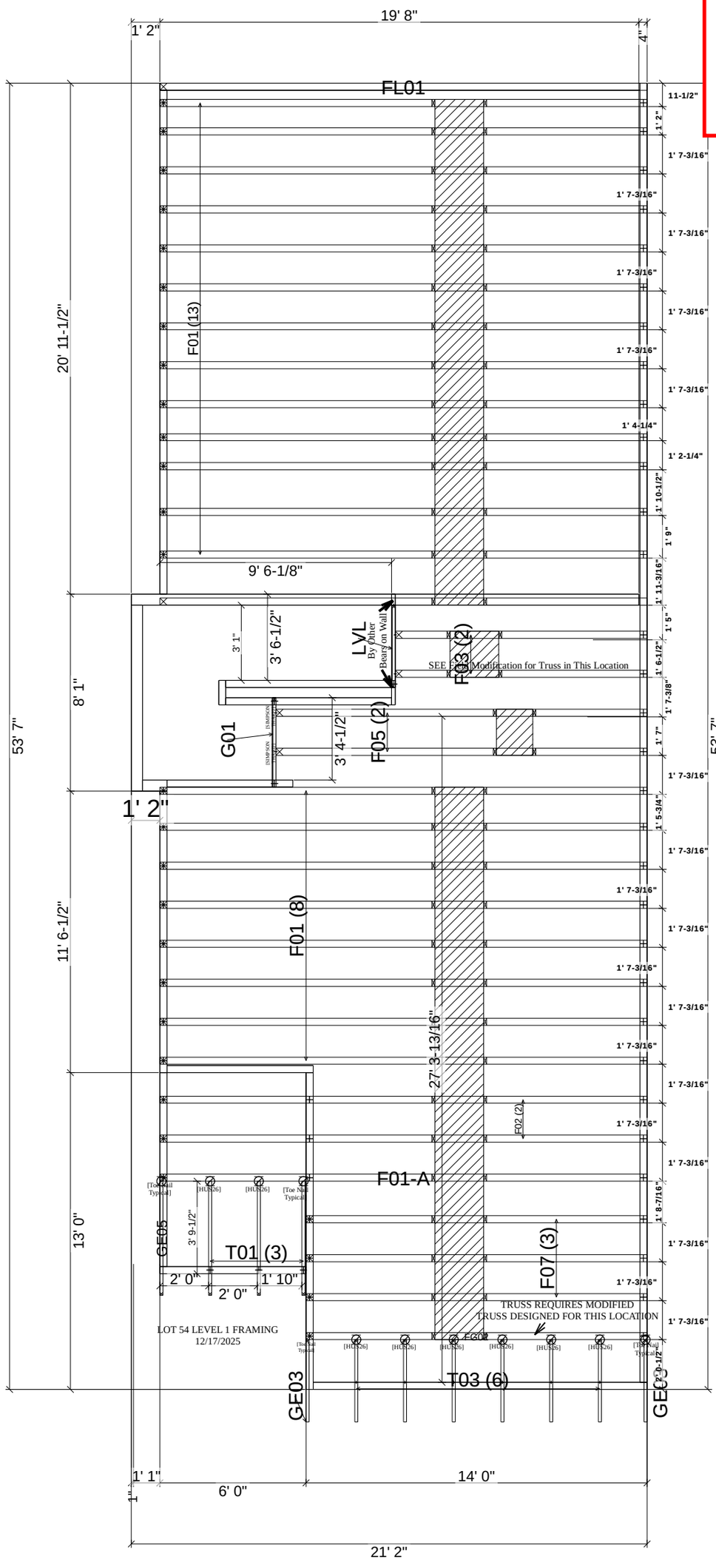
STAND STRUCTURAL ENGINEERING
8234 Robinson St
Overland Park, KS 66204
(913) 214-2169

☒ Reviewed ☐ Revise and Resubmit
☐ Reviewed as Noted ☐ Rejected
☐ Not required by the Contract Documents
☐ For Record Only

By: JFunk
Date: 12/17/2025



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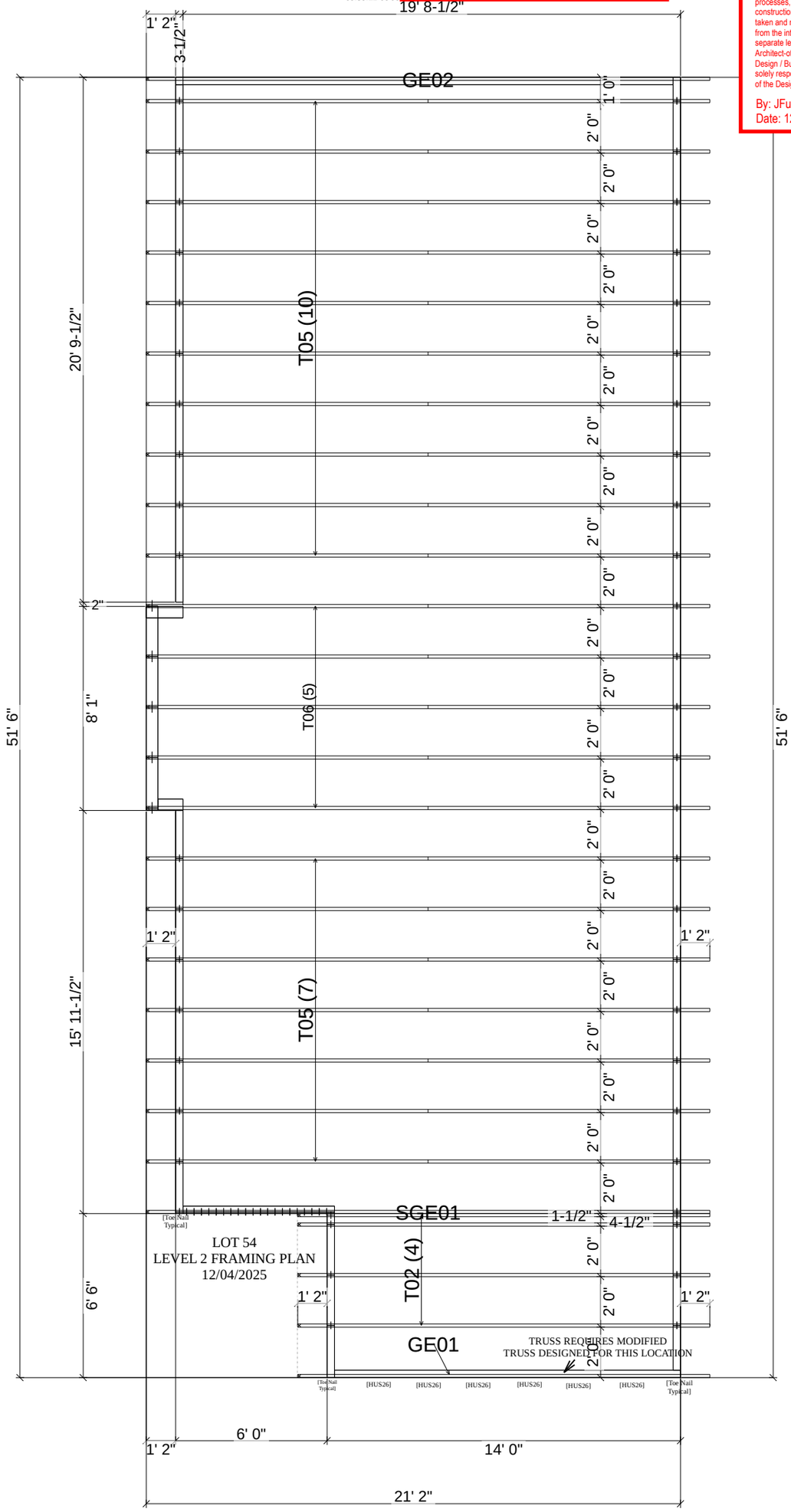


EAGLE METAL

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
12/31/2025 9:37:31

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 **Quality Line Truss**.

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: **LOT 54_E1_11032025** - 1254650
F01-A, F01, F02, F03, F05, F07, FG02, FL01, GE01, GE02, GE03, GE05, SGE01, T01, T02, T03, T05, T06

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.

12/17/2025
STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

STAND STRUCTURAL ENGINEERING
8234 Robinson St
Overland Park, KS 66204
(913) 214-2169

☒ Reviewed ☐ Revise and Resubmit
☐ Reviewed as Noted ☐ Rejected
☐ Not required by the Contract Documents
☐ For Record Only

Review is only for general conformance with the design concept and the intent of the Contract Documents. Contractor is solely responsible for verifying dimensions, for establishing fabrication processes, means, techniques, sequences and procedures of construction and for coordination of work of all trades. Review action taken and noted to information shown does not authorize deviations from the intent of the contract documents, unless so stated in a separate letter or Change Order. The Structural Engineer and/or Architect-of-Record retained by the Contractor or his Supplier, for the Design / Build portion of the project represented by this submittal, is solely responsible for the correctness, appropriateness and adequacy of the Design / Build system.

By: JFunk
Date: 12/17/2025

Arturo A. Hernandez (MO, 2006000095)
My license expiration date for the state of MO is 12/31/2026.

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

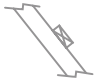
3X4 - The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

-, /, 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.

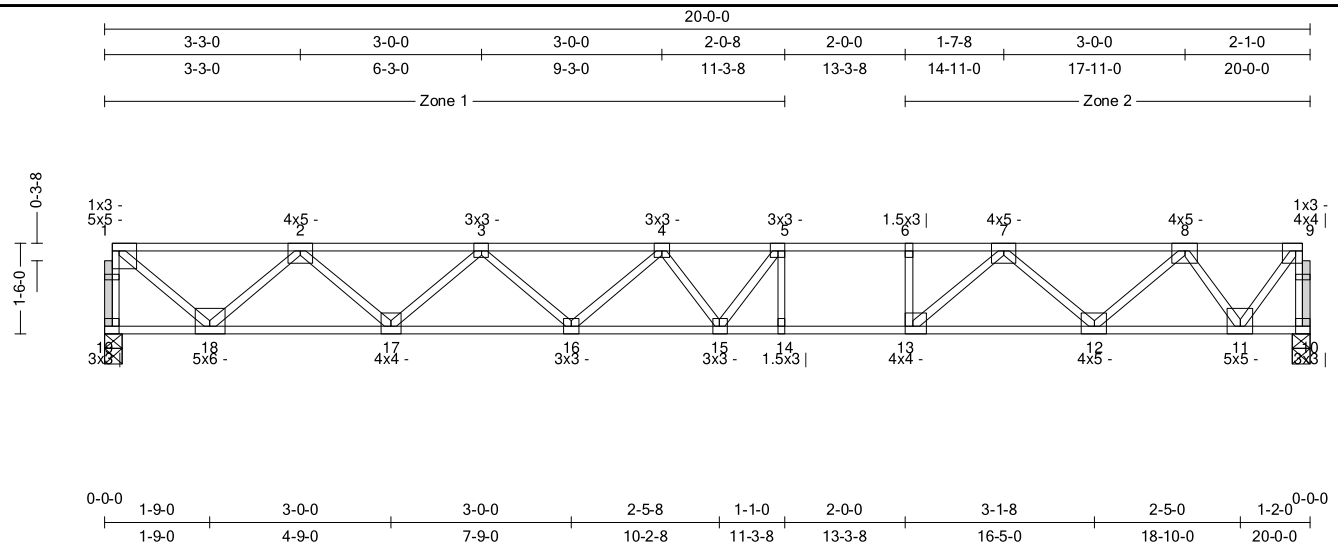
•**NDS:** National Design Specification for Wood Construction

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

1254650 0002/0020

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:F01-A Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:40 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	PLY(S)	SPACING	WGT/PLY
20-0-0	0/12	1	0-0-0	0-0-0	1	19.19 in	103 lbs



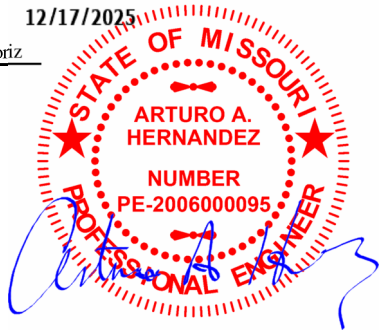
All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	40	Bldg Code :	IBC 2018/	TC :	0.62 (6-7)	Vert TL:	0.51 in	L / 456	(14-15)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.97 (13-14)	Vert LL:	0.27 in	L / 858	(14-15)	L / 360
BCLL :	0	Rep Mbr :	No	Web :	0.29 (1-18)	Horz TL:	0.07 in		10	
BCDL :	10	Lumber D.O.L. :	100 %							

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
19	1	3.5 in	1.50 in	1,324 lbs	·	·	·	·	·
10	1	3.5 in	1.50 in	1,154 lbs	·	·	·	·	·

12/17/2025



Material

TC: SYP 2400/1.8 4 x 2
BC: SYP 2400/1.8 4 x 2
Web: SYP #1 4 x 2

Loads

1) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Load Case D1: Std Dead Load

Distributed Loads

Member	Location 1	Location 2	Direction	Spread	Start Load	End Load	Trib Width
Top	0-0-0	6-0-0	Down	Proj	40 plf	40 plf	

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.380		(-1,301 lbs)	3-4	0.394		(-4,038 lbs)	5-6	0.621		(-3,885 lbs)	7-8	0.244		(-2,297 lbs)
	2-3	0.427		(-3,163 lbs)	4-5	0.566		(-4,165 lbs)	6-7	0.625		(-3,885 lbs)	8-9	0.167		(-784 lbs)
BC	11-12	0.214	1,459 lbs		14-15	0.970	3,885 lbs		17-18	0.275	2,465 lbs					
	12-13	0.712	3,112 lbs		15-16	0.439	4,245 lbs									
	13-14	0.970	3,885 lbs		16-17	0.389	3,749 lbs									
Web	1-19	0.140		(-1,301 lbs)	3-16	0.065	393 lbs		7-12	0.134		(-1,106 lbs)				
	1-18	0.287	1,734 lbs		5-15	0.111	580 lbs		8-12	0.188	1,136 lbs					
	2-18	0.192		(-1,579 lbs)	5-14	0.044		(-361 lbs)	8-11	0.135		(-1,218 lbs)				
	2-17	0.157	947 lbs		6-13	0.049		(-401 lbs)	9-11	0.224	1,351 lbs					
	3-17	0.096		(-794 lbs)	7-13	0.192	1,031 lbs		9-10	0.123		(-1,151 lbs)				

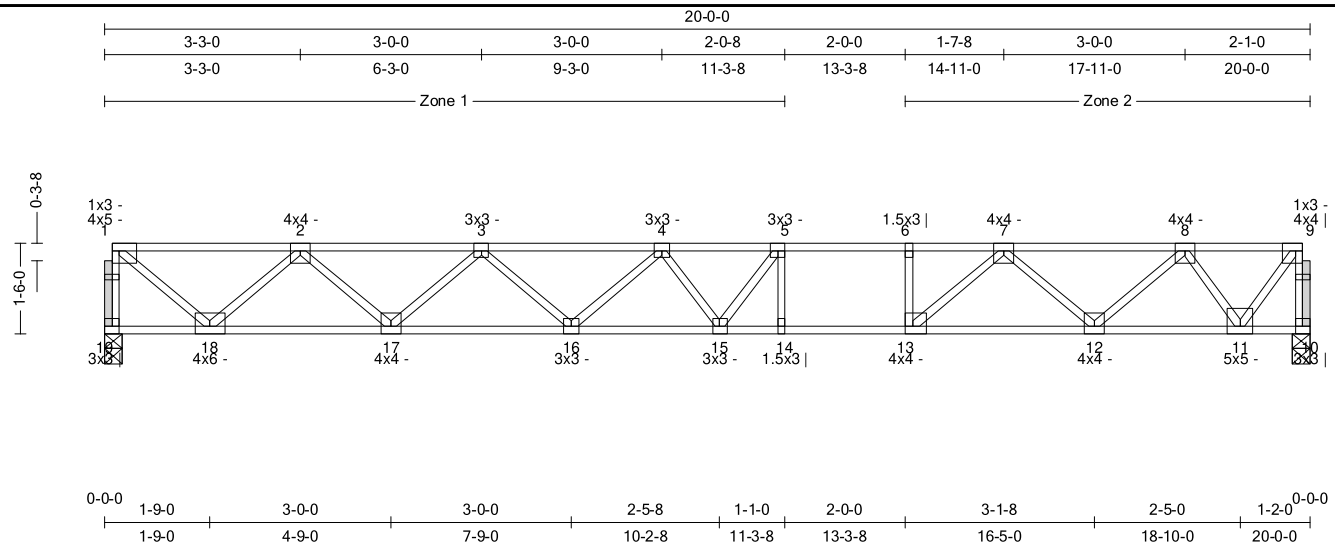
Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Unless otherwise specified by the Building Designer, one strongback every 10'-0".
3) The fabrication tolerance for this floor truss is 10 % (Cq = 0.90).
4) A creep factor of 2.00 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) ▭ Indicates non-structural members.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:F01 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:42 Page: 1 of 1

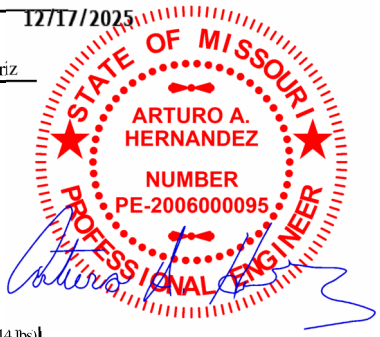
SPAN	PITCH	QTY	OHL	OHR	PLY(S)	SPACING	WGT/PLY
20-0-0	0/12	21	0-0-0	0-0-0	1	19.19 in	102 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL:	40	Bldg Code:	IBC 2018/	TC:	0.48 (6-7)	Vert TL:	0.47 in	L / 498	(14-15)	L / 240
TCDL:	10		TPI 1-2014	BC:	0.77 (13-14)	Vert LL:	0.27 in	L / 858	(14-15)	L / 360
BCLL:	0	Rep Mbr:	Yes	Web:	0.25 (1-18)	Horz TL:	0.06 in		10	
BCDL:	10	Lumber D.O.L.:	100 %							

12/17/2025



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
19	1	3.5 in	1.50 in	1,119 lbs	·	·	·	·	·
10	1	3.5 in	1.50 in	1,119 lbs	·	·	·	·	·

Material

TC: SYP 2400/1.8 4 x 2
BC: SYP 2400/1.8 4 x 2
Web: SYP #1 4 x 2

Loads

1) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.214		(-1,127 lbs)	3-4	0.331		(-3,727 lbs)	5-6	0.477		(-3,695 lbs)	7-8	0.202	(-2,214 lbs)
	2-3	0.250		(-2,815 lbs)	4-5	0.423		(-3,924 lbs)	6-7	0.482		(-3,695 lbs)	8-9	0.142	(-757 lbs)
BC	11-12	0.175	1,411 lbs		14-15	0.770	3,695 lbs		17-18	0.223	2,124 lbs				
	12-13	0.570	2,985 lbs		15-16	0.369	3,974 lbs								
	13-14	0.770	3,695 lbs		16-17	0.322	3,394 lbs								
Web	1-19	0.117		(-1,097 lbs)	3-16	0.075	451 lbs		7-13	0.176	945 lbs		9-10	0.119	(-1,114 lbs)
	1-18	0.249	1,502 lbs		4-16	0.042		(-336 lbs)	7-12	0.127		(-1,046 lbs)			
	2-18	0.164		(-1,351 lbs)	5-15	0.094	496 lbs		8-12	0.180	1,090 lbs				
	2-17	0.155	938 lbs		5-14	0.039		(-319 lbs)	8-11	0.131		(-1,178 lbs)			
	3-17	0.095		(-786 lbs)	6-13	0.045		(-369 lbs)	9-11	0.216	1,305 lbs				

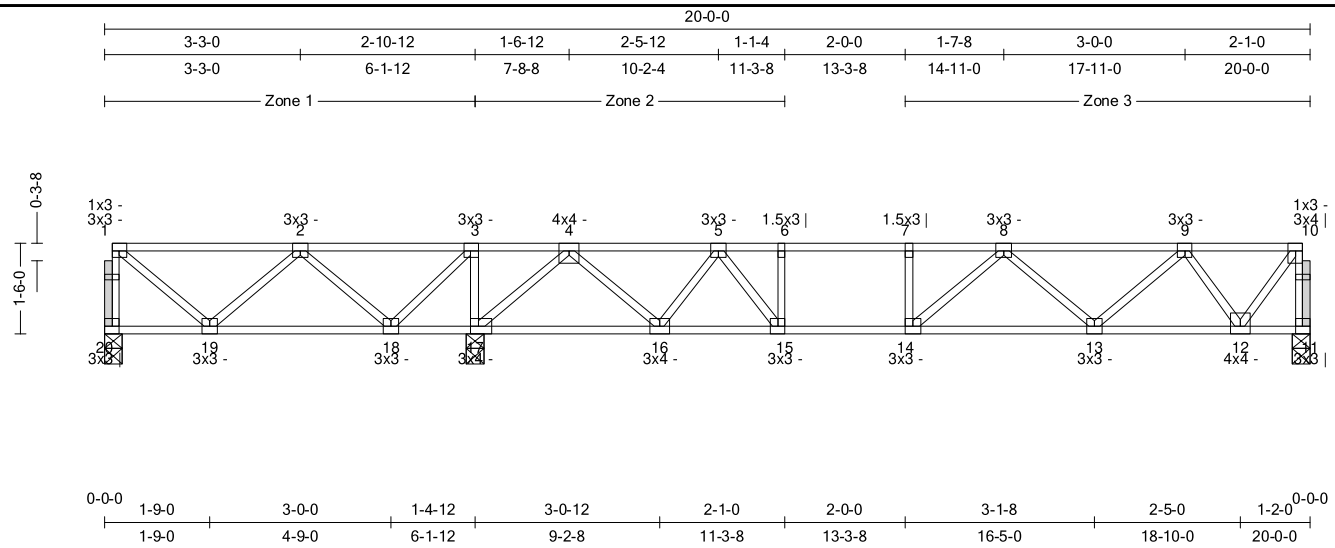
Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Unless otherwise specified by the Building Designer, one strongback every 10'-0".
3) The fabrication tolerance for this floor truss is 10 % (Cq = 0.90).
4) A creep factor of 2.00 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) ▭ Indicates non-structural members.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:F02 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:43 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	PLY(S)	SPACING	WGT/PLY
20-0-0	0/12	2	0-0-0	0-0-0	1	19.19 in	103 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	40	Bldg Code :	IBC 2018/	TC :	0.32 (6-7)	Vert TL:	0.16 in	L / 999	(13-14)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.35 (14-15)	Vert LL:	0.09 in	L / 999	(13-14)	L / 360
BCLL :	0	Rep Mbr :	No	Web :	0.13 (10-12)	Horz TL:	0.02 in		11	
BCDL :	10	Lumber D.O.L. :	100 %							

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
17	1	3.5 in	1.50 in	1,582 lbs	·	·	·	·	·
20	1	3.5 in	1.50 in	279 lbs	·	·	·	·	·
11	1	3.5 in	1.50 in	730 lbs	·	·	·	·	·

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

Material

TC: SYP 2400/1.8 4 x 2
BC: SYP 2400/1.8 4 x 2
Web: SYP #1 4 x 2

Loads

1) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Load Case D1: Std Dead Load

Point Loads

Member	Location	Direction	Load	Trib Width
Top	6-1-12	Down	300 lbs	

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	3-4	0.181	595 lbs		6-7	0.316		(-1,590 lbs)	9-10	0.136	(-465 lbs)
	4-5	0.130		(-905 lbs)	7-8	0.196		(-1,590 lbs)			
	5-6	0.310		(-1,590 lbs)	8-9	0.175		(-1,301 lbs)			
BC	12-13	0.186	874 lbs		15-16	0.322	1,255 lbs		18-19	0.075	322 lbs
	13-14	0.298	1,590 lbs		16-17	0.113	339 lbs				
	14-15	0.354	1,590 lbs		17-18	0.069		(-595 lbs)			
Web	2-18	0.057		(-425 lbs)	5-16	0.068		(-604 lbs)	10-12	0.133	802 lbs
	3-18	0.086	461 lbs		5-15	0.099	554 lbs		10-11	0.076	(-709 lbs)
	3-17	0.095		(-789 lbs)	8-13	0.049		(-392 lbs)			
	4-17	0.129		(-1,065 lbs)	9-13	0.096	580 lbs				
	4-16	0.131	791 lbs		9-12	0.082		(-737 lbs)			

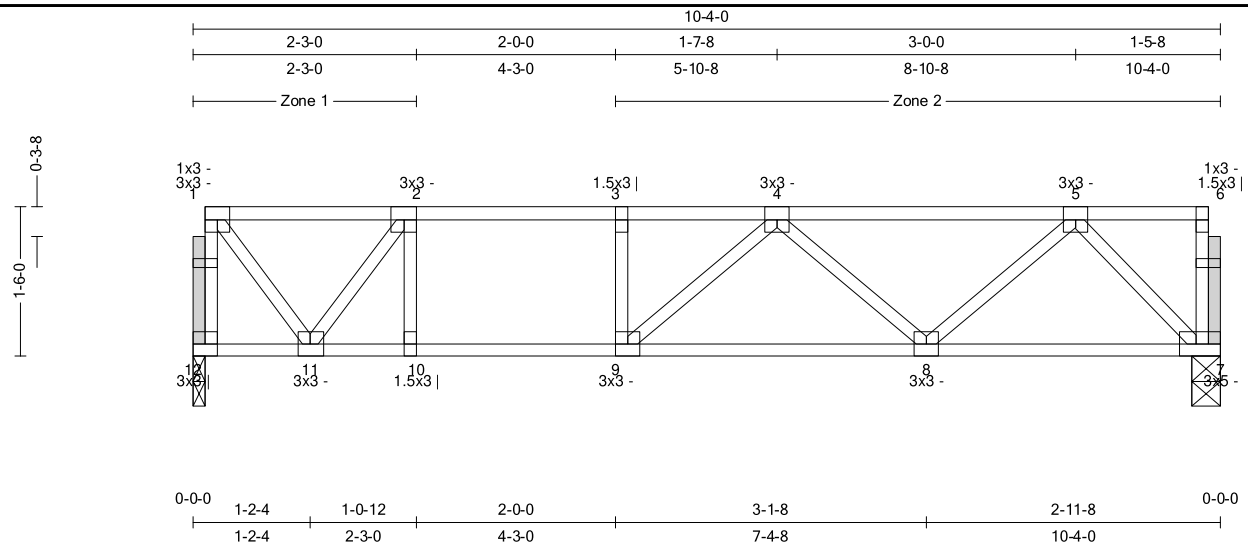
Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Unless otherwise specified by the Building Designer, one strongback every 10'-0".
3) The fabrication tolerance for this floor truss is 10 % (Cq = 0.90).
4) A creep factor of 2.00 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) Indicates non-structural members.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:F03 Job: LOT 54_E1_11032025 Date: 12/17/25 10:26:01 Page: 1 of 1

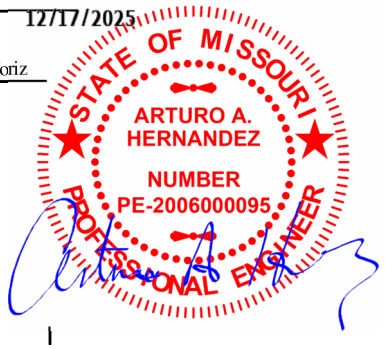
SPAN	PITCH	QTY	OHL	OHR	PLY(S)	SPACING	WGT/PLY
10-4-0	0/12	2	0-0-0	0-0-0	1	19.19 in	55 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	40	Bldg Code :	IBC 2018/	TC :	0.58 (1-2)	Vert TL:	0.21 in	L / 578	(8-9)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.84 (9-10)	Vert LL:	0.13 in	L / 947	(8-9)	L / 360
BCLL :	0	Rep Mbr :	No	Web :	0.11 (1-11)	Horz TL:	0.01 in		7	
BCDL :	10	Lumber D.O.L. :	100 %							

12/17/2025



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
12	1	1.5 in	1.50 in	578 lbs	·	·	·	·	·
7	1	3.5 in	1.50 in	578 lbs	·	·	·	·	·

Material

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

Loads

1) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.577		(-374 lbs)	3-4	0.426		(-863 lbs)			
	2-3	0.562		(-863 lbs)	4-5	0.301		(-835 lbs)			
BC	7-8	0.325	483 lbs		9-10	0.837	863 lbs				
	8-9	0.611	1,019 lbs		10-11	0.837	863 lbs				
Web	1-12	0.056		(-529 lbs)	2-10	0.053	316 lbs				
	1-11	0.105	635 lbs		5-8	0.079	477 lbs				
	2-11	0.093		(-833 lbs)	5-7	0.082		(-712 lbs)			

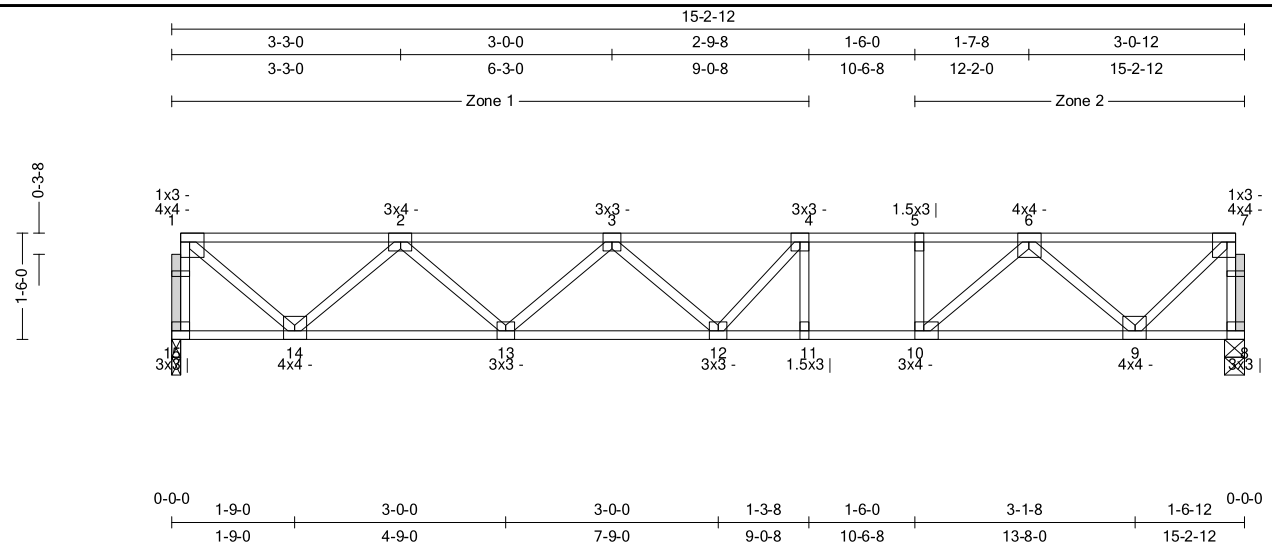
Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Unless otherwise specified by the Building Designer, one strongback every 10'-0".
3) The fabrication tolerance for this floor truss is 10 % (Cq = 0.90).
4) A creep factor of 2.00 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) ▭ Indicates non-structural members.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:F05 Job: LOT 54_E1_11032025 Date: 12/17/25 10:26:03 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	PLY(S)	SPACING	WGT/PLY
15-2-12	0/12	2	0-0-0	0-0-0	1	19.19 in	78 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	40	Bldg Code :	IBC 2018/	TC :	0.36 (5-6)	Vert TL:	0.21 in	L / 867	(11-12)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.61 (10-11)	Vert LL:	0.12 in	L / 999	(11-12)	L / 360
BCLL :	0	Rep Mbr :	No	Web :	0.18 (1-14)	Horz TL:	0.03 in		8	
BCDL :	10	Lumber D.O.L. :	100 %							

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
15	1	1.5 in	1.50 in	852 lbs	·	·	·	·	·
8	1	3.5 in	1.50 in	852 lbs	·	·	·	·	·

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

Material

TC: SYP 2400/1.8 4 x 2
BC: SYP 2400/1.8 4 x 2
Web: SYP #1 4 x 2

Loads

1) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.239		(-824 lbs)	3-4	0.338		(-2,239 lbs)	5-6	0.356	(-2,061 lbs)
	2-3	0.231		(-1,932 lbs)	4-5	0.342		(-2,061 lbs)	6-7	0.237	(-707 lbs)
BC	9-10	0.447	1,454 lbs		11-12	0.606	2,061 lbs		13-14	0.187	1,525 lbs
	10-11	0.606	2,061 lbs		12-13	0.283	2,238 lbs				
Web	1-15	0.089		(-831 lbs)	3-13	0.052		(-415 lbs)	7-9	0.166	1,000 lbs
	1-14	0.182	1,097 lbs		4-12	0.059	309 lbs		7-8	0.087	(-815 lbs)
	2-14	0.115		(-951 lbs)	6-10	0.142	808 lbs				
	2-13	0.091	552 lbs		6-9	0.123		(-1,013 lbs)			

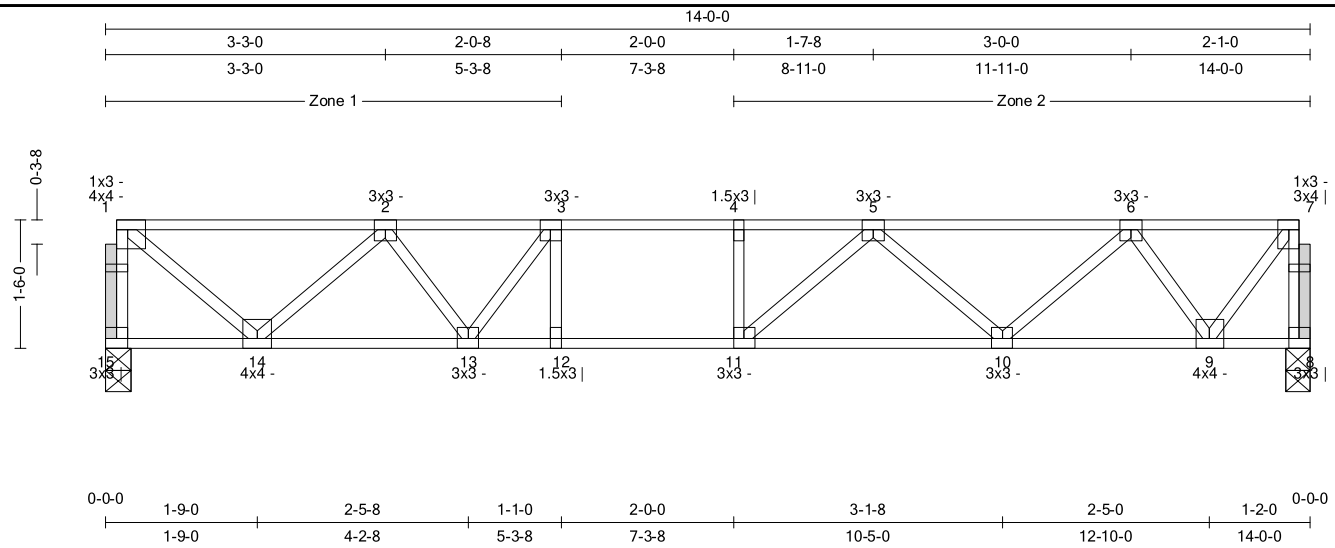
Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Unless otherwise specified by the Building Designer, one strongback every 10'-0".
3) The fabrication tolerance for this floor truss is 10 % (Cq = 0.90).
4) A creep factor of 2.00 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) Indicates non-structural members.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:F07 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:45 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	PLY(S)	SPACING	WGT/PLY
14-0-0	0/12	3	0-0-0	0-0-0	1	19.19 in	73 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)	**General**		**CSI**		**Deflection**		**L/**	**(loc)**	**Allowed**
TCLL : 40	Bldg Code :	IBC 2018/	TC :	0.37 (1-2)	Vert TL:	0.16 in	L / 999	(10-11)	L / 240
TCDL : 10		TPI 1-2014	BC :	0.61 (11-12)	Vert LL:	0.11 in	L / 999	(10-11)	L / 360
BCLL : 0	Rep Mbr :	Yes	Web :	0.16 (1-14)	Horz TL:	0.02 in		8	
BCDL : 10	Lumber D.O.L. :	100 %							

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

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
15	1	3.5 in	1.50 in	783 lbs	·	·	·	·	·
8	1	3.5 in	1.50 in	783 lbs	·	·	·	·	·

Material

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

Loads

1) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.366		(-739 lbs)	3-4	0.351		(-1,869 lbs)	5-6	0.245		(-1,425 lbs)
	2-3	0.362		(-1,607 lbs)	4-5	0.232		(-1,869 lbs)	6-7	0.196		(-505 lbs)
BC	9-10	0.275	947 lbs		11-12	0.612	1,869 lbs		13-14	0.275	1,362 lbs	
	10-11	0.475	1,776 lbs		12-13	0.612	1,869 lbs					
Web	1-15	0.081		(-761 lbs)	3-13	0.061		(-484 lbs)	7-9	0.144	870 lbs	
	1-14	0.163	984 lbs		5-10	0.059		(-476 lbs)	7-8	0.082		(-764 lbs)
	2-14	0.103		(-846 lbs)	6-10	0.107	648 lbs					
	2-13	0.075	428 lbs		6-9	0.089		(-798 lbs)				

Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Unless otherwise specified by the Building Designer, one strongback every 10'-0".
3) The fabrication tolerance for this floor truss is 10 % (Cq = 0.90).
4) A creep factor of 2.00 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) Indicates non-structural members.

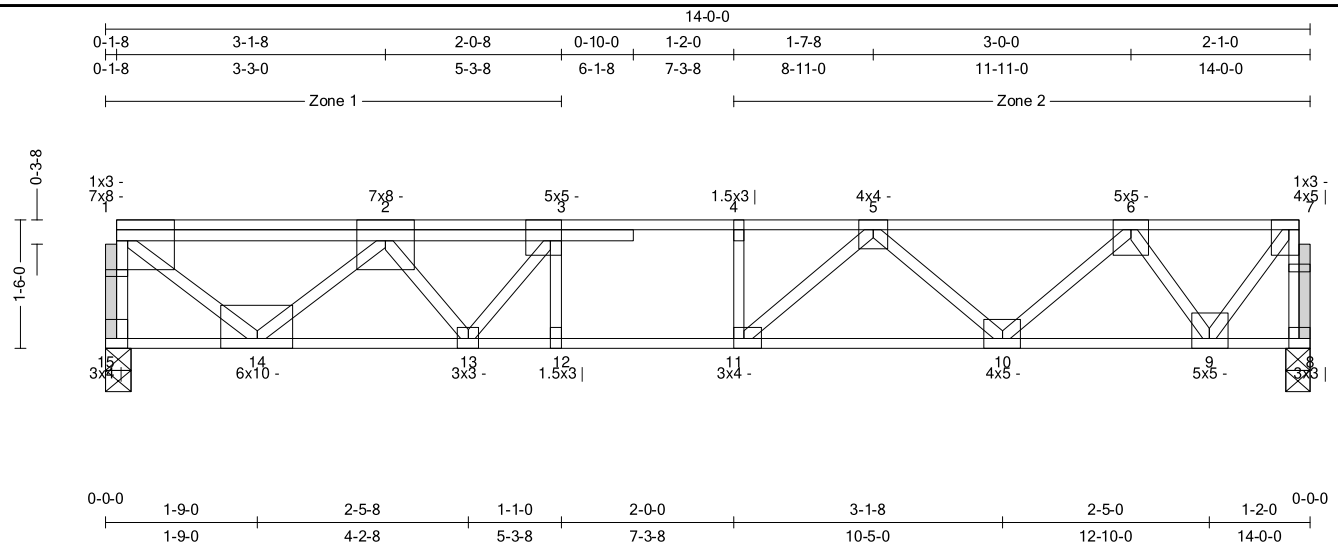
TrueBuild®Truss Software v5.8.14
Eagle Metal Products

Quality Line Truss Co., LLC

34593 S 4350 RD
Address 2
Adair, OK 74330

Truss:FG02
Job: LOT 54_E1_11032025
Date: 12/17/25 10:25:46
Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	PLY(S)	SPACING	WGT/PLY
14-0-0	0/12	1	0-0-0	0-0-0	1	19.19 in	85 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	40	Bldg Code :	IBC 2018/ TPI 1-2014	TC :	0.54 (3-4)	Vert TL:	0.21 in	L / 774	(12-13)	L / 240
TCDL :	10	Rep Mbr :	No	BC :	0.72 (12-13)	Vert LL:	0.07 in	L / 999	(10-11)	L / 360
BCLL :	0	Lumber D.O.L. :	100 %	Web :	0.46 (1-14)	Horz TL:	0.05 in		8	
BCDL :	10									

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
15	1	3.5 in	1.50 in	2,003 lbs	·	·	·	·	·
8	1	3.5 in	1.50 in	1,484 lbs	·	·	·	·	·

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

Material

TC: SYP 2400/1.8 4 x 2
BC: SYP 2400/1.8 4 x 2
Web: SYP #1 4 x 2

Loads

1) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Load Case D1: Std Dead Load

Distributed Loads

Member	Location 1	Location 2	Direction	Spread	Start Load	End Load	Trib Width
Top	0-0-0	14-0-0	Down	Proj	80 plf	80 plf	

Point Loads

Member	Location	Direction	Load	Trib Width
Top	2-7-0	Down	800 lbs	

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.359		(-1,960 lbs)	3-4	0.545		(-4,052 lbs)	5-6	0.431		(-2,746 lbs)
	2-3	0.350		(-3,952 lbs)	4-5	0.507		(-4,047 lbs)	6-7	0.309		(-971 lbs)
BC	9-10	0.216	1,838 lbs		11-12	0.715	4,047 lbs		13-14	0.387	3,767 lbs	
	10-11	0.544	3,577 lbs		12-13	0.715	4,047 lbs					
Web	1-15	0.225		(-1,975 lbs)	4-11	0.042		(-348 lbs)	6-9	0.185		(-1,563 lbs)
	1-14	0.458	2,559 lbs		5-11	0.147	772 lbs		7-9	0.294	1,674 lbs	
	2-14	0.306		(-2,401 lbs)	5-10	0.146		(-1,127 lbs)	7-8	0.166		(-1,470 lbs)
	2-13	0.055	314 lbs		6-10	0.213	1,232 lbs					

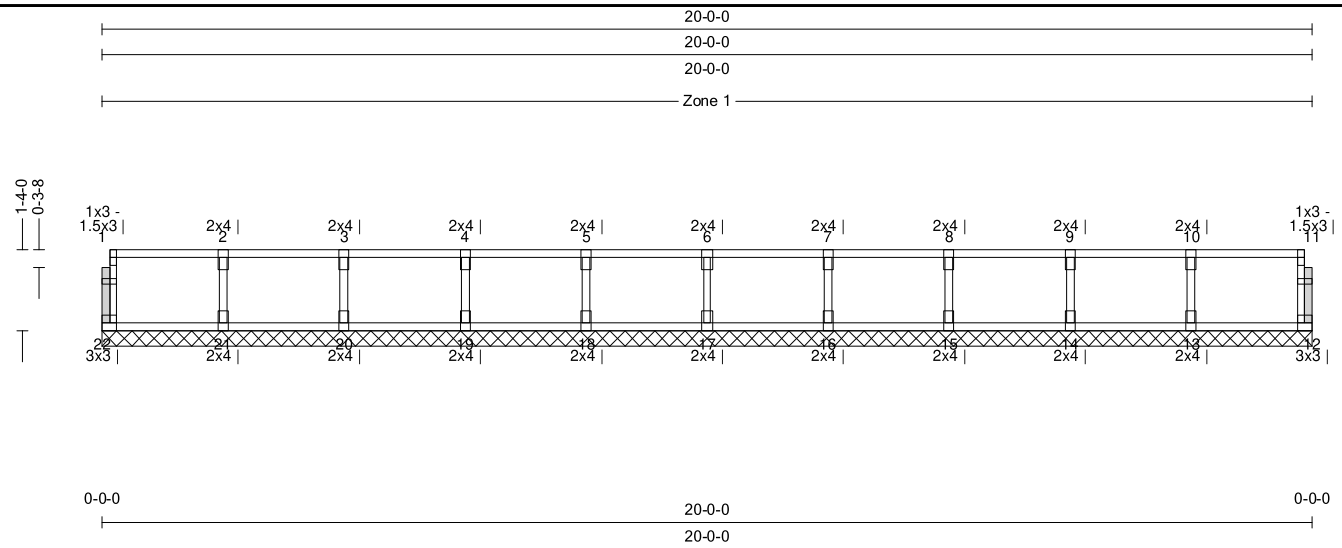
Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Unless otherwise specified by the Building Designer, one strongback every 10'-0".
3) The fabrication tolerance for this floor truss is 10 % (Cq = 0.90).
4) A creep factor of 2.00 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) Indicates non-structural members.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:FL01 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:48 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	PLY(S)	SPACING	WGT/PLY
20-0-0	0/12	1	0-0-0	0-0-0	1	19.19 in	77 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)	General		CSI		Deflection		L/	(loc)	Allowed
TCLL : 40	Bldg Code :	IBC 2018/	TC :	0.13 (1-2)	Vert TL:	0 in UP	L / 999	12	L / 240
TCDL : 10		TPI 1-2014	BC :	0.04 (20-21)	Vert LL:	0 in	L / 999	12	L / 360
BCLL : 0	Rep Mbr :	No	Web :	0.07 (1-22)	Horz TL:	0 in			
BCDL : 10	Lumber D.O.L. :	100 %							

12/17/2025

Reaction

Brg Combo	Brg Width	Max React	Ave React	Max Grav Uplift	Max MWFRS Uplift	Max C&C Uplift	Max Uplift	Max Horiz
1	·	212 lbs	101 plf	·	·	·	·	-10 lbs

Material

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

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC		
BC		
Web		

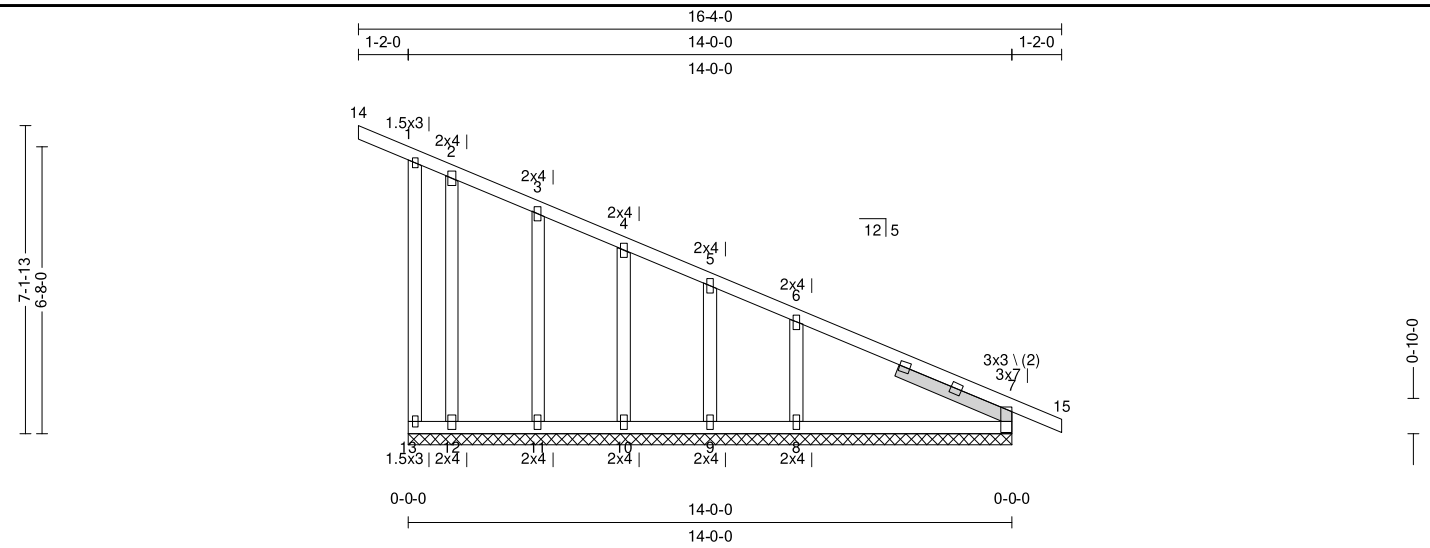
Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Unless otherwise specified by the Building Designer, one strongback every 10'-0".
3) Gable requires continuous bottom chord bearing.
4) Continuous bearing knee-wall/ladder floor trusses are not designed for any loads from levels above. Additional blocking, by others, may be required in order to transfer loads.
5) Gable webs placed at 24 " OC, U.N.O.
6) Attach gable webs with 2x4 20ga plates, U.N.O.
7) Bracing shown is for in-plane requirements. For out-of-plane requirements, refer to BCSI-B3 published by the SBCA.
8) The fabrication tolerance for this floor truss is 10 % (Cq = 0.90).
9) A creep factor of 2.00 has been applied for this truss analysis.
10) The "SYP" label shown in the "Material Summary" above indicates the new SPIB design values effective June 1, 2013 were used.
11) ▭ Indicates non-structural members.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:GE01 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:49 Page: 1 of 1

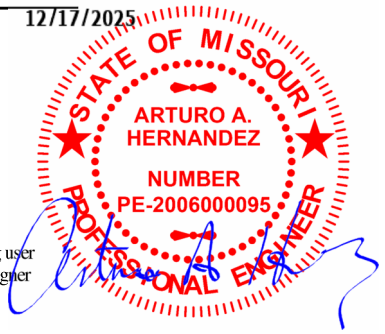
SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
14-0-0	-5/12	1	1-2-0	1-2-0	0-0-0	0-0-0	1	24 in	86 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)	General		CSI		Deflection		L/	(loc)	Allowed
TCLL: 20	Bldg Code:	IBC 2018/	TC:	0.35 (1-2)	Vert TL:	0.02 in	L / 999	(7-8)	L / 240
TCDL: 10		TPI 1-2014	BC:	0.13 (7-8)	Vert LL:	0 in	L / 999	8	L / 360
BCLL: 0	Rep Mbr:	No	Web:	0.39 (1-13)	Horz TL:	0 in			
BCDL: 10	Lumber D.O.L.:	115 %							

12/17/2025



Reaction

Brg Combo	Brg Width	Max React	Ave React	Max Grav Uplift	Max MWFRS Uplift	Max C&C Uplift	Max Uplift	Max Horiz
1	-	452 lbs	99 plf	-	-79 lbs	-269 lbs	-269 lbs	-261 lbs

Material

TC: SYP#1 2 x 4
BC: SYP#1 2 x 4
Web: SYP#2 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 sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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/Hip, 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 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 32.67 ft^2, DOL = 115 %.

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC			
BC			
Web	6-8	0.054	(-349 lbs)

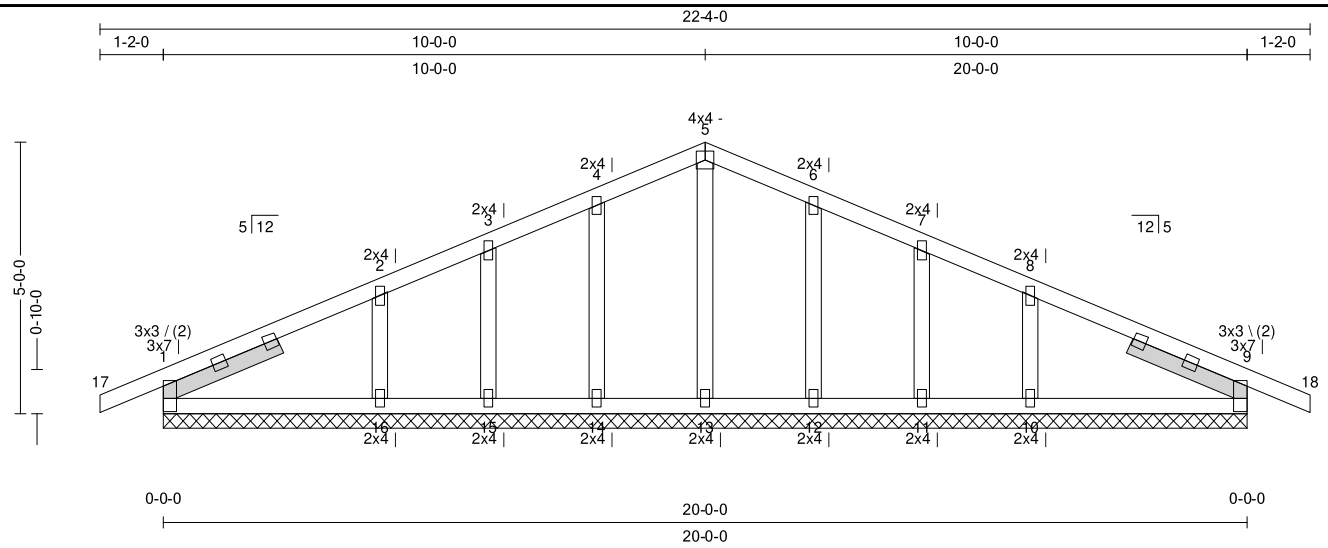
Notes

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 20 % (Cq = 0.80).
7) A creep factor of 2.00 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) ▭ Indicates non-structural members.
10) Listed wind uplift reactions based on MWFRS & C&C loading.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:GE02 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:51 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
20-0-0	5/12	1	1-2-0	1-2-0	0-0-0	0-0-0	1	24 in	100 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL:	20	Bldg Code:	IBC 2018/	TC:	0.14 (1-2)	Vert TL:	0.01 in	L / 999	(9-10)	L / 240
TCDL:	10		TPI 1-2014	BC:	0.08 (9-10)	Vert LL:	0 in	L / 999	10	L / 360
BCLL:	0	Rep Mbr:	No	Web:	0.04 (6-12)	Horz TL:	0 in			
BCDL:	10	Lumber D.O.L.:	115 %							

Reaction

Brg Combo	Brg Width	Max React	Ave React	Max Grav Uplift	Max MWFRS Uplift	Max C&C Uplift	Max Uplift	Max Horiz
1	-	291 lbs	92 plf	-	-51 lbs	-106 lbs	-106 lbs	-146 lbs

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

Material

TC: SYP#1 2 x 4
BC: SYP#1 2 x 4
Web: SYP#2 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 sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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/Hip, 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 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 44.67 ft^2, DOL = 115 %.

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC		
BC		
Web		

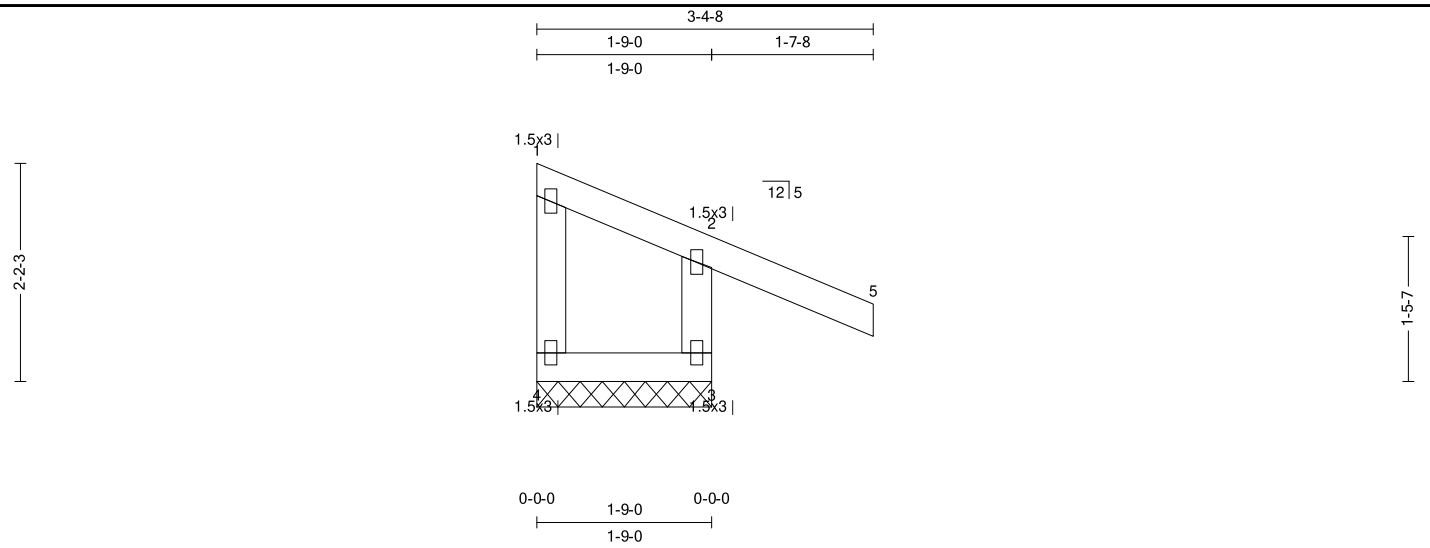
Notes

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 20 % (Cq = 0.80).
7) A creep factor of 2.00 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) ▭ Indicates non-structural members.
10) Listed wind uplift reactions based on MWFRS & C&C loading.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:GE03 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:52 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
1-9-0	-5/12	2	0-0-0	1-7-8	0-0-0	0-0-0	1	24 in	11 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)	General		CSI		Deflection		L/	(loc)	Allowed
TCLL: 20	Bldg Code:	IBC 2018/	TC:	0.40 (2-5)	Vert TL:	0 in UP	L / 999	(3-4)	L / 240
TCDL: 10		TPI 1-2014	BC:	0.07 (3-4)	Vert LL:	0 in UP	L / 999	(3-4)	L / 360
BCLL: 0	Rep Mbr:	No	Web:	0.43 (2-3)	Horz TL:	0 in			
BCDL: 10	Lumber D.O.L.:	115 %							

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

Reaction

Brg Combo	Brg Width	Max React	Ave React	Max Grav Uplift	Max MWFRS Uplift	Max C&C Uplift	Max Uplift	Max Horiz
1	·	218 lbs	158 plf	-24 lbs	-49 lbs	-296 lbs	-296 lbs	-156 lbs

Material

TC: SYP#1 2 x 4
BC: SYP#1 2 x 4
Web: SYP#2 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) sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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 not been designed for the effects of unbalanced snow loads.
3) This truss has been designed to account for the effects of ice dams forming at the eaves.
4) 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/Hip, Risk Category II, Overall Bldg Dims 25 ft x 60 ft, h = 15 ft, End Zone Truss, Both end webs considered. DOL = 1.60
5) This truss has been designed for the effects of a 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 6.75 ft^2, DOL = 115 %.

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC			
BC			
Web	2-3	0.432	337 lbs

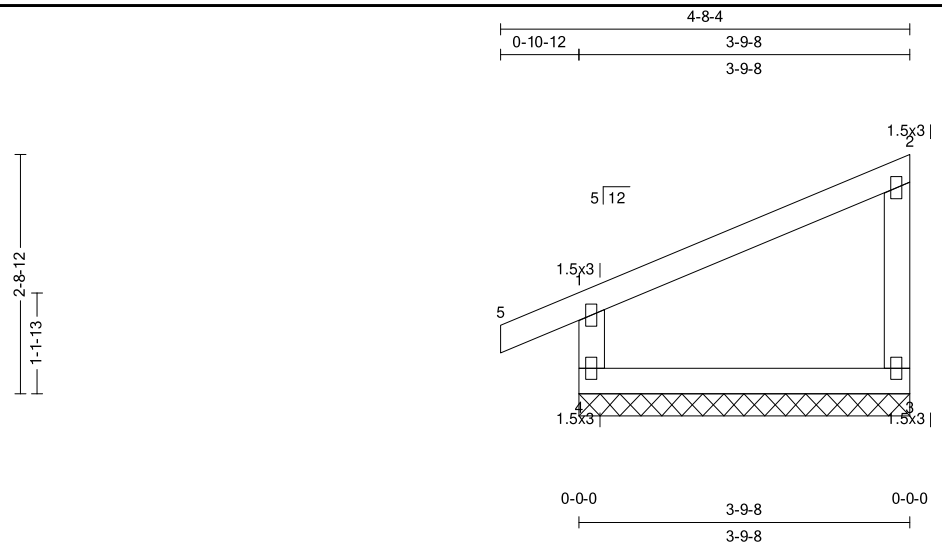
Notes

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 1.5x3 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 20 % (Cq = 0.80).
7) A creep factor of 2.00 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 joint 4 may need to be considered.
10) Listed wind uplift reactions based on MWFRS & C&C loading.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:GE05 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:53 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
3-9-8	5/12	1	0-10-12	0-0-0	0-0-0	0-0-0	1	24 in	16 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)	General		CSI		Deflection		L/	(loc)	Allowed
TCLL: 20	Bldg Code:	IBC 2018/	TC:	0.26 (1-2)	Vert TL:	0.01 in	L / 999	(3-4)	L / 240
TCDL: 10		TPI 1-2014	BC:	0.09 (3-4)	Vert LL:	0 in	L / 999	3	L / 360
BCLL: 0	Rep Mbr:	No	Web:	0.38 (2-3)	Horz TL:	0 in			
BCDL: 10	Lumber D.O.L.:	115 %							

Reaction

Brg Combo	Brg Width	Max React	Ave React	Max Grav Uplift	Max MWFRS Uplift	Max C&C Uplift	Max Uplift	Max Horiz
1	-	209 lbs	92 plf	-	-34 lbs	-236 lbs	-236 lbs	145 lbs

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

Material

TC: SYP#1 2 x 4
BC: SYP#1 2 x 4
Web: SYP#2 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) sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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 not been designed for the effects of unbalanced snow loads.
3) This truss has been designed to account for the effects of ice dams forming at the eaves.
4) 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/Hip, Risk Category II, Overall Bldg Dims 25 ft x 60 ft, h = 15 ft, End Zone Truss, Both end webs considered. DOL = 1.60
5) This truss has been designed for the effects of a 19 psf live load computed in accordance with IBC 2018 assuming slope = 5/12 and area supported = 9.38 ft^2, DOL = 115 %.

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression 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 1.5x3 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 20 % (Cq = 0.80).
7) A creep factor of 2.00 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) Listed wind uplift reactions based on MWFRS & C&C loading.

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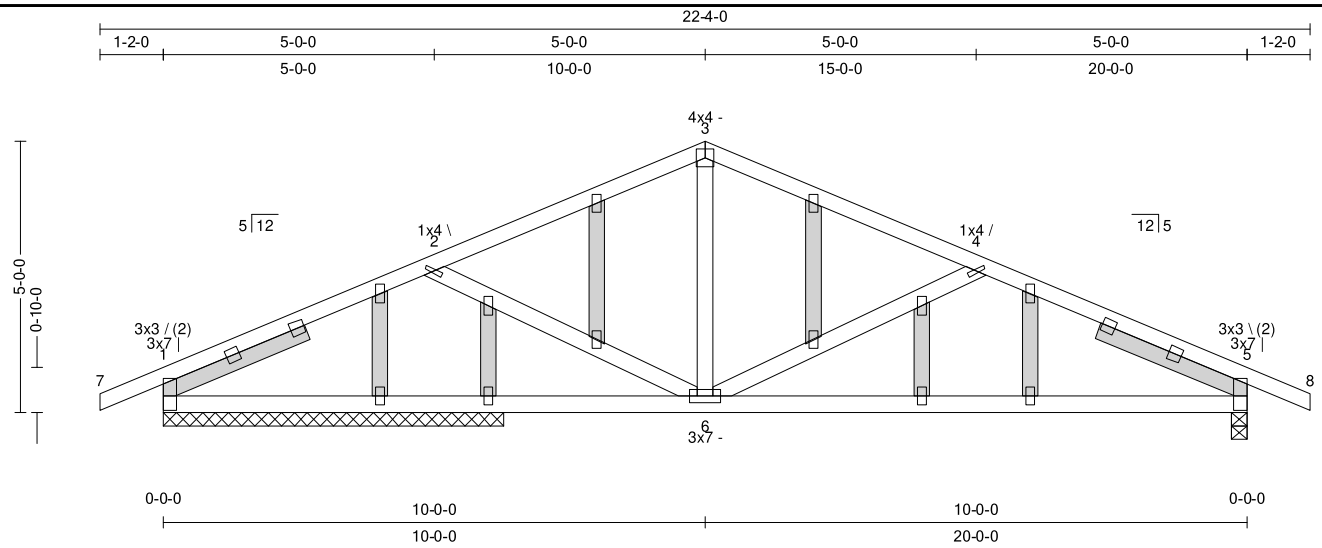
Eagle Metal Products

Quality Line Truss Co., LLC
34593 S 4350 RD
Address 2
Adair, OK 74330

Truss:SGE01
Job: LOT 54_E1_11032025
Date: 12/17/25 10:25:54
Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
20-0-0	5/12	1	1-2-0	1-2-0	0-0-0	0-0-0	1	24 in	112 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	20	Bldg Code :	IBC 2018/	TC :	0.28 (2-3)	Vert TL:	0.67 in	L / 241	(5-6)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.99 (5-6)	Vert LL:	0.31 in	L / 520	(5-6)	L / 360
BCLL :	0	Rep Mbr :	No	Web :	0.14 (2-6)	Horz TL:	0.02 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
5	1	3.5 in	1.50 in	998 lbs	·	-98 lbs	-332 lbs	-332 lbs	·
1	1	75.5 in	N/A	939 lbs	·	-113 lbs	-345 lbs	-345 lbs	1,220 lbs
1	1	75.5 in	N/A	159 lbs	·	·	·	·	-1,220 lbs

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

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 4-11-0, 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 sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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/Hip, 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 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 44.67 ft^2, DOL = 115 %.
5) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.267	493 lbs	(-1,435 lbs)	3-4	0.278	386 lbs	(-1,171 lbs)
	2-3	0.279	386 lbs	(-1,172 lbs)	4-5	0.258	493 lbs	(-1,433 lbs)
BC	5-6	0.986	1,218 lbs	(-328 lbs)	6-1	0.970	1,220 lbs	(-329 lbs)
Web	3-6	0.092	554 lbs					

Notes

1) Unless noted otherwise, do not cut or alter any truss member or plate without prior approval from a Professional Engineer.
2) Gable webs placed at 24 " OC, U.N.O.
3) Attach structural gable blocks with 2x4 20ga plates, U.N.O.
4) Bracing shown is for in-plane requirements. For out-of-plane requirements, refer to BCSI-B3 published by the SBCA.
5) The fabrication tolerance for this roof truss is 20 % (Cq = 0.80).
6) A creep factor of 2.00 has been applied for this truss analysis.
7) The "SYP" label shown in the "Material Summary" above indicates the new SPIB design values effective June 1, 2013 were used.
8) ▭ Indicates non-structural members.
9) Listed wind uplift reactions based on MWFRS & C&C loading.

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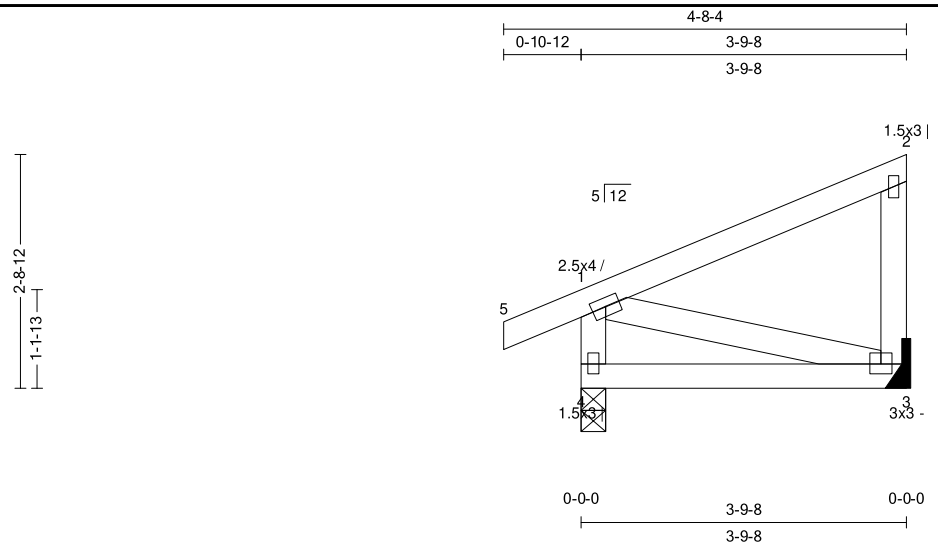
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:T01 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:56 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
3-9-8	5/12	3	0-10-12	0-0-0	0-0-0	0-0-0	1	24 in	21 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)	General		CSI		Deflection		L/	(loc)	Allowed
TCLL: 20	Bldg Code:	IBC 2018/	TC:	0.18 (1-2)	Vert TL:	0.02 in	L / 999	(3-4)	L / 240
TCDL: 10		TPI 1-2014	BC:	0.12 (3-4)	Vert LL:	0.01 in	L / 999	(3-4)	L / 360
BCLL: 0	Rep Mbr:	Yes	Web:	0.08 (2-3)	Horz TL:	0 in		3	
BCDL: 10	Lumber D.O.L.:	115 %							

12/17/2025

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
4	1	3.5 in	1.50 in	247 lbs	·	-9 lbs	-236 lbs	-236 lbs	147 lbs
3	1	3.5 in	---	177 lbs	·	-34 lbs	-191 lbs	-191 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.

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

Loads

1) This truss has been designed for the effects of balanced (14 psf) sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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 not been designed for the effects of unbalanced snow loads.
3) This truss has been designed to account for the effects of ice dams forming at the eaves.
4) 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/Hip, Risk Category II, Overall Bldg Dims 25 ft x 60 ft, h = 15 ft, End Zone Truss, Both end webs considered. DOL = 1.60
5) This truss has been designed for the effects of a 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 9.38 ft^2, DOL = 115 %.
6) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression 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) The fabrication tolerance for this roof truss is 20 % (Cq = 0.80).
3) Hanger is for graphical interpretation only. Install hanger per manufacturer's recommendation.
4) Brace bottom chord with approved sheathing or purlins per Bracing Summary.
5) A creep factor of 2.00 has been applied for this truss analysis.
6) The "SYP" label shown in the "Material Summary" above indicates the new SPIB design values effective June 1, 2013 were used.
7) Listed wind uplift reactions based on MWFRS & C&C loading.

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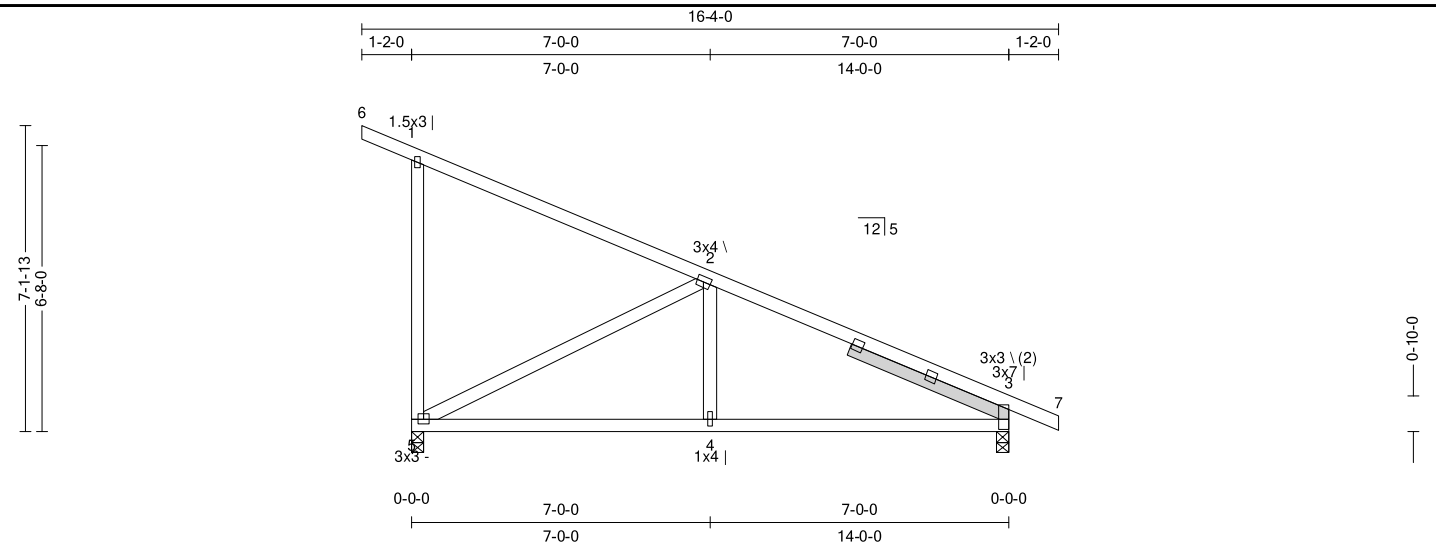
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:T02 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:57 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
14-0-0	-5/12	4	1-2-0	1-2-0	0-0-0	0-0-0	1	24 in	73 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	20	Bldg Code :	IBC 2018/	TC :	0.63 (2-3)	Vert TL:	0.14 in	L / 999	(3-4)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.57 (3-4)	Vert LL:	0.06 in	L / 999	(3-4)	L / 360
BCLL :	0	Rep Mbr :	Yes	Web :	0.82 (2-5)	Horz TL:	0.02 in		3	
BCDL :	10	Lumber D.O.L. :	115 %							

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

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
5	1	3.5 in	1.50 in	762 lbs	·	-119 lbs	-317 lbs	-317 lbs	-249 lbs
3	1	3.5 in	1.50 in	746 lbs	·	-15 lbs	-238 lbs	-238 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 5-3-0, 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 sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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/Hip, 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 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 32.67 ft^2, DOL = 115 %.
5) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	2-3	0.634		(-993 lbs)					
BC	3-4	0.571	826 lbs		4-5	0.571	826 lbs		
Web	2-5	0.822	361 lbs	(-924 lbs)	2-4	0.057	344 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 20 % (Cq = 0.80).
3) Brace bottom chord with approved sheathing or purlins per Bracing Summary.
4) A creep factor of 2.00 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) ▭ Indicates non-structural members.
7) Listed wind uplift reactions based on MWFRS & C&C loading.

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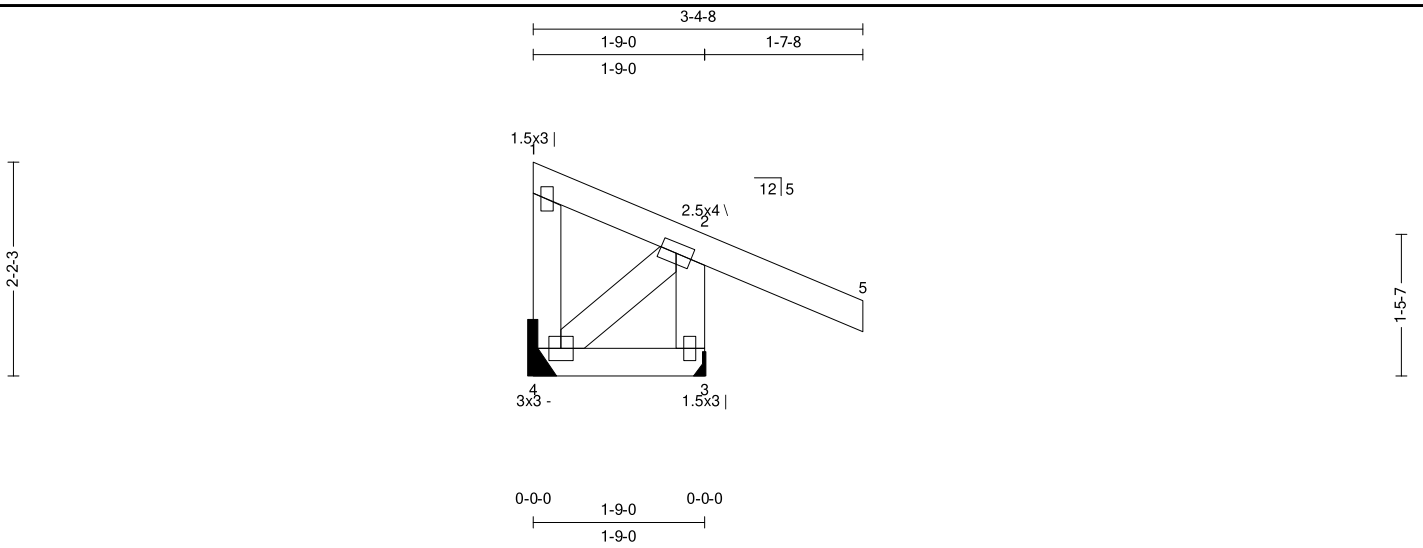
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:T03 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:58 Page: 1 of 1

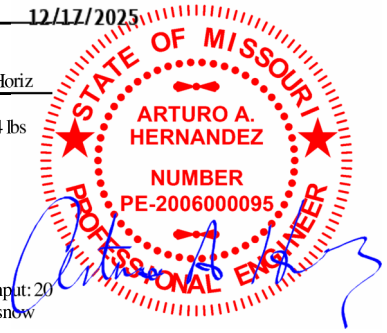
SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
1-9-0	-5/12	6	0-0-0	1-7-8	0-0-0	0-0-0	1	24 in	14 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	20	Bldg Code :	IBC 2018/	TC :	0.35 (1-2)	Vert TL:	0 in	L / 999	(3-4)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.02 (3-4)	Vert LL:	0 in	L / 999	(3-4)	L / 360
BCLL :	0	Rep Mbr :	Yes	Web :	0.06 (2-3)	Cant / OH TL:	0 in UP	2L / 999	3	2L / 240
BCDL :	10	Lumber D.O.L. :	115 %			Cant / OH LL:	0 in	2L / 999	3	2L / 240
						Horz TL:	0 in		4	

12/17/2025



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
4	1	3.5 in	---	47 lbs	-46 lbs	-47 lbs	-39 lbs	-47 lbs	·
3	1	1.5 in	---	242 lbs	·	-54 lbs	-326 lbs	-326 lbs	-144 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) sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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 not been designed for the effects of unbalanced snow loads.
3) This truss has been designed to account for the effects of ice dams forming at the eaves.
4) 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/Hip, Risk Category II, Overall Bldg Dims 25 ft x 60 ft, h = 15 ft, End Zone Truss, Both end webs considered. DOL = 1.60
5) This truss has been designed for the effects of a 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 6.75 ft^2, DOL = 115 %.
6) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC									
BC									
Web	2-3	0.057	337 lbs						

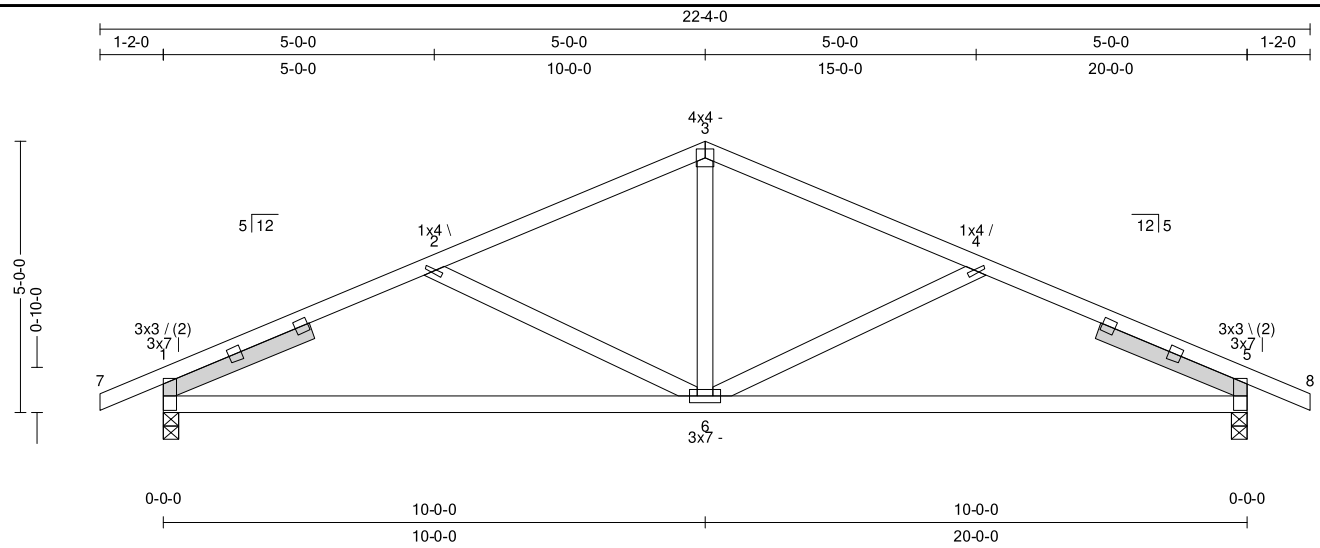
Notes

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 20 % (Cq = 0.80).
3) Hangers are for graphical interpretation only. Install hangers per manufacturer's recommendations.
4) Brace bottom chord with approved sheathing or purlins per Bracing Summary.
5) A creep factor of 2.00 has been applied for this truss analysis.
6) The "SYP" label shown in the "Material Summary" above indicates the new SPIB design values effective June 1, 2013 were used.
7) Due to negative reactions in gravity load cases, special connections to the bearing surface at joint 4 may need to be considered.
8) Listed wind uplift reactions based on MWFRS & C&C loading.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:T05 Job: LOT 54_E1_11032025 Date: 12/17/25 10:25:59 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
20-0-0	5/12	17	1-2-0	1-2-0	0-0-0	0-0-0	1	24 in	92 lbs



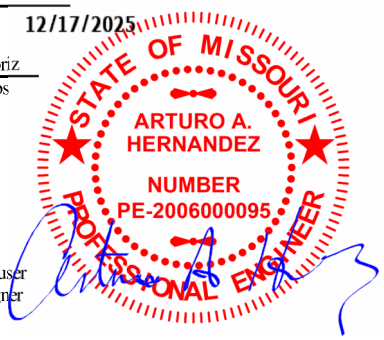
All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)		General		CSI		Deflection		L/	(loc)	Allowed
TCLL :	20	Bldg Code :	IBC 2018/	TC :	0.15 (3-4)	Vert TL:	0.44 in	L / 527	(5-6)	L / 240
TCDL :	10		TPI 1-2014	BC :	0.70 (5-6)	Vert LL:	0.21 in	L / 999	(5-6)	L / 360
BCLL :	0	Rep Mbr :	Yes	Web :	0.13 (4-6)	Horz TL:	0.03 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	1,048 lbs	·	-86 lbs	-322 lbs	-322 lbs	17 lbs
5	1	3.5 in	1.50 in	1,048 lbs	·	-86 lbs	-322 lbs	-322 lbs	·

12/17/2025



Material

TC: SYP 2400/1.8 2 x 4
BC: SYP 2400/1.8 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 sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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/Hip, 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 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 44.67 ft^2, DOL = 115 %.
5) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.140	463 lbs	(-1,571 lbs)	3-4	0.153	354 lbs	(-1,321 lbs)
	2-3	0.153	354 lbs	(-1,321 lbs)	4-5	0.140	463 lbs	(-1,571 lbs)
BC	5-6	0.704	1,339 lbs	(-302 lbs)	6-1	0.704	1,339 lbs	(-302 lbs)
Web	3-6	0.110	666 lbs					

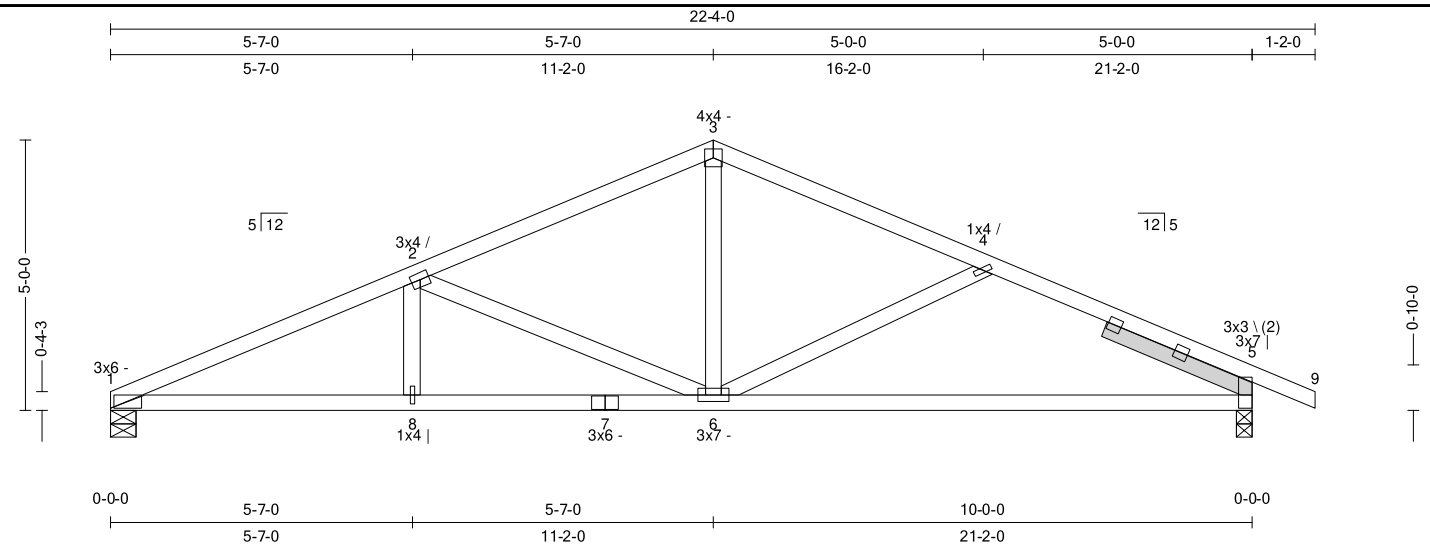
Notes

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 20 % (Cq = 0.80).
3) Brace bottom chord with approved sheathing or purlins per Bracing Summary.
4) A creep factor of 2.00 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) ▭ Indicates non-structural members.
7) Listed wind uplift reactions based on MWFRS & C&C loading.

TrueBuild®Truss Software v5.8.14
Eagle Metal Products

	Quality Line Truss Co., LLC 34593 S 4350 RD Address 2 Adair, OK 74330	Truss:T06 Job: LOT 54_E1_11032025 Date: 12/17/25 10:26:00 Page: 1 of 1

SPAN	PITCH	QTY	OHL	OHR	CANT L	CANT R	PLY(S)	SPACING	WGT/PLY
21-2-0	5/12	5	0-0-0	1-2-0	0-0-0	0-0-0	1	24 in	93 lbs



All plates shown to be Eagle 20 unless otherwise noted.

Loading (psf)	General		CSI		Deflection		L/	(loc)	Allowed
TCLL: 20	Bldg Code:	IBC 2018/	TC:	0.29 (2-3)	Vert TL:	0.67 in	L / 368	(5-6)	L / 240
TCDL: 10		TPI 1-2014	BC:	0.99 (6-8)	Vert LL:	0.31 in	L / 787	(5-6)	L / 360
BCLL: 0	Rep Mbr:	Yes	Web:	0.37 (2-6)	Horz TL:	0.05 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	5.5 in	1.50 in	1,035 lbs	·	-68 lbs	-264 lbs	-264 lbs	-32 lbs
5	1	3.5 in	1.50 in	1,107 lbs	·	-91 lbs	-330 lbs	-330 lbs	·

12/17/2025

STATE OF MISSOURI
ARTURO A. HERNANDEZ
NUMBER PE-2006000095
PROFESSIONAL ENGINEER

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 4-2-0, 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 sloped roof snow loads in accordance with ASCE7 - 16 with the following user defined input: 20 psf GSL, Terrain C, Exposure (Ce = 1.0), 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/Hip, 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 19 psf live load computed in accordance with IBC 2018 assuming slope = 5 /12 and area supported = 44.67 ft^2, DOL = 115 %.
5) Concurrent minimum storage attic loading has been applied in accordance with IBC 1607.1

Member Forces

Table indicates: Member ID, max CSI, max tension force, (max compression force). Only forces greater than 300lbs are shown in this table.

TC	1-2	0.289	527 lbs	(-2,072 lbs)	3-4	0.243	392 lbs	(-1,429 lbs)				
	2-3	0.290	390 lbs	(-1,436 lbs)	4-5	0.223	490 lbs	(-1,670 lbs)				
BC	5-6	0.923	1,426 lbs	(-326 lbs)	6-8	0.990	1,871 lbs	(-380 lbs)	8-1	0.529	1,871 lbs	(-380 lbs)
Web	2-6	0.370		(-670 lbs)	3-6	0.123	740 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 20 % (Cq = 0.80).
3) Brace bottom chord with approved sheathing or purlins per Bracing Summary.
4) A creep factor of 2.00 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) ▭ Indicates non-structural members.
7) Listed wind uplift reactions based on MWFRS & C&C loading.

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