

Carolina Carports, Inc.

Carports • Buildings • Garages

STRUCTURAL DESIGN

ENCLOSED BUILDING

**MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT- BOX EAVE
FRAME AND BOW FRAME**

10 November 2016

Revision 4

M&A Project No. 15156S & 16135S

Full

HARNETT COUNTY CENTRAL PERMITTING

APPLICATION # 4680 Spring Hill

JOB NAME Justin Kelly on Rd

DATE PLANS RECEIVED 7-16-18

SITE PLANS APPROVED 7-16-18

APPROVED BY [Signature]

Prepared for:

**Carolina Carports, Inc.
187 Cardinal Ridge Trail
Dobson, NC 27017**

Prepared by:

NOTICE TO CONTRACTOR

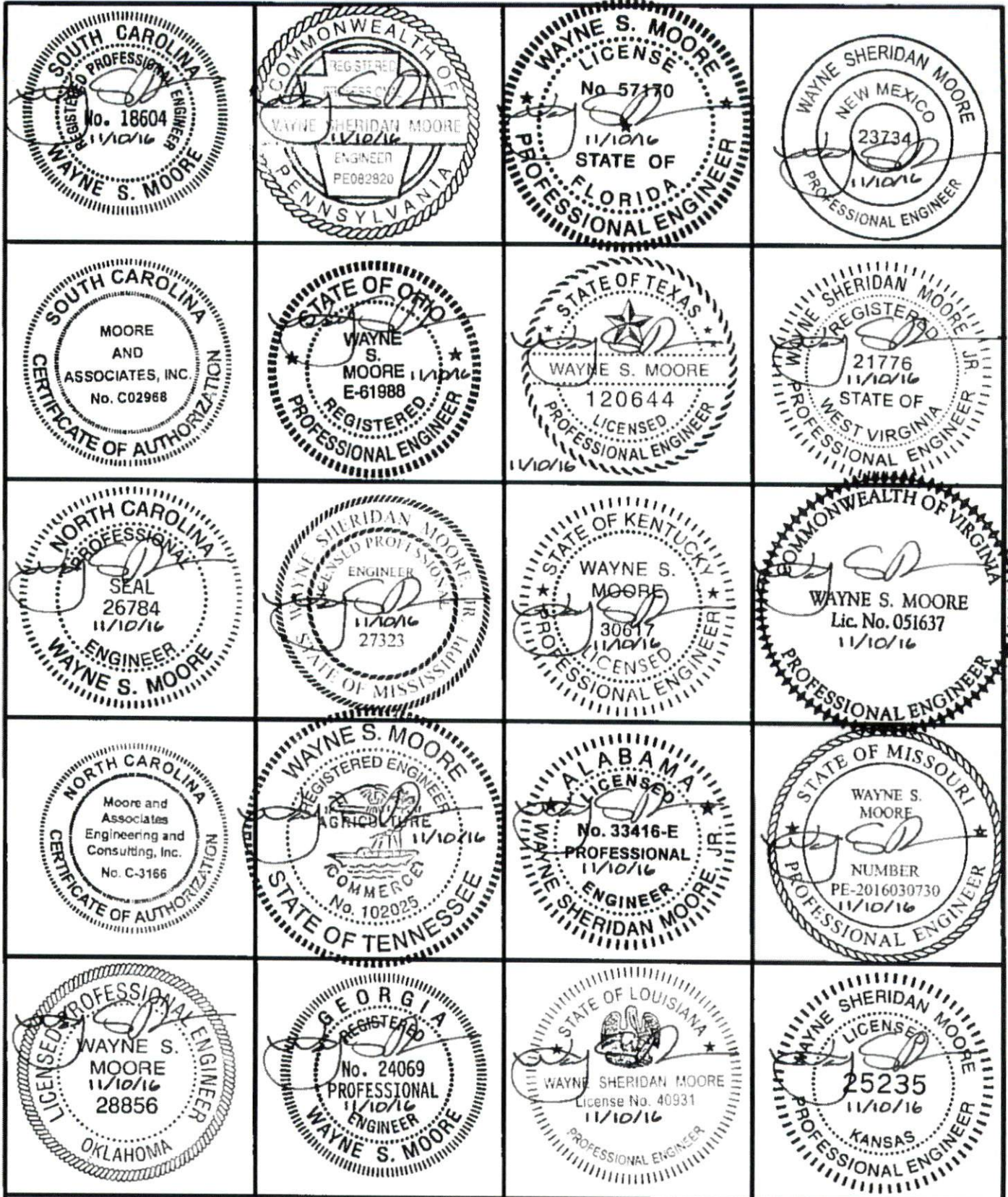
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

Moore and Associates Engineering and Consulting, Inc.

**1009 East Avenue
North Augusta, SC 29841**



**MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING**



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ENGINEERING AND CONSULTING, INC.**

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CAROLINA CARPORTS, INC.
30"x20" ENCLOSED STRUCTURE
PE SEAL COVER SHEET

CHECKED BY: PDH

PROJECT MGR: WSM

DATE: 11-10-16

SCALE: NTS

JOB NO 151565
161355




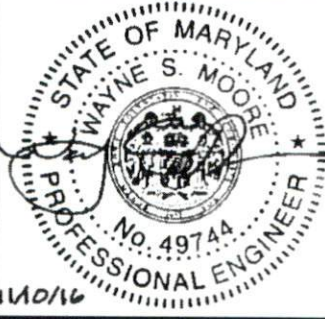
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SHT. 1

DWG. NO: SK-3

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16135S

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187 CARDINAL RIDGE TRAIL
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30'x20" ENCLOSED STRUCTURE

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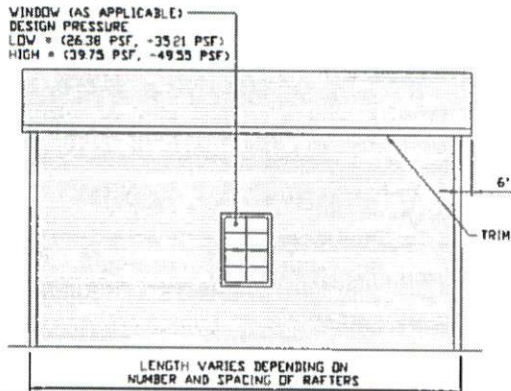
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DWG. NO: SK-3

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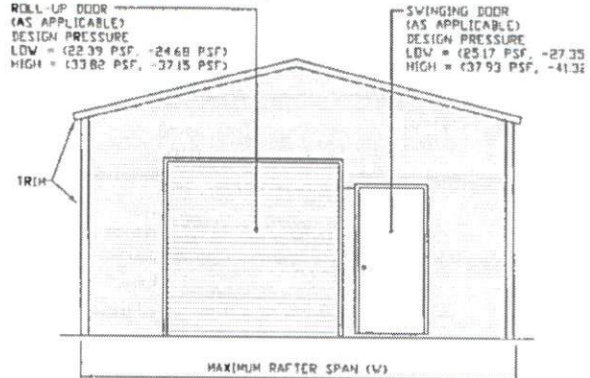
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BOX EAVE FRAME RAFTER STRUCTURE (Sheets 4, 4A, 4B, 4C, 4D, 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 8, 9, 11, 12, 13, AND 15)



TYPICAL SIDE ELEVATION-HORIZONTAL ROOF

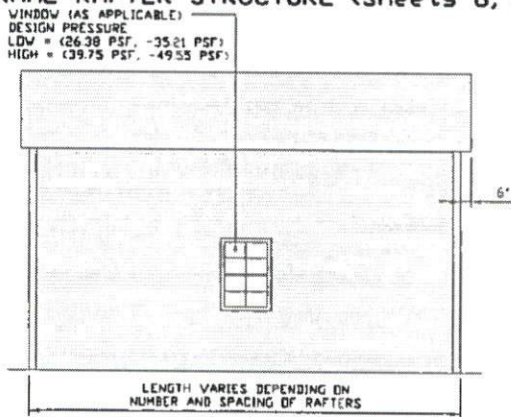
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TYPICAL END ELEVATION-HORIZONTAL ROOF

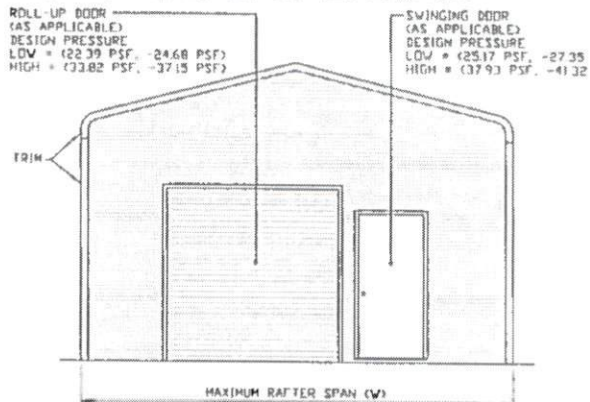
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BOW FRAME RAFTER STRUCTURE (Sheets 6, 6A, 7, 7A, 7B, 7C, 8, 10, 11, 12, AND 14)



TYPICAL SIDE ELEVATION

SCALE: NTS



TYPICAL END ELEVATION

SCALE: NTS

INSTALLATION NOTES AND SPECIFICATIONS

- 1 DESIGN IS FOR MAXIMUM 30' WIDE x 20' EAVE HEIGHT ENCLOSED STRUCTURES
- 2 DESIGN WAS DONE IN ACCORDANCE WITH THE 2014 FLORIDA BUILDING CODE (FBC) 5TH EDITION, 2012 NORTH CAROLINA BUILDING CODE, 2006 INTERNATIONAL BUILDING CODE (IBC), 2009 IBC 2012 IBC AND 2015 IBC
- 3 DESIGN LOADS ARE AS FOLLOWS:
 - A) DEAD LOAD = 15 PSF
 - B) LIVE LOAD = 12 PSF
 - C) GROUND SNOW LOAD = 30 PSF (<26'), 35 PSF (26' < W < 30') (MAXIMUM 45 PSF FOR EXPOSURE B AND 55 PSF FOR EXPOSURE C AT 4'-0" O.C SPACING)
- 4 LOW ULTIMATE WIND SPEED (LW) 105 TO 140 MPH (NOMINAL WIND SPEED 81 TO 108 MPH) MAXIMUM RAFTER/POST AND END POST SPACING = 50 FEET
- 5 HIGH ULTIMATE WIND SPEED (HW) 141 TO 170 MPH (NOMINAL WIND SPEED 109 TO 132 MPH) MAXIMUM RAFTER/POST AND END POST SPACING = 40 FEET
- 6 LOW HAZARD RISK CATEGORY I (WIND)
- 7 WIND EXPOSURE CATEGORY B OR C
- 8 SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" - 14 GAGE TUBE STEEL (TS) FRAMING MEMBERS (UNLESS NOTED OTHERWISE)
- 9 AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR HAT CHANNELS, AND COLUMNS (INTERIOR OR END) = 8" O.C (MAX)
- 10 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 20 FEET OR LESS, AND ROOF SLOPES OF 14' (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY
- 11 ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES
- 12 GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT x 30" LONG IN SUITABLE SOIL CONDITIONS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED. NOT ALLOWED FOR HIGH WIND APPLICATION
- 13 WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
 - SOIL SITE CLASS = D
 - RISK CATEGORY I/II/III
 - R = 3.25 I_e = 10
 - S_{DS} = 1.522 V = C_sW
 - S_{D1} = 0.839

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187 CARDINAL RIDGE TRAIL
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SHT. 3

SCALE: NTS

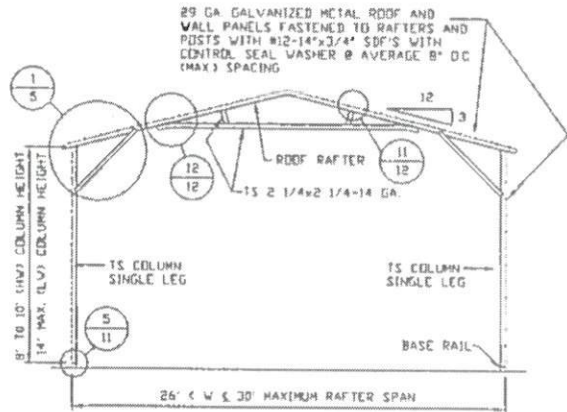
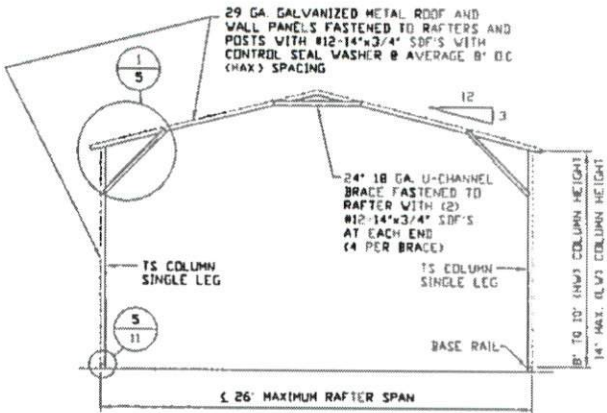
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EXPOSURE B

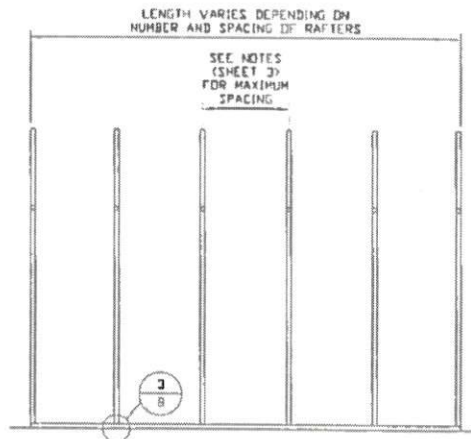


TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

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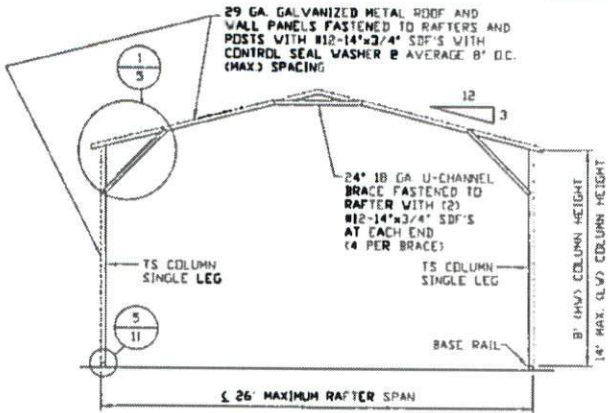
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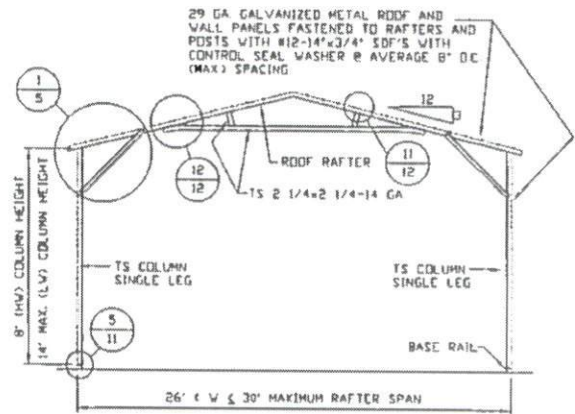
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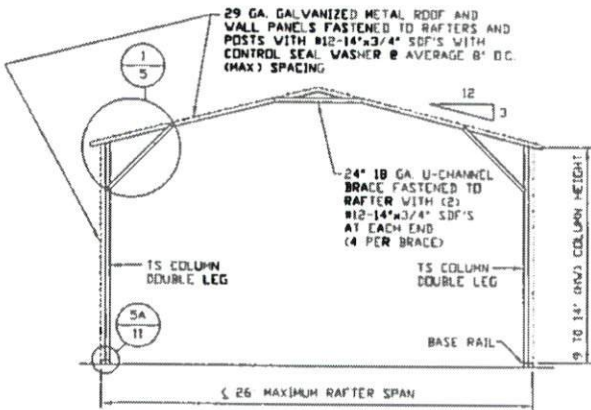
EXPOSURE C



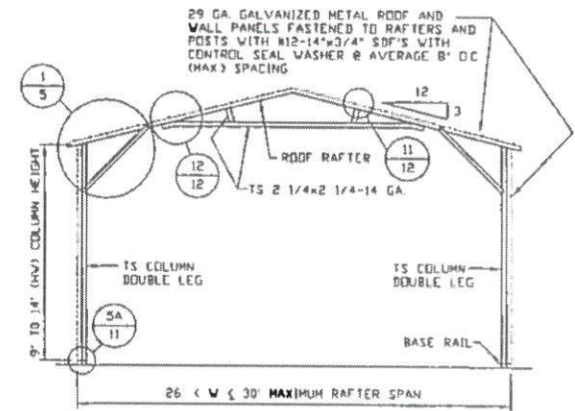
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SCALE: NTS



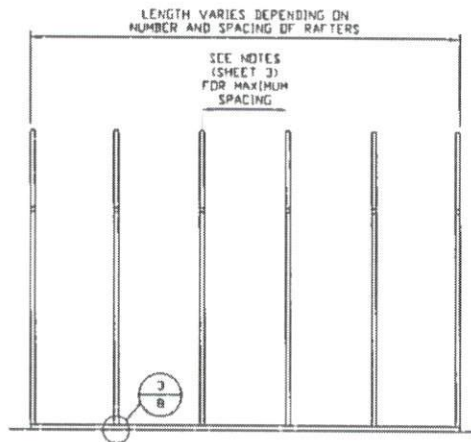
TYPICAL RAFTER/COLUMN END FRAME SECTION
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TYPICAL RAFTER/COLUMN END FRAME SECTION
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TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
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SHT. 4A

SCALE: NTS

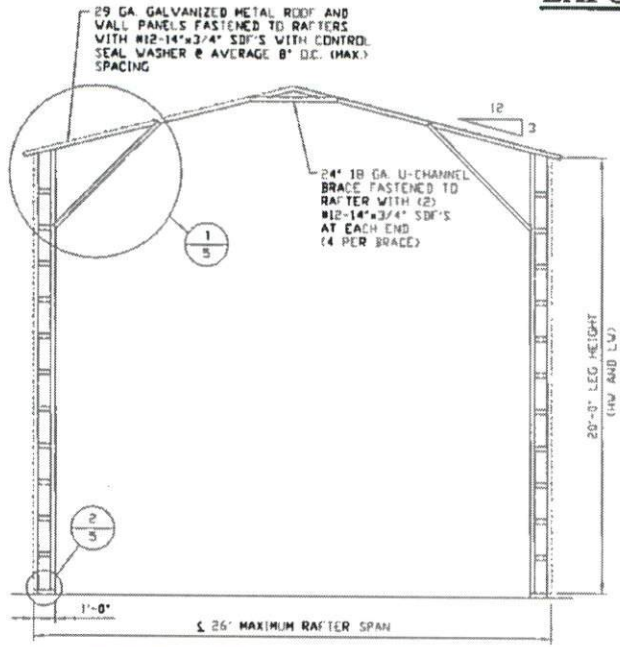
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**JOB NO: 15156S
16135S**

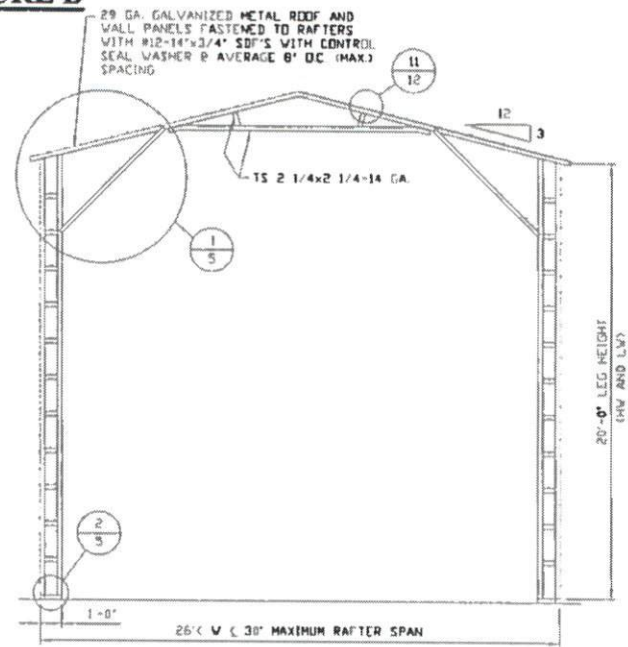
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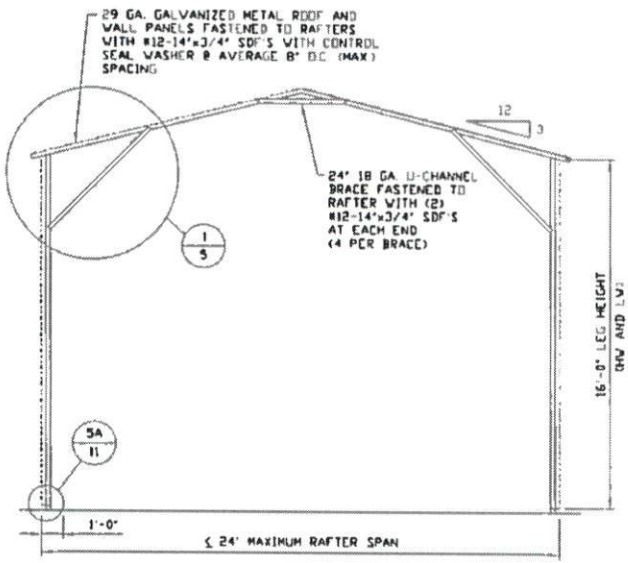
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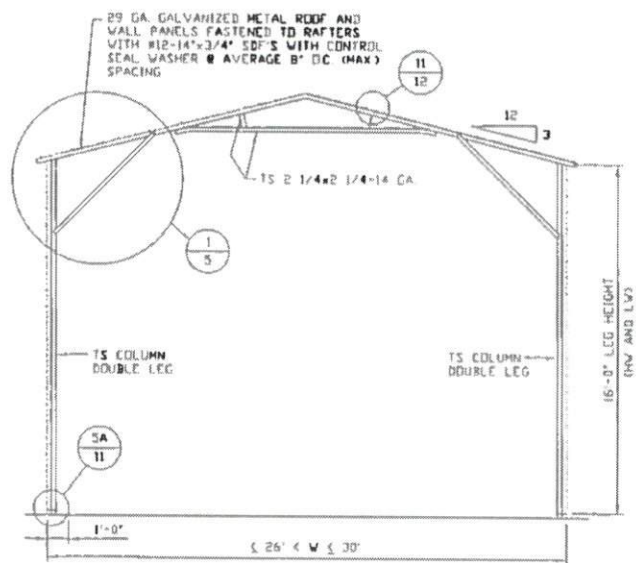
TYPICAL RAFTER/COLUMN END FRAME SECTION
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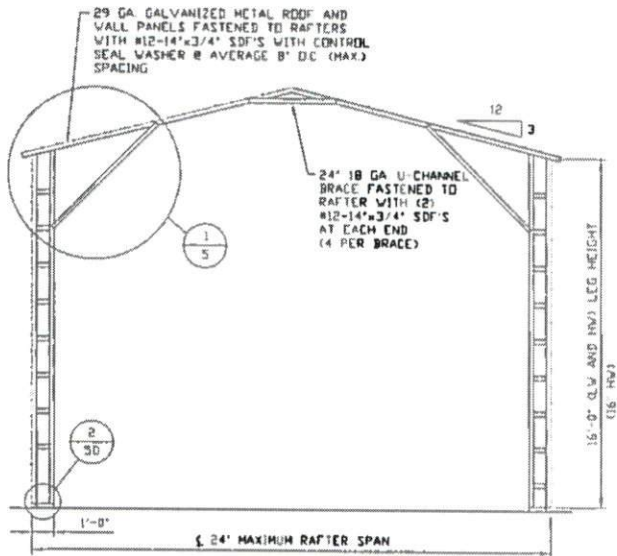
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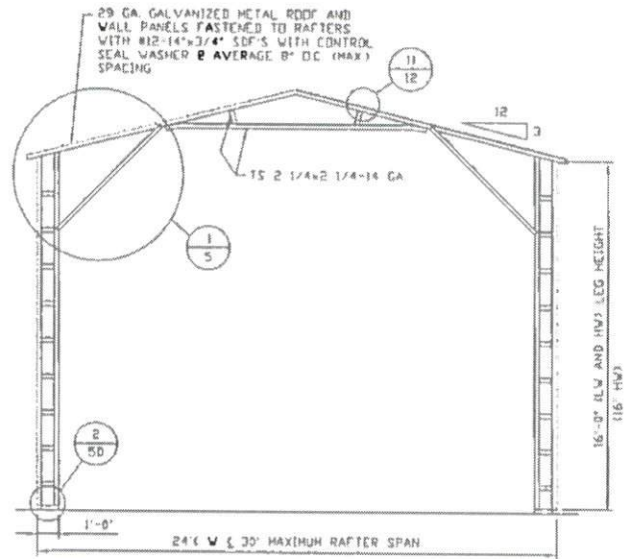
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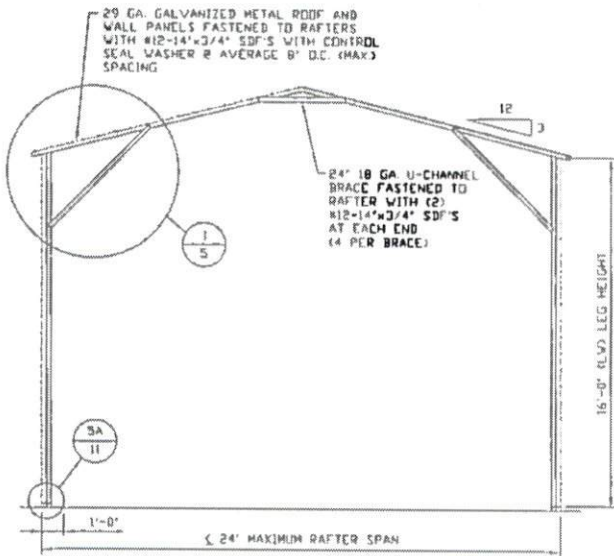
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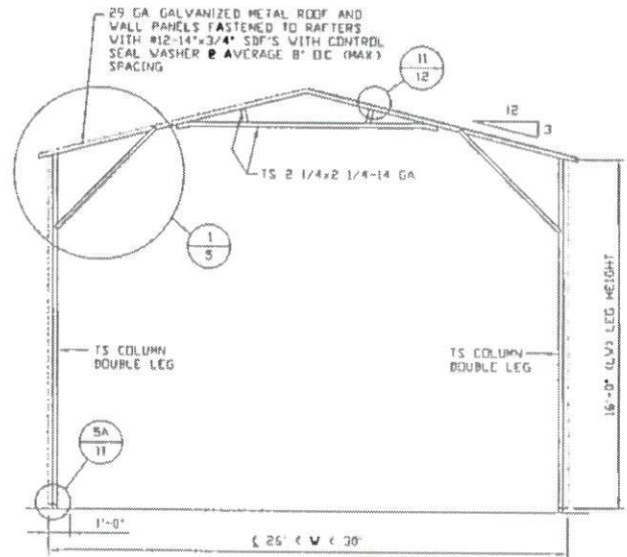
TYPICAL RAFTER/COLUMN END FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION
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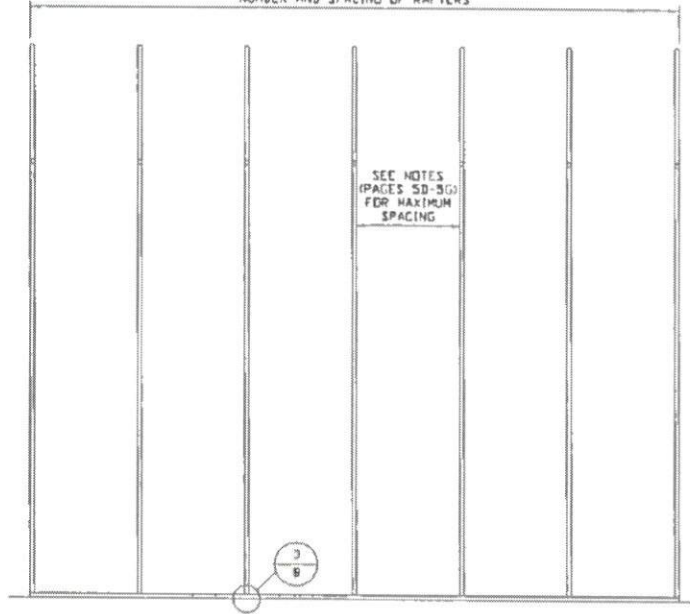
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LENGTH VARIES DEPENDING ON
NUMBER AND SPACING OF RAFTERS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

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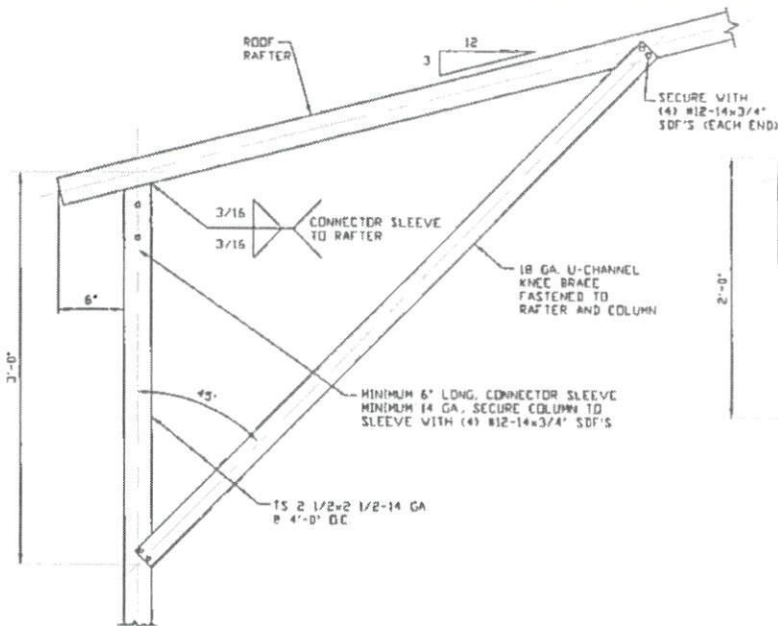
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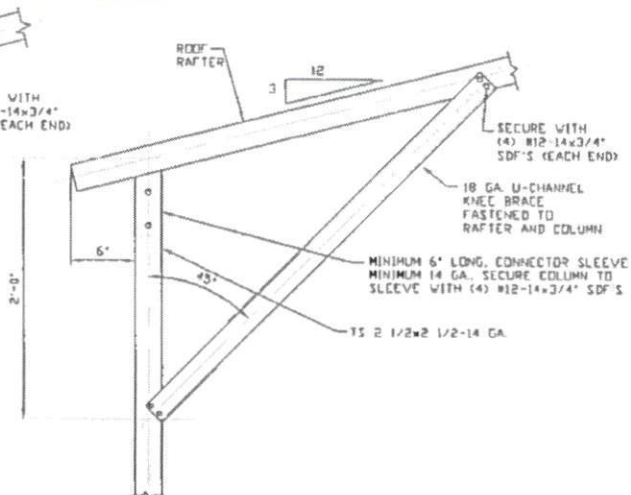
EXPOSURE B (140 MPH)



1A

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12' < TO ≤ 14'

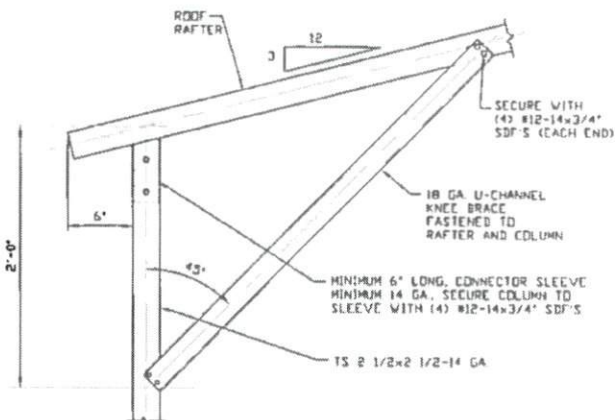
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1B

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 8' < TO ≤ 12'

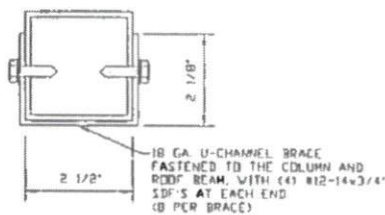
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1C

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS ≤ 8'

SCALE: NTS



BRACE SECTION

SCALE: NTS

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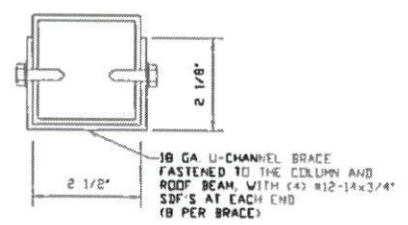
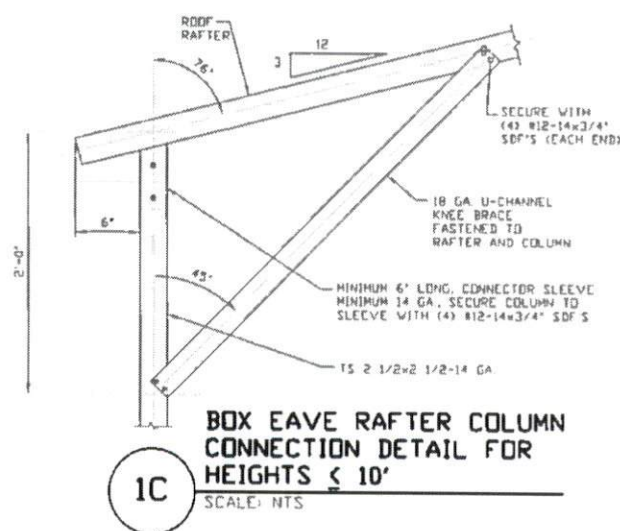
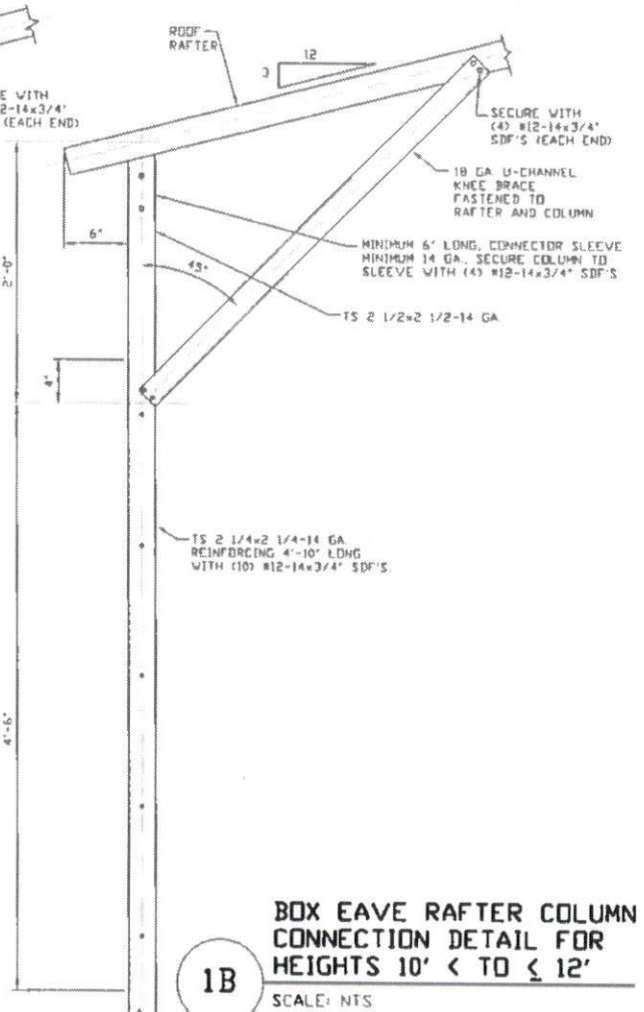
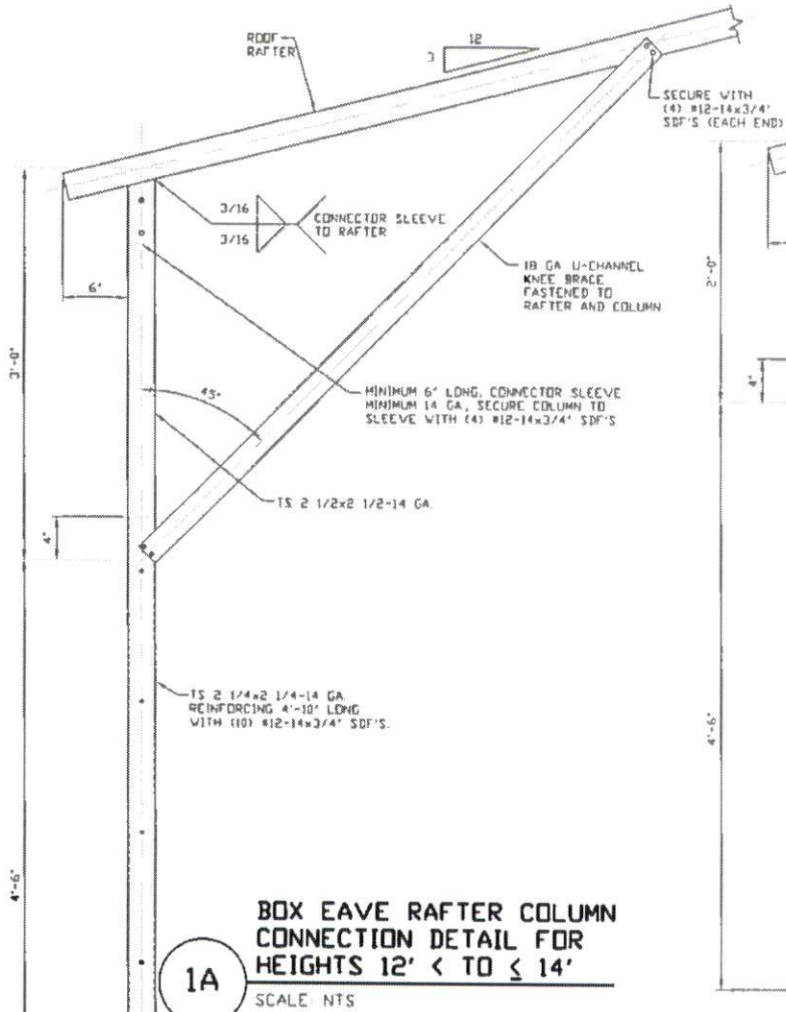
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EXPOSURE B (170 MPH)



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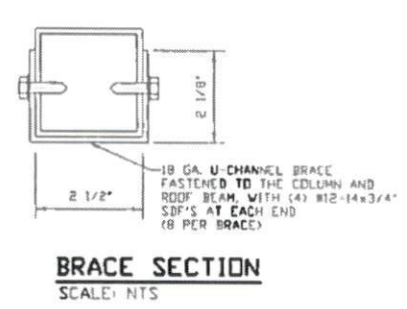
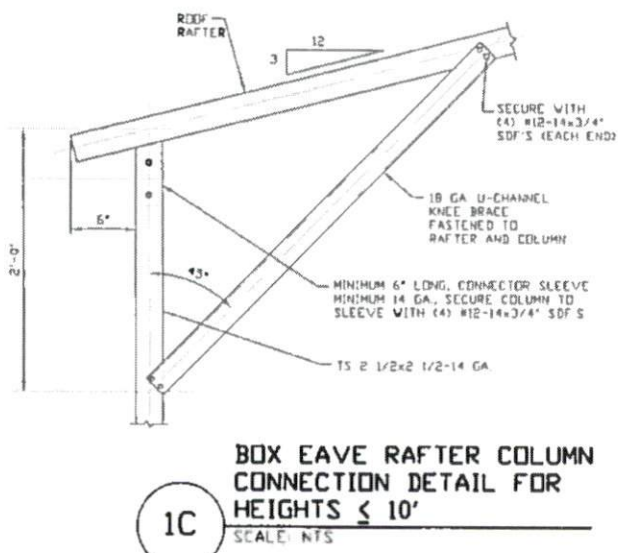
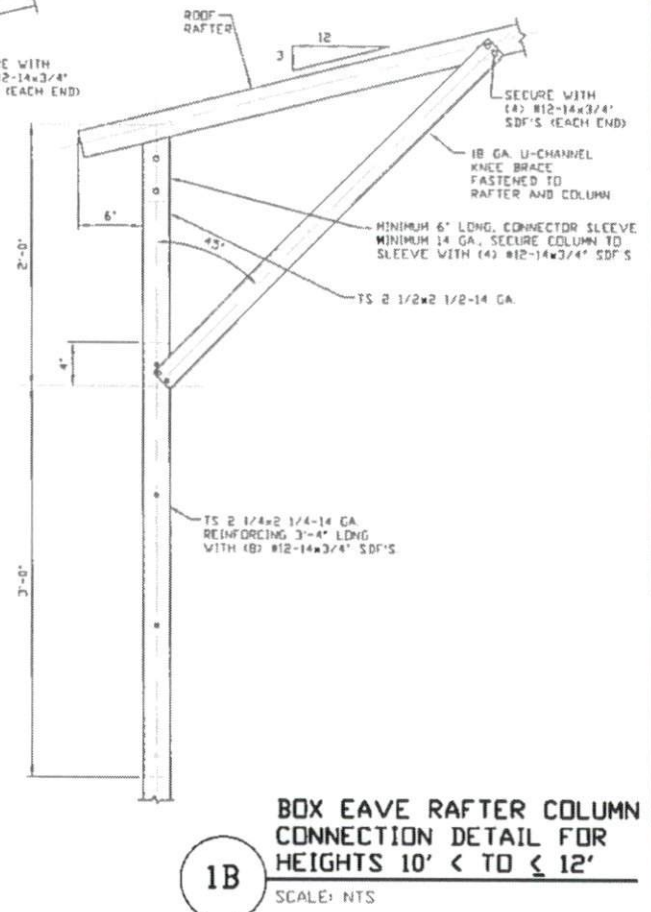
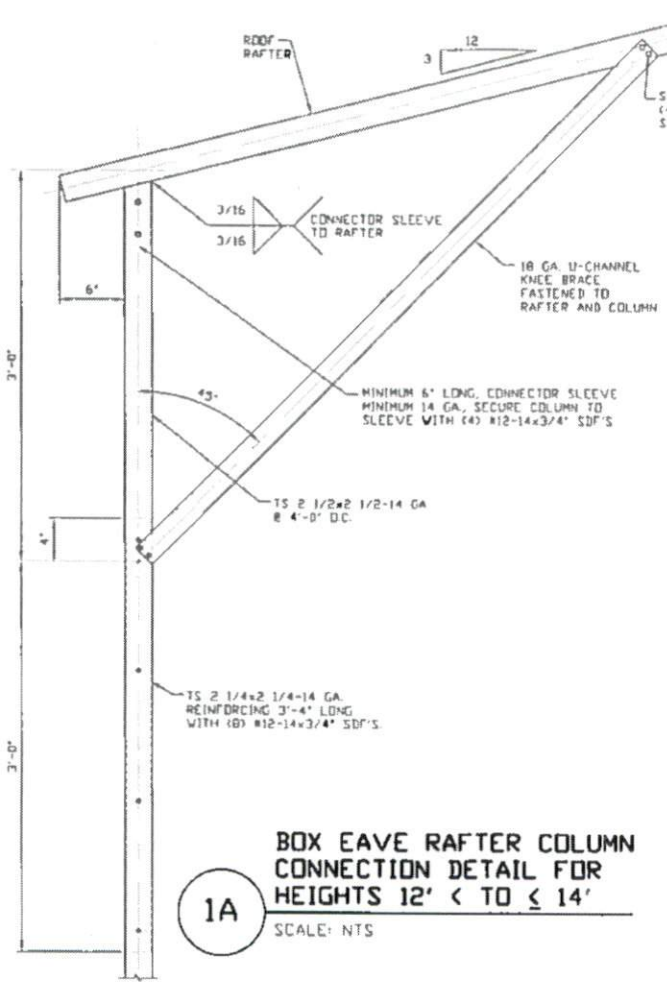
PROJECT MGR: VSM
CLIENT: -

DATE: 11-10-16
SHT. 5A

SCALE: NTS
DWG. NO: SK-3

JOB NO: 151565
161355
REV: 4

EXPOSURE C (140 MPH)



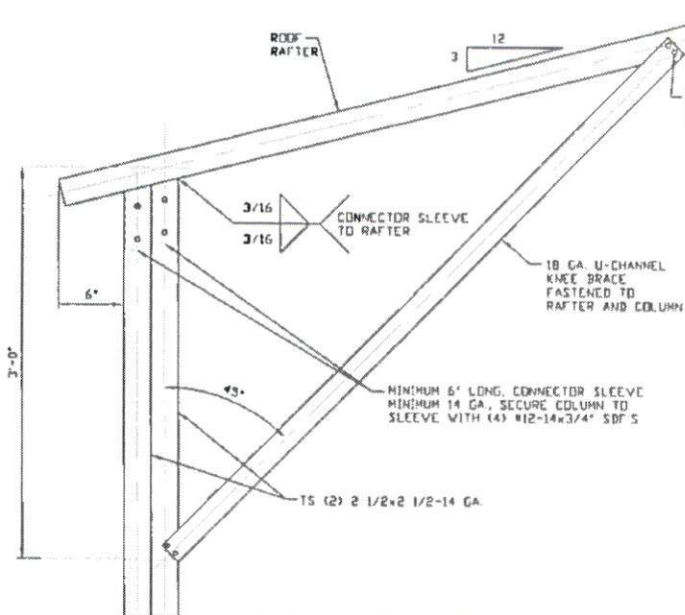
**MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.**

DRAWN BY: JRS
CHECKED BY: PDM
PROJECT MGR: VSM
CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20' ENCLOSED STRUCTURE
DATE: 11-10-16
SHT. 5B
SCALE: NTS
DWG. NO: SK-3
JOB NO: 15156S
16135S
REV: 4

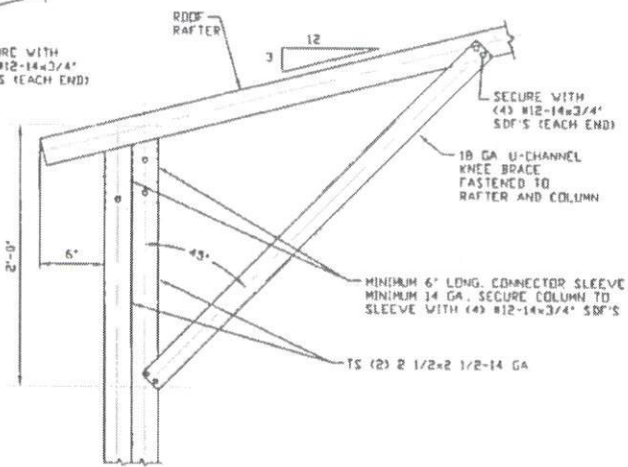
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EXPOSURE C (170 MPH)



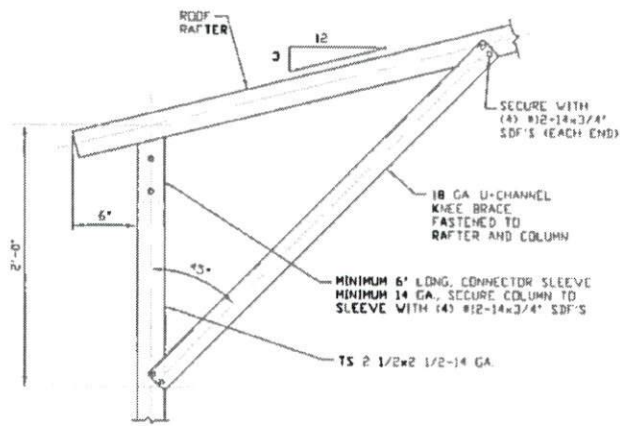
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12' < TO ≤ 14'

1A
SCALE: NTS



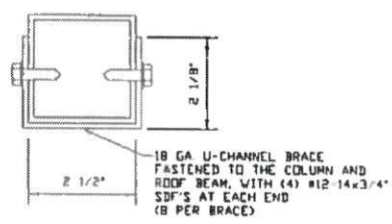
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 8' < TO ≤ 12'

1B
SCALE: NTS



BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS ≤ 8'

1C
SCALE: NTS



BRACE SECTION
SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: -

CAROLINA CARPORTS, INC
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SCALE: NTS

SHT. 5C

JOB NO: 13156S

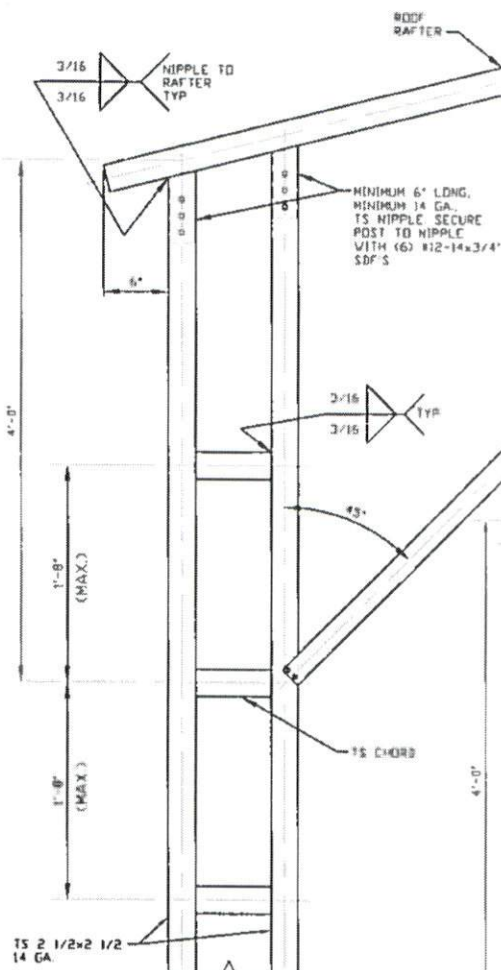
16135S

DWG. NO: SK-3

REV.: 4

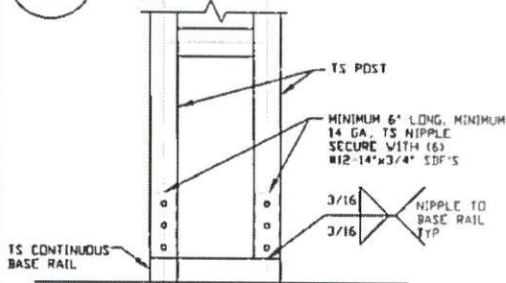
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EXPOSURE B (140 MPH)



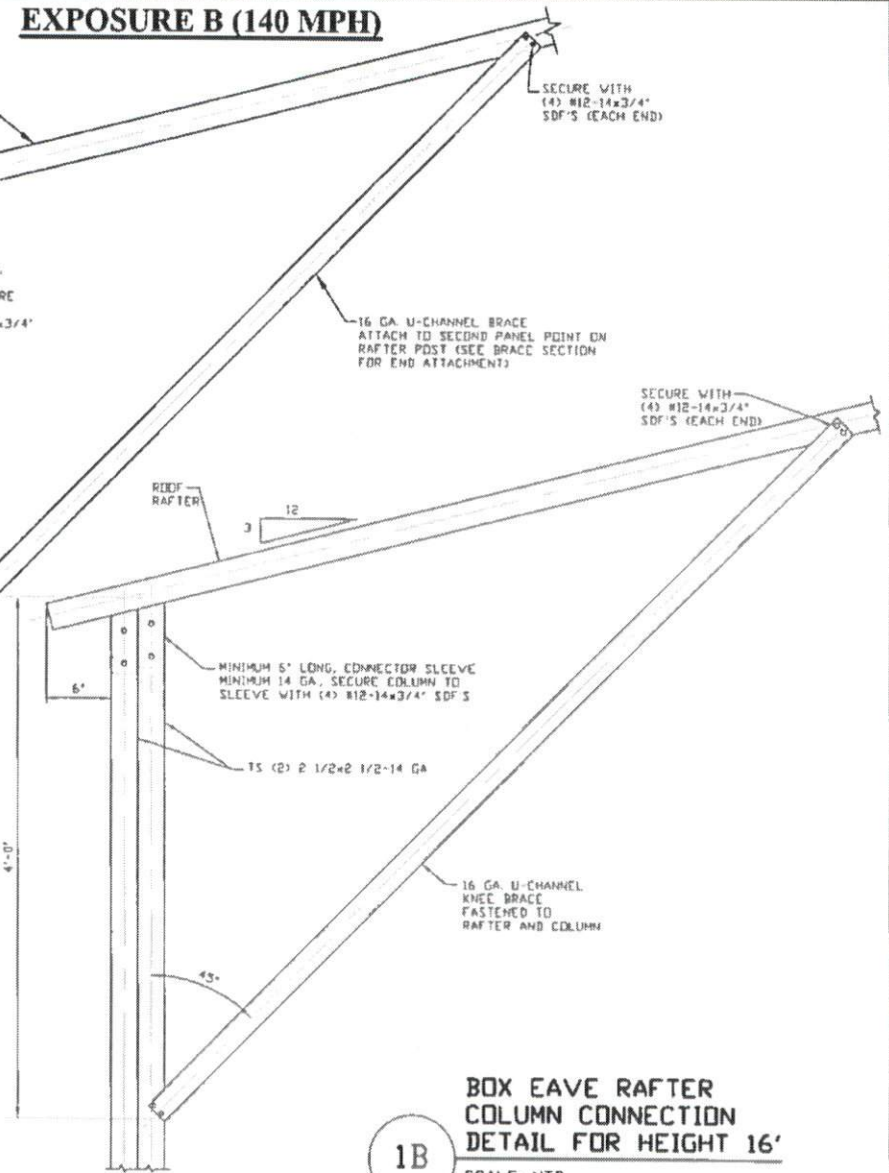
1A BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHT 20'

SCALE: NTS



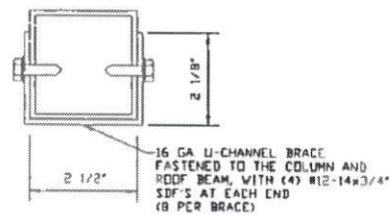
2 POST/BASE RAIL CONNECTION DETAIL

SCALE: NTS



1B BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHT 16'

SCALE: NTS



BRACE SECTION

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: -

CAROLINA CARPORTS, INC
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 5D

SCALE: NTS

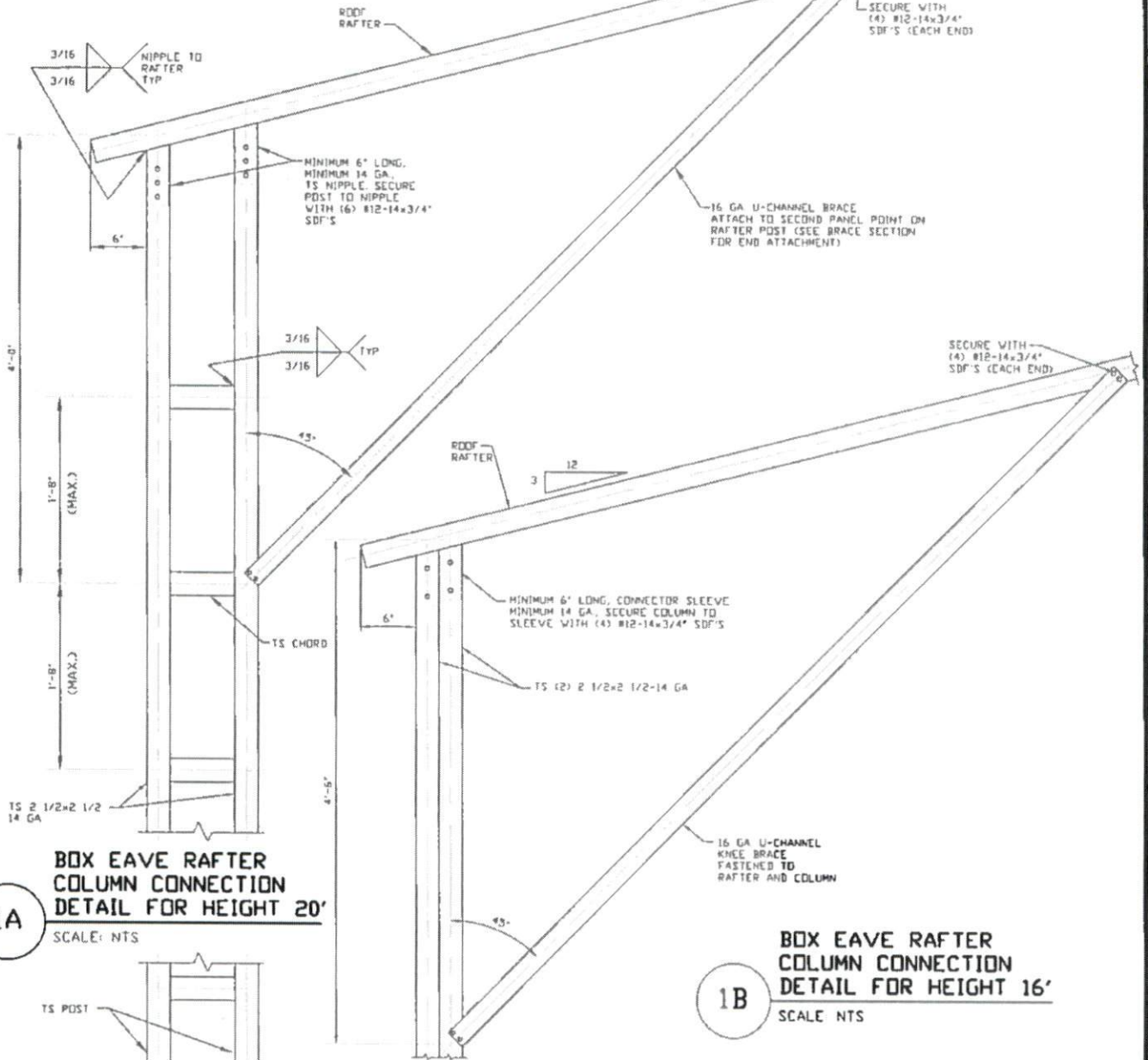
DWG. NO: SK-3

JOB NO: 15156S
16135S

REV: 4

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EXPOSURE B (170 MPH)



1A

**BOX EAVE RAFTER COLUMN CONNECTION
DETAIL FOR HEIGHT 20'**

SCALE: NTS

1B

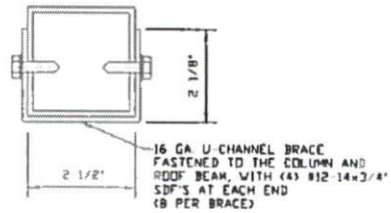
**BOX EAVE RAFTER COLUMN CONNECTION
DETAIL FOR HEIGHT 16'**

SCALE: NTS

2

POST/BASE RAIL CONNECTION DETAIL

SCALE: NTS



BRACE SECTION
SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20' ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 5E

SCALE: NTS

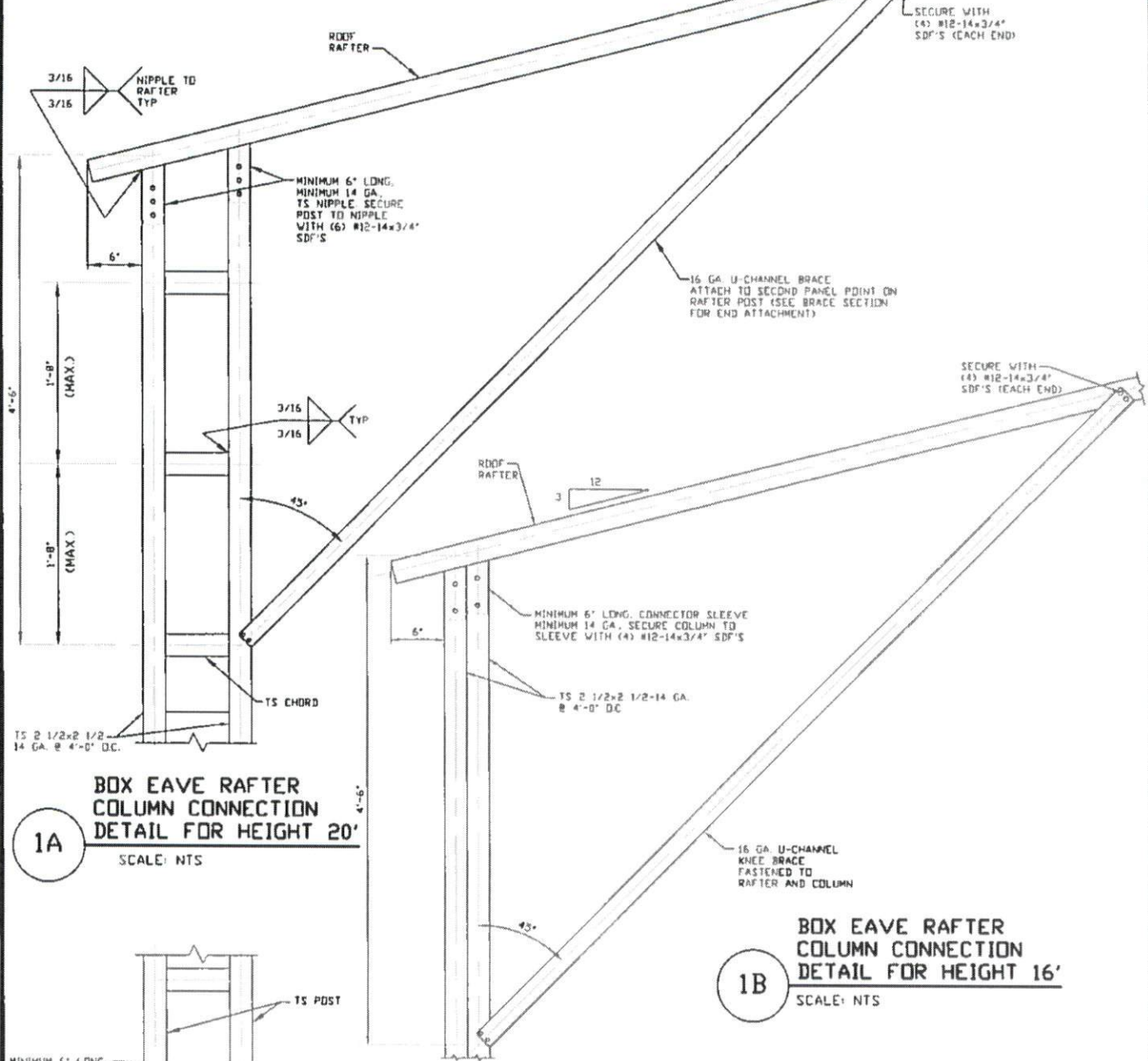
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JOB NO: 15156S

REV: 4

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EXPOSURE C (140 MPH)

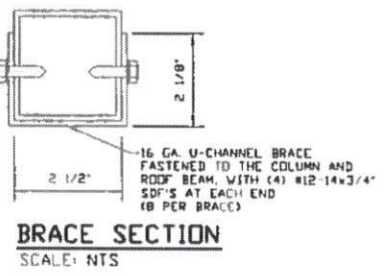


1A

1B

2

2 POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS



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CHECKED BY: PDH
PROJECT MGR: VSM
CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20' ENCLOSED STRUCTURE

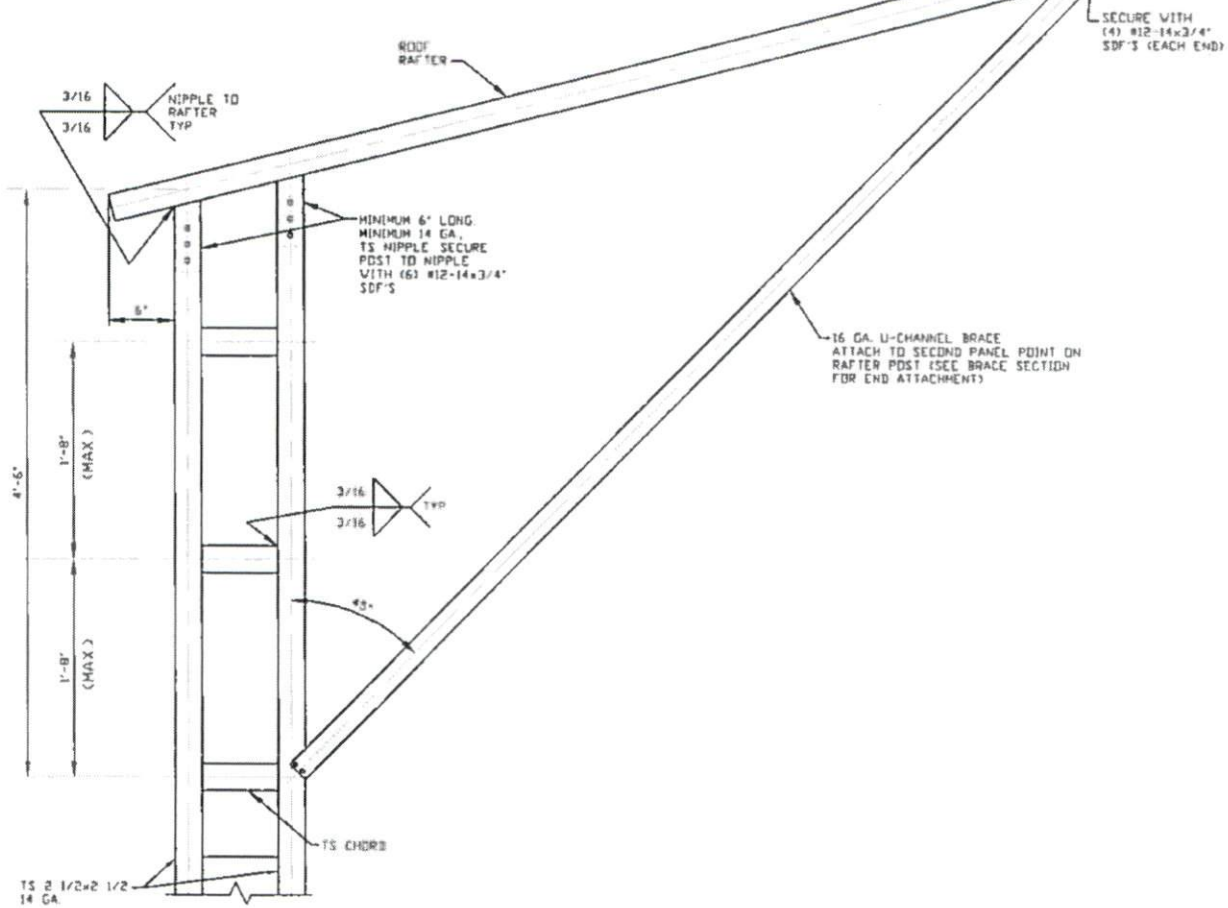
DATE: 11-10-16
SHT. 3F

SCALE: NTS
DWG. NO: SK-3

JOB NO: 15156S
16135S
REV: 4

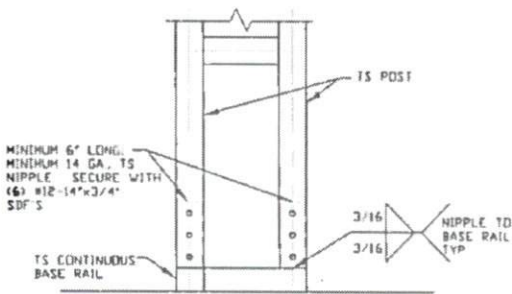
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EXPOSURE C (170 MPH)



BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHT 16' ≤ W ≤ 20'

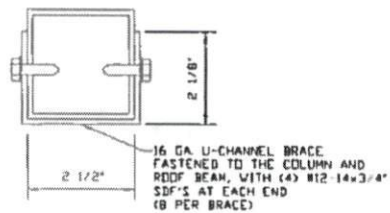
1A SCALE: NTS



2 POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHT 16'

1B SCALE: NTS



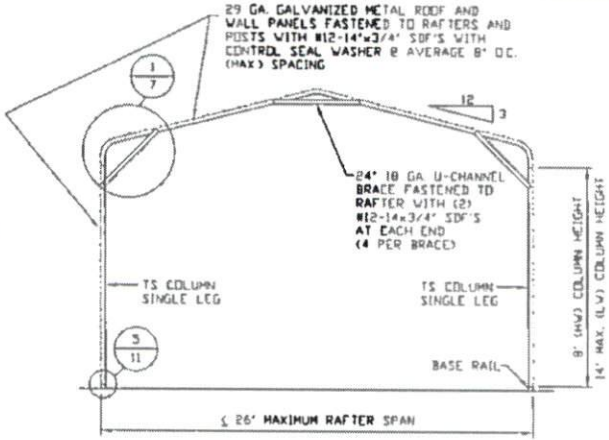
BRACE SECTION
SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS		CAROLINA CARPORTS, INC 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017	
CHECKED BY: PDM		30'x20' ENCLOSED STRUCTURE	
PROJECT MGR: WSM	DATE: 11-10-16	SCALE: NTS	JOB NO: 15156S 16135S
CLIENT: -	SHT. 5G	DWG. NO: SK-3	REV: 4

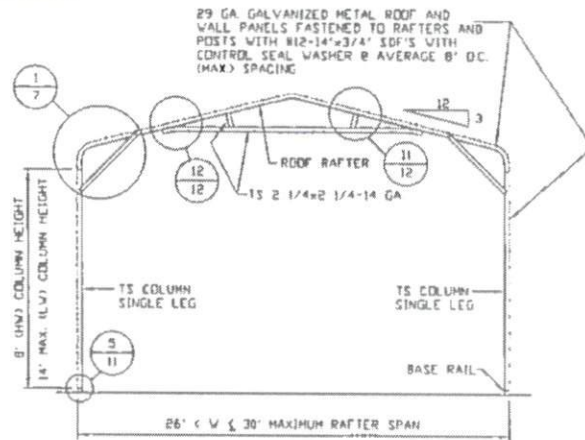
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EXPOSURE B



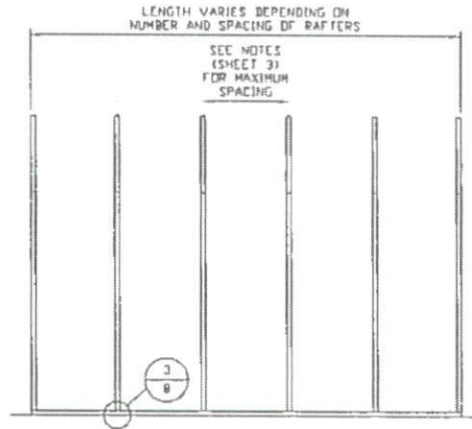
TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS



TYPICAL RAFTER/COLUMN FRAMING SIDE SECTION

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSH

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 6

SCALE: NTS

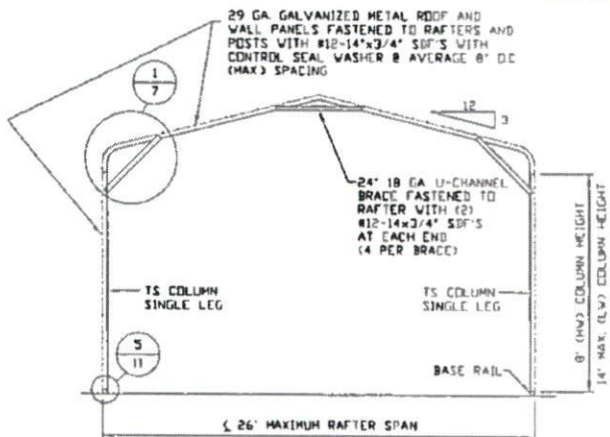
DWG. NO: SK-3

JOB NO: 15156S
161355

REV: 4

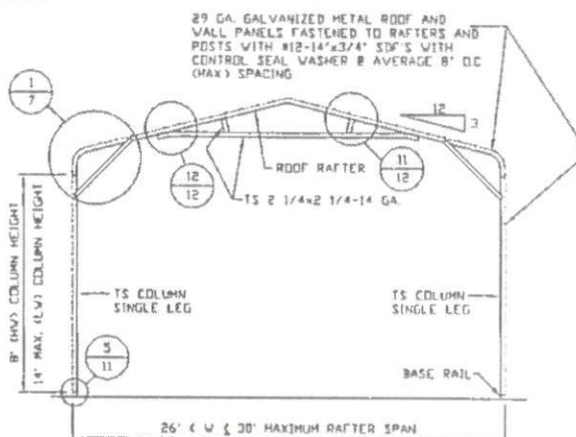
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EXPOSURE C



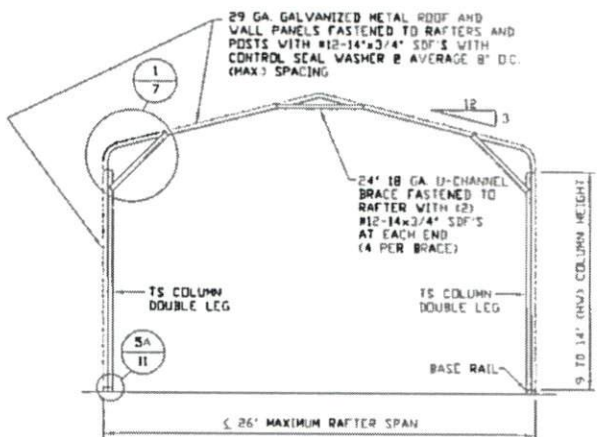
TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS



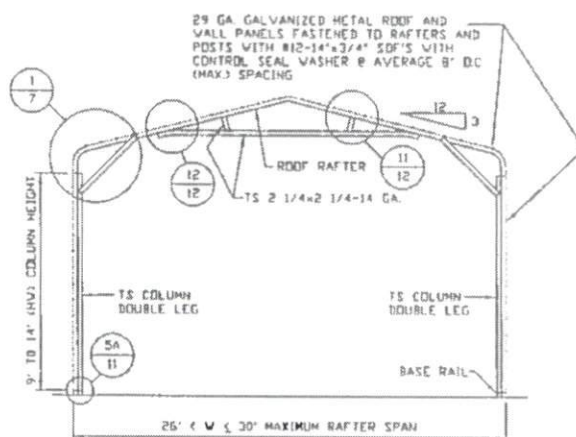
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SCALE: NTS



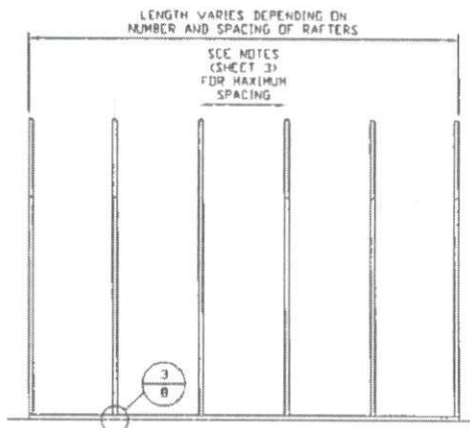
TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS



TYPICAL RAFTER/COLUMN FRAMING SIDE SECTION

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20' ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 6A

SCALE: NTS

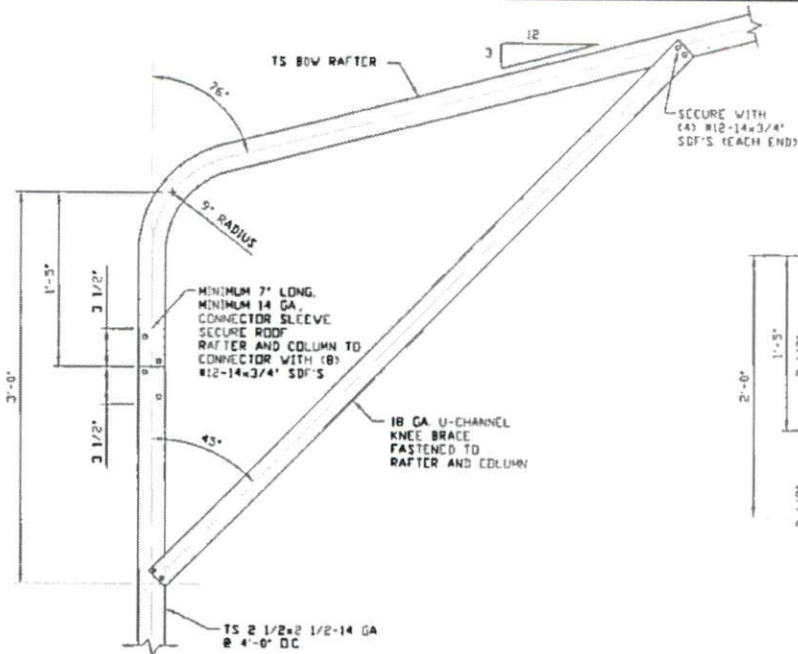
DWG. NO: SK-3

JOB NO: 15156S
16135S

REV: 4

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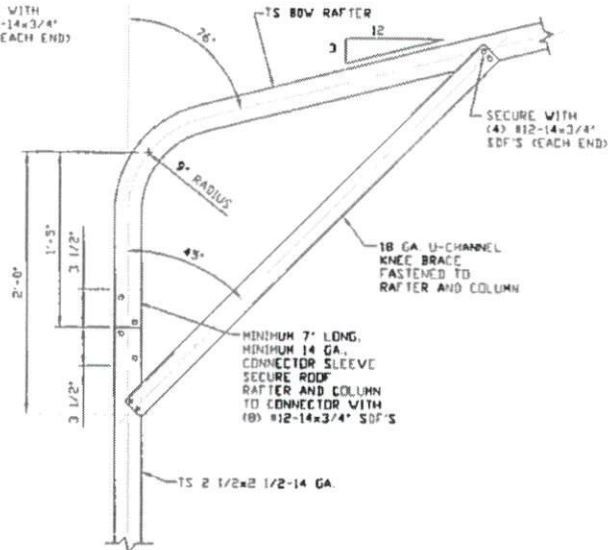
EXPOSURE B (140 MPH)



1A

**BOX EAVE RAFTER COLUMN
CONNECTION DETAIL FOR
HEIGHTS 12' < TO <= 14'**

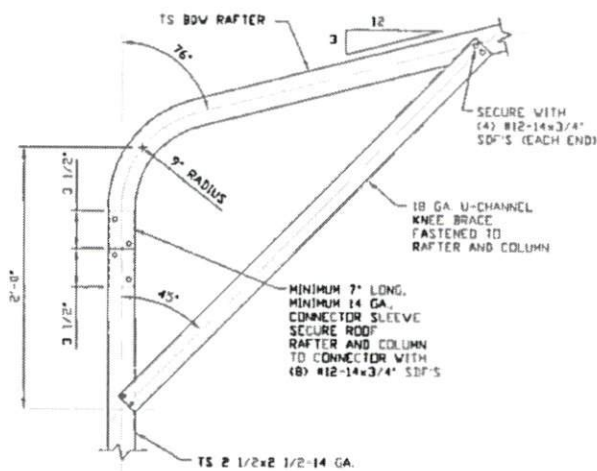
SCALE: NTS



1B

**BOX EAVE RAFTER COLUMN
CONNECTION DETAIL FOR
HEIGHTS 8' < TO <= 12'**

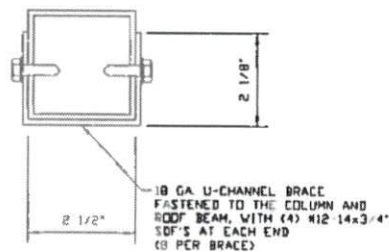
SCALE: NTS



1C

**BOX EAVE RAFTER COLUMN
CONNECTION DETAIL FOR
HEIGHTS <= 8'**

SCALE: NTS



BRACE SECTION

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PMH

PROJECT MGR: WSM

CLIENT: -

CAROLINA CARPORTS, INC
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 7

SCALE: NTS

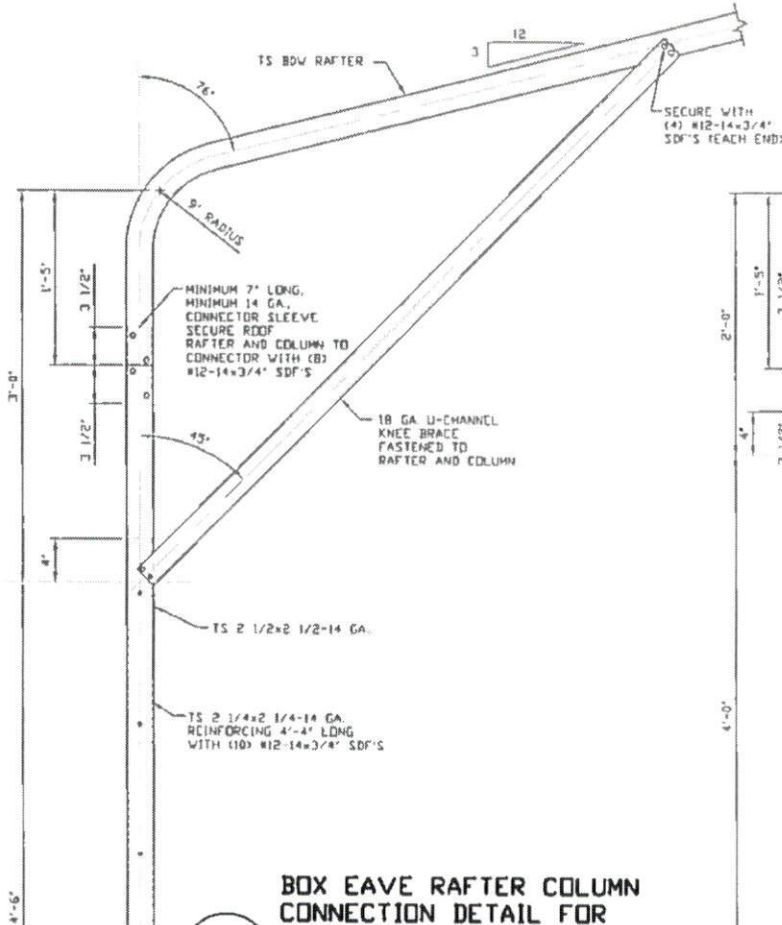
DWG. NO: SK-3

JOB NO: 151565
161355

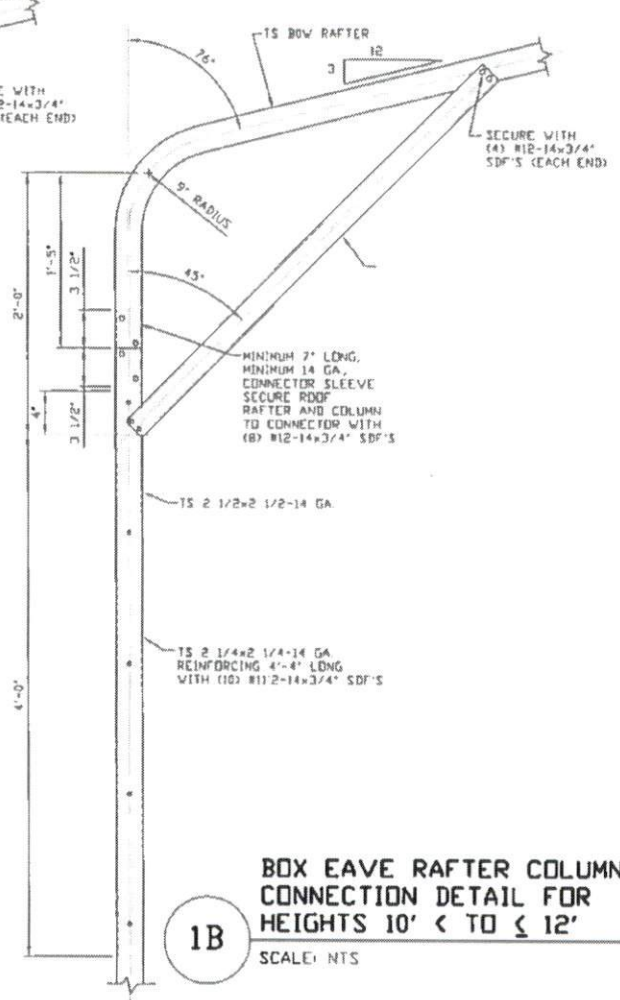
REV.: 4

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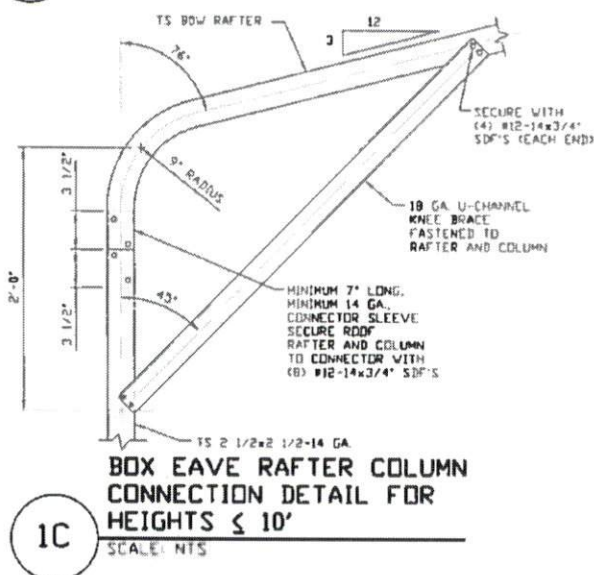
EXPOSURE B (170 MPH)



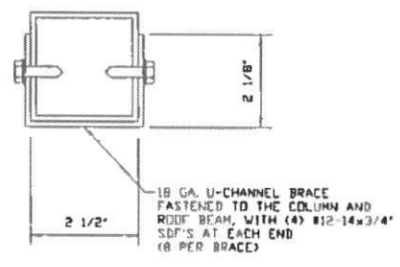
1A
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12' < TO <= 14'
 SCALE: NTS



1B
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10' < TO <= 12'
 SCALE: NTS



1C
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS <= 10'
 SCALE: NTS



BRACE SECTION
 SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS
 CHECKED BY: PDH

CAROLINA CARPORTS, INC.
 187 CARDINAL RIDGE TRAIL
 DOBSON, NC 27017
 30'x20" ENCLOSED STRUCTURE

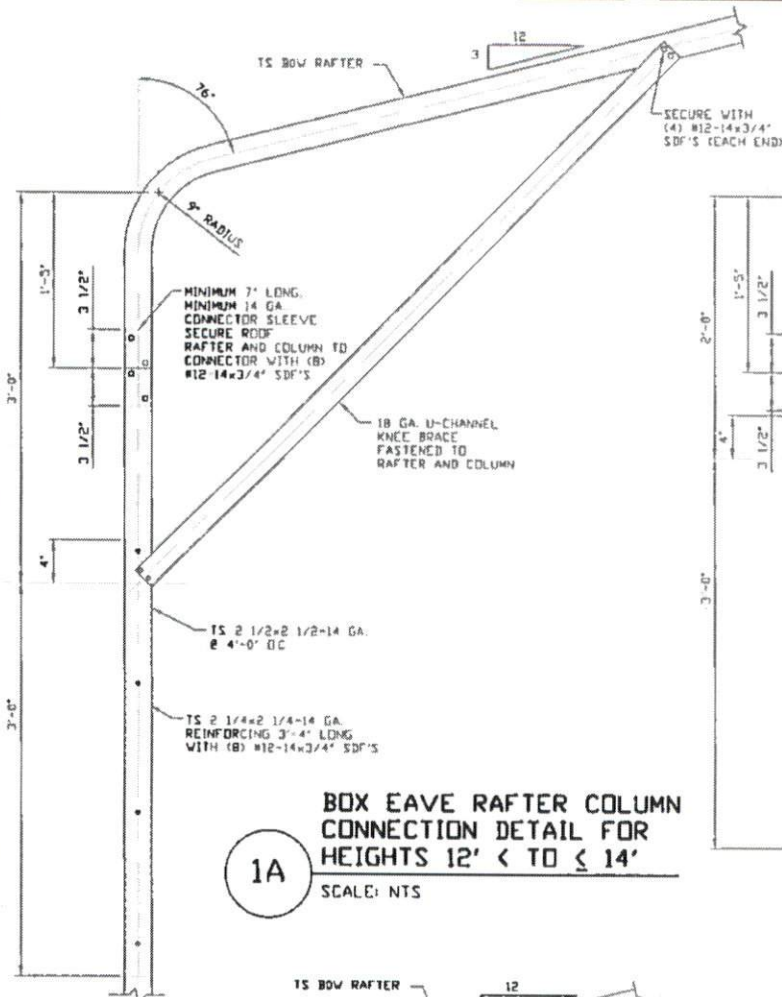
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PROJECT MGR: WSM
 CLIENT: -

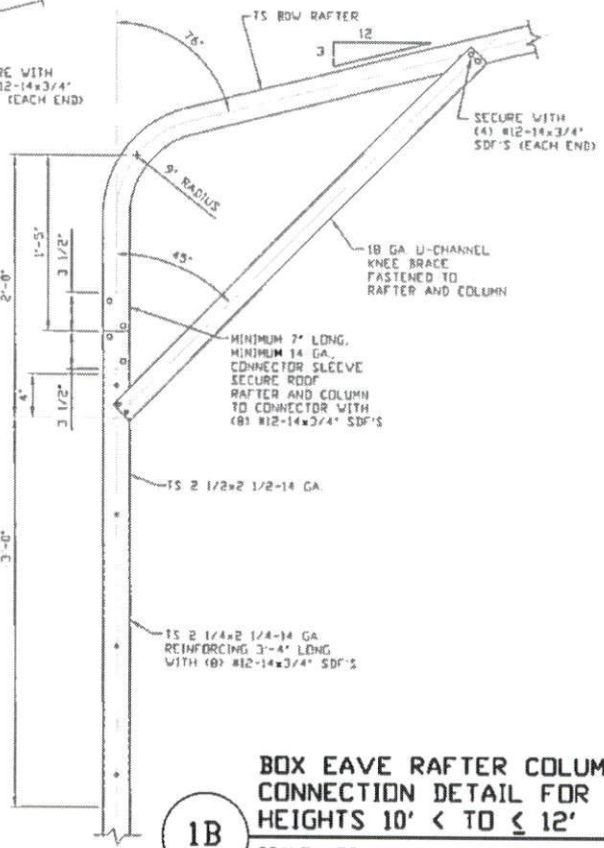
DATE: 11-10-16
 SHT. 7A

SCALE: NTS
 DWG. NO: SK-3
 JOB NO: 151565
 161355
 REV: 4

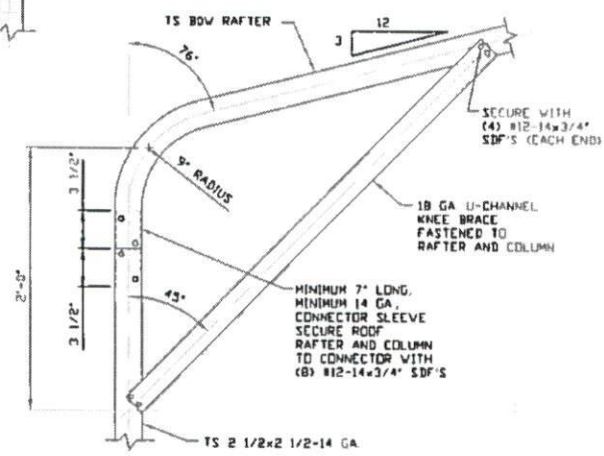
EXPOSURE C (140 MPH)



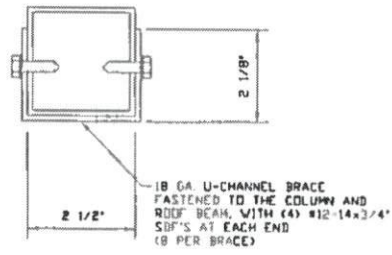
1A
 BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12' < TO <= 14'
 SCALE: NTS



1B
 BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10' < TO <= 12'
 SCALE: NTS



1C
 BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS <= 10'
 SCALE: NTS



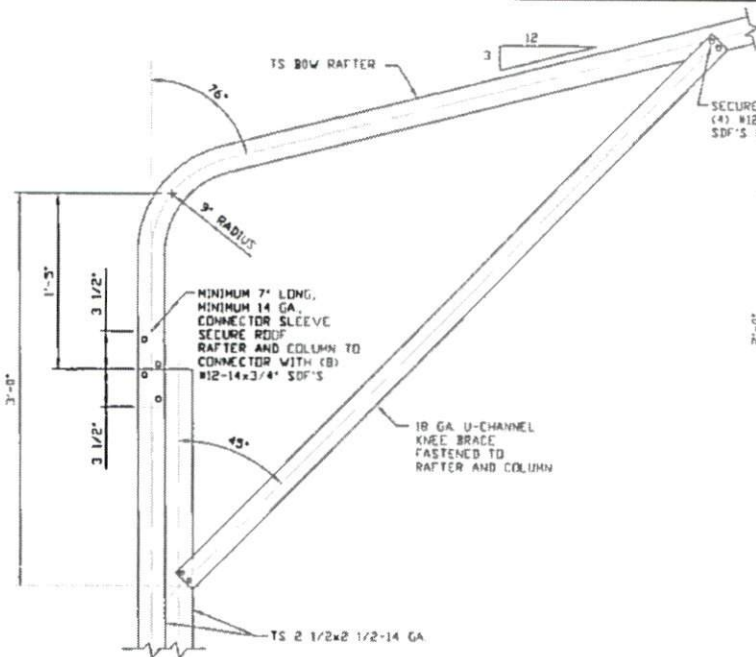
BRACE SECTION
 SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS	CAROLINA CARPORTS, INC 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE		
CHECKED BY: PDH	PROJECT MGR: WSM	DATE: 11-10-16	SCALE: NTS
CLIENT: -	SHT. 7B	DWG. NO: SK-3	JOB NO: 15156S 16135S
			REV: 4

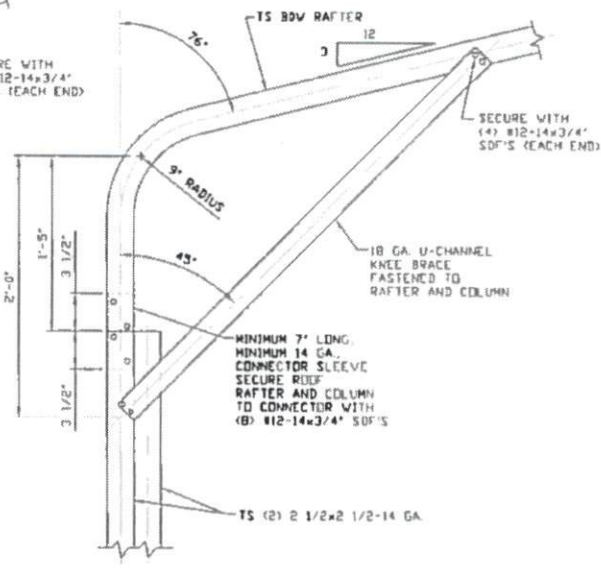
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EXPOSURE C (170 MPH)



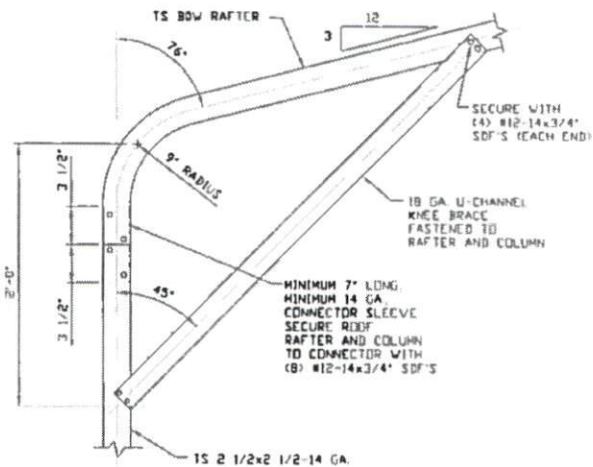
1A BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12' < TO ≤ 14'

SCALE: NTS



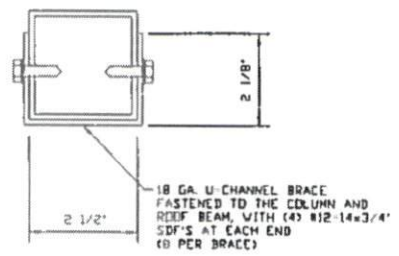
1B BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 8' < TO ≤ 12'

SCALE: NTS



1C BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS ≤ 8'

SCALE: NTS



BRACE SECTION

SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20' ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 7C

SCALE: NTS

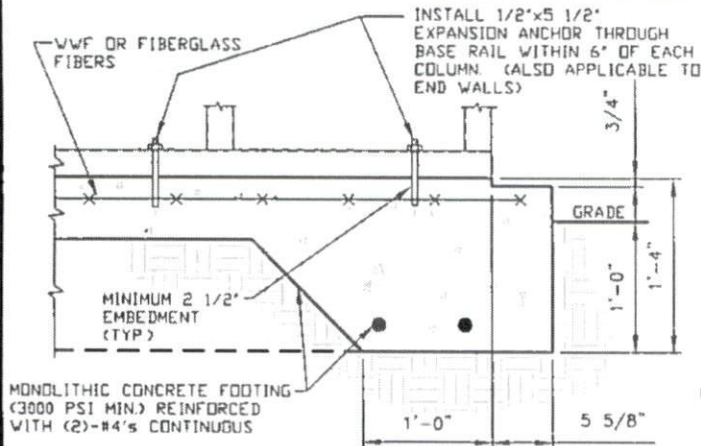
DWG. NO: SK-3

JOB NO: 151565
161355

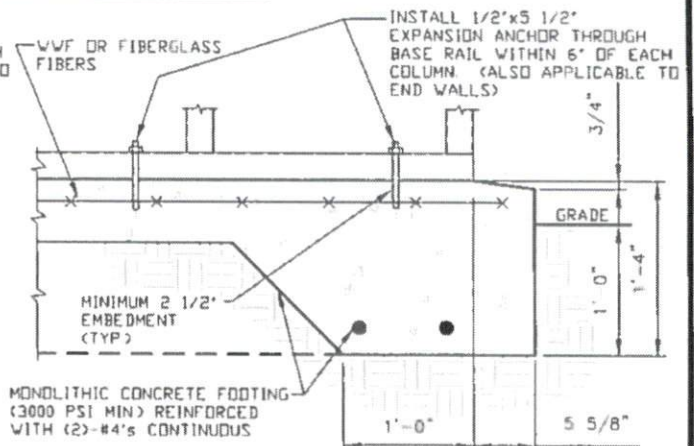
REV: 4

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BASE RAIL ANCHORAGE OPTIONS



**3A CONCRETE MONOLITHIC SLAB
BASE RAIL ANCHORAGE**
SCALE: NTS
MINIMUM ANCHOR EDGE DISTANCE IS 6 3/4"



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

GENERAL NOTES

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:

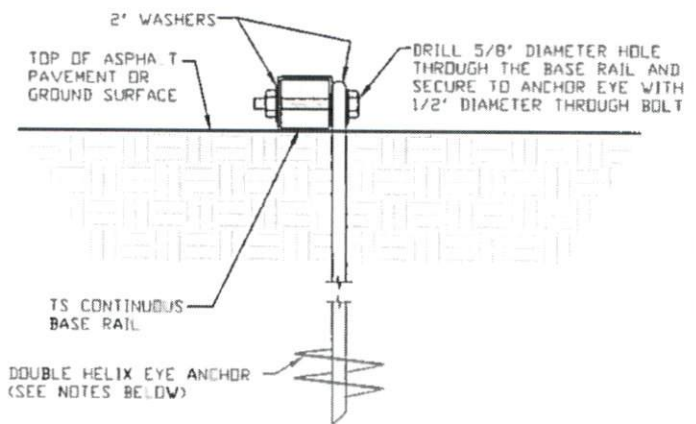
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

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, PRELDADED 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



3C GROUND BASE HELIX ANCHORAGE
SCALE: NTS (CAN BE USED FOR ASPHALT)

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 8

SCALE: NTS

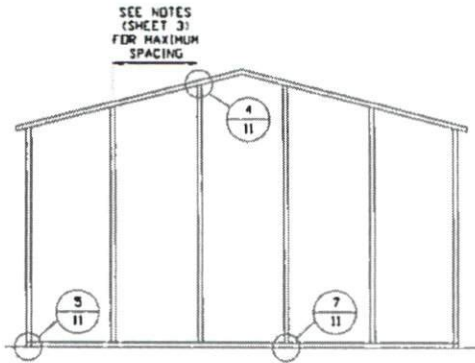
DWG. NO: SK-3

JOB NO: 151565
161235

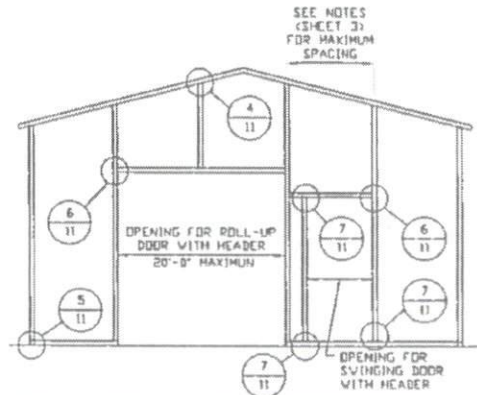
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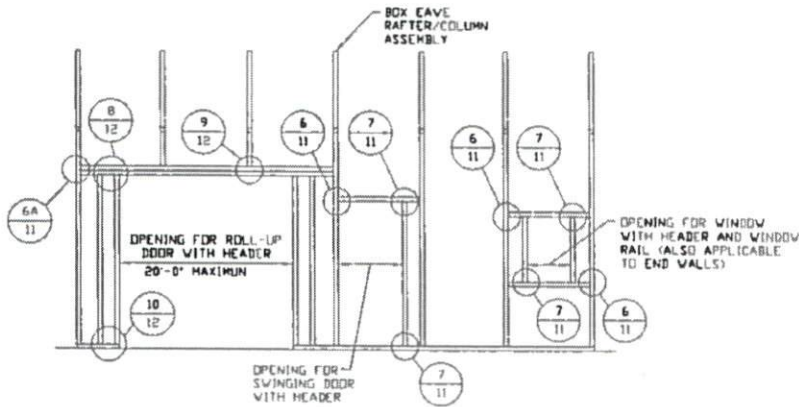
BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



**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

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ENGINEERING AND CONSULTING, INC.**

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CHECKED BY: PDH

PROJECT MGR: WSH

CLIENT: -

CAROLINA CARPORTS, INC
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 9

SCALE: NTS

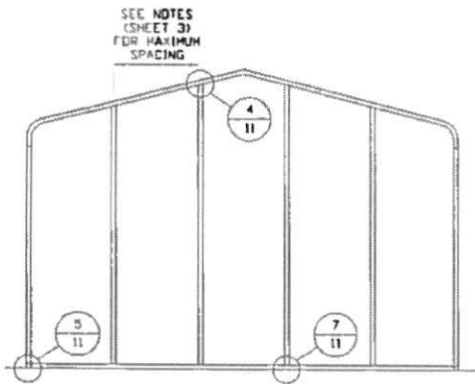
DWG. NO: SK-3

JOB NO: 15156S
16135S

REV: 4

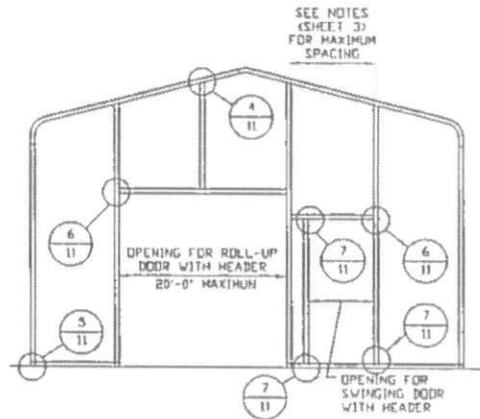
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BOW RAFTER END WALL AND SIDE WALL OPENINGS



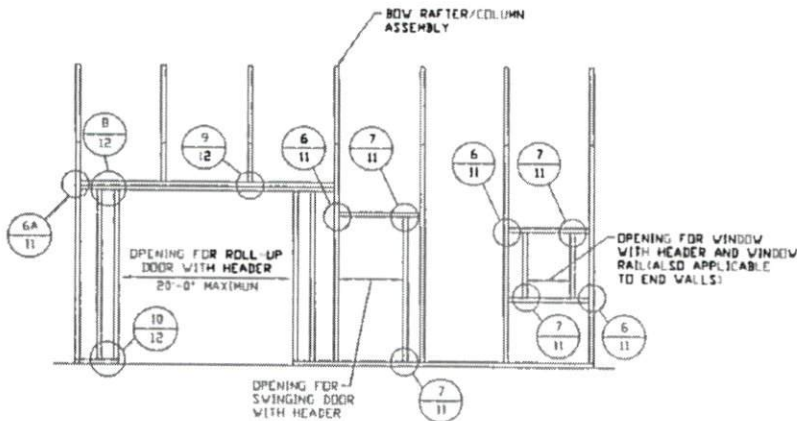
**TYPICAL BOW RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 10

SCALE: NTS

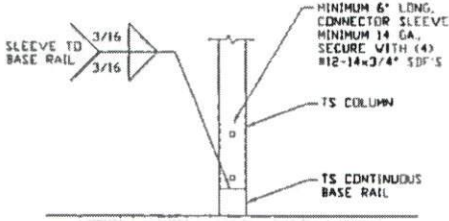
DWG. NO: SK-3

JOB NO: 15156S
16135S

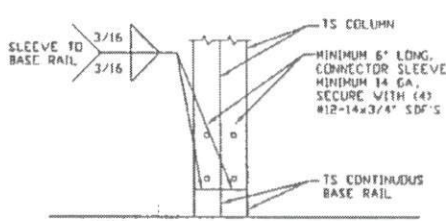
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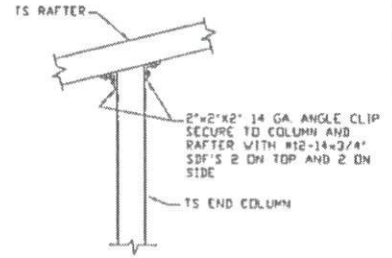
BOW AND BOX EAVE RAFTER WALL OPENING DETAILS



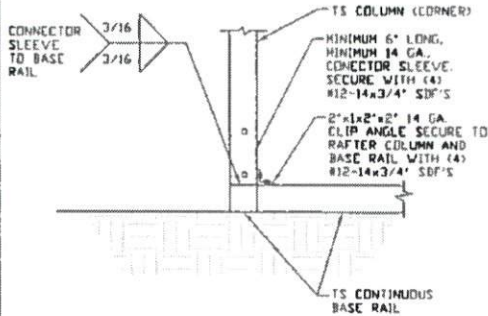
2 RAFTER COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



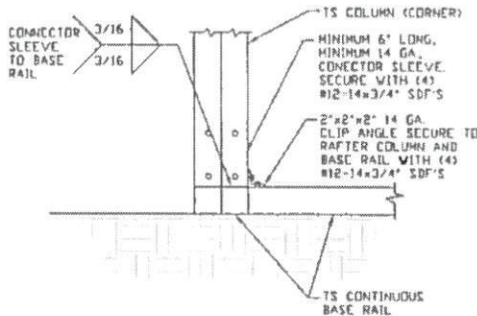
2A RAFTER COLUMN/BASE RAIL CONNECTION DETAIL



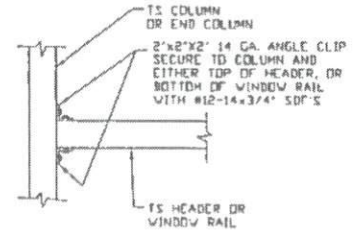
4 END COLUMN/RAFTER CONNECTION DETAIL
SCALE: NTS



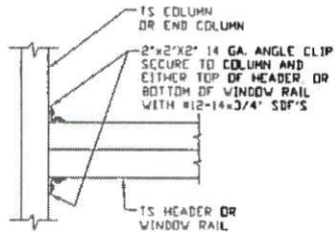
5 END COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



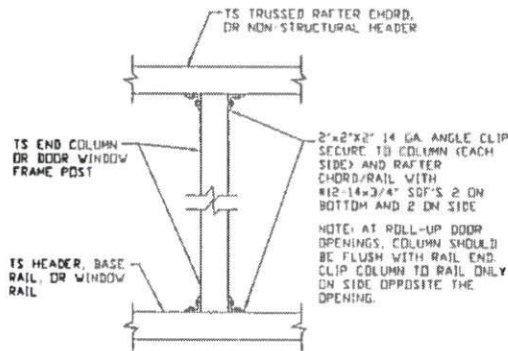
5A END COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



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

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ENGINEERING AND CONSULTING, INC.**

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSH

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20' ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 11

SCALE: NTS

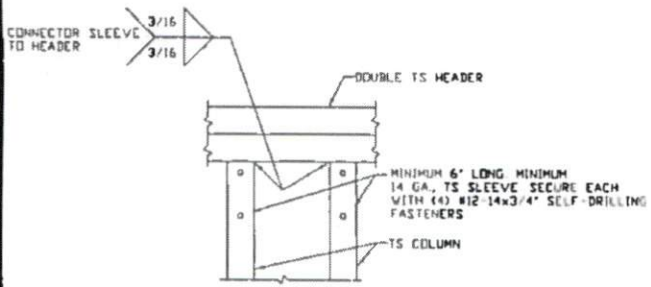
DWG. NO: SK-3

JOB NO: 15136S
16135S

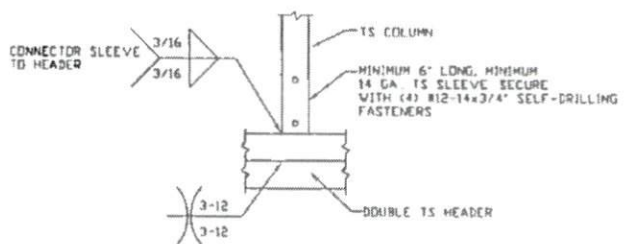
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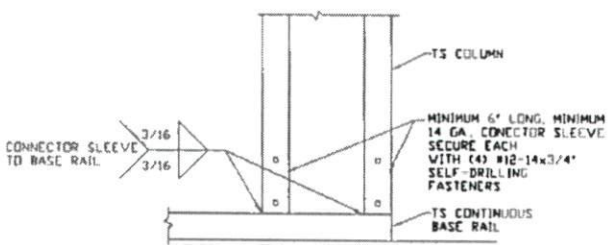
BOW AND BOX EAVE RAFTER WALL OPENING DETAILS



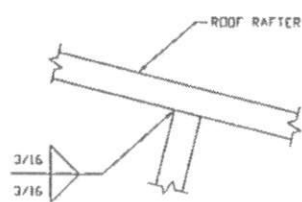
8 DOUBLE HEADER/COLUMN CONNECTION DETAIL
SCALE: NTS



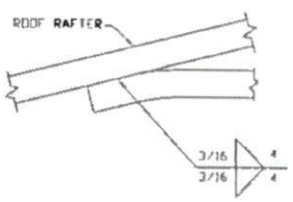
9 COLUMN/DOUBLE HEADER CONNECTION DETAIL
SCALE: NTS



10 COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



11 RAFTER TO CHORD CONNECTION DETAIL
SCALE: NTS



12 COLLAR TIE CONNECTION DETAIL
SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 12

SCALE: NTS

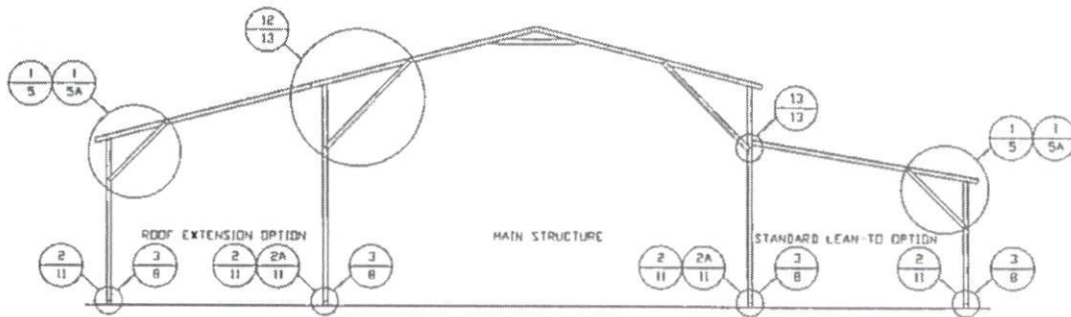
DWG. NO: SK-3

JOB NO: 151565
161355

REV: 4

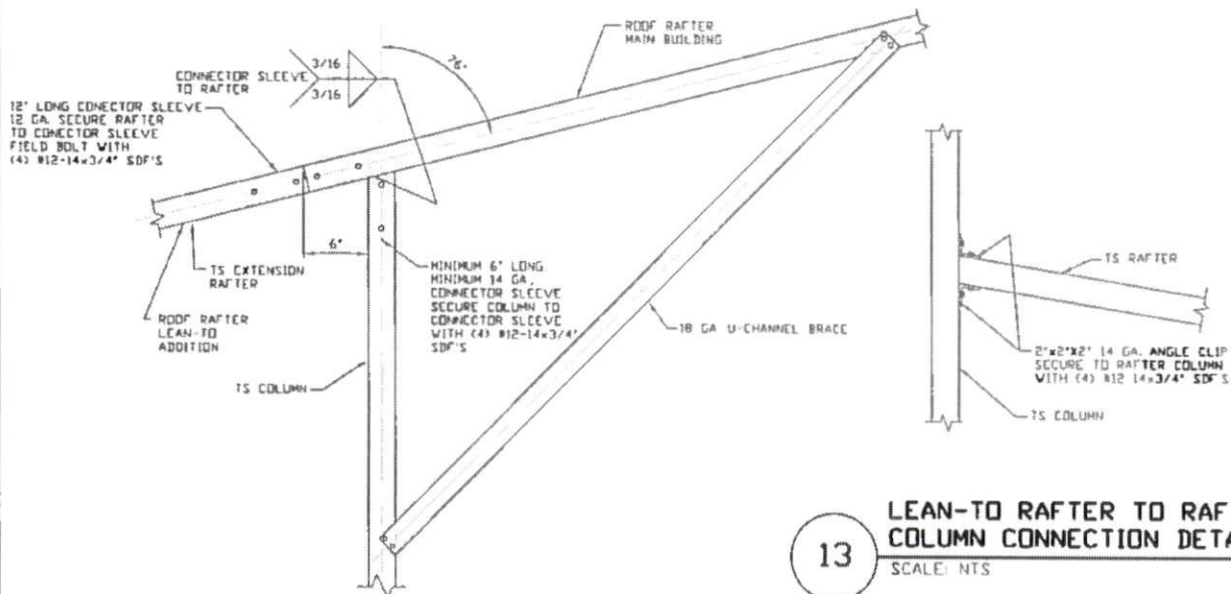
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BOX EAVE RAFTER LEAN-TO OPTIONS



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

SCALE: NTS



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL

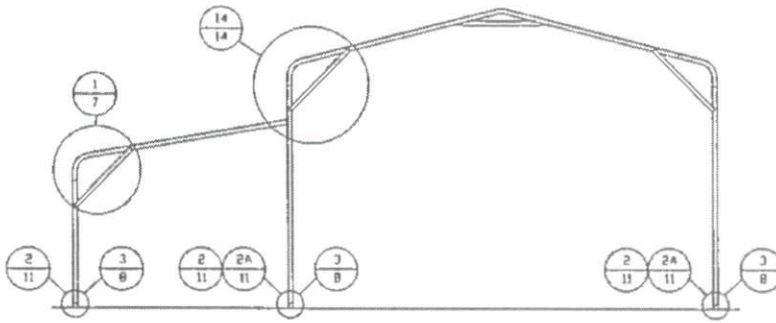
SCALE: NTS

12 SIDE EXTENSION RAFTER/COLUMN DETAIL

SCALE: NTS

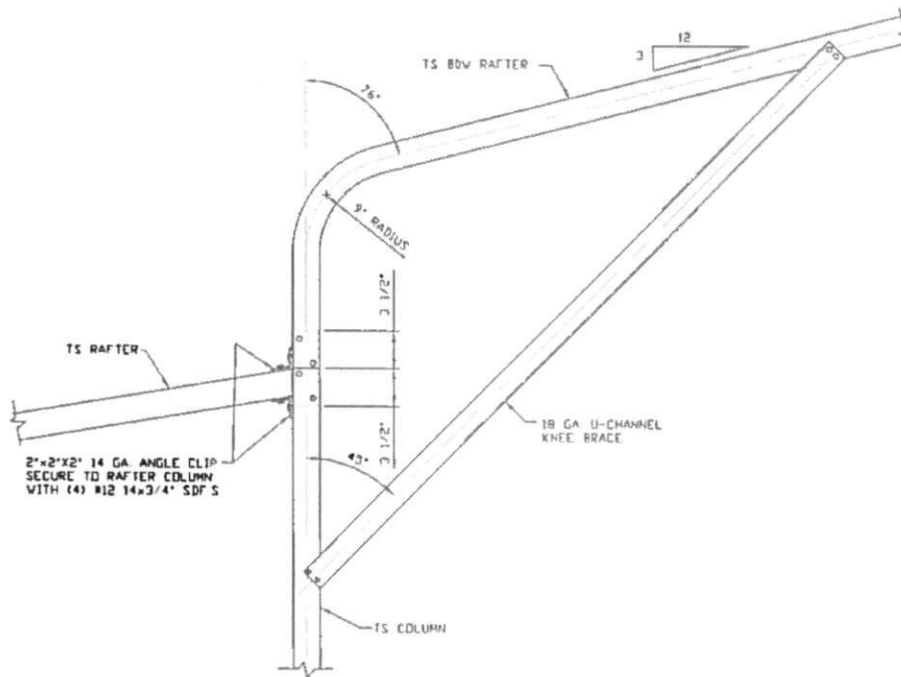
MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JRS	CAROLINA CARPORTS, INC. 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE		
	CHECKED BY: PDH			
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	CLIENT: -	SHT. 13	DWG. NO: SK-3	REV: 4

BOW RAFTER LEAN-TO OPTION



TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION

SCALE: NTS



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL

14

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: -

**CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE**

DATE: 11-10-16

SHT. 14

SCALE: NTS

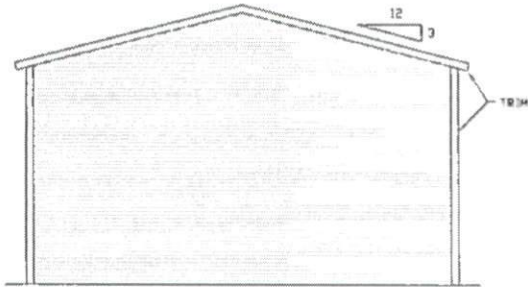
DWG. NO: SK-3

**JOB NO: 15156S
16135S**

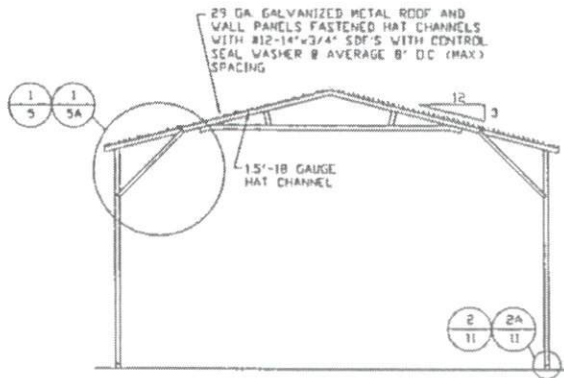
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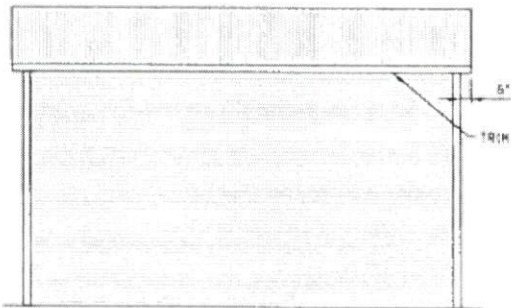
BOX EAVE RAFTER VERTICAL ROOF OPTION



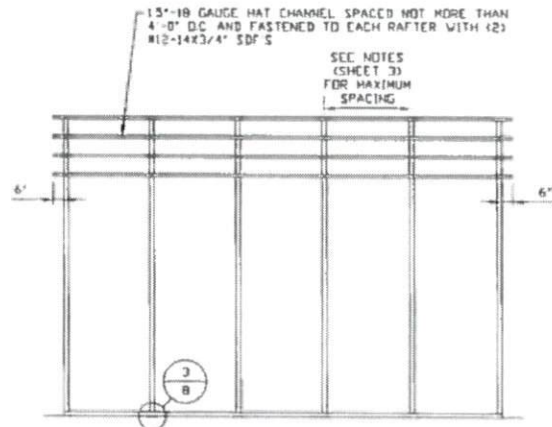
**TYPICAL END ELEVATION
VERTICAL ROOF**
SCALE: NTS



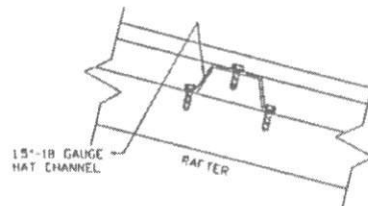
**TYPICAL SECTION
VERTICAL ROOF OPTION**
SCALE: NTS



**TYPICAL SIDE ELEVATION
VERTICAL ROOF**
SCALE: NTS



**TYPICAL FRAMING SECTION
VERTICAL ROOF OPTION**
SCALE: NTS



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

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

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PROJECT MGR: WSM

CLIENT: -

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187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20' ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 15

SCALE: NTS

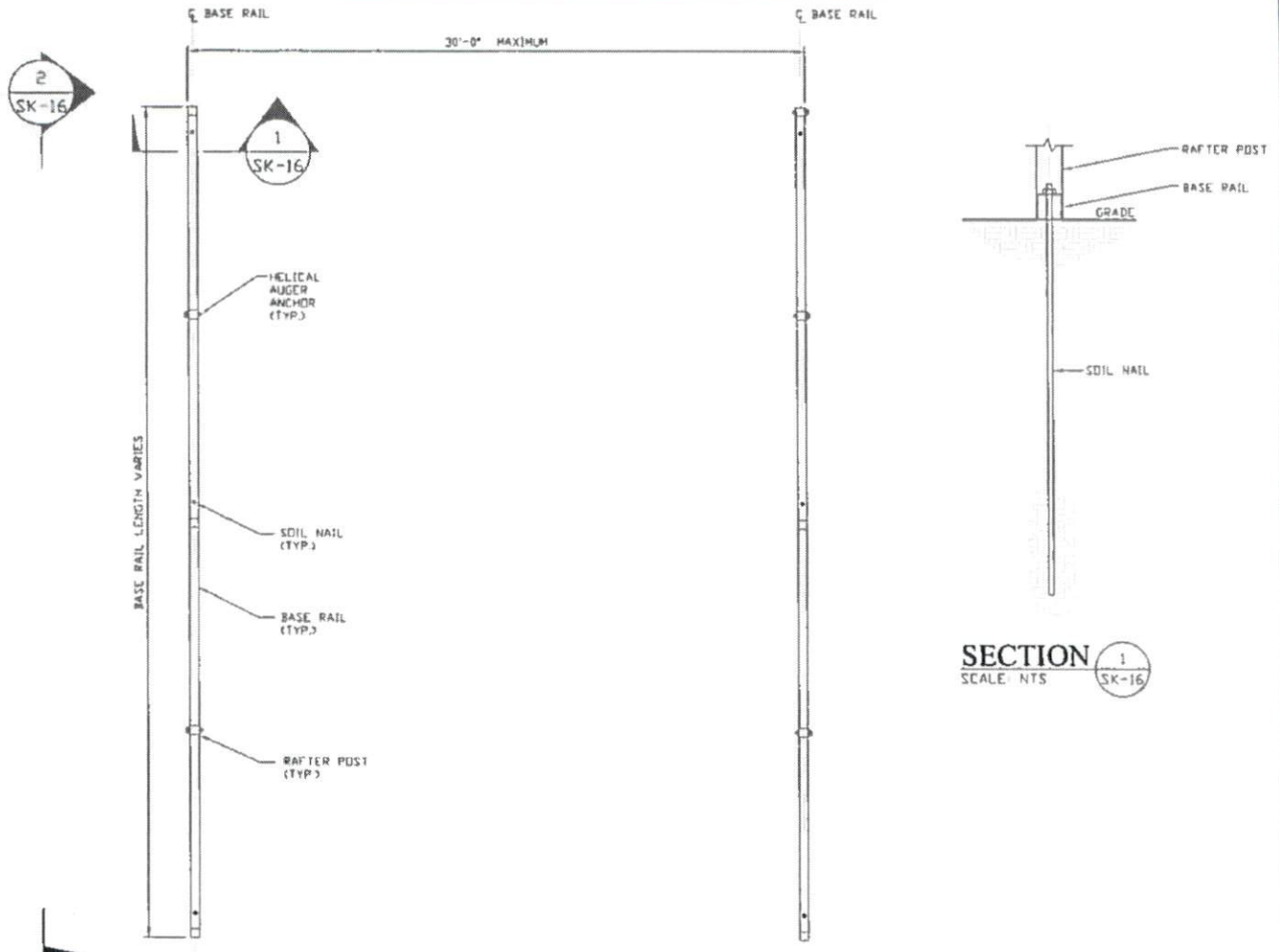
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JOB NO: 15136S
16135S

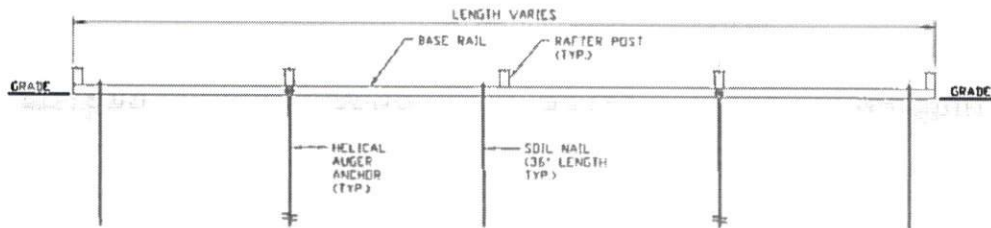
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BASE RAIL ON GRADE APPLICATION



BASE RAIL PLAN
SCALE: NTS



HELIX ANCHOR	
SIDE LENGTH	SPACING
20'	20'
25'	25' NOTE 2
30'	10' (EVERY OTHER POST)

SECTION 2
SCALE: NTS

- NOTES:
- 1 INSTALLATION OF SOIL NAILS OR EXPANSION ANCHORS ALSO APPLY TO END WALLS
 - 2 FOR EXPOSURE C USE 10' SPACING (EVERY OTHER POST)

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

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CHECKED BY: PDH

PROJECT MGR: WSH

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 16

SCALE: NTS

DWG. NO: SK-3

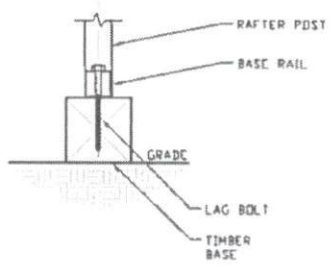
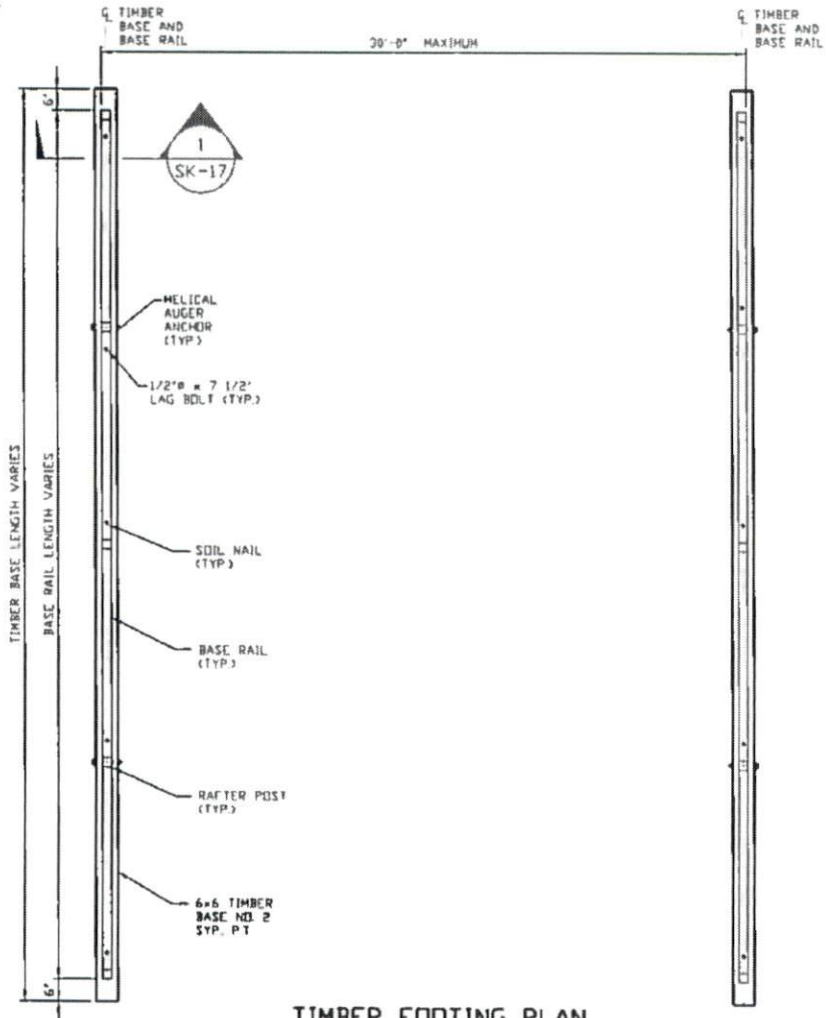
JOB NO: 151565
161355

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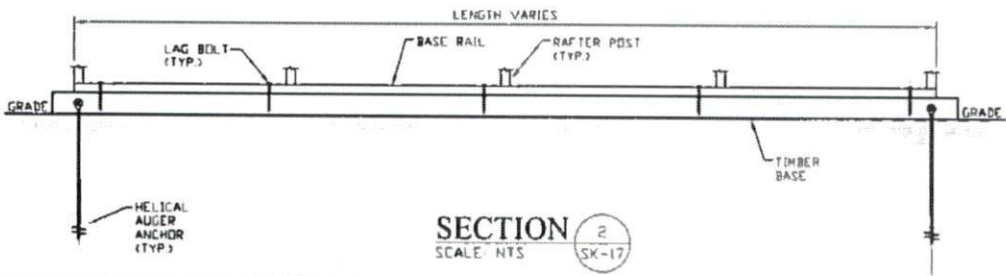
OPTIONAL BASE RAIL ON TIMBER BEAM

2
SK-17



SECTION 1
SCALE: NTS
SK-17

TIMBER FOOTING PLAN
SCALE: NTS



SECTION 2
SCALE: NTS
SK-17

HELIX ANCHOR	
SIDE LENGTH	SPACING
20'	20'
25'	25' NOTE 2
30'	10' (EVERY OTHER POST)

- NOTES
- 1 INSTALLATION OF SOIL NAILS OR EXPANSION ANCHORS ALSO APPLY TO END WALLS
 - 2 FOR EXPOSURE C USE 10' SPACING (EVERY OTHER POST)

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: -

CAROLINA CARPORTS, INC
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 17

SCALE: NTS

DWG. NO: SK-3

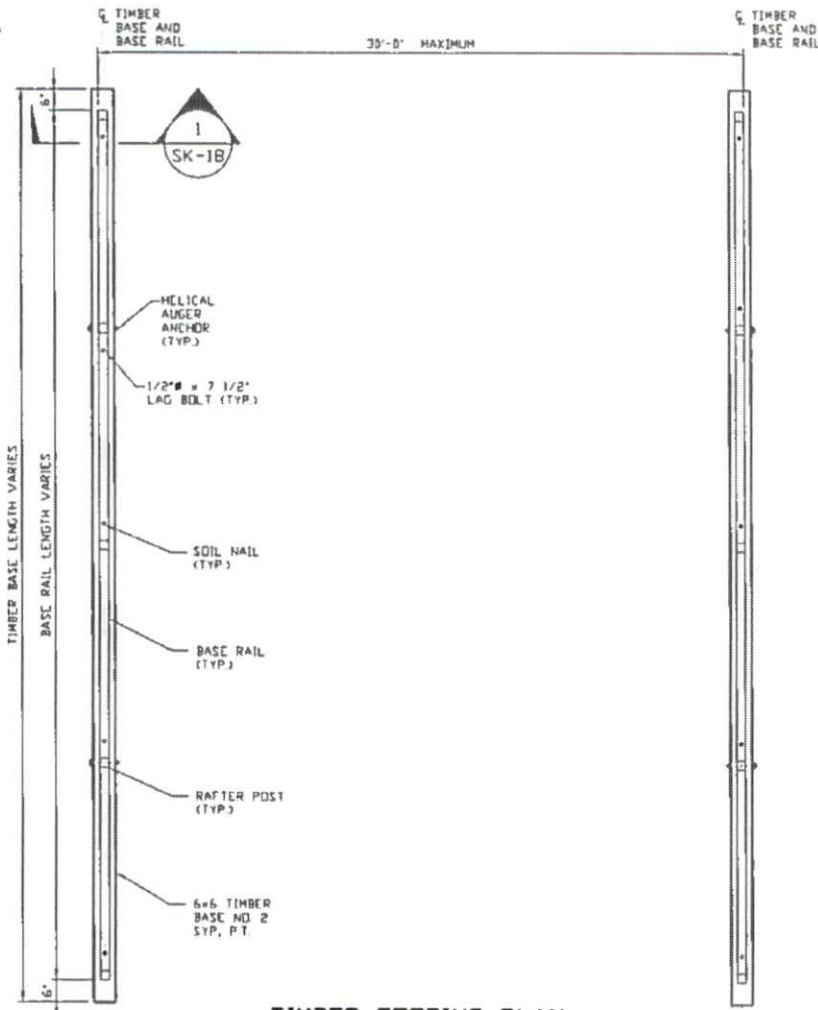
JOB NO: 15156S
16135S

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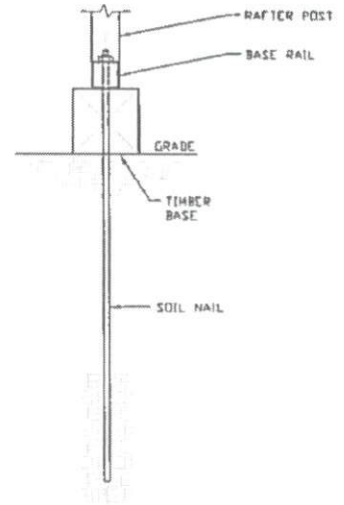
OPTIONAL BASE RAIL ON TIMBER BEAM WITH SOIL NAIL

2
SK-1B

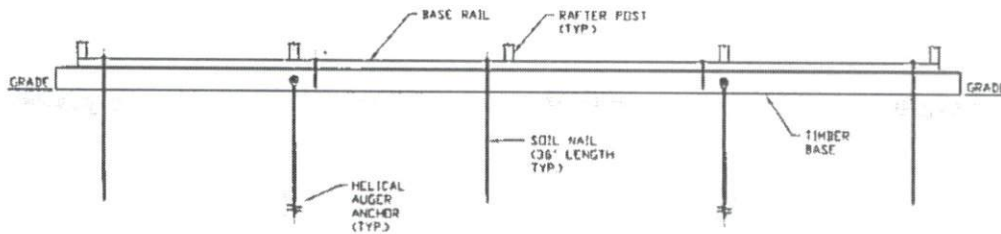


TIMBER FOOTING PLAN

SCALE: NTS



SECTION 1
SCALE: NTS



SECTION 2
SCALE: NTS

HELIX ANCHOR	
SIDE LENGTH	SPACING
20'	20'
25'	25' NOTE 2
30'	10' (EVERY OTHER POST)

1. INSTALLATION OF SOIL NAILS OR EXPANSION ANCHORS ALSO APPLY TO END WALLS
2. FOR EXPOSURE C USE 10' SPACING (EVERY OTHER POST)

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSH

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
DOBSON, NC 27017
30'x20" ENCLOSED STRUCTURE

DATE: 11-10-16

SHT. 1B

SCALE: NTS

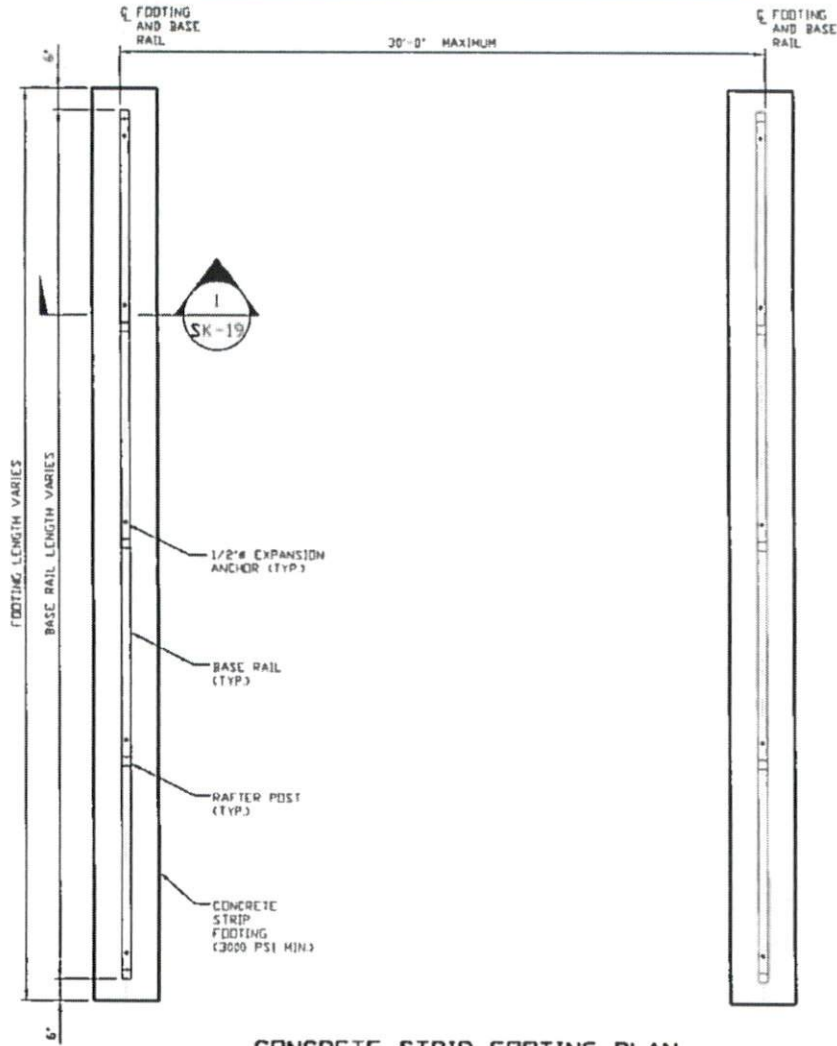
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JOB NO: 151565
161355

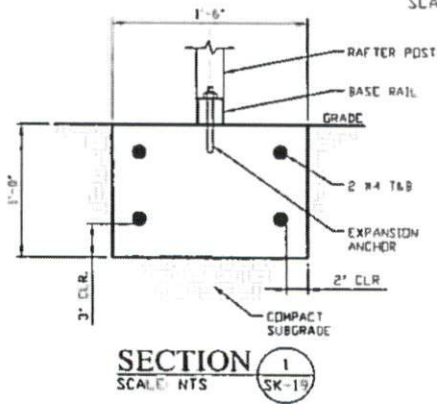
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OPTIONAL CONCRETE STRIP FOOTING



CONCRETE STRIP FOOTING PLAN
SCALE: NTS



SECTION 1
SCALE: NTS

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ENGINEERING AND CONSULTING, INC.**

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PROJECT MGR: WSM

CLIENT: -

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187 CARDINAL RIDGE TRAIL
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DATE: 11-10-16

SCALE: NTS

JOB NO 151565
161355

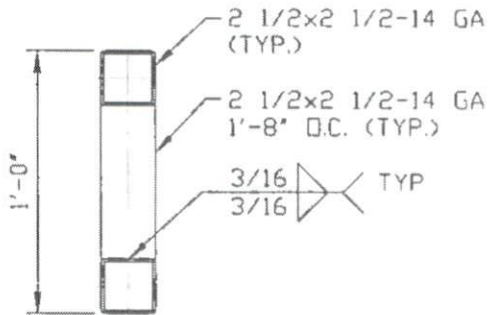
SHT. 19

DWG. NO: SK-3

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OPTIONAL DOOR HEADER



**HEADER DETAIL FOR DOOR
OPENINGS 12'± LENGTH ≤20'**

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSH

CLIENT: -

CAROLINA CARPORTS, INC.
187 CARDINAL RIDGE TRAIL
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30'x20" ENCLOSED STRUCTURE

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SCALE: NTS

SHT. 20

DWG. NO: SK-3

JOB NO: 151565
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