

APPLICABLE CODES
1. 2023 FLORIDA BUILDING CODE, BUILDING
2. 2023 FLORIDA BUILDING CODE, RESIDENTIAL

APPLICABLE STANDARDS
1. ASCE 7-22: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES
2. AISC STEEL CONSTRUCTION MANUAL (8TH EDITION)
3. ACI 318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
4. TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
5. AWS D1.1: STRUCTURAL WELDING

DESIGN LOADS

1. DEAD LOAD = 1.5 PSF
2. ROOF LIVE LOAD = 12 PSF
3. GROUND SNOW LOAD = 4 PSF
4. WIND LOAD
A. RISK CATEGORY = II
B. WIND EXPOSURE CATEGORY = C
C. ULTIMATE WIND SPEED = 120 MPH
NOMINAL WIND SPEED = 94 MPH
D. STRUCTURE HAS BEEN DESIGNED TO WITHSTAND WIND SPEEDS UP TO 170 MPH PER CONTRACTORS REQUES, AT EXPOSURE B.

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 APPROVED 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 WITH MINIMUM YIELD STRENGTH OF 54 KSI. 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 DUTCH LAP METAL PANELS FASTENED DIRECTLY TO 2.5"X2.5"X14 GA/2.5"X2.5"X12GA 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. MAXIMUM RAFTER SPACING IS 5'-0"
I) FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH
II) FOR BUILDING SPAN LESS THAN 50'-0"

11. MAXIMUM RAFTER SPACING IS 4'-0"
I) FOR WIND SPEEDS BETWEEN 141 MPH AND 170 MPH
II) FOR BUILDING SPAN GREATER THAN OR EQUAL TO 50'-0"

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) + H
H = 1'-0" (RISK CATEGORY I & II BUILDINGS)
H = 2'-0" (RISK CATEGORY III & IV BUILDINGS)

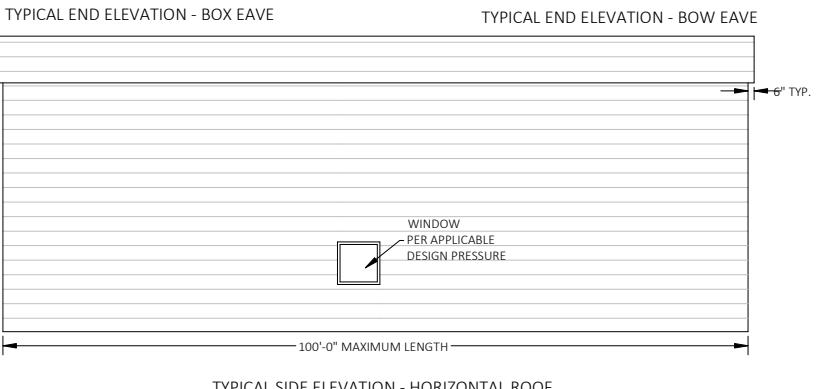
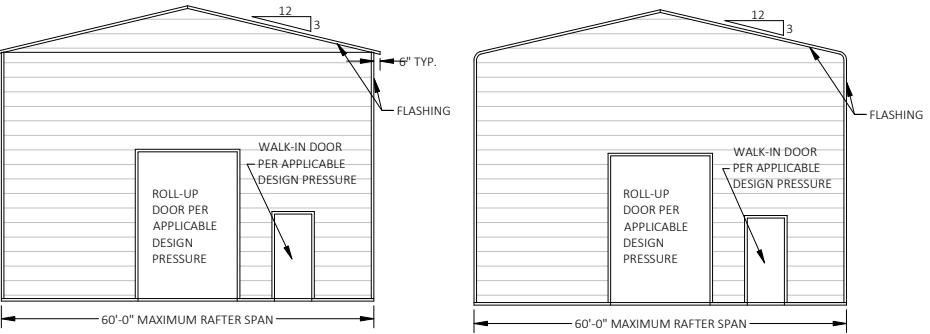
II) DFE (DESIGN FLOOD ELEVATION)

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 (4-16)
7	BOX EAVE RAFTER LEAN-TO OPTIONS
8	CONNECTION DETAILS (18-20)
9	BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION
10	OPTIONAL HELICAL ANCHORING ON GRADE DETAIL

ENCLOSED METAL BUILDING DESIGN
MAXIMUM 60'-0" WIDE X 100'-0" LONG X 20'-0" HIGH (EAVE)
BOX EAVE FRAME / BOW EAVE FRAME



ADJUSTED C & C WIND PRESSURES (ROOF, ASD, PSF)				ADJUSTED C & C WIND PRESSURES (WALL, ASD, PSF)			
EFFECTIVE WIND AREA (SQ. FT) :	10.00	EFFECTIVE WIND AREA (SQ. FT) :	200.00	EFFECTIVE WIND AREA (SQ. FT) :	10.00	EFFECTIVE WIND AREA (SQ. FT) :	200.00
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA
ZONE 1 (NEGATIVE) =	-44.9	ZONE 1 (NEGATIVE) =	-21.6	ZONE 1 (NEGATIVE) =	-35.2	ZONE 1 (NEGATIVE) =	-26.4
ZONE 1 (OVERHANG) =	-62.4	ZONE 1 (OVERHANG) =	-35.2	ZONE 1 (OVERHANG) =	-31.5	ZONE 1 (OVERHANG) =	-24.2
ZONE 2 (NEGATIVE) =	-57.2	ZONE 2 (NEGATIVE) =	-27.3	ZONE 2 (NEGATIVE) =	-40.8	ZONE 2 (NEGATIVE) =	-28.1
ZONE 2 (OVERHANG) =	-74.7	ZONE 2 (OVERHANG) =	-40.8	ZONE 2 (OVERHANG) =	-41.4	ZONE 2 (OVERHANG) =	-32.4
ZONE 3 (NEGATIVE) =	-73	ZONE 3 (NEGATIVE) =	-41.4	ZONE 3 (NEGATIVE) =	-54.9	ZONE 3 (NEGATIVE) =	-30.0
ZONE 3 (OVERHANG) =	-90.5	ZONE 3 (OVERHANG) =	-54.9	ZONE 3 (OVERHANG) =	-54.9	ZONE 3 (OVERHANG) =	-28.1
EFFECTIVE WIND AREA (SQ. FT) :	20.00	EFFECTIVE WIND AREA (SQ. FT) :	300.00	EFFECTIVE WIND AREA (SQ. FT) :	50.00	EFFECTIVE WIND AREA (SQ. FT) :	100.00
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA
ZONE 1 (NEGATIVE) =	-39.5	ZONE 1 (NEGATIVE) =	-18.5	ZONE 1 (NEGATIVE) =	-31.5	ZONE 1 (NEGATIVE) =	-24.2
ZONE 1 (OVERHANG) =	-56.1	ZONE 1 (OVERHANG) =	-31.5	ZONE 1 (OVERHANG) =	-40.3	ZONE 1 (OVERHANG) =	-26.0
ZONE 2 (NEGATIVE) =	-50.3	ZONE 2 (NEGATIVE) =	-27.3	ZONE 2 (NEGATIVE) =	-41.4	ZONE 2 (NEGATIVE) =	-28.1
ZONE 2 (OVERHANG) =	-66.9	ZONE 2 (OVERHANG) =	-41.4	ZONE 2 (OVERHANG) =	-53.7	ZONE 2 (OVERHANG) =	-30.0
ZONE 3 (NEGATIVE) =	-63.5	ZONE 3 (NEGATIVE) =	-41.4	ZONE 3 (NEGATIVE) =	-53.7	ZONE 3 (NEGATIVE) =	-28.1
ZONE 3 (OVERHANG) =	-80.1	ZONE 3 (OVERHANG) =	-53.7	ZONE 3 (OVERHANG) =	-53.7	ZONE 3 (OVERHANG) =	-28.1
EFFECTIVE WIND AREA (SQ. FT) :	50.00	EFFECTIVE WIND AREA (SQ. FT) :	500.00	EFFECTIVE WIND AREA (SQ. FT) :	200.00	EFFECTIVE WIND AREA (SQ. FT) :	500.00
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA
ZONE 1 (NEGATIVE) =	-32.4	ZONE 1 (NEGATIVE) =	-18.5	ZONE 1 (NEGATIVE) =	-30.8	ZONE 1 (NEGATIVE) =	-24.5
ZONE 1 (OVERHANG) =	-47.8	ZONE 1 (OVERHANG) =	-27.3	ZONE 1 (OVERHANG) =	-39.6	ZONE 1 (OVERHANG) =	-25.2
ZONE 2 (NEGATIVE) =	-41.1	ZONE 2 (NEGATIVE) =	-41.4	ZONE 2 (NEGATIVE) =	-41.4	ZONE 2 (NEGATIVE) =	-23.8
ZONE 2 (OVERHANG) =	-56.5	ZONE 2 (OVERHANG) =	-53.7	ZONE 2 (OVERHANG) =	-53.7	ZONE 2 (OVERHANG) =	-23.8
ZONE 3 (NEGATIVE) =	-50.9	ZONE 3 (NEGATIVE) =	-41.4	ZONE 3 (NEGATIVE) =	-41.4	ZONE 3 (NEGATIVE) =	-23.8
ZONE 3 (OVERHANG) =	-66.3	ZONE 3 (OVERHANG) =	-53.7	ZONE 3 (OVERHANG) =	-53.7	ZONE 3 (OVERHANG) =	-23.8
EFFECTIVE WIND AREA (SQ. FT) :	100.00	EFFECTIVE WIND AREA (SQ. FT) :	1000.00	EFFECTIVE WIND AREA (SQ. FT) :	22.1	EFFECTIVE WIND AREA (SQ. FT) :	1000.00
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA
ZONE 1 (NEGATIVE) =	-27	ZONE 1 (NEGATIVE) =	-18.5	ZONE 1 (NEGATIVE) =	-30.8	ZONE 1 (NEGATIVE) =	-23.8
ZONE 1 (OVERHANG) =	-41.5	ZONE 1 (OVERHANG) =	-30.8	ZONE 1 (OVERHANG) =	-39.6	ZONE 1 (OVERHANG) =	-23.8
ZONE 2 (NEGATIVE) =	-34.2	ZONE 2 (NEGATIVE) =	-27.3	ZONE 2 (NEGATIVE) =	-41.4	ZONE 2 (NEGATIVE) =	-23.8
ZONE 2 (OVERHANG) =	-48.7	ZONE 2 (OVERHANG) =	-39.6	ZONE 2 (OVERHANG) =	-55.8	ZONE 2 (OVERHANG) =	-23.8
ZONE 3 (NEGATIVE) =	-41.4	ZONE 3 (NEGATIVE) =	-41.4	ZONE 3 (NEGATIVE) =	-53.7	ZONE 3 (NEGATIVE) =	-23.8
ZONE 3 (OVERHANG) =	-55.8	ZONE 3 (OVERHANG) =	-53.7	ZONE 3 (OVERHANG) =	-53.7	ZONE 3 (OVERHANG) =	-23.8

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

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
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CA CERT. #30782
PROJECT NO. 2528243

CONTRACTOR: BEST METAL BUILDINGS LLC
484 NW TURNER AVE
LAKE CITY FL 32055
PROJECT ADDRESS: RIVERA
PID #01-6S-16-03761-173,
LAKE CITY FL
SHEET: 1 OF 10

DESIGN DATE: 10/10/2025
REVISION 1: DATE
REVISION 2: DATE
DRAWN BY: JS
SCALE: NTS

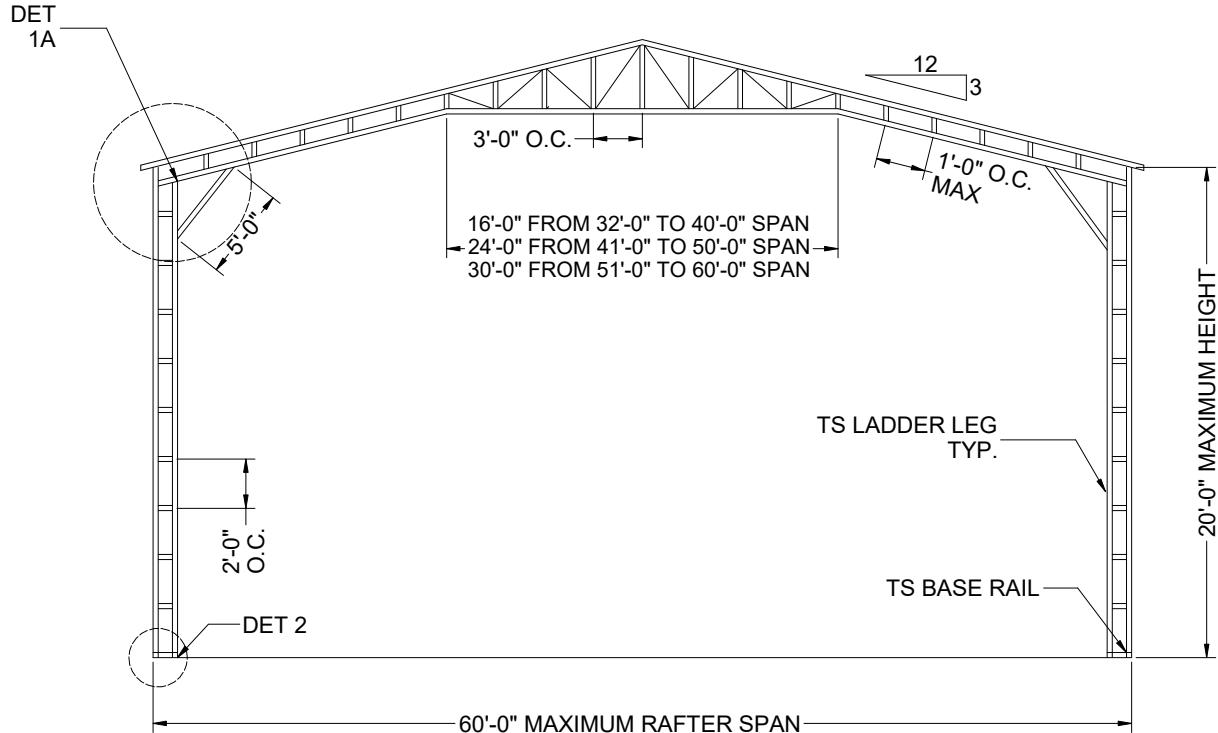
THE ENGINEERING ON THESE PLANS IS SITE
SPECIFIC FOR (1) STRUCTURE ONLY AT THE
PROVIDED ADDRESS(ES).

MEMBER LEGEND:

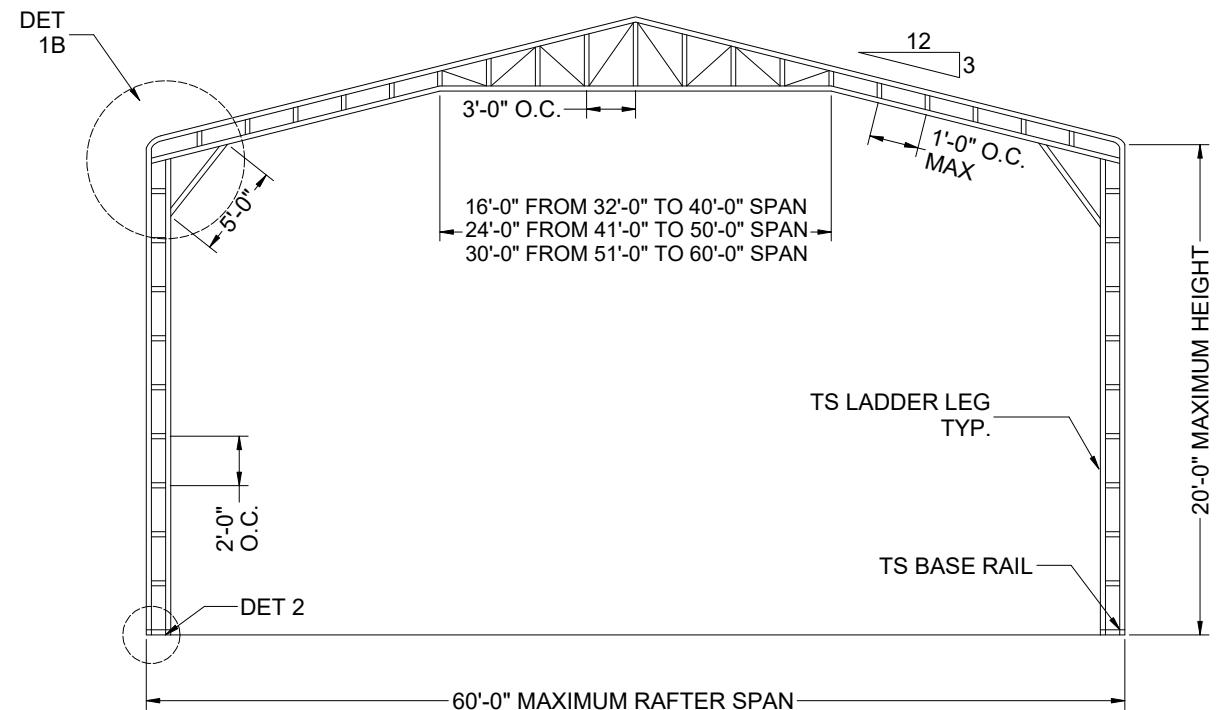
1. TS COLUMN = 2.5X2.5X14 GA U.N.O.
2. TRUSS MEMBERS = 2.5X2.5X14 GA U.N.O.
3. KNEE-BRACE = 2.5"X2"X18GA CHANNEL
4. PURLIN = 1.125"X18GA HAT CHANNEL
5. TS BRACE = 2.5"X2.5"X14GA TUBE
6. END WALL COLUMN = (2)2.5X2.5X14GA U.N.O.

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TRUSS LAYOUT- BOX EAVE



TRUSS LAYOUT- BOW EAVE



CONTRACTOR:
BEST METAL BUILDINGS LLC
484 NW TURNER AVE
LAKE CITY FL 32055

PROJECT ADDRESS:

RIVERA
LAKE CITY FL
PID #01-6S-16-03761-173,

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CA CERT. #30782

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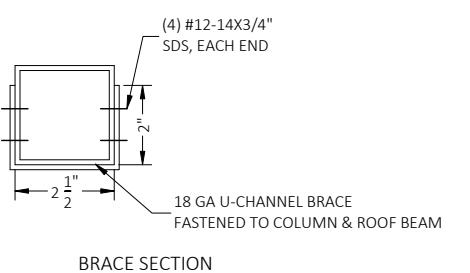
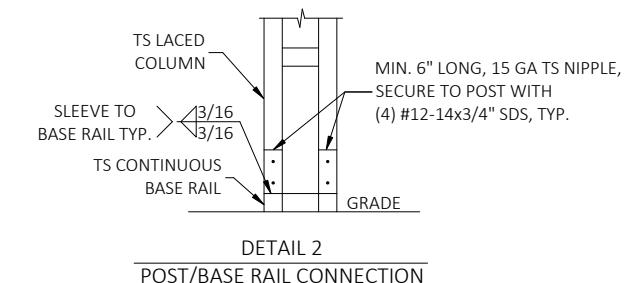
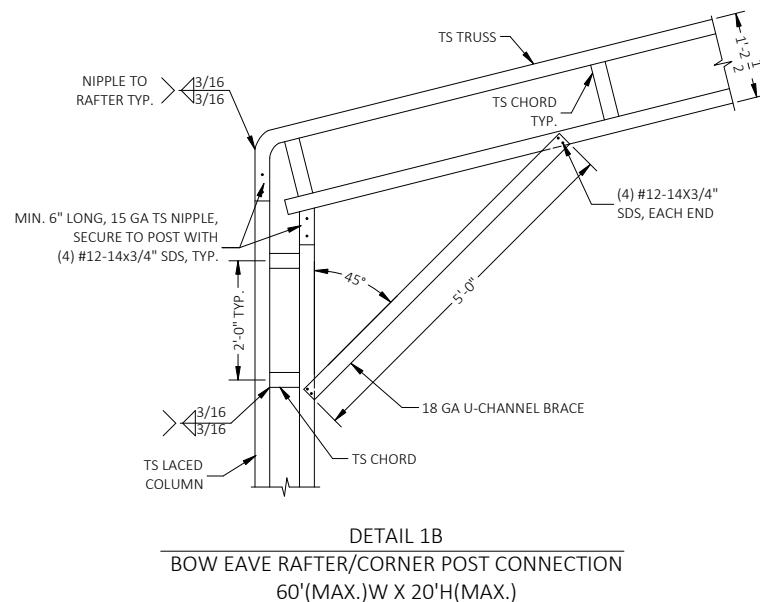
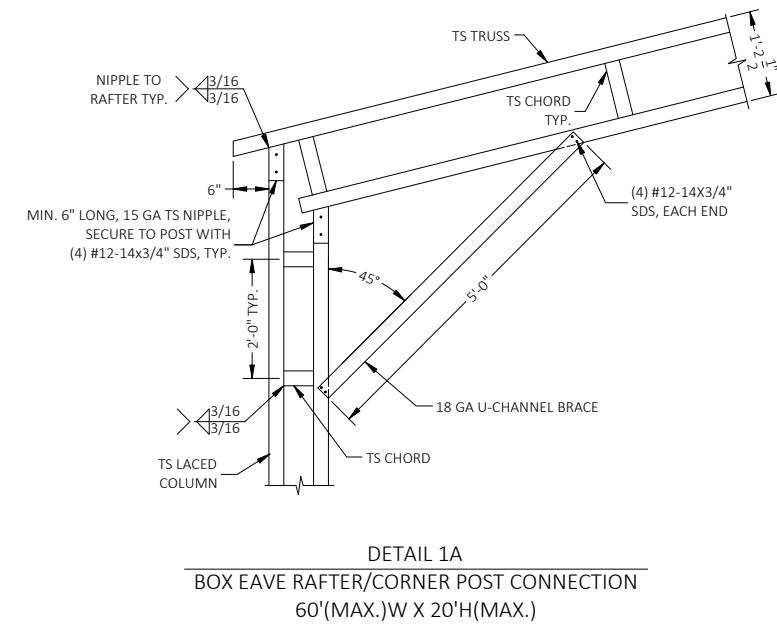
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OF 10

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3 OF 10

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

CONCRETE:
1. CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
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. MOISTURE OR POLYETHYLENE CURING PERMITTED.

4. CONTROL JOINTS SHALL BE PROVIDED AT EVERY 12' O.C. OR 18' O.C. FOR 4" THICK OR 6" THICK CONCRETE SLAB RESPECTIVELY.

5. TERMITE TREATMENT:
PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE BUILDING CODE:

a. TERMITE PROTECTION SHALL BE PROVIDED BY REGISTERED TERMICIDES, INCLUDING SOIL APPLIED PESTICIDES, BAITING SYSTEMS OR ANY OTHER APPROVED METHODS OF TERMITE PROTECTION.

b. CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT UPON THE COMPLETION OF THE APPLICATION OF TERMITE PROTECTIVE TREATMENT BY A REGISTERED TERMICIDE.

c. INITIAL CHEMICAL SOIL TREATMENT INSIDE THE FOUNDATION PERIMETER SHALL BE DONE AFTER THE COMPLETION OF EXCAVATION, BACKFILLING AND COMPACTION.

d. IF SOIL TREATMENT IS USED FOR SUBTERRANEAN TERMITE PREVENTION, CHEMICALLY TREATED SOIL SHALL BE PROTECTED WITH A MINIMUM 6 MIL VAPOR RETARDER TO PROTECT AGAINST RAINFALL DIILUTION. RETREATMENT IS REQUIRED IF RAINFALL OCCURS DURING VAPOR RETARDER PLACEMENT.

e. PLACEMENT OF REINFORCING STEEL SHALL BE DONE AVOIDING THE PENETRATION AND DISTURBANCE OF TREATED SOIL.

f. CONCRETE OVERPOUR OR MORTAR ACCUMULATED ALONG THE EXTERIOR FOUNDATION PERIMETER SHALL BE REMOVED PRIOR TO CHEMICAL SOIL TREATMENT.

g. SOIL TREATMENT SHALL ALSO BE APPLIED TO ALL EXTERIOR CONCRETE OR GRADE WITHIN 1 FOOT OF PRIMARY STRUCTURE SIDE WALLS ALONG WITH A VERTICAL CHEMICAL BARRIER.

h. PROTECTIVE SLEEVES AROUND THE PIPING PENETRATING THE CONCRETE SLAB-ON-GRADE FLOORS SHALL NOT BE OF CELLULOSE-CONTAINING MATERIALS.

i. A SIGNED CONTRACT ASSURING THE INSTALLATION, MAINTENANCE AND MONITORING SHALL BE PROVIDED TO THE BUILDING OFFICIAL PRIOR TO POURING OF SLAB IF A BAITING SYSTEM IS TO BE USED BY THE REGISTERED TERMICIDE.

REINFORCING STEEL:

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

2. REINFORCEMENT MAY BE BENT IN THE FIELD OR SHOP AS LONG AS:

a. IT IS BENT COLD;
b. REINFORCEMENT 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 SIX-BAR DIAMETERS.

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 1-1/2 INCHES.

FROST PROTECTION:

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 LINE DEPTH.

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 ANCHOR MUST BE AS SHOWN IN TABLE 4A 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.

HP 9 BARBED DRIVE ANCHOR NOTES:

1. ANCHOR TO BE 3/4" DIA (A529 GRADE 50) WITH 30" MIN. EMBEDMENT & (4) MIN. BARS AS SHOWN IN DETAIL 3C.

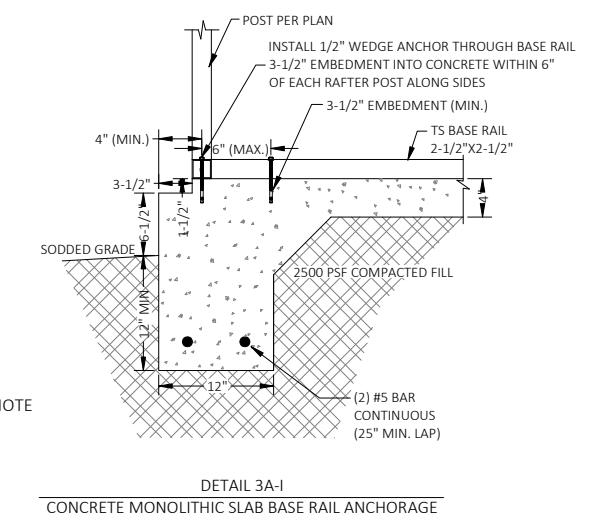
2. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, CORALS, MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS AND CLAYS, MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, ANCHOR SHALL BE INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.

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.

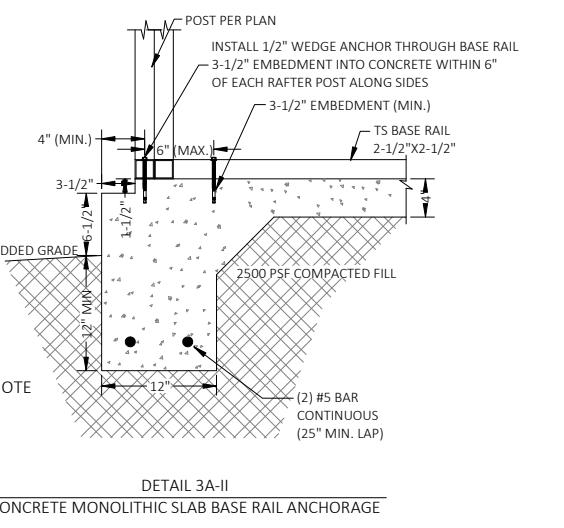
4. THE UPLIFT/BEARING CAPACITY OF THE ANCHORS MUST BE AS SHOWN IN TABLE 4A FOR ANCHORS PROVIDED AT THE JAMBS OF DOOR OPENINGS. THE INCREASE IN ANCHOR CAPACITY MAY BE ACHIEVED BY INCREASING THE DIAMETER AND/OR THE EMBEDMENT OF THE ANCHORS, OR BY USING DIFFERENT ANCHORS DEPENDING ON THE MANUFACTURER'S SPECIFICATIONS.

TABLE 4A

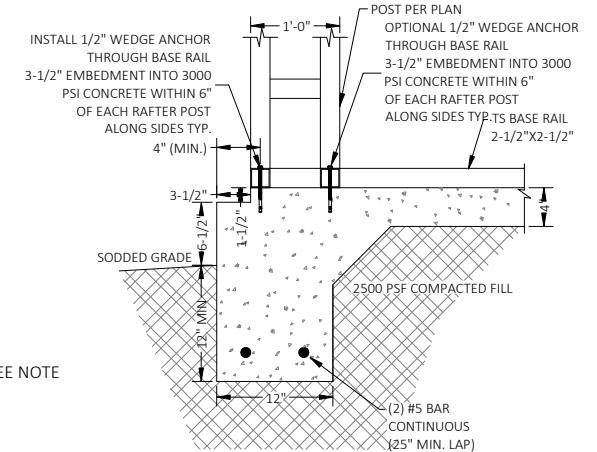
OPENING WIDTH (FT.)	REQUIRED UPLIFT / BEARING CAPACITY OF HELICAL ANCHORS		RAFTER SPACING (FT.)
	4	5	
6	11.0	9.5	
8	13.0	11.5	
10	15.0	13.0	
12	17.0	14.5	
14	19.5	16.5	
16	21.5	18.0	
18	23.5	20.0	
20	25.5	21.5	



DETAIL 3A-I
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

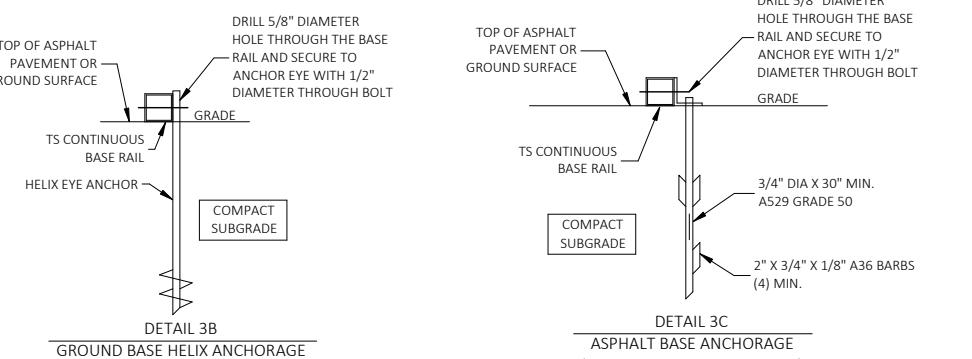


DETAIL 3A-II
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

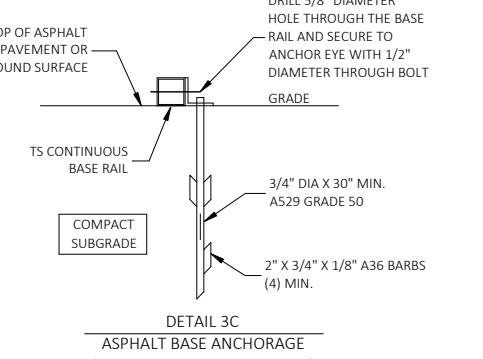


DETAIL 3A-III
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

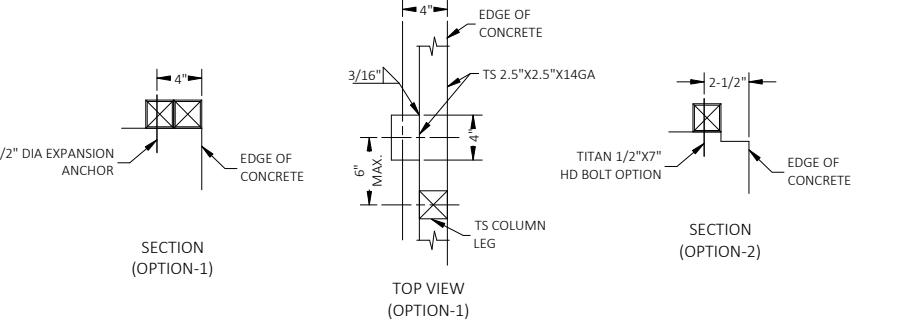
* = COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING REQUIRED FOOTING DEPTH BASED ON FROST LINE DEPTH.



DETAIL 3B
GROUND BASE HELIX ANCHORAGE



DETAIL 3C
ASPHALT BASE ANCHORAGE (HP 9 BARBED DRIVE ANCHOR)



TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

BASE RAIL ANCHORAGE OPTION

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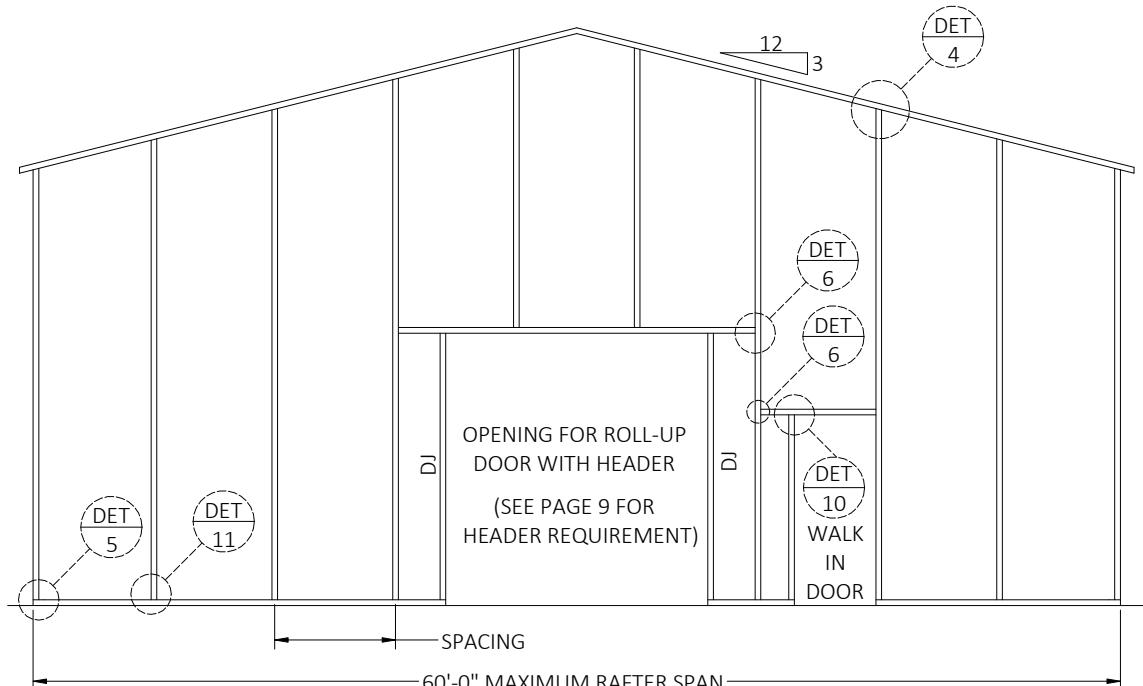
FLORIDA ENGINEERING LLC
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PROJECT NO. 2528243

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PROJECT ADDRESS: RIVERA
PID #01-6S-16-03761-173,
LAKE CITY FL

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REVISION 1: DATE
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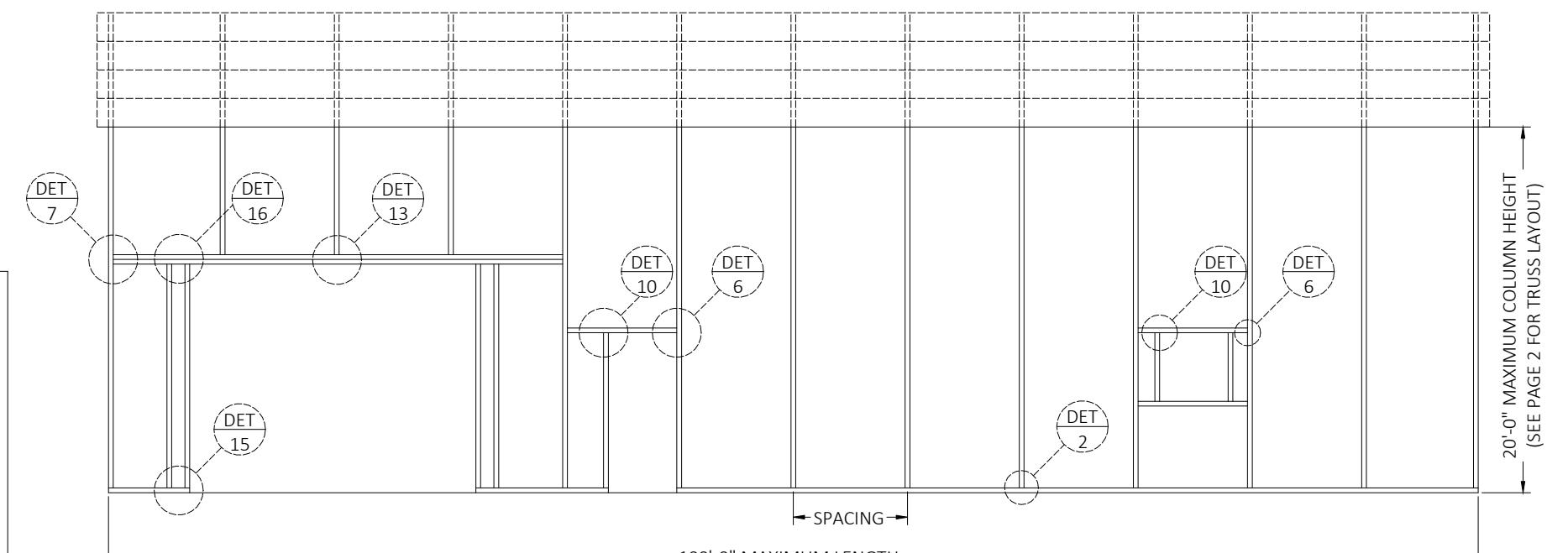
4 OF 10



TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

SPACING = 5'-0"	I) FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH II) FOR BUILDING SPAN LESS THAN 50'-0"
SPACING = 4'-0"	I) FOR WIND SPEEDS BETWEEN 141 MPH AND 170 MPH II) FOR BUILDING SPAN GREATER THAN 50'-0"

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TYPICAL BOX FAVE RAFTER SIDE WALL FRAMING SECTION

SPACING = 5'-0"	I) FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH II) FOR BUILDING SPAN LESS THAN 50'-0"
SPACING = 4'-0"	I) FOR WIND SPEEDS BETWEEN 141 MPH AND 170 MPH II) FOR BUILDING SPAN GREATER THAN 50'-0"

TS COLUMN

FOR HEADER <= 10'-0"

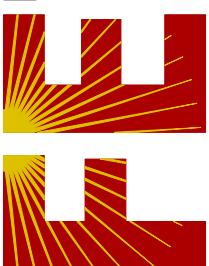
TS DOUBLE COLUMN TYP.

FOR HEADER > 10'-0"

(DJ)

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LAKE CI
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BIVEBA

PROJECT NO. 2528243



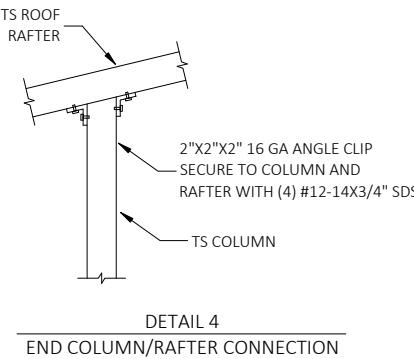
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LAKE CITY FL

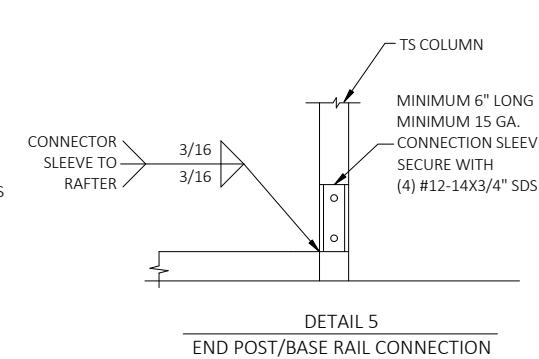
RIVERA

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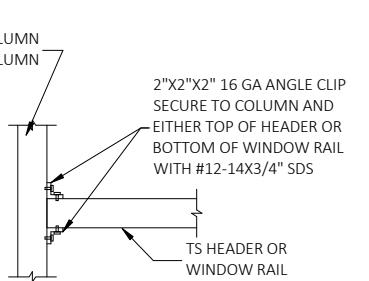
CONNECTION DETAILS



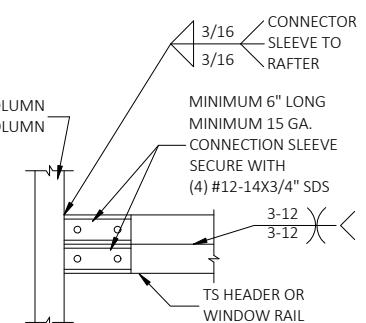
DETAIL 4
END COLUMN/RAFTER CONNECTION



DETAIL 5
END POST/BASE RAIL CONNECTION

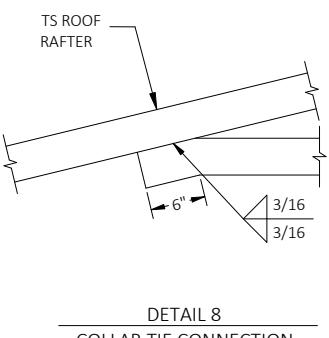


DETAIL 6
HEADER TO COLUMN CONNECTION

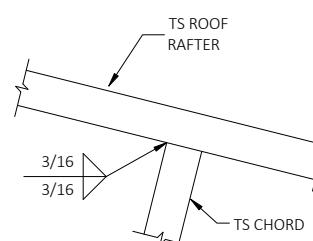


DETAIL 7
DOUBLE HEADER TO COLUMN CONNECTION

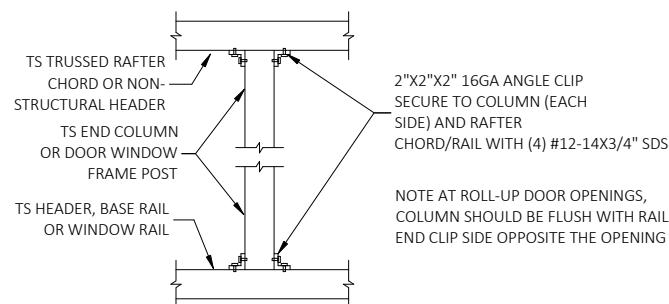
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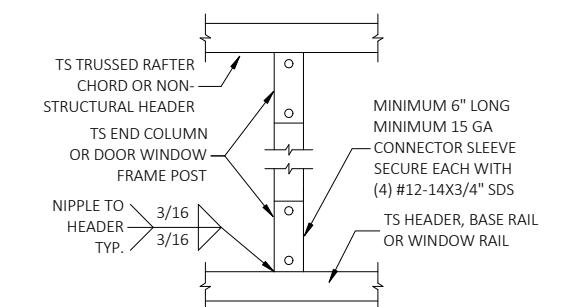
DETAIL 8
COLLAR TIE CONNECTION



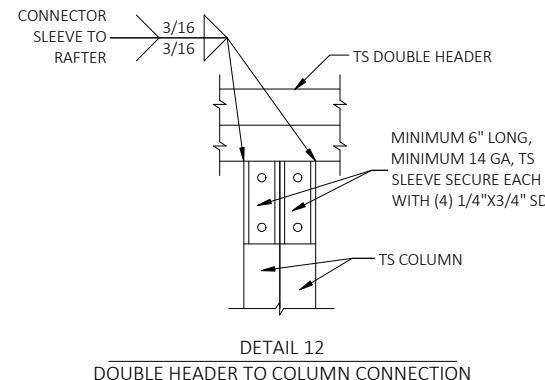
DETAIL 9
RAFTER TO CHORD CONNECTION



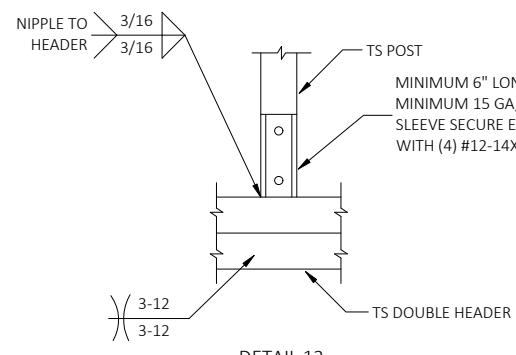
DETAIL 10
POST TO HEADER, BASE RAIL OR WINDOW RAIL CONNECTION
(OPTION-1)



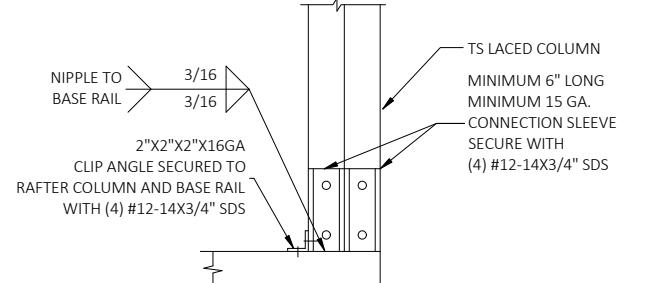
DETAIL 11
POST TO HEADER, BASE RAIL CONNECTION
(OPTION-2)



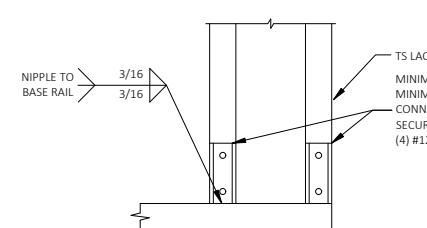
DETAIL 12
DOUBLE HEADER TO COLUMN CONNECTION



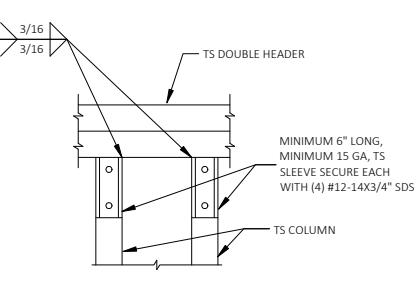
DETAIL 13
POST/DOUBLE HEADER CONNECTION



DETAIL 14
POST/BASE RAIL CONNECTION



DETAIL 15
POST/BASE RAIL CONNECTION



DETAIL 16
POST/BASE RAIL CONNECTION

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LAKE CITY FL 32055
PROJECT ADDRESS:
RIVERA
PID #01-6S-16-03761-173,

DESIGN DATE: 10/10/2025

REVISION 1: DATE

REVISION 2: DATE

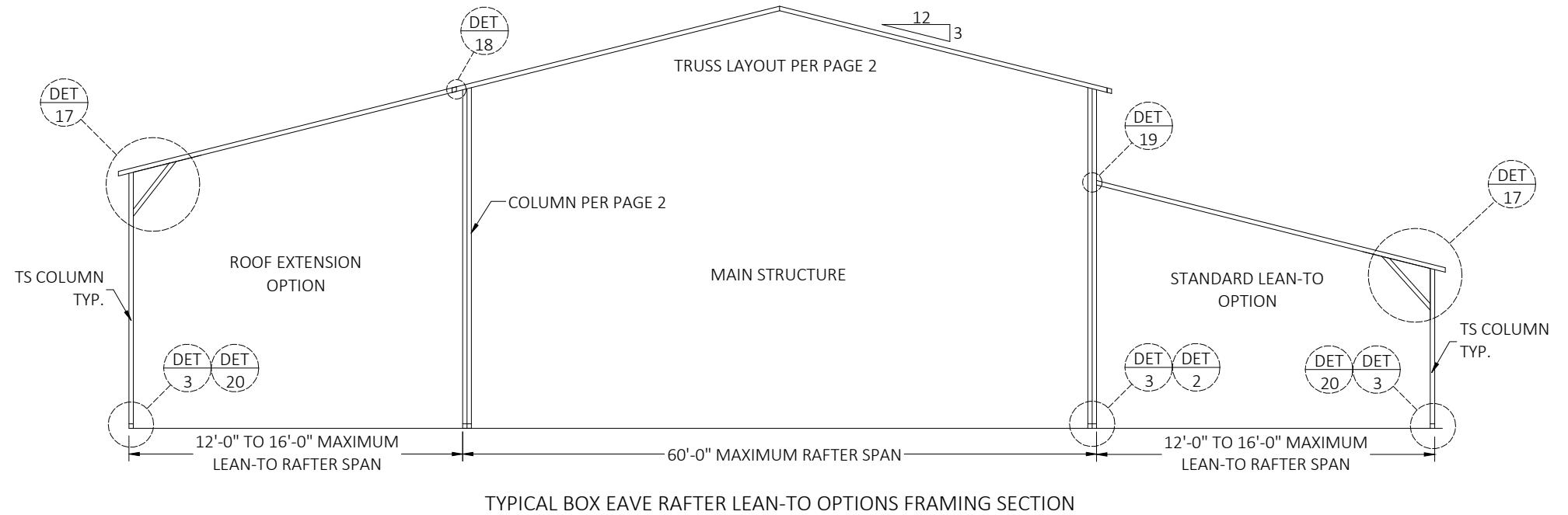
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DRAWN BY: JS

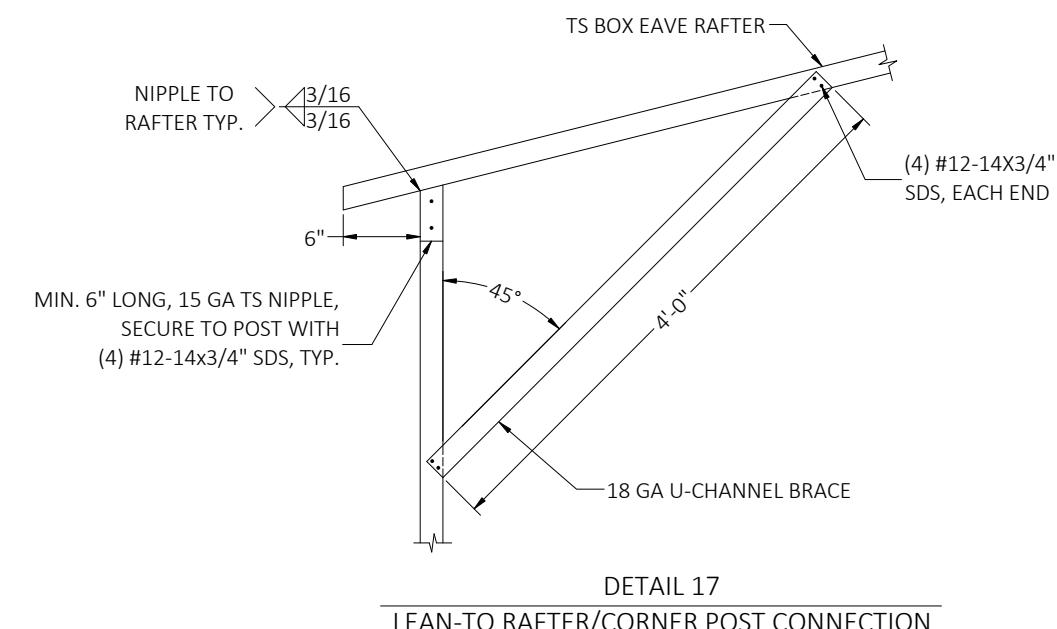
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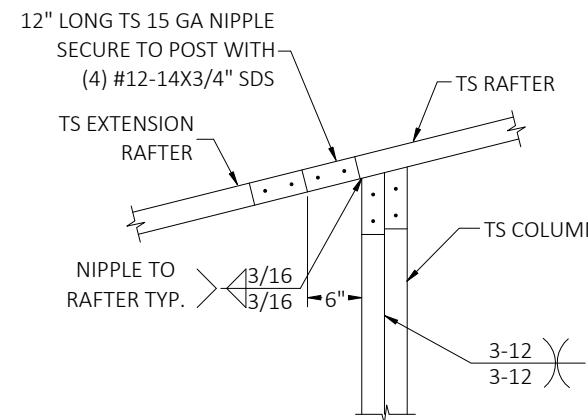
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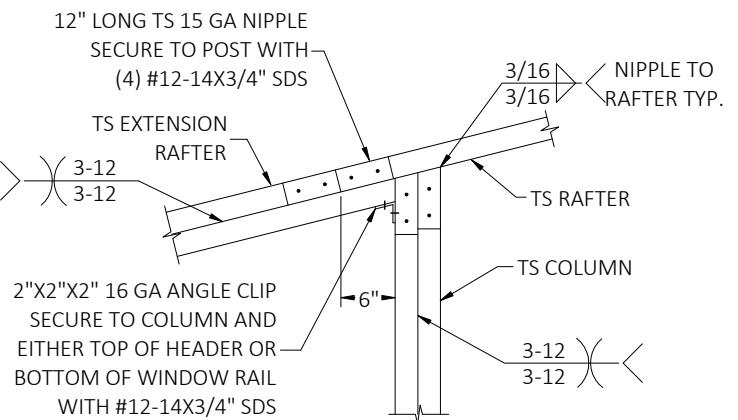
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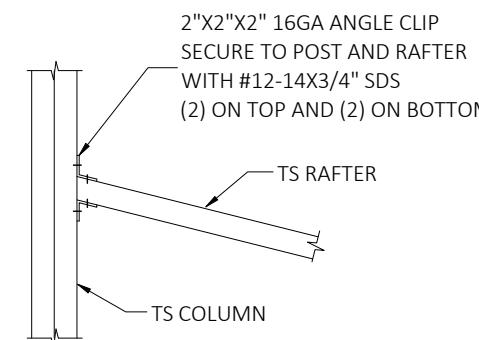
CONNECTION DETAILS



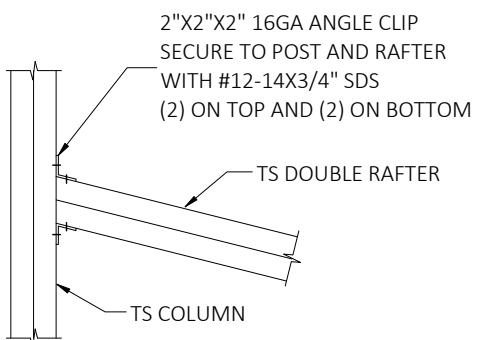
DETAIL 18A
SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN 12'-0"



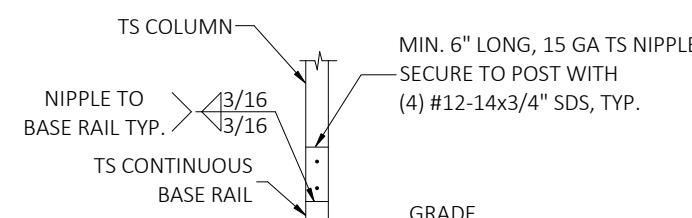
DETAIL 18B
SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 12'-0" AND 16'-0"



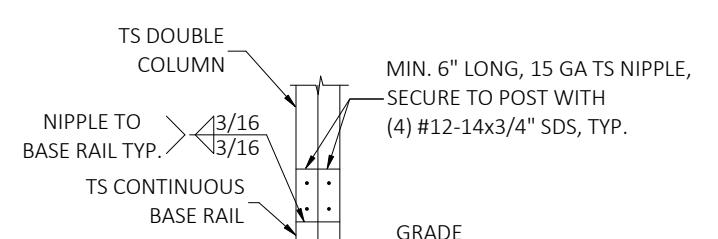
DETAIL 19A
LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN 12'-0"



DETAIL 19B
LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 12'-0" AND 16'-0"



DETAIL 20A
LEAN-TO POST CONNECTION



DETAIL 20B
LEAN-TO DOUBLE POST CONNECTION

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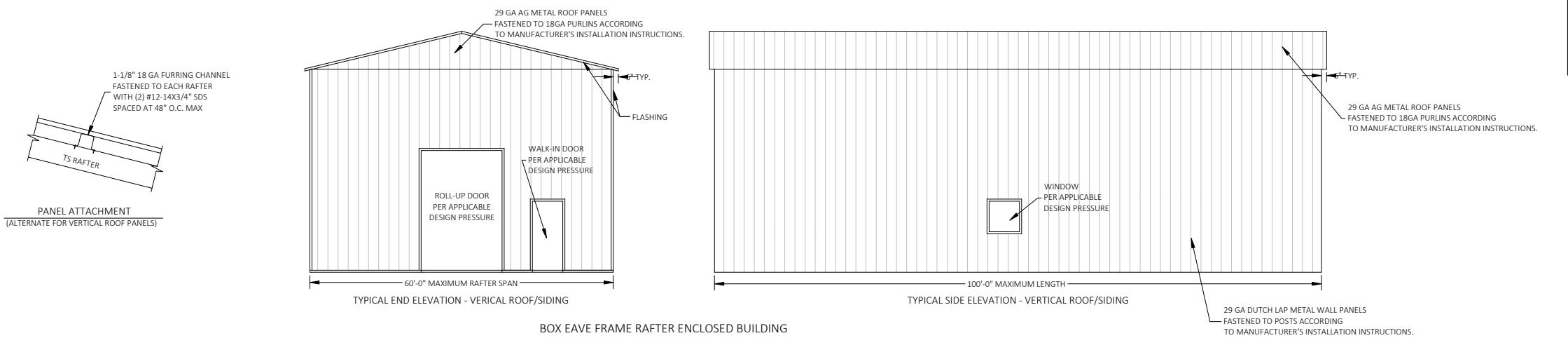
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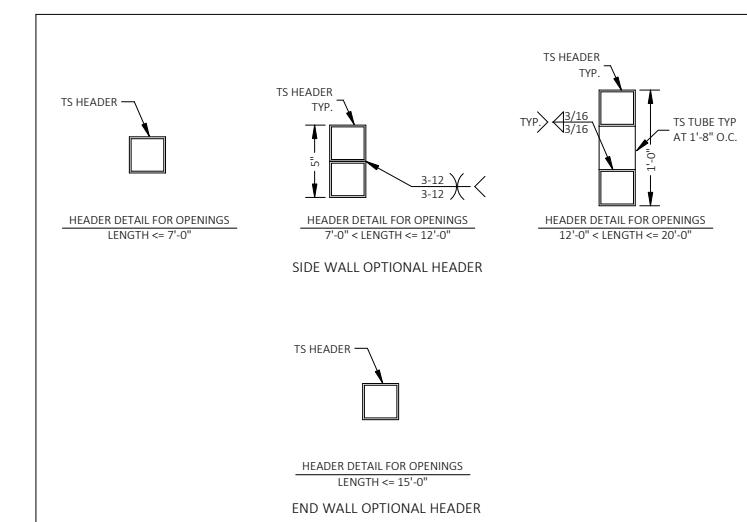
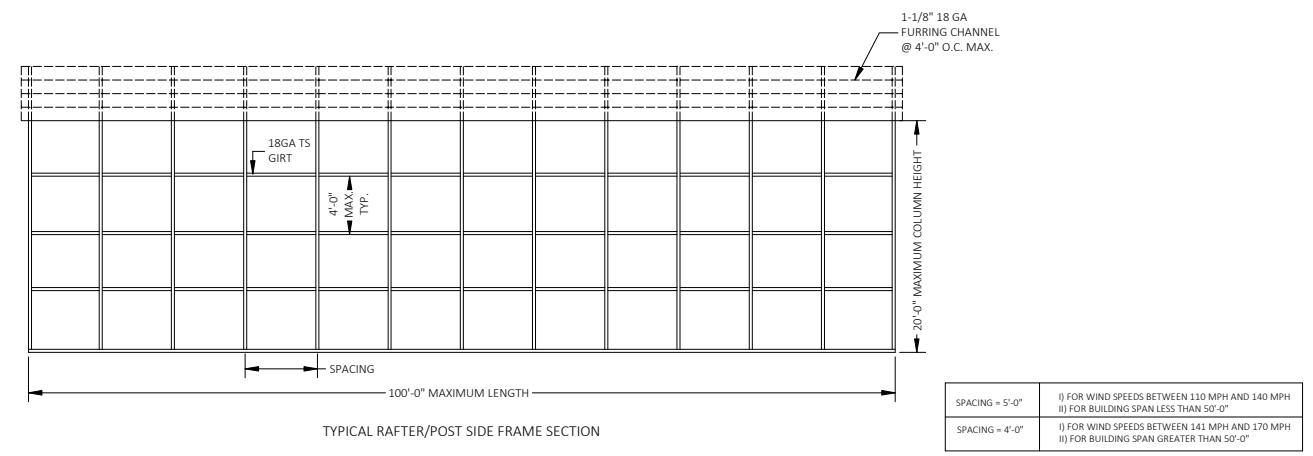
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LAKE CITY FL

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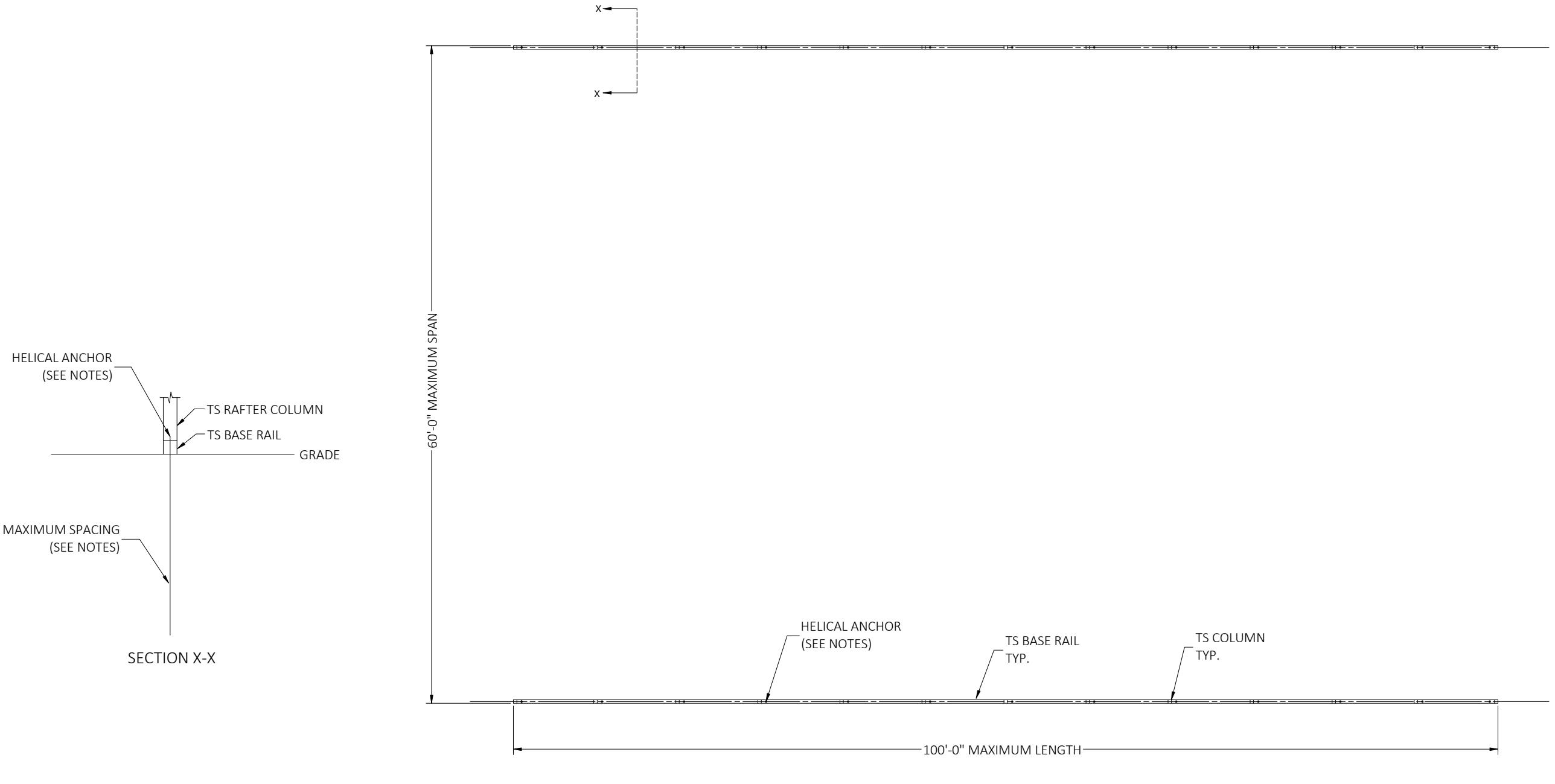
OF 10

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 EVERY 10'.
2. FOR MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT EVERY 5' OR EVERY POST (LEG).
3. THE UPLIFT/BEARING CAPACITY OF EACH ANCHOR MUST BE EQUAL TO OR GREATER THAN 8.5 KIPS.

OPTIONAL HELICAL ANCHORING ON GRADE DETAIL

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