APPLICABLE CODES AND STANDARDS

- 1. 2023 FLORIDA BUILDING CODE, BUILDING
- 2. 2023 FLORIDA BUILDING CODE, RESIDENTIAL
- 3. ASCE 7-22: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES
- 4. AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)
- 5. ACI 318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- 6. TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
- 7. AWS D1.1: STRUCTURAL WELDING

DESIGN LOADS

- 1. DEAD LOAD = 1.5 PSF
- 2. ROOF LIVE LOAD = 12 PSF
- 3 GROUND SNOW LOAD = 2 PSF
- 4. WIND LOAD
- A. RISK CATEGORY = I
- B. WIND EXPOSURE CATEGORY = C
- C. ULTIMATE WIND SPEED = 110 MPH
- NOMINAL WIND SPEED = 86 MPH
- D. STRUCTURE HAS BEEN DESIGNED TO WITHSTAND WIND SPEEDS UP TO 140 MPH PER CONTRACTORS REQUEST.

INSTALLATION NOTES AND SPECIFICATIONS

- 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 BUILDING CODE APROVED PRODUCT LIST, AND NOT PROVIDED AND INSTALLED BY THE CONTRACTOR, WHICH CAUSE ADDITIONAL LOADS ON THE STRUCTURE SHALL BE AT THE OWNER'S RISK. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR FAILURE OR STRUCTURAL DAMAGE DUE TO THE EXTRA LOAD.
- 3. ALL STEEL TUBING SHALL BE 50 KSI GALVANIZED STEEL. ALL FASTENERS SHALL BE ZINC COATED HARDWARE.
- 4. END WALL COLUMNS (POST) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING U.N.O.
- 5. 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.
- 6. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9" AND END = 6" MAX.
- 7. 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 14° (3:12 PITCH) OR LESS. SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
- 8. ANCHORS SHALL BE INSTALLED THROUGH THE BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES AND ENDS.
- 9. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBARS WITH WELDED NUT X 36" 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.
- 10. RAFTER SPACING IS 5'-0" MAX.
- 11. PURLIN SPACING IS 4'-0" MAX.
- 12. WIND FORCES GOVERN OVER SEISMIC FORCES.
- 13. CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS:

CONTRACTOR TO VERIFY THAT THE FINISHED FLOOR ELEVATION FOR THE PROPOSED STRUCTURE IS AT OR ABOVE THE GREATER OF THE FOLLOWING ELEVATIONS:

I) BFE (BASE FLOOD ELEVATION) + 2'-0"

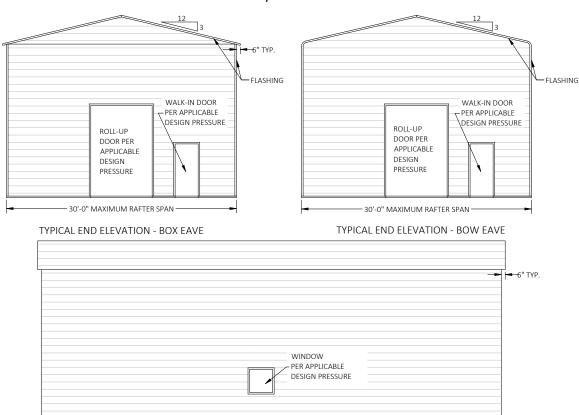
II) DFE (DESIGN FLOOD ELEVATION)

III) THE MINIMUM ELEVATION MANDATED BY THE BUILDING CODES ADOPTED BY THE AUTHORITY HAVING JURISDICTION

DRAWING INDEX

PAGE NO.	DESCRIPTION		
1	TITLE PAGE WITH INDEX		
2	TRUSS DESIGN FOR RAFTER SPAN		
3	CONNECTION DETAILS (1-2)		
4	BASE RAIL AND FOUNDATION ANCHORAGE		
5	RAFTER END WALL, SIDE WALL AND OPENING FRAMING		
6	CONNECTION DETAILS (4-14)		
7	BOX EAVE RAFTER LEAN-TO OPTIONS		
8	CONNECTION DETAILS (16-18)		
9	BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION		
10	OPTIONAL HELICAL ANCHORING ON GRADE DETAIL		
11	OPTIONAL CONCRETE STRIP FOOTING		
12	OPTIONAL HELICAL ANCHORING ON TIMBER BEAM DETAIL		

ENCLOSED METAL BUILDING DESIGN MAXIMUM 30'-0" WIDE X 100'-0" LONG X 20'-0" HIGH (EAVE) BOX EAVE FRAME / BOW EAVE FRAME



-		100'-0" M. TYPICAL SIDE ELEVA	AXIMUM LEN		
ADJUSTED C & (C WIND P	RESSURES (ROOF, ASD, F	PSF)	ADJUSTED C & C WIND PRESSURE:	S (WALL, ASD, PSF)
EFFECTIVE WIND AREA (SQ. FT) :	10.00	EFFECTIVE WIND AREA (SQ. FT) :	200.00	EFFECTIVE WIND AREA (SQ. FT) :	10.00
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	22.6
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 4 (NEGATIVE) =	-24.0
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 5 (NEGATIVE) =	-28.4
ZONE 1 (NEGATIVE) =	-37.1	ZONE 1 (NEGATIVE) =	-17.9		
ZONE 1 (OVERHANG) =	-51.6	ZONE 1 (OVERHANG) =	-29.1	EFFECTIVE WIND AREA (SQ. FT) :	20.00
ZONE 2 (NEGATIVE) =	-47.3	ZONE 2 (NEGATIVE) =	-22.6	ALL ZONES (POSITIVE) =	21.8
ZONE 2 (OVERHANG) =	-61.8	ZONE 2 (OVERHANG) =	-33.8	ZONE 4 (NEGATIVE) =	-23.3
ZONE 3 (NEGATIVE) =	-60.3	ZONE 3 (NEGATIVE) =	-34.2	ZONE 5 (NEGATIVE) =	-26.9
ZONE 3 (OVERHANG) =	-74.9	ZONE 3 (OVERHANG) =	-45.4	, ,	
. ,		<u> </u>		EFFECTIVE WIND AREA (SQ. FT) :	50.00
EFFECTIVE WIND AREA (SQ. FT) :	20.00	EFFECTIVE WIND AREA (SQ. FT) :	300.00	ALL ZONES (POSITIVE) =	20.8
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ZONE 4 (NEGATIVE) =	-22.2
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 5 (NEGATIVE) =	-24.8
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA		
ZONE 1 (NEGATIVE) =	-32.7	ZONE 1 (NEGATIVE) =	-15.3	EFFECTIVE WIND AREA (SQ. FT) :	100.00
ZONE 1 (OVERHANG) =	-46.4	ZONE 1 (OVERHANG) =	-26.1	ALL ZONES (POSITIVE) =	20.0
ZONE 2 (NEGATIVE) =	-41.6	ZONE 2 (NEGATIVE) =	-22.6	ZONE 4 (NEGATIVE) =	-21.5
ZONE 2 (OVERHANG) =	-55.3	ZONE 2 (OVERHANG) =	-33.3	ZONE 5 (NEGATIVE) =	-23.3
ZONE 3 (NEGATIVE) =	-52.5	ZONE 3 (NEGATIVE) =	-34.2	, ,	
ZONE 3 (OVERHANG) =	-66.2	ZONE 3 (OVERHANG) =	-44.9	EFFECTIVE WIND AREA (SQ. FT) :	200.00
		` '		ALL ZONES (POSITIVE) =	19.2
EFFECTIVE WIND AREA (SQ. FT) :	50.00	EFFECTIVE WIND AREA (SQ. FT) :	500.00	ZONE 4 (NEGATIVE) =	-20.7
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ZONE 5 (NEGATIVE) =	-21.7
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	, ,	
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	EFFECTIVE WIND AREA (SQ. FT) :	300.00
ZONE 1 (NEGATIVE) =	-26.8	ZONE 1 (NEGATIVE) =	-15.3	ALL ZONES (POSITIVE) =	18.8
ZONE 1 (OVERHANG) =	-39.5	ZONE 1 (OVERHANG) =	-25.5	ZONE 4 (NEGATIVE) =	-20.3
ZONE 2 (NEGATIVE) =	-34	ZONE 2 (NEGATIVE) =	-22.6	ZONE 5 (NEGATIVE) =	-20.8
ZONE 2 (OVERHANG) =	-46.7	ZONE 2 (OVERHANG) =	-32.7	, ,	
ZONE 3 (NEGATIVE) =	-42.1	ZONE 3 (NEGATIVE) =	-34.2	EFFECTIVE WIND AREA (SQ. FT) :	500.00
ZONE 3 (OVERHANG) =	-54.8	ZONE 3 (OVERHANG) =	-44.4	ALL ZONES (POSITIVE) =	18.2
. ,		, ,		ZONE 4 (NEGATIVE) =	-19.7
EFFECTIVE WIND AREA (SQ. FT) :	100.00	EFFECTIVE WIND AREA (SQ. FT) :	1000.00	ZONE 5 (NEGATIVE) =	-19.7
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	` ′	
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	EFFECTIVE WIND AREA (SQ. FT) :	1000.00
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ALL ZONES (POSITIVE) =	18.2
ZONE 1 (NEGATIVE) =	-22.4	ZONE 1 (NEGATIVE) =	-15.3	ZONE 4 (NEGATIVE) =	-19.7
ZONE 1 (OVERHANG) =	-34.3	ZONE 1 (OVERHANG) =	-25.5	ZONE 5 (NEGATIVE) =	-19.7
ZONE 2 (NEGATIVE) =	-28.3	ZONE 2 (NEGATIVE) =	-22.6	, ,	
ZONE 2 (OVERHANG) =	-40.2	ZONE 2 (OVERHANG) =	-32.7		
		1			

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

ZONE 3 (NEGATIVE) =

ZONE 3 (OVERHANG) =

ZONE 3 (NEGATIVE) =

ZONE 3 (OVERHANG) =



THE ENGINEERING ON THESE PLANS IS SITE SPECIFIC FOR (1) STRUCTURE ONLY AT THE

PROVIDED ADDRESS(ES).

UNIT 101 CHARLOTTE, FLORIDA 33952 TAMIAMI TRAIL, (941) 391-598(FLEng.com Orders@FLEng.c ORIDA PORT 161

COM

9 N

PROJECT

391-5980



DR. SCHUCK 202 SE MORNING GLORY CT LAKE CITY, FLORIDA, 32025 STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST MOUNT AIRY, NC 27030

08/11/2025 DATE DATE SHEET: JS

DESIGN DATE: REVISION 1: REVISION 2: DRAWN BY: SCALE: NTS OF 12 MEMBER LEGEND:

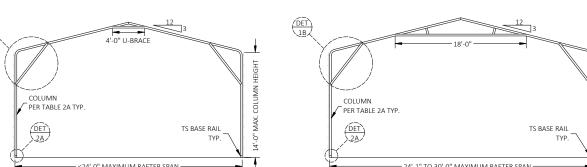
1. SIDEWALL TS COLUMN = 2.5X2.5X14 GA U.N.O.

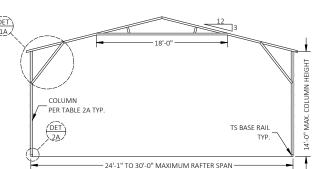
- 2. SIDEWALL TS DOUBLE COLUMN = (2)2.5X2.5X14 GA U.N.O.
- 3. TRUSS MEMBERS = 2.5X2.5X14 GA U.N.O.
- 4. KNEE-BRACE = 2.5"X2"X18GA CHANNEL
- 5. PURLIN = 1.125"X18GA HAT CHANNEL
- 6. U-BRACE = 2.5"X2"X16GA CHANNEL
- 7. ENDWALL COLUMN:

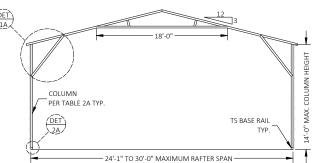
MAX. EAVE HEIGHT	END WALL COLUMN DIMENSIONS
20'	(2) 2.5X2.5X14 GA
14'	2.5X2.5X14 GA

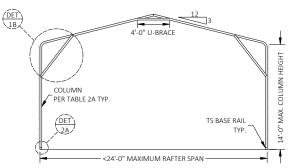
TRUSS LAYOUT- BOX EAVE

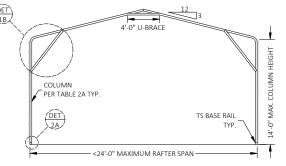
TRUSS LAYOUT- BOW EAVE



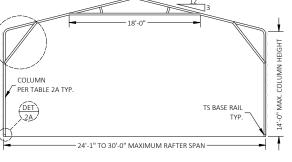












This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



4'-0" U-BRACE

<24'-0" MAXIMUM RAFTER SPAN -

-<24'-0" MAXIMUM RAFTER SPAN -

TS BASE RAIL

TS BASE RAIL

(DET)

TS LACED COLUMN

DET 2C

TS DOUBLE COLUMN

TS LACED COLUMN

DET 2C

DET 2B

4'-0" U-BRACE

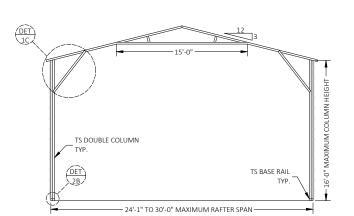


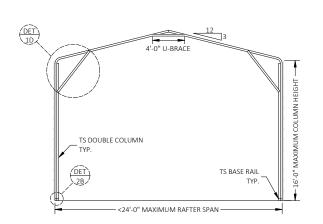
TS BASE RAIL

- 24'-1" TO 30'-0" MAXIMUM RAFTER SPAN -

FOR COLUMN HEIGHT OF MAX. 14'-0"			
BUILDING LENGTH	COLUMN DIMENSIONS		
< = 60'-0" ALL COLUMNS TO BE 2.5X2.5X14 GA			
60'-1" TO 100'-0"	(N-10) CENTRAL COLUMNS TO BE (2)2.5X2.5X14 GA		
REST 2.5X2.5X14 GA			
THE ALC OF COLUMN AND DED CIDE FLEWATION			

*N = NO. OF COLUMNS PER SIDE ELEVATION



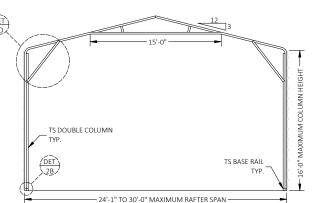


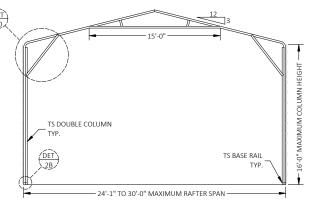
TS LACED COLUMN

TS BASE RAIL

<24'-0" MAXIMUM RAFTER SPAN -

DET 2C





26'-1" TO 30'-0" MAXIMUM RAFTER SPAN

TS BASE RAII

TS LACED COLUMN

DET 2C







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

CA CERT. #30782

2522050

PROJECT NO.







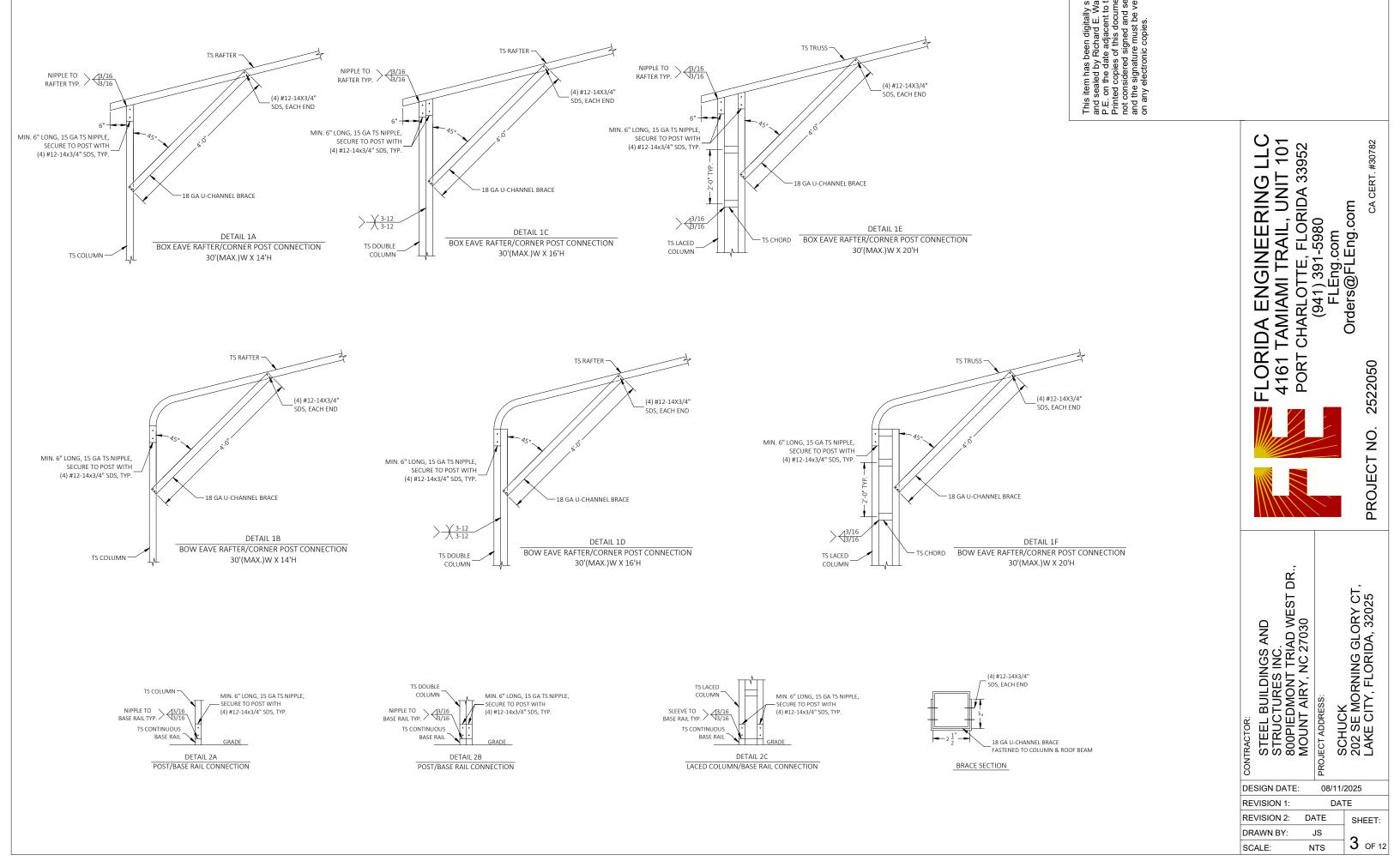


SCHUCK 202 SE MORNING GLORY CT, LAKE CITY, FLORIDA, 32025

DESIGN DATE: 08/11/2025 REVISION 1: DATE REVISION 2: DATE DRAWN BY: JS **2** OF 12 SCALE: NTS

SHEET:





CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF

- 1. CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT
- 2. ALL OPEN AREAS OF CONCRETE OUTSIDE OF THE PROPOSED STRUCTURE SHALL BE
- DESIGNED TO SLOPE AWAY FROM THE STRUCTURE. 3. WHERE CONCRETE SPECIFICATIONS ARE REQUIRED, BY ONE OR MORE REGULATORY
- AGENCY, THE FOLLOWING SPECIFICATIONS ARE APPLICABLE: a. CONCRETE SHALL CONFORM TO ASTM C94 FOR THE FOLLOWING COMPONENTS:
- i. PORTLAND CEMENT TYPE 1 ASTM C 150
- ii AGGREGATES LARGE AGGREGATE 3/4 MAX. ASTM C 33
- iii. AIR ENTRAINING +/- 1 % ASTM C 260
- iv. WATER REDUCING AGENT ASTM C 494
- v. CLEAN POTABLE WATER vi. OTHER ADMIXTURES NOT PERMITTED
- b. Concrete slump at discharge chute not less than 3" or more than 5". Water ADDED AFTER BATCHING IS NOT PERMITTED.
- c. PREPARE & PLACE CONCRETE PER AMERICAN CONCRETE INSTITUTE MANUAL OF STANDARD PRACTICE, PART 1, 2, & 3 INCLUDING HOT WEATHER RECOMMENDATIONS.
- d. MOIST CURE OR POLYETHYLENE CURING PERMITTED.
- e. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE BUILDING CODE (FOR RISK CATEGORY II, III, & IV STRUCTURES ONLY).
- f. CONCRETE SLAB SHALL BE PLACED OVER A MIN. 6 MIL POLYETHYLENE VAPOR BARRIER (SLAB ONLY). 4. CONTROL JOINTS SHALL BE PROVIDED AT EVERY 12' O.C. OR 18' O.C. FOR 4" THICK OR 6"
- THICK CONCRETE SLAB RESPECTIVELY.

- 1. THE REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER
- 2. REINFORCEMENT MAY BE BENT IN THE FIELD OR SHOP AS LONG AS:
- a. IT IS BENT COLD
- b. REINFRCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT
- c. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN
- 3. 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

<u>FROST PROTECTION:</u>
1. 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

- 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, MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING
- 2. THE UPLIFT/BEARING CAPACITY OF HELICAL ANCHOR MUST BE EQUAL TO OR GREATER THAN 8.5 KIPS FOR ANCHORS INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
- 3. THE UPLIFT/BEARING CAPACITY OF HELICAL ANCHORS MUST BE AS SHOWN IN TABLE A FOR ANCHORS PROVIDED AT THE JAMBS OF DOOR OPENINGS. THE INCREASE IN HELICAL ANCHOR CAPACITY MAY BE ACHIEVED BY INCREASING THE DIAMETER AND/OR THE EMBEDMENT OF THE ANCHORS, OR BY USING DIFFERENT ANCHORS DEPENDING ON THE MANUFACTURER'S

HP 9 BARBED DRIVE ANCHOR NOTES

- 1. ANCHOR TO BE 3/4" DIA (A529 GRADE 50) WITH 30" MIN. EMBEDMENT & (4) MIN. BARBS
- 2. 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, MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, ANCHOR SHALL BE INSTALLED AT EVERY POST (LEG) / MAX. RAFTER
- 3. THE UPLIFT/BEARING CAPACITY OF EACH ANCHOR MUST BE EQUAL TO OR GREATER THAN 8.5 KIPS FOR ANCHORS INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING
- 4. The uplift/bearing capacity of the anchors must be as shown in table a for ANCHORS PROVIDED AT THE JAMBS OF DOOR OPENINGS. THE INCREASE IN ANCHOR CAPACITY MAY BE ACHIEVED BY INCREASING THE DIAMETER AND/OR THE EMBEDMENT OF THE ANCHORS, OR BY USING DIFFERENT ANCHORS DEPENDING ON THE MANUFACTURER'S

TABLE A

	IADLLA		
REQUIRED UPLIFT /	RAFTER SP	ACING (FT.)	
OF HELICAL ANCHORS		4	5
· ·	6	11.0	9.5
E)	8	13.0	11.5
МІВТН (ҒТ.)	10	15.0	13.0
	12	17.0	14.5
-	14	19.5	16.5
Ž	16	21.5	18.0
PENING	18	23.5	20.0
Ö	20	25.5	21.5

BASE RAII

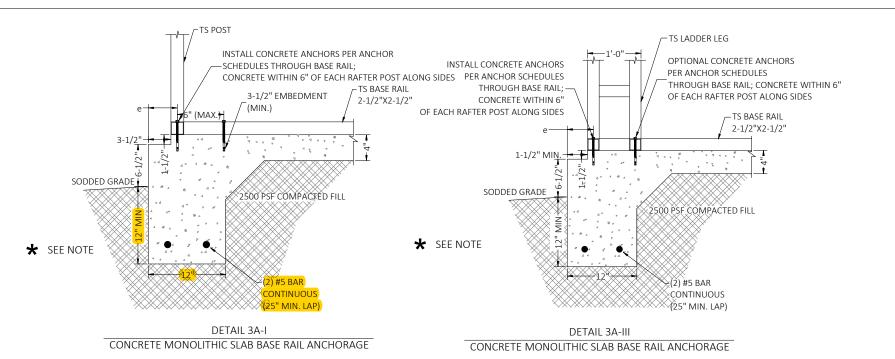
COMPACT

SUBGRADE

DETAIL 3B

GROUND BASE HELIX ANCHORAGE

3/4" HELIX EYE ANCHOR-



BASE RAIL

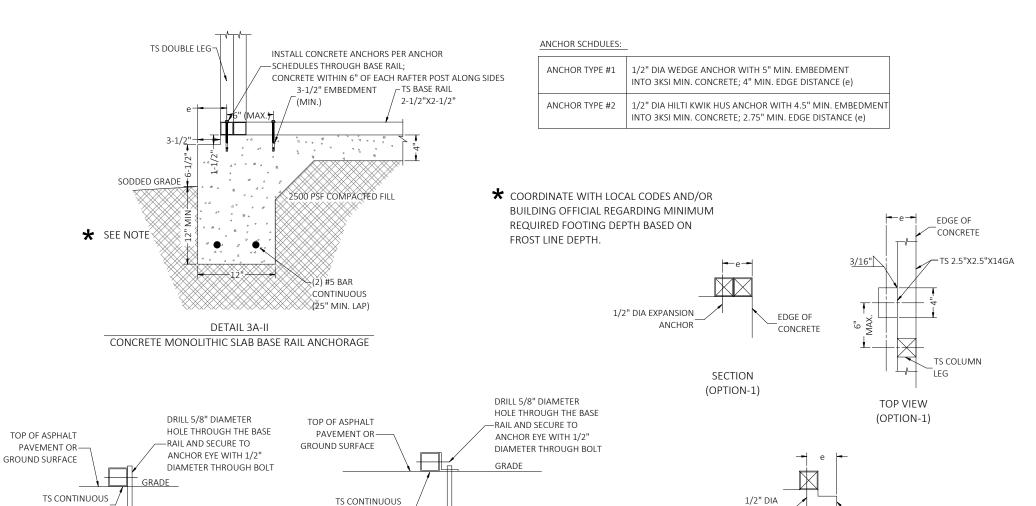
COMPACT

SUBGRADE

DETAIL 3C

ASPHALT BASE ANCHORAGE

(HP 9 BARBED DRIVE ANCHOR)



3/4" DIA X 30" MIN.

2" X 3/4" X 1/8" A36 BARBS

A529 GRADE 50





2522050

9

PROJECT

DR STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST D MOUNT AIRY, NC 27030 SCHUCK 202 SE MORNING GLORY CT LAKE CITY, FLORIDA, 32025

EDGE OF

CONCRETE

HILTI KWIK HUS

OPTION

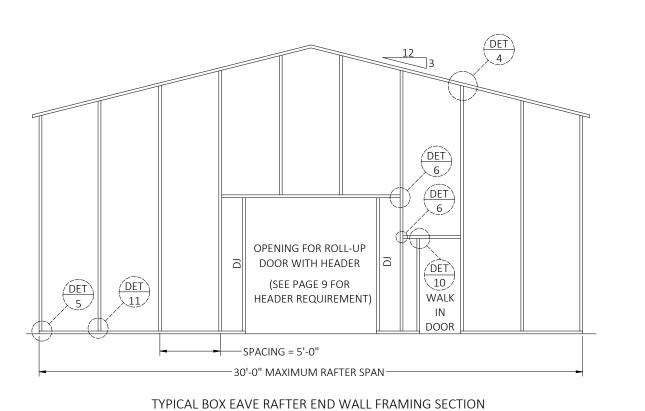
SECTION

(OPTION-2)

TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

BASE RAIL ANCHORAGE OPTION

DESIGN DATE:	08/11/	/2025
REVISION 1:	DA	TE
REVISION 2:	DATE	SHEET:
DRAWN BY:	JS	
SCALE:	NTS	4 OF 1



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 TAMIAMI TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com

CA CERT. #30782

2522050

PROJECT NO.

CONTRACTOR:

SCALE:

20'-0" MAXIMUM COLUMN HEIGHT (SEE PAGE 2 FOR TRUSS LAYOUT)

DET

STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST DR., MOUNT AIRY, NC 27030 SCHUCK 202 SE MORNING GLORY CT, LAKE CITY, FLORIDA, 32025 PROJECT ADDRESS

DESIGN DATE: 08/11/2025 DATE REVISION 1: REVISION 2: DATE SHEET: DRAWN BY: **5** OF 12

NTS

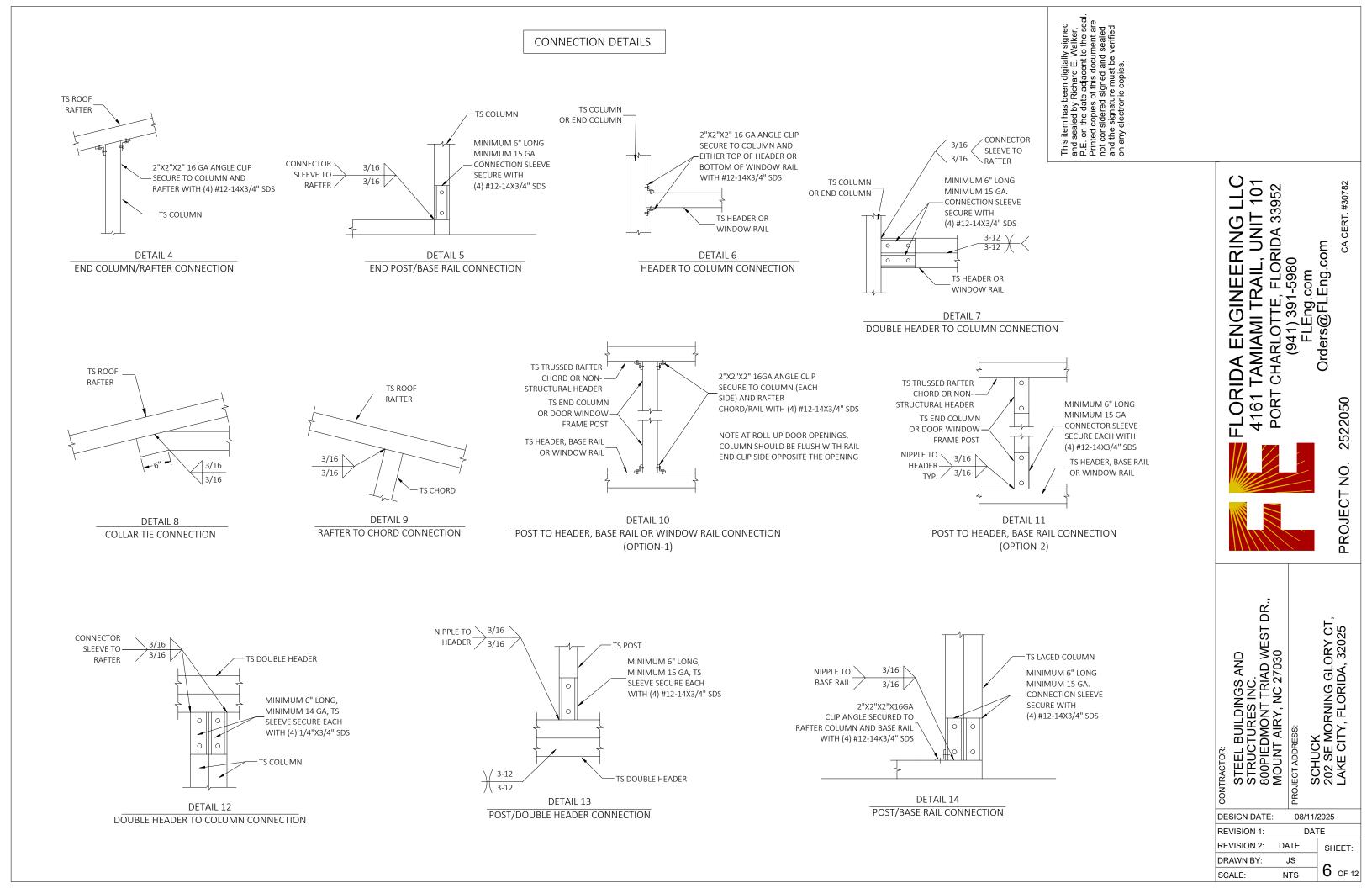
DET 13 DET 10 DET 10 DET 6 DET 10 DET 6 | | DET 2 DET 14 -100'-0" MAXIMUM LENGTH-

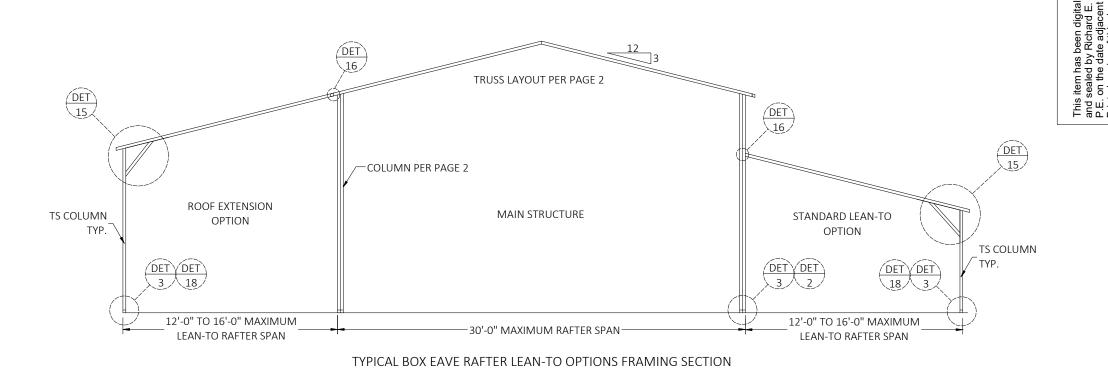
TYPICAL BOX EAVE RAFTER SIDE WALL FRAMING SECTION

	S DOUBLE COLUMN TYP. 3-12 3-12
FOR HEADER <= 10'-0"	FOR HEADER > 10'-0"
SIDE WALL/END V	WALL DOOR JAMBS (DJ)

*SEE PAGE 9 FOR

HEADER REQUIREMENT





TS BOX EAVE RAFTER

18 GA U-CHANNEL BRACE

DETAIL 15 LEAN-TO RAFTER/CORNER POST CONNECTION

(4) #12-14X3/4" SDS, EACH END

NIPPLE TO \
RAFTER TYP.

MIN. 6" LONG, 15 GA TS NIPPLE, SECURE TO POST WITH (4) #12-14x3/4" SDS, TYP.

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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

2522050

PROJECT NO.







STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST DR., MOUNT AIRY, NC 27030 SCHUCK 202 SE MORNING GLORY CT, LAKE CITY, FLORIDA, 32025

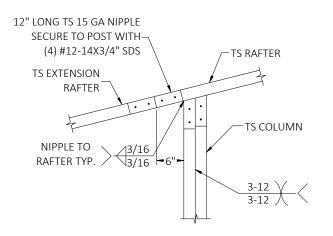
PROJECT ADDRESS

DESIGN DATE: 08/11/2025 REVISION 1: DATE REVISION 2: DATE SHEET: DRAWN BY: JS **7** OF 12

NTS

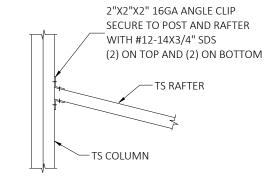
SCALE:

CONNECTION DETAILS



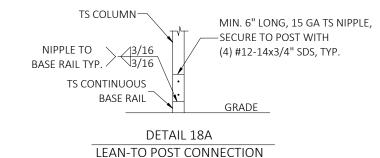
DETAIL 16A

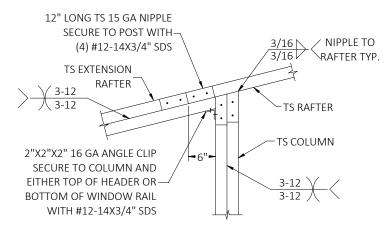
SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN 12'-0"



DETAIL 17A

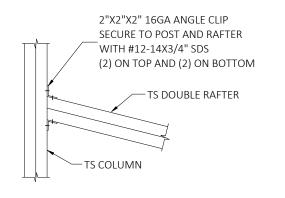
LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN 12'-0"





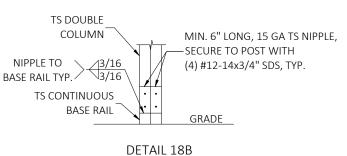
DETAIL 16B

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



DETAIL 17B

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



LEAN-TO DOUBLE POST CONNECTION

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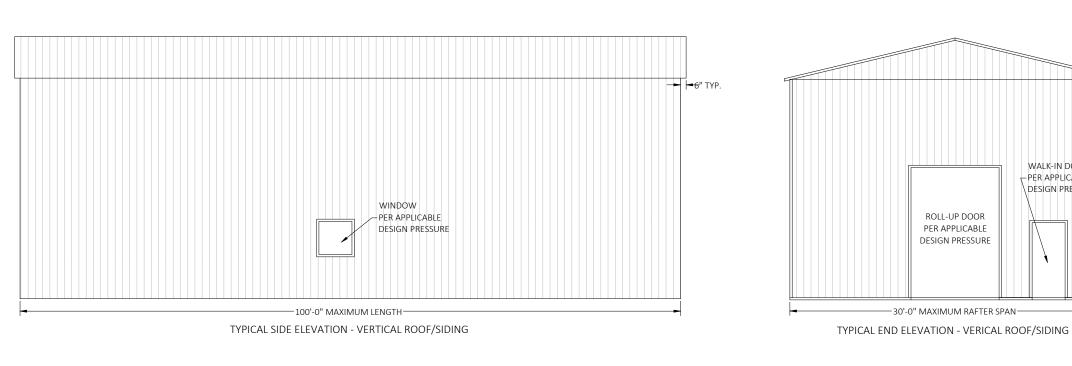
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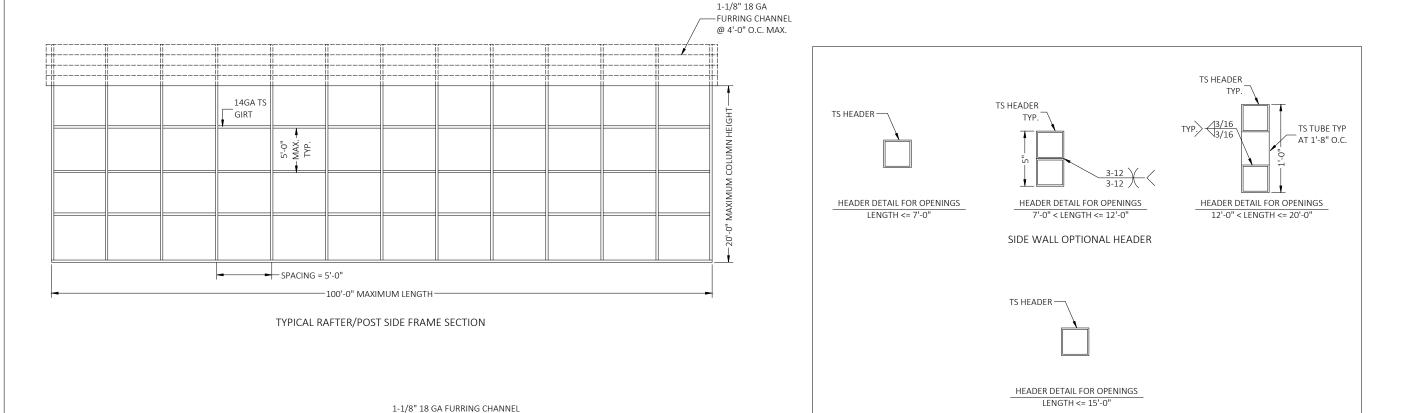
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BOX EAVE FRAME RAFTER ENCLOSED BUILDING





-FLASHING

WALK-IN DOOR PER APPLICABLE DESIGN PRESSURE

END WALL OPTIONAL HEADER



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TS RAFTER PANEL ATTACHMENT (ALTERNATE FOR VERTICAL ROOF PANELS)

FASTENED TO EACH RAFTER

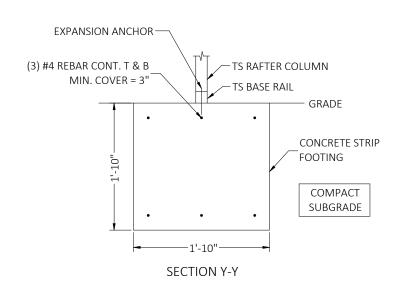
WITH (2) #12-14X3/4" SDS SPACED AT 48" O.C. MAX

GENERAL NOTES

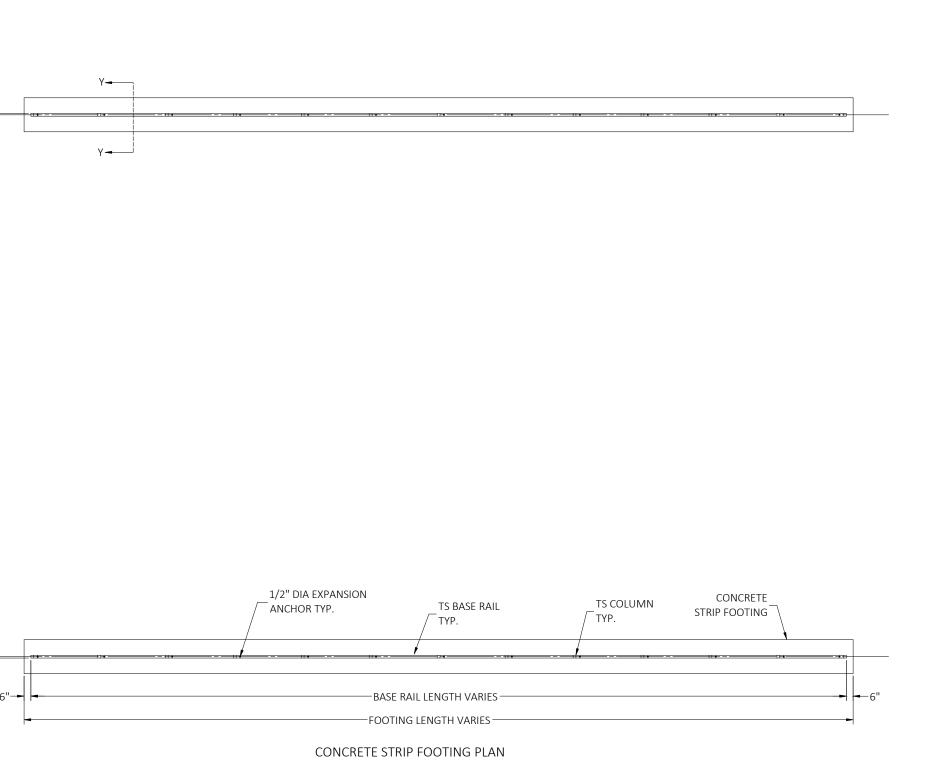
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 2500 PSF.

MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

- 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 PERMENENTLY 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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SCALE:

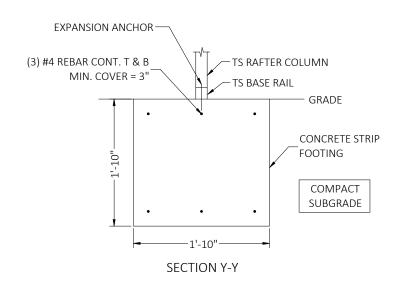
10 OF 12

GENERAL NOTES

CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 2500 PSF.

MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

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- 4. REINFORCEMENT IS BENT COLD.
- 5. MINIMUM INSIDE DIAMETER OF BEND = (6) BAR DIAMETERS
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OPTIONAL CONCRETE STRIP FOOTING





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SCALE:

CONCRETE STRIP FOOTING PLAN

BASE RAIL LENGTH VARIES FOOTING LENGTH VARIES

1/2" DIA EXPANSION CONCRETE TS COLUMN TS BASE RAIL ANCHOR TYP. STRIP FOOTING TYP. TYP.

TIMBER NOTES:

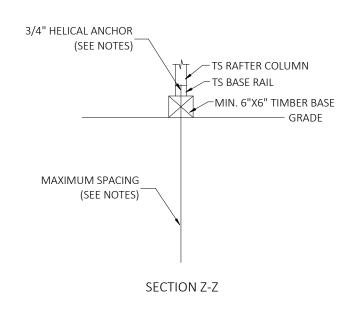
1. TIMBER BASE TO BE NO. 2 SYP PT OR EQUIVALENT.

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, MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
- 2. THE UPLIFT/BEARING CAPACITY OF HELICAL ANCHOR MUST BE EQUAL TO OR GREATER THAN 8.5 KIPS FOR ANCHORS INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
- 3. THE UPLIFT/BEARING CAPACITY OF HELICAL ANCHORS MUST BE AS SHOWN IN TABLE A FOR ANCHORS PROVIDED AT THE JAMBS OF DOOR OPENINGS. THE INCREASE IN HELICAL ANCHOR CAPACITY MAY BE ACHIEVED BY INCREASING THE DIAMETER AND/OR THE EMBEDMENT OF THE ANCHORS, OR BY USING DIFFERENT ANCHORS DEPENDING ON THE MANUFACTURER'S SPECIFICATIONS.

TABLE A

REQUIRED UPLIFT / BEARING CAPACITY OF HELICAL ANCHORS		RAFTER SPACING (FT.)	
		4	5
· ·	6	11.0	9.5
(FT.)	8	13.0	11.5
OPENING WIDTH	10	15.0	13.0
	12	17.0	14.5
	14	19.5	16.5
	16	21.5	18.0
	18	23.5	20.0
	20	25.5	21.5



OPTIONAL HELICAL ANCHORING ON TIMBER BEAM DETAIL

Z

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SCALE:

-TIMBER BASE TYP. TYP. -100'-0" MAXIMUM LENGTH

TS COLUMN

BASE RAIL PLAN

MIN. 6"X6"

HELICAL ANCHOR

(SEE NOTES)

BASE RAIL