

# STRUCTURAL DESIGN

# **ENCLOSED BUILDING**

# MAXIMUM 30'-0" WIDE X 14'-0" EAVE HEIGHT- BOX EAVE FRAME AND BOW FRAME

6 December 2012 Revision 0 M&A Project No. 12117S

Prepared for:

Mr. Danny Lowery President- Steel Structures 1660 Dixon Airline Road Augusta, Georgia 30906

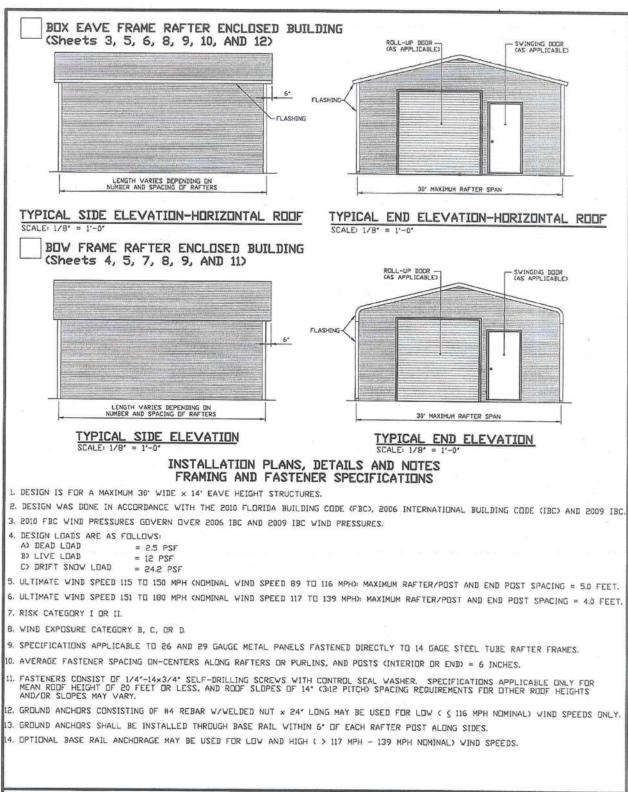


#### Prepared by:

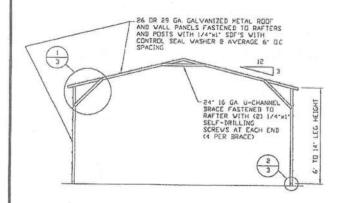
Moore and Associates Engineering and Consulting, Inc. 1009 East Avenue North Augusta, SC 29841

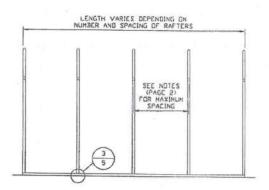


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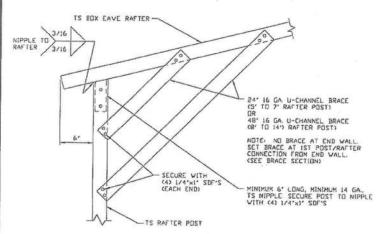
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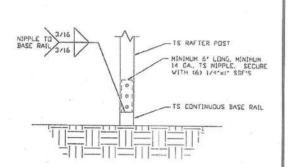




TYPICAL RAFTER/POST END FRAME SECTION SCALE: 1/8' = 1'-0'

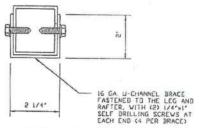
TYPICAL RAFTER/POST SIDE FRAMING SECTION
SCALE: 1/8' = 1'-0'





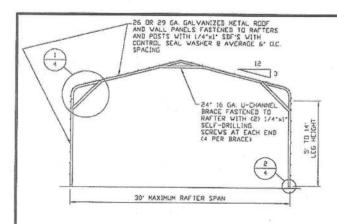
BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL
SCALE NTS

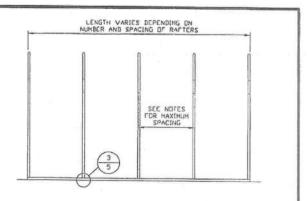




BRACE SECTION

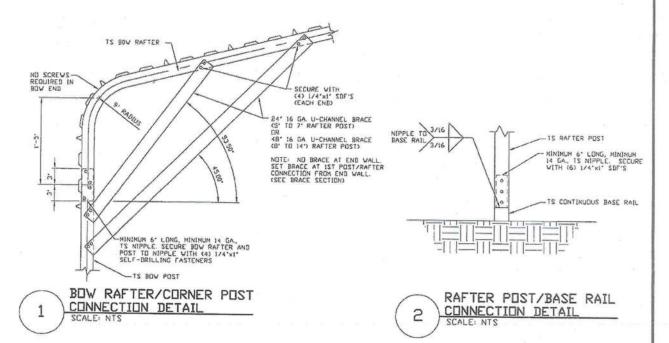
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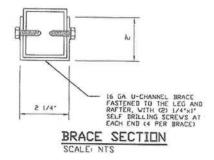




# TYPICAL RAFTER/POST END FRAME SECTION SCALE: 1/8' = 1'-0'

TYPICAL RAFTER/POST FRAMING SIDE SECTION SCALE: 1/8' = 1'-0'





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# BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEEDS INSTALL 1/2'x6' EXPANSION ANCHOR THROUGH BASE RAIL WITHIN 6" DF EACH RAFTER POST ALONG SIDES MINIMUM 2 3/4"

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHURAGE MINIMUM ANCHOR EDGE DISTANCE IS 6 3/4".

# INSTALL 1/2'x6' EXPANSION ANCHOR THROUGH BASE RAIL WITHIN 6' OF EACH RAFTER POST ALONG SIDES DA AT JNS LUCAT CONTINUOUS CONCRETE PAVEMENT MINIMUM E 3/4" S 374"

CONCRETE SLAB BASE RAIL ANCHORAGE 3B SCALE: NIS MINIMUM ANCHOR EDGE DISTANCE IS 6 3/4".

### GENERAL NOTES

FOOTING

#### CONCRETE

MONOLITHIC CONCRETE FOOT (3000 PS1 MIN.) REINFORCED VITH (2) #4's CONTINUOUS

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

#### COVER OVER REINFORCING STEEL

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER RETURNING BARS SHALL BE PER ACI-318: 3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST— AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND L 1/2 INCHES ELSEWHERE.

#### REINFORCING STEEL

THE REINFORCING STEEL SHALL BE MINIMUM GRADE 60.

#### GALVANIZATION

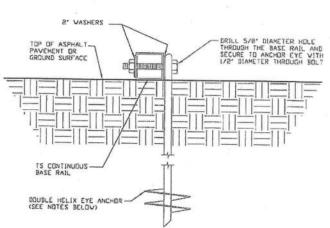
METAL ACCESSORIES FOR USE IN EXTERIOR WALL CONSTRUCTION AND NOT DIRECTLY EXPOSED TO THE WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153, CLASS B-2. METAL PLATE CONNECTORS, SCREWS, BOLTS AND NAILS EXPOSED DIRECTLY TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.

#### REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED

- 1. REINFORCEMENT IS BENT COLD; 2. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS; AND 3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT
- BE FIELD BENT.

#### HELIX ANCHOR NOTES

- FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELIADED SILTS AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT.
- 2. FOR CORAL USE MINIMUM (2) 4' HELICES WITH MINIMUM 30 INCH EMBEDMENT.
- 3 FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILITS, AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT.
- 4. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL USE MINIMUM (2) 6' HELICES WITH MINIMUM 50 INCH EMBEDMENT.
- 5. FOR VERY LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL USE MINIMUM (2) 8' HELICES WITH MINIMUM GO INCH EMBEDMENT.



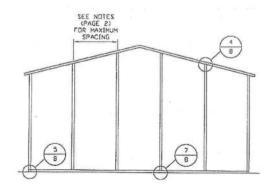
GROUND BASE HELIX ANCHORAGE 30 SCALE: NTS (CAN BE USED FOR ASPHALT)

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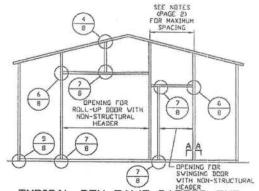
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## BOX EAVE RAFTER END WALL AND WALL OPENINGS

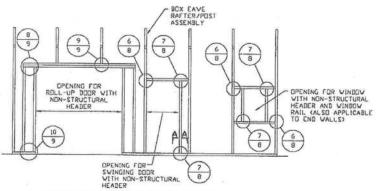


TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION SCALE: 1/8' = 1'-0'

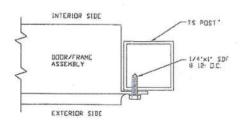


TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE: 1/8" = 1'-0"



TYPICAL BOX EAVE RAFTER
SIDE WALL OPENINGS FRAMING SECTION
SCALE 1/8' = 1'-0'



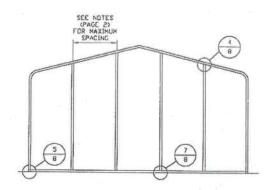
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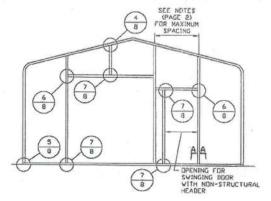
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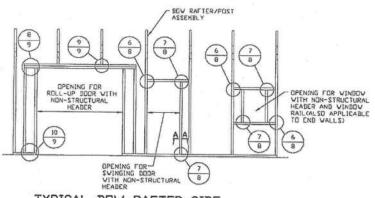
## BOW RAFTER END WALL AND WALL OPENINGS



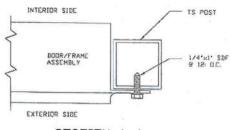
TYPICAL BOW RAFTER
END WALL FRAMING SECTION
SCALE: 1/8' = 1'-0'



TYPICAL BOW RAFTER END WALL OPENINGS FRAMING SECTION SCALE: 1/8' = 1'-0'



TYPICAL BOW RAFTER SIDE WALL OPENINGS FRAMING SECTION SCALE: 1/8" = 1'-0"



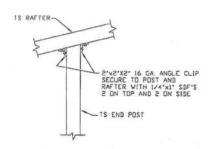
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CLIENT: -	SHT. 7 OF 12	DWG. NO: SK-3	DWG. ND: SK-3 REV.: 0				

## BOX EAVE RAFTER WALL OPENING DETAILS



4 END POST/RAFTER CONNECTION DETAIL
SCALE: NTS

NIPPLE ID 3/16

NIPPLE ID 3/16

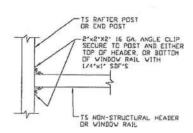
NINIMUM 6' LONG, MINIMUM 14 GA, TS NIPPLE, SECURE VITH (6) 1/4'x1' SDF'S

1 1/2'x1 1/2'x2' 16 GA, CLIP ANGLE SECURE TO RAFTER POST AND BASE RAIL V/(4)

1 1/4'x1' SDF'S

TS CONTINUOUS BASE RAIL

5 END POST/BASE RAIL
CONNECTION DETAIL
SCALE: NTS



NON-STRUCTURAL HEADER OR WINDOW RAIL TO POST CONNECTION DETAIL

6

TS END POST OR
DOOR VINDOV
FRAME POST

TS NON-STRUCTURAL
NEADER, BASE RAIL,
OR VINDOV RAIL

2"\2"\2"\2"\2"\2"\2"\2"\2"\2"\2"\2"\3"\6 GA ANGLE CLIP
SECURE TO POST GACH
SITE AND RAFTER
CHRIZ/RAIL VITH 1/4"\1"

TS TRUSSED RAFTER CHORD. OR NON-STRUCTURAL HEADER

POST TO NON-STRUCTURAL HEADER,
BASE RAIL, OR WINDOW RAIL
CONNECTION DETAIL

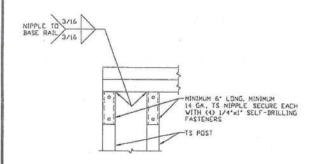
SCALE: NTS

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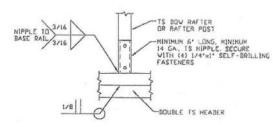
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### BOX EAVE RAFTER WALL OPENING DETAILS

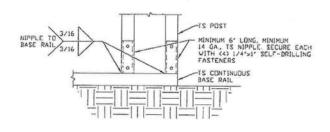


8 DOUBLE HEADER/POST CONNECTION DETAIL
SCALE: NTS



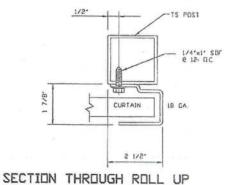
9 RAFTER POST/DOUBLE HEADER CONNECTION DETAIL

SCALE: NTS



RAFTER POST/BASE RAIL CONNECTION DETAIL

SCALE: NTS



DOOR HEADER

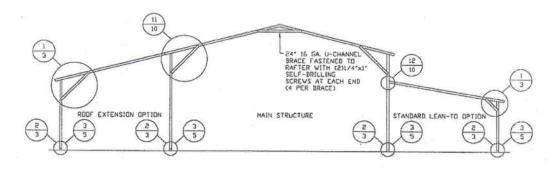
SCALE: NTS NOTE: CURTAIN IS 26 GA. GALVANIZED STEEL WITH BAKED ON EPOXY PRIMER & POLYESTER TOP CUAT.

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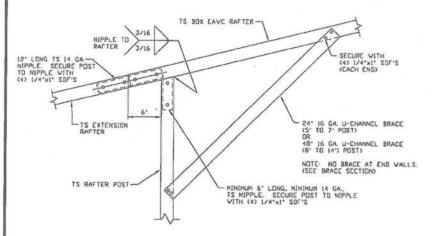
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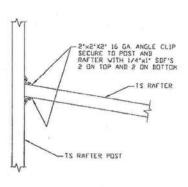
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## **BOX EAVE RAFTER LEAN-TO OPTIONS**



TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)



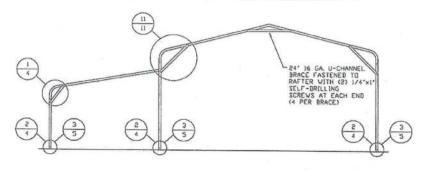




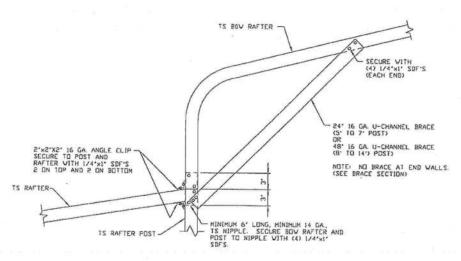
12 | LEAN-TO RAFTER TO RAFTER POST CONNECTION DETAIL | SCALE: NTS

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#### **BOW RAFTER LEAN-TO OPTION**



# TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION SCALE: 1/8' = 1'-0'

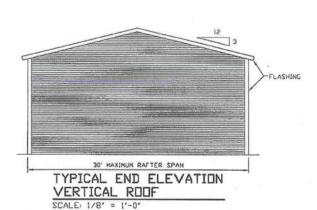


LEAN-TO RAFTER TO RAFTER POST CONNECTION DETAIL

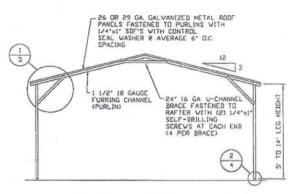
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#### BOX EAVE RAFTER VERTICAL ROOF OPTION



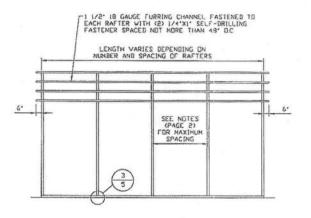
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TYPICAL SECTION
VERTICAL ROOF OPTION
SCALE: 1/8' = 1'-0'

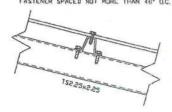
LENGTH VARIES DEPENDING ON NUMBER AND SPACING OF RAFTERS

TYPICAL SIDE ELEVATION VERTICAL ROOF
SCALE: 1/8' = 1'-0'



TYPICAL FRAMING SECTION VERTICAL ROOF OPTION
SCALE: 1/8' = 1'-0'

1 1/2" 18 GAUGE FURRING CHANNEL FASTENED TO EACH RAFTER VITH (2) 1/4"X)" SELF-DRILLING FASTENER SPACED NOT MORE THAN 48" G.C.



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

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