

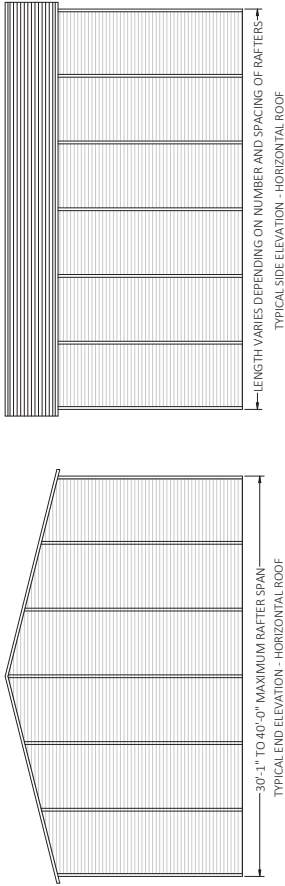
GENERAL NOTES

- DESIGN IS FOR MAXIMUM 40'-0" WIDE X 20'-0" EAVE HEIGHT FULLY ENCLOSED STRUCTURES.
- APPLICABLE CODES, REGULATIONS, & STANDARDS:
 - 2023 FLORIDA BUILDING CODE (8TH EDITION)
 - 2024 INTERNATIONAL BUILDING CODE
 - ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
 - ASCE STEEL CONSTRUCTION MANUAL (15TH EDITION)
 - A61.1318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
 - TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
 - AWS D3.1: STRUCTURAL WELDING
- RISK CATEGORY: I
- EXPOSURE CATEGORY: C
LOW ULTIMATE WINDSPEED 105 TO 150 MPH (NOMINAL WIND SPEED 81 TO 116 MPH); MAXIMUM WIND SPEED 120 TO 160 MPH (NOMINAL WIND SPEED 96 TO 128 MPH); MAXIMUM WIND PRESSURE 13.5 TO 20.0 PSF (NOMINAL WIND PRESSURE 10.5 TO 16.0 PSF); MAXIMUM HIGH ULTIMATE WINDSPEED 151 TO 180 MPH (NOMINAL WIND SPEED 117 TO 139 MPH); MAXIMUM RAFTER/POST AND END POST SPACING = 4'-0" FEET.
- DEAD LOAD = 10 PSF
- LIVE LOAD = 10 PSF
- SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" - 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS; 29 GAUGE METAL PANELS SHALL BE FASTENED TO 18 GAUGE RIB CHANNELS (UNLESS OTHERWISE NOTED).
- OPTIONAL BASE RAIL ANCHORAGE MAY BE USED FOR LOW AND MUST BE USED FOR HIGH WIND SPEEDS.
- FASTENERS CONSIST OF #12-14 x 3/4" SELF-DRILLING FASTENER (SDF). USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 14° (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
- AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9" OR END = 6" (MAX.).
- WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
SOIL SITE CLASS = D
RISK CATEGORY II/III
R = 3.25 Ie = 1.0
S_{DS} = 0.087 g V = GSW
S_{d1} = 0.084 g
- GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES.
- GROUND ANCHOR (SOIL NAILS) CONSIST OF #5 REBAR W/ WELDED NUT X 30" LONG IN SUITABLE SOIL CONDITIONS MAY BE USED FOR LOW (≤ 108 MPH NOMINAL) WIND SPEEDS ONLY. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USE IN UNSUITABLE SOILS AS NOTED.
- MIN. LAP REQUIREMENT FOR REBAR IN FOOTER IS 25".
- SOIL TO BE COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY, AT OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM D1557-93.
- PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC.
- A LANDING OF MIN. 36" WIDTH IN THE DIRECTION OF TRAVEL SHALL BE PROVIDED AT THE EXTERIOR DOORS. SLOPE OF LANDING NOT TO EXCEED 1/4"-1". LANDING LEVEL NOT TO BE LOWER THAN 1-1/2" (FOR EGRESS DOORS) & 7-3/4" (FOR OTHER EXTERIOR DOORS) BELOW THE TOP OF THRESHOLD.

DRAWING INDEX

PAGE NO.	DESCRIPTION
1	NOTES AND SPECIFICATIONS
2	BOX EAVE FRAME RAFTER ENCLOSED BUILDING
3	BOX EAVE FRAME RAFTER ENCLOSED BUILDING
4	BOX EAVE VERTICAL RIB SIDING OPTION
5	BOX EAVE RAFTER LEAN TO OPTIONS
6	BOX EAVE RAFTER END WALL, SIDE WALL AND OPENING FRAMING
7	VENT AND CMU STEM WALL DETAIL
8	OPTIONAL CONCRETE STRIP FOOTING

ENCLOSED METAL BUILDING DESIGN
MAXIMUM 40'-0" WIDE X 20'-0" EAVE HEIGHT
BOX EAVE FRAME



BOX EAVE FRAME RAFTER ENCLOSED BUILDING

PRODUCT CATEGORY	SUB CATEGORY	MANUFACTURER	APPROVAL No. & DATE
STRUCTURAL COMPONENTS	ROOF DECK	CAPITAL METAL SUPPLY, INC. 29 GA. CAPITAL RIB ROOF PANEL	FL20472-2-R3 12/13/2023
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAPITAL METAL SUPPLY, INC. 29 GA. CAPITAL RIB WALL PANEL	FL20348-2-R3 12/13/2023
EXTERIOR DOORS	ROLL-UP	JANUS INTERNATIONAL GROUP, LLC SERIES 3652	FL14425-1-R6 12/15/21
EXTERIOR DOORS	ROLL-UP	JANUS INTERNATIONAL GROUP, LLC SERIES 750	FL21450-10-R11 10/17/23
EXTERIOR DOORS	ROLL-UP	JANUS INTERNATIONAL GROUP, LLC SERIES 3100	FL12795-4-R6 10/12/20
EXTERIOR DOORS	SWINGING	ELUMI DOOR AND METAL COMPANY SERIES 407	FL17996-5-R3 12/26/23
WINDOWS	SINGLE HUNG	KINRO, INC 9750 SH	FL993-5-R19 11/01/23
WINDOWS	VERTICAL SLIDING	KINRO, INC 18000-R VS	FL993-8-R19 11/01/23

DIGITAL CERTIFICATION NOTES:
1. THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SHALL REMAIN IN DIGITAL FORMAT. SHALL BE VERIFIED BY ELECTRONIC MEANS & PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED.
2. THIS DOCUMENT HAS BEEN CREATED BY FLORIDA ENGINEERING LLC'S SYSTEMS ENGINEERING SOFTWARE WITHOUT THE WRITTEN CONSENT OF FLORIDA ENGINEERING LLC AND TUBULAR BUILDING SYSTEMS.
3. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE FLORIDA ENGINEERING LLC'S CERTIFICATION.
4. THESE PLANS ARE GENERIC AND DO NOT PROVIDE INFORMATION FOR A SITE-SPECIFIC PROJECT WHERE THE SITE CONDITIONS DEVIATE FROM WHAT HAS BEEN CALLED OUT IN THESE PLANS.
5. CONTRACTOR MUST NOT DEVIATE FROM THE CONDITIONS DETAILED ON THESE PLANS.
6. CONSTRUCTION SAFETY AT THE SITE IS THE CONTRACTOR'S RESPONSIBILITY.

CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

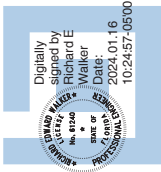
PROJECT DESCRIPTION:
40' WIDE X 20' HIGH
ENCLOSED STRUCTURE

DESIGN DATE:	12/14/2023
REVISION 1:	DATE
REVISION 2:	DATE
SCALE:	NTS
PAGE:	1

FLORIDA ENGINEERING LLC
4161 TAMAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FL.Eng.com
Orders@FL.Eng.com
CA CERT. #30782
PROJECT NO. 2322771-40-E



This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Digitally signed by Richard E Walker
Date: 2024.01.16 10:25:00-0500

This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed on and the signature must be verified on any electronic copies.

CONCRETE:

1. CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC.
3. MINIMUM SOIL BEARING CAPACITY OF COMPACTED GRADE = 2000 PSF

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318: 3 INCHES WHERE THE CONCRETE IS POURED AGAINST AND TEMPORARY IN CONTACT WITH THE EARTH OR UNPROTECTED FROM THE EARTH OR WEATHER, OTHERWISE 1-1/2 INCHES.

THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

1. IT IS BENT COLD;
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FELD BENT;
3. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN 8X-BAR DIAMETERS.
4. MINIMUM REQUIRED LAP LENGTH SHALL NOT BE LESS THAN 57-BAR DIAMETERS.

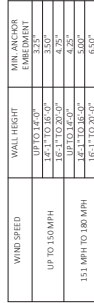
1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS USE MINIMUM (7) 4" HEIFICES WITH MINIMUM 30 INCH EMBEDMENT.

3. FOR MEDIUM DENSE COARSE SANDS SANDY GRAVELS VERY STIFF SILTS

4. FOR LOOSE TO MEDIUM DENSE COARSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLOWED FILL USE MINIMUM (2) 6" HELICES

5. FOR VERY LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND CUTS ALLUVIAL FILLICE MINIMIZING CLOSURE DEVICES

WITH MINIMUM 60 INCH EMBEDMENT.



FLORIDA ENGINEERING LLC
4161 TAMAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLeng.com
Orders@FLeng.com

PROJECT NO. 2322771-40-E
CA CERT. #30782

TRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

PROJECT DESCRIPTION:

DESIGN DATE:	12/14/2023	PAGE:	3
REVISION 1:	DATE		
REVISION 2:	DATE		
SCALE:	NTS		

This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

FLORIDA REGISTERED PROFESSIONAL ENGINEER
No. 81540
DATE OF EXPIRATION 7/1/2024
10/25/01-05000

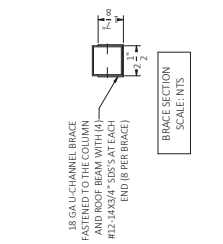
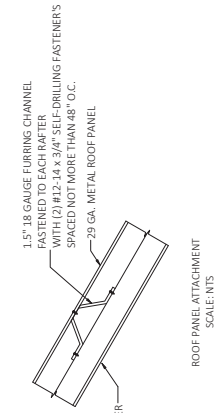
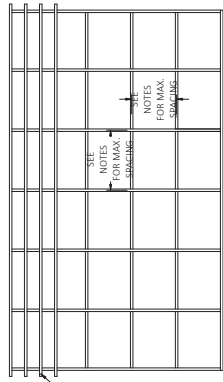
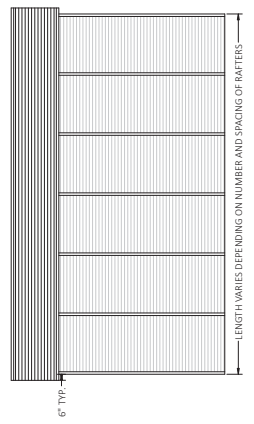
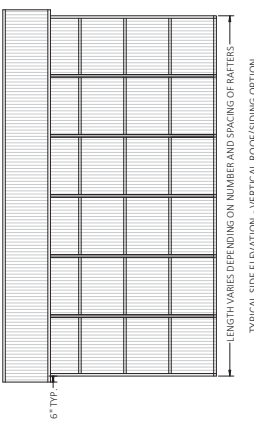
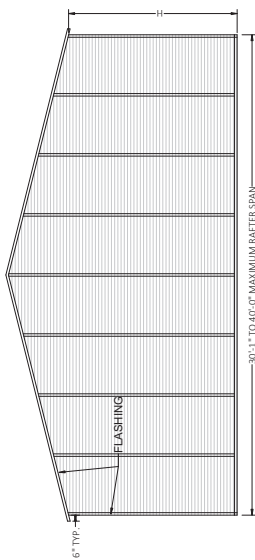
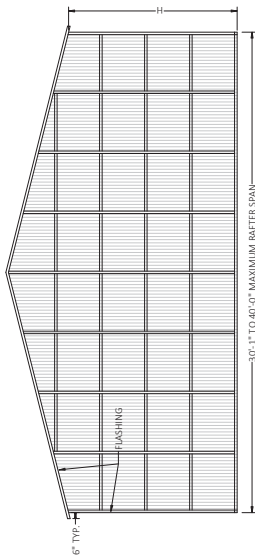
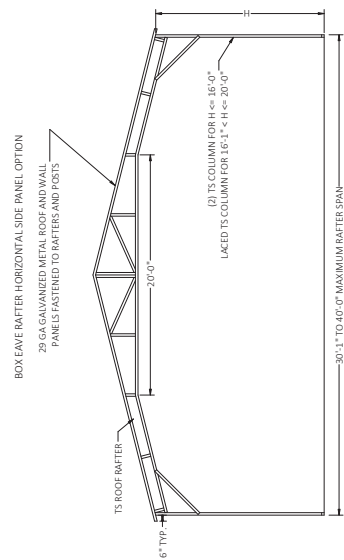
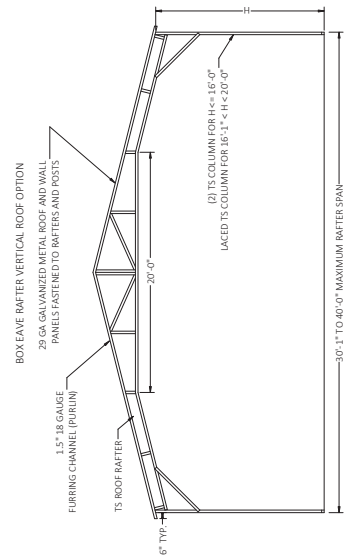
Digitally signed by Richard E. Walker
DN: cn=Richard E. Walker, o=FLORIDA ENGINEERING LLC, email=Orders@FLEng.com, c=US

FLORIDA ENGINEERING LLC
4161 TAMAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com
CA CERT. #30782
PROJECT NO. 2322771-40-E

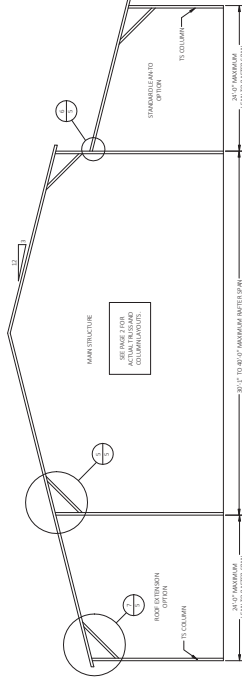


CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025
PROJECT DESCRIPTION:
40' WIDE X 20' HIGH
ENCLOSED STRUCTURE

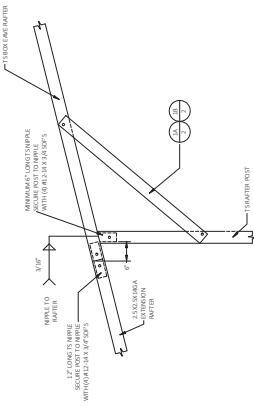
DESIGN DATE:	12/14/2023
REVISION 1:	DATE
REVISION 2:	DATE
SCALE:	NTS



BOX EAVE RAFTER LEAN-TO OPTIONS



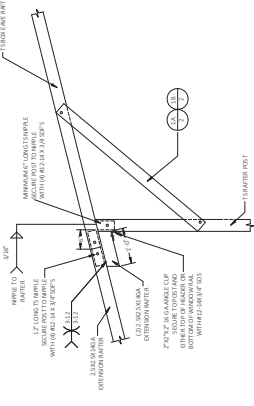
TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)



5A

FOR EXTENSION RAFTER SPANS $W \leq 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.
FOR EXTENSION RAFTER SPANS $W > 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.

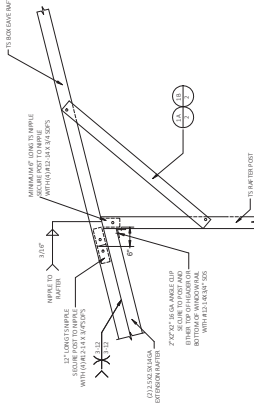
SCALE: 1/8"=1'-0"



5B

FOR EXTENSION RAFTER SPANS $W \leq 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.
FOR EXTENSION RAFTER SPANS $W > 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.

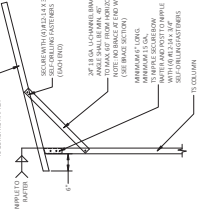
SCALE: 1/8"=1'-0"



5C

FOR EXTENSION RAFTER SPANS $W \leq 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.
FOR EXTENSION RAFTER SPANS $W > 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.

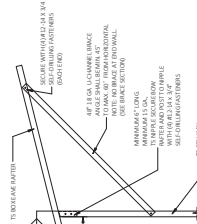
SCALE: 1/8"=1'-0"



7A

FOR EXTENSION RAFTER SPANS $W \leq 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.
FOR EXTENSION RAFTER SPANS $W > 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.

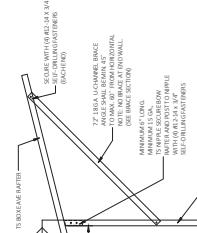
SCALE: 1/8"=1'-0"



7B

FOR EXTENSION RAFTER SPANS $W \leq 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.
FOR EXTENSION RAFTER SPANS $W > 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.

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



7C

FOR EXTENSION RAFTER SPANS $W \leq 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.
FOR EXTENSION RAFTER SPANS $W > 12'-0"$ IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PRE DETAIL 7A/C.

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

This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Digitally signed by Richard E. Walker
DN: cn=Richard E. Walker, o=FLORIDA ENGINEERING LLC, ou=PORT CHARLOTTE, FLORIDA 33952, email=Orders@FLEng.com, c=US

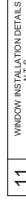
2023.01.16
10:25:03-0500

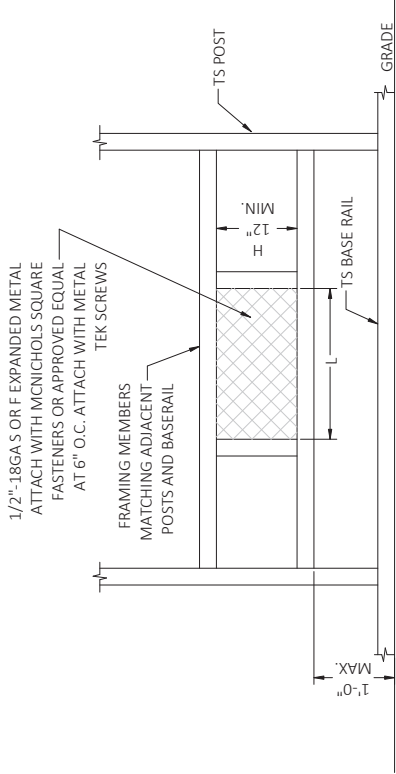
FLORIDA ENGINEERING LLC
4161 TAMAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com
CA CERT. #30782
PROJECT NO. 2322771-40-E



TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025
PROJECT DESCRIPTION:
40' WIDE X 20' HIGH
ENCLOSED STRUCTURE

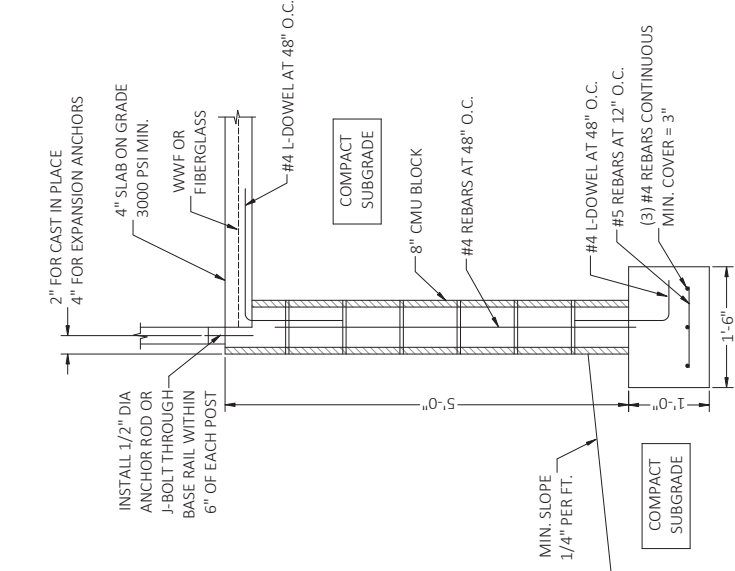
DESIGN DATE: 12/14/2023
REVISION 1: DATE
REVISION 2: DATE
SCALE: NTS





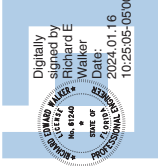
TYPICAL FLOOD VENT DETAIL

- NOTES:
1. MINIMUM VENT SPACE REQUIRED = 1 SQ. IN. OF OPEN VENT AREA PER SQ. FT. OF BUILDING AREA.
 2. PROVIDE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES OF EACH ENCLOSED BUILDING.
 3. APPLY A 1.3 FACTOR WHEN CALCULATING TOTAL OPEN AREA WHEN USING 1/2"-18GA S OR F EXPANDED METAL.
 4. TOTAL OPEN AREA OF VENT = L X H (MIN. 12").
 5. FLOOD VENT DETAIL COMPLIES WITH FEMA/NFIP.
 6. PREFABRICATED FLOOD VENTS MEETING THE REQUIREMENTS OF FEMA/NFIP MAY BE USED.



STAND-ALONE CONCRETE MASONRY UNIT (CMU)
FOUNDATION STEM WALL DETAIL

This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



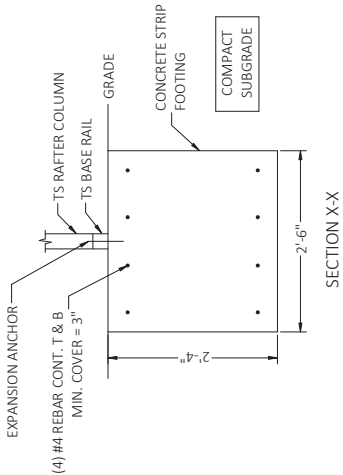
FLORIDA ENGINEERING LLC
4161 TAMAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLENG.com
Orders@FLENG.com

PROJECT NO. 2322771-40-E
CA CERT. #30782

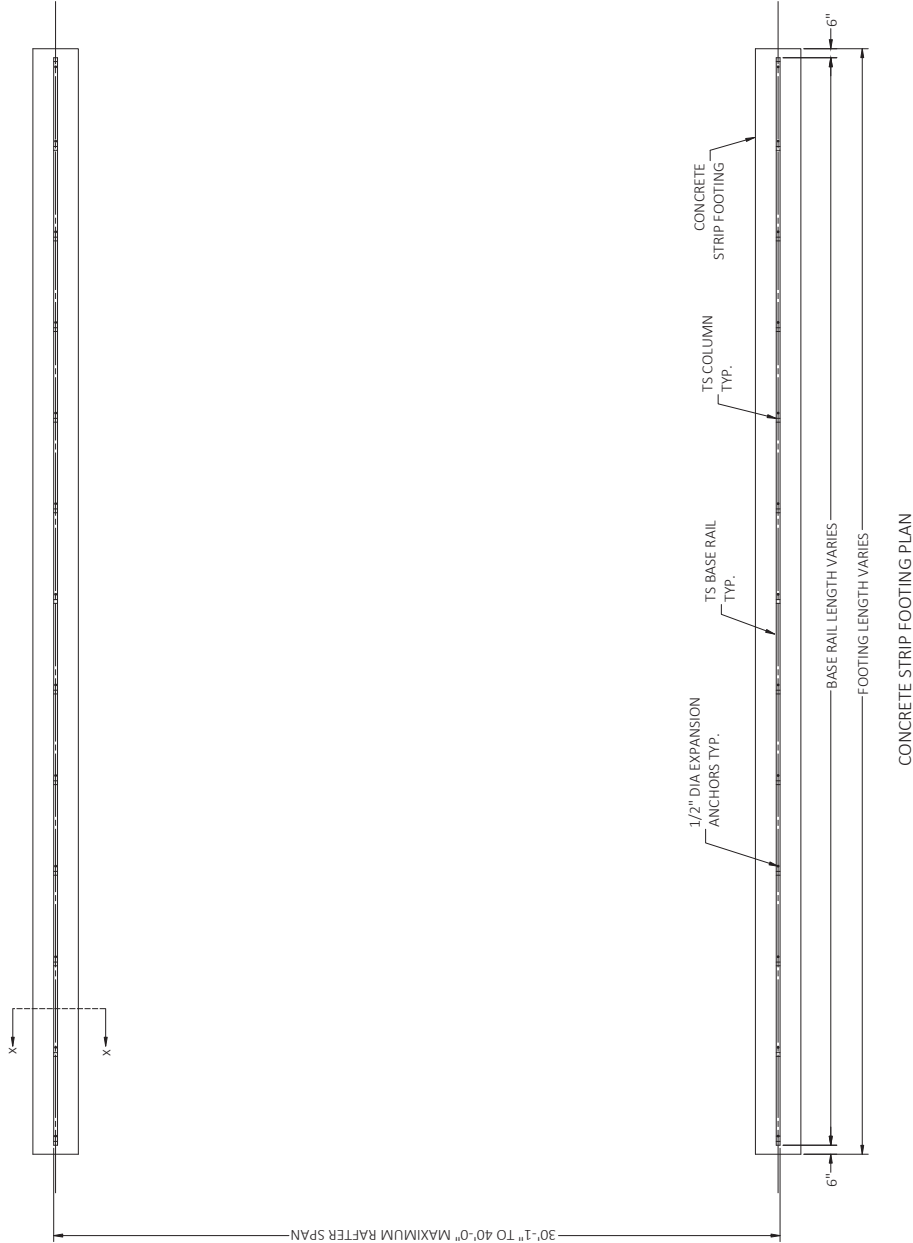
CONTRACTOR:		TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE, LAKE CITY, FL 32025	
PROJECT DESCRIPTION:		40' WIDE X 20' HIGH ENCLOSED STRUCTURE	
DESIGN DATE:	12/14/2023	PAGE:	7
REVISION 1:	DATE	REVISION 2:	DATE
SCALE:	NTS		

GENERAL NOTES:
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 1500 PSF.

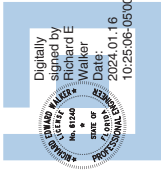
- CONCRETE:
MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI
- REINFORCING STEEL:
1. TURNDOWN REINFORCING STEEL = ASTM A615 GRADE 60
2. SLAB REINFORCEMENT = WELDED WIRE FABRIC PER ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT
3. REINFORCING STEEL COVER = 3" WHERE CASE AGAINST AND PERMANENTLY EXPOSED TO SOIL OR WATER, 1.5" EVERYWHERE ELSE.
4. REINFORCEMENT IS BENT COLD.
5. MINIMUM INSIDE DIAMETER OF BEND = (6) BAR DIAMETERS
6. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.



OPTIONAL CONCRETE STRIP FOOTING



This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



FLORIDA ENGINEERING LLC
4161 TAMAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLeng.com
Orders@FLeng.com
CA CERT. #30782
PROJECT NO. 2322771-40-E



CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025
PROJECT DESCRIPTION:
40' WIDE X 20' HIGH
ENCLOSED STRUCTURE

DESIGN DATE:	12/14/2023
REVISION 1:	DATE
REVISION 2:	DATE
SCALE:	NTS