

RE: 4438033 - WEAVER HOMES- THE GASTON II 2ND FLOOR

Trenco  
818 Soundside Rd  
Edenton, NC 27932

**Site Information:**

Project Customer: WEAVER HOMES    Project Name:  
Lot/Block: 52    Subdivision: WEST PRESERVE  
Address: 273 BOYCE COURT  
City: Sanford    State: NC

**Name Address and License # of Structural Engineer of Record, If there is one, for the building.**

Name:    License #:  
Address:  
City, County:    State:

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

Design Code: IRC2015/TPI2014    Design Program: MiTek 20/20 8.6  
Wind Code: N/A    Design Method: N/A  
Wind Speed: N/A mph  
Roof Load: N/A psf    Floor Load: 55.0 psf

This package includes 1 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Job ID#	Truss Name	Date
1	I72649606	4438033	F3	4/9/25

The truss drawing(s) referenced above have been prepared by  
Truss Engineering Co. under my direct supervision based on the parameters  
provided by Builders FirstSource (Albermarle,NC).

Truss Design Engineer's Name: Gilbert, Eric

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

**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.



April 9, 2025

Gilbert, Eric

RE: \$JOBNAME - \$JOBDESC

Trenco  
818 Soundside Rd  
Edenton, NC 27932

**Site Information:**

Project Customer: \$SI\_CUSTOMER    Project Name: \$SI\_JOBNAME  
Lot/Block: \$SI\_LOTNUM                      Subdivision: \$SI\_SUBDIV  
Address: \$SI\_SITEADDR  
City, County: \$SI\_SITECITY                      State: \$SI\_SITESTATE

RE: \$JOBNAME - \$JOBDESC

Trenco  
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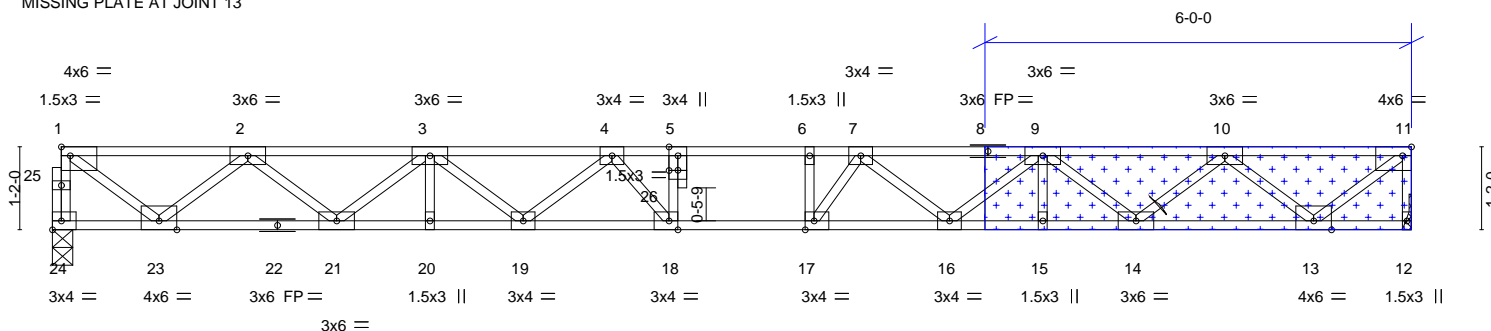
**Site Information:**

Project Customer: \$SI\_CUSTOMER    Project Name: \$SI\_JOBNAME  
Lot/Block: \$SI\_LOTNUM                      Subdivision: \$SI\_SUBDIV  
Address: \$SI\_SITEADDR  
City, County: \$SI\_SITECITY                      State: \$SI\_SITESTATE

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed Apr 9 13:37:46 2025 Page 1  
ID:LoEKtQIz?05bL4kGRC1iOZvlfS2-RfC?PsB70Ha3NSaPanL8w3uITxbGKWrCDoi7J4zJC?f

0-9-10      1-8-0      0-7-14

DAMAGED PLATE AT JOINT 9  
MEMBER 10-14 BROKEN 6" FROM JOINT 14  
MISSING PLATE AT JOINT 13



GUSSET MAY BE TRIMMED  
TIGHT TO SINGLE PLY HANGER.



ATTACH 3/4" PLYWOOD OR OSB GUSSET (23/32" RATED SHEATHING 48/24 EXP 1) TO EACH SIDE OF TRUSS WITH ONE ROW OF (0.131" X 2.5") NAILS SPACED 2" O.C. FROM EACH FACE INTO EACH COVERED TRUSS MEMBER. IN ADDITION TO REQUIRED NAILING, CONSTRUCTION QUALITY ADHESIVE RECOMMENDED TO REDUCE POTENTIAL SQUEAKS.

<div><div><div>8-9-10</div><div>8-9-10</div><div>9-8-6</div><div>10-7-2</div><div>19-1-8</div></div></div>												
<div><div><div>8-9-10</div><div>0-10-12</div><div>0-10-12</div><div>8-6-6</div></div></div>												
Plate Offsets (X,Y)-- [1:Edge,0-1-8], [11:0-1-8,Edge], [17:0-1-8,Edge], [18:0-1-8,Edge], [26:0-1-8,0-0-1]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d				PLATES GRIP		
TCLL	40.0	Plate Grip DOL	1.00	TC	0.89	Vert(LL)	-0.40	17-18	>567	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.55	17-18	>412	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.08	12	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 98 lb	FT = 20%F, 11%E

**LUMBER-**

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.1(flat)
WEBS	2x4 SP No.3(flat)

**BRACING-**

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 18-19.

**REACTIONS.**

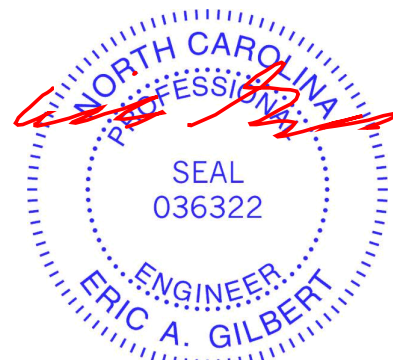
(size) 24=0-3-7, 12=Mechanical  
Max Grav 24=1035(LC 1), 12=1042(LC 1)

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

TOP CHORD	1-24=-1030/0, 11-12=-1034/0, 1-2=-1226/0, 2-3=-3050/0, 3-4=-4219/0, 4-5=-4680/0, 5-6=-4686/0, 6-7=-4686/0, 7-9=-4195/0, 9-10=-3014/0, 10-11=-1173/0
BOT CHORD	21-23=0/2311, 20-21=0/3799, 19-20=0/3799, 18-19=0/4590, 17-18=0/4686, 16-17=0/4584, 15-16=0/3772, 14-15=0/3772, 13-14=0/2265
WEBS	5-18=-298/90, 6-17=-360/113, 1-23=0/1487, 2-23=-1411/0, 2-21=0/963, 3-21=-956/0, 3-19=0/536, 4-19=-510/0, 4-18=-225/533, 11-13=0/1497, 10-13=-1423/0, 10-14=0/974, 9-14=-968/0, 9-16=0/541, 7-16=-546/0, 7-17=-230/591

**NOTES-**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Refer to girder(s) for truss to truss connections.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10'-0" oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 4) CAUTION. Do not erect truss backwards.



April 9, 2025



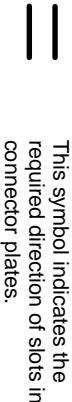
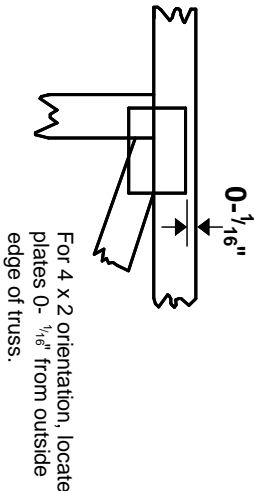
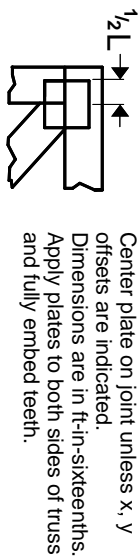
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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/TP1 Quality Criteria and DS8-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Components Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



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# Symbols

## PLATE LOCATION AND ORIENTATION



\* Plate location details available in MITek software or upon request.

## PLATE SIZE

**4 X 4**

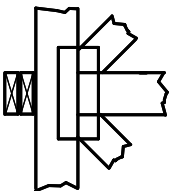
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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.

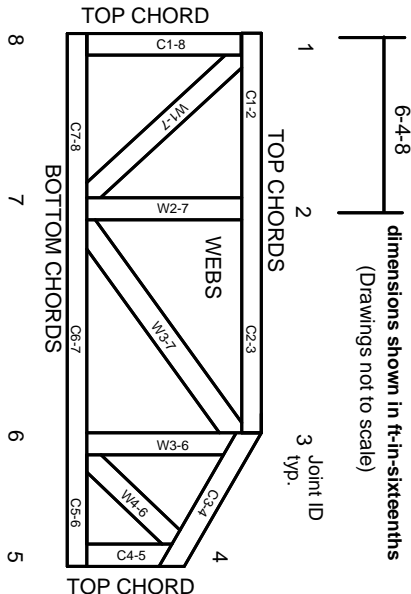
## BEARING



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 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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ENGINEERING BY  
**TRENCO**  
A MITek Affiliate

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