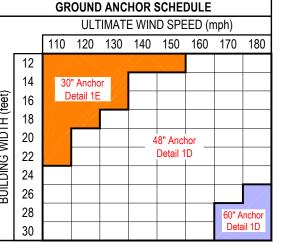
FBC APPROVED PRODUCTS LIST			MAXIMUM ALLOWABLE WIND SPEED					
PRODUCT CATEGORY	SUB CATEGORY	MANUFACTURER	APPROVAL No. & DATE	QA EXPIRATION DATE	OPEN	ENCLOSED	PARTIALLY ENCLOSED	ľ
STRUCTURAL COMPONENTS	ROOF DECK	CAROLINA CARPORTS, INC. 26 Gauge AG Panel	FL6596.1-R7 12/12/23	04/05/27	180	180	180	
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAROLINA CARPORTS, INC. 26 Gauge AG Panel	FL6702.1-R7 12/12/23	03/14/27	180	180	180	С
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAROLINA CARPORTS, INC. 26 Gauge Dutch Lap Wall Panel	FL6702.3-R7 12/12/23 **	03/14/27	N/A	164	143	
EXTERIOR DOORS	SWINGING	ELIXIR DOOR AND METAL COMPANY Series 402-14	FL17996.3-R3 12/26/23	08/26/25	N/A	139	139	N
EXTERIOR DOORS	SWINGING	ELIXIR DOOR AND METAL COMPANY Series 407	FL17996.5-R3 12/26/23	08/19/25	N/A	174	155	L
EXTERIOR DOORS	ROLL-UP	ASTA INDUSTRIES INC. Model 203 (12' Max. Width)	FL8888.1-R7 11/06/23	12/31/24	N/A	180	174	
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll Up Sheet Door (8' Max. Width)	FL16806.2-R6 12/13/23	04/05/27	N/A	180	180	
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (10' Max. Width)	FL16806.4-R6 12/13/23	04/05/27	N/A	180	172	(feet)
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (12' Max. Width)	FL16806.1-R6 12/13/23	04/05/27	N/A	179	154	MIDTH
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (16' Max. Width)	FL41335.1-R1 12/13/23	04/05/27	N/A	163	142	<b>BUILDING WIDTH (feet)</b>
WINDOWS	SINGLE HUNG	CGI WINDOWS AND DOORS Model SH 4000A	FL23358.2-R8 04/16/24	12/31/32	N/A	174	156	BUII
NOTES:  1. DOORS AND WINDOWS SHOWN A PRODUCT SHALL HAVE A VAL		FERENT PRODUCT LINES AND/OR MODELS, PROVIDE	D THE FOLLOWING COI	NDITIONS ARE MET:				Ī

TABLE 1 RAFTER FRAME, END POST, GROUND ANCHOR AND PANEL FASTENER SPACING SPECIFICATIONS

	WIND	ULTIMATE	NOMINAL	MAXIMUM POST / RAFTER	AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS OR GIRTS (INCHES)		
RISK CATEGORY	EXPOSURE CATEGORY	WIND SPEED (MPH)	WIND SPEED (MPH)	SPACING	INTERIOR POSTS/RAFTERS	END POSTS/RAFTERS	
-	B or C	110 TO 150	89 TO 116	5.0	6	6	
'	BOIC	151 TO 180	117 TO 139	4.0	6	6	

- IOTES: 1. Specifications applicable to 26 gauge metal roof and wall panels fastened directly to 12 or 14 gauge steel tube framing, or 18 gauge hat channel roof purlins.
  - 2. Specifications applicable only for mean roof height of 20 feet or less, and roof slopes of 7° to 27° (1.5:12 to 6:12 pitch). Spacing requirements for other roof heights and/or slopes may vary.



## **METAL CARPORT INSTALLATION PLANS** AND DETAILS AND FRAMING AND **FASTENER SPECIFICATIONS**

FOR CONSTRUCTION IN THE STATE OF FLORIDA

PREPARED FOR: CAROLINA CARPORTS, INC.

P.O. BOX 1263 DOBSON, NORTH CAROLINA 27017

PREPARED BY:

### BECHTOL ENGINEERING AND TESTING, INC.

605 WEST NEW YORK AVENUE DELAND, FLORIDA 32720 Certificate of Authorization No. 00005492

DETAILS 1C AND 1D SHOWN ON SHEET 4 OF 6

- A. PRODUCT SHALL HAVE A VALID FBC PRODUCT APPROVAL.

  B. COMPONENTS ARE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION REQUIREMENTS.
- 2. FRAMING CONNECTIONS FOR DOOR AND WINDOW FRAMES REMAIN THE SAME FOR SUBSTITUTED PRODUCTS. HEADERS AND WINDOW RAILS MAY BE RAISED OR LOWERED AS NECESSARY TO ACCOMODATE SUBSTITUTED PRODUCT.

\* MAXIMUM POST SPACING FOR DUTCH LAP IS 4.0

## **GENERAL NOTES:**

- 1. THESE PLANS PERTAIN ONLY TO THE STRUCTURE, INCLUDING MAIN WIND FORCE RESISTING SYSTEM, COMPONENTS AND CLADDING, AND BASE RAIL ANCHORAGE. OTHER DESIGN ISSUES, INCLUDING BUT NOT LIMITED TO PLUME INGRESS/EGRESS, PROPERTY SET-BACKS, FINISH FLOOR ELEVATION AND SLOPE, OR OTHER LOCAL ZONING REQUIREMENTS ARE THE RESPONSIBILITY OF OTHERS.
- 2. THESE STRUCTURES ARE DESIGNED AS NON-HABITABLE UTILITY/STORAGE BUILDINGS (RISK CATEGORY I) CAPABLE OF SUPPORTING DEAD LOAD OF THE STRUCTURE AND APPLICABLE LIVE AND WIND LOADS. IMPROVEMENTS NC HEREIN, INCLUDING DOORS, WINDOWS, OR OTHER COMPONENTS NOT LISTED IN THE FBC APPROVED PRÓDUCTS LIST (THIS SHEET), AND NOT PROVIDED AND INSTALLED BY CAROLINA CARPORTS, INC., WHICH EXERT ADDITIONAL SHALL BE AT THE OWNER'S RISK. BECHTOL ENGINEERING AND TESTING, INC., SHALL NOT BE RESPONSIBLE FOR STRUCTURAL DAMAGE OR FAILURE DUE TO THE APPLICATION OF ADDITIONAL LOADS.
- 3. ALL STEEL TUBING SHALL BE 50 KSI GALVANIZED STEEL. ALL FASTENERS SHALL BE GALVANIZED OR STAINLESS STEEL OR ZINC PLATED.
- 4. ALL COMPONENTS AND CLADDING SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND SHALL MEET THE DESIGN PRESSURES REQUIRED BY THE FLORIDA BUILDING CODE (FBC) AT THE LOCATION OF THE BUILDING WITHIN
- 5. ALL FIELD FRAMING CONNECTIONS SHALL BE #12-14 x 3/4" SELF DRILLING SCREWS WITHOUT CONTROL SEAL WASHER. ALL SHOP FRAMING CONNECTIONS SHALL BE WELDED.
- 6. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. THE REINFORCING STEEL SHALL BE MINIMUM GRADE 40. CONCRETE SLAB FOUNDATIONS SHALL BE REINFORCED WITH 6X6-W1.4XW1.4 WELDED WIRE FABRIC COMPLYING WITH ASTM A 185, OR WITH SYNTHETIC FIBER REINFORCEMENT COMPLYING WITH ASTM C1116.
- 7. BASE RAIL GROUND ANCHOR REQUIREMENTS: ONE WITHIN 6" OF EVERY POST LOCATION, AND BOTH SIDES OF OPENINGS WHERE BASE RAIL IS ABSENT. GROUND ANCHORS ARE NOT REQUIRED FOR CONCRETE FOOTING AND/OR CONCRETE SLAB CONSTRUCTION. SEE GROUND ANCHOR SCHEDULE (THIS SHEET) FOR SPECIFIC GROUND ANCHOR SIZE REQUIREMENTS.
- 8. CONCRETE ANCHORS SHALL BE TAPCON REDHEAD LDT 1/2" x 5" OR EQUIVALENT.
- 9. POST/RAFTER BRACING: BRACE ON EVERY POST/RAFTER CONNECTION, EXCEPT FOR END WALLS.
- 10. SLAB FOUNDATION SUBGRADE SOILS SHALL BE TERMITE TREATED AND COVERED WITH 6 MIL VAPOR RETARDER PER SECTION R318.1 OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) RESIDENTIAL, AND SECTION 1816.1 OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) - BUILDING. SOIL LOAD BEARING PRESSURE OF 2000PSF IS ASSUMED.
- 11. 14 GA FRAMING: 2-1/2" x 2-1/2" TUBE STEEL (TS) WITH 2-1/4" x 2-1/4" TS NIPPLES. 12 GA FRAMING: 2-1/4" x 2-1/4" TS WITH 2" x 2" TS NIPPLES.
- 12. FOR CONTINUOUS REINFORCING, MINIMUM BAR OVERLAP SHALL BE 40 BARS DIAMETERS ( 25" FOR #5 REBAR)
- 13. TORNADO VELOCITY COMPLIANCE IS NOT REQUIRED FOR RISK I OR RISK I OR RISK II STRUCTURES PER SECTION R301.2.1.1 OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023)- RESIDENTIAL AND SECTION 1603.1.4 OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) - BUILDING, AND ASCE 7-22

Reviewed for Code THIS IS TO CERTIFY THAT THE CALCULATIONS AND Compliance SPECIFICATIONS HEREIN HAVE BEEN PREPARED BY THE UNDERSIGNED PROFESSIONAL ENGINEER AND ARE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1609 OF THE FLORIDA BUILDING CODE, EIGHTH EDITION (2023).

PLEASE NOTE: PLANS EXPIRE MIDNIGHT 12/31/24

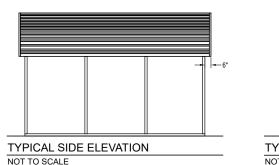


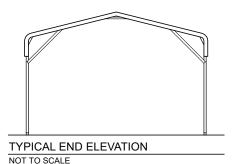
# CAROLINA CARPORTS, INC. GENERIC PLANS FOR USE IN THE STATE OF FLORIDA UP TO 30' WIDE

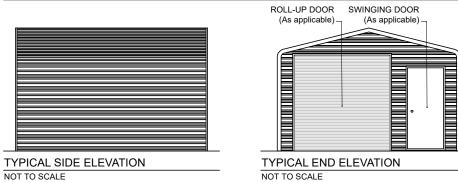


REVISED	5/14/24	DATE: 1/1/2024
DRAWN:	CS	SCALE: NTS
CHECKE	CS/ID	PROJ. NO.: G24001
APPROV	TB / LP	SHEET 1 OF 6

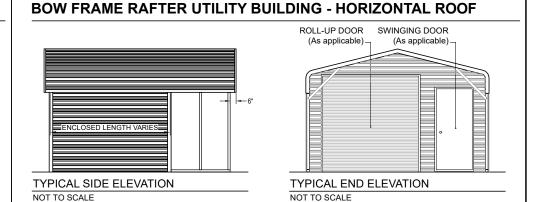
# **BOW FRAME RAFTER OPEN CARPORT - HORIZONTAL ROOF**



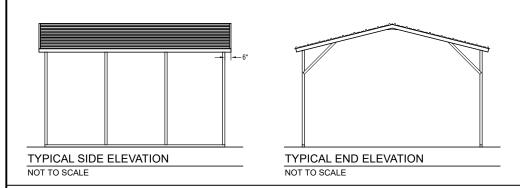




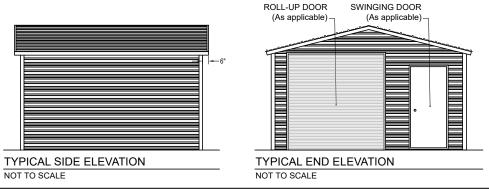
**BOW FRAME RAFTER ENCLOSED BUILDING - HORIZONTAL ROOF** 



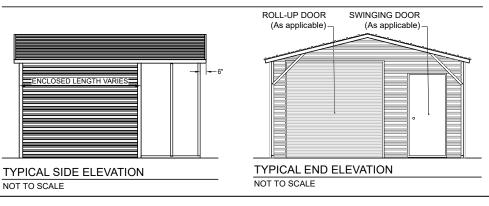




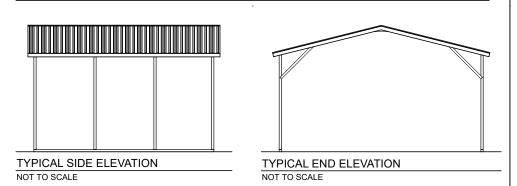
**BOX EAVE FRAME RAFTER ENCLOSED BLDG - HORIZONTAL ROOF** 

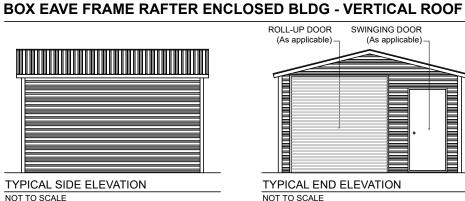


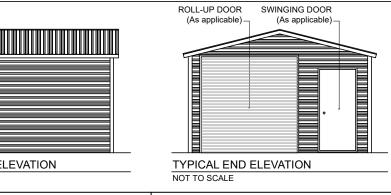
**BOX EAVE FRAME RAFTER UTILITY BLDG - HORIZONTAL ROOF** 



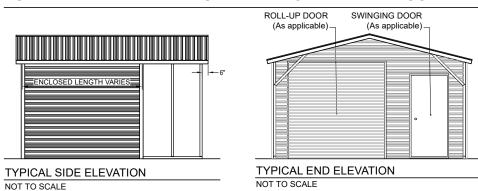
# **BOX EAVE FRAME RAFTER OPEN CARPORT - VERTICAL ROOF**

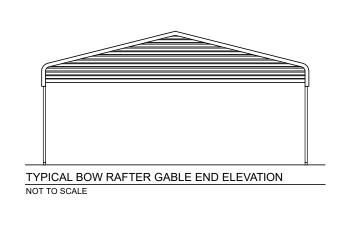


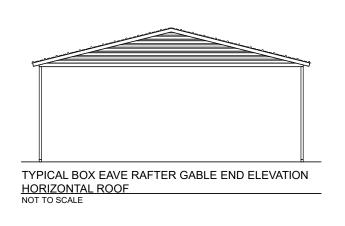


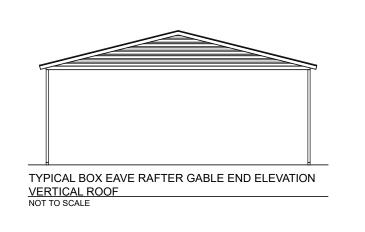




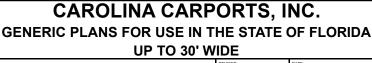




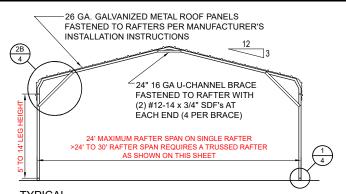




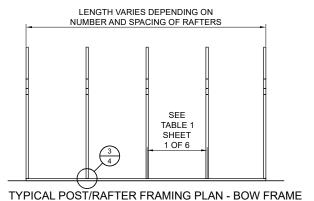




01 10 00 11		
	REVISED: 5/14/24	DATE: 1/1/2024
BECHTOL ENGINEERING AND TESTING. inc.	DRAWN: CS	SCALE: NTS
ONSULTING GEOTECHNICAL ENVIRONMENTAL AND MATERIALS TESTING ENGINEERS	CS / ID	PROJ. NO.: G24001
ertificate of Authorization No. 00005492	APPROVED: TB / LP	SHEET 2 OF 6

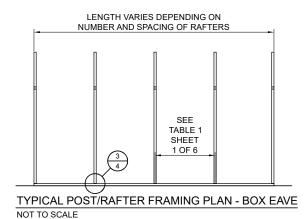


**TYPICAL** INTERIOR POST/RAFTER FRAME SECTION - BOW FRAME NOT TO SCALE



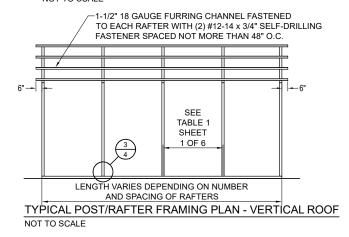
-26 GA. GALVANIZED METAL ROOF PANELS FASTENED TO RAFTERS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS 24" 16 GA U-CHANNEL BRACE FASTENED TO RAFTER WITH (2) #12-14 x 3/4" SDF's AT EACH END (4 PER BRACE) 24' MAXIMUM RAFTER SPAN ON SINGLE RAFTER >24' TO 30' RAFTER SPAN REQUIRES A TRUSSED RAFTER
AS SHOWN ON THIS SHEET

TYPICAL INTERIOR POST/RAFTER FRAME SECTION - HORIZONTAL ROOF - BOX EAVE



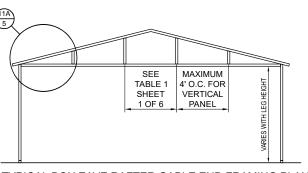
-26 GA. GALVANIZED METAL ROOF PANELS FASTENED TO PURLINS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS 24" 16 GA U-CHANNEL BRACE FASTENED TO RAFTER WITH (2) #12-14 x 3/4" SDF's AT EACH END (4 PER BRACE) 24' MAXIMUM RAFTER SPAN ON SINGLE RAFTER >24' TO 30' RAFTER SPAN REQUIRES A TRUSSED RAFTER
AS SHOWN ON THIS SHEET  $\binom{1}{4}$ 

TYPICAL INTERIOR POST/RAFTER FRAME SECTION - VERTICAL ROOF -BOX EAVE NOT TO SCALE

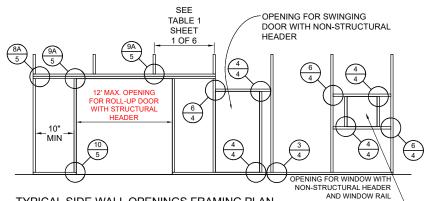


SEE TABLE 1 SHEET 1 OF 6

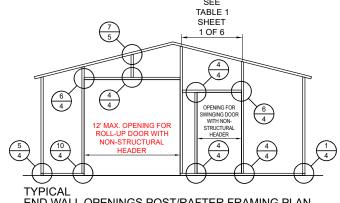
TYPICAL BOW RAFTER GABLE END FRAMING PLAN NOT TO SCALE



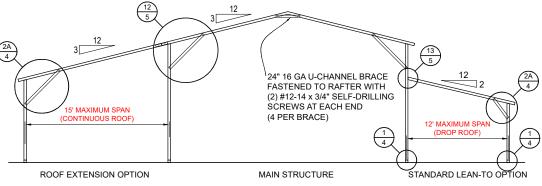
TYPICAL BOX EAVE RAFTER GABLE END FRAMING PLAN NOT TO SCALE





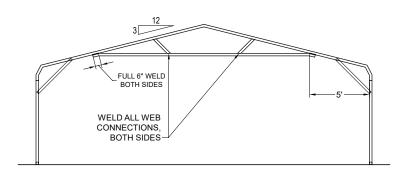


END WALL OPENINGS POST/RAFTER FRAMING PLAN NOT TO SCALE



TYPICAL LEAN-TO OPTIONS FRAMING PLAN (BOTH OPTIONS SHOWN)

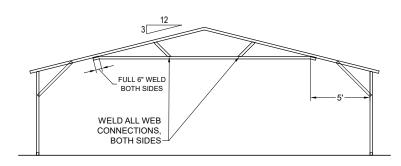
NOT TO SCALE (BOX EAVE RAFTER SHOWN, ONLY STANDARD LEAN-TO IS APPLICABLE TO BOW FRAME RAFTER)



OPTIONAL 24'-1" TO 30' TRUSSED RAFTER - BOW

NOT TO SCALE

NOT TO SCALE



OPTIONAL 24'-1" TO 30' TRUSSED RAFTER - BOX EAVE NOT TO SCALE

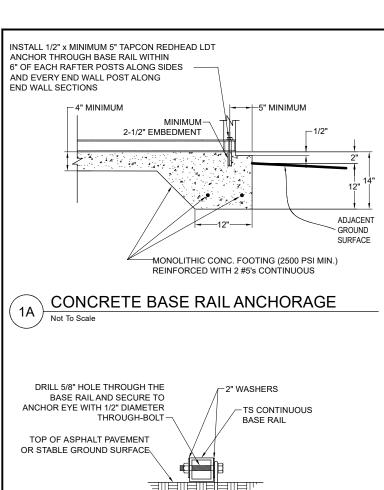
 $\begin{pmatrix} 1 \\ 4 \end{pmatrix}$ **FREESTANDING** LEAN-TO FRAMING PLAN NOT TO SCALE

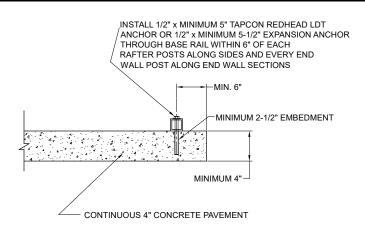


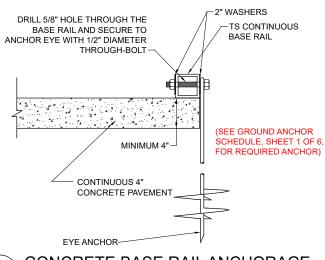
# CAROLINA CARPORTS, INC. GENERIC PLANS FOR USE IN THE STATE OF FLORIDA UP TO 30' WIDE

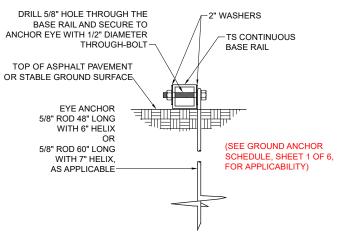


	REVISED: 5/14/24	DATE: 1/1/2024		
G	DRAWN: CS	SCALE: NTS		
ERS	CHECKED: CS / ID	PROJ. NO.: G24001		
	APPROVED: TB / LP	SHEET 3 OF 6		









CONCRETE BASE RAIL ANCHORAGE (OPTIONAL - OPEN CARPORTS ONLY)

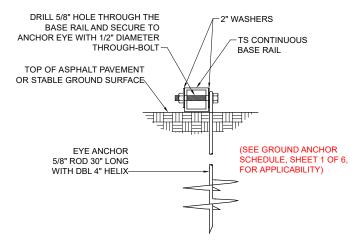
CONCRETE BASE RAIL ANCHORAGE 1C Not To Scale (OPEN CARPORTS WHERE SLAB EDGE DISTANCE DOES NOT MEET MINIMUM EDGE DISTANCE SHOWN IN DETAIL 1B) BASE RAIL DEEP ANCHORAGE Not To Scale

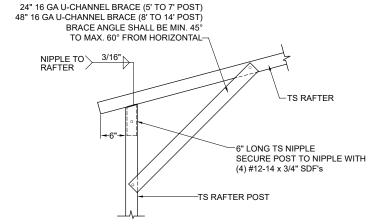
6" LONG TS NIPPLE

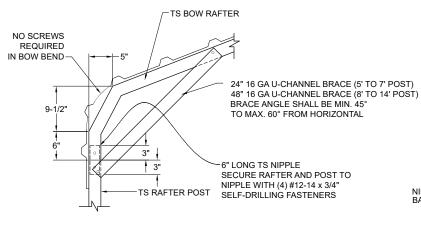
SECURE POST TO NIPPLE

WITH (4) #12-14 x 3/4" SDF's

TS RAFTER POST





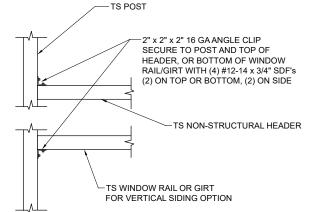




BASE RAIL ANCHORAGE

**BOX EAVE RAFTER/POST DETAIL** 

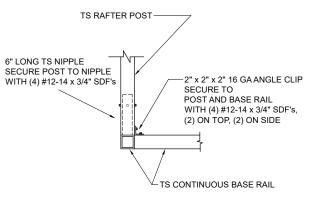
**BOW RAFTER/POST DETAIL** 



NON-STRUCTURAL HEADER, WINDOW RAIL, OR GIRT TO POST CONN. DETAIL 6 Not To Scale

TS TRUSSED RAFTER CHORD, OR NON-STRUCTURAL HEADER TS END POST OR DOOR/ WINDOW FRAME POST 2"x2"x2" 16 GA ANGLE CLIP SECURE TO POST (EACH SIDE) TS BASE/WINDOW RAIL OR AND RAFTER CHORD/RAIL WITH NON-STRUCTURAL HEADER (4) #12-14 x 3/4" SDF's, (2) ON (12 GA IF ROLL-UP DOOR FRAME) TÓP OR BOTTOM, (2) ON SIDE

POST TO RAIL, TRUSS CHORD, OR NON-STRUCTURAL HEADER CONN. DETAIL Not To Scale



END POST/BASE RAIL CONN. Not To Scale



Date: 2024.0517 09:46:55 -04'00 STATE OF CORIDA (1907) CAROLINA CARPORTS, INC. GENERIC PLANS FOR USE IN THE STATE OF FLORIDA UP TO 30' WIDE

Digitally signed by

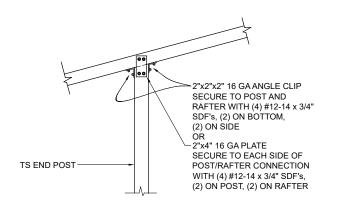
Love B Patel

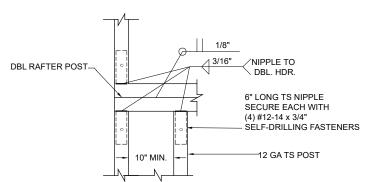


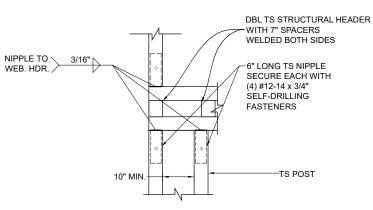
5/14/24 1/1/2024 CS NTS CS / ID G24001 TB/IP SHEET 4 OF 6

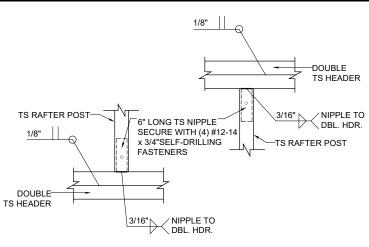
NICENSE CANTELLINION OF THE PROPERTY OF THE PR

CORIDA CHI









# END POST/RAFTER CONN. DETAIL

RAFTER POST/DBL. HEADER DETAIL Not To Scale

RAFTER POST/WEB HEADER DETAIL

RAFTER POST/HEADER DETAIL 9A

> -2"x2"x2" 16 GA ANGLE CLIP SECURE TO RAFTER POST AND GABLE RAIL WITH (4) #12-14 x 3/4" SDF's,

SECURE TO RAFTER AND GABLE

RAIL WITH (4) #12-14 x 3/4" SDF's

6" LONG TS NIPPLE

(2) ON TOP, (2) ON BOTTOM

SECURE RAFTER AND POST

SELF-DRILLING FASTENERS

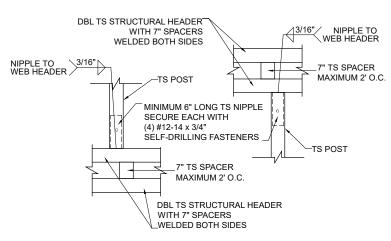
TO NIPPLE WITH (4) #12-14 x 3/4"

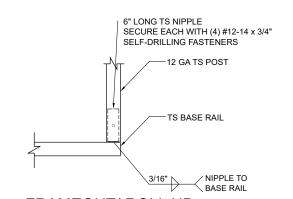
2"x2"x2" 16 GA-

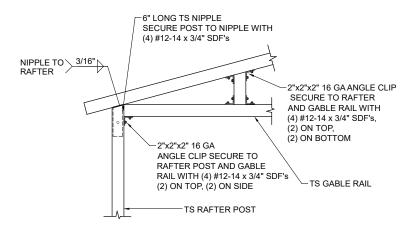
ANGLE CLIP

TS GABLE RAIL

TOP AND BOTTOM







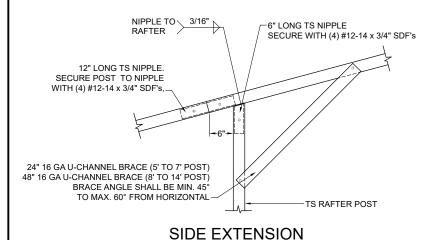
# GABLE RAIL TO RAFTER POST **CONNECTION DETAIL**

#### STRUCTURAL HEADER TO POST CONNECTION DETAIL 9B Not To Scale

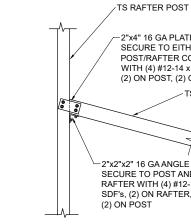
FRAMEOUT/ ROLL UP POST / BASE RAIL CONN. DETAIL Not To Scale

GABLE RAIL TO RAFTER POST **CONNECTION DETAIL** 11B Not To Scale

TS RAFTER POST



12



2"x4" 16 GA PLATE (ONE REQUIRED) SECURE TO EITHER SIDE OF POST/RAFTER CONNECTION WITH (4) #12-14 x 3/4" SDF's (2) ON POST, (2) ON RAFTER TS LEAN-TO RAFTER -2"x2"x2" 16 GA ANGLE CLIP SECURE TO POST AND RAFTER WITH (4) #12-14 x 3/4" SDF's. (2) ON RAFTER.

RAFTER/POST DETAIL

POST / LEAN-TO RAFTER CONN. DETAIL Not To Scale

CORIDA CHI CAROLINA CARPORTS, INC. GENERIC PLANS FOR USE IN THE STATE OF FLORIDA UP TO 30' WIDE

Digitally signed by

Date: 2024.05.17\*

09:47:02 -04'0

Love B Patel 👄



BECHTOL ENGINEERING AND TESTING, INC.

Senior Engineer Love B. Patel, P.E., State of Florida, Professional Engineer, License No. 90753

This item has been digitally signed and sealed by Love B. Patel, 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.

605 WEST NEW YORK AVENUE

DELAND, FLORIDA 32720

Love B

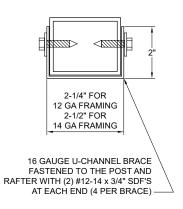
Love B. Patel, P.E.

**Patel** 

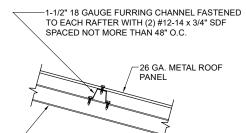
VV		
	REVISED: 5/14/24	DATE: 1/1/2024
G	DRAWN: CS	SCALE: NTS
RS	CHECKED: CS / ID	PROJ. NO.: G24001
110	APPROVED: TB / LP	SHEET 5 OF 6

No. 90753

TS RAFTER

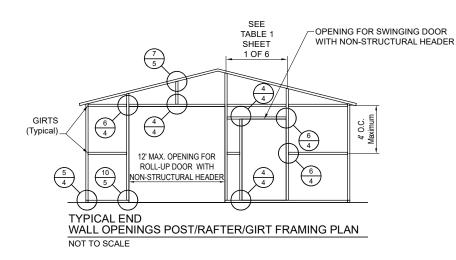


# **BRACE SECTION**

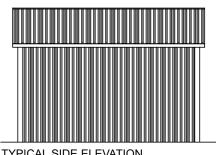


# ROOF PANEL ATTACHMENT

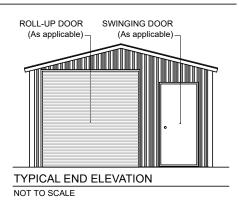
(ALTERNATE FOR VERTICAL ROOF PANELS)



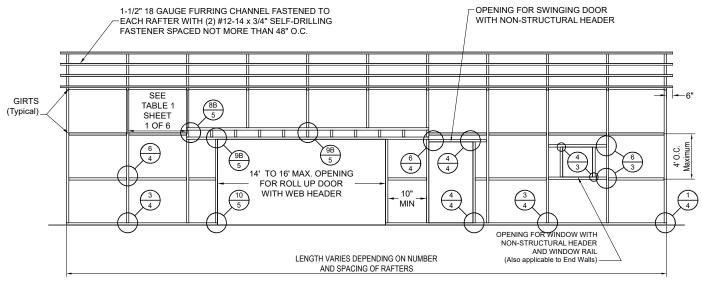
# **BOX EAVE FRAME RAFTER ENCLOSED BLDG - VERTICAL SIDES**



TYPICAL SIDE ELEVATION NOT TO SCALE

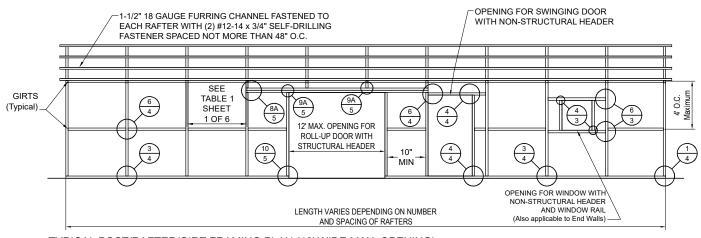


# VERTICAL SIDE OPTION



TYPICAL POST/RAFTER/GIRT FRAMING PLAN (14' TO 16' WIDE MAX. OPENING)

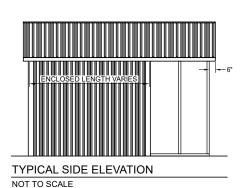
NOT TO SCALE

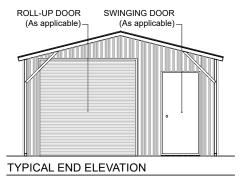


TYPICAL POST/RAFTER/GIRT FRAMING PLAN (12' WIDE MAX. OPENING)

NOT TO SCALE

# **BOX EAVE FRAME RAFTER UTILITY BLDG - VERTICAL SIDES**





NOT TO SCALE

NE B PAZZIA BECHTOL ENGINEERING AND TESTING, INC. 605 WEST NEW YORK AVENUE DELAND, FLORIDA 32720 Digitally signed by Love B Love B Pate Date: 2024.05.17 Patel 09:47:10 -04 00 Love B. Patel, P.E. CORIDA CHI Senior Engineer Love B. Patel, P.E., State of Florida, Professional Engineer, License No. 90753 This item has been digitally signed and sealed by Love B. Patel, 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.

# CAROLINA CARPORTS, INC. GENERIC PLANS FOR USE IN THE STATE OF FLORIDA UP TO 30' WIDE



	REVISED: 5/14/24	DATE: 1/1/2024		
G	DRAWN: CS	SCALE: NTS		
ERS	CHECKED: CS / ID	PROJ. NO.: G24001		
Lito	APPROVED: TB / LP	SHEET 6 OF 6		