



## **STRUCTURAL DESIGN ENCLOSED BUILDING**

**MAXIMUM 30'-0" WIDE X 16'-0" EAVE HEIGHT-  
BOX EAVE FRAME AND BOW FRAME**

**6 May 2022**

**Revision 1**

**M&A Project No. 20217S/22082S**

**Prepared for:**

**Pre-Built Structures  
1330 W Jake Alexander Blvd.  
Salisbury, NC 28417**




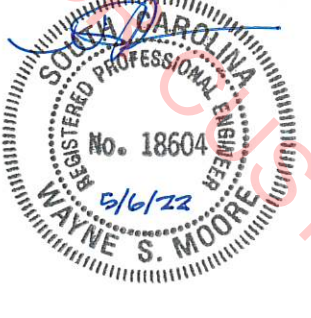


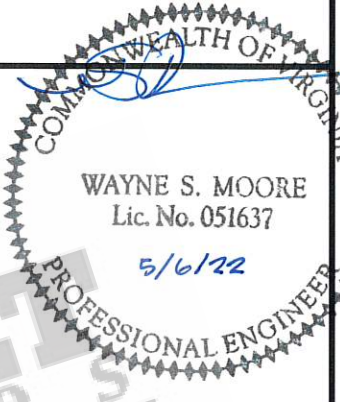
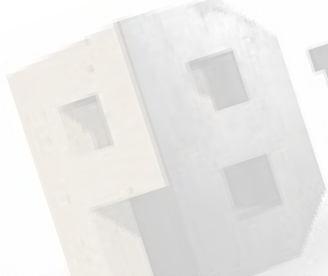
**Prepared by:**

**Moore and Associates Engineering and Consulting, Inc.  
1009 East Avenue  
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**401 S. Main Street, Suite 200  
Mount Airy, NC 27030**



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PROJECT MGR: VSM

CLIENT: PRE-BUILT

PRE-BUILT STRUCTURES  
1330 W JAKE ALEXANDER BLVD.  
SALISBURY, NC 28417  
30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 5-6-22

SHT. 1

SCALE: NTS

DWG. NO: SK-3

JOB NO:  
20217S/22082S

REV: 1

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1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0"x16'-0" ENCLOSED STRUCTURE

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**SHT. 2**

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## INSTALLATION NOTES AND SPECIFICATIONS

1. DESIGN IS FOR MAXIMUM 30'-0" WIDE x 16'-0" EAVE HEIGHT ENCLOSED STRUCTURES.
2. DESIGN WAS DONE IN ACCORDANCE WITH ALL THE APPLICABLE BUILDING CODES LISTED ON SHEET 3A.
3. DESIGN LOADS ARE AS FOLLOWS:
  - A) ROOF DEAD LOADS:
    - SELF-WEIGHT = 1.5 PSF
    - MEP = 0 PSF
    - COLLATERAL = 0 PSF
  - B) ROOF LIVE LOAD = 12 PSF
  - C) FLOOR LIVE LOAD = 100 PSF (4" CONCRETE SLAB/FOOTING)
  - D) GROUND SNOW LOAD = 35 PSF
    - = 30 PSF (WITH U-CHANNEL RAFTER TIE)

NOTE: UNBALANCED LOADING DUE TO SNOW DRIFTING FROM AN ADJACENT TALLER STRUCTURE HAS NOT BEEN EVALUATED.
4. 3-SECOND GUST ULTIMATE WIND SPEED ( $V_{ULT}$ ) =  $\leq 145$  MPH (NOMINAL WIND SPEED =  $\leq 112$  MPH).
5. MAXIMUM RAFTER/COLUMN AND END COLUMN SPACING = 5.0 FEET (UNLESS NOTED OTHERWISE).
6. ENDWALL COLUMNS (POSTS) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING (UNLESS NOTED OTHERWISE).
7. RISK CATEGORY I (NOT FOR HUMAN HABITATION).
8. WIND EXPOSURE CATEGORY B.
9. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2"x2 1/2"-14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS (UNLESS NOTED OTHERWISE). 2 1/4"x2 1/4"-12 GAUGE TS MAY BE USED AS OPTIONAL FRAMING MEMBERS.
10. CONNECTOR SLEEVES ARE MINIMUM 6" LONG, TS 2 1/4"x2 1/4"-14 GAUGE FOR 2 1/2"x2 1/2"-14 GAUGE AND TS 2"x2"-12 GAUGE FOR 2 1/4"x2 1/4"-12 GAUGE FRAMING MEMBERS (UNLESS NOTED OTHERWISE).
11. STRUCTURAL ANALYSIS/DESIGN IS BASED ON TS MEETING THE REQUIREMENTS OF ASTM A653 GRADE 50 WITH MINIMUM YIELD STRENGTH ( $F_y$ ) OF 54 KSI AND GALVANIZING MEETING THE MINIMUM REQUIREMENTS OF G60.
12. AVERAGE PANEL FASTENER SPACING ON-CENTERS = 10 INCHES.
13. FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 16 FEET OR LESS, AND ROOF SLOPES OF 14" (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY. ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF JOINT SEALANT.
14. ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH COLUMN.
15. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT x 30" LONG AND MAY ONLY BE USED IN CONJUNCTION WITH OTHER (OPTIONAL) ANCHOR DEVICES AND ONLY IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED. COORDINATE WITH LOCAL CODES/ORDINANCES REGARDING MINIMUM LENGTH FOR FROST DEPTH PROTECTION.
16. CONTRACTOR TO PROVIDE ADEQUATE BRACING FOR STRUCTURE SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURE AND FOUNDATION ARE DESIGNED FOR A COMPLETED CONDITION ONLY AND, THEREFORE, REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION.
17. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
  - SOIL SITE CLASS = D
  - RISK CATEGORY I
  - $R = 3.25$        $I_E = 1.0$
  - $S_{DS} = 2.625 g$        $V = C_s W$
  - $S_{DI} = 2.13 g$
18. IF MORE THAN 50% OF COLUMN (LEG) ARE REMOVED IN ANY LONGITUDINAL (SIDE) WALLS OF A BUILDING, THE ENGINEER IS TO BE NOTIFIED TO DETERMINE WHETHER PORTAL FRAMES OR OTHER LONGITUDINAL STABILITY ELEMENTS WILL BE REQUIRED.
19. THIS MASTER DESIGN IS A GENERIC MASTER DESIGN PRIMARILY INTENDED FOR PLANT FABRICATION AND ERECTION AKIN TO SHOP DRAWINGS. THE MASTER DESIGN IS NOT PRIMARILY INTENDED FOR CONSTRUCTION PERMIT. WHEN APPLYING FOR BUILDING PERMIT, THE CERTIFIED BUILDING OFFICIAL MUST BE CONSULTED TO VERIFY WHETHER THE USE OF THE MASTER DESIGN IS ADEQUATE OR IF A SITE-SPECIFIC DESIGN IS REQUIRED FOR BUILDING PERMIT. ANY VARIATION FROM THE ANALYSIS/DESIGN PARAMETERS OF THE MASTER DESIGN REQUIRES THE DEVELOPMENT OF A SITE-SPECIFIC DESIGN.

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**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSM**

**CLIENT: PRE-BUILT**

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1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 3**

**SCALE: NTS**

**DWG. NO: SK-3**

**JOB NO:**

**20217S/22082S**

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## LIST OF APPLICABLE BUILDING CODES

2018 INTERNATIONAL BUILDING CODE (IBC 2018)

2015 INTERNATIONAL BUILDING CODE (IBC 2015)

2012 INTERNATIONAL BUILDING CODE (IBC 2012)

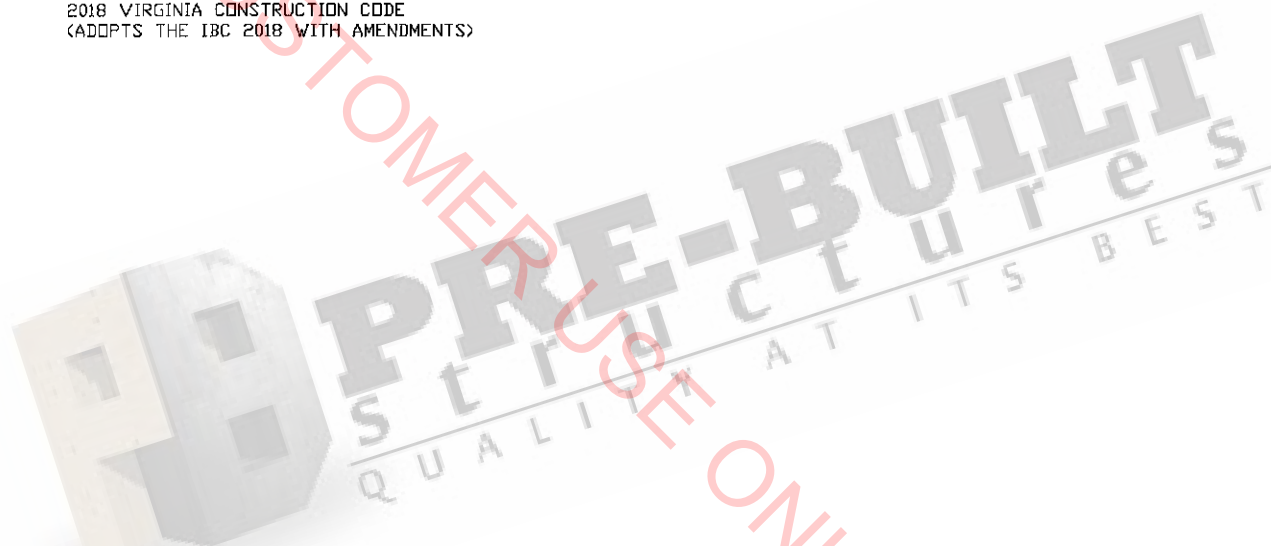
GEORGIA STATE MINIMUM STANDARD BUILDING CODE  
(ADOPTS THE IBC 2018 WITH AMENDMENTS)

2018 NORTH CAROLINA BUILDING CODE  
(ADOPTS THE IBC 2015 WITH AMENDMENTS)

2018 SOUTH CAROLINA BUILDING CODE  
(ADOPTS THE IBC 2018 WITH AMENDMENTS)

BUILDING CODE 2012 OF TENNESSEE  
(ADOPTS THE IBC 2012 WITH AMENDMENTS)  
BUILDING CODE 2018 OF NASHVILLE AND DAVIDSON  
COUNTY (ADOPTS THE IBC 2018 WITH AMENDMENTS)

2018 VIRGINIA CONSTRUCTION CODE  
(ADOPTS THE IBC 2018 WITH AMENDMENTS)



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**SHT. 3A**

**SCALE: NTS**

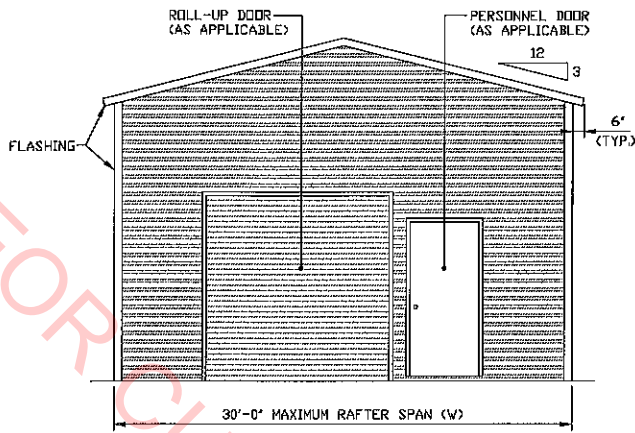
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**JOB NO:  
202175/22082S**

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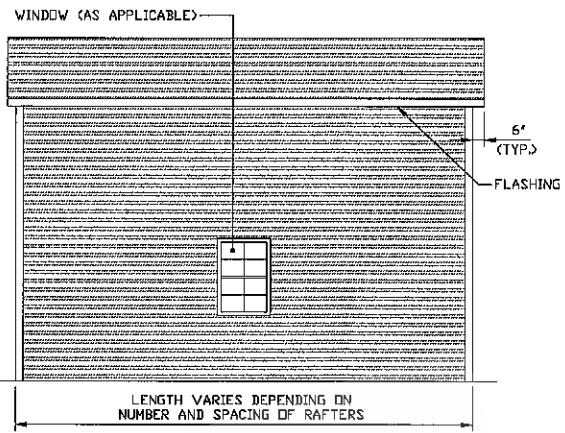
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## BOX EAVE FRAME RAFTER STRUCTURE



**TYPICAL END ELEVATION**

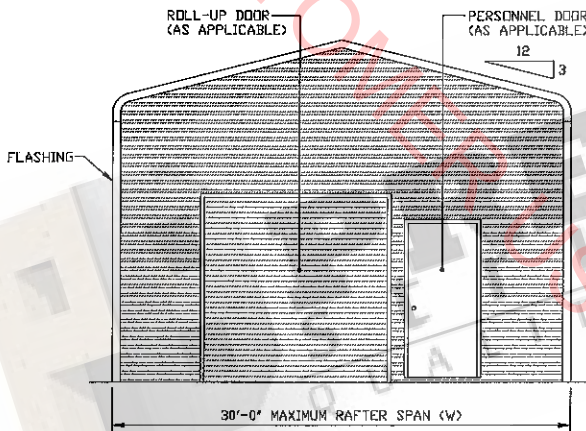
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**TYPICAL SIDE ELEVATION**

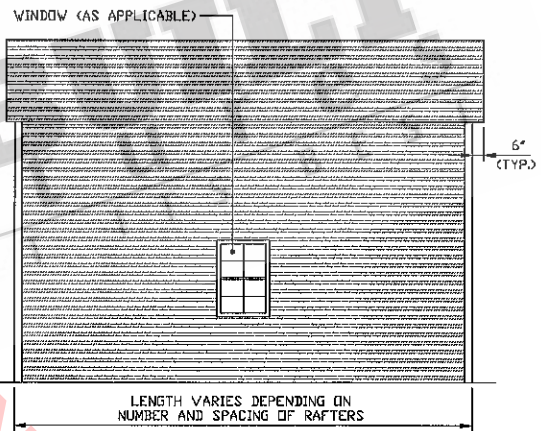
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## BOW EAVE FRAME RAFTER STRUCTURE



**TYPICAL END ELEVATION**

SCALE: NTS



**TYPICAL SIDE ELEVATION**

SCALE: NTS

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**SHT. 4**

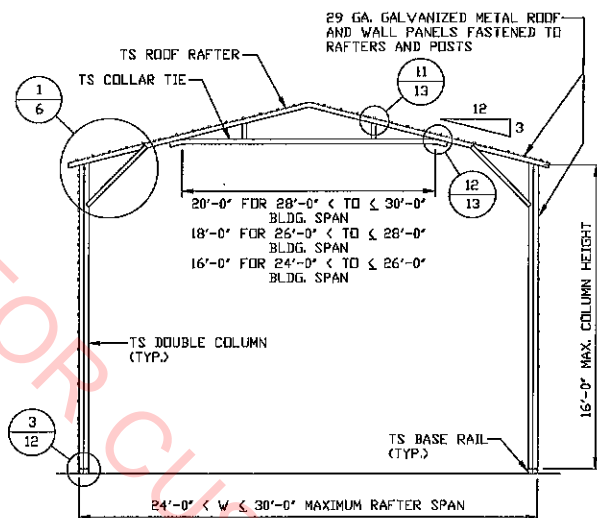
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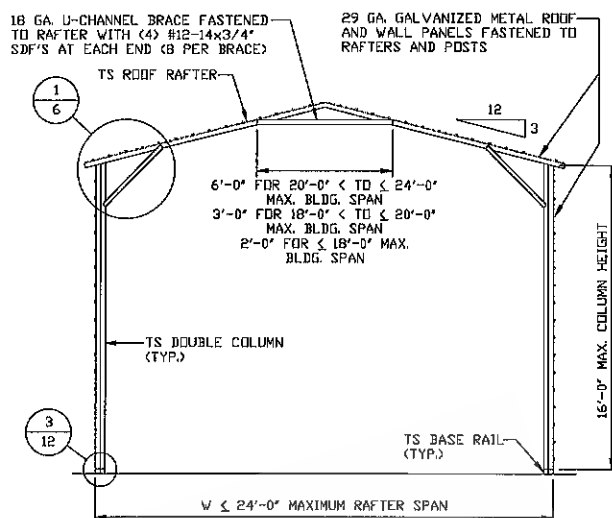
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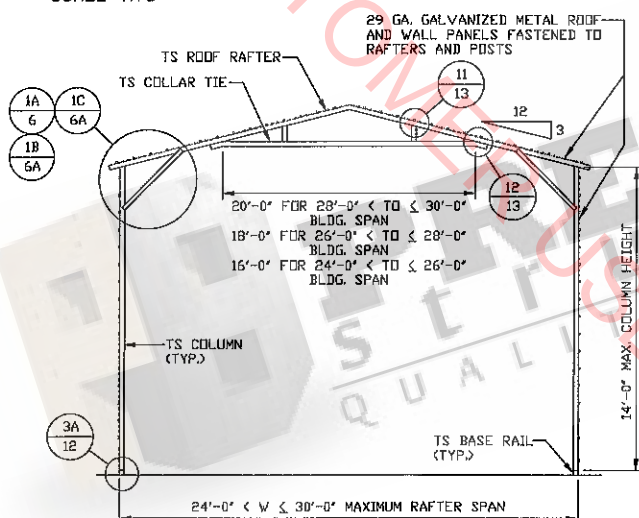
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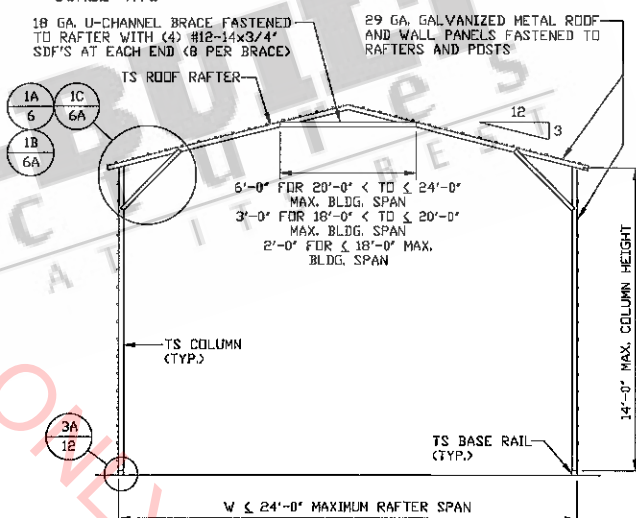
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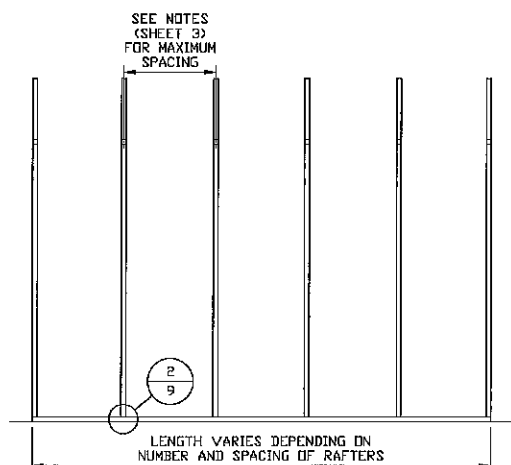
**TYPICAL RAFTER/COLUMN FRAME SECTION**  
SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME SECTION**  
SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME SECTION**  
SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**  
SCALE: NTS

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**PROJECT MGR: VSM**

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**SALISBURY, NC 28417**

**30'-0"X16'-0" ENCLOSED STRUCTURE**

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**SHT. 5**

**SCALE: NTS**

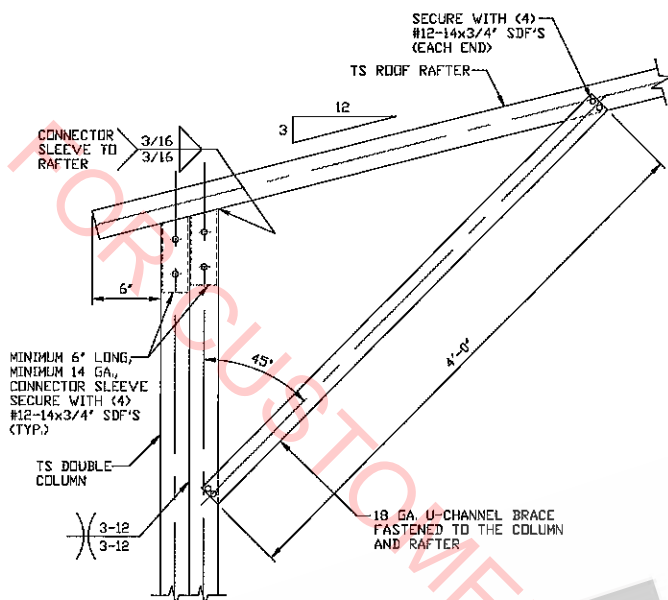
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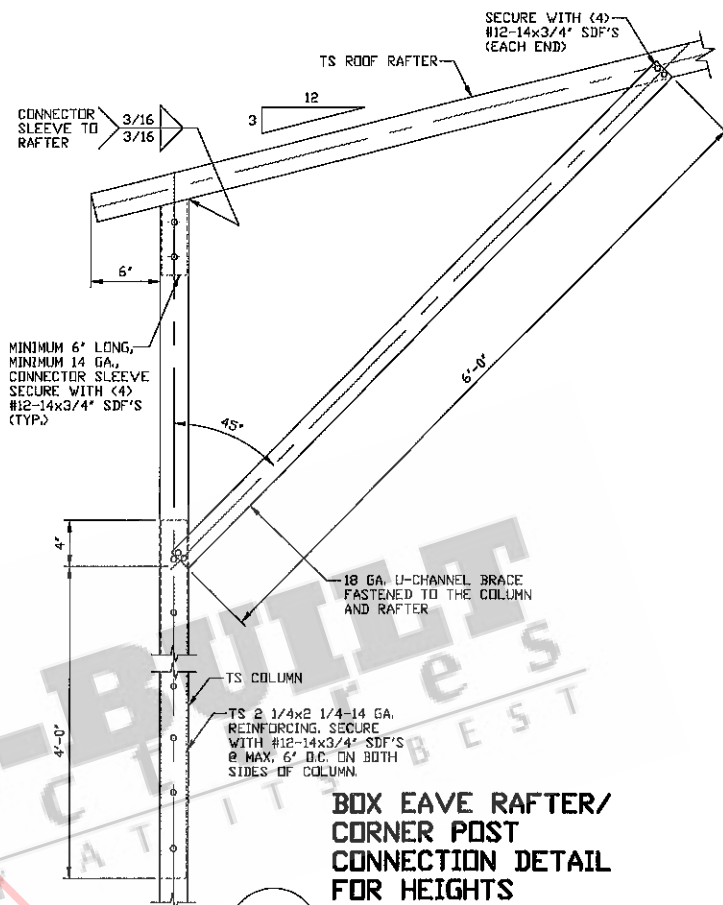
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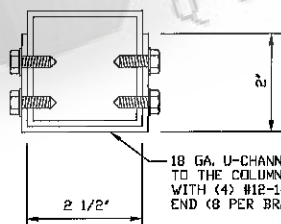
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**BOX EAVE RAFTER/CORNER POST  
CONNECTION DETAIL  
FOR HEIGHTS 14'-0" < TO ≤ 16'-0"**  
SCALE: NTS



**BOX EAVE RAFTER/  
CORNER POST  
CONNECTION DETAIL  
FOR HEIGHTS  
10'-0" < TO ≤ 14'-0"**  
SCALE: NTS



**BRACE SECTION**  
SCALE: NTS

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**PROJECT MGR: WSH**

**CLIENT: PRE-BUILT**

**PRE-BUILT STRUCTURES**

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SALISBURY, NC 28417

30'-0"x16'-0" ENCLOSED STRUCTURE

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**SHT. 6**

**SCALE: NTS**

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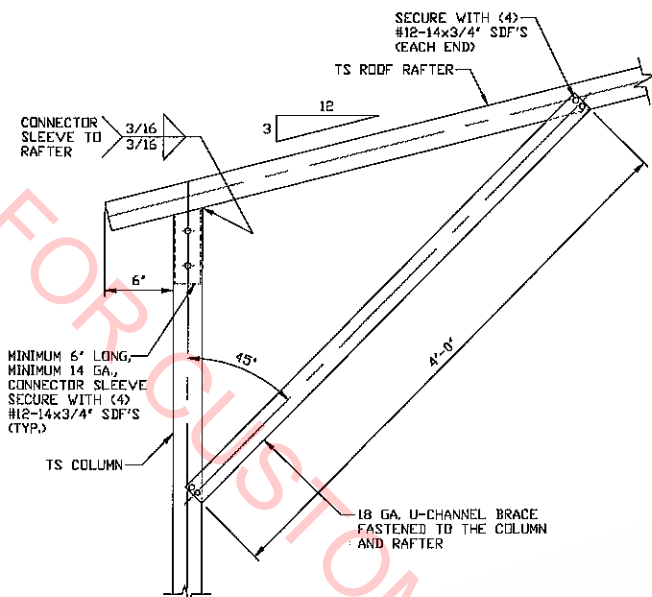
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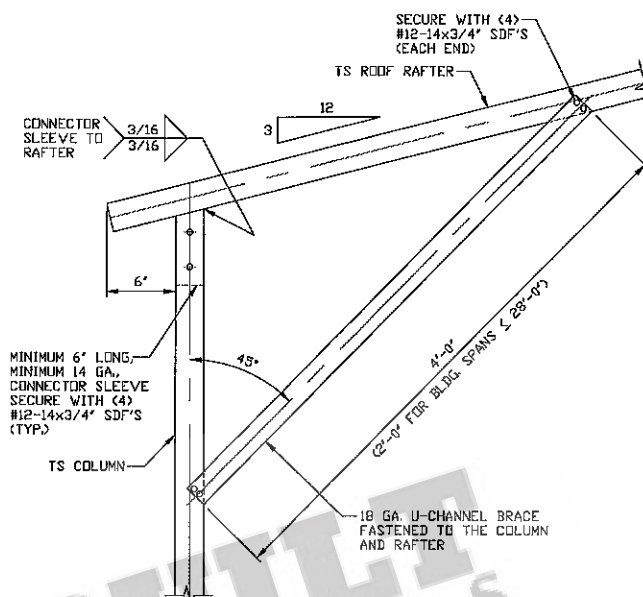




**BOX EAVE RAFTER/CORNER POST  
CONNECTION DETAIL  
FOR HEIGHTS 8'-0" < TO ≤ 10'-0"**

1B

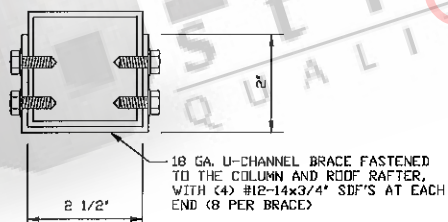
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**BOX EAVE RAFTER/CORNER POST  
CONNECTION DETAIL  
FOR HEIGHTS ≤ 8'-0"**

1C

SCALE: NTS



**BRACE SECTION**

SCALE: NTS

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**SHT. 6A**

**SCALE: NTS**

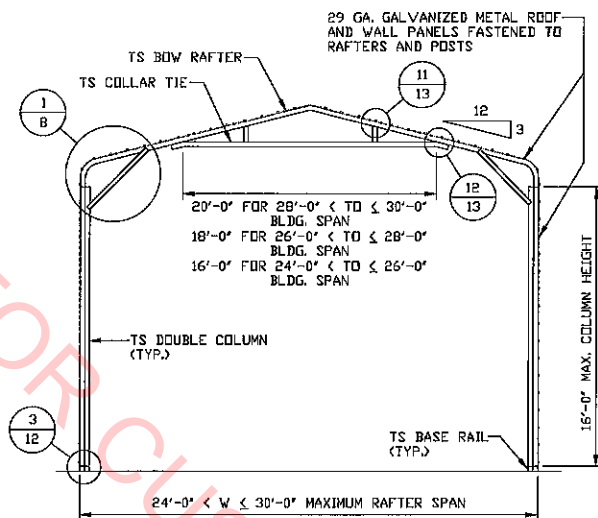
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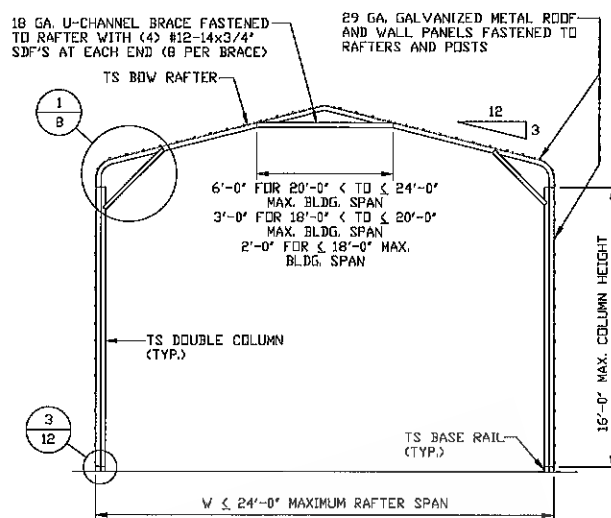
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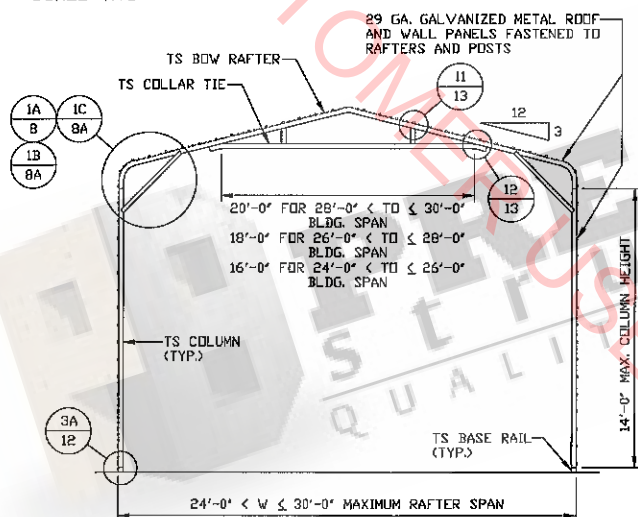
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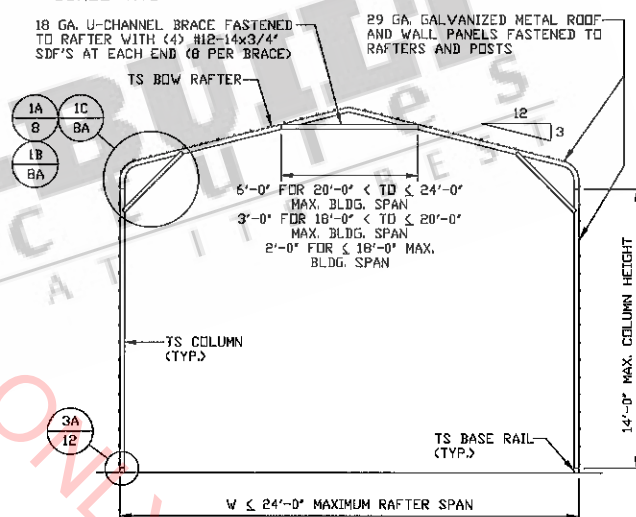
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SCALE: NTS



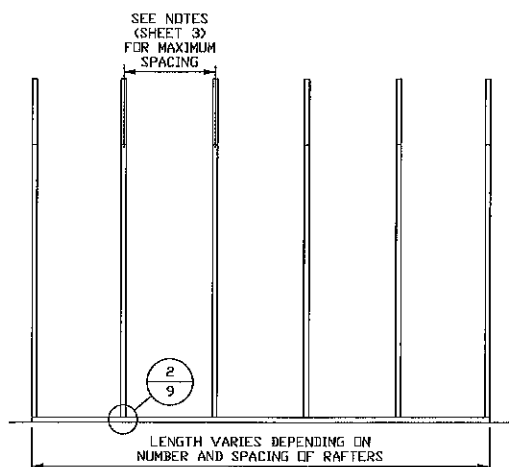
**TYPICAL RAFTER/COLUMN FRAME SECTION**  
SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME SECTION**  
SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME SECTION**  
SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**  
SCALE: NTS

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**SHT. 7**

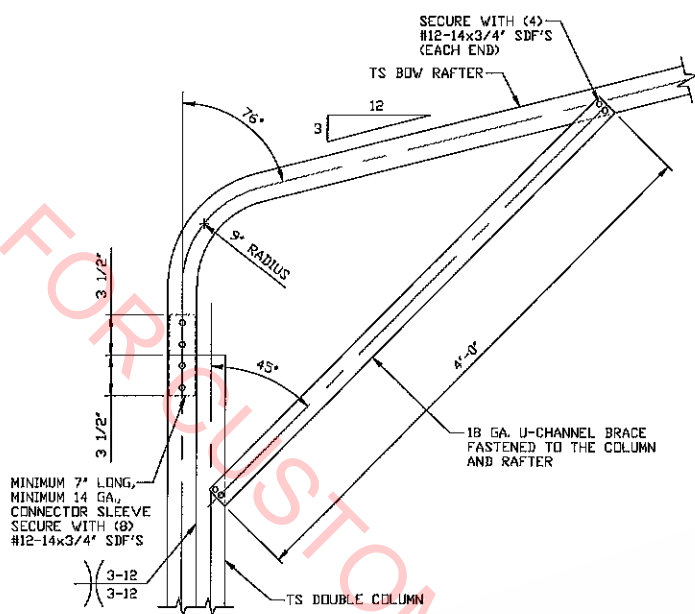
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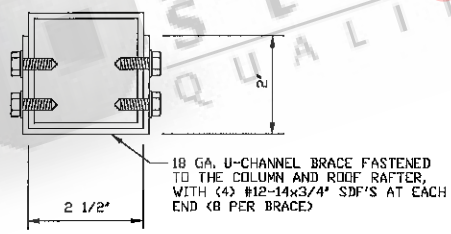
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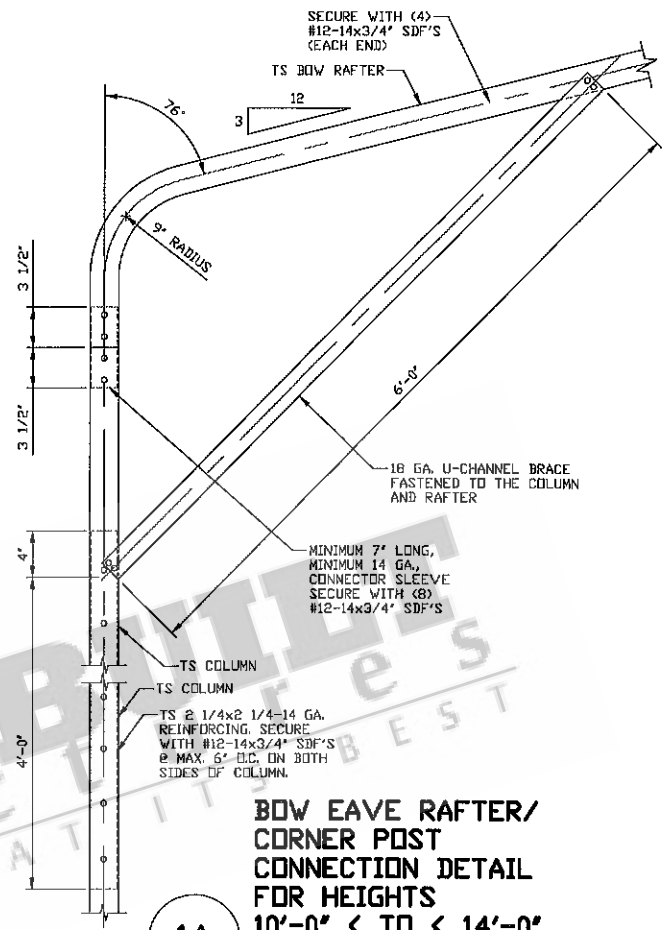
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**1**  
**BOW EAVE RAFTER/CORNER POST  
 CONNECTION DETAIL  
 FOR HEIGHTS 14'-0" < TD ≤ 16'-0"**  
 SCALE: NTS



**BRACE SECTION**  
 SCALE: NTS



**1A**  
**BOW EAVE RAFTER/  
 CORNER POST  
 CONNECTION DETAIL  
 FOR HEIGHTS  
 10'-0" < TD ≤ 14'-0"**  
 SCALE: NTS

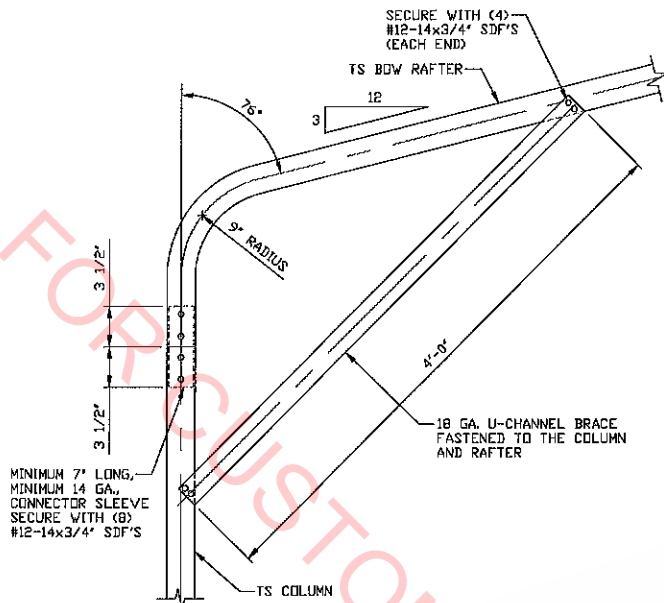
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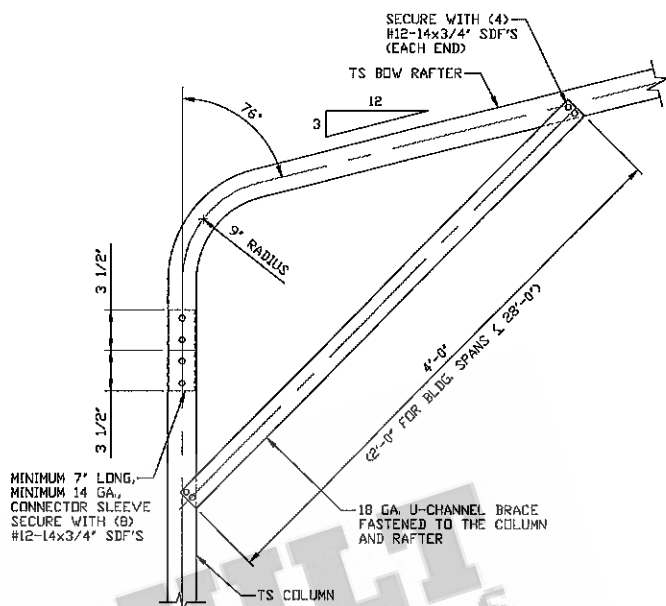
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 30'-0"x16'-0" ENCLOSED STRUCTURE

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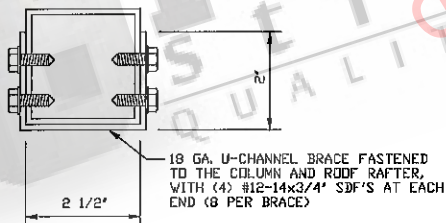
**DATE: 5-6-22**  
**SHT. 8**  
**SCALE: NTS**  
**DWG. NO: SK-3**  
**JOB NO: 20217S/22082S**  
**REV: 1**



**1B**  
**BOW EAVE RAFTER/CORNER POST  
 CONNECTION DETAIL  
 FOR HEIGHTS 8'-0" < TD ≤ 10'-0"**  
 SCALE: NTS



**1C**  
**BOW EAVE RAFTER/CORNER POST  
 CONNECTION DETAIL  
 FOR HEIGHTS ≤ 8'-0"**  
 SCALE: NTS



**BRACE SECTION**  
 SCALE: NTS

**MOORE AND ASSOCIATES  
 ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSH**

**CLIENT: PRE-BUILT**

**PRE-BUILT STRUCTURES**  
 1330 W JAKE ALEXANDER BLVD.  
 SALISBURY, NC 28417  
 30'-0" x 16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 8A**

**SCALE: NTS**

**DWG. NO: SK-3**

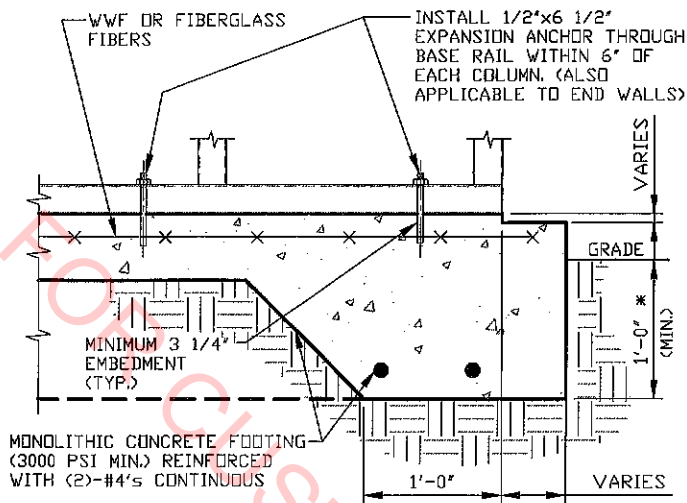
**JOB NO:  
 20217S/22082S**

**REV: 1**

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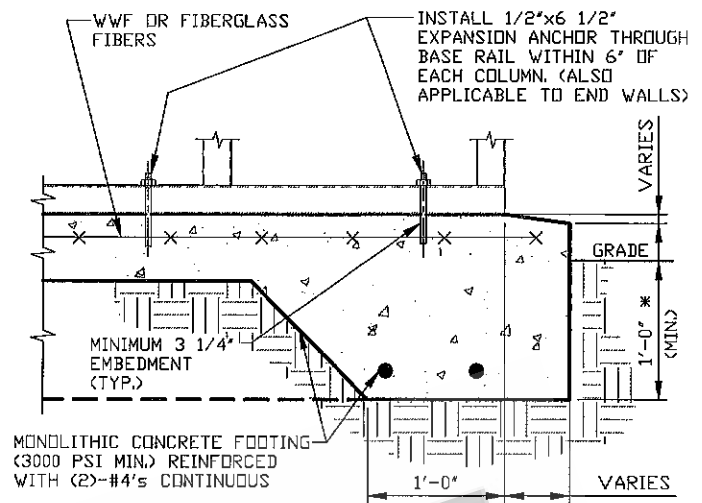


## BASE RAIL ANCHORAGE OPTIONS



### 2 CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS  
MINIMUM ANCHOR EDGE DISTANCE IS 4".  
\* COORDINATE WITH LOCAL CODES/ORD.  
REGARDING MINIMUM FROST DEPTH REQ.



### 2A CONCRETE SLAB BASE RAIL ANCHORAGE

SCALE: NTS  
MINIMUM ANCHOR EDGE DISTANCE IS 4".  
\* COORDINATE WITH LOCAL CODES/ORD.  
REGARDING MINIMUM FROST DEPTH REQ.

## GENERAL NOTES

NOTE: CONCRETE MONOLITHIC SLAB DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF.

### CONCRETE:

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 BARS SHALL BE PER ACI-318:  
3" IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2" ELSEWHERE.

### REINFORCING STEEL:

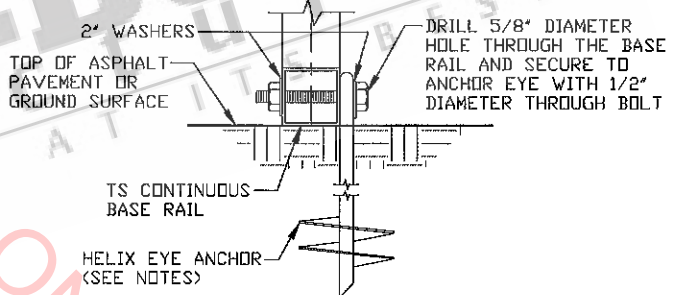
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

### 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.
3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.

### HELIX ANCHOR NOTES:

1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
2. FOR CORAL USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
3. FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS, AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
4. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL, USE MINIMUM (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT.
5. FOR VERY LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.



### 2B GROUND BASE HELIX ANCHORAGE

SCALE: NTS  
(CAN BE USED FOR ASPHALT)  
\* COORDINATE WITH LOCAL CODES/ORD.  
REGARDING MINIMUM FROST DEPTH REQ.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSM**

**CLIENT: PRE-BUILT**

**PRE-BUILT STRUCTURES**

1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 9**

**SCALE: NTS**

**DWG. NO: SK-3**

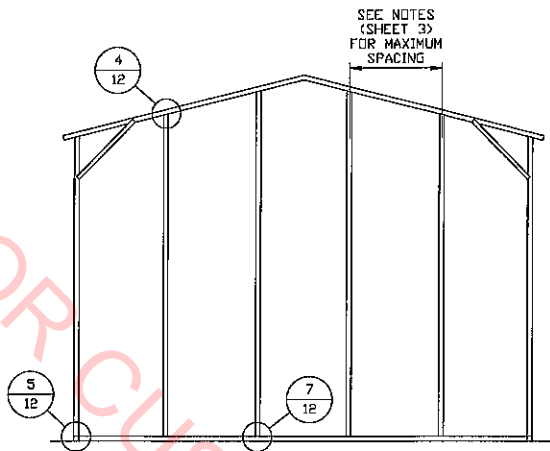
**JOB NO:**

**20217S/22082S**

**REV: 1**

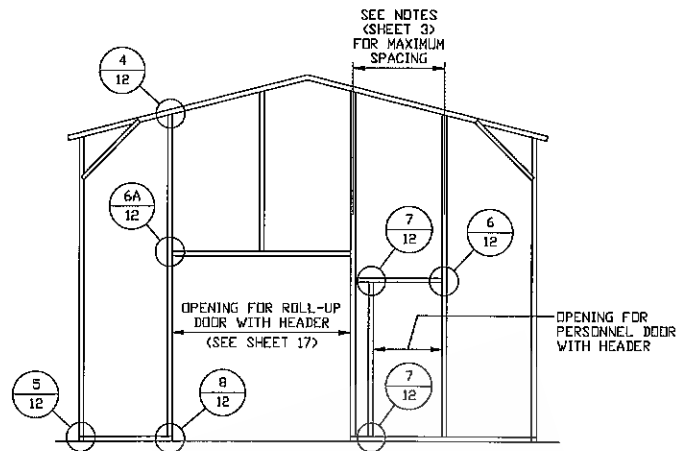
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# BOX EAVE RAFTER END WALL AND SIDE WALL FRAMING SECTIONS



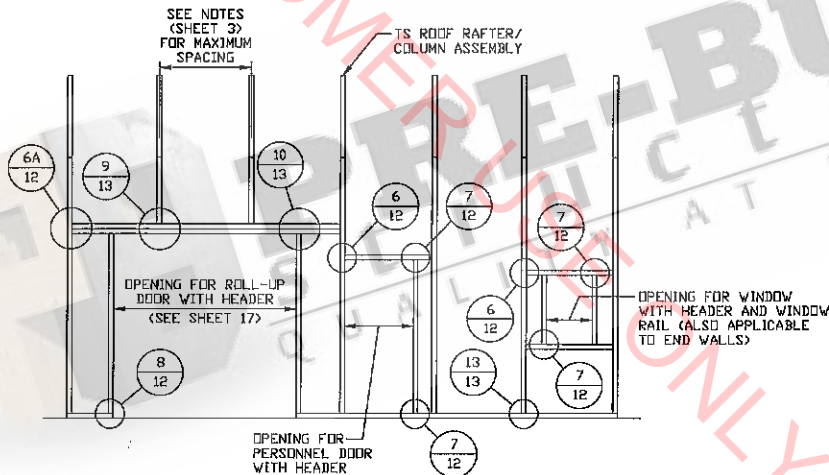
**TYPICAL BOX EAVE RAFTER  
END WALL FRAMING SECTION**

SCALE: NTS



**TYPICAL BOX EAVE RAFTER END  
WALL OPENINGS FRAMING SECTION**

SCALE: NTS



**TYPICAL BOX EAVE RAFTER  
SIDE WALL OPENINGS FRAMING SECTION**

SCALE: NTS

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: VSM**

**CLIENT: PRE-BUILT**

**PRE-BUILT STRUCTURES**

1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0"X16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 10**

**SCALE: NTS**

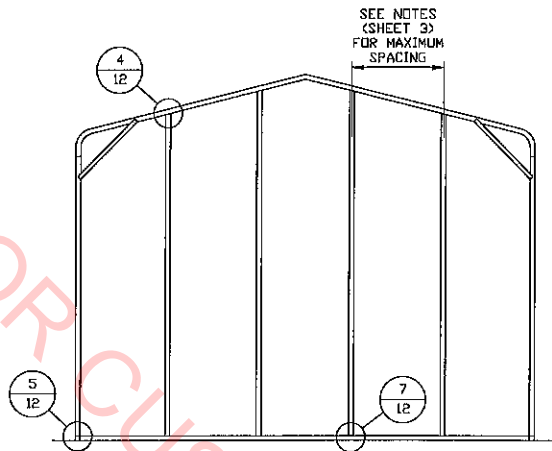
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**JOB NO:  
20217S/22082S**

**REV: 1**

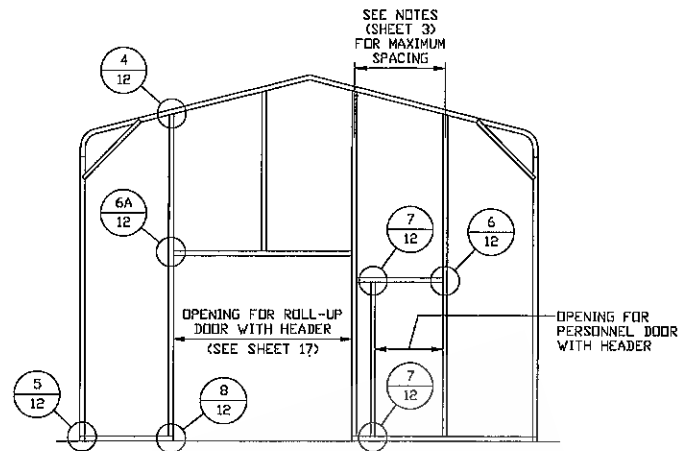
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## BOW EAVE RAFTER END WALL AND SIDE WALL FRAMING SECTIONS



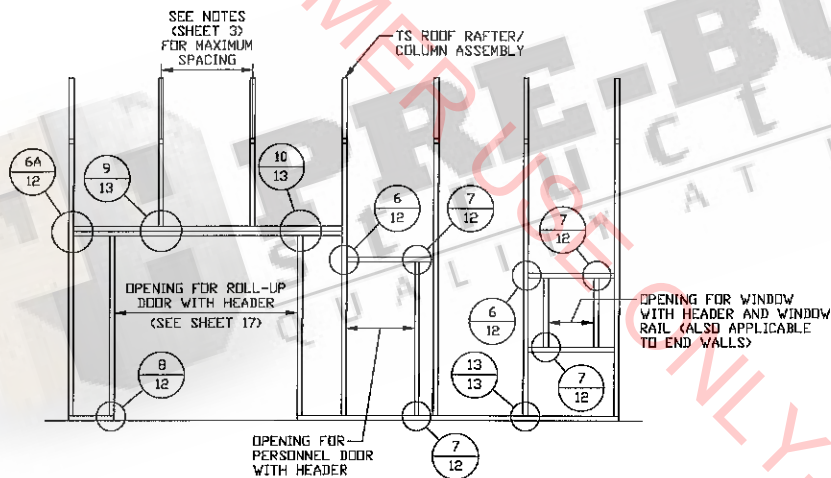
**TYPICAL BOW EAVE RAFTER  
END WALL FRAMING SECTION**

SCALE: NTS



**TYPICAL BOW EAVE RAFTER END  
WALL OPENINGS FRAMING SECTION**

SCALE: NTS



**TYPICAL BOW EAVE RAFTER  
SIDE WALL OPENINGS FRAMING SECTION**

SCALE: NTS

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSM**

**CLIENT: PRE-BUILT**

**PRE-BUILT STRUCTURES**

1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0"X16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 11**

**SCALE: NTS**

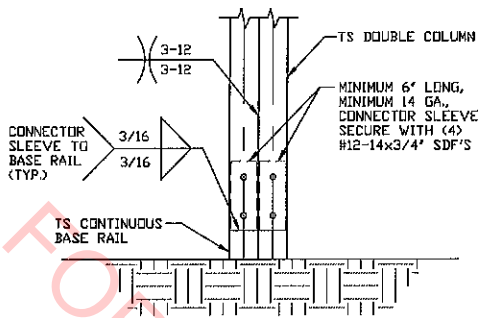
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**JOB NO:  
20217S/22082S**

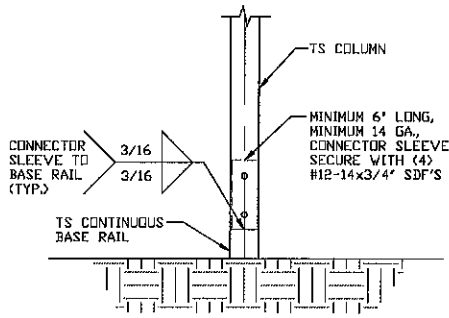
**REV: 1**

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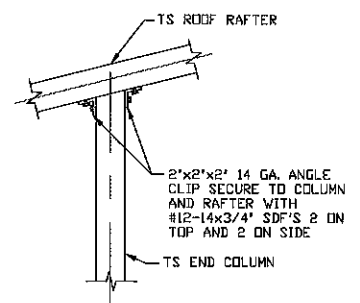
# CONNECTION DETAILS



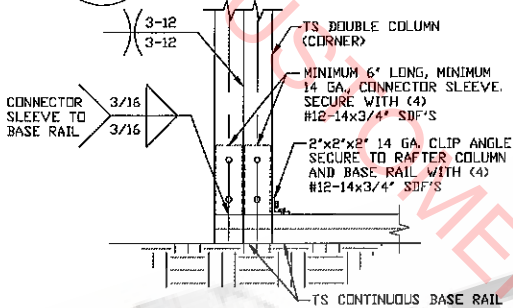
**3 POST/BASE RAIL CONNECTION DETAIL**  
SCALE: NTS



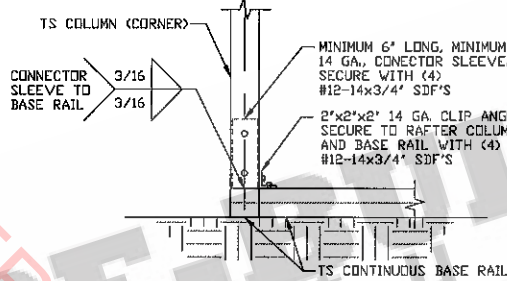
**3A POST/BASE RAIL CONNECTION DETAIL**  
SCALE: NTS



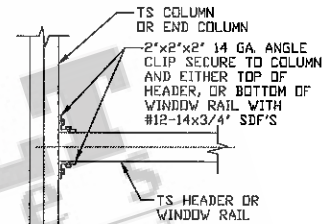
**4 END COLUMN/RAFTER CONNECTION DETAIL**  
SCALE: NTS



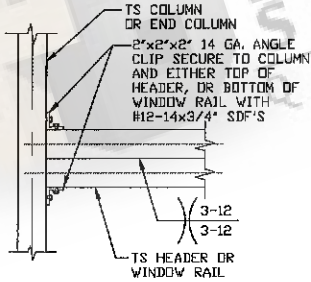
**5 END COLUMN/BASE RAIL CONNECTION DETAIL**  
SCALE: NTS



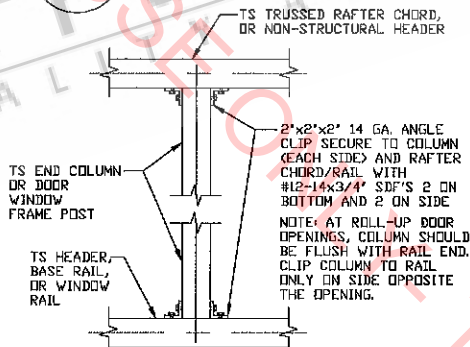
**5A END COLUMN/BASE RAIL CONNECTION DETAIL**  
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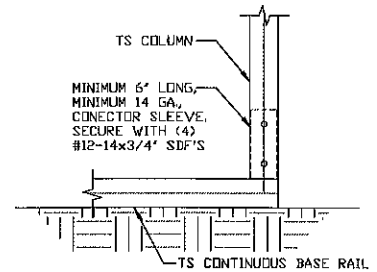
**6 COLUMN OR WINDOW RAIL TO POST CONNECTION DETAIL**  
SCALE: NTS



**6A COLUMN OR WINDOW RAIL TO POST CONNECTION DETAIL**  
SCALE: NTS



**7 COLUMN TO HEADER, BASE RAIL, OR WINDOW RAIL CONNECTION DETAIL**  
SCALE: NTS



**8 COLUMN/BASE RAIL CONNECTION DETAIL**  
SCALE: NTS

MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: PRE-BUILT

PRE-BUILT STRUCTURES

1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 5-6-22

SHT. 12

SCALE: NTS

DWG. NO: SK-3

JOB NO:

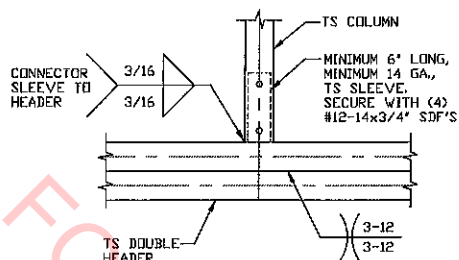
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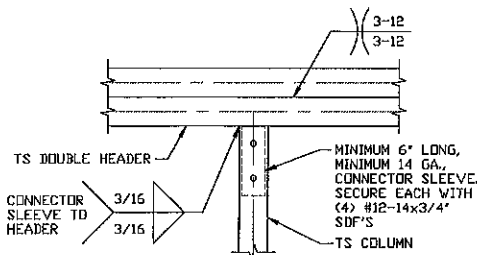


## CONNECTION DETAILS



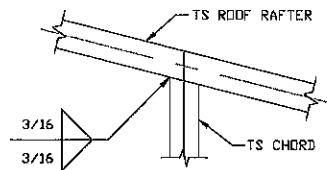
**9 COLUMN/DOUBLE HEADER CONNECTION DETAIL**

SCALE: NTS



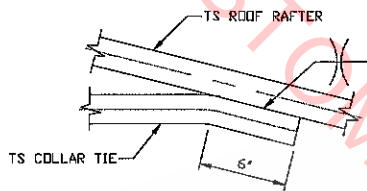
**10 DOUBLE HEADER/COLUMN CONNECTION DETAIL**

SCALE: NTS



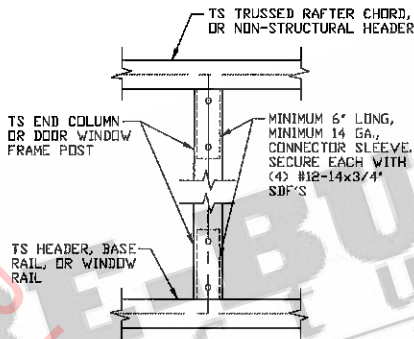
**11 RAFTER TO CHORD CONNECTION DETAIL**

SCALE: NTS



**12 COLLAR TIE CONNECTION DETAIL**

SCALE: NTS



**13 COLUMN TO HEADER OR BASE RAIL CONNECTION DETAIL**

SCALE: NTS

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSM**

**CLIENT: PRE-BUILT**

PRE-BUILT STRUCTURES  
1330 W JAKE ALEXANDER BLVD.  
SALISBURY, NC 28417  
30'-0"X16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 13**

**SCALE: NTS**

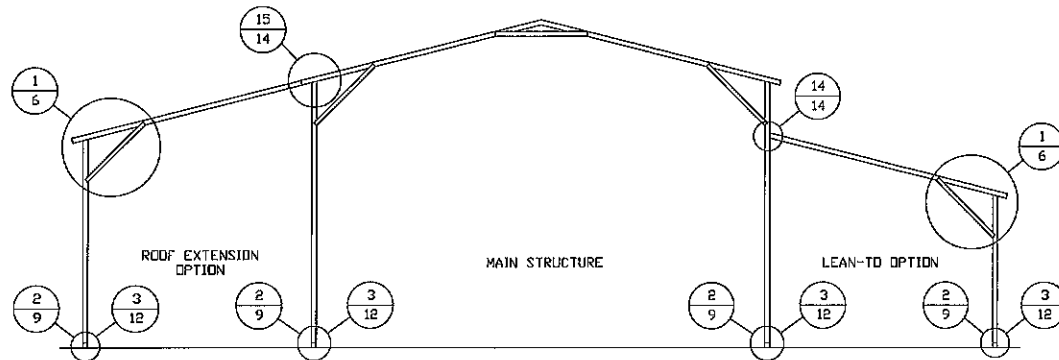
**DWG. NO: SK-3**

**JOB NO:  
202173/22062S**

**REV: 1**

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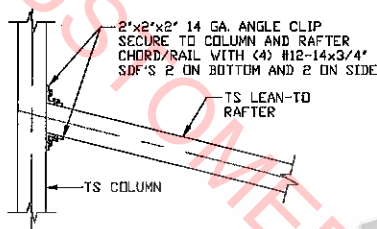
## BOX EAVE RAFTER LEAN-TO OPTIONS



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

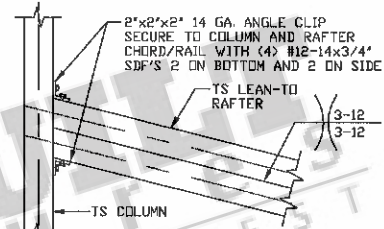
SCALE: NTS

REFERENCE RAFTER COLUMN CONNECTION DETAILS FOR APPROPRIATE COLUMN HEIGHT AND TUBING SPECIFICATIONS UTILIZED IN A LEAN-TO CONFIGURATION.



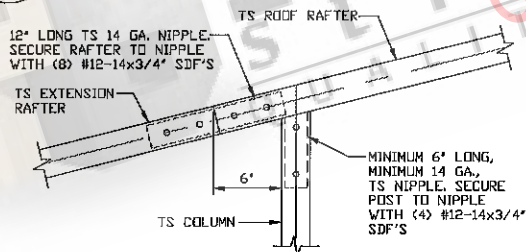
#### 14 LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $\leq 12'-0''$

SCALE: NTS



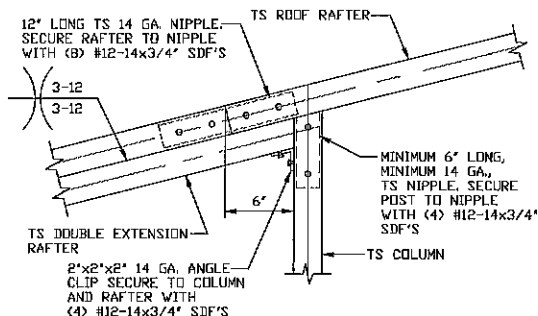
#### 14A LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0'' < \text{TO} \leq 16'-0''$

SCALE: NTS



#### 15 SIDE EXTENSION RAFTER COLUMN DETAIL FOR SPANS $\leq 12'-0''$

SCALE: NTS



#### 15A SIDE EXTENSION RAFTER COLUMN DETAIL FOR SPANS $12'-0'' < \text{TO} \leq 16'-0''$

SCALE: NTS

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSM**

**CLIENT: PRE-BUILT**

PRE-BUILT STRUCTURES

1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 3-6-22**

**SHT. 14**

**SCALE: NTS**

**DWG. NO: SK-3**

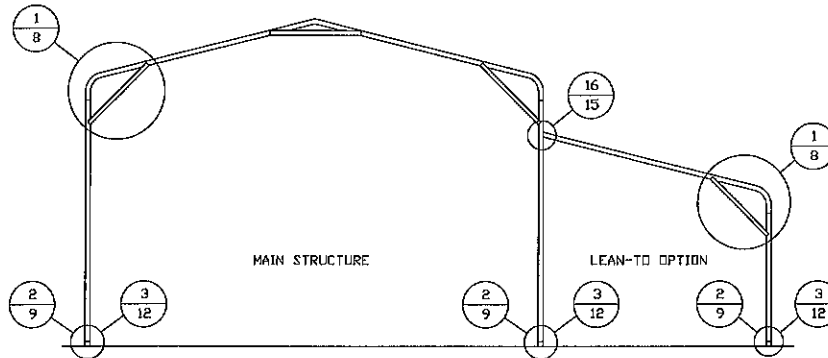
**JOB NO**

**20217S/22062S**

**REV: 1**

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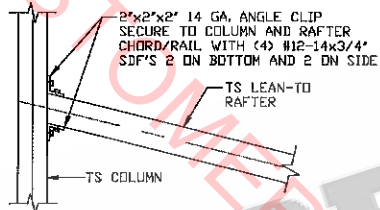
## BOW EAVE RAFTER LEAN-TO OPTIONS



### TYPICAL BOW EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION

SCALE: NTS

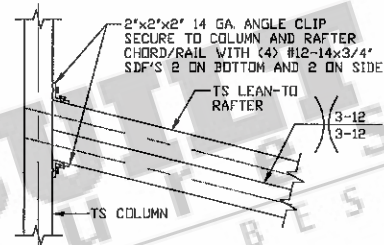
REFERENCE RAFTER COLUMN CONNECTION DETAILS FOR APPROPRIATE COLUMN HEIGHT AND TUBING SPECIFICATIONS UTILIZED IN A LEAN-TO CONFIGURATION.



**LEAN-TO RAFTER TO RAFTER  
COLUMN CONNECTION DETAIL  
FOR RAFTER SPANS  $\leq 12'-0''$**

16

SCALE: NTS



**LEAN-TO RAFTER TO RAFTER  
COLUMN CONNECTION DETAIL FOR  
RAFTER SPANS  $12'-0'' < TO \leq 16'-0''$**

16A

SCALE: NTS

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSH**

**CLIENT: PRE-BUILT**

**PRE-BUILT STRUCTURES**

1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 15**

**SCALE: NTS**

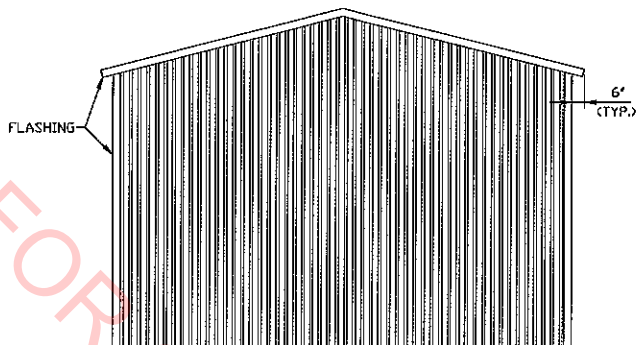
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**JOB NO:  
20217S/22092S**

**REV: 1**

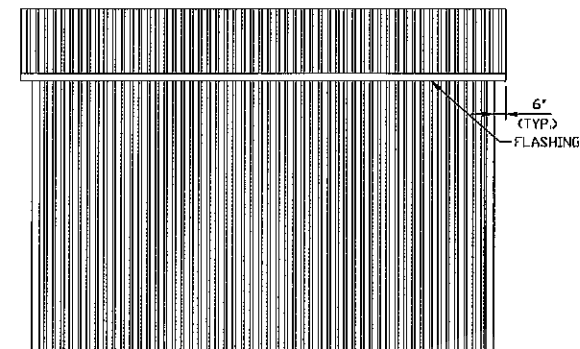
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# BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



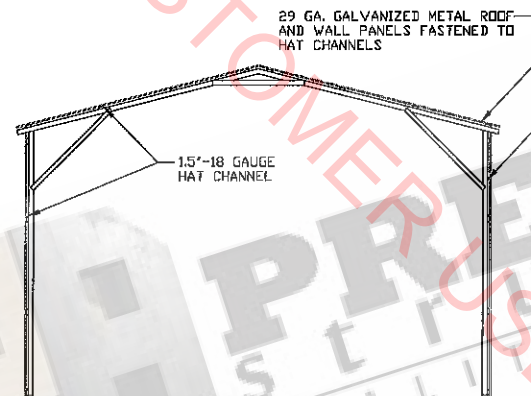
**TYPICAL END ELEVATION  
VERTICAL ROOF/SIDING**

SCALE: NTS



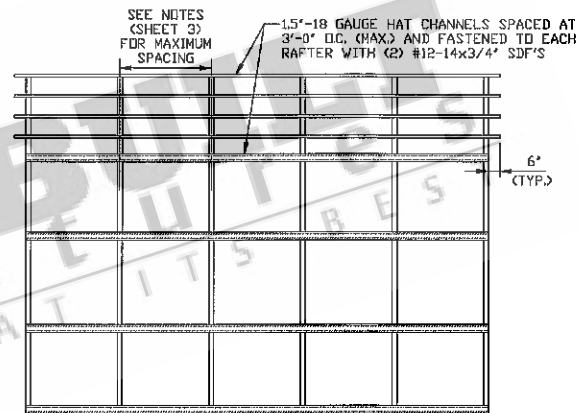
**TYPICAL SIDE ELEVATION  
VERTICAL ROOF/SIDING**

SCALE: NTS



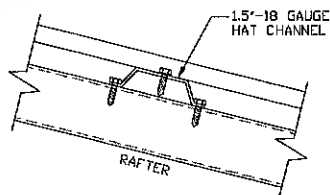
**TYPICAL SECTION VERTICAL  
ROOF/SIDING OPTION**

SCALE: NTS



**TYPICAL FRAMING SECTION VERTICAL  
ROOF/SIDING OPTION WITH TS GIRTS**

SCALE: NTS



**PANEL ATTACHMENT**

(ALTERNATE FOR VERTICAL ROOF PANELS)

SCALE: NTS

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: VSM**

**CLIENT: PRE-BUILT**

**PRE-BUILT STRUCTURES**  
1330 W JAKE ALEXANDER BLVD.  
SALISBURY, NC 28417  
30'-0"X16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 16**

**SCALE: NTS**

**DWG. NO: SK-3**

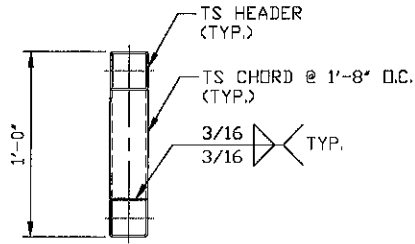
**JOB NO:  
20217S/22082S**

**REV: 1**

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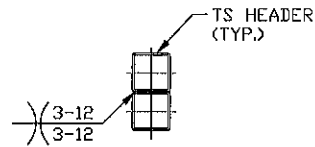


## SIDE WALL HEADER OPTIONS



**HEADER DETAIL FOR SIDE WALL  
DOOR OPENINGS  
12'-0" < LENGTH ≤ 16'-0"**

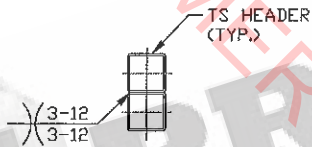
SCALE: NTS



**HEADER DETAIL FOR SIDE WALL  
DOOR OPENINGS ≤ 12'-0"**

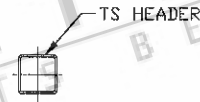
SCALE: NTS

## END WALL HEADER OPTIONS



**HEADER DETAIL FOR SIDE WALL  
DOOR OPENINGS  
14'-0" < LENGTH ≤ 16'-0"**

SCALE: NTS



**HEADER DETAIL FOR END WALL  
DOOR OPENINGS ≤ 14'-0"**

SCALE: NTS

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSM**

**CLIENT: PRE-BUILT**

**PRE-BUILT STRUCTURES**

1330 W JAKE ALEXANDER BLVD.

SALISBURY, NC 28417

30'-0" x 16'-0" ENCLOSED STRUCTURE

**DATE: 5-6-22**

**SHT. 17**

**SCALE: NTS**

**DWG. NO: SK-3**

**JOB NO:  
20217S/22082S**

**REV: 1**

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