APPLICABLE CODES, REGULATIONS, & STANDARDS

A. THE 2023 FLORIDA BUILDING CODE, 8TH EDITION
B. ASCE/SEI 7-22: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES
C. ACI 318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
D. AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)
E. AWS D1.1: STRUCTURAL WELDING

1. THESE PLANS BELONG EXCLUSIVELY TO THE STRUCTURE, INCLUDING MAIN WIND FORCE RESISTING SYSTEM (MWFRS), COMPONENTS AND CLADDING (C&C), AND BASE RAIL ANCHORAGE. OTHER DESIGN ISSUES, INCLUDING BUT NOT LIMITED TO PROPERTY SET-BACKS, ELECTRICAL, PLUMBING, INGRESS/EGRESS, FINISH FLOOR SLOPES AND ELEVATIONS, OR OTHER LOCAL ZONING REQUIREMENTS ARE THE LIABILITY OF OTHERS.

2. THESE STRUCTURES ARE ENGINEERED AS CAPABLE OF SUPPORTING DEAD LOAD OF THE STRUCTURE AND LIVE AND WIND LOADS. UPGRADES NOT SPECIFICALLY ADDRESSED HEREIN, SUCH AS WINDOWS, DOORS, OR ANOTHER COMPONENT NOT LISTED IN THE FLORIDA BUILDING CODE APROVED PRODUCT LIST, AND NOT PROVIDED AND INSTALLED BY TUBULAR BUILDING SYSTEMS, WHICH CAUSE ADDITIONAL LOADS ON THE STRUCTURE SHALL BE AT THE OWNER'S RISK. FLORIDA ENGINEERING LLC, SHALL NOT BE RESPONSIBLE FOR FAILURE OR STRUCTURAL DAMAGE DUE TO THE EXTRA LOAD.

3. LOW ULTIMATE WIND SPEED 105 TO 140 MPH (NOMINAL WIND SPEED 81 TO 108 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 5.0 FEET.

4. HIGH ULTIMATE WIND SPEED 141 TO 170 MPH (NOMINAL WIND SPEED 109 TO 132 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 4.0 FEET.

5. ALL STEEL TUBING SHALL BE 50 KSI GALVANIZED STEEL. ALL FASTENERS SHALL BE ZINC COATED HARDWARE.

6. 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 HAT CHANNELS (UNLESS OTHERWISE NOTED).

7. 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.

8. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9" OR END = 6", (MAX.).

9. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
SOIL SITE CLASS = D
RISK CATEGORY I/II/III
R = 3.25 Ie = 1.0
Sds = 0.087 g V = CsW
Sdi = 0.084 g

10. GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES.

11. 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.

12. MIN. LAP REQUIREMENT FOR REBAR IN FOOTER IS 25".

13. SOIL TO BE COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY, AT OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM D1557-93

14. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC. FOR RISK CATEGORY II, III, & IV STRUCTURES ONLY.

15. ALL OPEN AREAS OF CONCRETE OUTSIDE OF THE PROPOSED STRUCTURE SHALL BE DESIGNED TO SLOPE AWAY FROM THE STRUCTURE.

16. 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.

| SHEET NO. | DRAWING INDEX |
|---|---|
| S/01 | GENERAL NOTES |
| S/02 | PLAN/ ELEVATIONS |
| S/03 | FOUNDATION PLAN |
| S/04 | DETAILS |

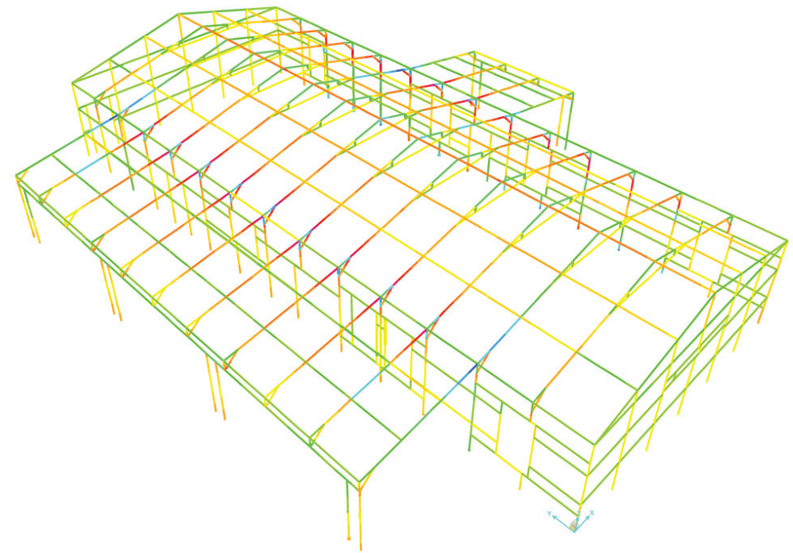
PROPOSED METAL BUILDING FOUNDATION & SHELL STRUCTURAL DESIGN ONLY. ALL OTHER REQUIRED PERMITS TO BUILD OUT TO A HABITABLE LIVING SPACE ARE TO BE BY OTHERS/ PER SEPERATE CERTIFICATE. INCLUDING BUT NOT LIMITED TO, ELECTRICAL, PLUMBING, ENERGY CALCS., ETC.
FOR MORE INFORMATION VISIT:
https://flengineeringllc.com/order/ OR SCAN QR CODE.

THE ENGINEERING ON THESE PLANS IS SITE SPECIFIC FOR (1) STRUCTURE ONLY AT THE PROVIDED ADDRESS(ES).

Columbia County Building Department
Plans Reviewed for Code Compliance
State of Florida

| PRODUCT CATEGORY | SUB CATEGORY | MANUFACTURER | APPROVAL No. & DATE |
|---|---|---|---|
| STRUCTURAL COMPONENTS | ROOF DECK | CAPITAL METAL SUPPLY, INC. 29 GA. CAPITAL RIB ROOF PANEL | FL20147.2-R3 12/13/23 |
| STRUCTURAL COMPONENTS | STRUCTURAL WALL | CAPITAL METAL SUPPLY, INC. 29 GA. CAPITAL RIB WALL PANEL | FL20148.2-R3 12/13/23 |
| EXTERIOR DOORS | SWINGING | MASONITE INTERNATIONAL WOOD-EDGE STEEL SIDE-HINGED DOOR UNIT | FL5465.1-R11 12/14/23 |
| EXTERIOR DOORS | SWINGING | PLASTPRO INC. / NANYA PLASTICS CORP. A. SMOOTH/WOOD GRAIN/ RUSTIC/MAHOGANY SERIES N FIBERGLASS DOOR | FL15220.1-R5 10/17/23 |
| WINDOWS | SINGLE HUNG | MI WINDOWS AND DOORS 3500 HP | FL17894.1-R6 08/19/23 |

CTP = CONTRACTOR TO PROVIDE APPROVED PRODUCTS THAT MEET OR EXCEED WIND DESIGN PRESSURES.



3-D FINITE ELEMENT ANALYISIS PERFORMED
STRUCTURE COMPLIES w/ FBC 2023 8th EDITION


**DESIGN DATA**

| | |
|---|---|
| DESIGN CRITERIA : | ASCE/SEI 7 |
| RISK CATEGORY : | II |
| OCCUPANCY CLASSIFICATION : | R3 |
| CONSTRUCTION TYPE : | II-B |
| DEFLECTION LIMIT = | L/240 |
| ULTIMATE DESIGN WIND SPEED (MPH) $V_{ULT}$ = | 120 |
| NOMINAL DESIGN WIND SPEED (MPH) $V_{ASD}$ = | 93 |
| EXPOSURE CATEGORY : | C |
| MEAN BUILDING HEIGHT (FT) = | 11.88 |
| MINIMUM BUILDING PLAN DIMENSION (FT) = | 30.00 |
| END ZONE DIMENSION (FT) a = | 3.00 |
| ROOF STYLE : | GABLE |
| ROOF PITCH : | 3.00 IN 12 |
| OCCUPANCY CLASSIFICATION : | PARTIALLY ENCLOSED |
| DEAD LOAD (DUE TO SELF-WEIGHT) = | 3.5 PSF |
| ROOF LIVE LOAD = | 12 PSF |
| GROUND SNOW LOAD = | 0 PSF |

**ADJUSTED C & C WIND PRESSURES (ASD) (PSF)**

| ROOF | EWA (FT²) | |
|---|---|---|
| | 75.00 | |
| Zone 1' | NA | NA |
| Zone 1 | 15.2 | -26.6 |
| Zone 2' | NA | NA |
| Zone 2 | 15.2 | -33.8 |
| Zone 3' | NA | NA |
| Zone 3 | 15.2 | -41.2 |

| ROOF O/H | EWA (FT²) | |
|---|---|---|
| | 75.00 | |
| Zone 1' | NA | NA |
| Zone 1 | NA | -40.1 |
| Zone 2' | NA | NA |
| Zone 2 | NA | -47.2 |
| Zone 3' | NA | NA |
| Zone 3 | NA | -54.8 |

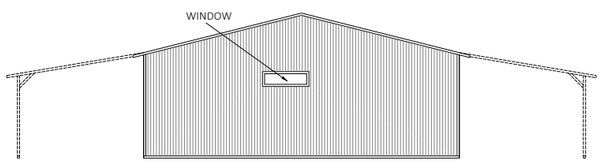
| WALL | EWA (FT²) | |
|---|---|---|
| | 50.00 | |
| Zone 4 | 22.9 | -24.5 |
| Zone 5 | 22.9 | -27.3 |

| SWING DOOR | EWA (FT²) | |
|---|---|---|
| | 20.00 | |
| Zone 4 | 24.0 | -25.6 |
| Zone 5 | 24.0 | -29.5 |

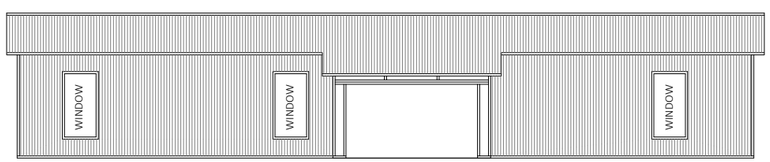
| ROLL-UP DOOR | EWA (FT²) | |
|---|---|---|
| | 87.50 | |
| Zone 4 | 22.2 | -23.8 |
| Zone 5 | 22.2 | -25.9 |

| WINDOW | EWA (FT²) | |
|---|---|---|
| | 4.00 | |
| Zone 4 | 24.8 | -26.5 |
| Zone 5 | 24.8 | -31.3 |

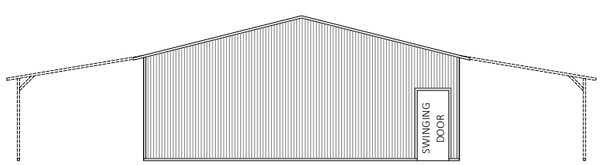
CONTRACTOR TO PROVIDE BUILDING CODE APPROVED PRODUCTS TO MEET OR EXCEED THE DESIGN PRESSURES AS TABULATED.



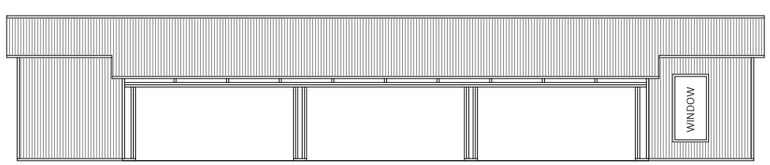
FRONT ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION



LEFT SIDE ELEVATION

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FLORIDA ENGINEERING LLC
4161 TAMIAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com
CA CERT. #30782


PROJECT NO. 2403108

CONTRACTOR:
TUBULAR BUILDING SYSTEMS
P.O. BOX. 2254
LAKE CITY, FL 32056

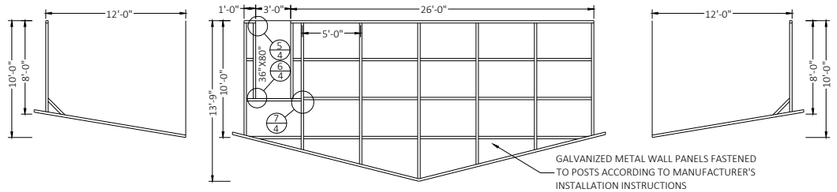
PROJECT ADDRESS:
SNIDER
403 SE TEVIS AVE
LAKE CITY, FL 32025

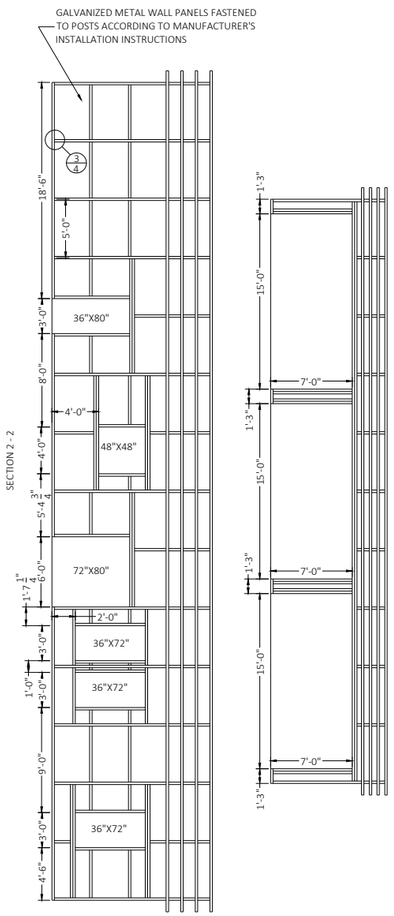
| | |
|---|---|
| DESIGN DATE: | 02/23/2024 |
| REVISION 1: | 02/23/2024 |
| REVISION 2: | 02/23/2024 |
| DRAWN BY: | TCP |
| SCALE: | NTS |

SHEET: 01

SCOPE OF WORK:
PROPOSED METAL BUILDING FOUNDATION & EXTERNAL SHELL STRUCTURAL DESIGN ONLY. ALL OTHER REQUIRED PERMITS TO BUILD OUT TO A HABITABLE LIVING SPACE ARE TO BE BY OTHERS, INCLUDING BUT NOT LIMITED TO, ELECTRICAL, PLUMBING, ENERGY CALCULATIONS, ETC.

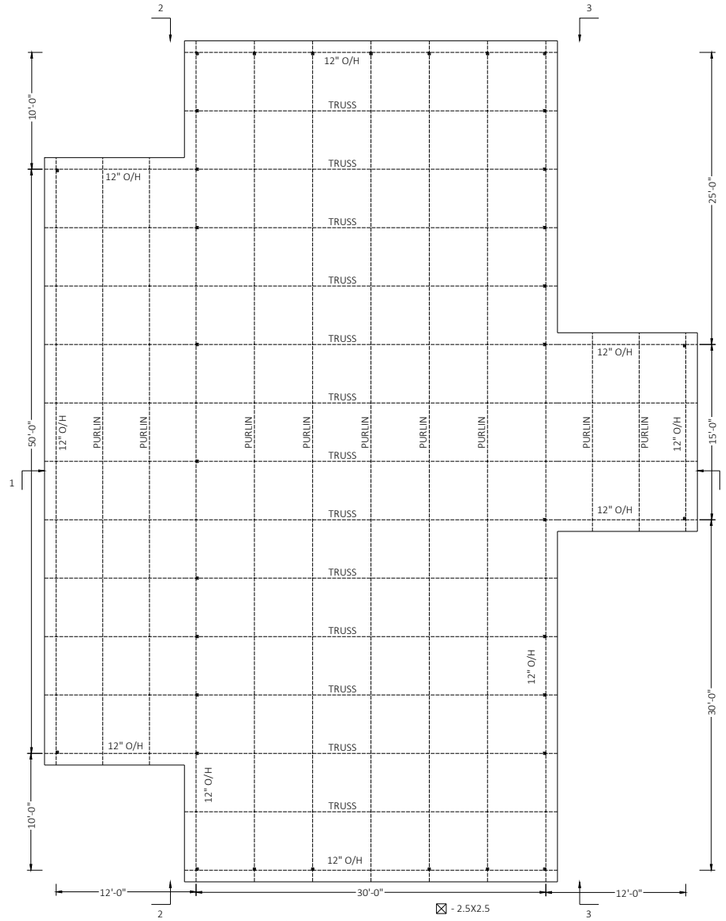
FRAMING NOTES:
1. ALL FRAME MEMBERS ARE 2.5"X2.5"X14 GA TS U.N.O.
2. MAX. RAFTER SPACING = 5'-0"
3. U-BRACE = 2.5"X2"X18 GA CHANNEL
4. PURLIN = 1.5" X 18GA HAT CHANNEL
5. KNEE BRACE = 2.5"X2"X18GA CHANNEL

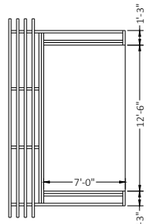


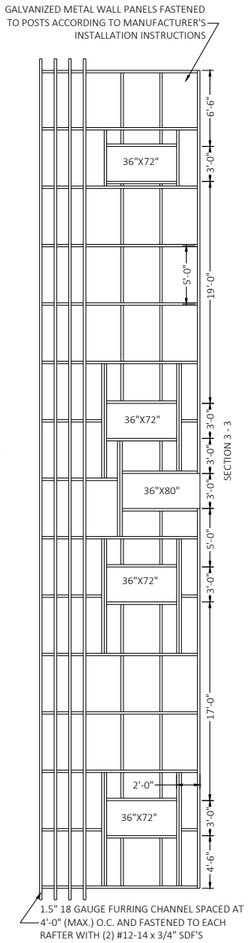



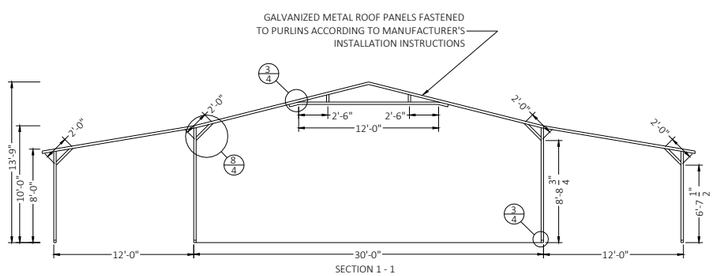


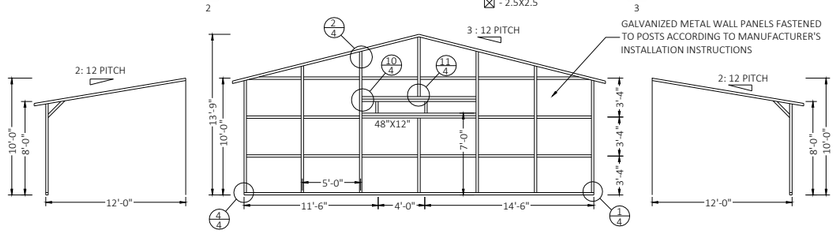


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| DRAWN BY: | TCP |
| SCALE: | NTS |

SHEET: 02

GENERAL NOTES

CONCRETE:
CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.

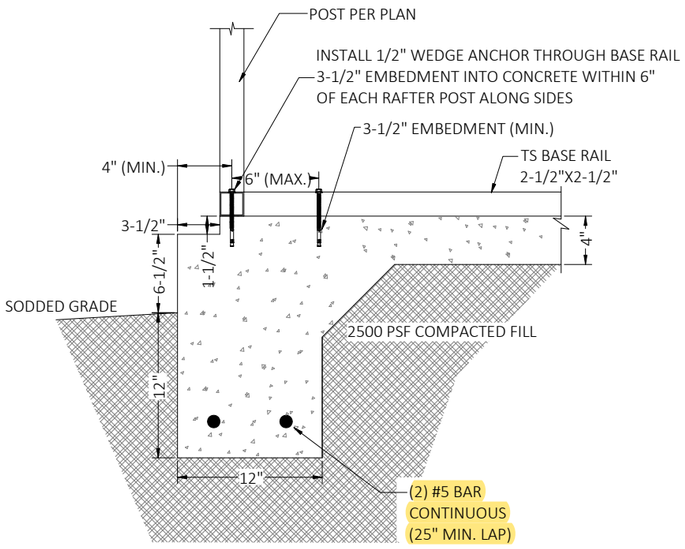
COVERAGE OF THE REINFORCED STEEL:
FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318: 3 INCHES WHERE THE CONCRETE IS POURED AGAINST AND TEMPORARY IN CONTACT WITH THE EARTH OR UNPROTECTED FROM THE EARTH OR WEATHER, OTHERWISE 1-1/2 INCHES.

CONCRETE NOTE:
ALL OPEN AREAS OF CONCRETE OUTSIDE OF THE PROPOSED STRUCTURE SHALL BE DESIGNED TO SLOPE AWAY FROM THE STRUCTURE

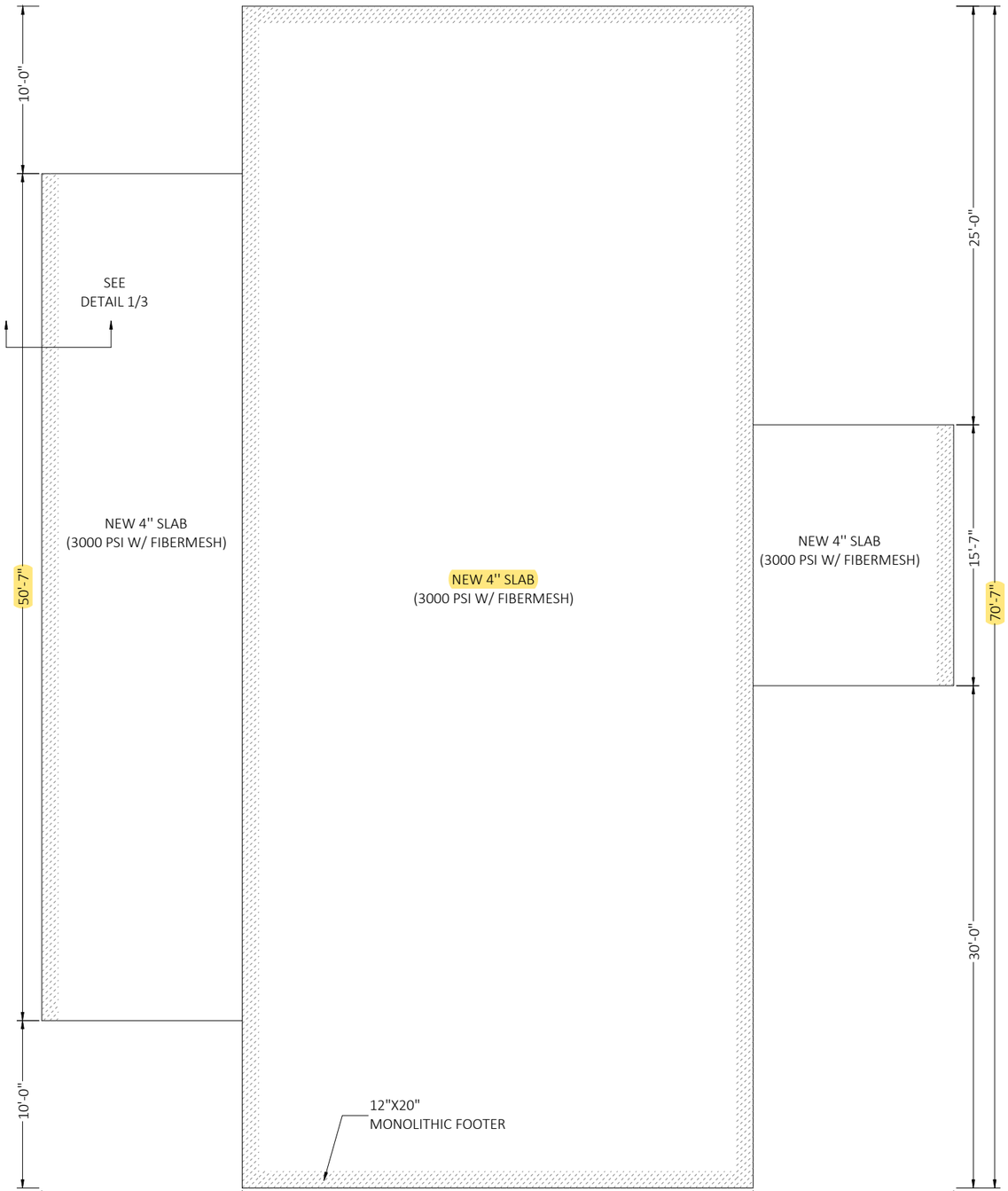
REINFORCING STEEL:
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

REINFORCEMENT MAY BE BENT IN THE FIELD OR SHOP AS LONG AS:
1. IT IS BENT COLD;
2. REINFRCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT;
3. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.

FROST PROTECTION:
FOUNDATION SHALL BE PROTECTED AGAINST FROST USING RIGID FOAM INSULATION (EPS OR EQUIVALENT). FOR NO FROST PROTECTION OPTION, COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING REQUIRED FOOTING DEPTH BASED ON FROST LINE DEPTH.




| 1 | 12"X20" MONO. FOOTER BASE RAIL ANCHORAGE<br>SCALE: NTS |
|---|---|




FOUNDATION PLAN SCALE :
NTS

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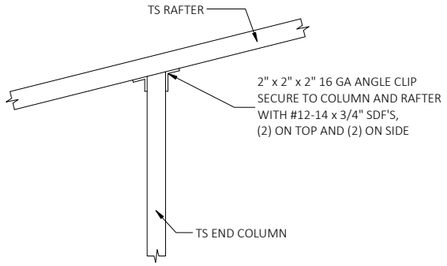
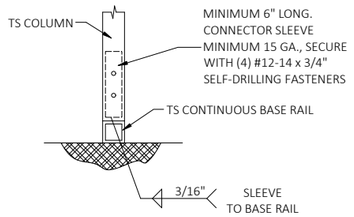
| SHEET: | 03 |




| 2 | END POST/RAFTER CONNECTION DETAIL SCALE: NTS |
|---|---|




| 3 | RAFTER POST/BASE RAIL CONNECTION DETAIL SCALE: NTS |
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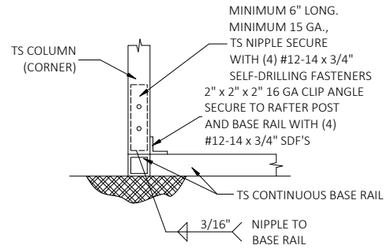
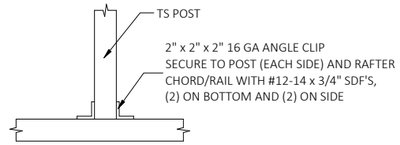
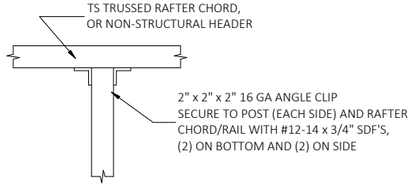


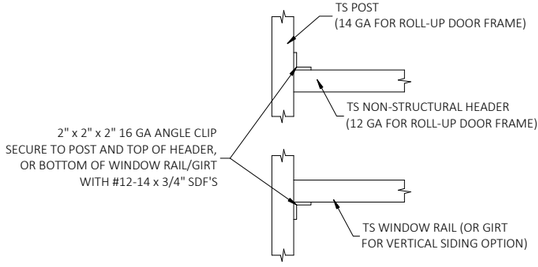

| 4 | END POST/BASE RAIL CONNECTION DETAIL SCALE: NTS |
|---|---|



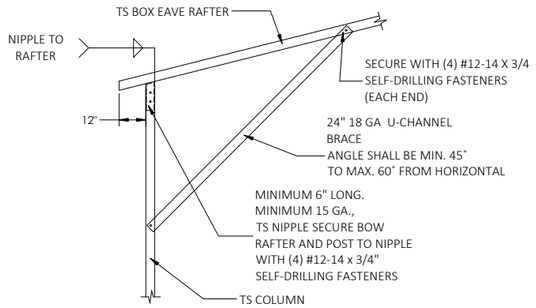

| 5 | POST TO NON-STRUCTURAL HEADER, BASE, RAIL OR WINDOW RAIL CONNECTION DETAIL SCALE: NTS |
|---|---|



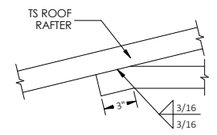

| 6 | POST TO NON-STRUCTURAL HEADER, BASE, RAIL OR WINDOW RAIL CONNECTION DETAIL SCALE: NTS |
|---|---|




| 7 | NON-STRUCTURAL HEADER OR WINDOW RAIL TO POST CONNECTION DETAIL SCALE: NTS |
|---|---|




| 8 | BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL SCALE: NTS |
|---|---|




| 9 | COLLAR-TIE CONNECTION SCALE: NTS |
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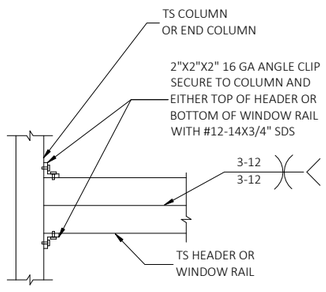


| 10 | DOUBLE HEADER TO COLUMN CONNECTION DETAIL SCALE: NTS |
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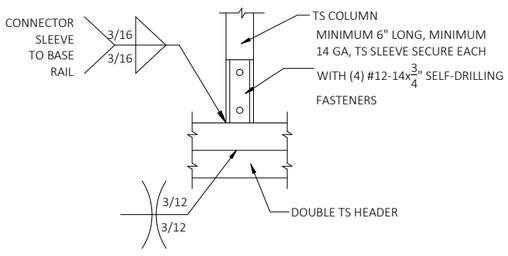


| 11 | COLUMN/DOUBLE HEADER CONNECTION DETAIL SCALE: NTS |
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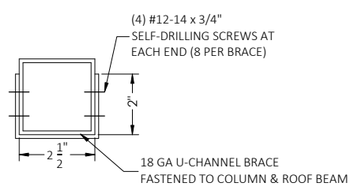
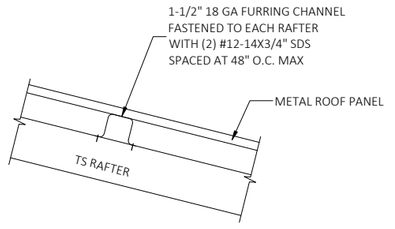



| 12 | BRACE SECTION SCALE: NTS |
|---|---|




| 12 | PANEL ATTACHMENT (ALTERNATE FOR VERTICAL ROOF PANELS) 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.

RICHARD EDWARD WALKER LICENSE No. 61240 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Richard E Walker
Date: 2024.02.28 14:23:43-05'00'

FLORIDA ENGINEERING LLC
4161 TAMIAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com
CA CERT. #30782

PROJECT NO. 2403108

CONTRACTOR:
TUBULAR BUILDING SYSTEMS
P.O. BOX. 2254
LAKE CITY, FL 32056

PROJECT ADDRESS:
SNIDER
403 SE TEVIS AVE
LAKE CITY, FL 32025

| | |
|---|---|
| DESIGN DATE: | 02/23/2024 |
| REVISION 1: | 02/23/2024 |
| REVISION 2: | 02/23/2024 |
| DRAWN BY: | TCP |
| SCALE: | NTS |

SHEET: 04