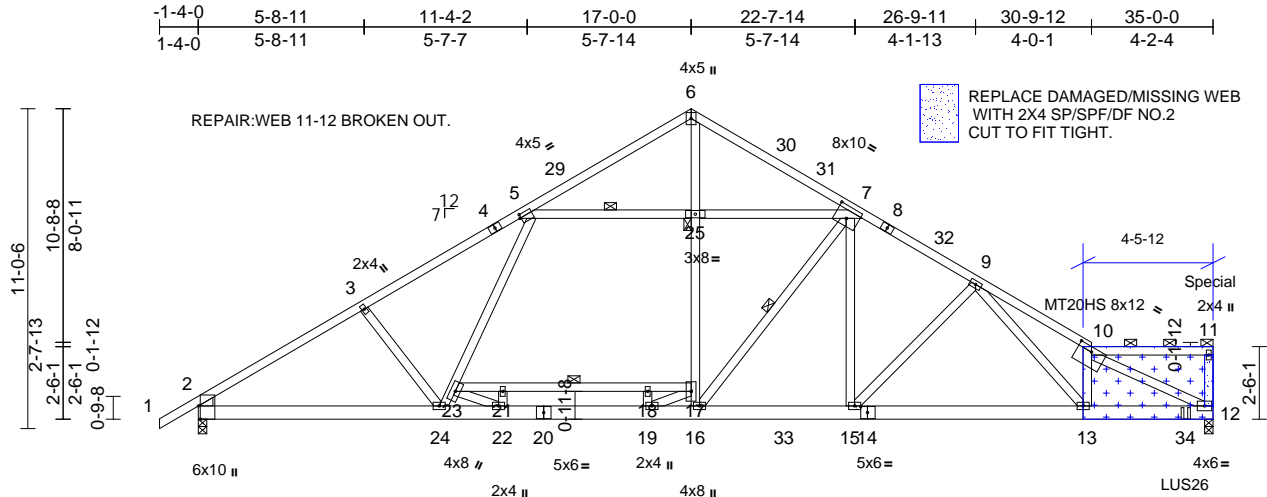


Job	Truss	Truss Type	Qty	Ply	32 Kipling Creek-Roof-2913 B TMB TDR 4'Bump GLH I73939014
24120045-01	A12	Roof Special Girder	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,
Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Jun 03 14:18:21
Page: 1

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ATTACH < 2 LAYERS > 3/4" PLYWOOD OR OSB GUSSET (23/32" RATED SHEATHING 48/24 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 3.0") 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. GLUE PLYWOOD LAYERS TOGETHER PRIOR TO ATTACHING TO TRUSS.

Scale = 1:79.5

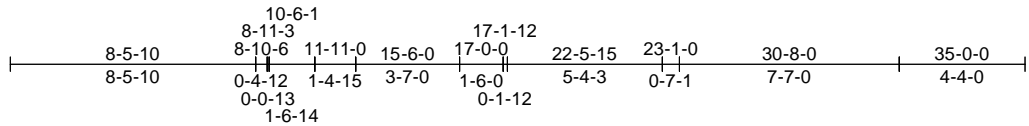
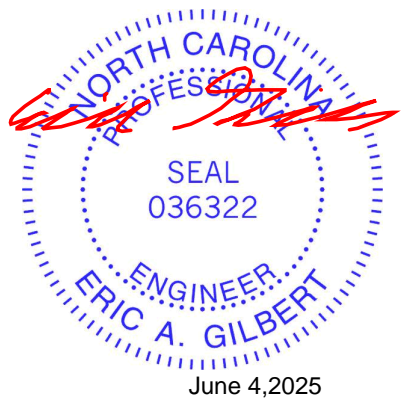


Plate Offsets (X, Y): [2:0-5-8,Edge], [5:0-0-8,0-1-8], [7:0-5-0,0-5-0], [10:0-6-0,0-2-0], [14:0-2-13,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.17	18-21	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.32	18-21	>999	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.08	12	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
Weight: 263 lb    FT = 20%												

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 23-17:2x4 SP No.2, 20-14:2x6 SP No.2  
WEBS 2x4 SP No.3  
WEDGE Left: 2x4 SP No.3  
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-6-15 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 10-11.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
5-11-12 oc bracing: 21-23  
5-7-0 oc bracing: 18-21  
5-10-5 oc bracing: 17-18.  
WEBS 1 Row at midpt 5-25, 7-16  
JOINTS 1 Brace at Jt(s): 11, 25  
**REACTIONS** (size) 2=0-3-8, 12=0-3-8  
Max Horiz 2=314 (LC 10)  
Max Uplift 12=100 (LC 12)  
Max Grav 2=2112 (LC 25), 12=2631 (LC 26)  
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/51, 2-3=-3200/0, 3-5=-3042/0, 5-6=-1367/43, 6-7=-1447/16, 7-9=-2722/5, 9-10=-3856/59, 10-11=-111/25, 11-12=-212/65  
BOT CHORD 2-24=-105/2869, 22-24=0/2522, 19-22=0/3245, 16-19=0/2369, 15-16=0/2337, 13-15=0/2625, 12-13=-24/3237, 21-23=-936/0, 18-21=-936/0, 17-18=-936/0 10-12=-3618/4, 16-17=-191/660, 17-25=-15/1106, 6-25=0/1149, 10-13=-411/120, 5-25=-1581/239, 7-25=-1539/250, 7-15=-24/719, 7-16=-595/340, 9-15=-598/142, 9-13=-50/974, 23-24=-41/380, 5-23=0/760, 3-24=-263/178, 21-22=-212/0, 22-23=0/923, 18-19=-264/0, 17-19=0/1108  
WEBS

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0  
4) Unbalanced snow loads have been considered for this design.  
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.  
6) 200.0lb AC unit load placed on the bottom chord, 13-0-0 from left end, supported at two points, 5-0-0 apart.  
7) Provide adequate drainage to prevent water ponding.  
8) All plates are MT20 plates unless otherwise indicated.  
9) All plates are 3x5 MT20 unless otherwise indicated.  
10) \* 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.  
11) All bearings are assumed to be SP 2400F 2.0E .  
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint 12.  
13) 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.



Job	Truss	Truss Type	Qty	Ply	32 Kipling Creek-Roof-2913 B TMB TDR 4'Bump GLH I73939014
24120045-01	A12	Roof Special Girder	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

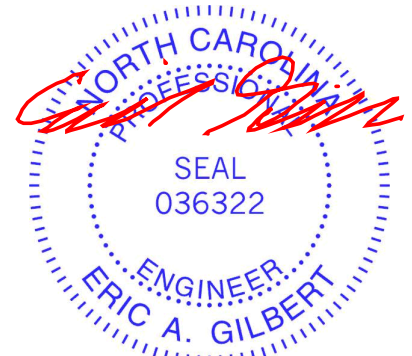
Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Jun 03 14:18:21  
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Page: 2

- 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 15) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 34-0-12 from the left end to connect truss(es) to front face of bottom chord.
- 16) Fill all nail holes where hanger is in contact with lumber.
- 17) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 61 lb down and 30 lb up at 34-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 18) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-6=-48, 6-10=-48, 10-11=-58, 12-26=-20, 17-23=-20  
Concentrated Loads (lb)  
Vert: 11=-34 (F), 22=-100, 19=-100, 34=-644 (F)



June 4, 2025

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

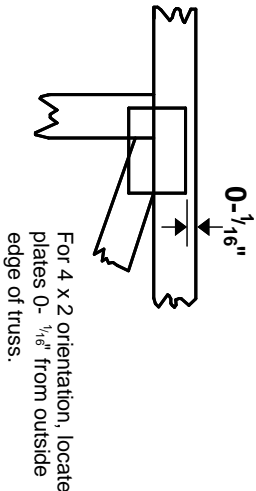
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

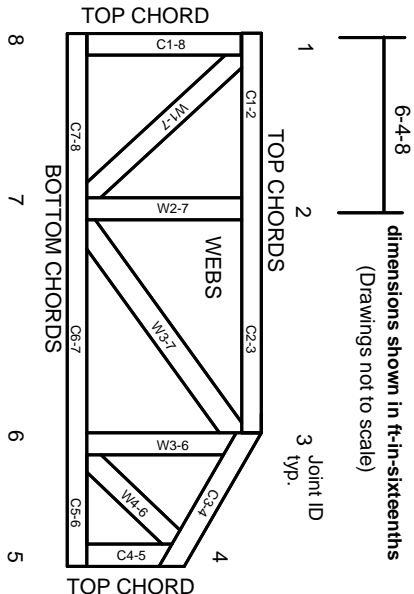
## BEARING



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