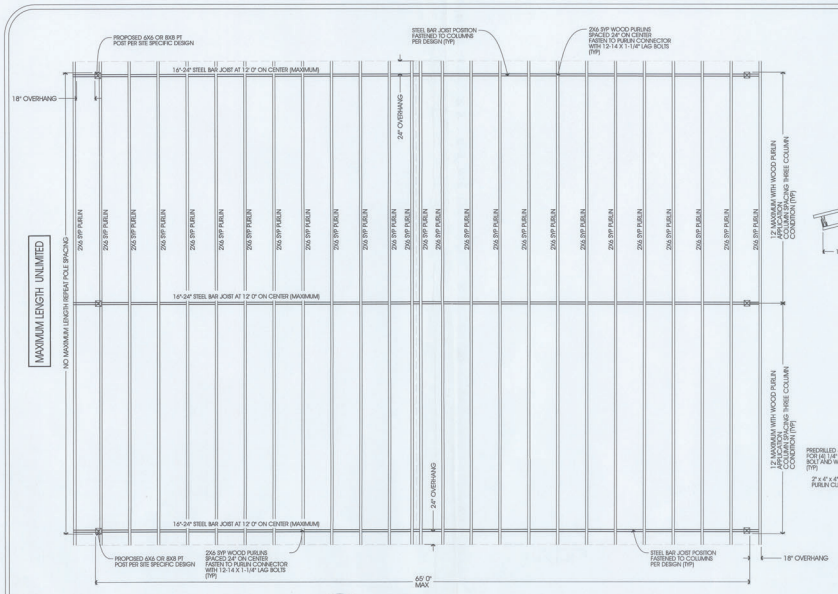
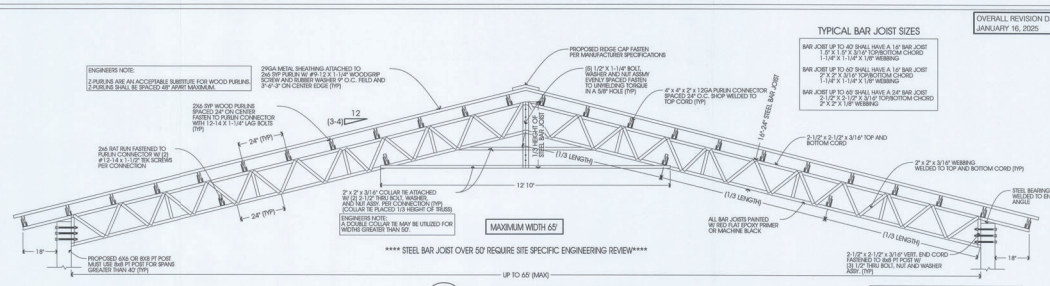


A S-1 POLE BARN PLAN VIEW
NOT TO SCALE

NOTE TO INSTALLER

1. INSTALLER SHALL ADD LATERAL BRACING DURING THE ERECTION PROCESS TO PREVENT BAR JOIST MOVEMENT.



B S-1 POLE BARN SECTION VIEW
NOT TO SCALE

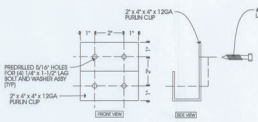
TYPICAL BAR JOIST SIZES

BAR JOIST UP TO 40' SHALL HAVE A 1/6" BAR JOIST 1.5" X 1.5" X 3/16" TOP/BOTTOM CHORD 1-1/4" X 1-1/4" X 1/8" WEBBING

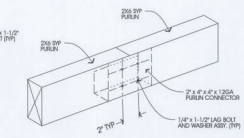
BAR JOIST UP TO 60' SHALL HAVE A 1/4" BAR JOIST 2" X 2" X 3/16" TOP/BOTTOM CHORD 1-1/4" X 1-1/4" X 1/8" WEBBING

BAR JOIST UP TO 80' SHALL HAVE A 3/4" BAR JOIST 2-1/2" X 2-1/2" X 3/16" TOP/BOTTOM CHORD 2" X 2" X 1/8" WEBBING

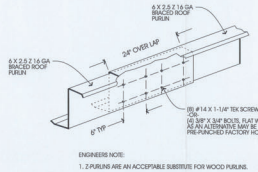
ENGINEERS NOTE:
STEEL BAR JOIST FASTEN TO PT POST WITH (2) 1/2" THOUGH BOLT, NUT WASHER ASSEMBLY INTO POST FOR UP TO 42' WIDE.
(3) 1/2" THROUGH BOLT, NUT, AND WASHER ASSEMBLY SHALL BE INSTALLED FOR WIDTHS GREATER THAN 40' WIDE.
(4) 6" LAG BOLTS IS AN ACCEPTABLE ALTERNATIVE.



D S-1 WOOD PURLIN CLIP
NOT TO SCALE



E S-1 WOOD PURLIN BUTT JOINT
NOT TO SCALE



ENGINEERS NOTE:
1. 2-PURLINS ARE AN ACCEPTABLE SUBSTITUTE FOR WOOD PURLINS.
2. 2-PURLINS SHALL BE SPACED 48" APART MAXIMUM.

F S-1 Z PURLIN SPLICE JOIST
NOT TO SCALE

COMPONENTS AND CLADDING (min.=ft. gross=0.00 (Opens)						
VELOCITY ULTIMATE	PRESSURE (PSF)					
	ROOF		WALLS			
	2	3	4	5	5A (NO OVERHANG)	5B (NO OVERHANG)
140 MPH	-17.4	-47.8	-52.3	+18.4	+21.3	+18.4 -25.1
150 MPH	-19.9	-54.9	-60.3	+21.2	+24.7	+21.2 -28.9
160 MPH	-22.7	-62.4	-70.9	+24.1	+28.8	+24.1 -32.8

COMPONENTS AND CLADDING (min.=ft. gross=0.15 (0.00 Opens)						
VELOCITY ULTIMATE	PRESSURE (PSF)					
	ROOF		WALLS			
	2	3	4	5	5A (NO OVERHANG)	5B (NO OVERHANG)
140 MPH	-21.3	-61.7	-68.2	+22.1	+26.7	+22.1 -29.7
150 MPH	-24.4	-70.3	-66.8	+25.3	+30.6	+25.3 -33.9
160 MPH	-27.8	-81.3	-76.0	+28.7	+37.4	+28.7 -37.4

COMPONENTS AND CLADDING (min.=ft. gross=12.00 (Partially Enclosed)						
VELOCITY ULTIMATE	PRESSURE (PSF)					
	ROOF		WALLS			
	2	3	4	5	5A (NO OVERHANG)	5B (NO OVERHANG)
140 MPH	-29.3	-87.7	-65.3	+33.2	+36.7	+33.2 -36.7
150 MPH	-33.7	-68.6	-76.1	+34.7	+42.1	+34.7 -42.1
160 MPH	-38.3	-78.0	-86.5	+39.4	+47.9	+39.4 -47.9

GENERAL NOTES

1. ALL CONCRETE WORK SHALL BE 3,000 P.S.I. AT 28 DAYS.
2. MINIMUM SOIL BEARING SHALL BE ASSUMED AT 2,000 P.S.F.
3. ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH THE 7-22 WIND CODE FOR ULTIMATE WIND SPEED AND 7-22 WIND CODES FOR AN ULTIMATE WIND SPEED OF 140 MPH AND GREATER. THESE PLANS INCLUDE DESIGN FOR ALL WIND SPEEDS UP TO AND INCLUDING 140 MPH. ULTIMATE WIND SPEED.
4. ALL SIDING AND ROOFING TO MINIMUM OF 29 GAUGE.
5. ATTACH TO THE COLUMNS AS SHOWN AND CONSIDERED TO BE A MALE OF THE COLUMN.
6. FOR ZONE LOCATIONS SEE ASCE 7-22. THE VALUE OF "a" SHALL BE A MINIMUM OF 3'-0". FOR ZONE LOADING SEE COMPONENTS AND CLADDING LOADING CHARTS THIS SHEET.
6. DESIGN LOADINGS:
ROOF DEAD LOAD = 5 PSF
ROOF LIVE LOAD = 20 PSF
WIND LOAD = PER TABLE
7. DOOR AND AND WINDOW DATA, SEE TABLE THIS SHEET.
8. ALL WINDOWS AND MAN DOORS MAY USE 1/4"X1" LONG TEK SCREWS TO ATTACH THE UNIT TO THE FRAME. CONNECTING THE UNIT TO METAL FRAME, FOLLOW THE MANUFACTURERS SPECIFICATIONS FOR LOCATING CONNECTIONS.
9. TYPE OF CONSTRUCTION
BUILDING CATEGORY
10. ALL WINDOWS ARE REQUIRED ONLY REQUIRED WITH WIND SPEEDS GREATER THAN OR EQUAL TO 130 MPH OR AS CALLED OUT ON PLANS.
11. ALL WELDS ARE CONTINUOUS WELDS DONE AT THE FACTORY.
12. MANUFACTURER IS NOT RESPONSIBLE FOR FAILURES OF OR INDUCED BY MATERIALS NOT PROVIDED BY MANUFACTURER; INCLUDING BUT NOT LIMITED TO, METAL ROOFING, FASTENERS, DOORS, WINDOWS, SEALANTS, CLOSURES, CONCRETE, MASONRY, BUILDING ACCESSORIES. THE LIMITED WARRANTY ALSO DOES NOT COVER DAMAGES TO MATERIALS IN A MANNER THAT THEY ARE NOT DESIGNED OR ENGINEERED FOR. ADDITIONALLY UNCONTROLLABLE EVENTS "ACT OF GOD" SUCH AS TORNADOES, FLOODS OR HURRICANES ARE OUTSIDE THE DESIGN PARAMETERS OF THE LIMITED WARRANTY.

STRUCTURAL NOTES:

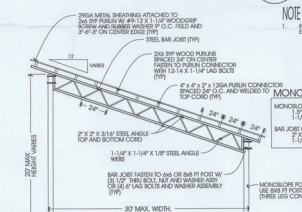
1. MATERIALS SHALL CONFORM TO STEEL ASTM 513.
2. ALL STEEL SHALL BE 50 KSI IN ACCORDANCE WITH CURRENT AISC MANUAL.
3. WELDING ELECTRODES TYPE E7000.
4. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH CURRENT AWWA REQUIREMENTS
5. ALL WELDING SHALL BE DONE BY A CERTIFIED WELDER.
6. BOLTS SHAT BE ASTM A325 W/ WASHERS AND NUTS (TYP).
7. WELD STRENGTH 70 KSI MIN.
8. ALL POST SHALL BE PRESSURE TREATED GROUND CONTACT.
9. ALL TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER
10. MIN. EDGE DISTANCE FOR BOLTS IS 1.5 TIMES THE BOLT DIA.
11. MAX TRUSS SPACING SHALL NOT EXCEED 2' 0" O.C. UNLESS NOTED OTHERWISE.
12. THE DESIGNER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF POOR WORKMANSHIP, OR IMPROPER USE, AND ACCEPTS NO RESPONSIBILITY OR EXERCISES NO CONTROL WITH REGARD TO FABRICATION, HANDLING, AND INSTALLATION OF TRUSSES

STEEL NOTE

THE DESIGN, FABRICATION, AND CREATION OF STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH AISC 360 AND AISC CODE OF STANDARD PRACTICE, 2023.

JSE PURLIN LOADING/SPAN TABLE			
JSE		8 OZ MOSE SHAKE, STD. LAP	
		16 GAUGE	14 GAUGE
SECTION	SPAN		
4" WIDE	14 FT	176	235
	16 FT	118	157
	20 FT	84	134
	24 FT	74	104
ALLOWABLE UNIFORM LOAD PER SQUARE FOOT			

USE 4" [16 GA] UP TO 15' SPAN
USE 6" [16 GA] UP TO 20' SPAN
USE 8" [16 GA] UP TO 25' SPAN

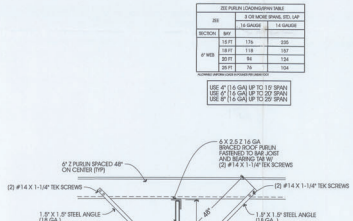


MONO SLOPE BAR JOIST SIZES

MONOLOPE UP TO 20' SHALL HAVE A 1/6" BAR JOIST 1.5" X 1.5" X 3/16" TOP/BOTTOM CHORD 1-1/4" X 1-1/4" X 1/8" WEBBING

BAR JOIST UP TO 30' (MAX) SHALL HAVE A 1/4" BAR JOIST 2" X 2" X 3/16" TOP/BOTTOM CHORD 1-1/4" X 1-1/4" X 1/8" WEBBING

C S-1 POLE BARN MONOSLOPE (OPTIONAL)
NOT TO SCALE



K S-1 Z-PURLIN BRACING DETAIL
SCALE: NTS

1 S-1 SITE SPECIFIC DESIGN
NOT TO SCALE

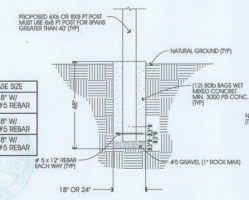
ENGINEERS NOTE ON FLORIDA BUILDING CODE COMPLIANCE:

THIS PLAN HAS BEEN ENGINEERED FOR A RISK CATEGORY II BUILDING WITHOUT A SITE PLAN/SURVEY. THIS BUILDING IS FOR AGRICULTURAL USE AND HAS NOT BEEN ENGINEERED FOR A RESIDENCE.

1) STRUCTURES USED AS CATEGORY II STRUCTURES (SINGLE FAMILY RESIDENCE OR OCCUPIED STRUCTURES) REQUIRE ADDITIONAL CODE COMPLIANCE BY A LICENSED DESIGN PROFESSIONAL.

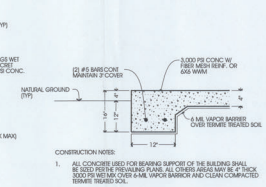
2) THE SUBSEQUENT DESIGN PROFESSIONAL IS RESPONSIBLE FOR MAKING THE BUILDING COMPLIANT TO THE FLORIDA BUILDING CODE.

a. SPECIAL ATTENTION SHALL BE MADE TO FBC-R 703.2 WATER RESISTIVE BARRIER.



BAR JOIST SIZE:	POST BASE SIZE
UP TO 30'	18" x 48" W/ 12" MIN. #5 REBAR
30' 1" - 40' 0"	24" x 48" W/ 16" MIN. #5 REBAR
40' 1" - 60' 0"	36" x 48" W/ 24" MIN. #5 REBAR

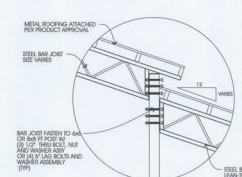
G S-1 POST AND FOOTING DETAIL
NOT TO SCALE



CONSTRUCTION NOTES:

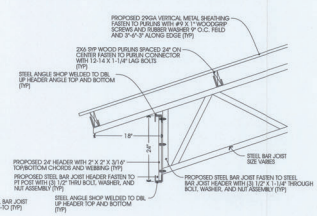
1. ALL CONCRETE USED FOR BEARING SUPPORT OF THE BUILDING SHALL BE SIZED PER THE PREVAILING PLANS. ALL OTHERS AREAS MAY BE 4" THICK 3000 PSI WET MIX OVER 6-MIL VAPOR BARRIER AND CLEAN COMPACTED TERMITE TREATED SOIL.

H S-1 CONCRETE FOUNDATION (OPTIONAL)
NOT TO SCALE



I S-1 WOOD PURLIN BUTT JOINT
NOT TO SCALE

ENGINEERS NOTE:
LEAN-TO SPANS UP TO 14' = 12" BAR JOIST
LEAN-TO SPANS UP TO 25' = 18" BAR JOIST
MAXIMUM SPAN 30' 0" = 24" BAR JOIST



J S-1 STEEL BAR JOIST TO STEEL BAR JOIST HEADER
NOT TO SCALE

CLIENT INFORMATION:
POLE BARN PLAN PREPARED FOR:

DESIGN STATEMENT:
THESE PLANS WERE DESIGNED FOLLOWING THE 2023 8TH EDITION FLORIDA BUILDING CODE AND ASCE 7-22, INCLUDING CHAPTER 16 ON STRUCTURAL DESIGN. AN ULTIMATE WIND SPEED OF 140 MPH, (3 SECOND GUST) IN WIND EXPOSURE CATEGORY 'B'. THIS STRUCTURE HAS BEEN DESIGNED AS RISK CATEGORY II.

OVERALL REVISION DATE
JANUARY 16, 2025

ENGINEERING • PLANNING • PERMITTING

REVISIONS:

DATE	BY	DESCRIPTION

EPI
ENGINEERED PERMITS, INC.
511 SOUTH WOODLAND BLVD.
SUITE A
DELAND, FL 32720
PHONE: 386-734-8800
FAX: 386-734-8828
CERT NO. 26298
EMAIL: epi@epieng.net

PROJECT: JAYERS CONSTRUCTION LLC

SHEET TITLE: STEEL BAR JOIST OPEN BUILDING

MICHAEL J. WOJTUNIAK, P.E.
EMAIL: mjw@mjwpe@gmail.com

SHEET NO. S-1

DATE: 3/27/2025

VOLUSIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY Code Compliance
PLANS EXAMINER

***THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. WOJTUNIAK, P.E. ON 3/27/2025 USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES. UNLESS THE RAISED SEAL HAS BEEN UTILIZED ***