

APPLICABLE CODES AND STANDARDS

- 2020 FLORIDA BUILDING CODE (7TH EDITION)
- 2018 INTERNATIONAL BUILDING CODE
- ASCE 7-16: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES
- AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)
- ACI 318-14: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
- AWS D1.1: STRUCTURAL WELDING

DESIGN LOADS

- DEAD LOAD = 15 PSF
- LIVE LOAD = 20 PSF
- WIND LOAD (SEE TABLE 1)
- RISK CATEGORY = II
- WIND EXPOSURE CATEGORY = C
- ULTIMATE WIND SPEED = 120 MPH
- NOMINAL WIND SPEED = 93 MPH

INSTALLATION NOTES AND SPECIFICATIONS

- END WALL COLUMNS (POST) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING U.N.O.
- SPECIFICATIONS APPLICABLE TO 29 GA METAL PANELS FASTENED DIRECTLY TO 2.5"x2.5"x14 GA TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS. 29 GA METAL PANELS SHALL BE FASTENED DIRECTLY TO 18 GA HAT CHANNELS U.N.O.
- AVERAGE FASTENER SPACING ON CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9" AND END = 6" MAX.
- FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING SCREWS (SDS), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20'-0" OR LESS, AND ROOF SLOPES OF 18" (4:12 PITCH) OR LESS. SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
- ANCHORS SHALL BE INSTALLED THROUGH THE BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES AND ENDS.
- STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBARS WITH WELDED NUT X 30" LONG AND MAY BE USED IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED. SOIL NAILS MAY BE USED FOR WIND SPEEDS LESS THAN OR EQUAL TO 145 MPH.
- RAFTER SPACING IS 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH AND 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH.

DRAWING INDEX

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ENCLOSED METAL BUILDING DESIGN MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT BOX EAVE FRAME AND BOW EAVE FRAME

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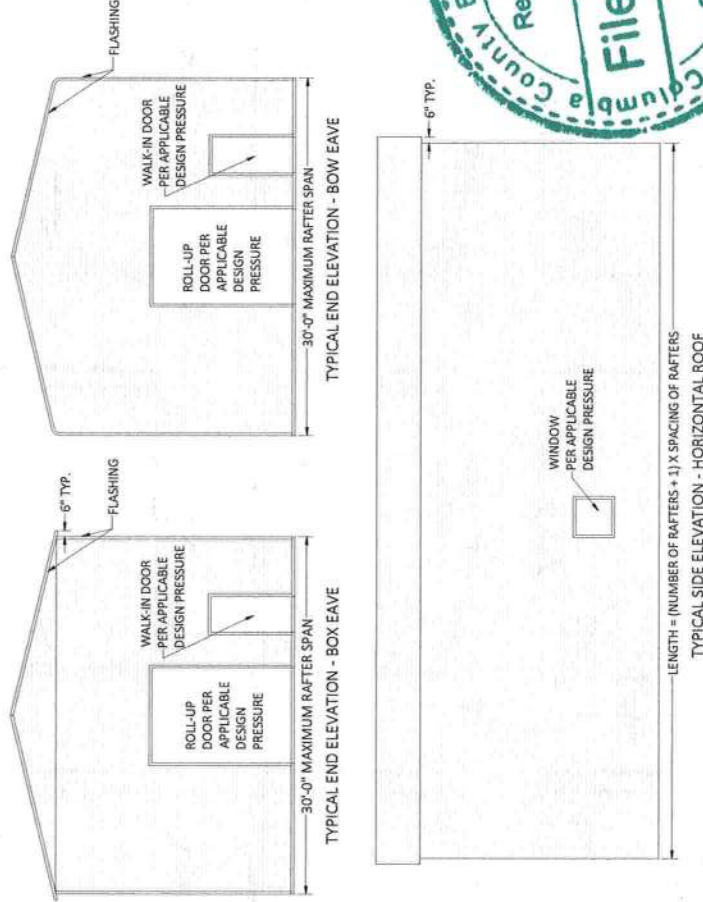


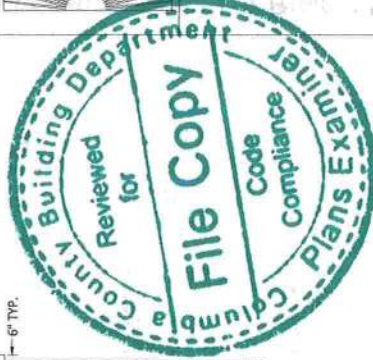
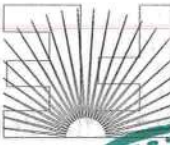
TABLE 1

MEMBER	PRODUCT APPROVAL NUMBER	WIND DESIGN PRESSURES
ROOF PANELS	FL39466	+12.1 PSF / -40.2 PSF
WALL PANELS	FL39594	+16.8 PSF / -21.3 PSF
GARAGE DOOR	CTP	+16.8 PSF / -21.3 PSF
WALK-IN DOOR	CTP	+16.8 PSF / -21.3 PSF

DESIGN WIND PRESSURES	120 MPH
ZONE 1	+12.1 PSF / -21.2 PSF
ZONE 2	+12.1 PSF / -34.5 PSF
ZONE 3	+12.1 PSF / -40.2 PSF
ZONE 4	+16.8 PSF / -18.4 PSF
ZONE 5	+16.8 PSF / -21.3 PSF

CTP = CONTRACTOR TO PROVIDE 2020 FBC APPROVED PRODUCTS THAT MEET OR EXCEED DESIGN PRESSURES AS TABULATED.

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www.flengineeringllc.com
PROJECT NO. 2217228
CA CERT. #30782



CONTRACTOR:
ELITE METAL
MANUFACTURING
PROJECT ADDRESS:
12'-30" WIDE PLANS
10121 88TH TRACE,
LIVE OAK FL 32060

DESIGN DATE: 06/24/2022
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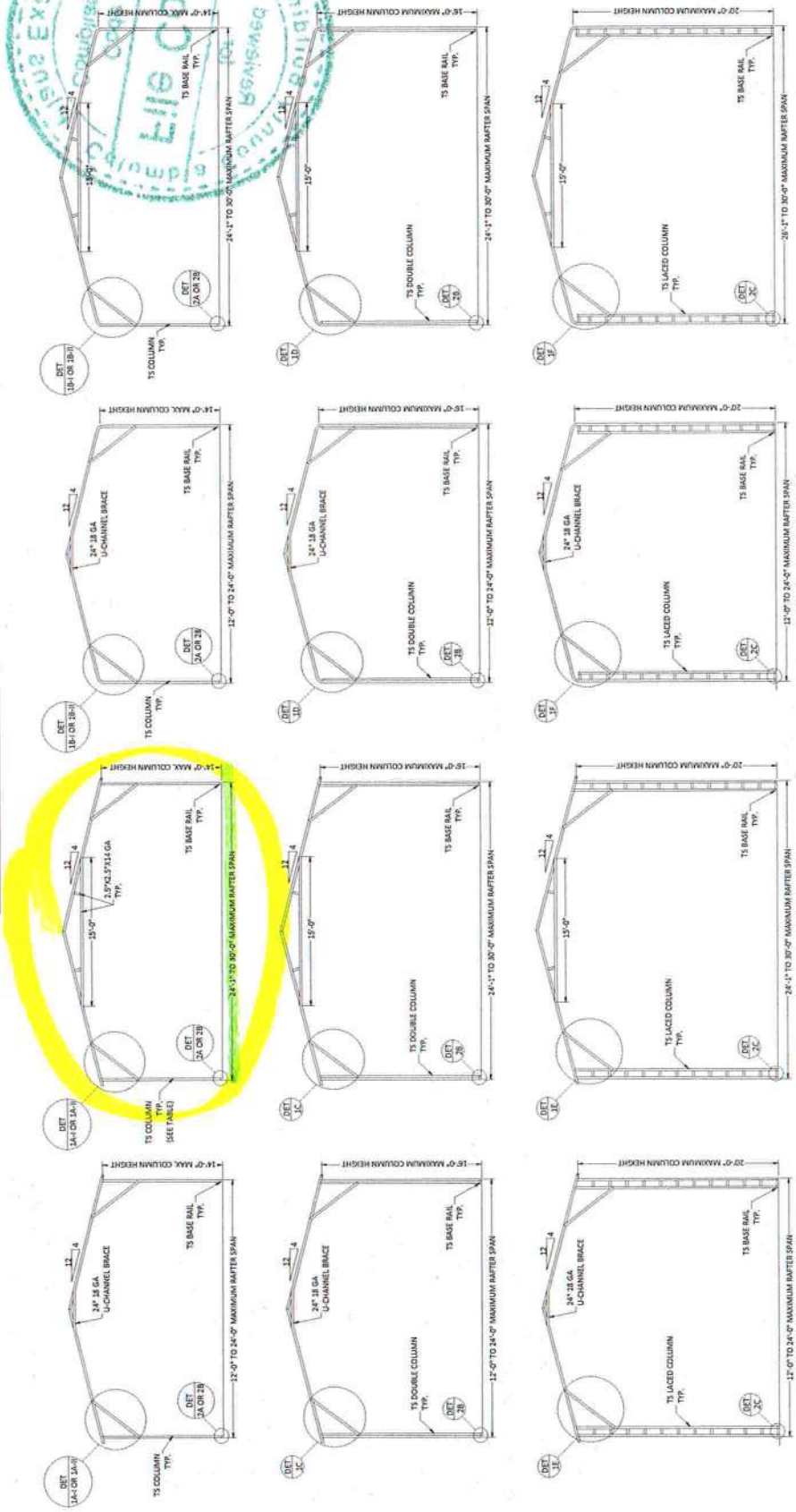
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BUILDING LENGTH	POST DIMENSIONS
< 55'-0"	ALL POSTS 2.500.3014 GA
55'-0" TO 60'-0"	(1) CENTRAL POSTS (12) 3014 GA (14) CENTRAL POSTS 2.5012.3012 GA
	POST 2.5012.3014 GA



BOX EAVE FRAME

BOW EAVE FRAME

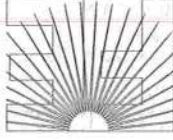
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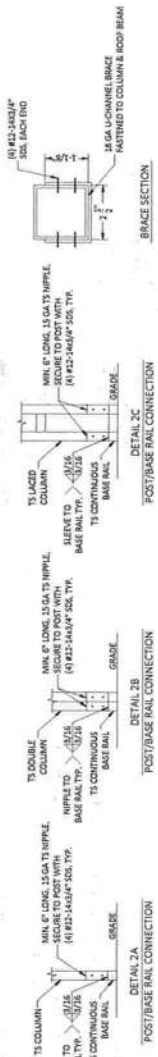
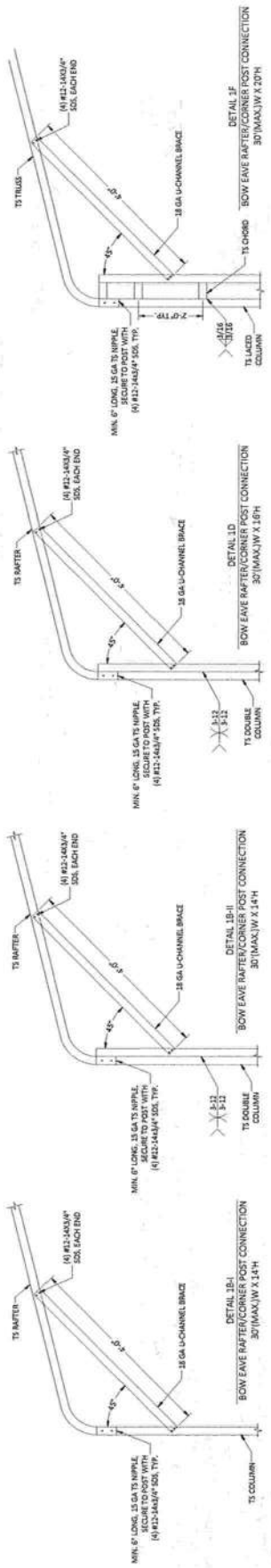
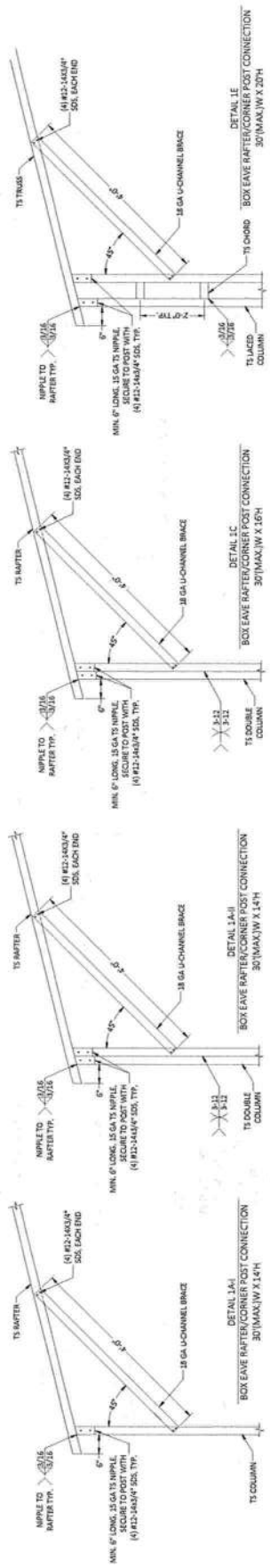
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GENERAL NOTES:
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 1500 PSF.

CONCRETE
MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

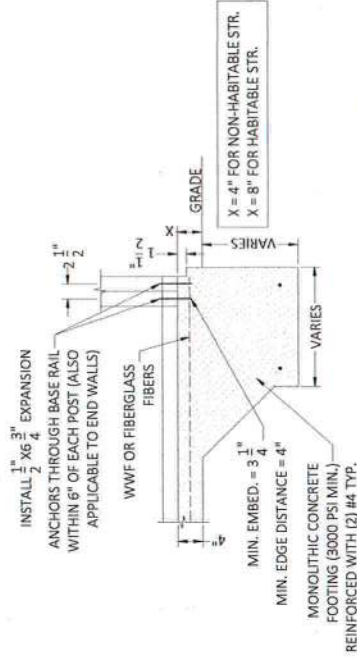
REINFORCING STEEL

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.

HELIX ANCHOR NOTES

1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, CORALS, MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS AND CLAYS, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT.
2. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT.
3. FOR VERY LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.

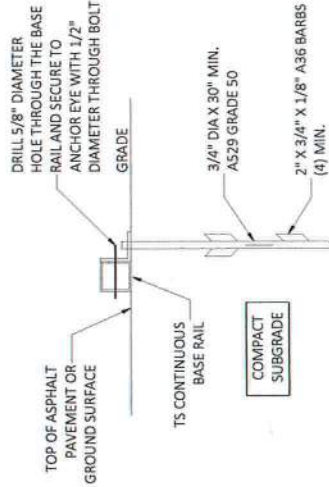
MONOLITHIC FOOTER SIZE	
110 C - 140 C	8"X8" - (2) #4
ABOVE 140 C	12"X12" - (2) #4



DETAIL 3A

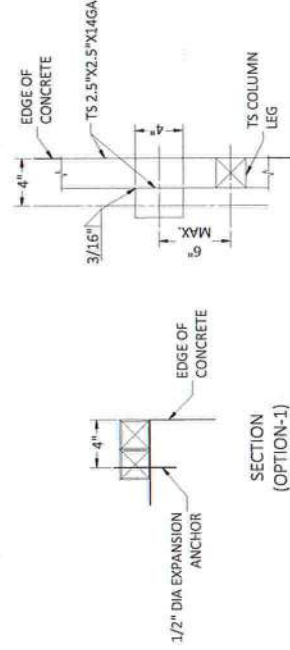
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

BASE RAIL ANCHORAGE OPTIONS



DETAIL 3C

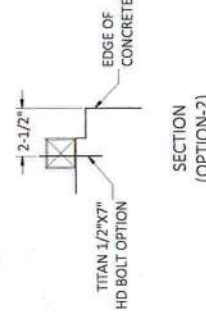
ASPHALT BASE ANCHORAGE
(HP 9 BARBED DRIVE ANCHOR)



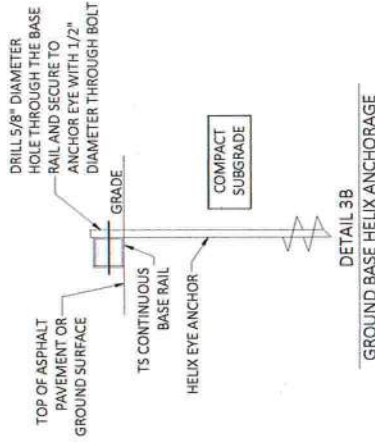
SECTION
(OPTION-1)

TOP VIEW
(OPTION-1)

TYPICAL ANCHOR DETAIL WHEN BASE
RAIL IS NEAR EDGE OF CONCRETE



SECTION
(OPTION-2)



DETAIL 3B

GROUND BASE HELIX ANCHORAGE

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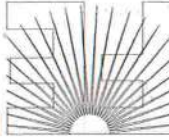


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CA CERT. #30702

PROJECT NO. 2217228



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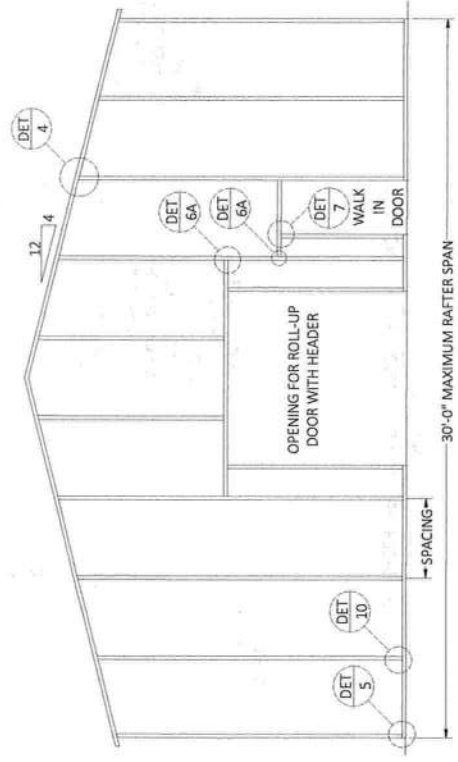
12'-30" WIDE PLANS
10121 88TH TRACE,
LIVE OAK FL 32060

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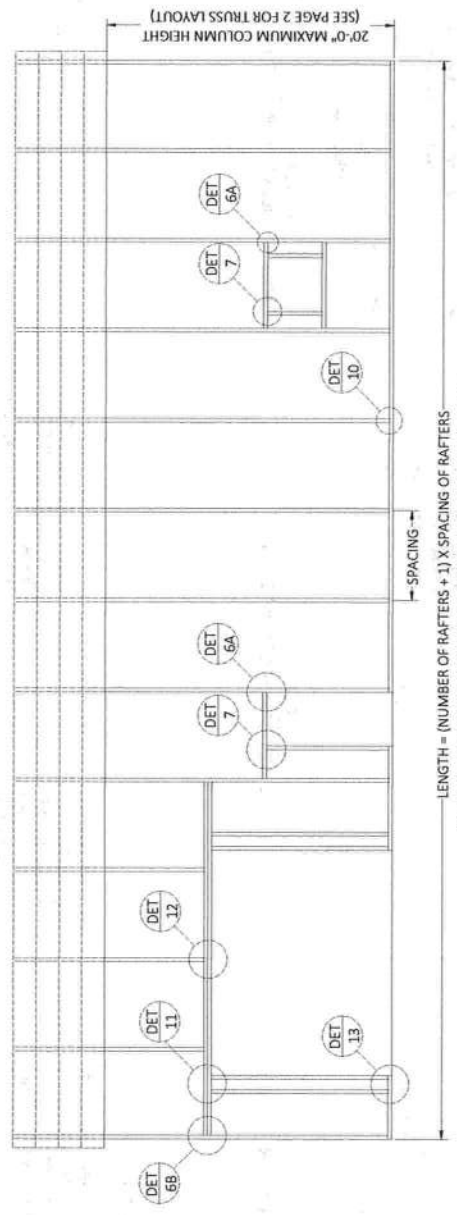
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30'-0" MAXIMUM RAFTER SPAN
SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH
SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH
TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION



LENGTH = (NUMBER OF RAFTERS + 1) X SPACING OF RAFTERS
SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH
SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH
TYPICAL BOX EAVE RAFTER SIDE WALL FRAMING SECTION

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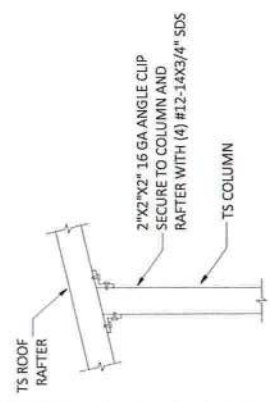
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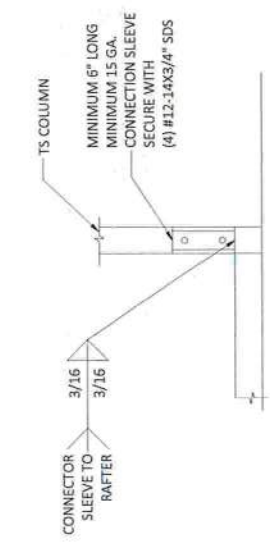
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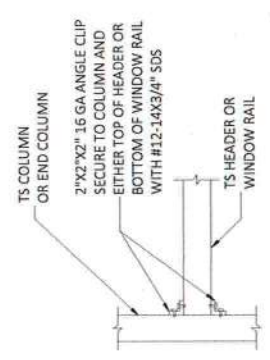
CONNECTION DETAILS



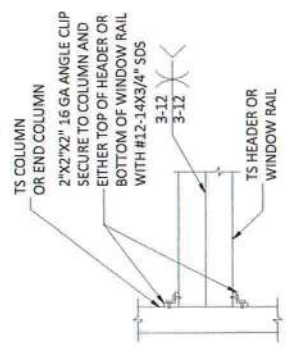
DETAIL 4
END COLUMN/RAFTER CONNECTION



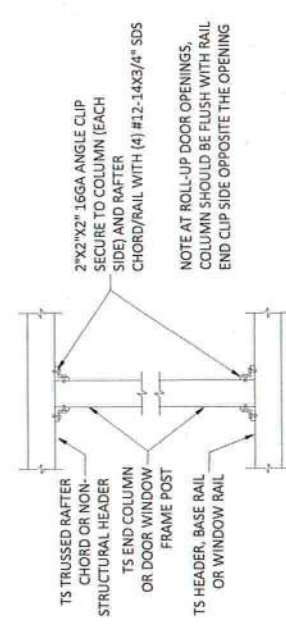
DETAIL 5
END POST/BASE RAIL CONNECTION



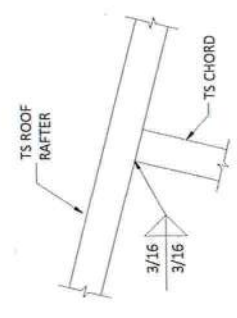
DETAIL 6A
HEADER TO COLUMN CONNECTION



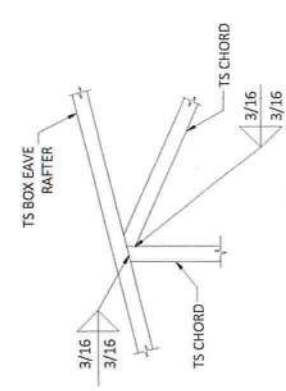
DETAIL 6B
DOUBLE HEADER TO COLUMN CONNECTION



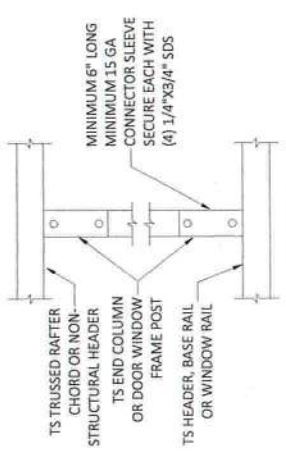
DETAIL 7
POST TO HEADER, BASE RAIL OR WINDOW RAIL CONNECTION



DETAIL 8
RAFTER TO CHORD CONNECTION



DETAIL 9
TRUSS POST AND CHORD TO RAFTER CONNECTION



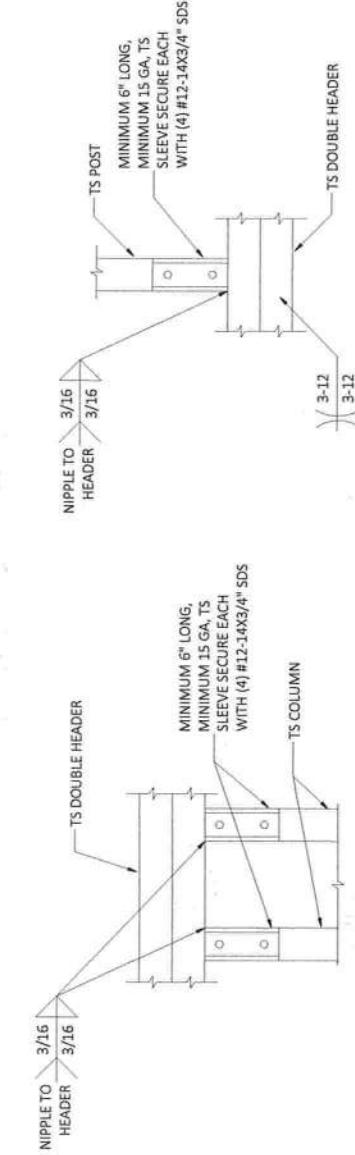
DETAIL 10
POST TO HEADER, BASE RAIL CONNECTION

CONNECTION DETAILS

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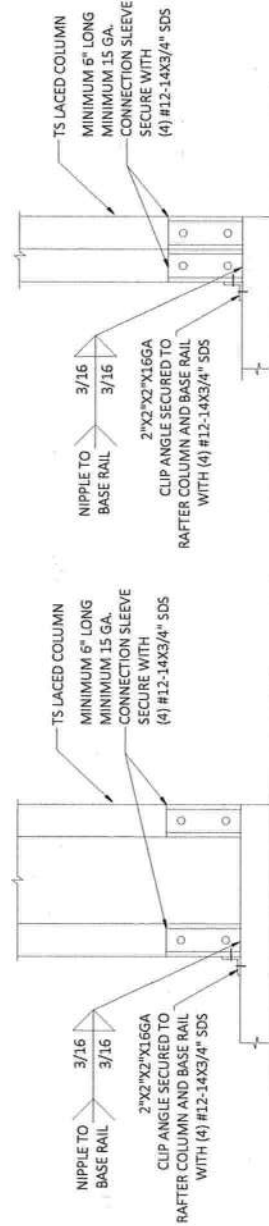


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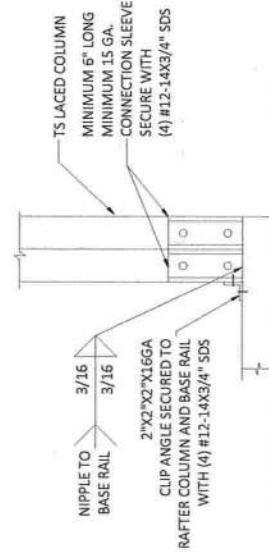


DETAIL 11
DOUBLE HEADER TO POST CONNECTION

DETAIL 12
POST/DOUBLE HEADER CONNECTION

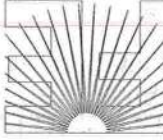


DETAIL 13A
POST/BASE RAIL CONNECTION



DETAIL 13B
POST/BASE RAIL CONNECTION

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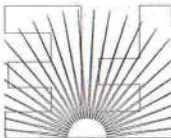
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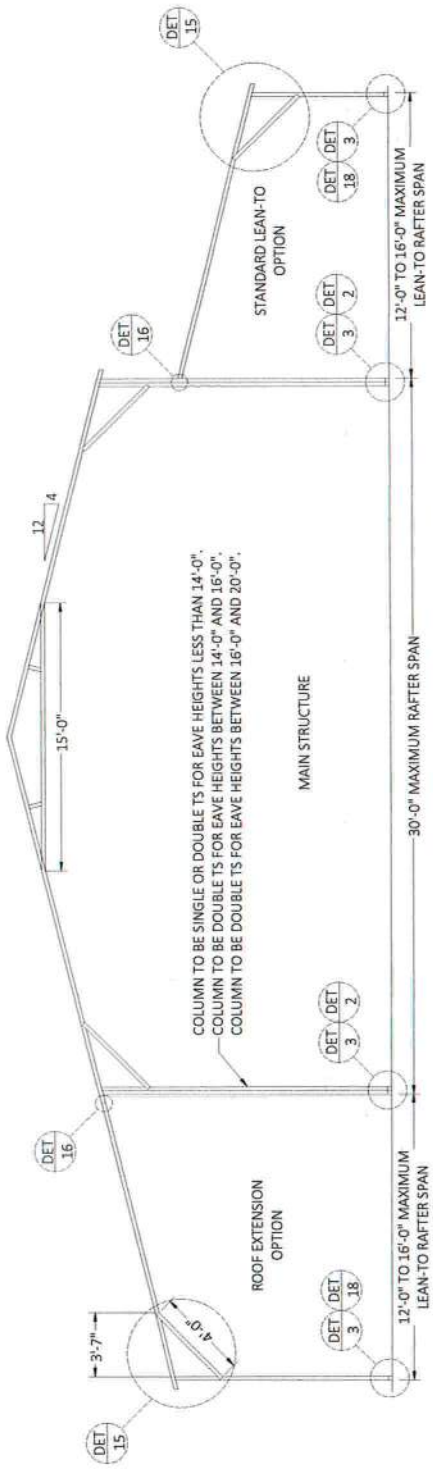
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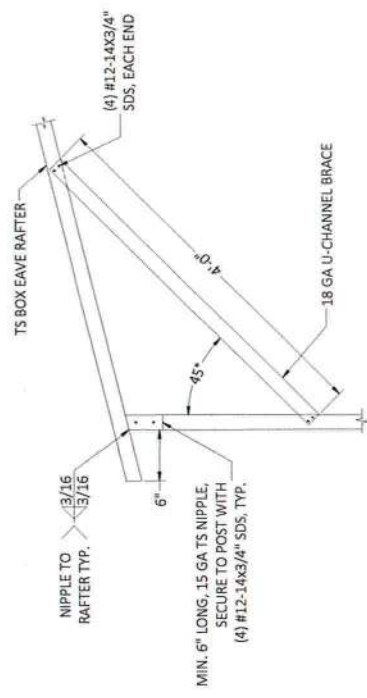


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TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION



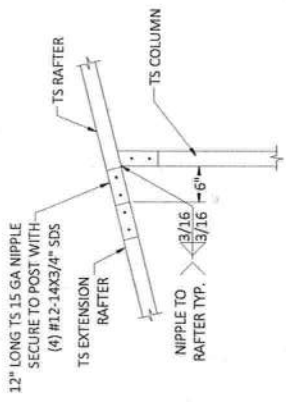
DETAIL 15
LEAN-TO RAFTER/CORNER POST CONNECTION



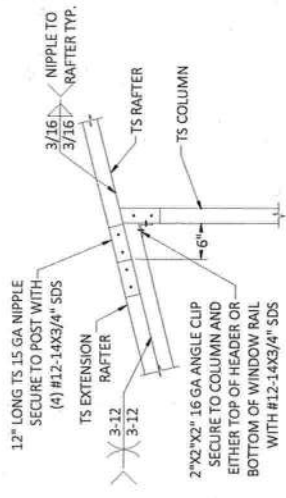
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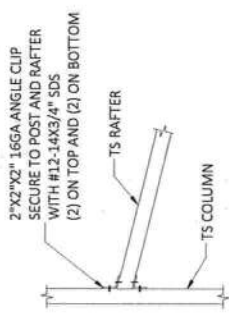
CONNECTION DETAILS



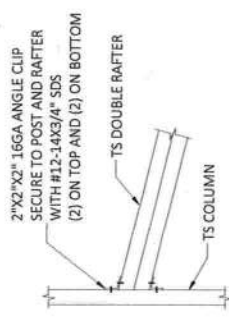
DETAIL 16A
SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN 12'-0"



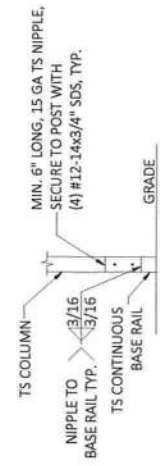
DETAIL 16B
SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 12'-0" AND 16'-0"



DETAIL 17A
LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN 12'-0"

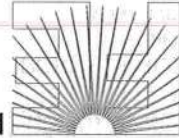


DETAIL 17B
LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 12'-0" AND 16'-0"



DETAIL 18
LEAN-TO POST CONNECTION

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A circular professional engineer seal for Craig E. Gunderson, State of Oregon. The seal features the text "CRAIG E. GUNDERSON" around the top inner edge and "PROFESSIONAL ENGINEER" around the bottom inner edge. In the center, it reads "STATE OF OREGON".

WINDOW WITH SPECIFIC ROOF PITCH

LENGTH = (NUMBER OF BATTERS - 1) X SPACING OF BATTERS

TYPICAL SIDE ELEVATION - VERTICAL ROOF/SIDING

Diagram illustrating a typical end elevation of a building. The structure features a gabled roof with a 6" rise and a 12" run (6" rise / 12" run). The roof is labeled "FLASHING". The main wall is labeled "36" MAXIMUM RAFTER SPAN". The wall includes a "WALK-IN DOOR PER APPLICABLE DESIGN PRESSURE" and a "ROLL-UP DOOR PER APPLICABLE DESIGN PRESSURE".

PANEL ATTACHMENT (ALTERNATE FOR VERTICAL ROOF PANELS)

ELITE METAL
MANUFACTURING

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LENGTH = (NUMBER OF RAFTERS + 1) X SPACING OF RAFTERS -
TYPICAL SIDE ELEVATION - VERTICAL ROOF/SIDING

BOX EAVE FRAME RAFTER ENCLOSED BUILDING

TYPICAL END ELEVATION - VERTICAL ROOF/SIDING

[illegible]

Diagram of a square column with the following dimensions and labels:

- Top horizontal dimension: 15'-0" MAXIMUM COLUMN HEIGHT
- Right vertical dimension: 15' BASE RAIL
- Bottom horizontal dimension: 12'-0" TO 24'-0" MAXIMUM RAILER SPAN
- Left vertical dimension: 12'
- Top-left corner: 24" 18 GA U-CHEANNEL BRACE
- Bottom-left corner: 35 SQUARE COLUMN TYP.
- Bottom-right corner: 35 SQUARE COLUMN TYP.
- Bottom-left corner detail: DET. 1/2"
- Bottom-right corner detail: DET. 1/2"

BOX EAVE FRAME

.....LENGTH = (NUMBER OF RAFTERS + 1) X SPACING OF RAFTERS
SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH
SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH
1.125" JB GA HAT CHANNELS CAN BE USED IN LIEU OF TS FOR GIRTS

END WALL OPTIONAL HEADER

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

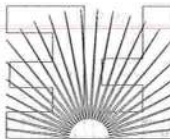
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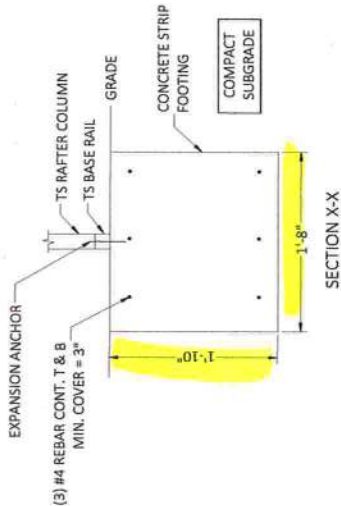
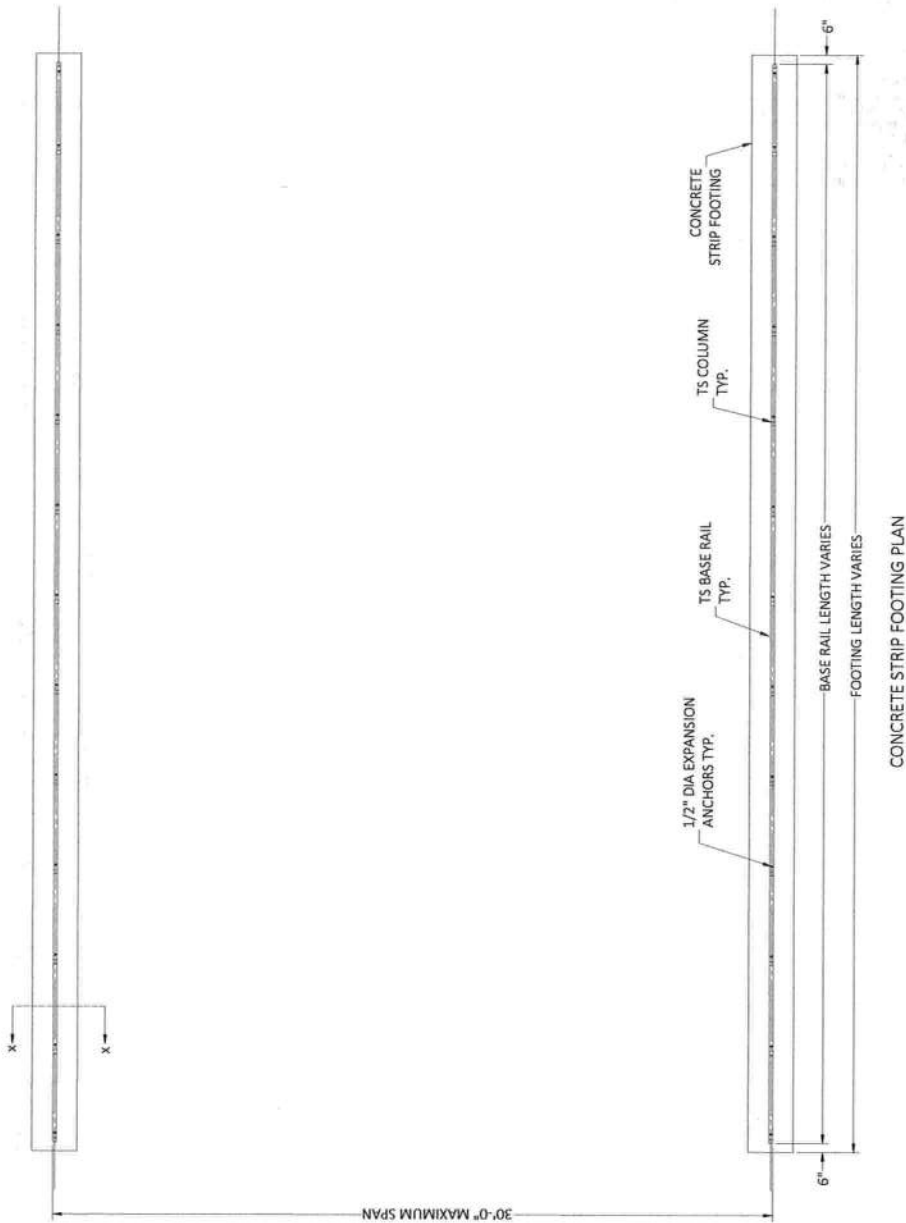
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FLORIDA ENGINEERING LLC
4161 TAMAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
www.flengineeringllc.com
PROJECT NO. 2217228



CONTRACTOR:
ELITE METAL
MANUFACTURING
PROJECT ADDRESS:
12'-30" WIDE PLANS
10121 88TH TRACE,
LIVE OAK FL 32060

DESIGN DATE:	06/24/2022
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HELIX ANCHOR NOTES

1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, CORALS, MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS AND CLAYS, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT.
2. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT.
3. FOR VERY LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.

OPTIONAL HELICAL ANCHORING DETAIL

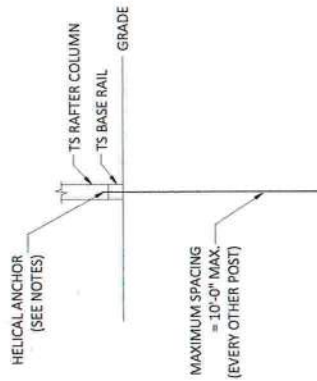
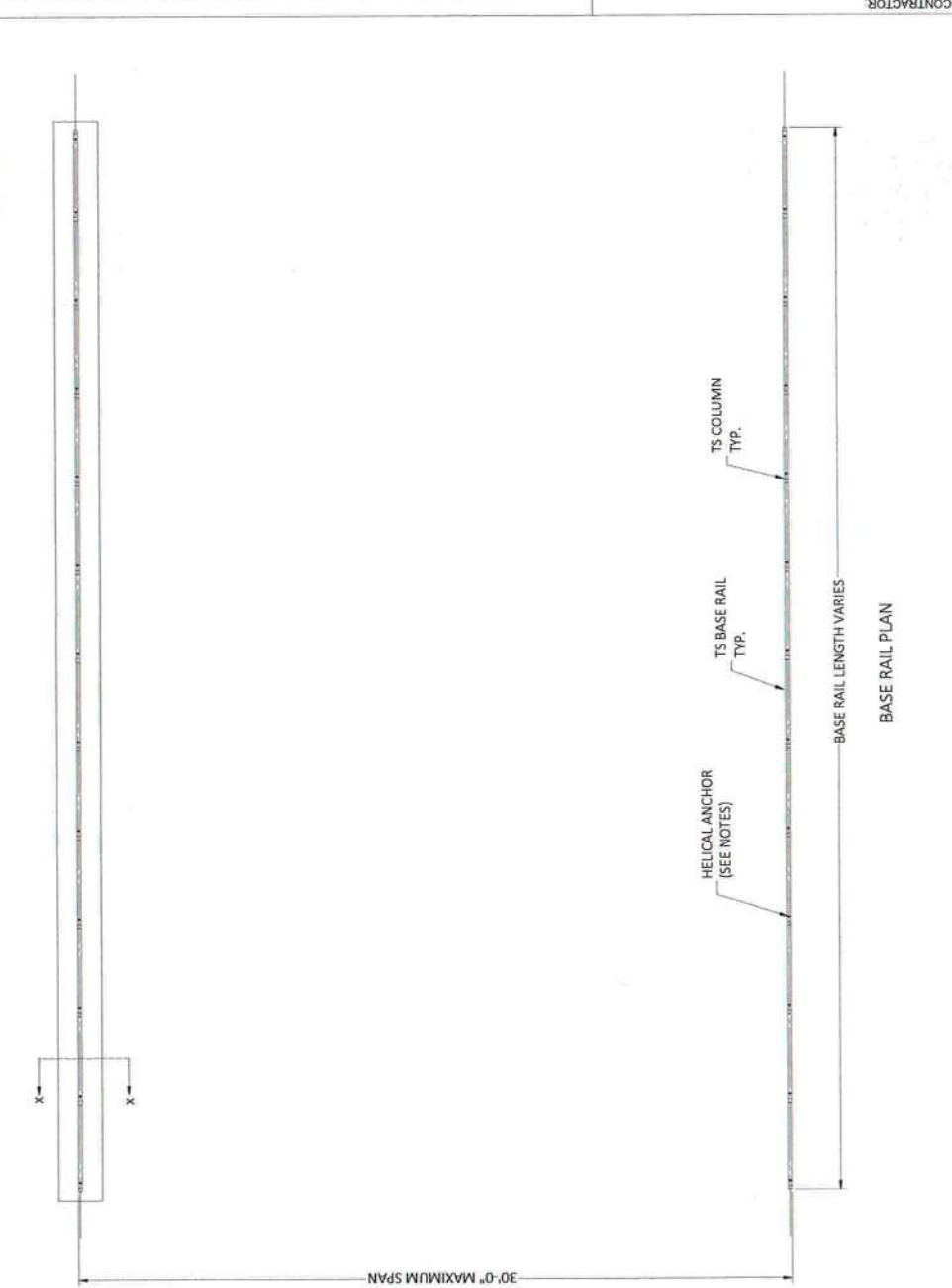
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