ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 35350A

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I58717738 thru I58717738

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

North Carolina COA: C-0844

June 5,2023

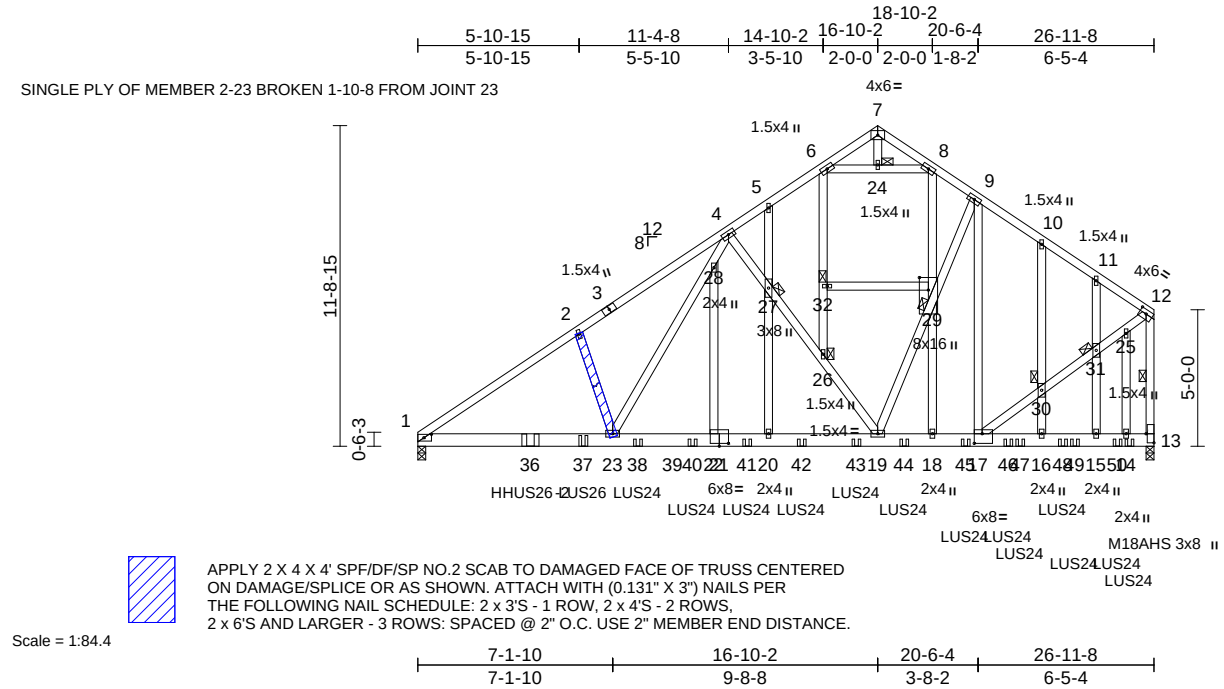
Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	
35350A	B1G	Common Girder	1	2	I58717738 Job Reference (optional)

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

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Fri Jun 02 14:15:37 ID:LGTr3byI7ltpZngxBRpVoazq9d4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



APPLY 2 X 4 X 4' SPF/DF/SP NO.2 SCAB TO DAMAGED FACE OF TRUSS CENTERED ON DAMAGE/SPLICE OR AS SHOWN. 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 @ 2" O.C. USE 2" MEMBER END DISTANCE.

Scale = 1:84.4

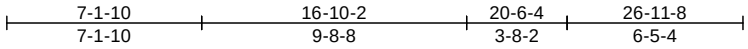


Plate Offsets (X, Y): [1:0-3-5,0-1-8], [12:Edge,0-1-12], [13:Edge,0-3-8], [17:0-3-8,0-4-4], [21:0-4-0,0-1-4], [29:0-5-8,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	0.13	15-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.22	15-16	>999	180	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	NO	WB	0.81	Horz(CT)	0.03	13	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 542 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3 *Except* 23-4,19-4,19-9,17-9,17-12:2x4 SP No.2
OTHERS	2x4 SP No.3 *Except* 26-6,22-28:2x4 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.
WEBS	1 Row at midpt 12-13
JOINTS	1 Brace at Jt(s): 24, 26, 27, 29, 30, 31, 32

REACTIONS (size) 1=0-3-8, 13=0-3-8
Max Horiz 1=453 (LC 13)
Max Uplift 1=-1311 (LC 14), 13=-1446 (LC 14)
Max Grav 1=2639 (LC 21), 13=5178 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-4277/2119, 2-4=-4221/2240, 4-5=-3070/1310, 5-6=-2658/1171, 6-7=-258/121, 7-8=-125/102, 8-9=-2903/1270, 9-10=-3022/1178, 10-11=-3144/1123, 11-12=-3287/1100, 12-13=-3777/1197
BOT CHORD	1-23=-1950/3739, 22-23=-1383/3093, 20-22=-1383/3093, 19-20=-1383/3093, 18-19=-885/2592, 17-18=-885/2592, 16-17=-92/143, 15-16=-92/143, 14-15=-92/143, 13-14=-92/143
WEBS	2-23=-400/323, 23-28=-1010/1114, 4-28=-1042/1183, 4-27=-1024/815, 26-27=-1432/962, 19-26=-698/684, 7-24=-95/203, 19-29=-558/241, 9-29=-930/231, 9-17=-97/545, 17-30=-989/3086, 30-31=-976/3044, 25-31=-1033/3218, 12-25=-960/3024, 14-25=-329/125, 26-32=-344/852, 6-32=-328/817, 5-27=-275/655, 20-27=-485/1205, 22-28=-78/108, 8-29=-709/1735, 18-29=-376/1038, 10-30=-68/219, 16-30=-77/191, 11-31=-66/234, 15-31=-115/455, 6-24=-2235/1048, 8-24=-2235/1048, 29-32=-262/116

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) N/A
3) N/A
4) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
5) Unbalanced roof live loads have been considered for this design.
6) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; 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
7) 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.
8) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
9) All plates are MT20 plates unless otherwise indicated.
10) All plates are 3x6 MT20 unless otherwise indicated.
11) Gable studs spaced at 2-0-0 oc.

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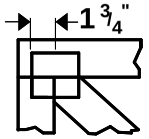
12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1311 lb uplift at joint 1 and 1446 lb uplift at joint 13.
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.
16) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 21-7-8 from the left end to 25-7-8 to connect truss(es) to front face of bottom chord.
17) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 4-1-8 from the left end to connect truss(es) to back face of bottom chord.
18) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 6-0-12 from the left end to connect truss(es) to back face of bottom chord.
19) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 4-3-0 oc max. starting at 8-0-12 from the left end to 26-0-12 to connect truss(es) to back face of bottom chord.
20) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent at 20-0-12 from the left end to connect truss(es) to back face of bottom chord.
21) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

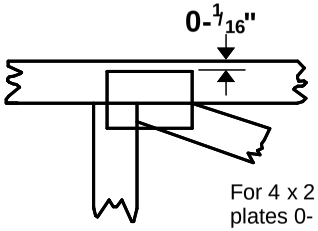
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-7=-60, 7-12=-60, 13-33=-20
   Concentrated Loads (lb)
   Vert: 14=-699 (B), 36=267 (B), 37=-6 (B), 38=-321 (B), 40=-350 (B), 41=-260 (B), 42=-288 (B), 43=-199 (B), 44=-697 (B), 45=-783 (B), 46=-230 (F), 47=-697 (B), 48=-230 (F), 49=-697 (B), 50=-230 (F)

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

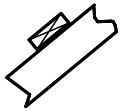
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

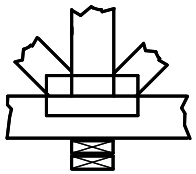
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

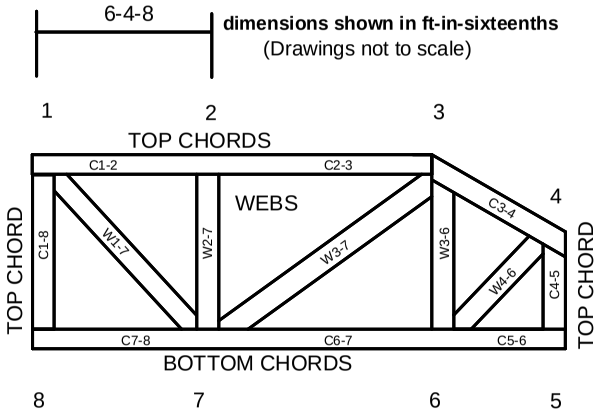


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.