

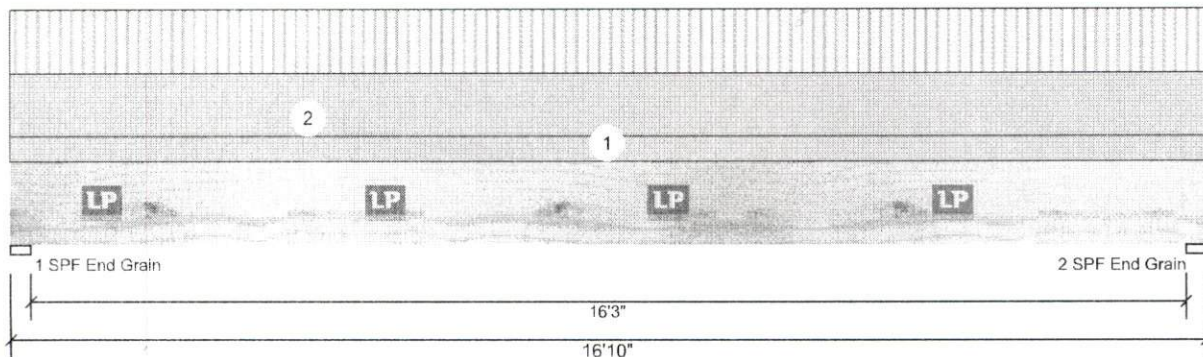


Client: Brad Cummings
 Project:
 Address:

Date: 7/17/2019
 Designer: Tony Huneycult
 Job Name: Day Job Garage
 Project #:

H1 LP-LVL 2900Fb-2.0E 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Member Information

Type: Girder
 Plies: 2
 Moisture Condition: Dry
 Deflection LL: 360
 Deflection TL: 600
 Importance: Normal
 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	Live	Dead	Snow	Wind	Const
1	842	1296	0	0	0
2	842	1296	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	23%	1296 / 842	2138	L	D+L
2 - SPF End Grain	3.500"	23%	1296 / 842	2138	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8514 ft-lb	8'5"	27029 ft-lb	0.315 (32%)	D+L	L
Shear	1783 lb	1'4 3/4"	9310 lb	0.192 (19%)	D+L	L
LL Defl inch	0.109 (L/1804)	8'5 1/16"	0.546 (L/360)	0.200 (20%)	L	L
TL Defl inch	0.277 (L/710)	8'5 1/16"	0.328 (L/600)	0.850 (85%)	D+L	L

Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.168", Long Term = 0.252"
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be continuously braced.
- 7 Bottom braced at bearings.
- 8 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	40 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Brick Load
2	Uniform			Top	100 PLF	100 PLF	0 PLF	0 PLF	0 PLF	Roof Load
	Self Weight				14 PLF					

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.
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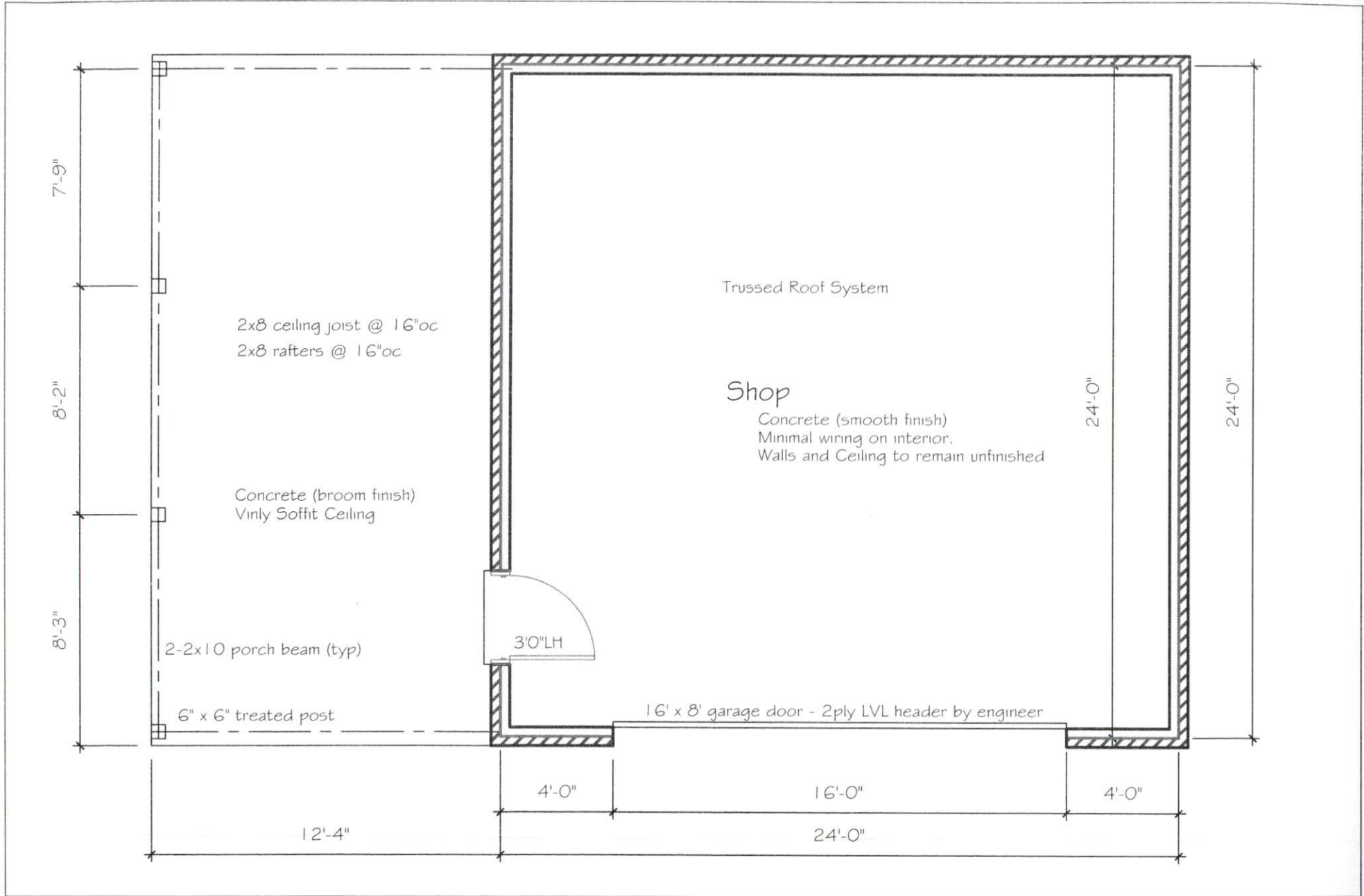
Manufacturer Info

Louisiana-Pacific Corp
 414 Union Street, Suite 2000
 Nashville, TN 37219
 (888) 820-0325
 www.lpcorp.com
 APA: PR-L280, ICC-ES: ESR-2403,
 LADBS: RR-25783; Florida: FL15228

Locust Lumber Company
 312 E. Main St., NC
 United States
 28097
 (704) 888-4411



This design is valid until 6/30/2018



7'-9"

8'-2"

8'-3"

2x8 ceiling joist @ 16"oc
2x8 rafters @ 16"oc

Concrete (broom finish)
Vinyl Soffit Ceiling

2-2x10 porch beam (typ)

6" x 6" treated post

3'0" LH

16' x 8' garage door - 2ply LVL header by engineer

Trussed Roof System

Shop

Concrete (smooth finish)
Minimal wiring on interior.
Walls and Ceiling to remain unfinished

24'-0"

24'-0"

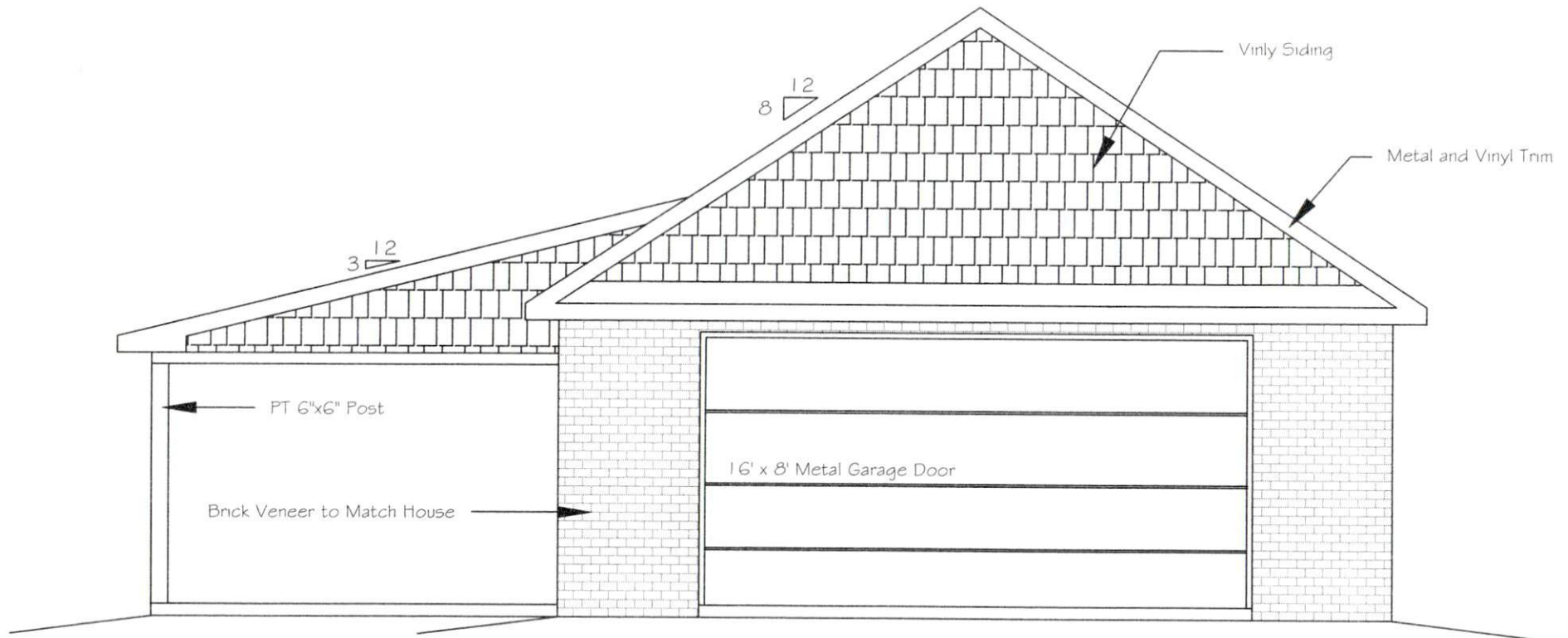
12'-4"

4'-0"

16'-0"

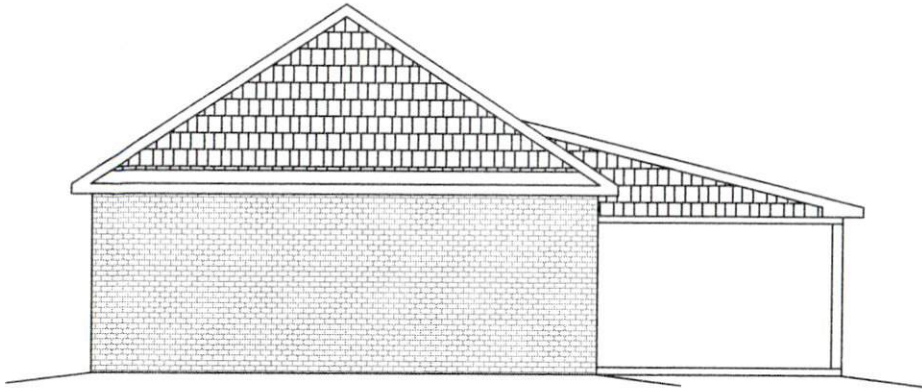
4'-0"

24'-0"



Front Elevation

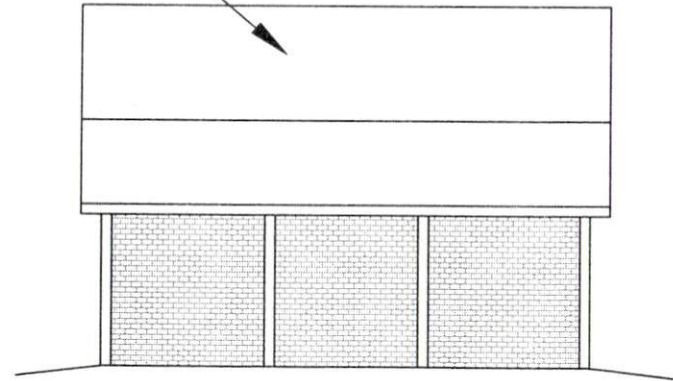
Scale: 1/4" = 1'-0"



Rear Elevation

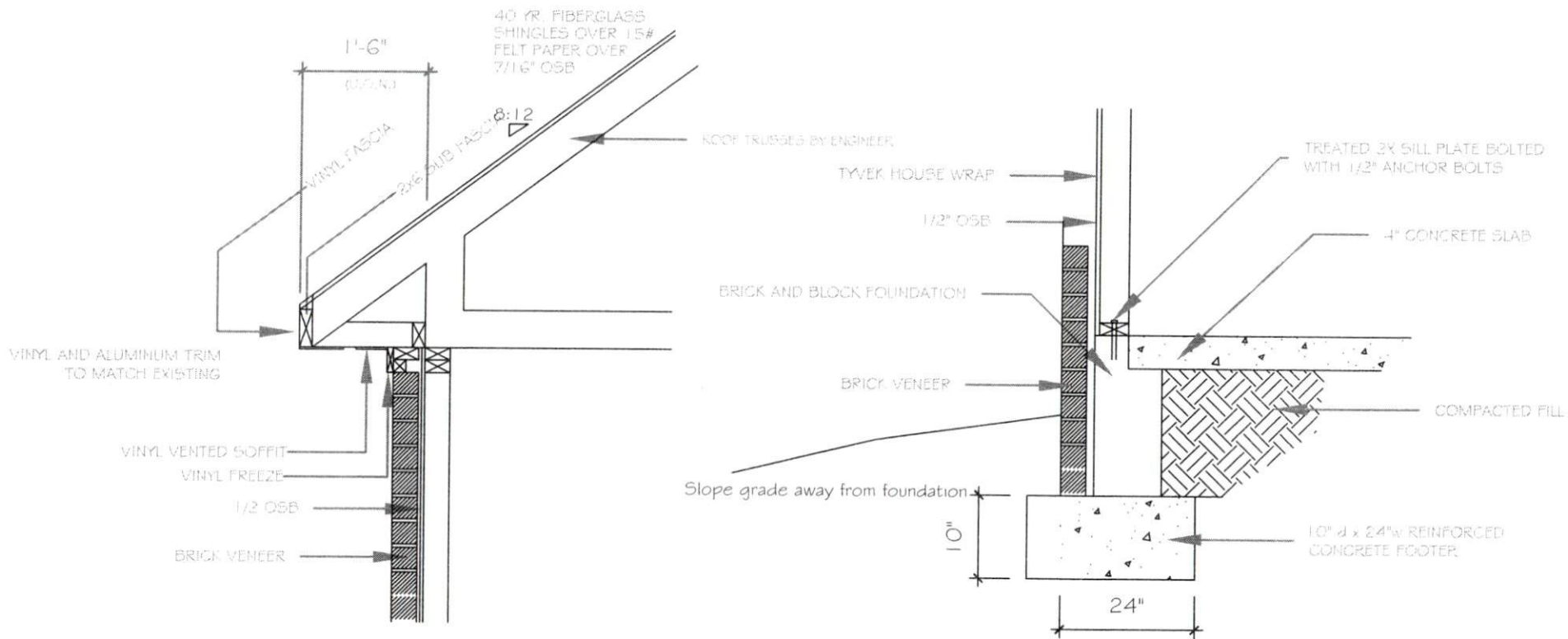
Scale: 1/8" = 1'-0"

40yr Arch Shingles to Match



Side Elevation

Scale: 1/8" = 1'-0"



Wall Sections

Scale: NTS

RE: T19-07004 - DAY JOB

Trenco
 818 Soundside Rd
 Edenton, NC 27932

Site Information:

Project Customer: Project Name:
 Lot/Block: Subdivision:
 Model:
 Address:
 City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.2
 Wind Code: N/A Wind Speed: 130 mph Design Method: User defined
 Roof Load: 40.0 psf Floor Load: N/A psf
 Mean Roof Height (feet): 12 Exposure Category: B

No.	Seal#	Truss Name	Date
1	E13289607	T01	7/17/19
2	E13289608	T01G	7/17/19

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Longleaf Truss Company.

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2019.

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.

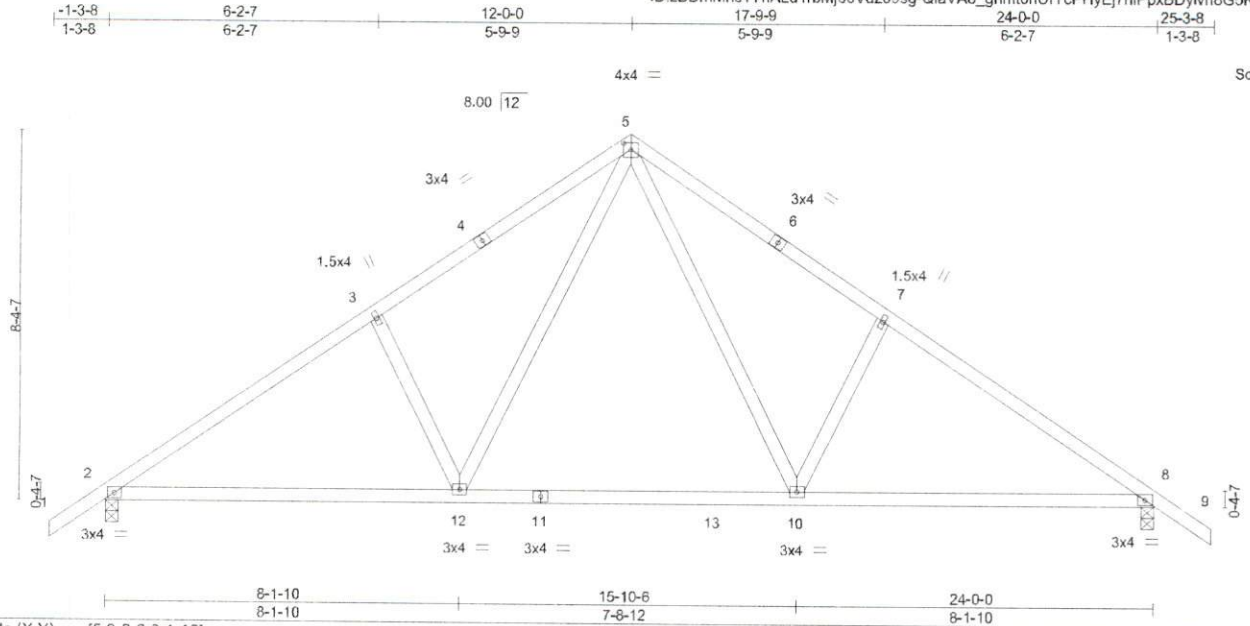


July 17, 2019

Job	Truss	Truss Type	Qty	Ply	DAY JOB	E13289607
T19-07004	T01	FINK	11	1		

Longleaf Truss Company, West End, NC - 27376

8.310 s Jun 11 2019 MiTek Industries, Inc. Wed Jul 17 09:42:09 2019 Page 1
 ID:zBDmMhs1YnALd1rbMj60Vdz09sg-QiaVAo_gnmT0nUfYcPHYEj7nlPpxBDYlvh8G5Kyx6y



Scale = 1:49.5

Plate Offsets (X,Y)-- [5:0-2-0-0-1-12]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.37	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 7.7/10.0	Plate Grp DOL 1.15	BC 0.56	Vert(LL) -0.11 10-12 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.26	Vert(CT) -0.22 8-10 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.03 8 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 122 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.1
 BOT CHORD 2x4 SP No.1
 WEBS 2x4 SP No.3

BRACING-

TOP CHORD Sheathed or 4-9-10 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(lb/size) 2=708/0-3-8, 8=708/0-3-8
 Max Horz 2=167(LC 10)
 Max Uplift 2=35(LC 12), 8=35(LC 12)
 Max Grav 2=1148(LC 24), 8=1148(LC 25)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-1485/34, 3-5=-1380/91, 5-7=-1380/91, 7-8=-1484/34
 BOT CHORD 2-12=0/1286, 10-12=0/839, 8-10=0/1180
 WEBS 3-12=-331/119, 5-12=-10/699, 5-10=-10/699, 7-10=-331/119

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Endosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL); Lum DOL=1.15 Plate DOL=1.15; Pg=10.0 psf; Pf=7.7 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 20.0psf 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, with BCDL = 10.0psf.
- All bearings are assumed to be User Defined crushing capacity of 425 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev 10/03/2015 BEFORE USE.

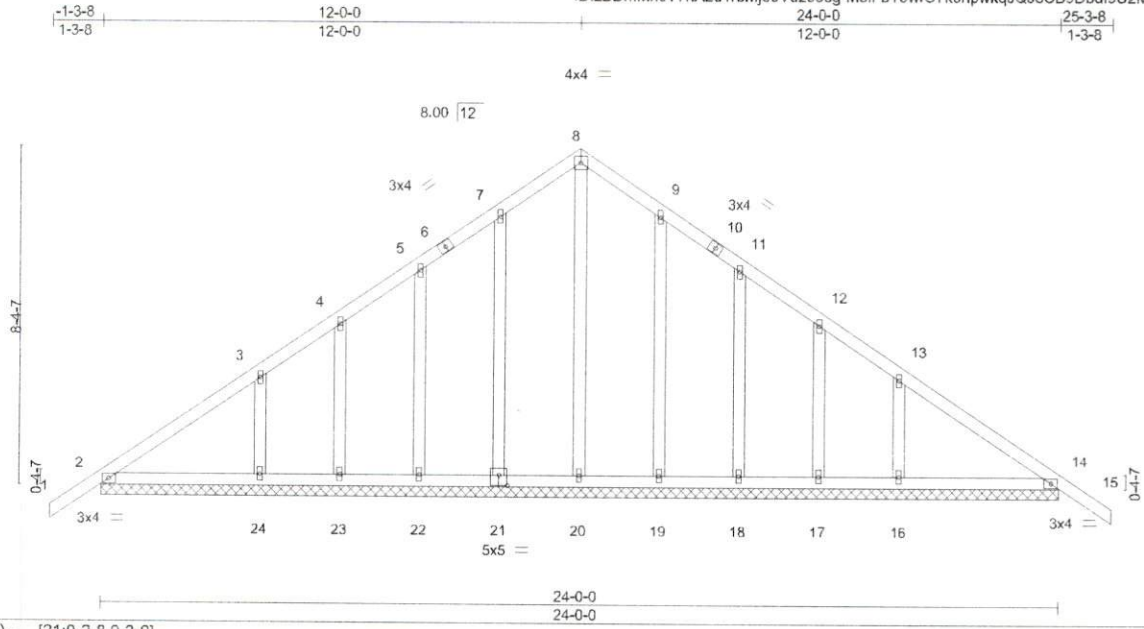
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job	Truss	Truss Type	Qty	Ply	DAY JOB	E13289608
T19-07004	T01G	GABLE	2	1		

Longleaf Truss Company, West End, NC - 27376,

8.310 s Jun 11 2019 MiTek Industries, Inc. Wed Jul 17 09:42:11 2019 Page 1
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Scale = 1:54.2

Plate Offsets (X,Y) [21:0-2-8,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.12	Vert(LL)	0.00	15	n/r	MT20	244/190
Snow (Pf/Pg) 7.7/10.0	Plate Grip DOL 1.15	BC 0.08	Vert(CT)	0.01	15	n/r		
TCDL 10.0	Lumber DOL 1.15	WB 0.13	Horz(CT)	0.00	14	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S						
BCDL 10.0	Code IRC2018/TPI2014						Weight: 149 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.1
 BOT CHORD 2x4 SP No.1
 OTHERS 2x4 SP No.3

BRACING-

TOP CHORD Sheathed or 6-0-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

- All bearings 24-0-0.
- (lb) - Max Horz 2=167(LC 10)
- Max Uplift All uplift 100 lb or less at joint(s) 2, 14, 21, 22, 23, 24, 19, 18, 17, 16
- Max Grav All reactions 250 lb or less at joint(s) 2, 14, 20, 21, 22, 23, 19, 18, 17 except 24=307(LC 24), 16=307(LC 25)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Endosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- TCLL: ASCE 7-16; P=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- 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 20.0psf 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.
- All bearings are assumed to be User Defined crushing capacity of 425 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 14, 21, 22, 23, 24, 19, 18, 17, 16.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

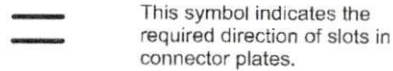
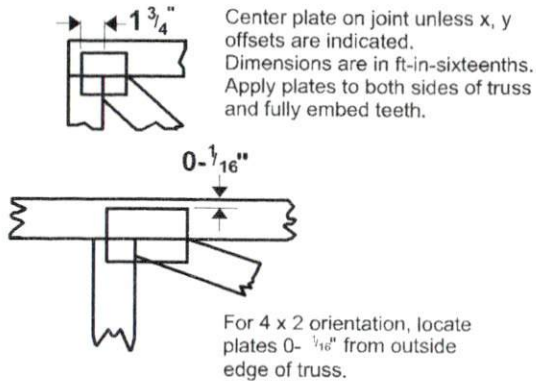


WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



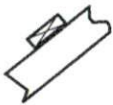
* Plate location details available in MiTek 20/20 software or upon request.

PLATE SIZE

4 x 4

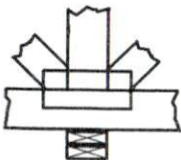
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

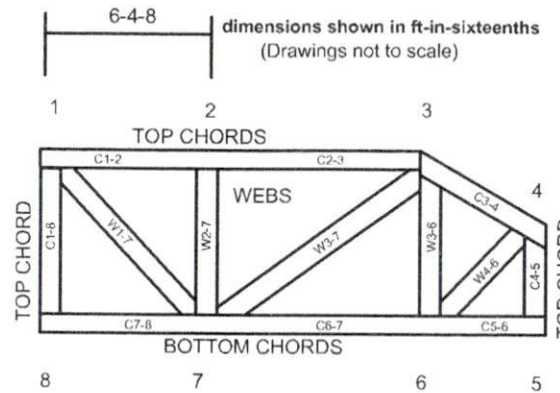


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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