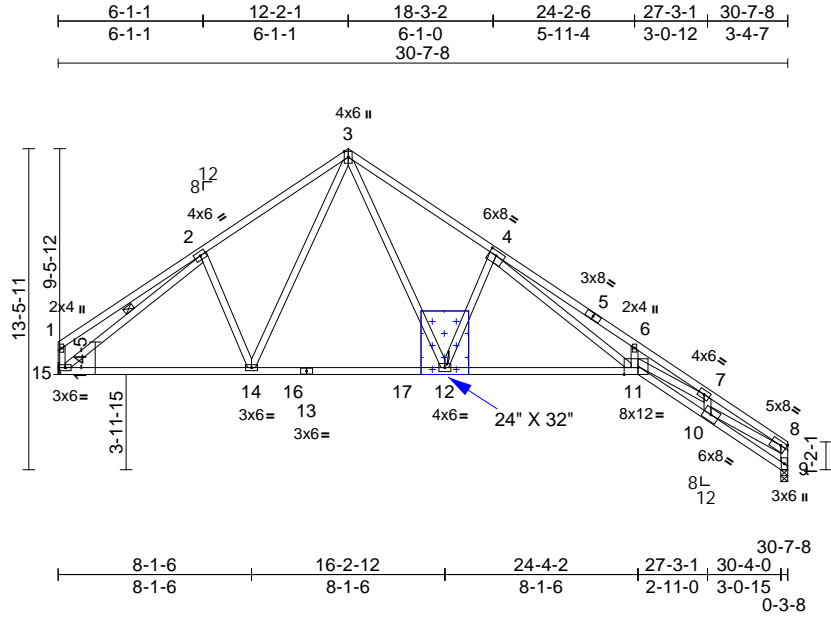
84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 E Feb 1 2025 Print: 8.830 E Feb 1 2025 MiTek Industries, Inc. Wed Jul 30 15:06:33

Page: 1

ID:rBJc5F1c7Mit2WEklxG90HzM4Fd-2ZNR8FTqRj1Mq5JhXnxVSpADiHE?u4USZ7oysr8q

REPAIR: 6" CRACK IN WEB 4-12 STARTING AT JOINT 12



ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1)
TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE:
2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C.
NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE
FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.51	11-12	>716	240	MT20	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-1.08	11-12	>336	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.74	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 185 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP DSS *Except* 1-3:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 11-9:2x4 SP No.1
WEBS 2x4 SP No.2 *Except* 11-4,15:2x4 SP No.1

BRACING

TOP CHORD Structural wood sheathing directly applied,
except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.
WEBS 1 Row at midpt 2-15

REACTIONS

(lb/size) 9=1062/0-3-8, 15=1062/
Mechanical
Max Horiz 15=-280 (LC 8)
Max Uplift 9=-85 (LC 13), 15=-33 (LC 12)
Max Grav 9=1213 (LC 2), 15=1213 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=-249/109, 2-3=-1444/255,
3-4=-1852/276, 4-5=-6534/512,
5-6=-6572/485, 6-7=-6588/372,
7-8=-4212/327, 8-9=-1234/132, 1-15=-244/94
BOT CHORD 14-15=-9/1293, 14-16=0/1031, 13-16=0/1031,
13-17=0/1031, 12-17=0/1031, 11-12=0/1816,
10-11=-225/3878, 9-10=-30/170
WEBS 2-14=-216/210, 3-14=-100/456,
3-12=-132/1249, 4-12=-944/243,
4-11=-319/4744, 6-11=-168/168,
2-15=-1397/773, 7-11=0/2304, 7-10=-840/82,
8-10=-216/3507

NOTES

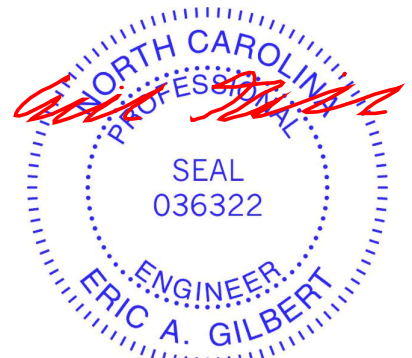
1) Unbalanced roof live loads have been considered for
this design.

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)

- Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat.
II; Exp B; Enclosed; MWFRS (envelope) exterior zone
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
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lum DOL
= 1.15 Plate DOL = 1.15); Category II; Exp B; Partially
Exp.; Ct=1.10
- 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.
- Bearings are assumed to be: , Joint 9 User Defined
crushing capacity of 425 psi, Joint 9 SP No.1 crushing
capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 9 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 85 lb uplift at joint
9 and 33 lb uplift at joint 15.
- This truss is designed in accordance with the 2015
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 30, 2025

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

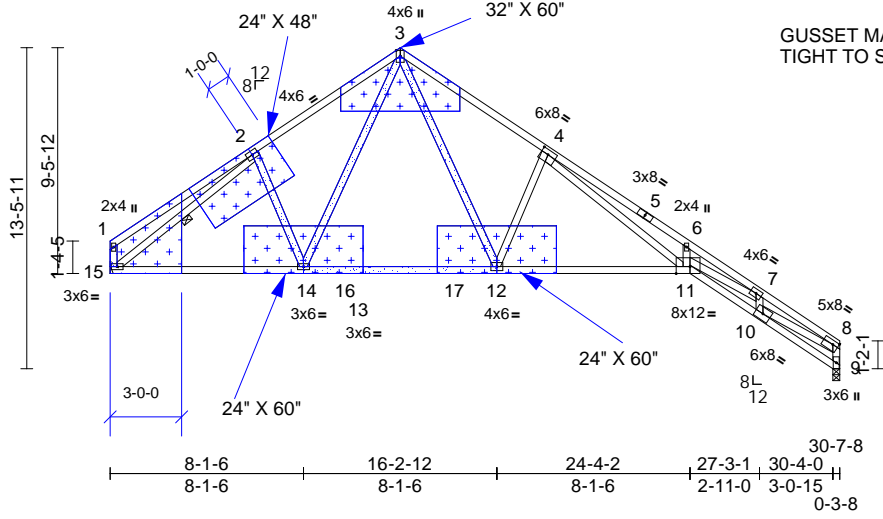
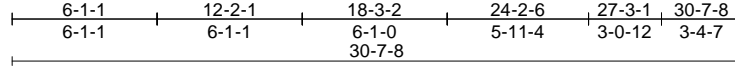
Job	Truss	Truss Type	Qty	Ply	72 Tobacco Road ** REVISED 5/14	175284641
2502453-24781	B2-2	Roof Special	8	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 E Feb 1 2025 Print: 8.830 E Feb 1 2025 MiTek Industries, Inc. Wed Jul 30 15:06:43

Page: 1

REPAIR: REPLACE BOTTOM CHORD 12-14
REPLACE WEB 2-14,3-14 AND 3-12
REPLACE VERTICAL 1-15



GUSSET MAY BE TRIMMED
TIGHT TO SINGLE PLY HANGER

Scale = 1:96.7



ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1)
TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE:
2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C.
NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE
FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.



INSTALL 2 X 4 SP NO.2
CUT TO FIT TIGHT.

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.51	11-12	>716	240	MT20	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-1.08	11-12	>336	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.74	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 185 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP DSS *Except* 1-3:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 11-9:2x4 SP No.1
WEBS 2x4 SP No.2 *Except* 11-4,15-2:2x4 SP No.1

BRACING

TOP CHORD Structural wood sheathing directly applied,
except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.
WEBS 1 Row at midpt 2-15

REACTIONS

(lb/size) 9=1062/0-3-8, 15=1062/
Mechanical
Max Horiz 15=280 (LC 8)
Max Uplift 9=85 (LC 13), 15=33 (LC 12)
Max Grav 9=1213 (LC 2), 15=1213 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=249/109, 2-3=1444/255,
3-4=1852/276, 4-5=6534/512,
5-6=6572/485, 6-7=6588/372,
7-8=4212/327, 8-9=1234/132, 1-15=244/94
BOT CHORD 14-15=9/1293, 14-16=0/1031, 13-16=0/1031,
13-17=0/1031, 12-17=0/1031, 11-12=0/1816,
10-11=225/3878, 9-10=30/170

WEBS

2-14=216/210, 3-14=100/456,
3-12=132/1249, 4-12=944/243,
4-11=319/4744, 6-11=168/168,
2-15=1397/73, 7-11=0/2304, 7-10=840/82,
8-10=216/3507

NOTES

1) 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=30ft; Cat.
II; Exp B; Enclosed; MWFRS (envelope) exterior zone
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
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lum DOL
= 1.15 Plate DOL = 1.15); Category II; Exp B; Partially
Exp.; Ct=1.10
- 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.
- Bearings are assumed to be: , Joint 9 User Defined
crushing capacity of 425 psi, Joint 9 SP No.1 crushing
capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 9 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 85 lb uplift at joint
9 and 33 lb uplift at joint 15.
- This truss is designed in accordance with the 2015
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 30,2025

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

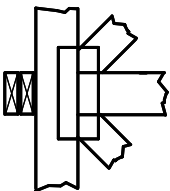
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

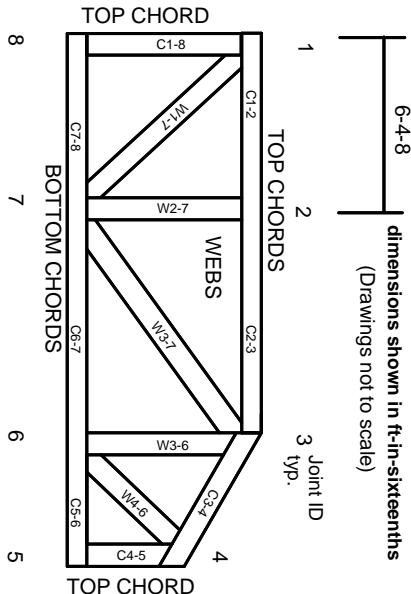


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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