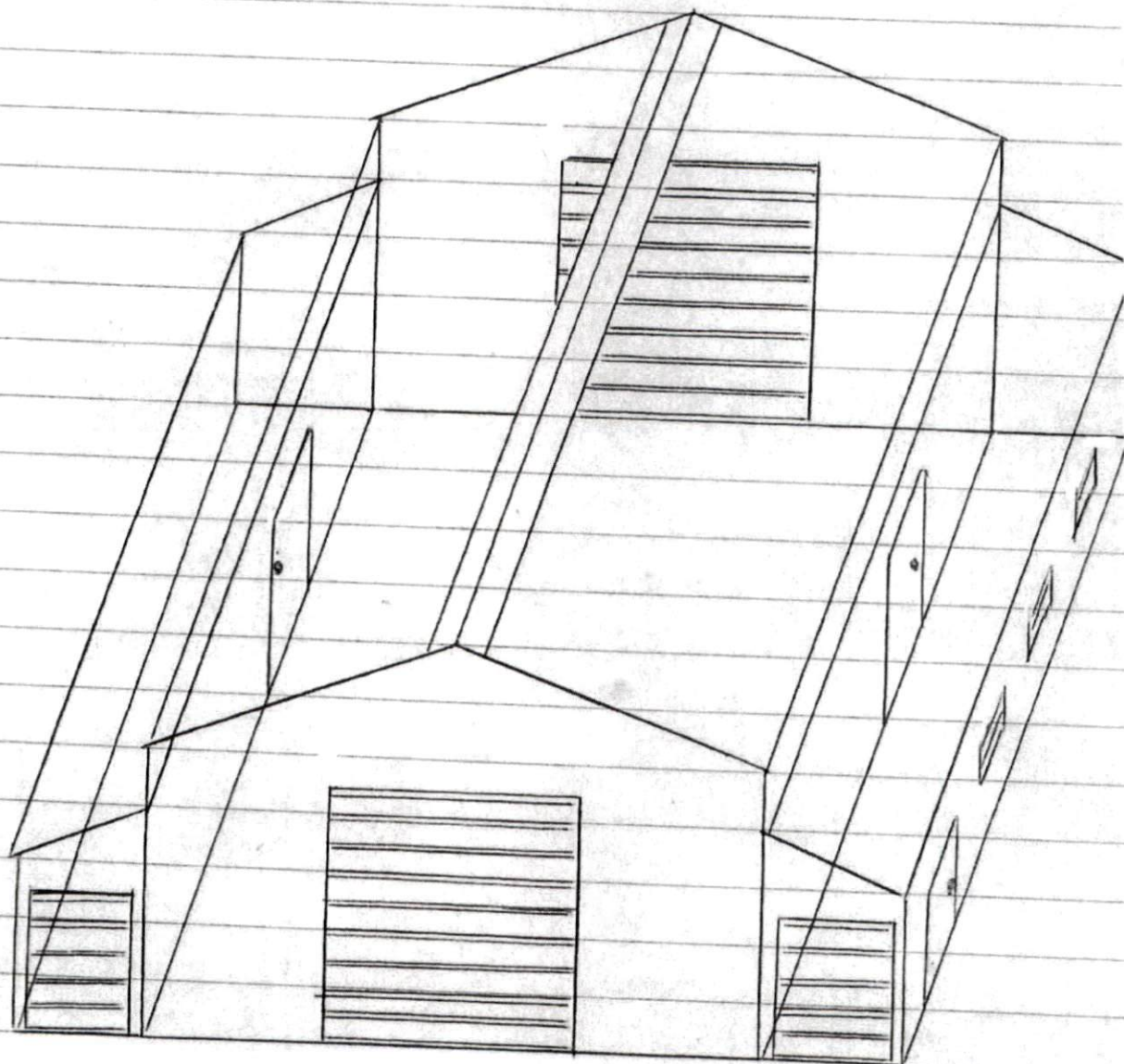


Steve & Mayberry

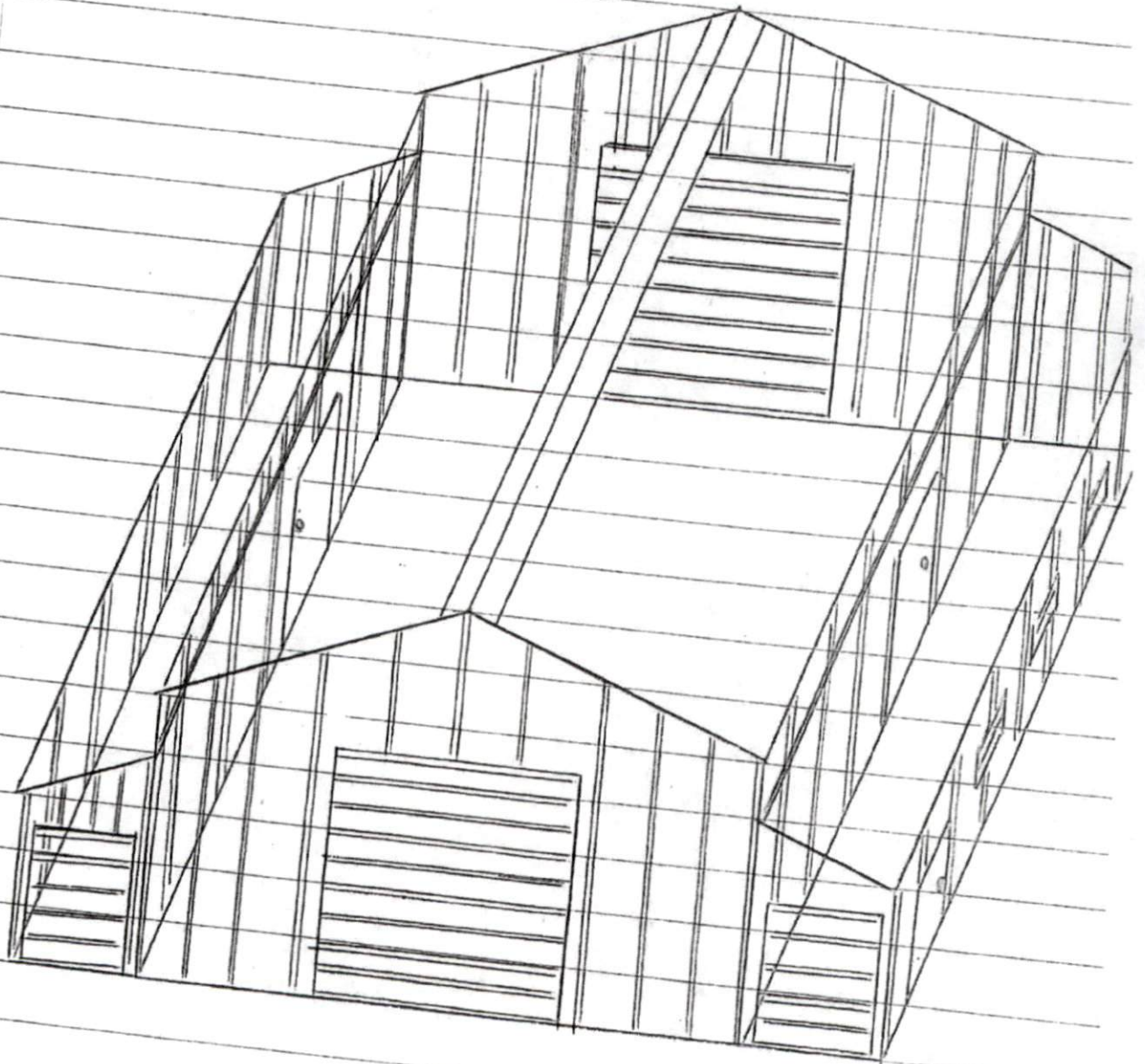
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Steve & Mayberry

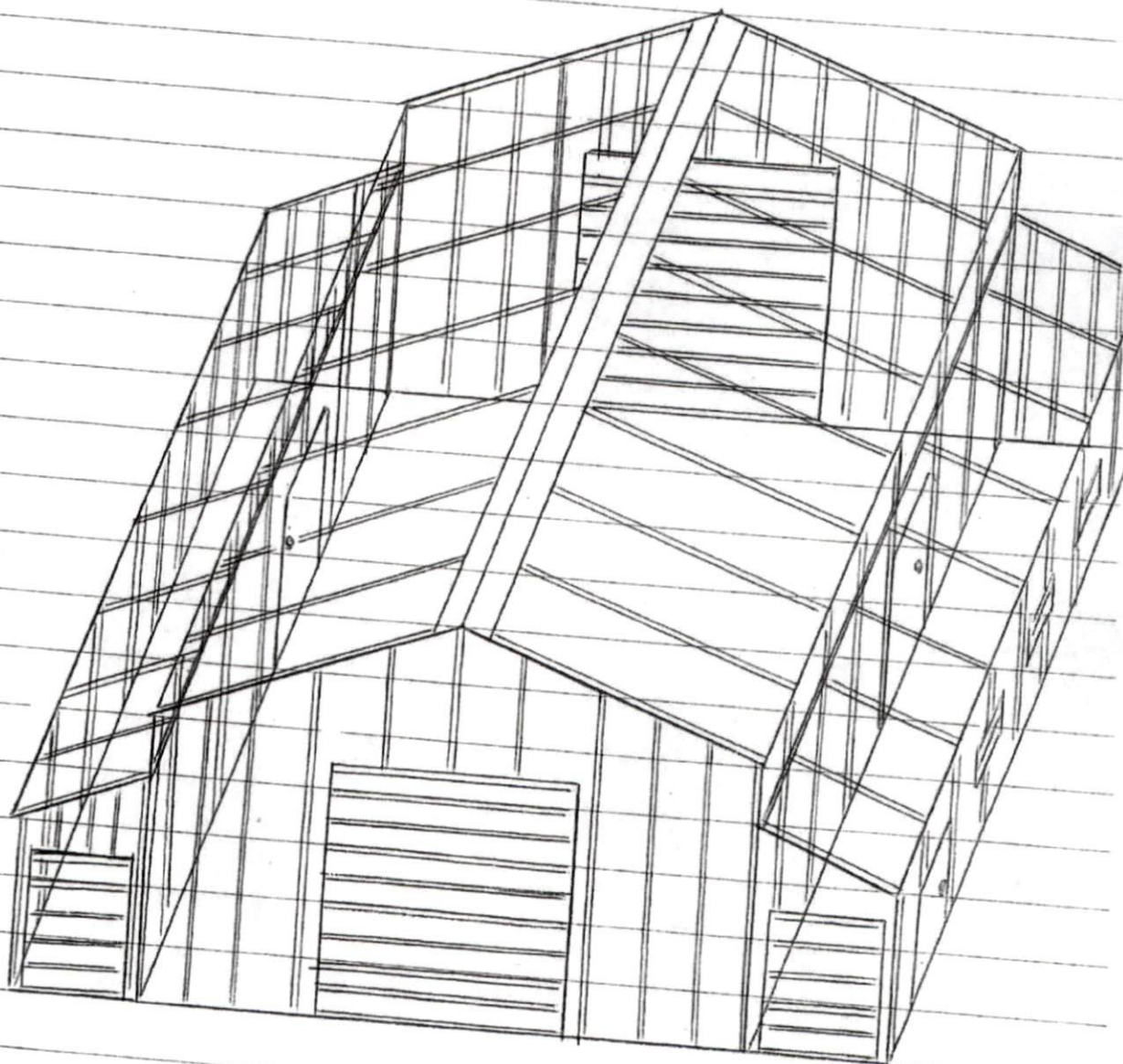
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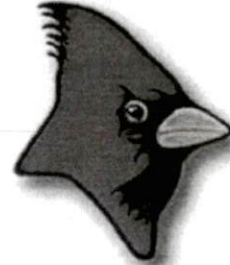
Steve @ Mayberry

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RG

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



**CAROLINA CARPORTS INC.**

P.O. BOX 1263  
DOBSON, NC 27017  
TOLL FREE 1-800-670-4262  
LOCAL 336-367-6400  
FAX 336-367-6410

PREPARED FOR:  
CAROLINA CARPORTS, INC.  
P.O. BOX 1263  
DOBSON, NORTH CAROLINA 27017

GENERAL NOTES:

ALL STEEL TUBING SHALL BE 50 KSI STEEL OR BETTER.

GROUND SNOW LOAD 30 PSF.

LOCATE ANCHORS AT EACH END OF BOW FRAME.

FASTEN METAL ROOF PANELS TO BOW FRAME WITH  $\frac{1}{2}$ "x1" SELF DRILLING FASTENERS (SDF) WITH CONTROL SEAL WASHERS AT 8" O.C. MAX. (SEE TABLE 1 AND TABLE 2 FOR FASTENER SPACINGS AND SPECIFICATIONS.)

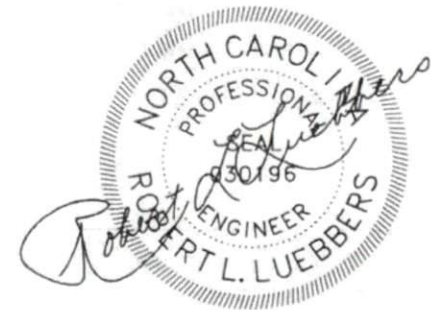
ALL FIELD CONNECTIONS SHALL BE  $\frac{1}{2}$ "x1" SELF DRILLING SCREWS, UNLESS NOTED OTHERWISE.

ALL SHOP CONNECTIONS SHALL BE WELDED.

ALL PLANS ARE VALID UNTIL THE NEXT REVISION OF THE INTERNATIONAL BUILDING CODE.

THE OWNER IS RESPONSIBLE FOR COMPLYING WITH LOCAL BUILDING CODE REQUIREMENTS.

THIS IS TO CERTIFY THAT THE CALCULATIONS AND SPECIFICATIONS HEREIN HAVE BEEN PREPARED BY THE UNDERSIGNED PROFESSIONAL ENGINEER, AND ARE IN ACCORDANCE WITH THE 2009 & 2012 INTERNATIONAL BUILDING CODES AND INTERNATIONAL RESIDENTIAL CODES and THE 2012 NC RESIDENTIAL BUILDING CODE.



8/30/2015

SHEET 1 OF 8

TABLE 1 – BOW FRAME AND PANEL FASTENER SPACING SPECIFICATIONS

WIND EXPOSURE CATEGORY	BASIC WIND SPEED 3 SECOND GUST (MPH)	MAXIMUM BOW SPACING (FEET)	AVERAGE FASTENER SPACING ON-CENTERS ALONG BOWS RAFTERS AND POSTS (INCHES)	
			INTERIOR BOWS	END BOWS
			B OR C	100 TO 130
	130 TO 150	4.0	6	6

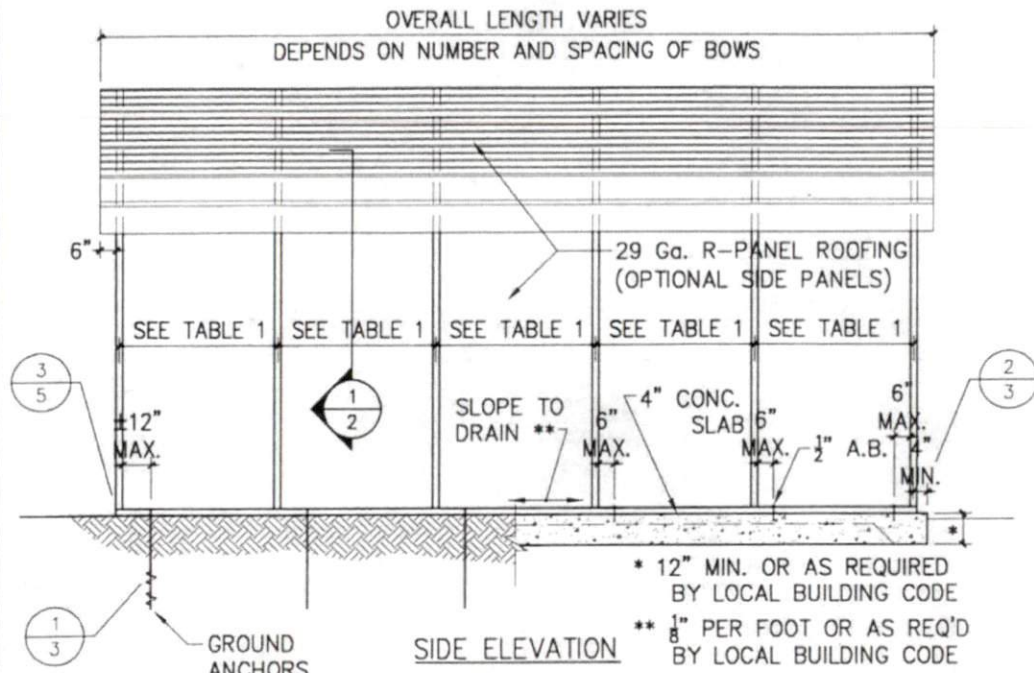
TABLE 2 – END POST AND END WALL PANEL FASTENER SPACING SPECIFICATIONS

WIND EXPOSURE CATEGORY	BASIC WIND SPEED 3 SECOND GUST (MPH)	MAXIMUM BOW SPACING (FEET)	AVERAGE FASTENER SPACING ON-CENTERS ALONG BOWS RAFTERS AND POSTS (INCHES)
B OR C	100 TO 150	5.0	6

- NOTES: 1. Specifications applicable to 29 gauge (100 to 130 mph) and 26 gauge (130 to 150) metal panels fastened directly to 12 or 14 gauge steel tube bow frames.  
 2. Fasteners consist of 1/4"-14x1" self-drilling screws (SDF) with control seal washer.  
 3. Specifications applicable only for mean roof height of 20 feet or less and roof slopes of 15 degrees (3:12) pitch). Spacing requirements for other roof heights and/or slopes may vary.

WINDOW AND DOOR NOTES	CARPORT WIDTH	MAX DOOR WIDTH
EXTERIOR WINDOWS AND GLASS DOORS SHALL BE TESTED BY AN APPROVED INDEPENDENT TESTING LABORATORY, AND BEAR AN AAMA OR WDMA OR OTHER APPROVED LABEL IDENTIFYING THE MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED PRODUCT EVALUATION ENTITY TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE FOLLOWING SPECIFICATION:  ANSI/AAMA/NWWDA 101/IS2 2/97  THE CONSTRUCTION SHALL BE TESTED IN ACCORDANCE WITH ASTM E 330, STANDARD TEST METHODS FOR STRUCTURAL PERFORMANCE OF EXTERIOR WINDOWS, CURTAIN WALLS, AND DOORS BY UNIFORM STATIC AIR PRESSURE.	12'	8'
	18' TO 20'	12'
	22' TO 24'	16'
	26' TO 30'	20'
	32' TO 36'	24'
	38' TO 40'	30'





NOTE:  
THIS STRUCTURE IS IN COMPLIANCE WITH THE 2009 & 2012 INTERNATIONAL BUILDING CODES AND INTERNATIONAL RESIDENTIAL CODES and THE 2012 NC RESIDENTIAL BUILDING CODE. LOADS ARE IN ACCORDANCE WITH ASCE/SEI 7-05 and 7-10.

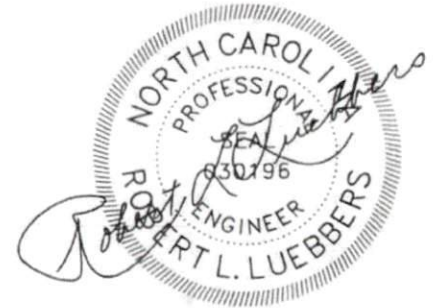
WIND SPEED* (3 SECOND WIND GUST)		120 MPH	130 MPH
IMPORTANCE FACTOR	WIND	0.77	0.77
	SNOW	0.8	0.8
	SEISMIC	1.0	1.0
BUILDING CATEGORY		I	I
EXPOSURE		C	C
INTERNAL PRESSURE COEFFICIENT		±0.55	±0.55
COMPONENT AND CLADDING PRESSURE	WALLS	+32.2/-40.5 PSF	+37.8/-47.5 PSF
	ROOF	+21.8/-65.4 PSF	+25.6/-76.8 PSF
STRUCTURE TYPE		ENCLOSED	ENCLOSED
ROOF LIVE LOAD		20 PSF	20 PSF
GROUND SNOW LOAD		30 PSF	30 PSF
SITE CLASS		D	D
SEISMIC DESIGN CATEGORY		D2	D2

\* WIND SPEED:  
 $V_{oad} = V_{ult} \times \sqrt{0.6}$   
 ASCE 7-05 USES WIND SPEED WITH 3 SECOND GUST FACTOR, ASCE 7-10 USES ULTIMATE WIND SPEED.

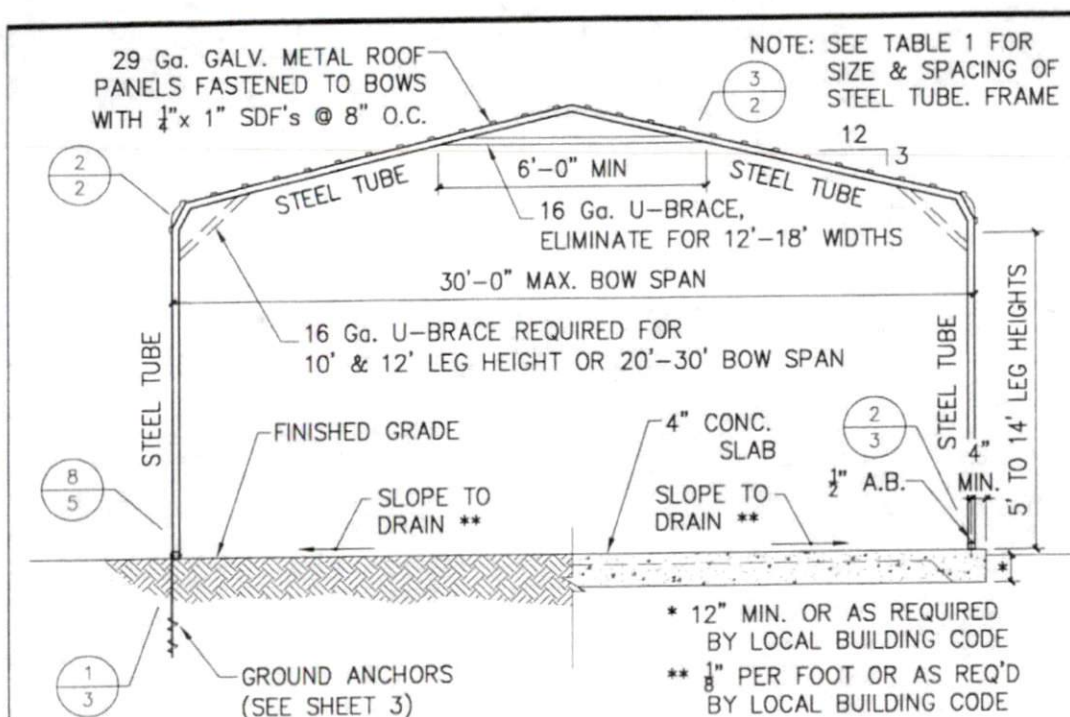
NOTES: METAL ACCESSORIES FOR USE IN EXTERIOR WALL CONSTRUCTION AND NOT DIRECTLY EXPOSED TO THE WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153, CLASS B-2. METAL PLATE CONNECTORS, SCREWS, BOLTS, AND NAILS EXPOSED TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.

TS 2 1/2 x 2 1/2 - 12 GAGE STEEL TUBING MAY BE SUBSTITUTED FOR TS 2 1/2 x 2 1/2 - 14 GAGE STEEL TUBING AND VICE VERSA. THE SIZE OF THE ASSOCIATED CONNECTION MATERIALS AND BRACING SHALL BE ADJUSTED ACCORDINGLY.

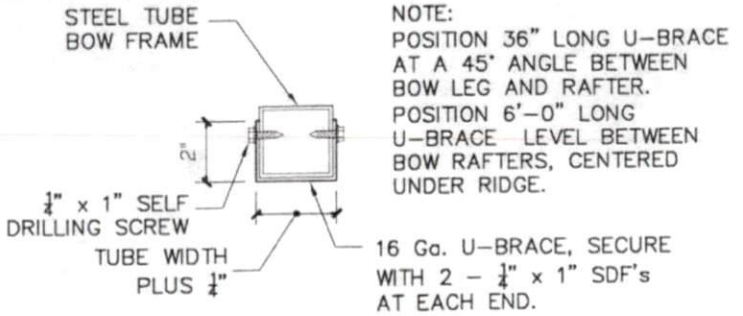
CORNER BRACE REQUIRED FOR ALL 10' & 12' POSTS AND FOR ALL 20'-30' SPANS



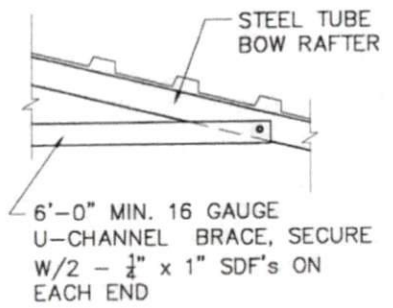
8/30/2015



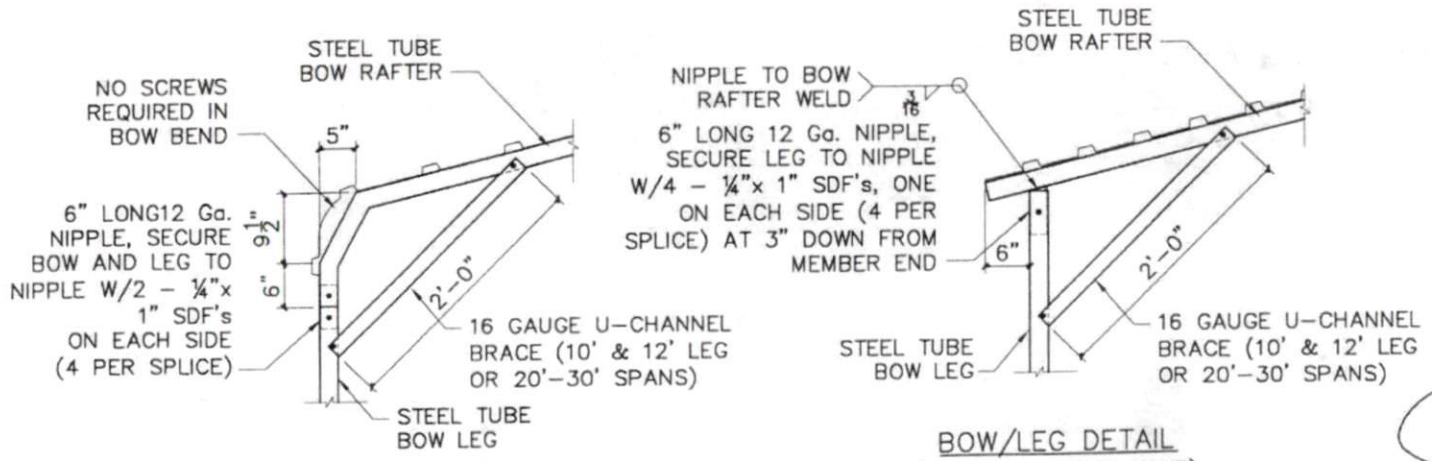
1  
2 TYPICAL BOW SECTION



BRACE SECTION



3  
2 RIDGE BRACE DETAIL



BOW/LEG DETAIL (OPTIONAL BOXED EAVE)

2  
2 BOW/LEG DETAIL



DRILL  $\frac{5}{8}$ " HOLE THROUGH THE BASE RAIL AND SECURE TO ANCHOR EYE WITH  $\frac{1}{2}$ " DIAMETER THROUGH BOLT

12 Ga. STEEL TUBE BASE RAIL

2" WASHERS

INSTALL  $\frac{1}{2}$ "  $\phi$  ITW/RAMSET REDHEAD MECHANICAL ANCHOR OR  $\frac{3}{8}$ "  $\phi$  SIMPSON EPOXY ADHESIVE ANCHOR (OR APPROVED EQUAL) THROUGH BASE RAIL WITHIN 6" OF EACH BOW

4" MIN.

12 Ga STEEL TUBE BASE RAIL

\* PROVIDE MINIMUM EMBEDMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

FINISHED GRADE

**SOIL CLASSIFICATIONS \***

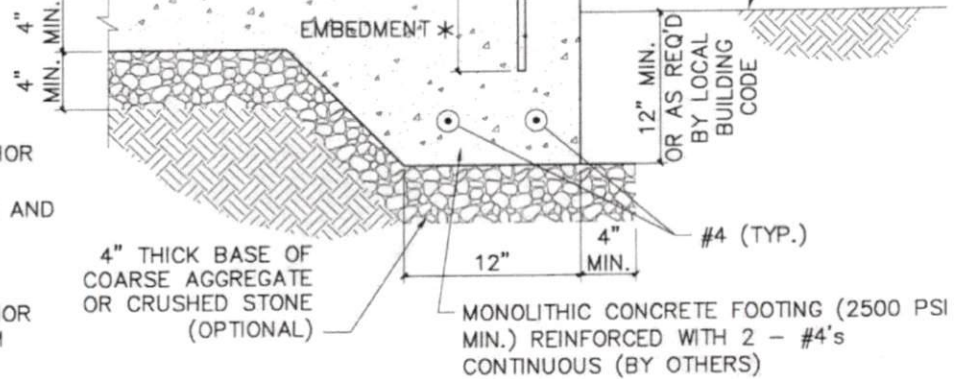
SOIL CLASS SOIL DESCRIPTION

- 2 Very dense &/or cemented sands, coarse gravel and cobbles, caliche, preloaded silts, and clays.
- 3 Medium dense coarse sands, sandy gravels, very stiff silts, and clays.
- 4 Loose to medium dense sands, firm to stiff clays and silts alluvial fill and VERY loose to medium dense sands, firm to stiff clays and silts, alluvial fill.

THE HELICAL ANCHOR SHALL BE APPROVED FOR USE IN SOIL CLASSIFICATIONS 2, 3, AND 4.

\* Taken from HUD "Standard for Installation of Mobile Homes"

GROUND ANCHOR  $\frac{3}{4}$ " x 30" WITH 2 - 4" HELIX AND  $\frac{3}{4}$ " EYE BOLT OR OTHER APPROVED HELICAL ANCHOR (THE MAXIMUM ALLOWABLE LOAD IS 3,150 LBS PER ANCHOR)



2  
3 CONCRETE BASE RAIL ANCHORAGE

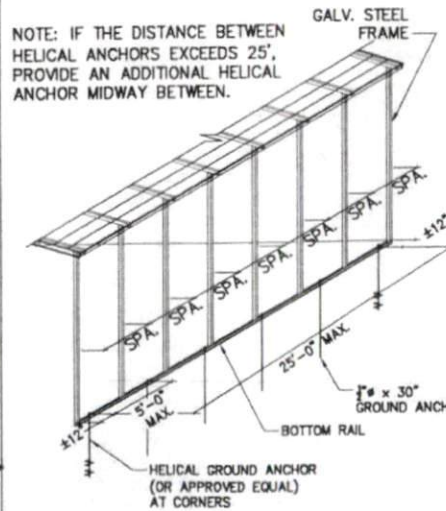
CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH (F'c) OF 2500 PSI AT 28 DAYS

MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE 3 INCHES FOR FOUNDATION WHERE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE WEATHER AND 1 1/2 INCHES ELSEWHERE. REINFORCING BARS EMBEDDED IN GROUTED CELLS SHALL HAVE A MINIMUM CLEAR DISTANCE OF 1/4 INCH FOR FINE GROUT AND 1/2 INCH FOR COARSE GROUT BETWEEN REINFORCING BARS AND ANY FACE OF A CELL. REINFORCING BARS USED IN MASONRY WALLS SHALL HAVE A MASONRY COVER (INCLUDING GROUT) OF NOT LESS THAN 2 INCHES FOR MASONRY UNITS WITH FACE EXPOSED TO EARTH OR WEATHER AND 1 1/2 INCHES ELSEWHERE.

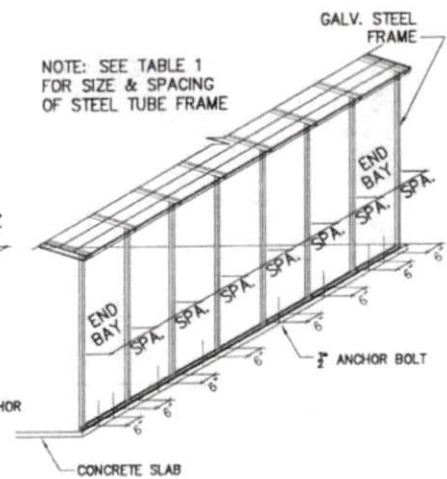
THE REINFORCING STEEL SHALL BE MINIMUM GRADE 40

REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED: ALL REINFORCEMENT IS COLD BENT; THE DIAMETER OF THE BEND MEASURED ON THE INSIDE OF THE BAR IS NOT LESS THAN SIX BAR DIAMETERS; AND REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT WHERE BENDING IS NECESSARY TO ALIGN DOWEL BARS WITH A VERTICAL CELL. BARS PARTIALLY EMBEDDED IN CONCRETE MAY BE BENT AT A SLOPE OF NOT MORE THAN 1 INCH OF HORIZONTAL DISPLACEMENT TO 6 INCHES OF VERTICAL BAR LENGTH.

1  
3 SOIL BASE RAIL ANCHOR DETAIL



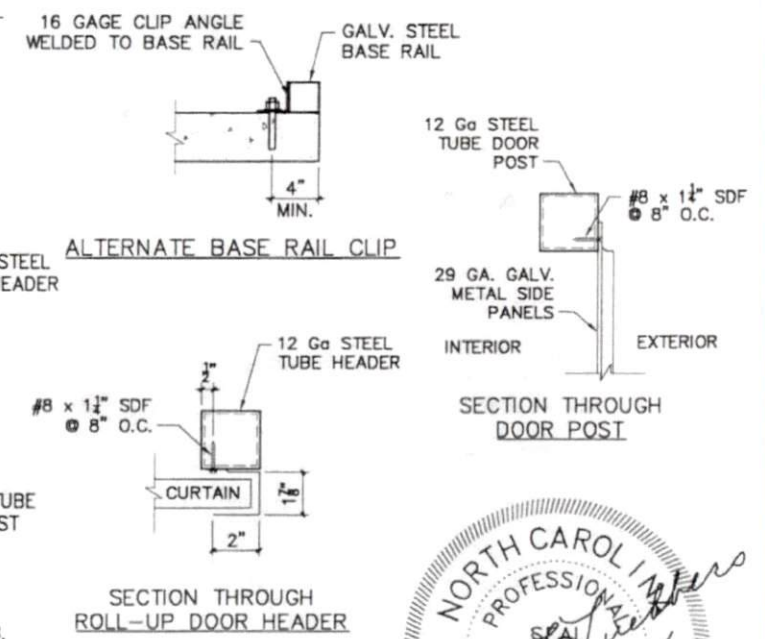
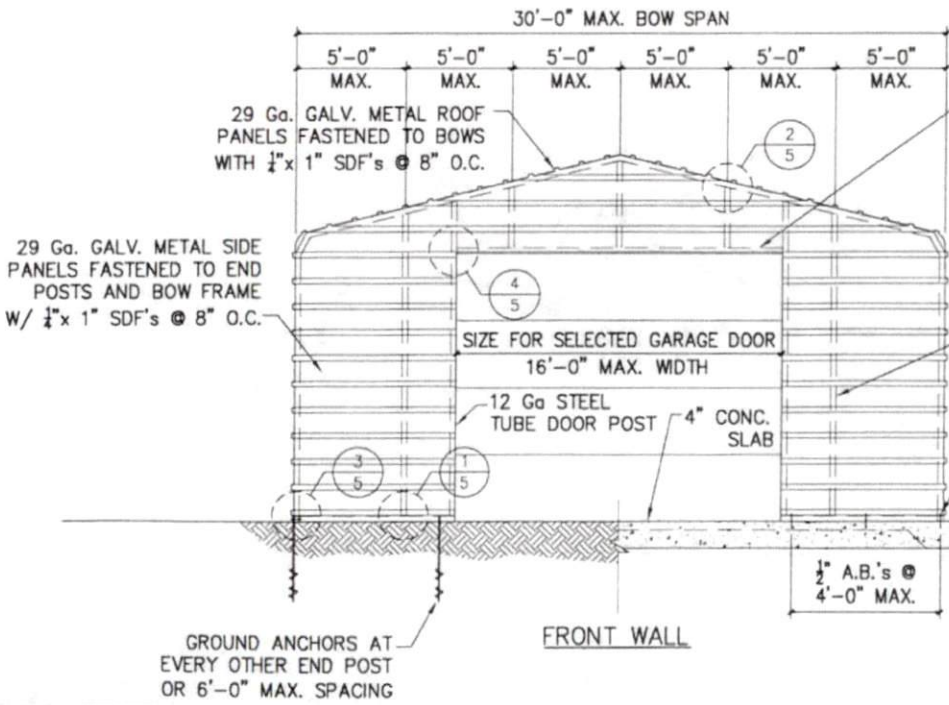
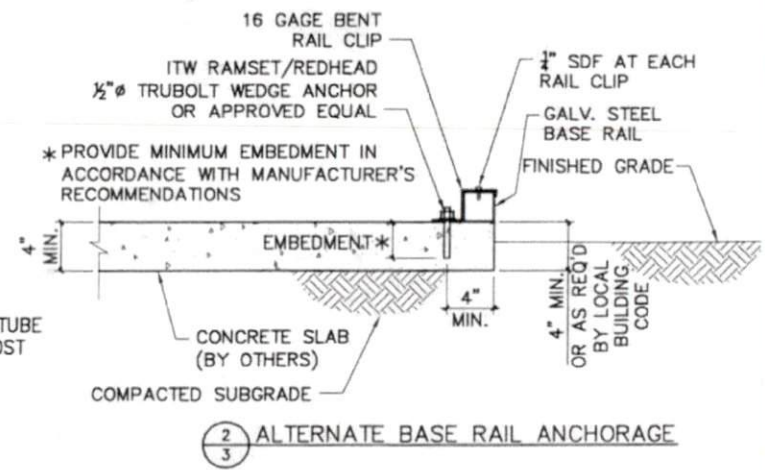
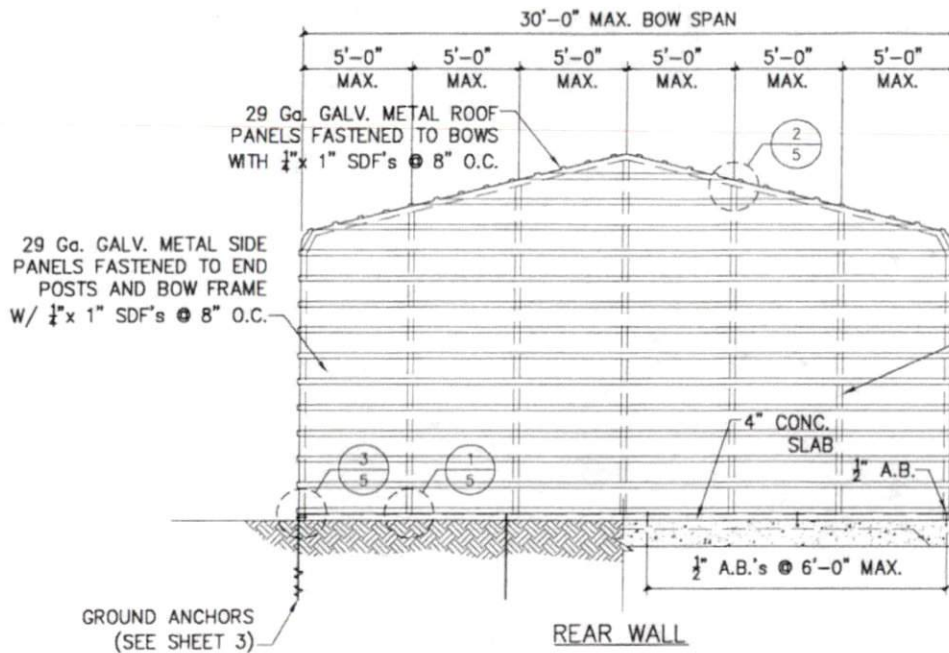
HELICAL GROUND ANCHORS



ANCHOR BOLTS







NOTE:  
ALL WINDOWS AND DOORS SHALL HAVE A  
MINIMUM DESIGN PRESSURE RATING OF ±35 PSF.



