EAGLE METAL

12300 Ford Rd, Suite 110
Dallas, Texas 75234

eaglemetal.com

The truss designs referenced below have been prepared by me or under my direct supervision based on the truss design criteria and requirements ("design criteria") provided by **Toza Truss, LLC**.

These truss designs are intended for the fabrication of individual building components that will perform to the design criteria provided. Any variance from the design criteria will render the affected truss designs inapplicable.

Listed below are the truss designs included in this package and covered by this seal.

Job: **Phil Lanzarotto** - 1169470
TA24, TAG24

Any location identification is for file reference only. No determination of the appropriateness of design criteria for any specific project has been made in preparing the truss designs.

Please refer to individual truss designs for specific design criteria.

Arturo A. Hernandez (NC, 31344)
My license renewal date for the state of NC is 12/31/2022.

IMPORTANT NOTE: The responsibility of the engineer sealing this package, as a Truss Engineer, is solely for design of individual trusses as individual building components based upon design criteria provided by others and set forth in the referenced truss drawings. The truss design criteria for the components have not been verified as appropriate for any particular building, project or use. Adequacy and suitability of design criteria and requirements for the truss designs for any specific project are the responsibility of the building designer, not the Truss Engineer, per ANSI/TPI-1, Chapter 2.

DESIGN NOTES

1. The Truss Design Drawing(s) provided with these Design Notes have been prepared under and are subject to ANSI / TPI 1 published by the Truss Plate Institute, www.tpinst.org. Capitalized terms have the meanings provided in ANSI / TPI 1.
2. Copies of each Truss Design Drawing shall be furnished to the installation contractor, Building Designer, Owner and all persons fabricating, handling, installing, bracing, or erecting the trusses.

DESIGN LIMITATIONS

3. The Truss Design Drawing is based upon specifications provided by the Building Designer in accordance with ANS1 / TPI 1. Neither the Truss Designer, Eagle, nor an engineer who seals this design (if any) assumes any responsibility for the adequacy or accuracy of specifications provided by the Building Designer.
4. The Building Designer is solely responsible for the suitability based upon the Truss Design Drawing and shall be responsible for reviewing and verifying that the information shown is in general conformance with the design of the Building.
5. Each Truss Design Drawing is for the individual building component (a truss). A seal on the Truss Design Drawing indicates acceptance of professional engineering responsibility solely for the individual truss.
6. Each Truss Design Drawing assumes trusses will be suitably protected from the environment.

HANDLING, INSTALLING, & BRACING

7. Refer to Building Component Safety Information (BCSI) for handling, installing, restraining and bracing trusses. Copies can be obtained from the Structural Building Components Association, www.sbcindustry.com.
8. Bracing shown on each Truss Design Drawing is for lateral support of individual truss components only to reduce buckling lengths. All temporary and permanent bracing, including lateral load and diagonal or cross bracing, are the responsibility, respectively, of the erector and Building Designer.
9. Eagle is not responsible for improper truss fabrication, handling, erection or bracing.
10. Compression chords shall be laterally braced by the roof or floor sheathing, directly attached, or have purlins provided at spacing shown, unless noted otherwise.
11. Bottom chord required bracing shall be at 1Oft spacing or less, if no structural rated ceiling is installed, unless noted otherwise.
12. Strongbacking shall be installed on all parallel chord trusses, including flooring systems, to limit deflection and reduce vibration. Refer to BCSI-B7.
13. Never exceed the design loading shown. Never stack building or other materials on inadequately braced truss; refer to BCSI.
14. Concentration of construction loads greater than the design loads shall not be applied to the trusses at any time; refer to BCSI.
15. Trusses shall be handled with care prior to erection to avoid damage. Refer to BCSI for recommended truss handling and erection.

MATERIALS & FABRICATION

16. Lumber moisture content shall be 19% or less at the time of fabrication unless noted otherwise.
17. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
18. Unless expressly noted, the truss designs are not applicable for use with fire retardant or preservative treated lumber.
19. Plates shall be applied on both faces of truss at each joint and embedded fully. Knots and wane at joint locations shall be regulated in accordance with ANSI / TPI 1.
20. For a specified plate gauge and grade, the specified size is a minimum.
21. Connections not shown are the responsibility of others.
22. Adequate support shall be provided to resist gravity, lateral and uplift loads.
23. For 4X2 truss orientation, locate plates 0 - 1/16" from outside the edge of the truss.
24. Fabrication of truss shall be in accordance with ANSI / TPI 1.

OTHER NOTES

25. Camber is a non-structural consideration and is the responsibility of truss fabricator.
26. Do not cut or alter any truss member or plate without prior approval from a professional engineer.
27. Lumber design values are in accordance with ANSI / TPI 1; lumber design values are by others.
28. Install specified hangers per manufacturer recommendations.

SYMBOLS

PLATE SIZE

3X4 - The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

-, /, I, Indicates required direction of slots; Reference "Joint Details" for more information.

20 Ga Gr40 connectors required
3X10-20HS - 20 Ga Gr60 connectors required
8X10-18HS - 18 Ga Gr60 connectors required

LATERAL BRACING

When this symbol shown, continuous lateral bracing is required on the member of the truss.

BEARING

Indicates location where bearings (supports) occur.

PLATE LOCATION & ORIENTATION

The plate shall be centered on joint and/or placed in accordance with the design drawing/QC full scale details.

REFERENCES

•**ANSI / TPI 1:** National Design Standard for Metal Plate Connected Wood Trusses

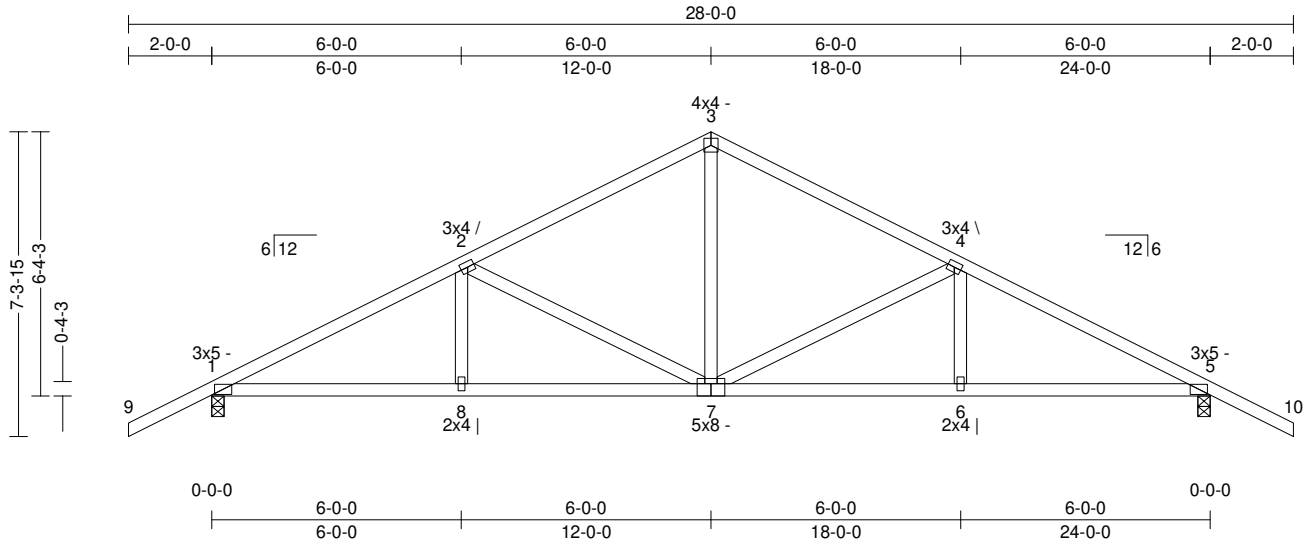
•**BCSI:** Building Component & Safety Information - Guide to Good Practice for Handling, Installing, Restraining, & Bracing of Metal Plate Connected Wood Trusses.

•**NDS:** National Design Specification for Wood Construction

•**ESR:** 1082 published by the International Code Council. www.icc-es.org

	TOZA TRUSS LLC 6633 CARL COX RD BENNETT NC 27208 Off: (336) 879-1212	Truss:TA24 Job: Phil Lanzarotto Date: 07/19/22 13:01:51 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLYS	SPACING	WGT/PLY
24-0-0	6/12	21	2-0-0	2-0-0	0-0-0	0-0-0	1	24 in	111 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	20	Bldg Code :	IRC 2018/	TC :	0.38 (1-2)	Vert TL:	0.11 in	L / 999	(6-7)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.40 (6-7)	Vert LL:	0.04 in	L / 999	(6-7)	L / 360
BCLL :	0	Rep Mbr :	Yes	Web :	0.38 (4-7)	Horz TL:	0.04 in		5	
BCDL :	10	Lumber D.O.L. :	115 %							

Reaction

JT	Brg Combo	Brg Width	Rqd Brg Width	Max React	Max Grav Uplift	Max MWFRS Uplift	Max C&C Uplift	Max Uplift	Max Horiz
1	1	3.5 in	1.50 in	968 lbs	·	-115 lbs	-378 lbs	-378 lbs	-33 lbs
5	1	3.5 in	1.50 in	968 lbs	·	-115 lbs	-378 lbs	-378 lbs	·

07/19/2022

NORTH CAROLINA PROFESSIONAL SEAL 031344 ENGINEER ARTURO A. HERNANDEZ

Material

TC: SYP#1 2 x 4
BC: SYP#1 2 x 4
Web: SYP#1 2 x 4

Bracing

TC: Sheathed or Purlins at 5-0-0, Purlin design by Others.
BC: Sheathed or Purlins at 10-0-0, Purlin design by Others.

Loads

1) This truss has been designed for the effects of balanced (14 psf) and unbalanced flat roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), Risk Category II (I = 1.00), Thermal (Ct = 1.00), DOL = 1.15. If the roof configuration differs from hip/gable, Building Designer shall verify snow loads.
2) This truss has been designed to account for the effects of ice dams forming at the eaves.
3) This truss has been designed for the effects of wind loads in accordance with ASCE7 - 16 with the following user defined input: 115 mph (Factored), Exposure C, Enclosed, Gable, Risk Category II, Overall Bldg Dims 25 ft x 60 ft, h = 15 ft, End Zone Truss, Both end webs considered. DOL= 1.60
4) This truss has been designed for the effects of a 16 psf live load computed in accordance with IRC 2018 assuming slope = 6 /12 and area supported = 56 ft^2, DOL = 115 %.
5) Minimum storage attic loading has been applied in accordance with IRC 301.5

Member Forces

Table indicates: Member ID, max CSI, max axial force, (max compr. force if different from max axial force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.378	-1,578 lbs		3-4	0.359	-1,069 lbs								
	2-3	0.359	-1,069 lbs		4-5	0.378	-1,578 lbs								
BC	5-6	0.398	1,369 lbs	(-213 lbs)	6-7	0.403	1,369 lbs	(-213 lbs)	7-8	0.403	1,369 lbs	(-213 lbs)	8-1	0.398	1,369 lbs	(-213 lbs)
Web	2-7	0.385	-566 lbs		4-7	0.385	-566 lbs								
	3-7	0.102	618 lbs	(-75 lbs)											

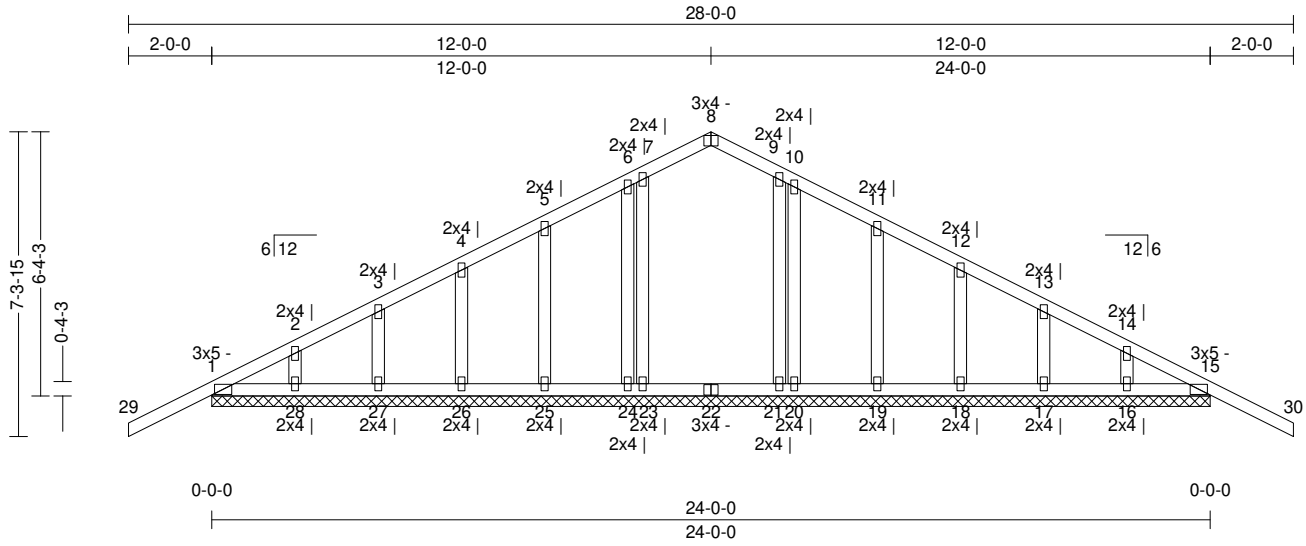
Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) The fabrication tolerance for this roof truss is 10 f-i-s (Cq = 0.90).
3) Brace bottom chord with approved sheathing or purlins per Bracing Summary.
4) A creep factor of 1.00 has been applied for this truss analysis.
5) The "SYP" label shown in the "Material Summary" above indicates the new SPIB design values effective June 1, 2013 were used.
6) Listed wind uplift reactions based on MWFRS & C&C loading.

TrueBuild® Truss Software v5.6.398
Eagle Metal Products

	TOZA TRUSS LLC 6633 CARL COX RD BENNETT NC 27208 Off: (336) 879-1212	Truss:TAG24 Job: Phil Lanzarotto Date: 07/19/22 13:01:56 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLYS	SPACING	WGT/PLY
24-0-0	6/12	2	2-0-0	2-0-0	0-0-0	0-0-0	1	24 in	133 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)	General		CSI		Deflection		L/	(loc)	Allowed
TCLL : 20	Bldg Code :	IRC 2018/	TC :	0.33 (1-2)	Vert TL:	0 in	L / 999	15	L / 240
TCDL : 10		TPI 1-2014	BC :	0.04 (19-20)	Vert LL:	0 in	L / 999	15	L / 360
BCLL : 0	Rep Mbr :	No	Web :	0.04 (9-21)	Horz TL:	0 in			
BCDL : 10	Lumber D.O.L. :	115 %							

07/19/2022

NORTH CAROLINA PROFESSIONAL SEAL 031344 ENGINEER ARTURO A. HERNANDEZ

Reaction

Brg Combo	Brg Width	Max React	Ave React	Max Grav Uplift	Max MWFRS Uplift	Max C&C Uplift	Max Uplift	Max Horiz
1	-	497 lbs	140 plf	-279 lbs	-113 lbs	-395 lbs	-395 lbs	-132 lbs

Material

TC: SYP#1 2 x 4
BC: SYP#1 2 x 4
Web: SYP#1 2 x 4

Bracing

TC: Sheathed or Purlins at 6-3-0, Purlin design by Others.
BC: Sheathed or Purlins at 10-0-0, Purlin design by Others.

Loads

1) This truss has been designed for the effects of balanced (14 psf) and unbalanced flat roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), Risk Category II (I = 1.00), Thermal (Ct = 1.00), DOL = 1.15. If the roof configuration differs from hip/gable, Building Designer shall verify snow loads.
2) This truss has been designed to account for the effects of ice dams forming at the eaves.
3) This truss has been designed for the effects of wind loads in accordance with ASCE7 - 16 with the following user defined input: 115 mph (Factored), Exposure C, Enclosed, Gable, Risk Category II, Overall Bldg Dims 25 ft x 60 ft, h = 15 ft, End Zone Truss, Both end webs considered. DOL= 1.60
4) This truss has been designed for the effects of a 16 psf live load computed in accordance with IRC 2018 assuming slope = 6 /12 and area supported = 56 ft^2, DOL = 115 %.

Member Forces

Table indicates: Member ID, max CSI, max axial force, (max compr. force if different from max axial force). Only forces greater than 300lbs are shown in this table.

TC		
BC		
Web		

Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Gable requires continuous bottom chord bearing.
3) Gable webs placed at 24 " OC, U.N.O.
4) Attach gable webs with 2x4 20ga plates, U.N.O.
5) Bracing shown is for in-plane requirements. For out-of-plane requirements, refer to BCSI-B3 published by the SBCA.
6) The fabrication tolerance for this roof truss is 10 f-i-s (Cq = 0.90).
7) A creep factor of 1.00 has been applied for this truss analysis.
8) The "SYP" label shown in the "Material Summary" above indicates the new SPIB design values effective June 1, 2013 were used.
9) Due to negative reactions in gravity load cases, special connections to the bearing surface at joints 1, 15 may need to be considered.
10) Listed wind uplift reactions based on MWFRS & C&C loading.

TrueBuild® Truss Software v5.6.398
Eagle Metal Products