APPLICABLE CODES AND STANDARDS

- 2023 FLORIDA BUILDING CODE (8TH EDITION)
- 2021 INTERNATIONAL BUILDING CODE
- ASCE 7-22: 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

INSTALLATION NOTES AND SPECIFICATIONS

- ROOF PITCH SHALL NOT BE GREATER THAN 12H:4V
- 2. END WALL COLUMNS (POST) AND SIDE WALL COLUMNS ARE THE SAME U.N.O.
- 29 GA METAL PANELS SHALL BE FASTENED DIRECTLY TO 2.5" x 2.5" x 14 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.
- 4. FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS SHALL BE:
- INTERIOR = 9" 4.2. END = 6".
- 5. FASTENERS SHALL BE #12-14 x 3/4" SELF-DRILLING SCREWS (SDS), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. APPLICABLE ONLY FOR:
- MEAN ROOF HEIGHT OF 20'-0" OR LESS
- ROOF SLOPES OF 18° (4:12 PITCH) OR LESS
- SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
- 6. 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 REBAR WITH WELDED NUT x 30" LONG AND MAY BE USED IN SUITABLE SOILS.
- 7.1. 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

BOW/RAFTER FRAME, END POST, GROUND ANCHOR AND PANEL FASTENER SPACING SPECIFICATIONS FASTENER SPACING O.C FOR ULT NOMINAL MAXIMUM RAFTERS/PURLINS, & POSTS (INCHES) WIND WIND RAFTER/BOW WIND SPEED SPEED EXPOSURE AND END POST CATEGORY INTERIOR CATEGORY SPACING (FEET) BOWS/RAFTERS BOWS/RAFTERS I, II, III, or IV 115 - 150 89 - 116 151 - 180 | 117 - 139 4.0

PAGE NO.

S-1

S-2

S-3

S-4

S-5

S-6 S-7

S-8

S-9

S-10

S-11

S-12

S-13

NOTES:
1. SPECIFICATIONS APPLICABLE TO 26 OR 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 12 OR 14 GAUGE STEEL TUBE BOW FRAMES.
2. FASTENTERS CONSIST OF 1/4*-14X1* SELF-DRILLING SCREWS WITH CONTROL SEAL WASHER.

- SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 14°(3:12 PITCH SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.

DRAWING INDEX

DESCRIPTION NOTES AND SPECIFICATIONS

BOX-BOW EAVE FRAME RAFTER ENCLOSED BUILDING

BASE RAIL AND ANCHORAGE DETAILS

CONNECTION DETAILS (1 OF 4)

CONNECTION DETAILS (2 OF 4)

CONNECTION DETAILS (3 OF 4)

BOX EAVE RAFTER LEAN-TO OPTIONS

CONNECTION DETAILS (4 OF 4)

OPTIONAL CONCRETE STRIP FOOTING

OPTIONAL HELICAL ANCHORING DETAIL

FREESTANDING BOX EAVE RAFTER LEAN-TO OPTIONS

BOX EAVE RAFTER VERTICAL ROOF-SIDING OPTION

BOX EAVE RAFTER END WALL, SIDE WALL AND OPENING FRAMING

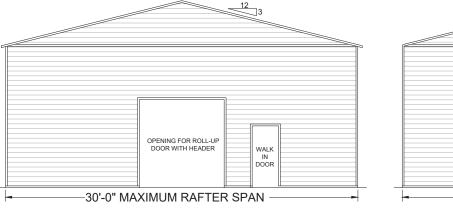
- 4. GROUND ANCHOR REQUIREMENTS ARE 1 @ EACH CORNER AND ONE EVERY OTHER INTERIOR BOW/RAFTER POST LOCATION, AT MAXIMUM OF 10' O.C., AND BOTH SIDES OF OPENINGS WHERE BASE RAIL IS ABSENT.

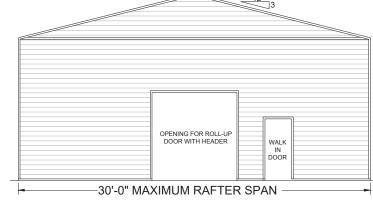
 5. GROUND ANCHORS ARE NOT REQUIRED WITH CONCRETE SLAB CONSTRUCTION.

DESIGN LOADS

- DEAD LOAD = 15 PSF
- LIVE LOAD = 20 PSF
- 3. WIND LOAD (SEE TABLE 1)

ENCLOSED METAL BUILDING DESIGN 22FT WIDE X 30FT LONG X 10FT EAVE HT.



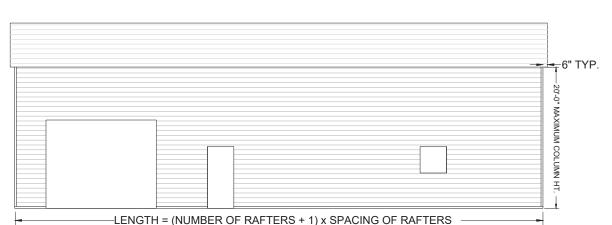


TYPICAL ELEVATION - BOX EAVE

SCALE: NTS

TYPICAL ELEVATION - BOW EAVE

SCALE: NTS



TYPICAL SIDE ELEVATION

SCALE: NTS

TABLE 1

MEMBER	PRODUCT	MAX WIND DESIGN				
	APPROVAL NUMBER	PRESSURES				
ROOF PANELS	FL39466	+41.6 PSF / -31.2 PSF				
WALL PANELS	FL39594	+55.4 PSF / -41.6 PSF				
GARAGE DOOR	CTP	CTP				
WALK-IN DOOR	CTP	CTP				

CTP = CONTRACTOR TO PROVIDE 2023 FBC APPROVED PRODUCTS THAT MEET OR EXCEED DESIGN PRESSURES AS TABLULATED.

PLANS PREPARED BY:

12558 BASS ROAD, LIVE OAK, FLORIDA 32060 P:386.320.7400 F: 850.807.7309 WWW.COLLINSENG.COM **CERTIFICATE OF AUTHORIZATION: 31728**

> SEALED BY ADAM T. COLLINS, P.E. ON 2024.05.16 PRINT COPIES OF THIS DOCUMENT ARE NOT CONSIDERED VERIFIED ON ANY ELECTRONIC COPIES.

	NO.	

).	REVISIONS	DATE	DATE	2024.05.16	SUBMITTALS	DATE	PREPARED BY
			DRAWN	SM			ADAM COLLING
			DESIGNED				(A ADAM COLLINS
			CHECKED	ATC			ENGINEERING INC.
							ENGINEENING INC.
			JOB No.	22047			CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

ELITE METAL MANUFACTURING 10121 88TH TRACE

NOTES AND SPECIFICATIONS

James Smith 539 NW Ridge Glen Welborn, FL 32094

SCALE AS-SHOWN

S-1

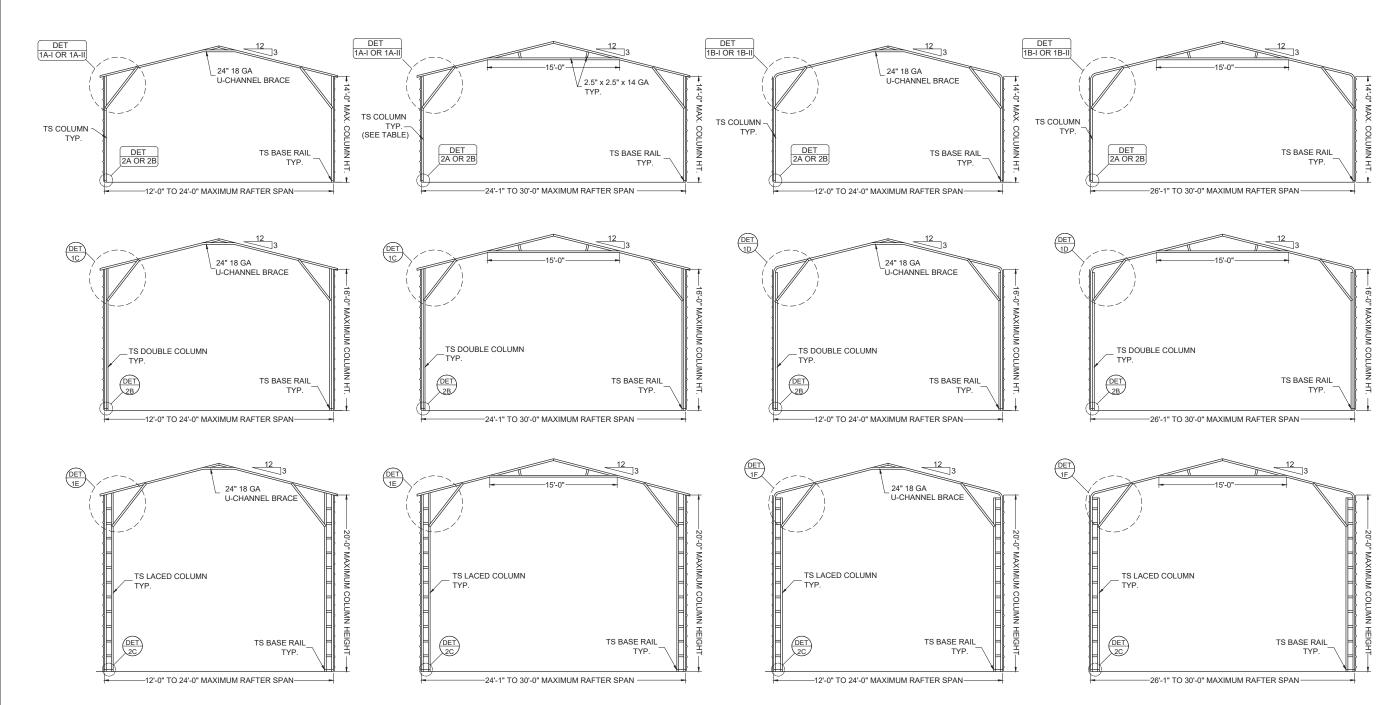
VERIFIED ON ANY ELECTRONIC COPIES.

No. 75584

*
STATE OF

ORIDA GIANTING

ORI



BOX EAVE FRAME

SCALE: NTS

BOW EAVE FRAME

SCALE: NTS

NO.	REVISIONS	DATE	DATE	2024.05.16	SUBMITTALS	DATE	PREPARED BY
			DRAWN	SM			ADAM COLLING
			DESIGNED	DMC			(A ADAM COLLINS
			CHECKED	ATC			ENGINEERING INC.
			JOB No.	22047			CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

BOX-BOW EAVE ELITE METAL FRAME RAFTER MANUFACTURING 10121 88TH TRACE **ENCLOSED BUILDING**

James Smith 539 NW Ridge Glen Welborn, FL 32094

SCALE

S-2

AS-SHOWN

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY ADAM T. COLLINS, P.E. ON 2024 05.16 PRINTE COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES. NO. 75584

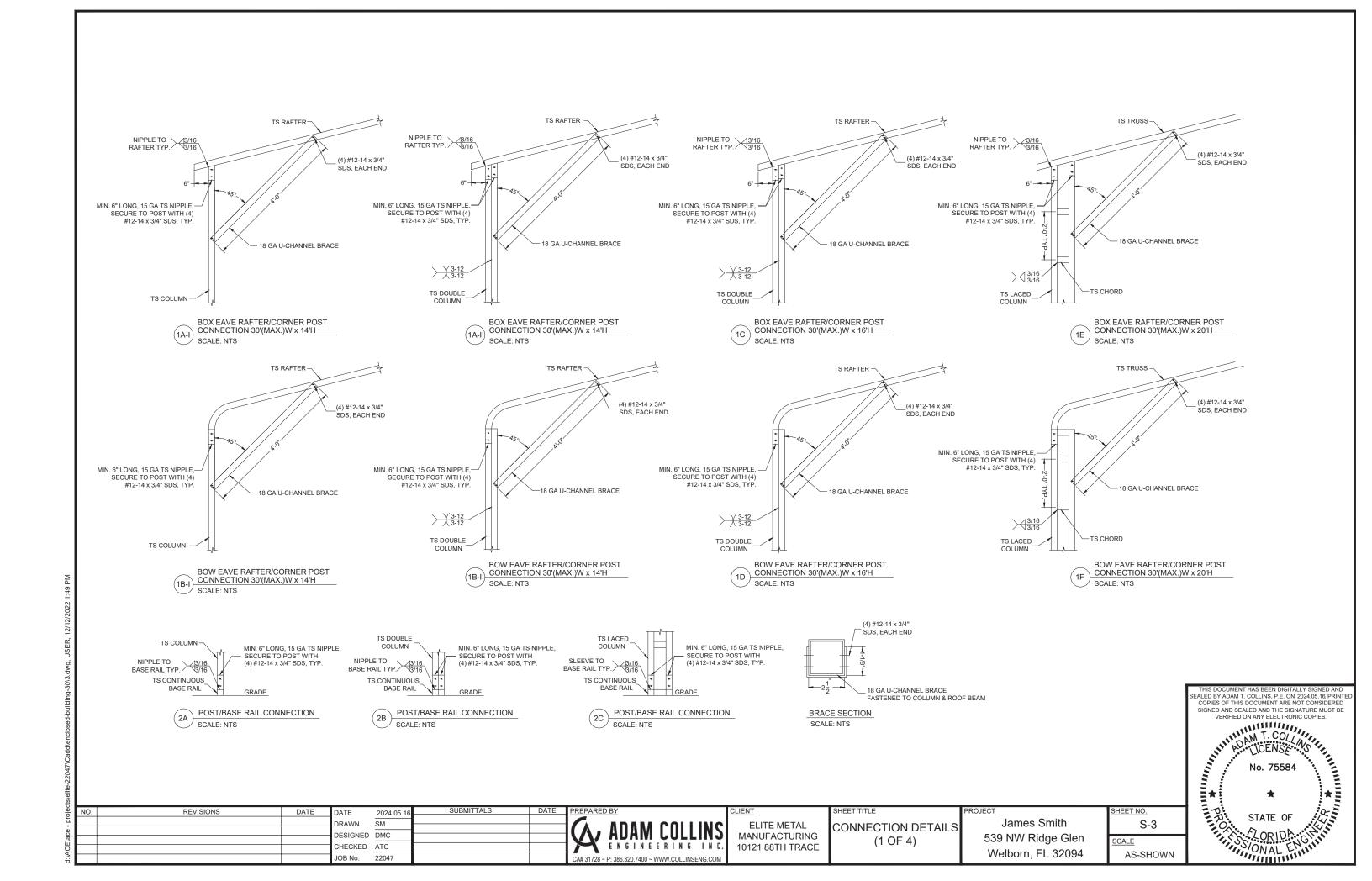
STATE OF

ORIDA:

ORIDA:

ORIDA:

ON AL ENGINEER OF CONTROL OF CON



GENERAL NOTES

MINIMUM SOIL BEARING CAPACITY: 1500 PSF. CONCRETE STRENGTH: 3000 PSI @ 28 DAYS

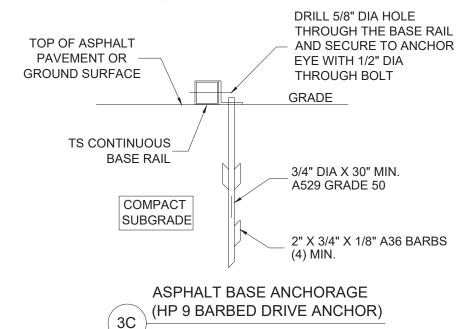
MONOLITHIC FOOTER SIZE 8" x 12" - (2) #4 110 C - 140 C ABOVE 140 C 12" x 16" - (2) #4

REINFORCING STEEL

- REBAR SHALL BE ASTM A615 GRADE 60
- SLAB REINFORCEMENT = WELDED WIRE FABRIC PER ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT
- CONCRETE COVER SHALL BE
- 3.1. 3" WHERE EXPOSED TO SOIL OR WATER.
- 2" EVERYWHERE ELSE.
- 4. REBAR SHALL BE BENT WITHOUT HEATING.
- MINIMUM BEND = 6 X BAR DIAMETER
- REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD

HELIX ANCHOR NOTES

- 1. USE MINIMUM (2) 4" HELICES WITH 30" EMBEDMENT FOR THE FOLLOWING SOILS:
- VERY DENSE AND/OR CEMENTED SANDS
- COARSE GRAVEL AND COBBLES 1.2.
- 1.3. CALICHE
- PRELOADED SILTS AND CLAYS 1.4.
- CORALS 1.5.
- MEDIUM DENSE COARSE SANDS 1.6.
- 1.7. SANDY GRAVEL
- 1.8. VERY STIFF SILTS AND CLAYS
- 2. USE MINIMUM (2) 6" HELICES WITH MINIMUM 48" EMBEDMENT FOR
- LOOSE TO MEDIUM DENSE SANDS
- FIRM TO STIFF CLAYS AND SILTS
- ALLUVIAL FILL
- 3. USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.
- 3.1. FOR VERY LOOSE TO MEDIUM DENSE SANDS
- FIRM TO STIFFER CLAYS AND SILTS
- ALLUVIAL FILL.



DATE

2024.05.

SM

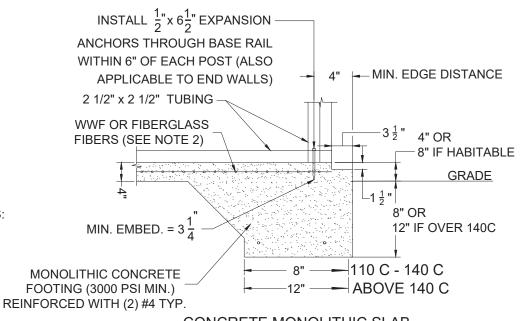
DRAWN

DESIGNED DMC

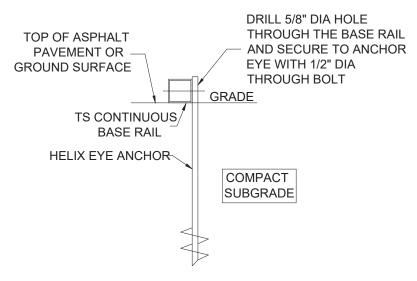
CHECKED ATC

SCALE: NTS

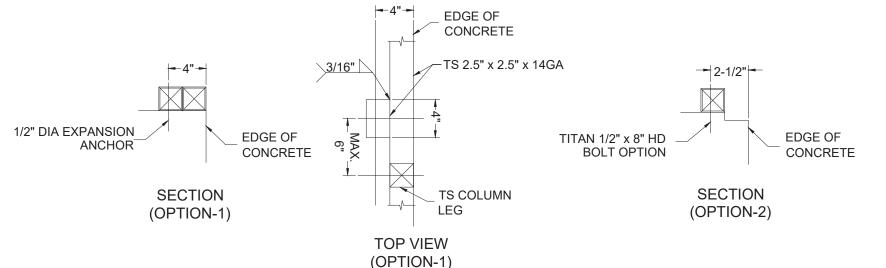
REVISIONS



CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE SCALE: NTS



GROUND BASE HELIX ANCHORAGE SCALE: NTS



TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

SCALE: NTS

ELITE METAL MANUFACTURING 10121 88TH TRACE

CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

HEET TITLE BASE RAIL AND ANCHORAGE DETAILS

James Smith 539 NW Ridge Glen Welborn, FL 32094

S-4 SCALE AS-SHOWN

COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

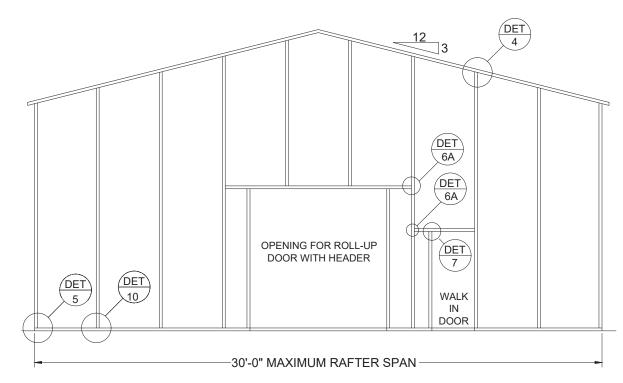
No. 75584

STATE OF

ORIDA CM.

ORIDA CM. VERIFIED ON ANY ELECTRONIC COPIES.

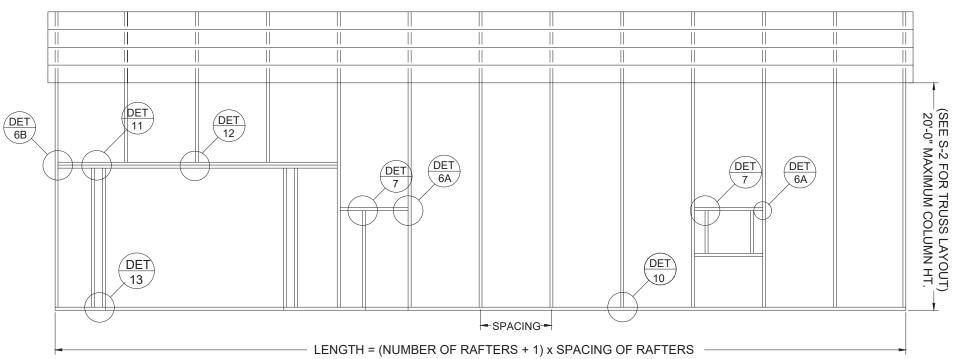
FALED BY ADAM T. COLLINS, P.E. ON 2024.05.16 PRINT



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

SCALE: NTS



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 FRAMING SECTION

SCALE: NTS

NO.	REVISIONS	DATE	DATE	2024.05.16	SUBMITTALS	DATE	PREPARED BY
			DRAWN	SM			C ADAMA COLLINIO
							(A) ADAM COLLINS
			DESIGNED				
			CHECKED	ATC			ENGINEERING INC.
			JOB No.	22047			CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

ELITE METAL
MANUFACTURING
10121 88TH TRACE

BOX EAVE RAFTER END
WALL, SIDE WALL AND
OPENING FRAMING

James Smith 539 NW Ridge Glen Welborn, FL 32094 SHEET NO.
S-5
SCALE
AS-SHOWN

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY ADAM T. COLLINS, P.E. ON 2024.05.16 PRINTE COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

No. 75584

STATE OF

ORIDAGO

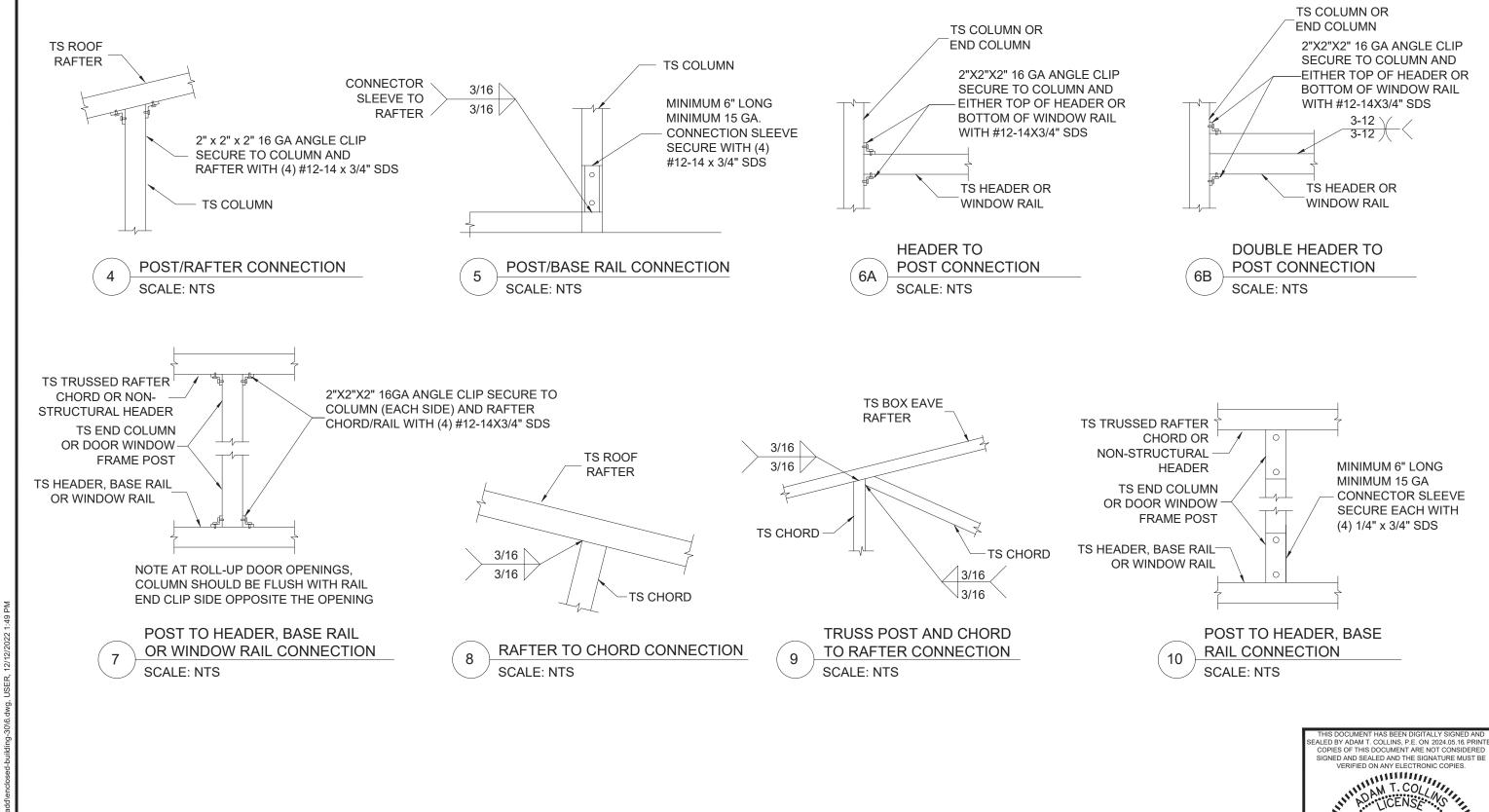
ORIDAGO

ORIDAGO

ORIDAGO

STATE OF

Science-Eggs (Science Constant) Colors (Science Constant)



d:\ACE\ace - projects\elite-22047\Cadd\en

REVISIONS

2024.05.

SM

22047

ORAWN

DESIGNED DMC

CHECKED ATC

ADAM COLLINS
ENGINEERINGING.
1013
CA# 31728 ~ P. 386 320 7400 ~ WWW. COLLINSENG.COM

ELITE METAL MANUFACTURING 10121 88TH TRACE CONNECTION DETAILS (2 OF 4)

SHEET TITLE

James Smith 539 NW Ridge Glen Welborn, FL 32094 SHEET NO.
S-6

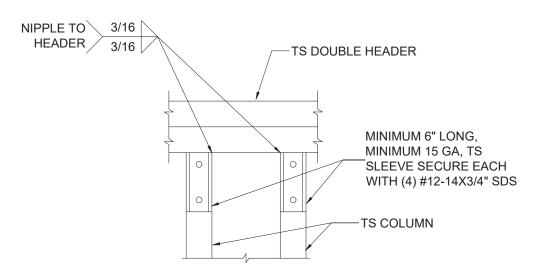
SCALE
AS-SHOWN

No. 75584

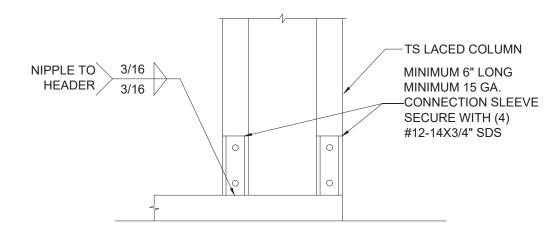
STATE OF

ORIDA GIANTINA OF THE SIGNAL ONE MOST BE VERIFIED ON ANY ELECTRONIC COPIES.

No. 75584



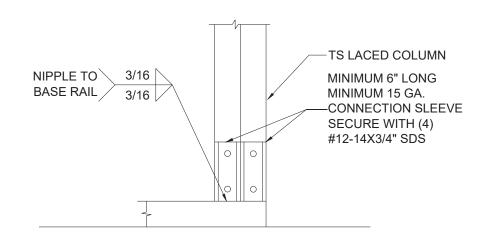
DOUBLE HEADER TO POST CONNECTION SCALE: NTS



POST/BASE RAIL CONNECTION

HEADER 3/16 TS POST MINIMUM 6" LONG. MINIMUM 15 GA, TS SLEEVE SECURE EACH WITH (4) #12-14X3/4" SDS / 3/12 TS DOUBLE HEADER 3/12

POST/DOUBLE HEADER CONNECTION 12 SCALE: NTS



POST/BASE RAIL CONNECTION (13B SCALE: NTS

NO.	REVISIONS	DATE	DATE	2024.05.16	SUBMITTALS	DATE	PREPARED BY
			DRAWN	SM			
							(A) ADAM COLLINS
			DESIGNED	DMC			
			CHECKED	ATC			ENGINEERING INC.
			JOB No.	22047			CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

SCALE: NTS

(13A

ELITE METAL MANUFACTURING 10121 88TH TRACE

NIPPLE TO 3/16

SHEET TITLE CONNECTION DETAILS (3 OF 4)

James Smith 539 NW Ridge Glen Welborn, FL 32094

S-7 SCALE

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY ADAM T. COLLINS, P.E. ON 2024 05.16 PRINTE COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES. No. 75584

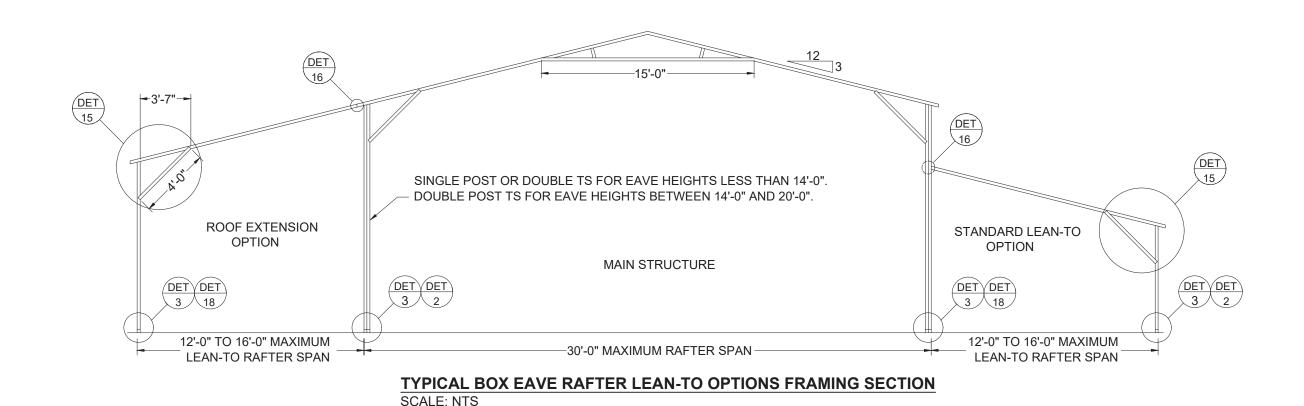
STATE OF

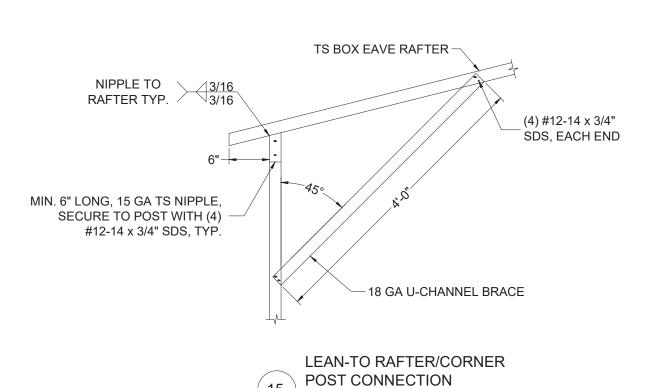
STATE OF

CONNAL

STATE OF

AS-SHOWN





SCALE: NTS

15

REVISIONS 2024.05.1 HEET TITLE DRAWN SM **ELITE METAL** DESIGNED DMC MANUFACTURING CHECKED ATC 10121 88TH TRACE 22047 CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

BOX EAVE RAFTER LEAN TO OPTIONS

James Smith Welborn, FL 32094

S-8 SCALE

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY ADAM T. COLLINS, P.E. ON 2024.05.16 PRINTE COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES. SIGNED AND SEALED AND THE SIGNAL TIME MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

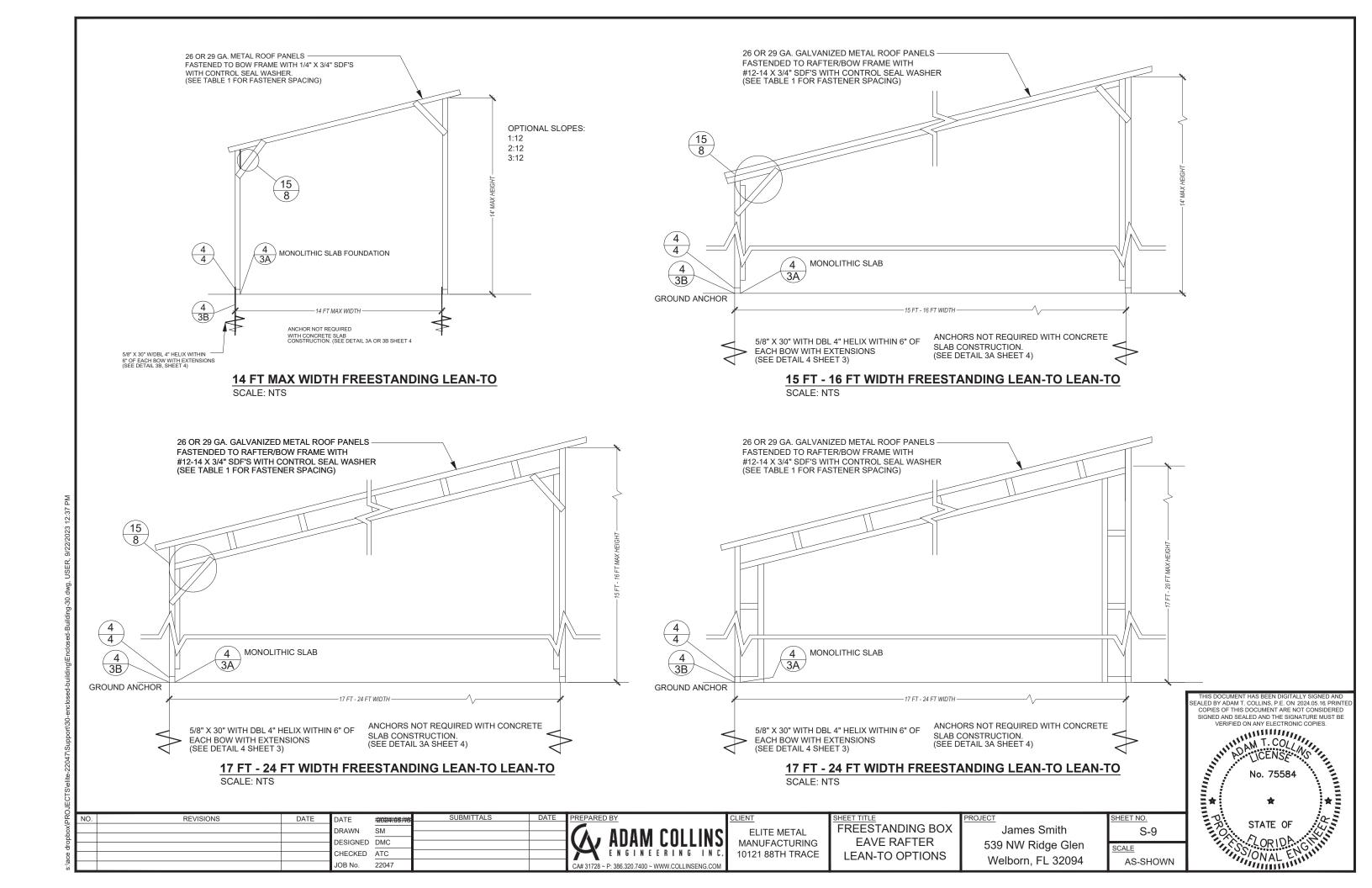
No. 75584

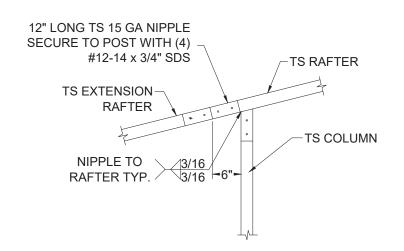
STATE OF

ORIDA GIANA

539 NW Ridge Glen

AS-SHOWN





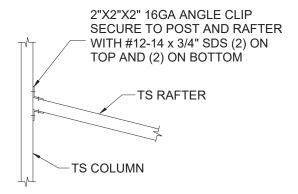
12" LONG TS 15 GA NIPPLE SECURE TO POST WITH (4) / NIPPLE TO #12-14 x 3/4" SDS RAFTER TYP. TS EXTENSION **RAFTER** 3-12 TS RAFTER TS COLUMN 2" x 2" x 2" 16 GA ANGLE CLIP -6"-SECURE TO COLUMN AND EITHER TOP OF HEADER OR-**BOTTOM OF WINDOW RAIL** WITH #12-14 x 3/4" SDS

SIDE EXTENSION RAFTER/POST CONNECTION RAFTER SPAN LESS THAN 12'-0" 16A

SCALE: NTS

SCALE: NTS

SIDE EXTENSION RAFTER/POST CONNECTION RAFTER SPAN BETWEEN 12'-0" AND 16'-0" 16B SCALE: NTS



2"X2"X2" 16GA ANGLE CLIP SECURE TO POST AND RAFTER WITH #12-14 x 3/4" SDS (2) ON TOP AND (2) ON BOTTOM TS DOUBLE RAFTER TS COLUMN

LEAN TO RAFTER/COLUMN CONNECTION RAFTER SPANLESS THAN 12'-0" 17B

LEAN TO RAFTER/COLUMN CONNECTION RAFTER SPAN BETWEEN 12'-0" AND 16'-0" 17B SCALE: NTS

TS COLUMN MIN. 6" LONG, 15 GA TS NIPPLE, SECURE TO POST WITH (4) NIPPLE TO 3/16 BASE RAIL TYP. 3/16 #12-14 x 3/4" SDS, TYP. TS CONTINUOUS-BASE RAIL GRADE

> LEAN-TO POST CONNECTION 18 SCALE: NTS

REVISIONS DATE 2024.05.1 DRAWN SM DESIGNED DMC CHECKED ATC 22047 CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

ELITE METAL MANUFACTURING

HEET TITLE CONNECTION DETAILS (4 OF 4)

James Smith 539 NW Ridge Glen Welborn, FL 32094

S-10 SCALE

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY ADAM T. COLLINS, P.E. ON 2024.05.16, PRINTE COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

No. 75584

STATE OF

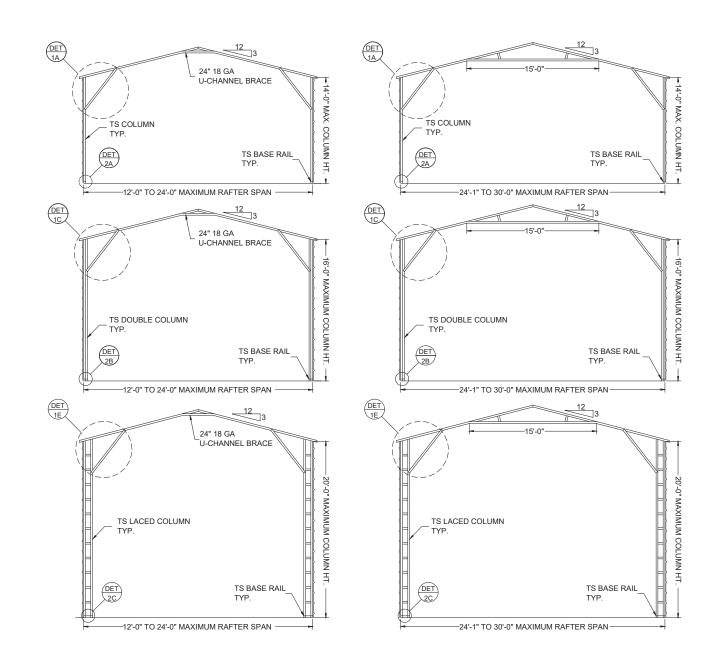
CORIDA:

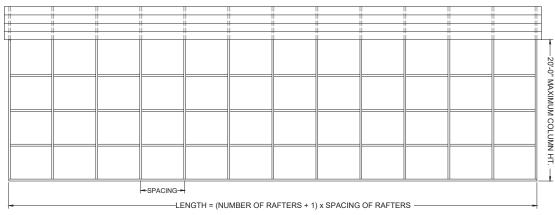
CORIDA: VERIFIED ON ANY ELECTRONIC COPIES.

ADAM COLLINS ENGINEERING INC.

10121 88TH TRACE

AS-SHOWN

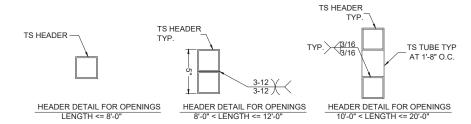




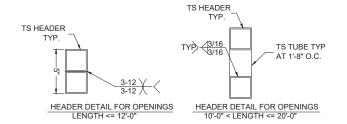
SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH 1.125" 18 GA HAT CHANNELS CAN BE USED IN LIEU OF TS FOR GIRTS.

TYPICAL SIDE FRAME SECTION

SCALE: NTS



SIDE WALL OPTION HEADER



END WALL OPTION HEADER

SCALE: NTS

BOX EAVE FRAME

1.125" 18 GA FURRING CHANNEL FASTENED TO EACH RAFTER WITH (2) #12-14 x 3/4" SDS SPACED AT 48" O.C. MAX TS RAFTER

PANEL ATTACHMENT (ALTERNATE FOR VERTICAL ROOF PANELS) SCALE: NTS

REVISIONS DATE 2024.05. **BOX EAVE RAFTER** ORAWN SM **ELITE METAL** VERTICAL MANUFACTURING DESIGNED DMC CHECKED ATC 10121 88TH TRACE **ROOF-SIDING OPTION** 22047 CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

James Smith 539 NW Ridge Glen Welborn, FL 32094

SCALE AS-SHOWN

S-11

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY ADAM T. COLLINS, P.E. ON 2024.05.16. PRINTE COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE No. 75584

STATE OF

STATE OF

CONNAL

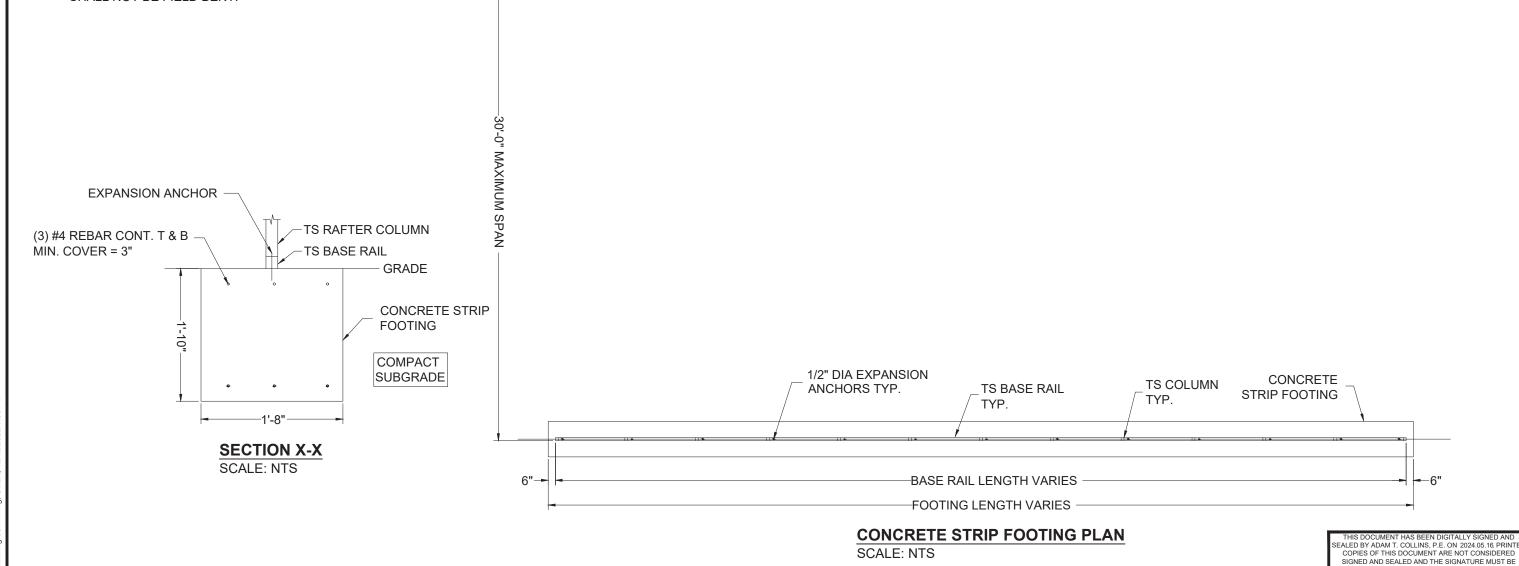
STATE OF VERIFIED ON ANY ELECTRONIC COPIES.



MINIMUM SOIL BEARING CAPACITY: 1500 PSF. CONCRETE STRENGTH: 3000 PSI @ 28 DAYS

REINFORCING STEEL

- 1. REBAR SHALL BE ASTM A615 GRADE 60
- 2. SLAB REINFORCEMENT = WELDED WIRE FABRIC PER ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT
- CONCRETE COVER SHALL BE
- 3.1. 3" WHERE EXPOSED TO SOIL OR WATER.
- 3.2. 2" EVERYWHERE ELSE.
- 4. REBAR SHALL BE BENT WITHOUT HEATING.
- MINIMUM BEND = 6 X BAR DIAMETER
- REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.



Χ-

X-

REVISIONS

2024.05.1 DRAWN SM **ADAM COLLINS** DESIGNED DMC CHECKED ATC 22047 CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

ELITE METAL MANUFACTURING 10121 88TH TRACE OPTIONAL CONCRETE STRIP FOOTING

HEET TITLE

James Smith 539 NW Ridge Glen Welborn, FL 32094

S-12 SCALE AS-SHOWN VERIFIED ON ANY ELECTRONIC COPIES.

No. 75584

STATE OF

ORIDA GIANA

STATE OF

VERIFIED ON ANY ELECTRONIC COPIES.

