

Reaction Summary of Order

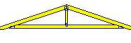



ROOF & FLOOR TRUSSES & BEAMS
 Reilly Road Industrial Park P.O. Box 40408
 Fayetteville, N.C. 28309 (910) 864-TRUS

REQ. QUOTE DATE	/ /	ORDER #	J0124-0366
ORDER DATE	01/22/24	QUOTE #	
DELIVERY DATE	/ /	CUSTOMER ACCT #	0000007216
DATE OF INVOICE	/ /	CUSTOMER PO #	
ORDERED BY	Shaun Garderner	INVOICE #	
COUNTY	Harnett	TERMS	
SUPERINTENDANT	Shaun Garderner	SALES REP	Neil Baggett
JOBSITE PHONE #	(910) 988-8172	SALES AREA	Hampton Horrocks

SOLD TO	Precision Custom Homes 206 Shoreline Drive Raeford, NC 28376 (910) 988-8172	JOB NAME: Lot 65 Liberty Meadow Porch MODEL: Roof TAG: Ragnar 2.0 DELIVERY INSTRUCTIONS: Deliver with 65 Liberty Meadows J1123-6512	LOT # 65 SUBDIV: Liberty Meadow JOB CATEGORY: B & S - Build and Ship
	Precision Custom Homes and Lot 65 Liberty Meadow Cameron, NC	SPECIAL INSTRUCTIONS: Deliver with 65 Liberty Meadows J1123-6512	PLAN SEAL DATE: BY DATE

BUILDING DEPARTMENT	OVERHANG INFO	HEEL HEIGHT	00-06-08	REQ. LAYOUTS	REQ. ENGINEERING	QUOTE	/ /
Roof Order	END CUT RETURN					LAYOUT	/ /
	GABLE STUDS	24 IN. OC		JOBSITE 1	JOBSITE 1	CUTTING	HH 01/22/24

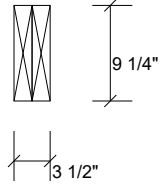
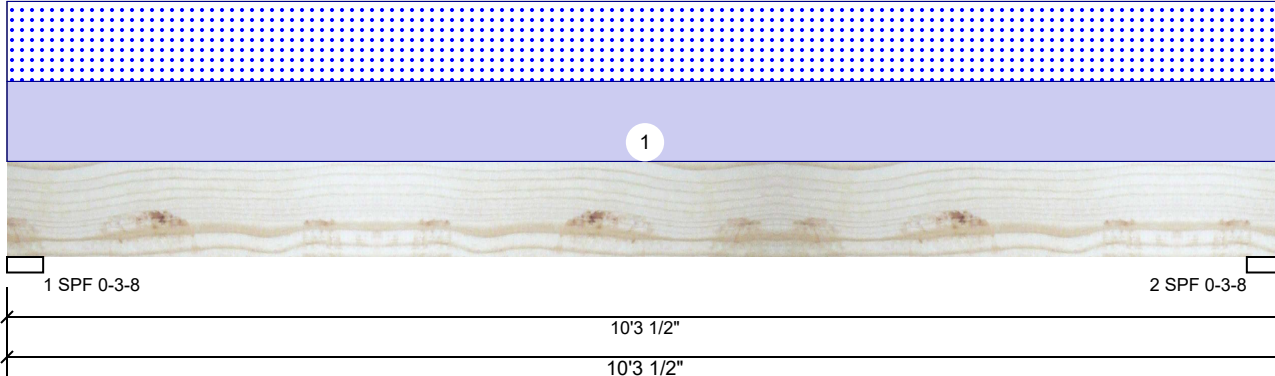
ROOF TRUSSES		LOADING INFORMATION		TCLL-TCDL-BCLL-BCDL	STRESS INCR.	ROOF TRUSS SPACING: 24.0 IN. O.C. (TYP.)				
				20.0,10.0,0.0,10.0	1.15					
PROFILE	QTY	PITCH		TYPE ID	BASE O/A	LUMBER		OVERHANG		REACTIONS
	PLY	TOP	BOT			TOP	BOT	LEFT	RIGHT	
	4	4.00	0.00	COMMON P1	14-11-00 14-11-00	2 X 6	2 X 6	01-03-00	01-03-00	Joint 2 Joint 4 655.3 lbs. 655.3 lbs. -252.5 lbs. -252.5 lbs.
	1	4.00	0.00	GABLE P1GE	14-11-00 14-11-00	2 X 6	2 X 6	01-03-00	01-03-00	Joint 2 Joint 8 655.3 lbs. 655.3 lbs. -360.0 lbs. -360.0 lbs.

ITEMS

QTY	ITEM TYPE	SIZE	LENGTH FT-IN-16	PART NUMBER	NOTES
4	LVL Beams (Sized)	LVL, 1-3/4" x 9-1/4" (S)	11-00-00		BM2

BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	240
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	881	844	0	0
2	Vertical	0	881	844	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	33%	881 / 844	1725	L	D+S
2 - SPF	3.500"	Vert	33%	881 / 844	1725	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4051 ft-lb	5'1 3/4"	14423 ft-lb	0.281 (28%)	D+S	L
Unbraced	4051 ft-lb	5'1 3/4"	7519 ft-lb	0.539 (54%)	D+S	L
Shear	1374 lb	9'2 3/4"	7943 lb	0.173 (17%)	D+S	L
LL Defl inch	0.082 (L/1443)	5'1 3/4"	0.246 (L/480)	0.333 (33%)	S	L
TL Defl inch	0.167 (L/706)	5'1 3/4"	0.492 (L/240)	0.340 (34%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	164 PLF	0 PLF	164 PLF	0 PLF	0 PLF	P1
	Self Weight				7 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Manufacturer Info

Metsä Wood
 301 Merritt 7 Building, 2nd Floor
 Norwalk, CT 06851
 (800) 622-5850
www.metsawood.com/us

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: J0124-0366
Lot 65 Liberty Meadow Porch

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: I63170062 thru I63170063

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844



January 23, 2024

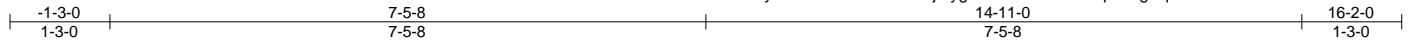
Gilbert, Eric

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 J0124-0366	Truss P1	Truss Type COMMON	Qty 4	Ply 1	Lot 65 Liberty Meadow Porch 163170062
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Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Jan 22 13:28:01 2024 Page 1
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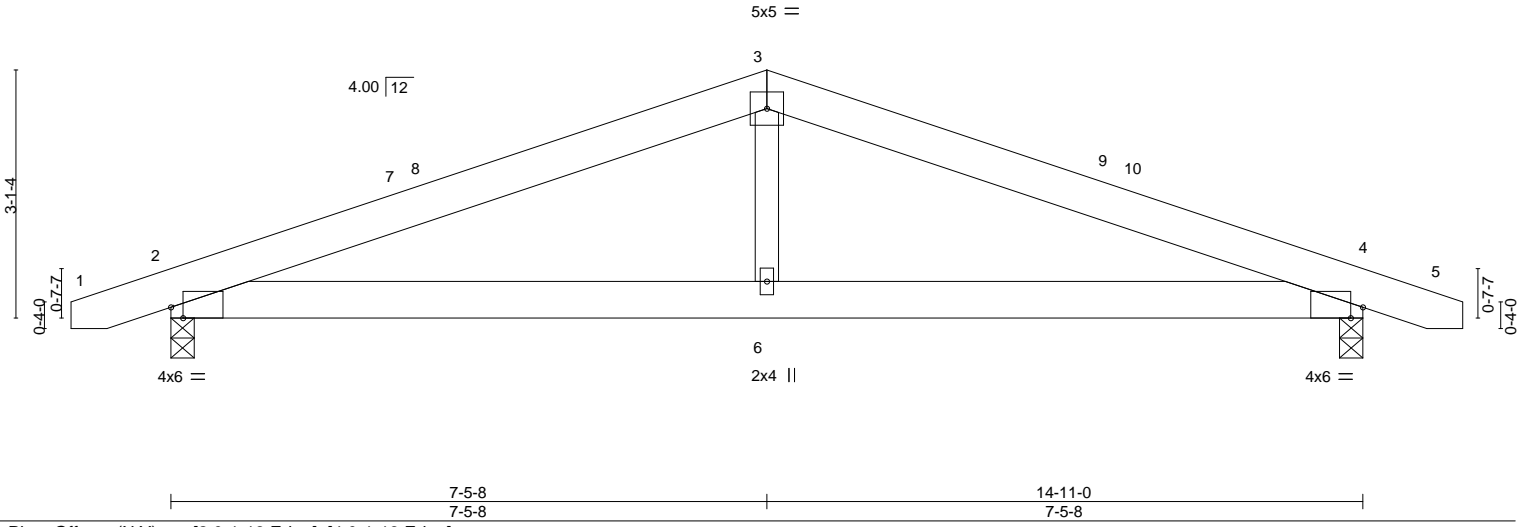


Plate Offsets (X,Y)--	[2:0-1-13,Edge], [4:0-1-13,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.25	Vert(LL) 0.06 4-6 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.22	Vert(CT) -0.05 2-6 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.08	Horz(CT) 0.01 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 81 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-11-13 oc bracing.

REACTIONS. (size) 2=0-3-8, 4=0-3-8
Max Horz 2=34(LC 12)
Max Uplift 2=-252(LC 8), 4=-252(LC 9)
Max Grav 2=655(LC 1), 4=655(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1042/1058, 3-4=-1042/1058
BOT CHORD 2-6=-908/913, 4-6=-908/913
WEBS 3-6=-430/347

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-5 to 3-4-8, Interior(1) 3-4-8 to 7-5-8, Exterior(2) 7-5-8 to 11-10-5, Interior(1) 11-10-5 to 15-11-5 zone; 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 252 lb uplift at joint 2 and 252 lb uplift at joint 4.
 - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



January 23, 2024

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 65 Liberty Meadow Porch
J0124-0366	P1GE	GABLE	1	1	63170063

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Jan 6 2022 MiTek Industries, Inc. Mon Jan 22 13:28:03 2024 Page 1

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Job Reference (optional)



Scale = 1:28.8

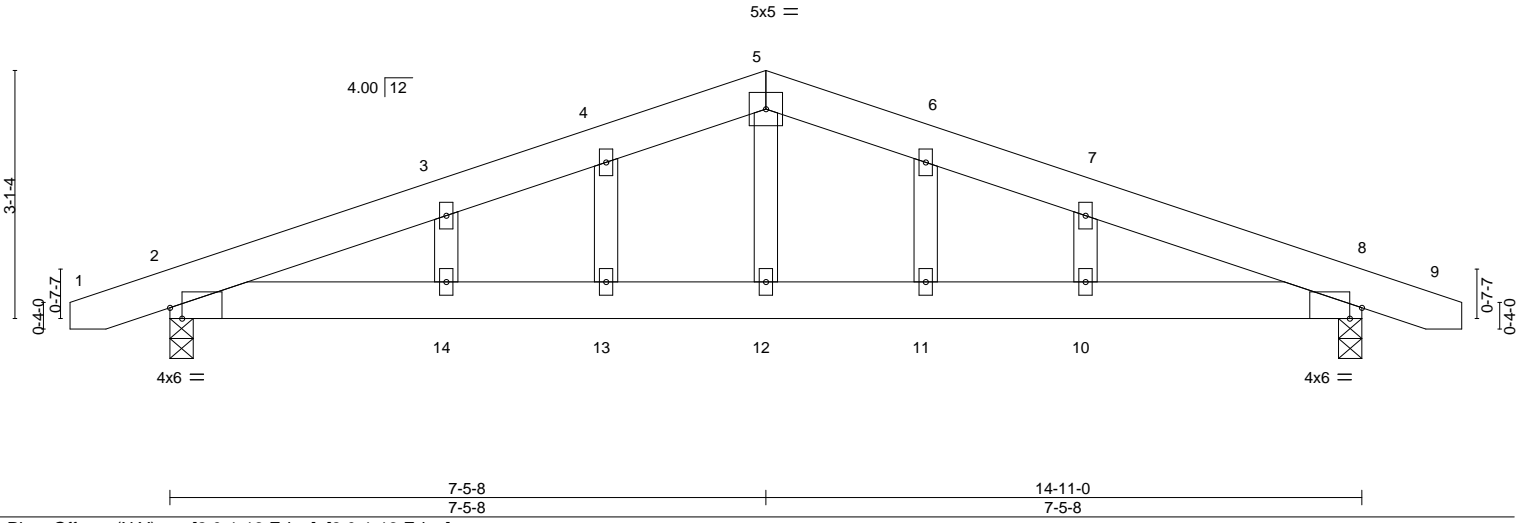


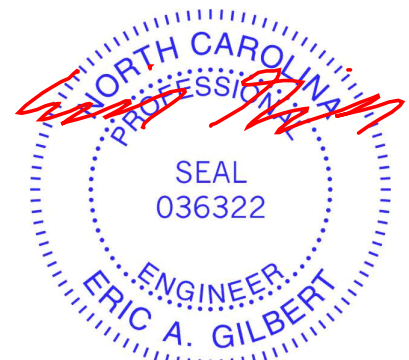
Plate Offsets (X, Y)--	[2:0-1-13,Edge], [8:0-1-13,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.18	Vert(LL) -0.03 14 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.25	Vert(CT) -0.06 13-14 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.08	Horz(CT) 0.01 8 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.05 10-11 >999 240	Weight: 89 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 7-7-5 oc bracing.
WEBS 2x4 SP No.2	
OTHERS 2x4 SP No.2	

REACTIONS. (size) 2=0-3-8, 8=0-3-8
 Max Horz 2=57(LC 12)
 Max Uplift 2=-360(LC 8), 8=-360(LC 9)
 Max Grav 2=655(LC 1), 8=655(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-1050/1139, 3-4=-984/1138, 4-5=-969/1155, 5-6=-969/1155, 6-7=-984/1138, 7-8=-1050/1139
 BOT CHORD 2-14=-992/929, 13-14=-992/929, 12-13=-992/929, 11-12=-992/929, 10-11=-992/929, 8-10=-992/929
 WEBS 5-12=-441/316

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) 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.
 - 4) All plates are 2x4 MT20 unless otherwise indicated.
 - 5) Gable studs spaced at 2-0-0 oc.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 360 lb uplift at joint 2 and 360 lb uplift at joint 8.
 - 9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



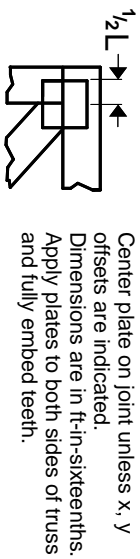
January 23, 2024

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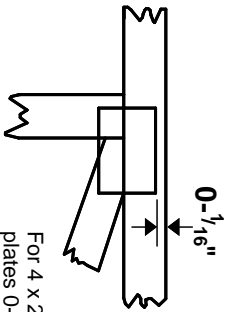


Symbols

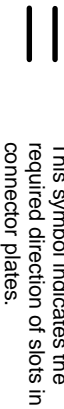
PLATE LOCATION AND ORIENTATION



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 software or upon request.

PLATE SIZE

4 X 4

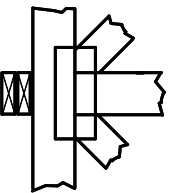
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

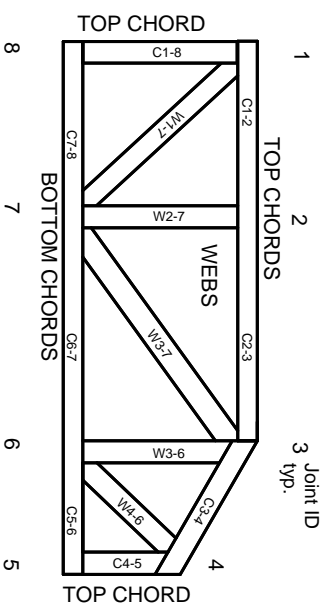


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: 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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MITek

ENGINEERING BY
TRENGO
A MITek Affiliate

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

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.