

**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**

**15 January 2018**

**Revision 7**

**M&A Project No. 15156S, 16135S & 17324S**

**Prepared for:**

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

**Prepared by:**

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

**401 S. Main Street, Suite 200  
Mount Airy, NC 27030**



**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING**


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





THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

PROJECT MGR: WSM  
CLIENT: CAROLINA CARPORTS

DATE: 1-15-18  
SHT. 1

SCALE: NTS  
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S  
REV: 7

<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRS	CAROLINA CARPORTS, INC. 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE		
	CHECKED BY: PDH			
<small>THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.</small>	PROJECT MGR: WSM	DATE: 1-15-18	SCALE: NTS	JOB NO: 15156S 16135S 17324S
	CLIENT: CAROLINA CARPORTS	SHT. 1A	DWG. NO SK-3	REV: 7

## DRAWING INDEX

SHEET 1	PE SEAL COVER SHEET
SHEET 1A	PE SEAL COVER SHEET
SHEET 2	DRAWING INDEX
SHEET 3A	INSTALLATION NOTES AND SPECIFICATIONS
SHEET 3B	TYPICAL SIDE AND END ELEVATIONS
SHEET 4	TYPICAL RAFTER/COLUMN END AND SIDE FRAMING SECTION (BOX EAVE RAFTER) EXPOSURE B
SHEET 4A	TYPICAL RAFTER/COLUMN END AND SIDE FRAMING SECTION (BOX EAVE RAFTER) EXPOSURE C
SHEET 4B	TYPICAL RAFTER/COLUMN END FRAMING SECTION (BOX EAVE RAFTER) DOUBLE COLUMN EXPOSURE B
SHEET 4C	TYPICAL RAFTER/COLUMN END FRAMING SECTION (BOX EAVE RAFTER) LACED DOUBLE LEG COLUMN EXPOSURE B
SHEET 4D	TYPICAL RAFTER/COLUMN END FRAMING SECTION (BOX EAVE RAFTER) LACED DOUBLE LEG COLUMN EXPOSURE C
SHEET 4E	TYPICAL SIDE FRAMING SECTION (BOX EAVE RAFTER) LACED DOUBLE LEG AND DOUBLE COLUMN OPTION
SHEET 5	COLUMN CONNECTION DETAILS (BOX EAVE STRUCTURE EXPOSURE B (140 MPH)
SHEET 5A	COLUMN CONNECTION DETAILS (BOX EAVE STRUCTURE EXPOSURE B (170 MPH)
SHEET 5B	COLUMN CONNECTION DETAILS (BOX EAVE STRUCTURE EXPOSURE C (140 MPH)
SHEET 5C	COLUMN CONNECTION DETAILS (BOX EAVE STRUCTURE EXPOSURE C (170 MPH)
SHEET 5D	COLUMN CONNECTION DETAILS (BOX EAVE STRUCTURE EXPOSURE B (140 MPH) LACED DOUBLE LEG AND DOUBLE COLUMN OPTION
SHEET 5E	COLUMN CONNECTION DETAILS (BOX EAVE STRUCTURE EXPOSURE B (170 MPH) LACED DOUBLE LEG AND DOUBLE COLUMN OPTION
SHEET 5F	COLUMN CONNECTION DETAILS (BOX EAVE STRUCTURE EXPOSURE C (140 MPH) LACED DOUBLE LEG AND DOUBLE COLUMN OPTION
SHEET 5G	COLUMN CONNECTION DETAILS (BOX EAVE STRUCTURE EXPOSURE C (170 MPH) LACED DOUBLE LEG AND DOUBLE COLUMN OPTION
SHEET 6	TYPICAL RAFTER/COLUMN END AND SIDE FRAMING SECTION (BOW RAFTER) EXPOSURE B
SHEET 6A	TYPICAL RAFTER/COLUMN END AND SIDE FRAMING SECTION (BOW RAFTER) EXPOSURE C
SHEET 7	COLUMN CONNECTION DETAILS (BOW RAFTER STRUCTURE EXPOSURE B 140 MPH)
SHEET 7A	COLUMN CONNECTION DETAILS (BOW RAFTER STRUCTURE EXPOSURE B 170 MPH)
SHEET 7B	COLUMN CONNECTION DETAILS (BOW RAFTER STRUCTURE EXPOSURE C 140 MPH)
SHEET 7C	COLUMN CONNECTION DETAILS (BOW RAFTER STRUCTURE EXPOSURE C 170 MPH)
SHEET 8	BASE RAIL ANCHORAGE OPTIONS
SHEET 9	TYPICAL END WALL AND SIDE WALL FRAMING SECTIONS (BOX EAVE)
SHEET 10	TYPICAL END WALL AND SIDE WALL FRAMING SECTIONS (BOW RAFTER)
SHEET 11	WALL OPENING DETAILS
SHEET 12	WALL OPENING DETAILS
SHEET 13	LEAN-TO OPTIONS (BOX EAVE RAFTER)
SHEET 14	LEAN-TO OPTIONS (BOW RAFTER)
SHEET 15	VERTICAL ROOF/SIDING OPTION END AND SIDE ELEVATION AND SECTION
SHEET 16	BASE RAIL ON GRADE APPLICATION
SHEET 17	OPTIONAL BASE RAIL ON TIMBER BEAM
SHEET 18	OPTIONAL BASE RAIL ON TIMBER BEAM WITH SOIL NAIL
SHEET 19	OPTIONAL CONCRETE STRIP FOOTING
SHEET 20	OPTIONAL HEADER

<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRS	CAROLINA CARPORTS, INC. 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE		
	CHECKED BY: PDH	JOB NO: 15156S 16135S 17324S		
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	PROJECT MGR: WSM	DATE: 1-15-18	SCALE: NTS	REV: 7
	CLIENT: CAROLINA CARPORTS	SHT. 2	DWG. NO: SK-3	

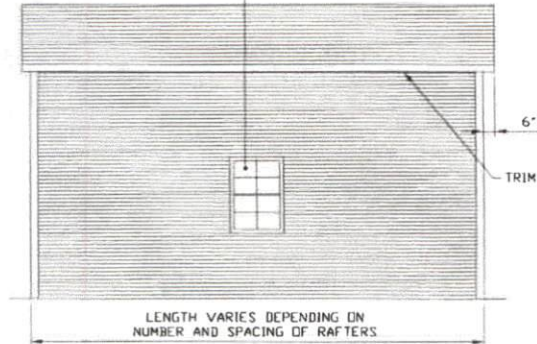
## INSTALLATION NOTES AND SPECIFICATIONS

- 1 DESIGN IS FOR MAXIMUM 30'-0" WIDE x 20'-0" EAVE HEIGHT ENCLOSED STRUCTURES
- 2 DESIGN WAS DONE IN ACCORDANCE WITH THE 2017 FLORIDA BUILDING CODE (FBC) 6TH 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 ( $\leq 24'$ ), 35 PSF ( $24' < W \leq 30'$ ), 35 PSF @ 4'-0" O.C. SPACING ( $\leq 24'$ )  
(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 = 5.0 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 = 4.0 FEET
- 6 RISK CATEGORY I
- 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) 6" O.C. (MAX) FOR HIGH WIND APPLICATIONS.
- 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  
 $R = 3.25$                        $I_E = 1.0$   
 $S_{DS} = 1.522$                  $V = C_S W$   
 $S_{DI} = 0.839$

<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRS	CAROLINA CARPORTS, INC. 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE		
	CHECKED BY: PDH			
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	PROJECT MGR: WSM	DATE: 1-15-18	SCALE: NTS	JOB NO: 15156S 16135S 17324S
	CLIENT: CAROLINA CARPORTS	SHT. 3A	DVG. NO SK-3	REV: 7

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

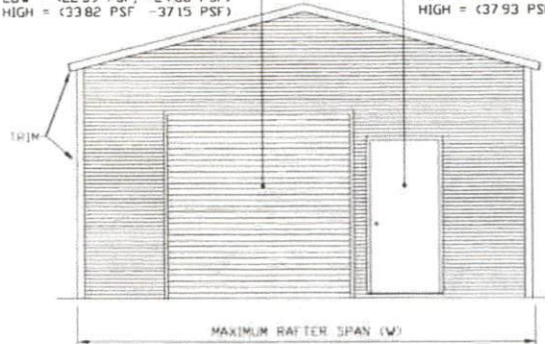
WINDOW (AS APPLICABLE)  
 DESIGN PRESSURE  
 LDW = (26.38 PSF, -35.21 PSF)  
 HIGH = (39.75 PSF, -49.55 PSF)



**TYPICAL SIDE ELEVATION-HORIZONTAL ROOF**  
 SCALE: NTS

ROLL-UP DOOR  
 (AS APPLICABLE)  
 DESIGN PRESSURE  
 LDW = (22.39 PSF, -24.68 PSF)  
 HIGH = (33.82 PSF, -37.15 PSF)

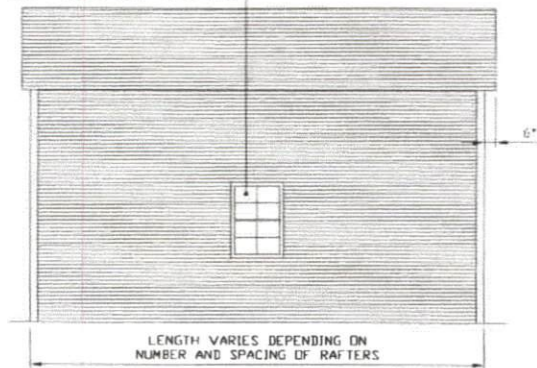
SWINGING DOOR  
 (AS APPLICABLE)  
 DESIGN PRESSURE  
 LDW = (25.17 PSF, -27.35 PSF)  
 HIGH = (37.93 PSF, -41.32 PSF)



**TYPICAL END ELEVATION-HORIZONTAL ROOF**  
 SCALE: NTS

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

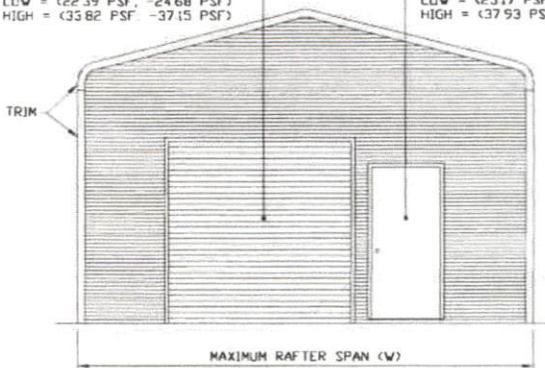
WINDOW (AS APPLICABLE)  
 DESIGN PRESSURE  
 LDW = (26.38 PSF, -35.21 PSF)  
 HIGH = (39.75 PSF, -49.55 PSF)



**TYPICAL SIDE ELEVATION**  
 SCALE: NTS

ROLL-UP DOOR  
 (AS APPLICABLE)  
 DESIGN PRESSURE  
 LDW = (22.39 PSF, -24.68 PSF)  
 HIGH = (35.82 PSF, -37.15 PSF)

SWINGING DOOR  
 (AS APPLICABLE)  
 DESIGN PRESSURE  
 LDW = (25.17 PSF, -27.35 PSF)  
 HIGH = (37.93 PSF, -41.32 PSF)



**TYPICAL END ELEVATION**  
 SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA  
 CARPORTS

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

DATE: 1-15-18

SHT. 3B

SCALE: NTS

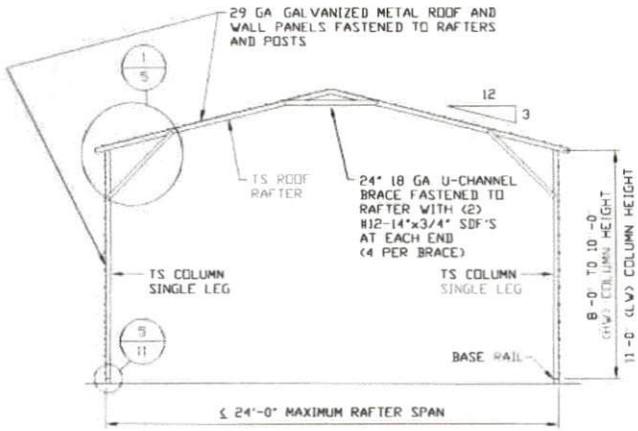
DWG. NO: SK-3

JOB NO: 15156S 16135S  
 17324S

REV: 7

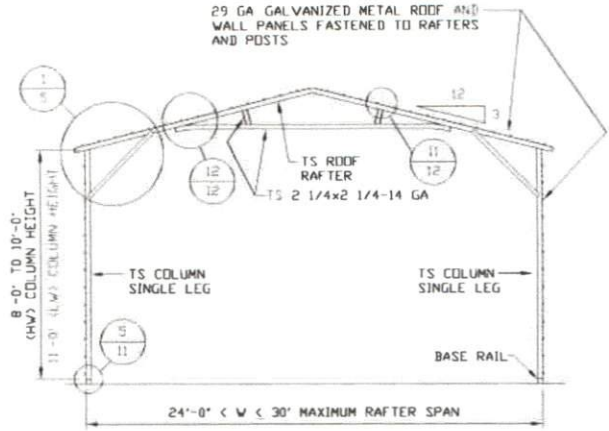
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

## EXPOSURE B



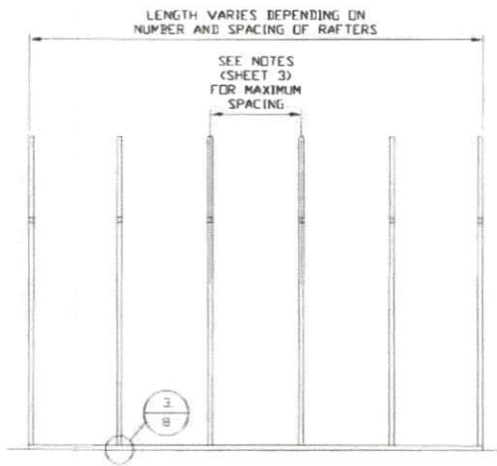
**TYPICAL RAFTER/COLUMN END FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN END FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA CARPORTS

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

DATE: 1-15-18

SHT. 4

SCALE: NTS

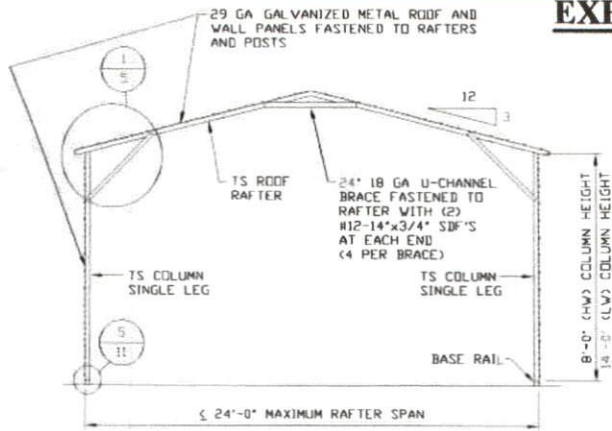
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

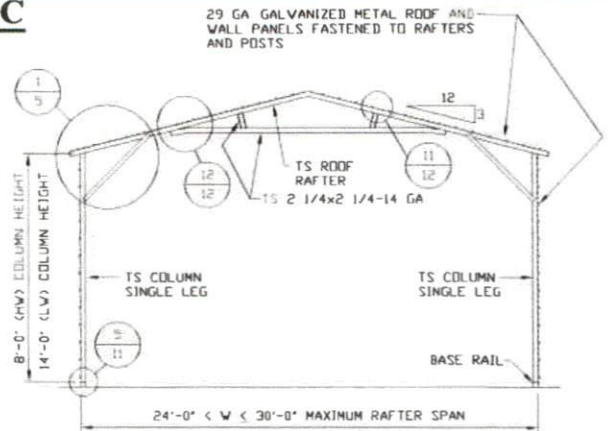
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# EXPOSURE C



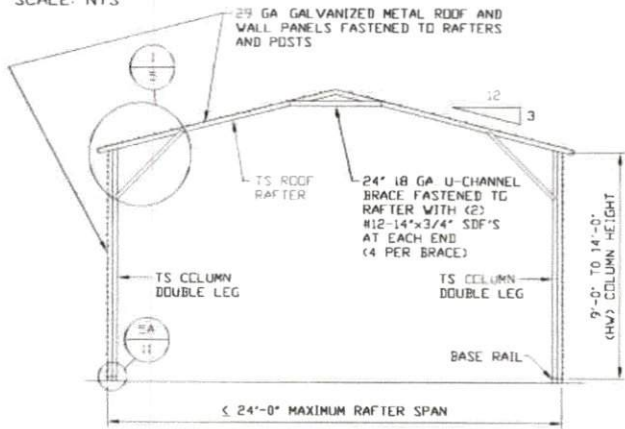
**TYPICAL RAFTER/COLUMN END FRAME SECTION**

SCALE: NTS



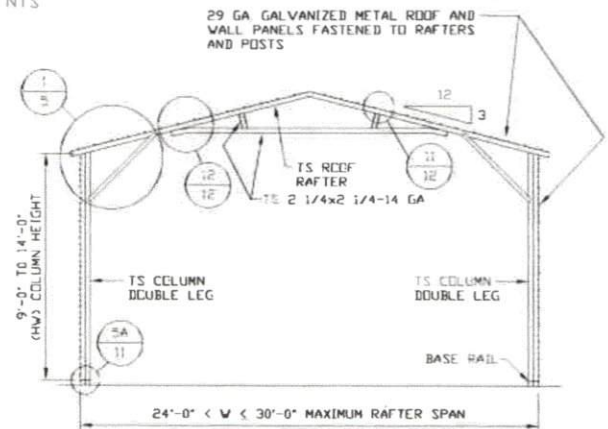
**TYPICAL RAFTER/COLUMN END FRAME SECTION**

SCALE: NTS



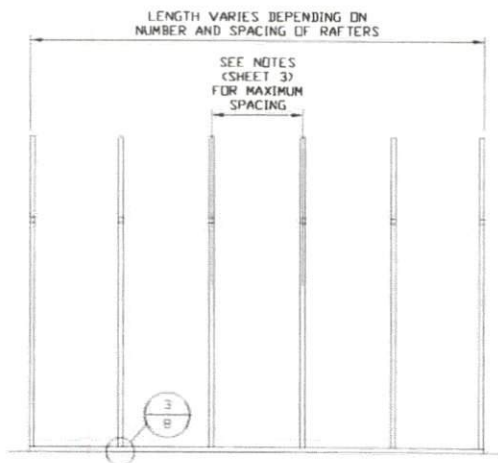
**TYPICAL RAFTER/COLUMN END FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN END FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA CARPORTS

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

DATE: 1-15-18

SHT. 4A

SCALE: NTS

DWG. NO: SK-3

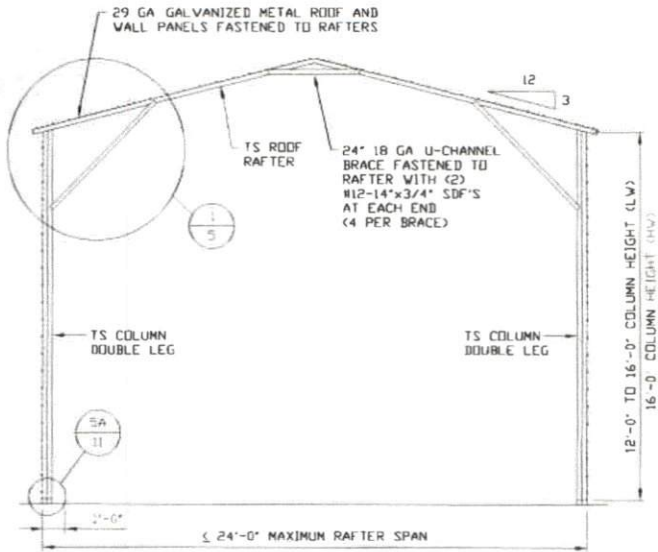
JOB NO: 15156S 16135S  
17324S

REV: 7

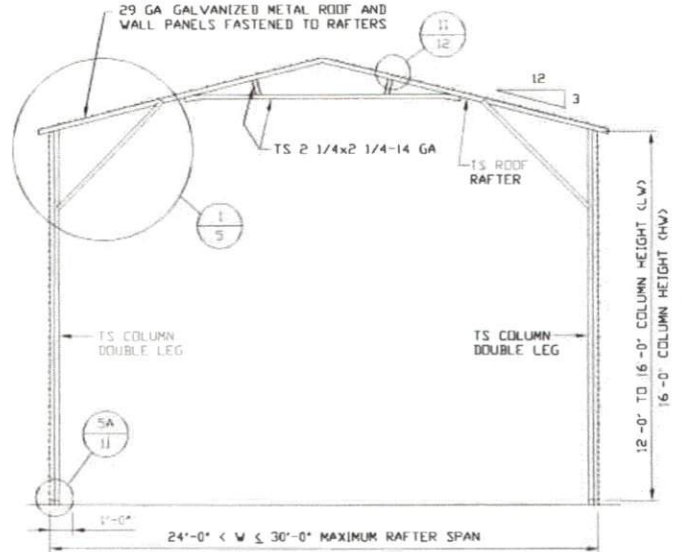
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



## EXPOSURE B



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



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

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 4B

SCALE: NTS

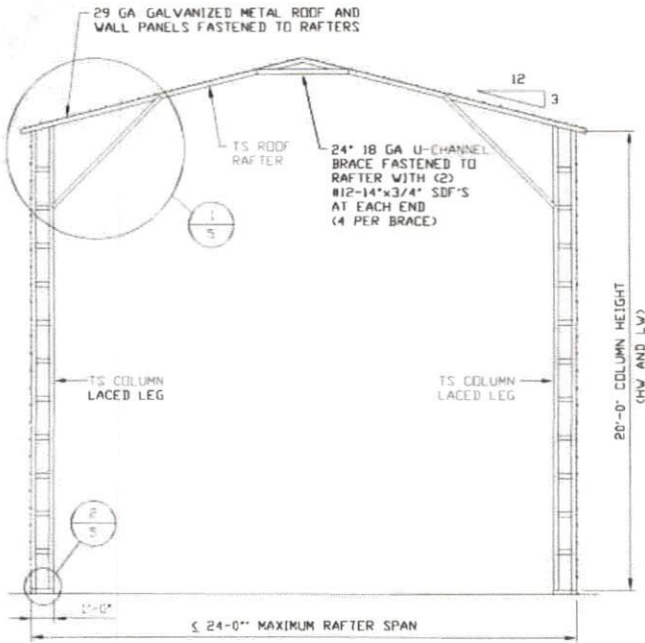
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

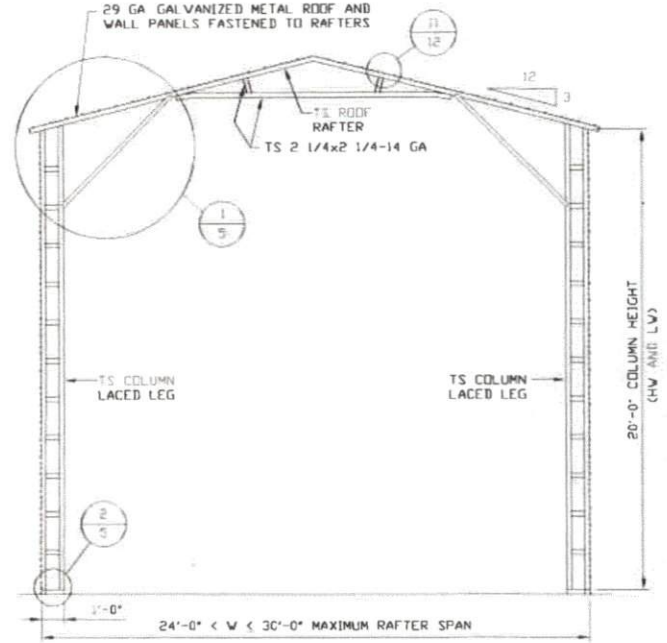
REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

## EXPOSURE B



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



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

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 4C

SCALE: NTS

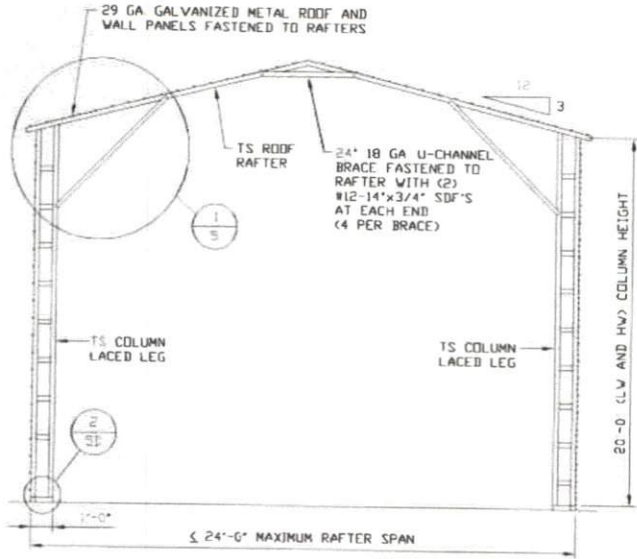
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

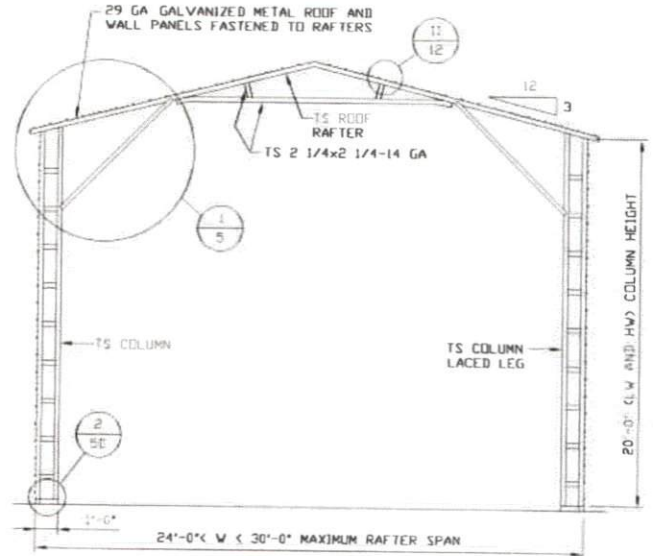
REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# EXPOSURE C



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



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

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 4D

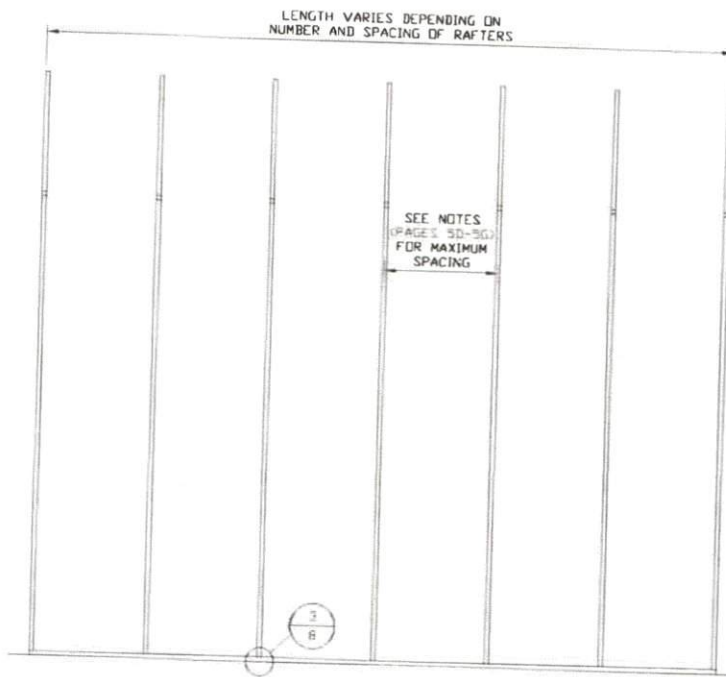
SCALE: NTS

DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-10

SCALE: NTS

JOB NO: 15156S 16135S  
17324S

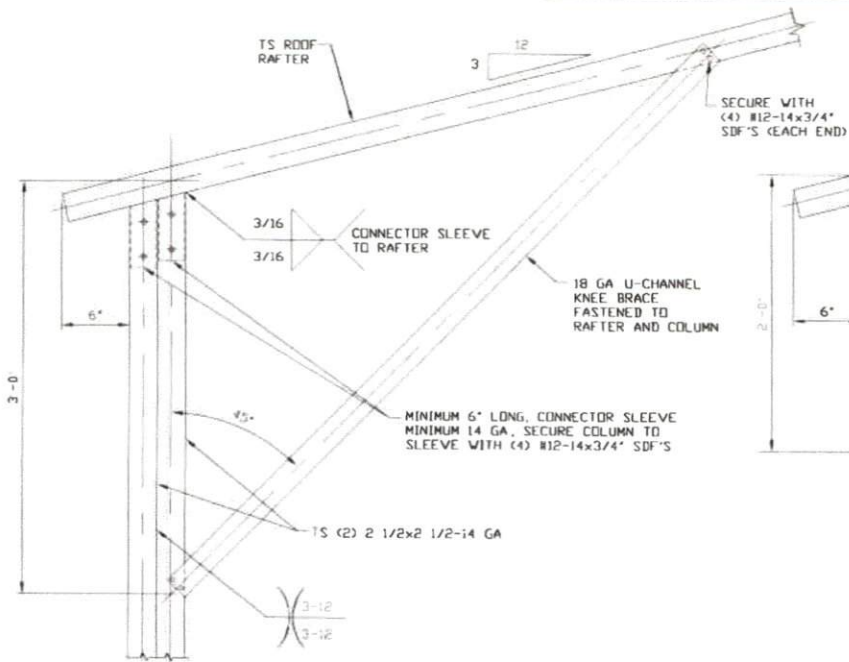
SHT. 4E

DWG. NO: SK-3

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

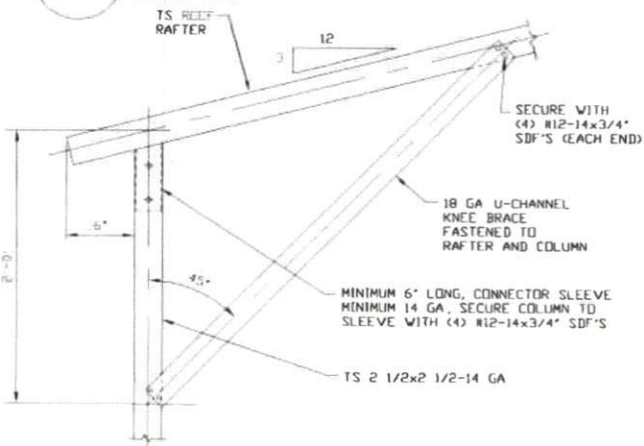
# EXPOSURE B (140 MPH)



**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO <= 16'-0"**

1A

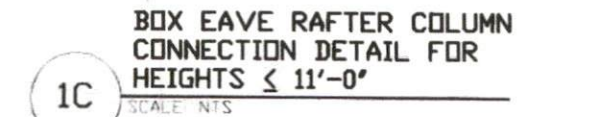
SCALE: NTS



**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 11'-0" < TO <= 12'-0"**

1B

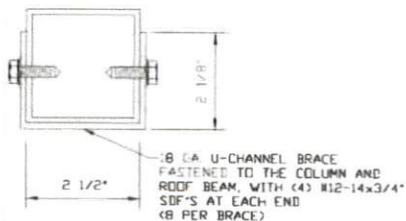
SCALE: NTS



**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS <= 11'-0"**

1C

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

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

DATE: 1-15-10

SHT. 5

SCALE: NTS

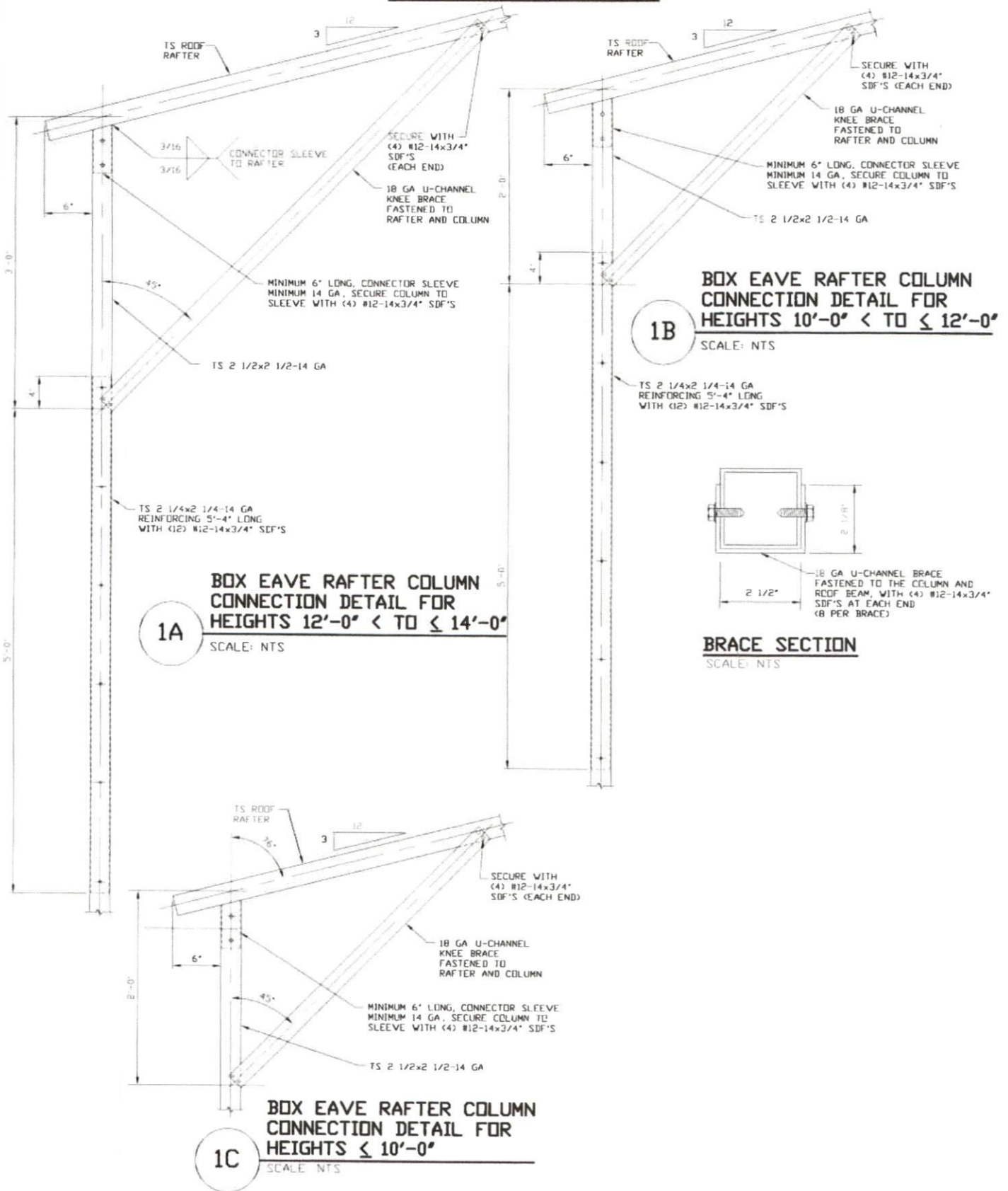
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# EXPOSURE B (170 MPH)



MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA CARPORTS

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

DATE: 1-15-18

SHT. 5A

SCALE: NTS

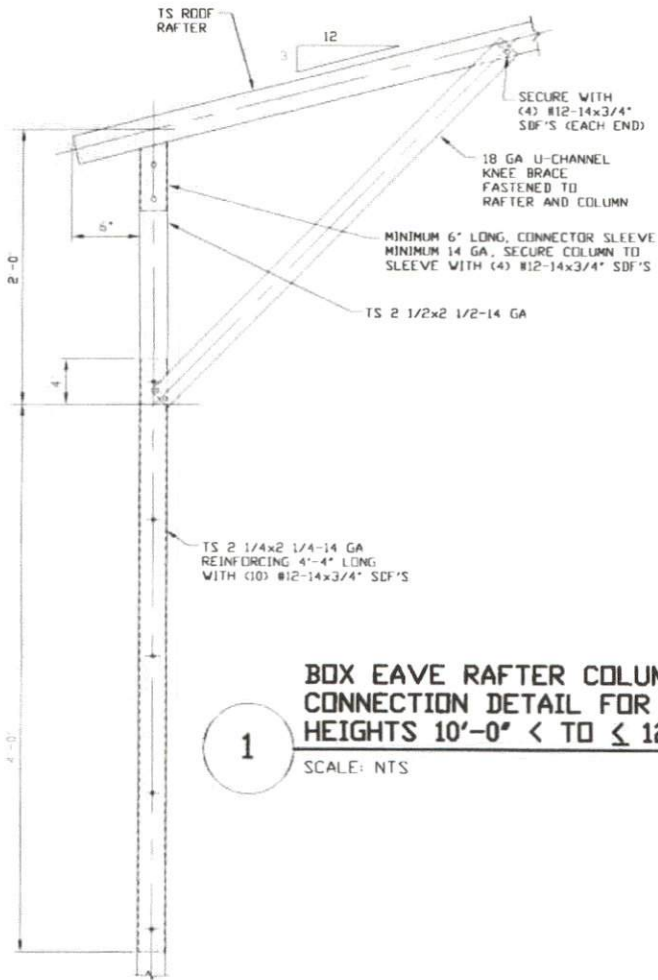
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

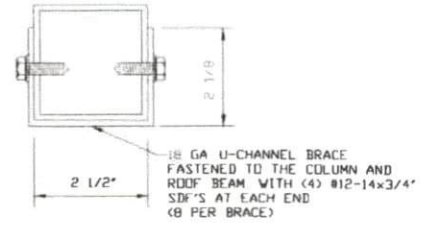
# EXPOSURE C (140 MPH)



**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < TO <= 12'-0"**

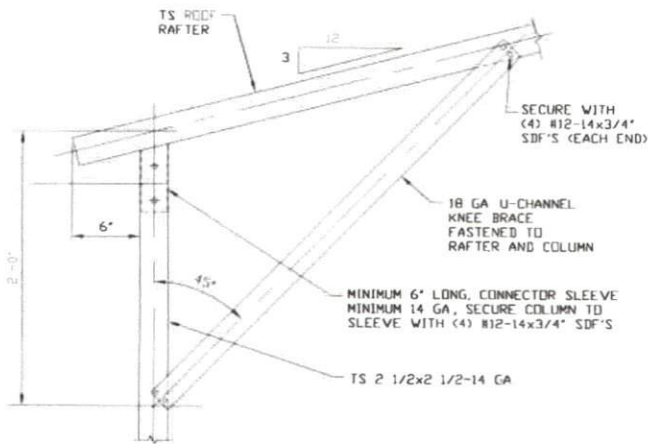
1

SCALE: NTS



**BRACE SECTION**

SCALE: NTS



**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS <= 10'-0"**

1B

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 5B

SCALE: NTS

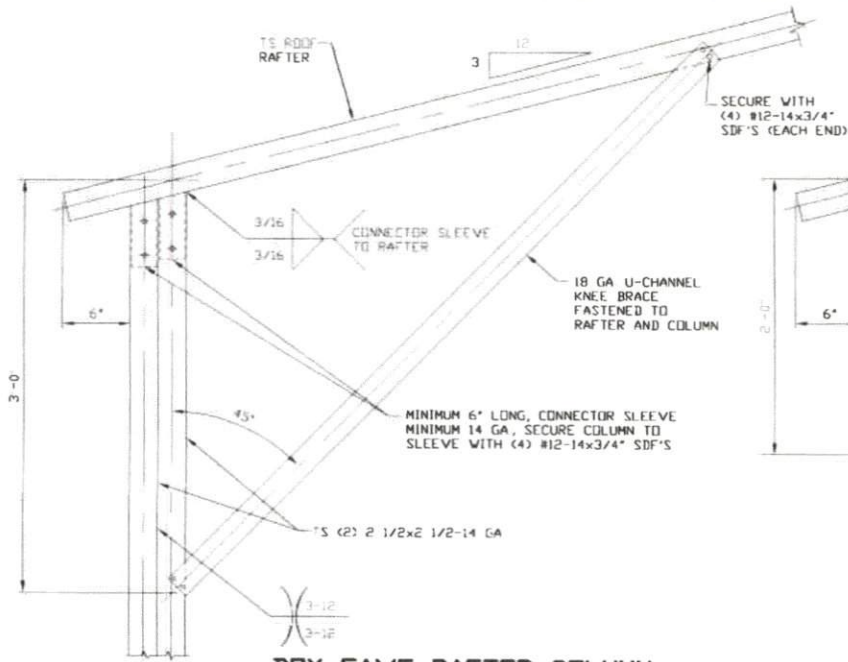
DWG. NO SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

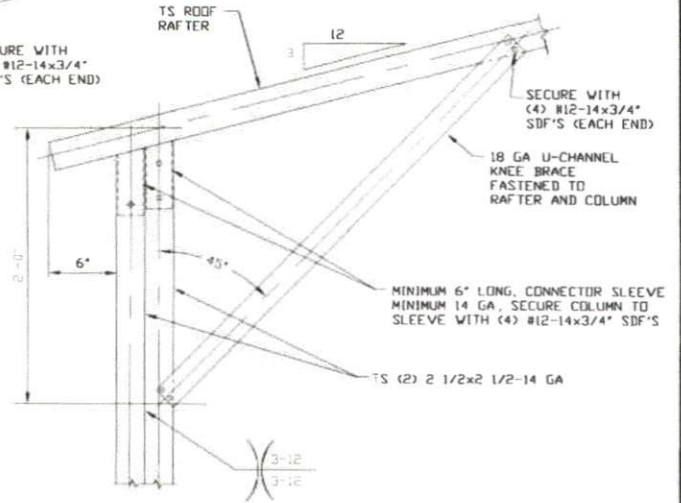
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# EXPOSURE C (170 MPH)



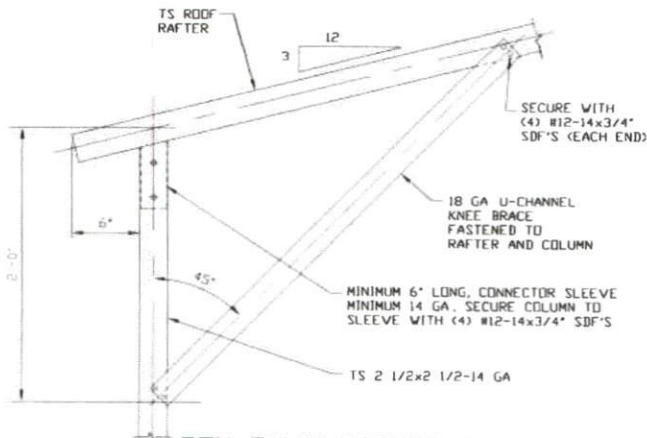
**1A**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO ≤ 14'-0"**

SCALE: NTS



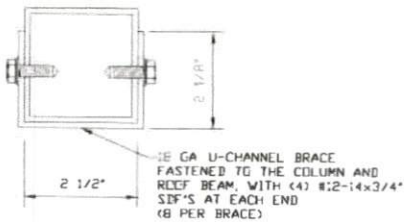
**1B**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 8'-0" < TO ≤ 12'-0"**

SCALE: NTS



**1C**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS ≤ 8'-0"**

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**

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

**DATE: 1-15-18**

**SHT. 5C**

**SCALE: NTS**

**DWG. NO: SK-3**

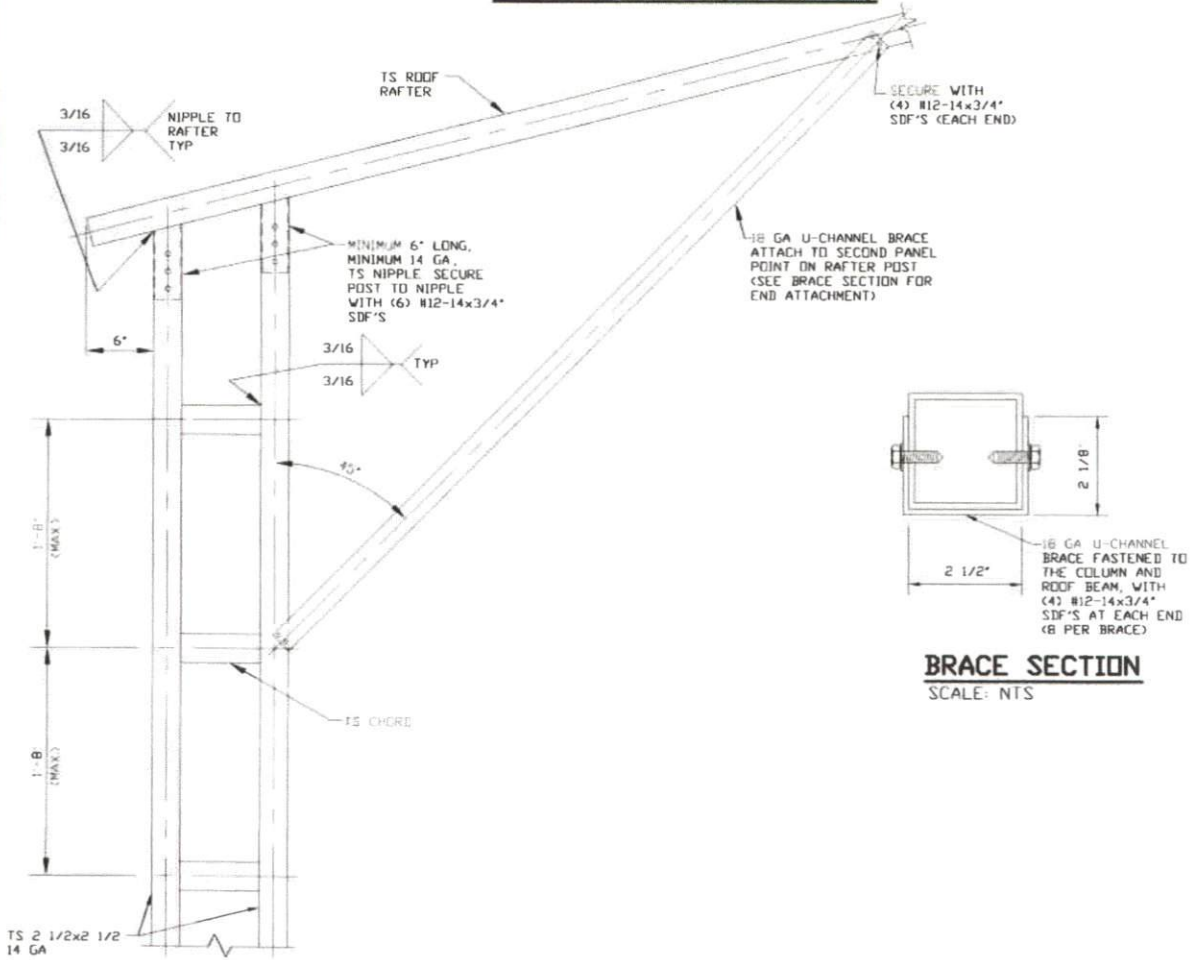
**JOB NO: 15156S 16135S  
 17324S**

**REV: 7**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

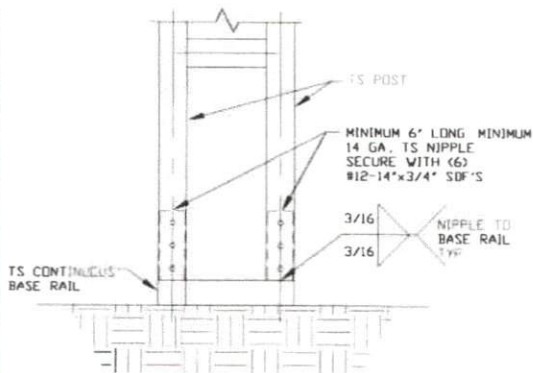


# EXPOSURE B (140 MPH)



## 1 BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHT 20'-0"

SCALE: NTS



## 2 POST/BASE RAIL CONNECTION DETAIL

SCALE: NTS

MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 5D

SCALE: NTS

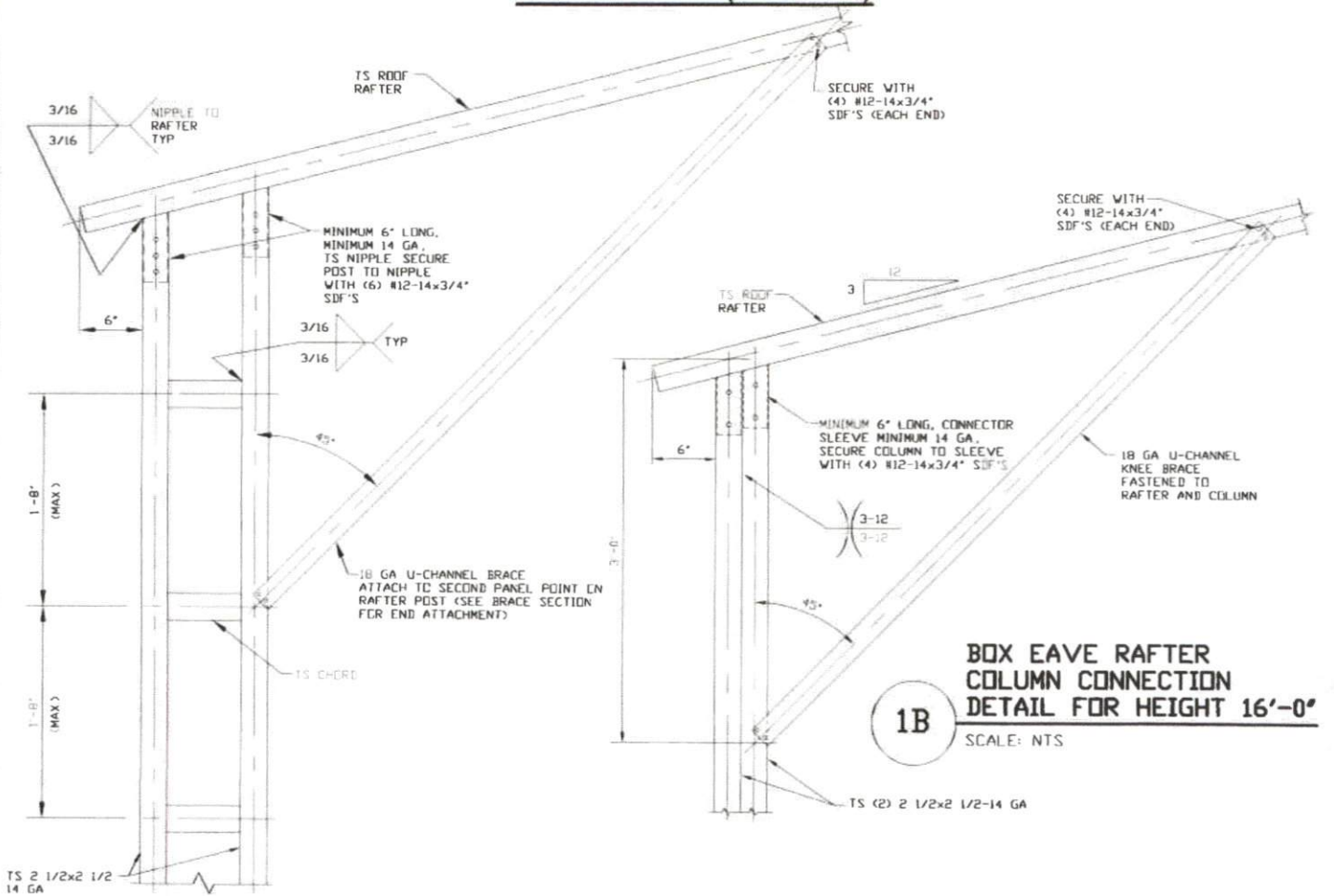
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# EXPOSURE B (170 MPH)



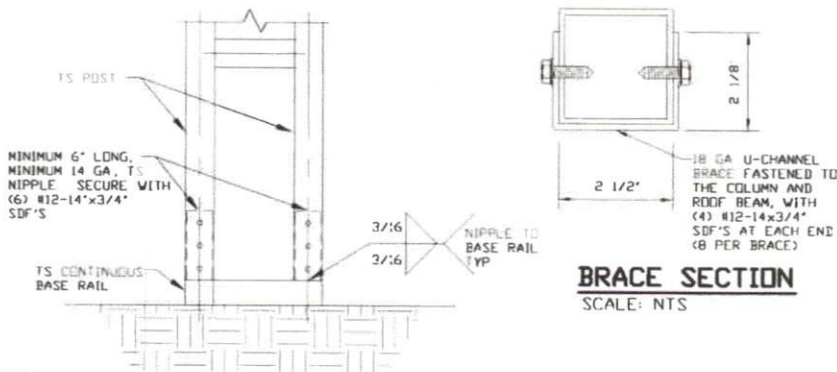
**BOX EAVE RAFTER  
COLUMN CONNECTION  
DETAIL FOR HEIGHT 16'-0"**

SCALE: NTS

**BOX EAVE RAFTER  
COLUMN CONNECTION  
DETAIL FOR  
HEIGHT 20'-0"**

SCALE: NTS

1A



**BRACE SECTION**

SCALE: NTS

2

**POST/BASE RAIL CONNECTION DETAIL**

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 5E

SCALE: NTS

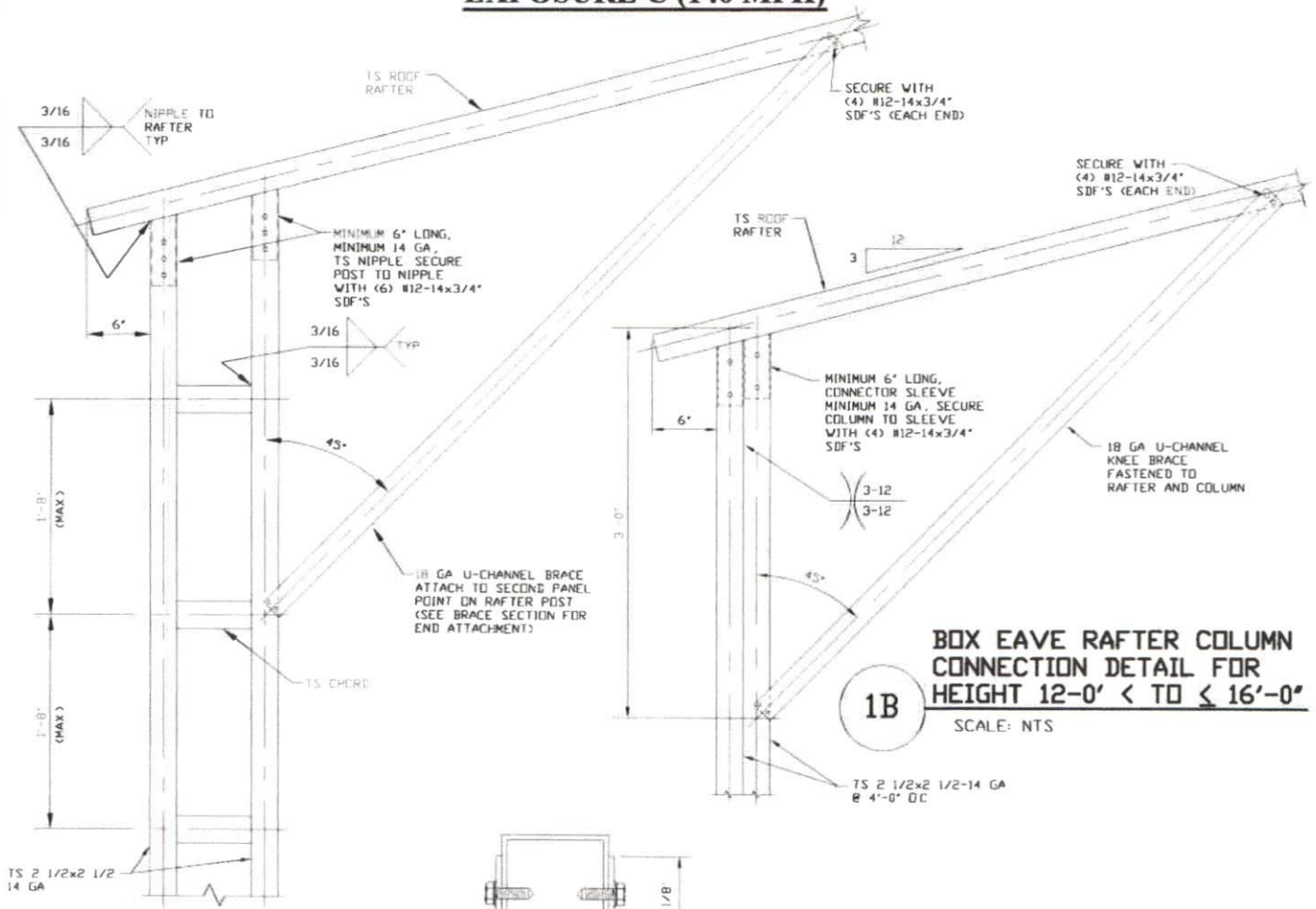
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

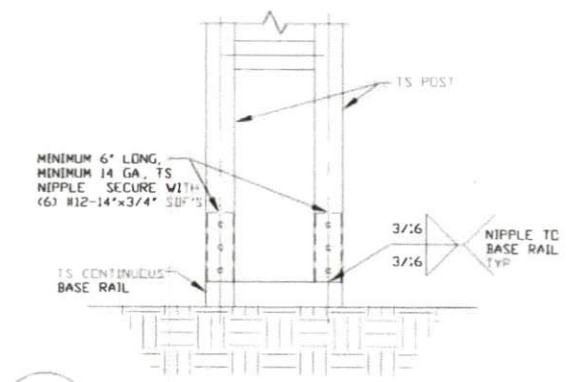
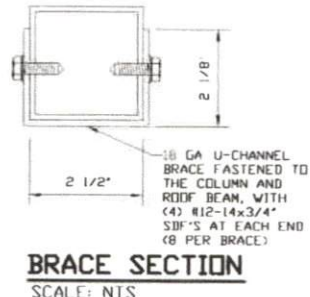
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# EXPOSURE C (140 MPH)



**1A** BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHT 20'-0"

SCALE: NTS



**2** POST/BASE RAIL CONNECTION DETAIL

SCALE: NTS

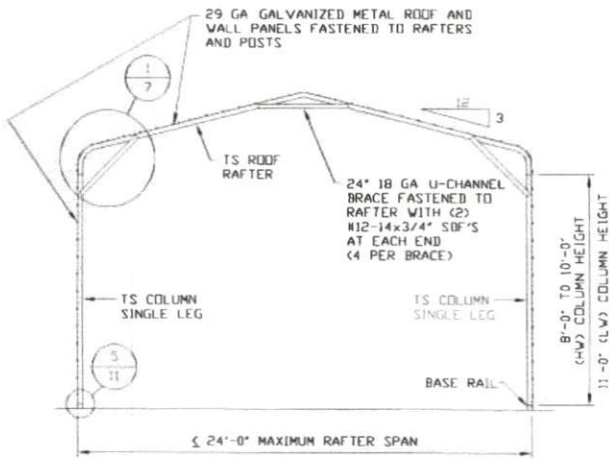
**MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.**

DRAWN BY: JRS		CAROLINA CARPORTS, INC. 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE	
CHECKED BY: PDH		DATE: 1-15-18	SCALE: NTS
PROJECT MGR: VSM	CLIENT: CAROLINA CARPORTS	SHT. 5F	JOB NO: 15156S 16135S 17324S
		DWG. NO: SK-3	REV: 7

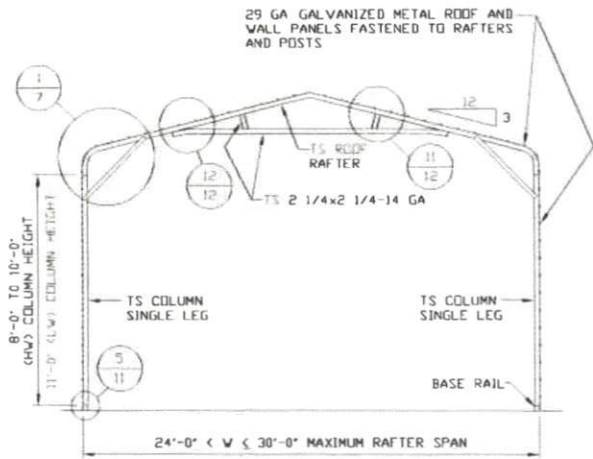
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



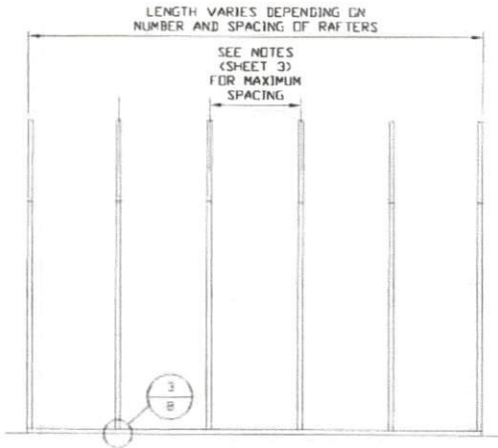
## EXPOSURE B



**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: VSH

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 6

SCALE: NTS

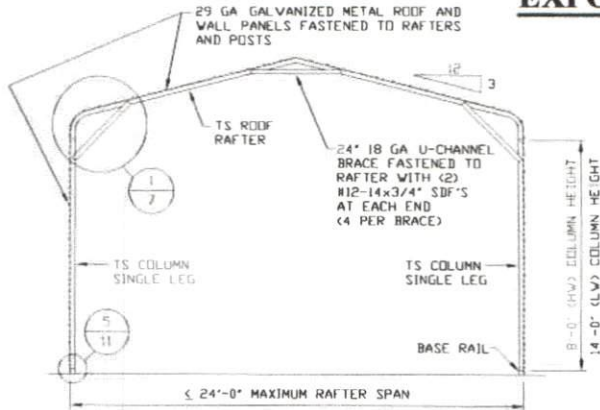
DWG. NO SK-3

JOB NO 15156S 16135S  
17324S

REV: 7

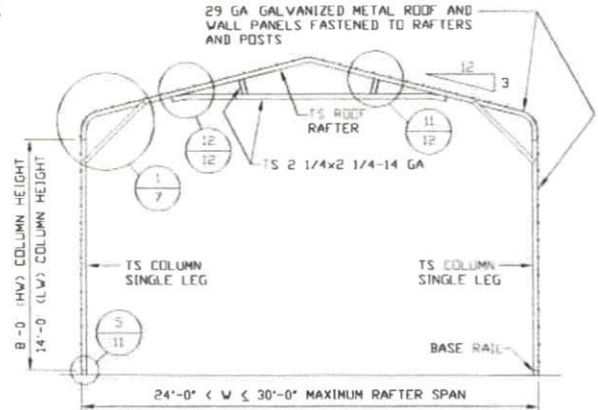
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# EXPOSURE C



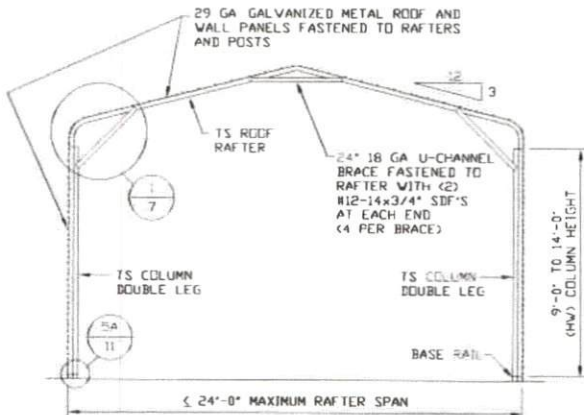
**TYPICAL RAFTER/COLUMN END FRAME SECTION**

SCALE: NTS



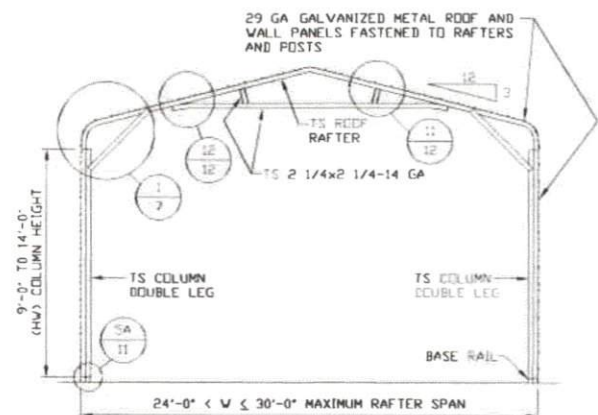
**TYPICAL RAFTER/COLUMN END FRAME SECTION**

SCALE: NTS



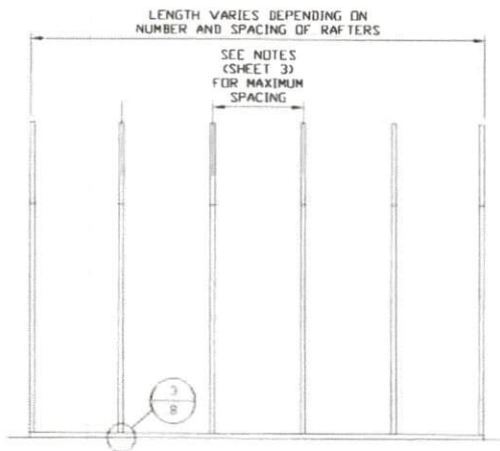
**TYPICAL RAFTER/COLUMN END FRAME SECTION**

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: WSH

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 6A

SCALE: NTS

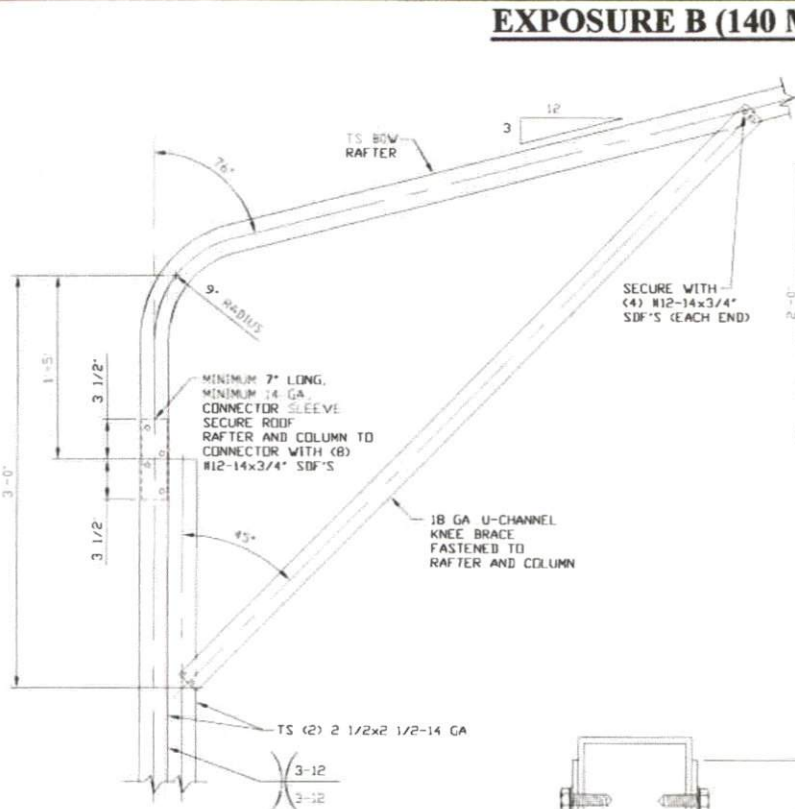
DWG. NO SK-3

JOB NO 15156S 16135S  
17324S

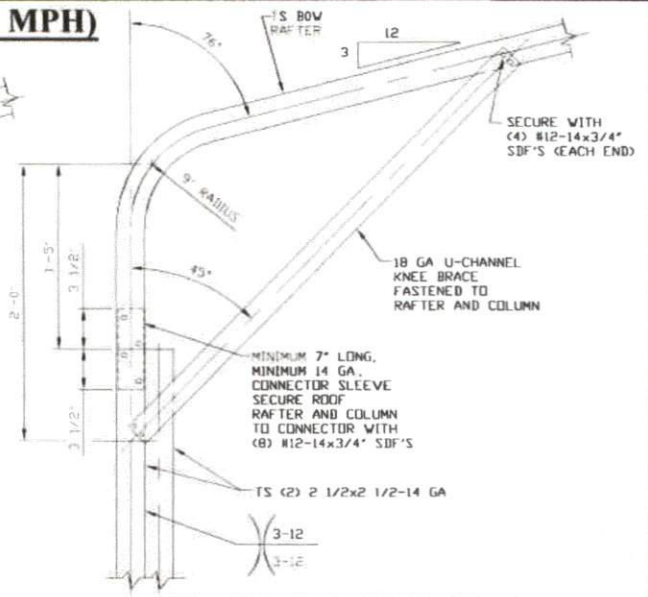
REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

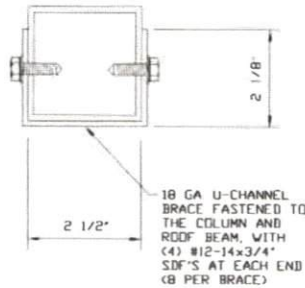
# EXPOSURE B (140 MPH)



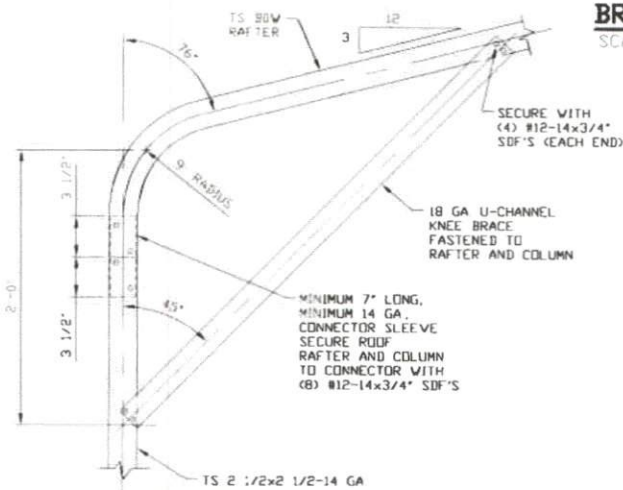
**1A**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO ≤ 14'-0"**  
 SCALE: NTS



**1B**  
**BOX EAVE RAFTER-COLUMN CONNECTION DETAIL FOR HEIGHTS 11'-0" < TO ≤ 12'-0"**  
 SCALE: NTS



**BRACE SECTION**  
 SCALE: NTS



**1C**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS ≤ 11'-0"**  
 SCALE: NTS

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

**DRAWN BY: JRS**

**CHECKED BY: PMH**

**PROJECT MGR: VSM**

**CLIENT: CAROLINA CARPORTS**

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

**DATE: 1-15-18**

**SHT. 7**

**SCALE: NTS**

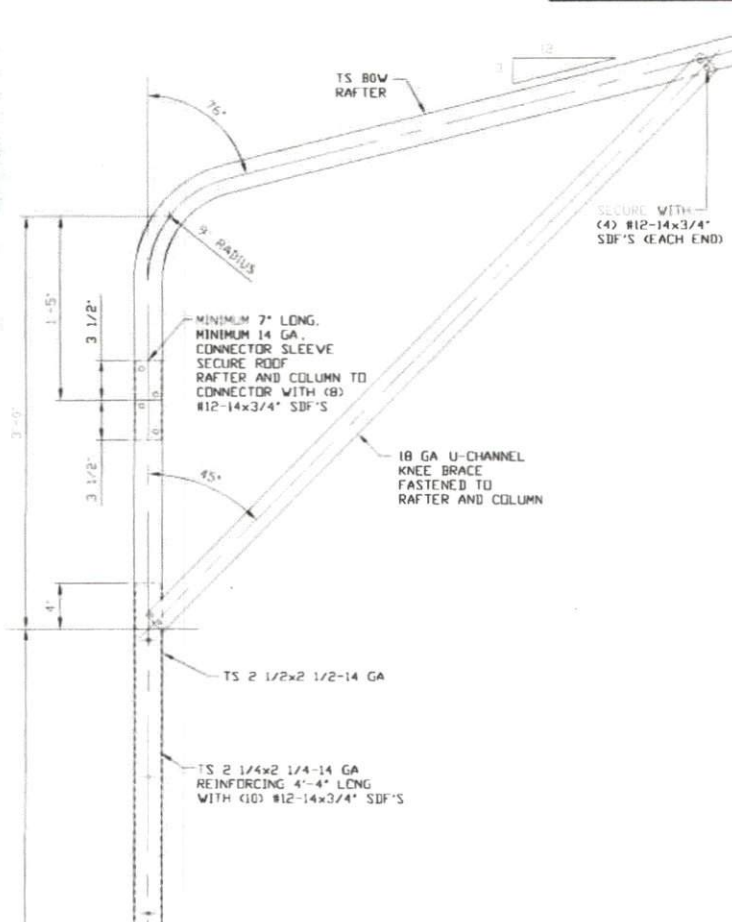
**DWG. NO: SK-3**

**JOB NO: 15156S 16135S 17324S**

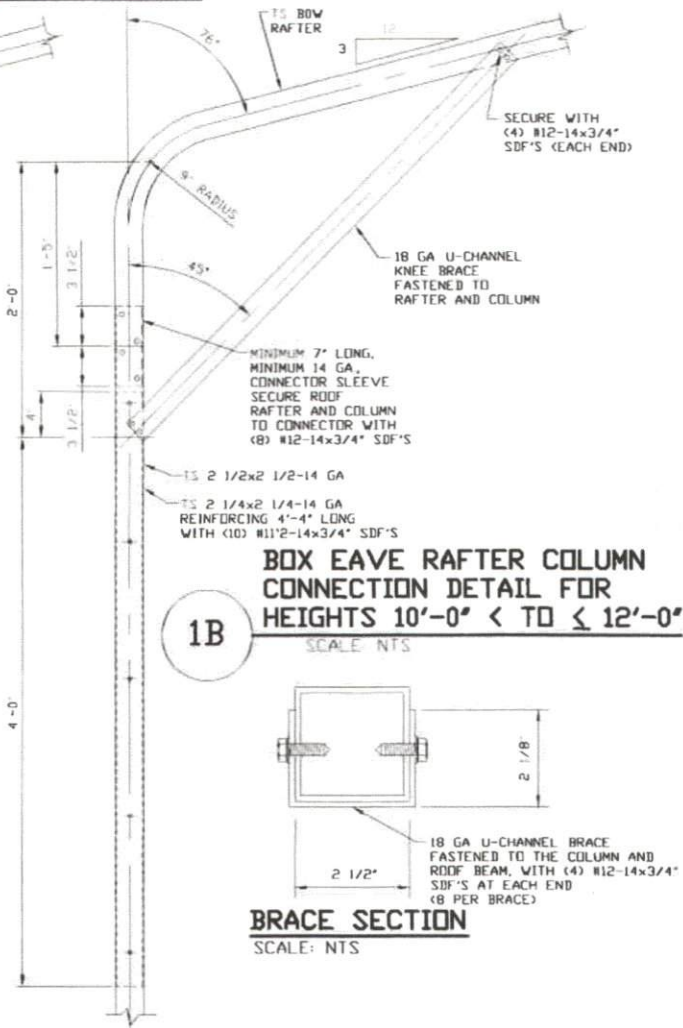
**REV: 7**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

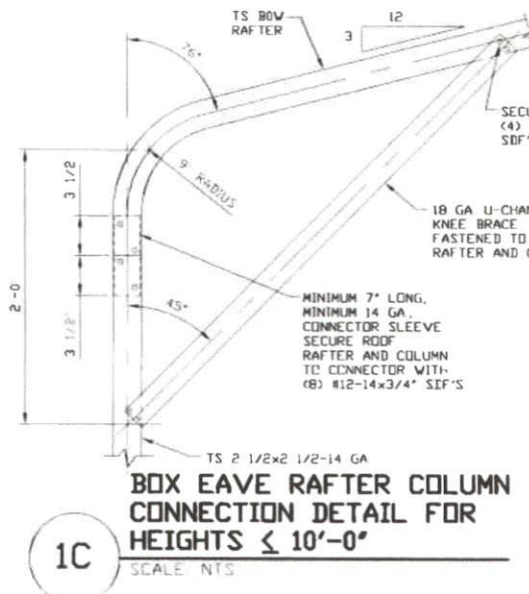
# EXPOSURE B (170 MPH)



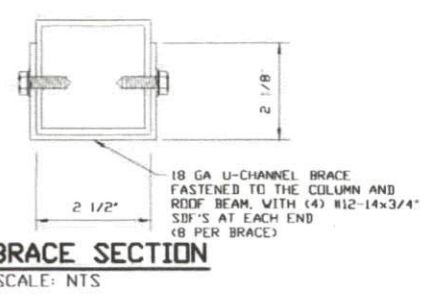
**1A**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12'-0" < TQ < 14'-0"**  
 SCALE: NTS



**1B**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < TO < 12'-0"**  
 SCALE: NTS



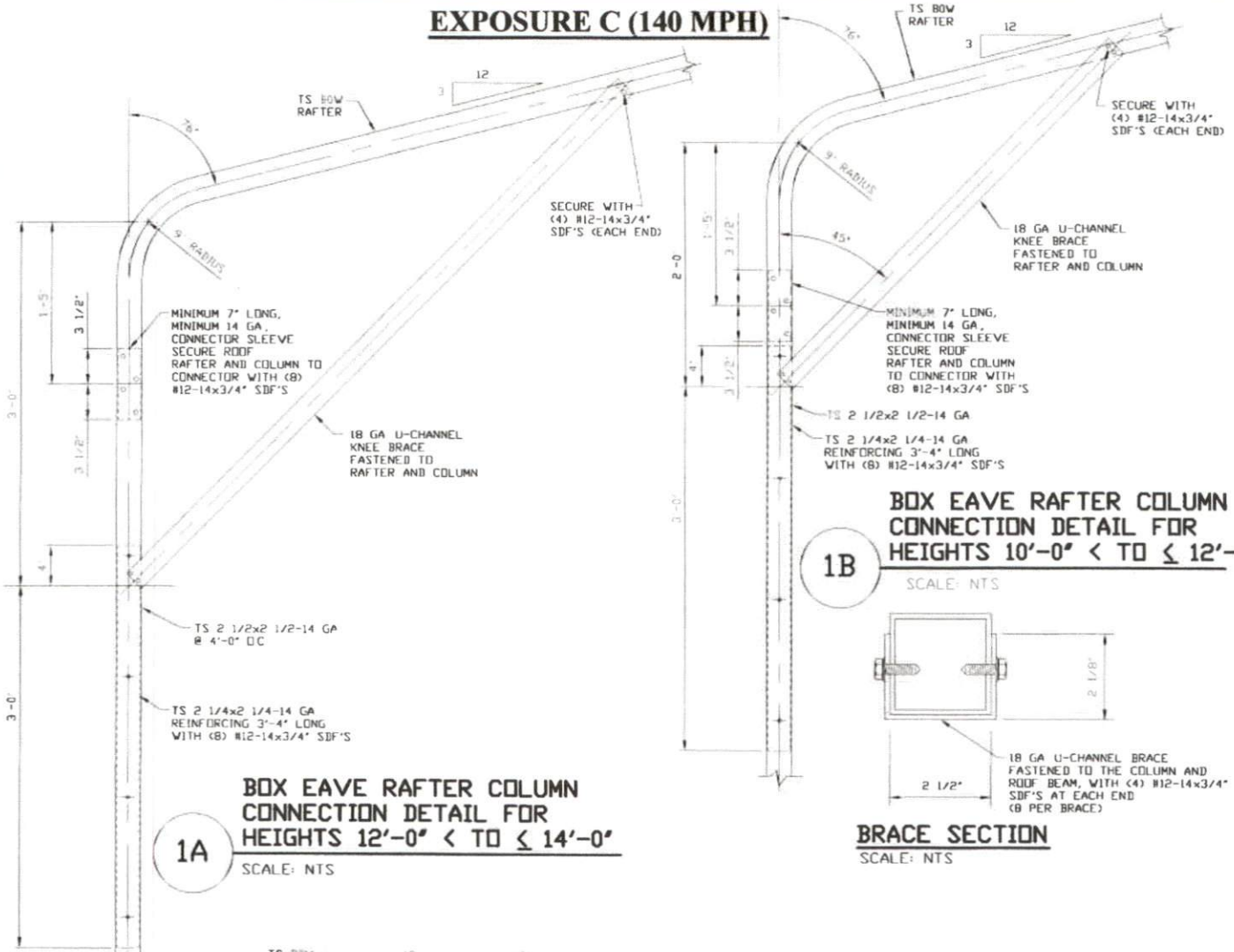
**1C**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS < 10'-0"**  
 SCALE: NTS



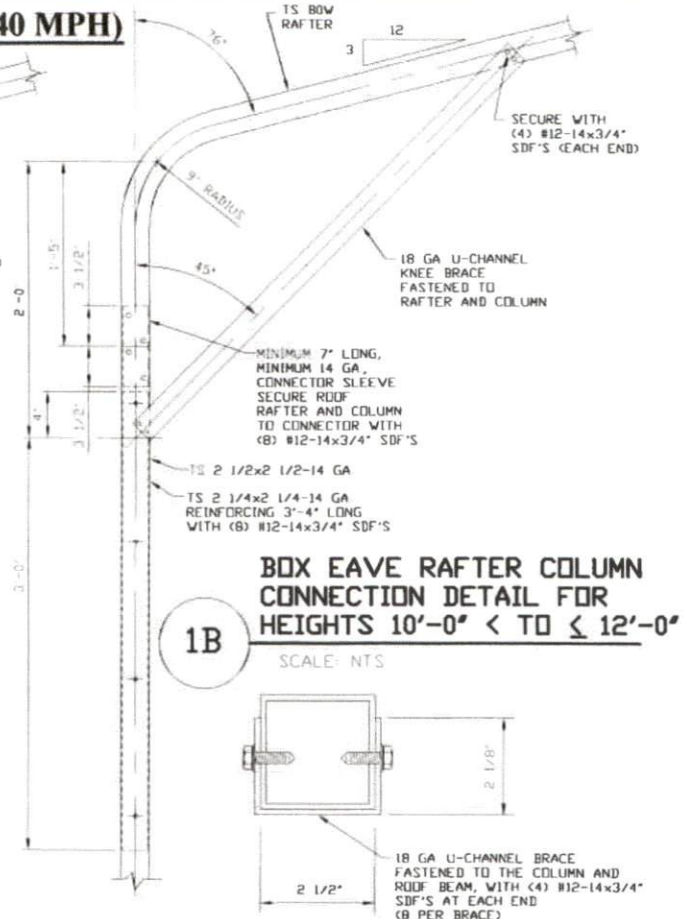
<b>MOORE AND ASSOCIATES          ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRS		CAROLINA CARPORTS, INC. 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE		
	CHECKED BY: PDH				
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	PROJECT MGR: VSM	DATE: 1-15-18	SCALE: NTS	JOB NO: 15156S 16135S 17324S	
	CLIENT: CAROLINA CARPORTS	SHT. 7A	DWG. NO: SK-3	REV: 7	



**EXPOSURE C (140 MPH)**

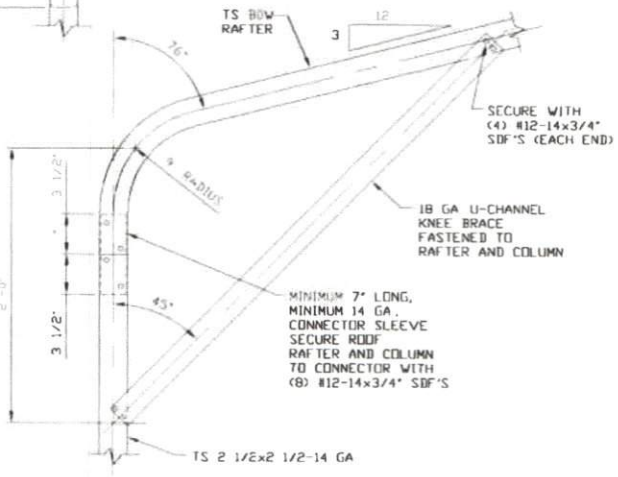


**1A**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO <= 14'-0"**  
 SCALE: NTS



**1B**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < TO <= 12'-0"**  
 SCALE: NTS

**BRACE SECTION**  
 SCALE: NTS



**1C**  
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS <= 10'-0"**  
 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

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

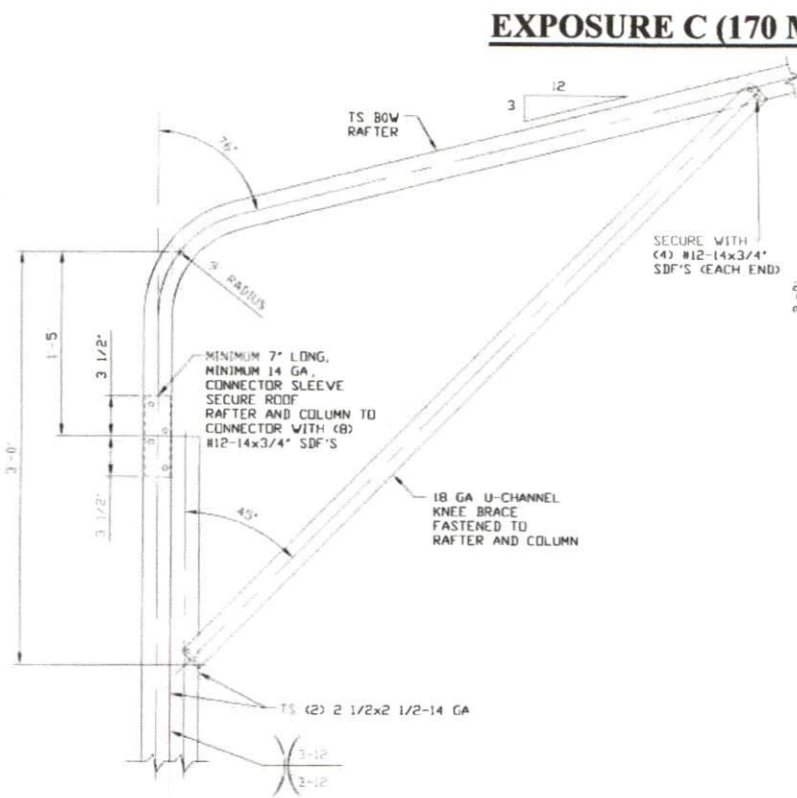
**PROJECT MGR: WSM**  
**CLIENT: CAROLINA CARPORTS**

**DATE: 1-15-18**  
**SHT. 7B**

**SCALE: NTS**  
**DWG. NO SK-3**

**JOB NO: 15156S 1613SS 17324S**  
**REV: 7**

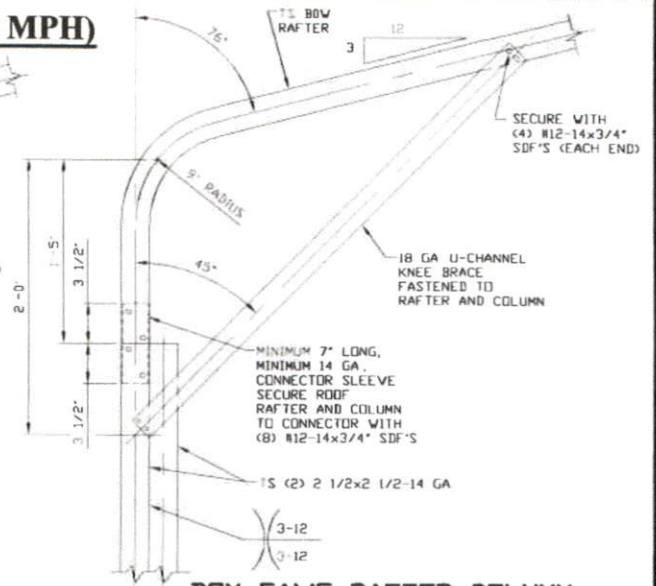
# EXPOSURE C (170 MPH)



1A

**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO <= 14'-0"**

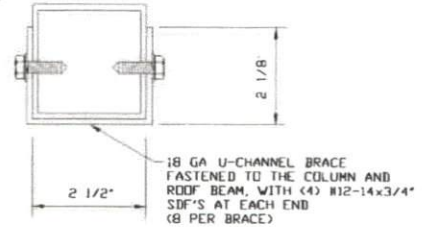
SCALE: NTS



1B

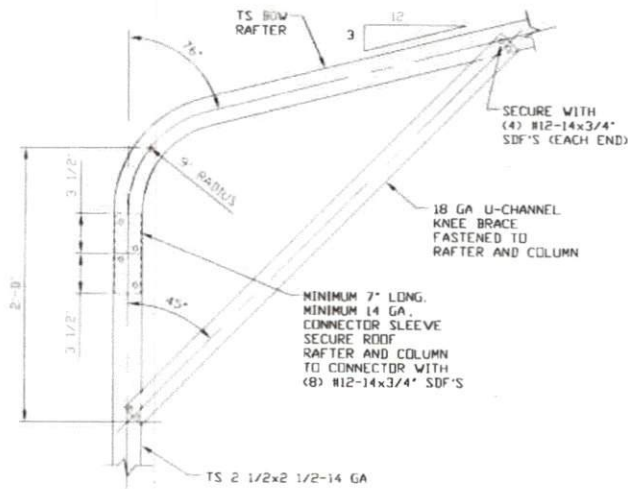
**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 8'-0" < TO <= 12'-0"**

SCALE: NTS



**BRACE SECTION**

SCALE: NTS



1C

**BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS <= 8'-0"**

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CAROLINA CARPORTS

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

DATE: 1-15-18

SHT. 7C

SCALE: NTS

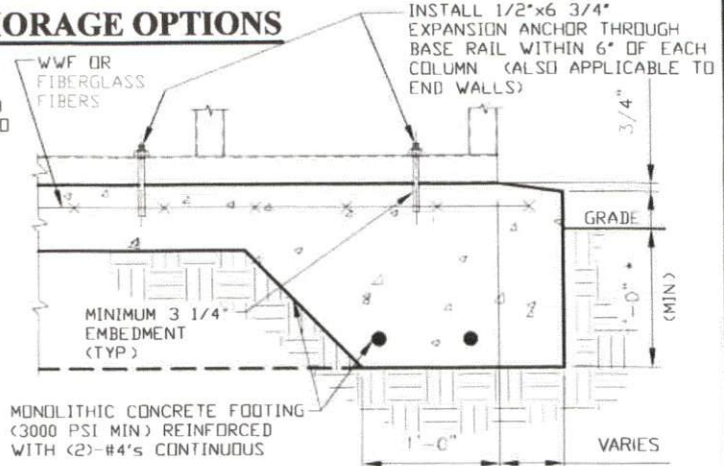
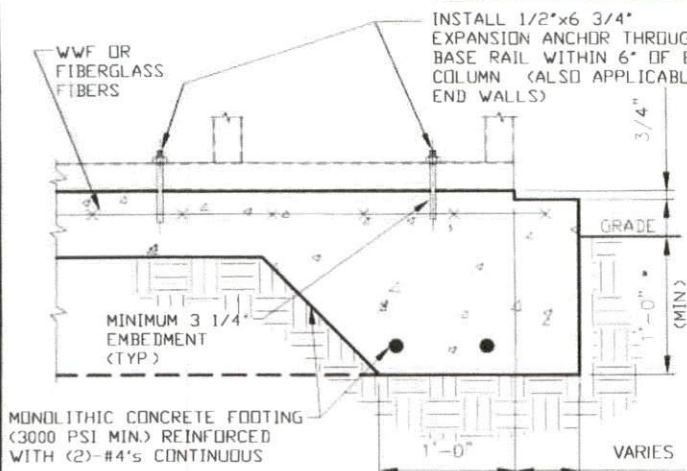
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

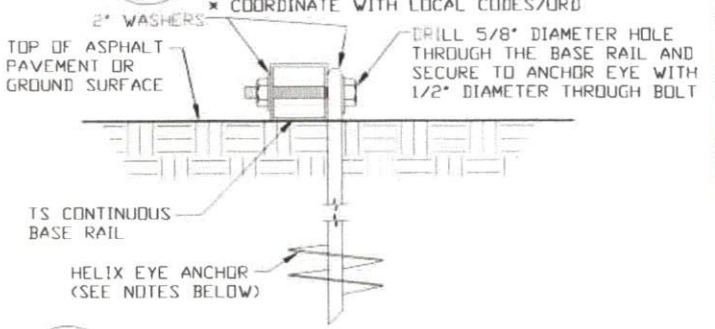
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

## BASE RAIL ANCHORAGE OPTIONS



**3A CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE**  
 SCALE: NTS  
 (MINIMUM ANCHOR EDGE DISTANCE IS 4")  
 \* COORDINATE WITH LOCAL CODES/ORD

**3B CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE**  
 SCALE: NTS  
 (MINIMUM ANCHOR EDGE DISTANCE IS 4")  
 \* COORDINATE WITH LOCAL CODES/ORD



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

### 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:

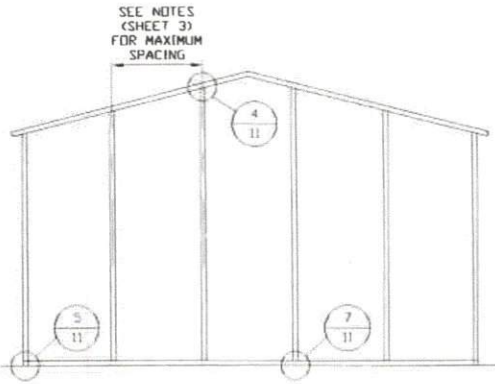
- 1 REINFORCEMENT IS BENT COLD
- 2 THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS
- 3 REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT

#### HELIX ANCHOR NOTES:

- 1 FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, 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 LOSE TO MEDIUM DENSE SANDS FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT

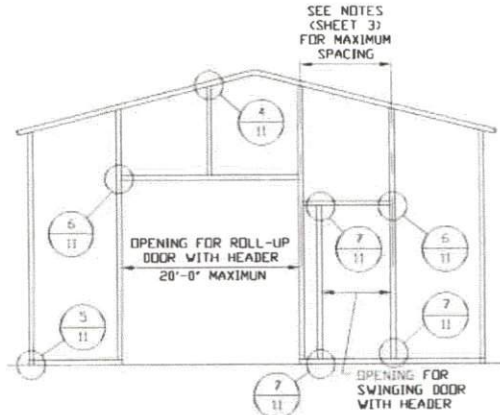
<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRS		CAROLINA CARPORTS, INC. 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE		
	CHECKED BY: PDH		JOB NO: 15156S 16135S 17324S		
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	PROJECT MGR: VSM		DATE: 1-15-18	SCALE: NTS	
	CLIENT: CAROLINA CARPORTS		SHT. 8	DWG. NO: SK-3	REV: 7

# BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



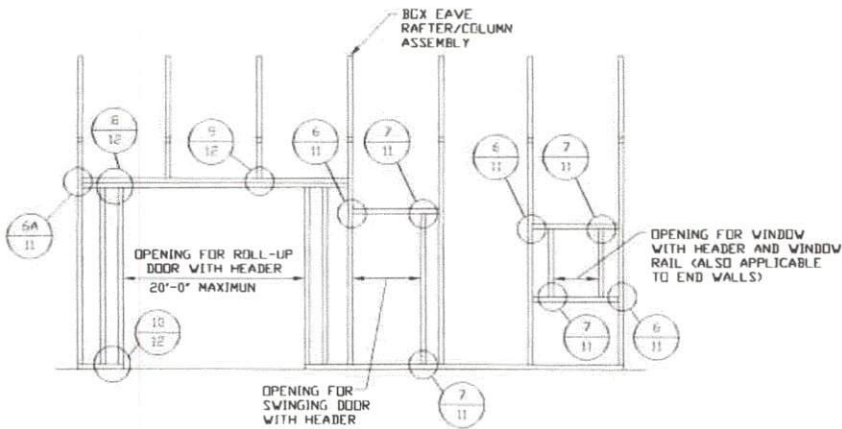
**TYPICAL BOX EAVE RAFTER  
END WALL FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

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

**DRAWN BY: JRS**

**CHECKED BY: PDH**

**PROJECT MGR: VSM**

**CLIENT: CAROLINA  
CARPORTS**

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

**DATE: 1-15-18**

**SHT. 9**

**SCALE: NTS**

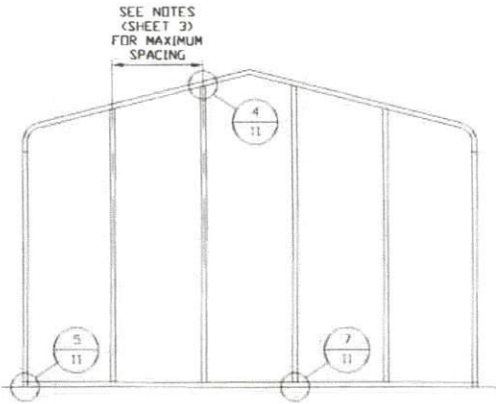
**DWG. NO: SK-3**

**JOB NO: 15156S 16135S  
17324S**

**REV: 7**

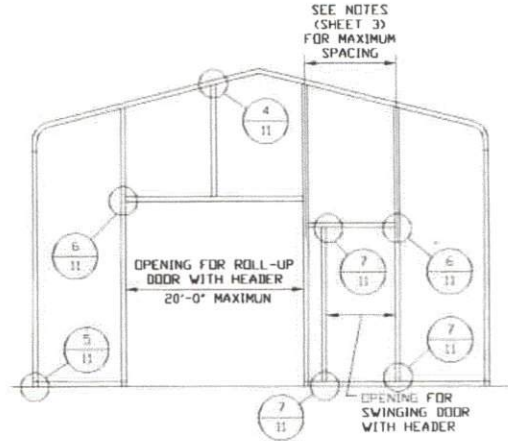
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# BOW RAFTER END WALL AND SIDE WALL OPENINGS



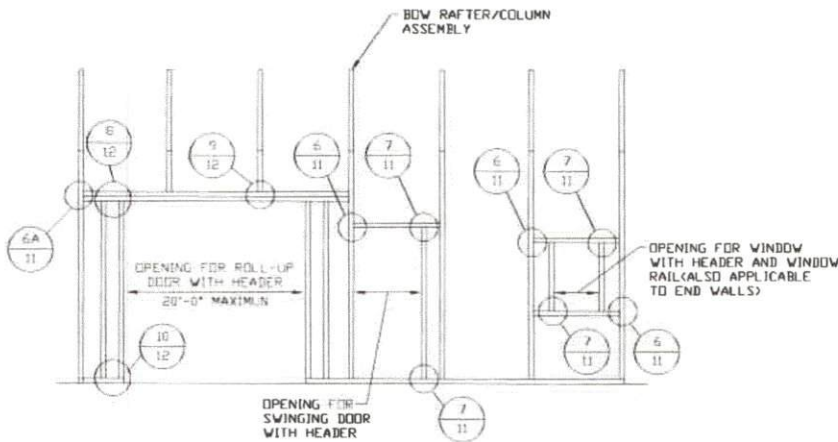
**TYPICAL BOW RAFTER  
END WALL FRAMING SECTION**

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**

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

**DATE: 1-15-18**

**SHT. 10**

**SCALE: NTS**

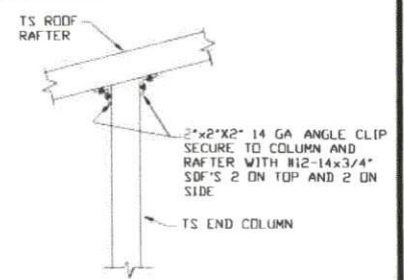
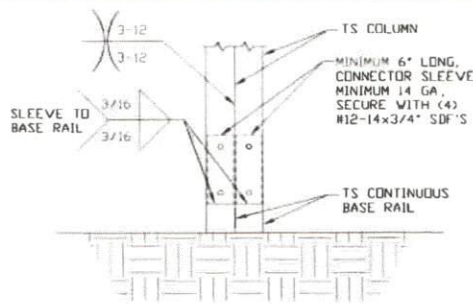
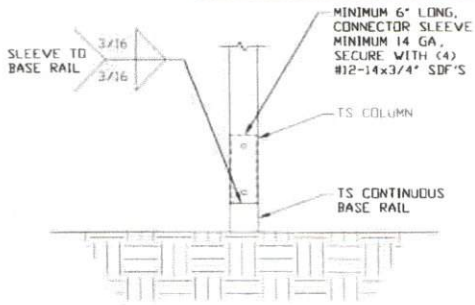
**DWG. NO: SK-3**

**JOB NO: 15156S 16135S  
17324S**

**REV: 7**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

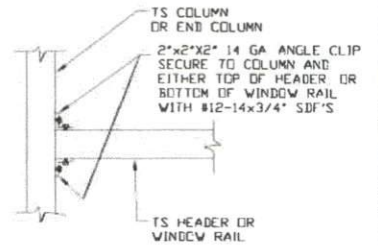
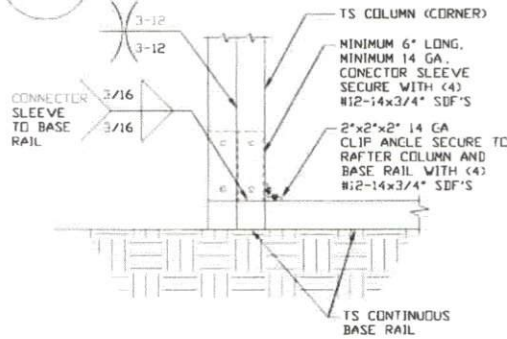
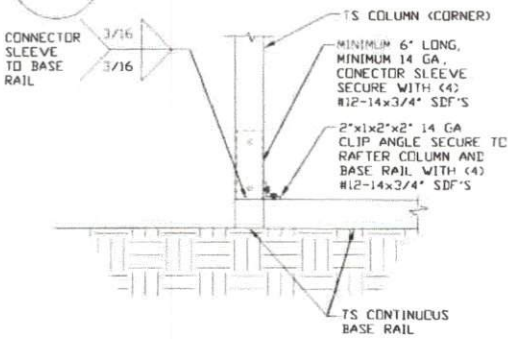
# BOW AND BOX EAVE RAFTER WALL OPENING DETAILS



**2** RAFTER COLUMN/BASE RAIL CONNECTION DETAIL  
SCALE: NTS

**2A** RAFTER COLUMN/BASE RAIL CONNECTION DETAIL  
SCALE: NTS

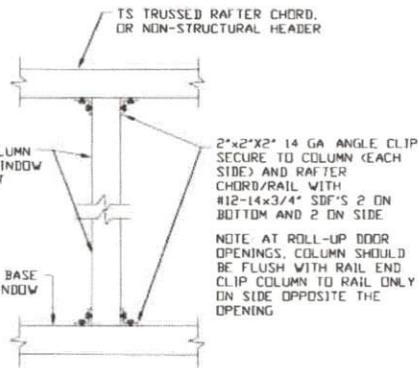
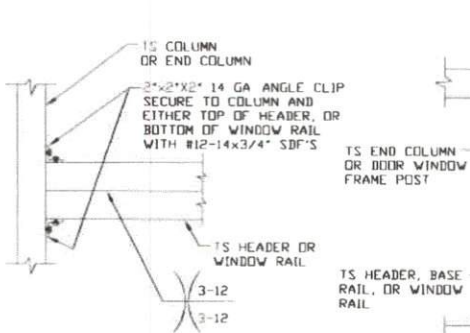
**4** END COLUMN/RAFTER CONNECTION DETAIL  
SCALE: NTS



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

**5A** END COLUMN/BASE RAIL CONNECTION DETAIL  
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

MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 11

SCALE: NTS

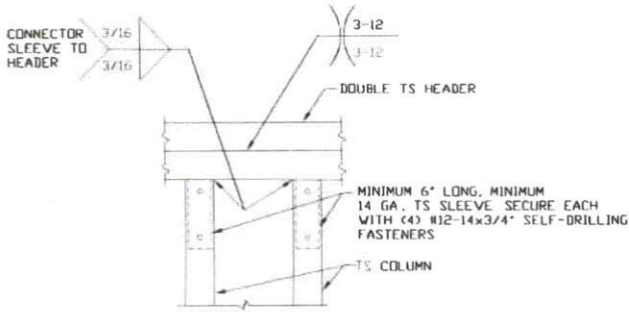
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

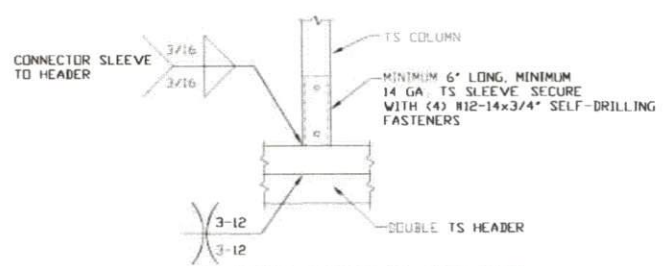
REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

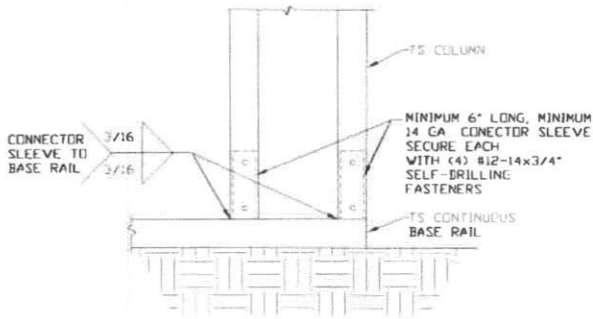
# BOW AND BOX EAVE RAFTER WALL OPENING DETAILS



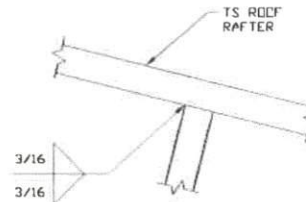
**8** DOUBLE HEADER/COLUMN CONNECTION DETAIL  
SCALE: NTS



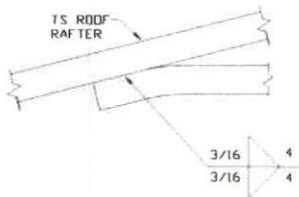
**9** COLUMN/DOUBLE HEADER CONNECTION DETAIL  
SCALE: NTS



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



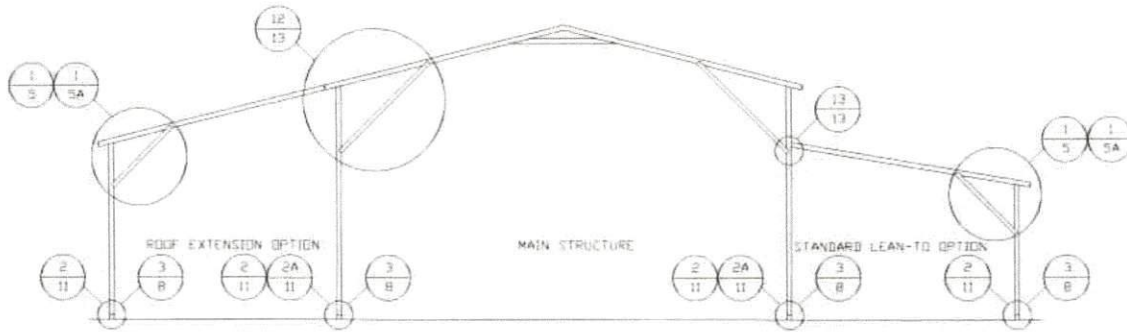
**11** RAFTER TO CHORD CONNECTION DETAIL  
SCALE: NTS



**12** COLLAR TIE CONNECTION DETAIL  
SCALE: NTS

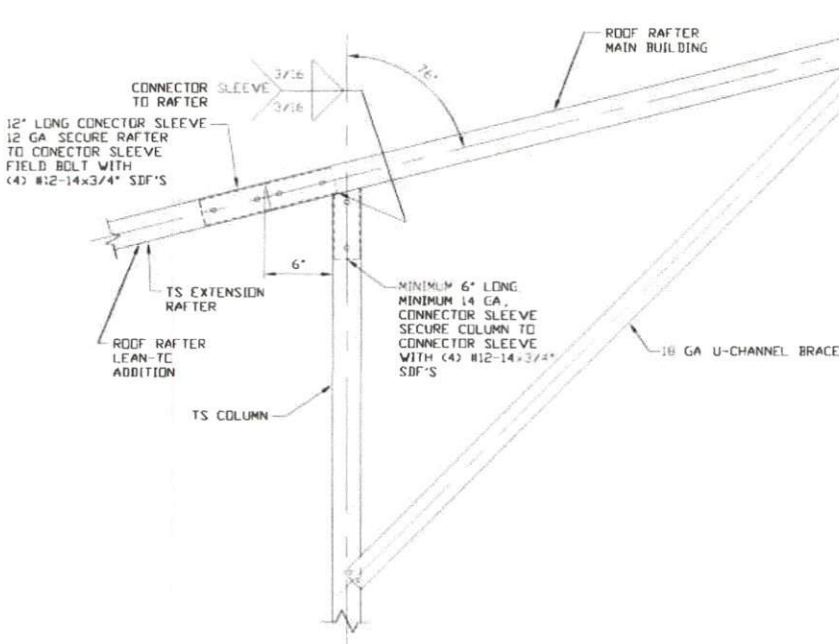
<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRS	CAROLINA CARPORTS, INC. 187 CARDINAL RIDGE TRAIL DOBSON, NC 27017 30'x20' ENCLOSED STRUCTURE		
	CHECKED BY: PDH	DATE: 1-15-18	SCALE: NTS	JOB NO: 15156S 16135S 17324S
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	PROJECT MGR: VSM	SHT. 12	DWG. NO SK-3	REV: 7
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: CAROLINA CARPORTS			

# BOX EAVE RAFTER LEAN-TO OPTIONS



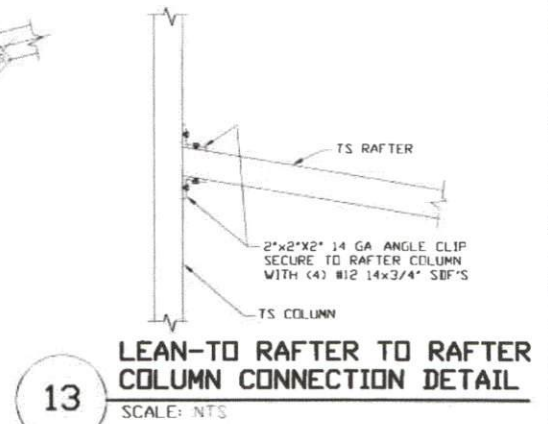
## TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

SCALE: NTS  
 MINIMUM WIDTH OF STANDARD LEAN-TO/ROOF EXTENSION IS 12'-0"



### 12 SIDE EXTENSION RAFTER/COLUMN DETAIL

SCALE: NTS



### 13 LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL

SCALE: NTS

MOORE AND ASSOCIATES  
 ENGINEERING AND CONSULTING, INC.

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA  
 CARPORTS

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

DATE: 1-15-18

SHT. 13

SCALE: NTS

DWG. NO: SK-3

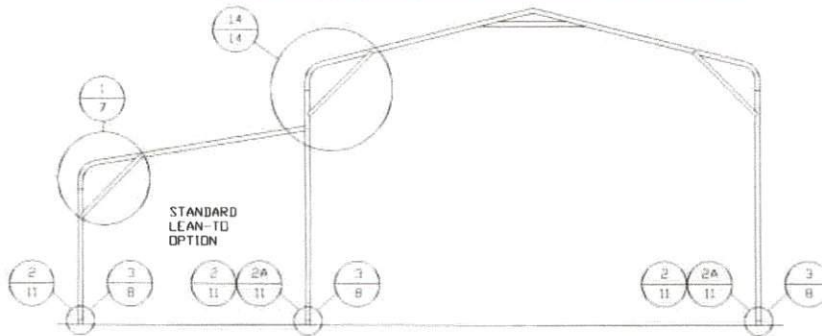
JOB NO: 15156S 16135S  
 17324S

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



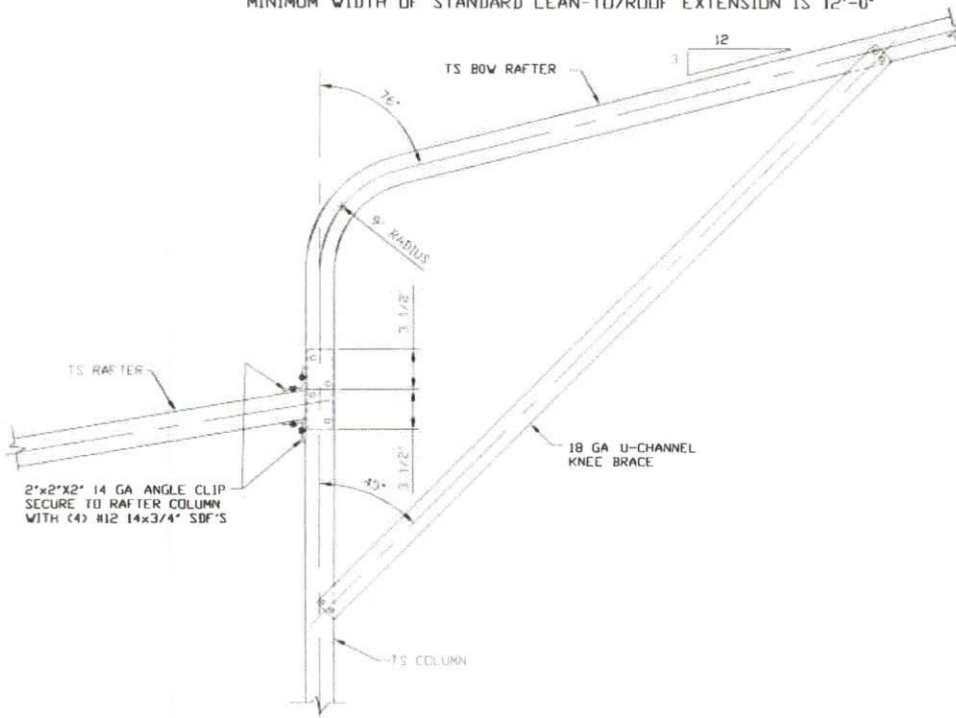
## BOW RAFTER LEAN-TO OPTION



### TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION

SCALE: NTS

MINIMUM WIDTH OF STANDARD LEAN-TO/ROOF EXTENSION IS 12'-0"



### 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: VSM**

**CLIENT: CAROLINA  
CARPORTS**

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

**DATE: 1-15-18**

**SCALE: NTS**

**SHT. 14**

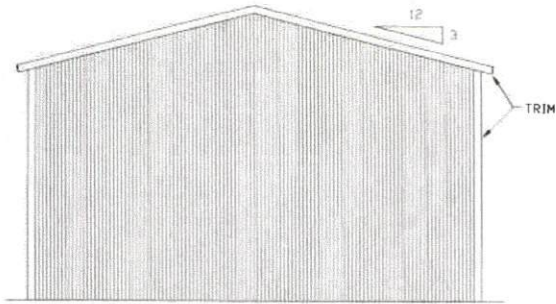
**DWG. NO SK-3**

**JOB NO: 15156S 16135S  
17324S**

**REV: 7**

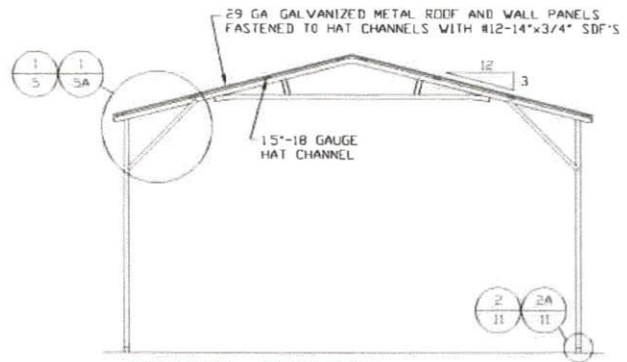
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



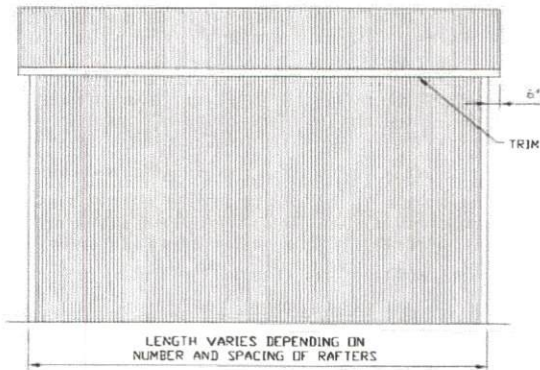
**TYPICAL END ELEVATION  
VERTICAL ROOF/SIDING**

SCALE: NTS



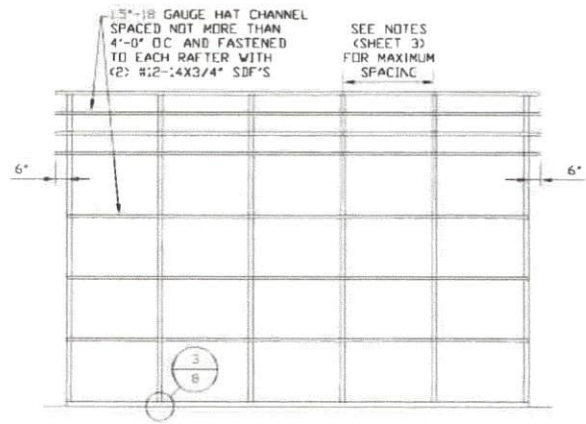
**TYPICAL SECTION  
VERTICAL ROOF/SIDING OPTION**

SCALE: NTS



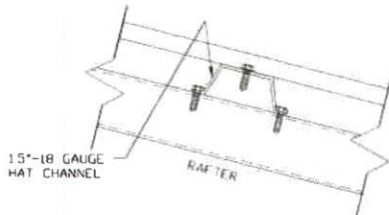
**TYPICAL SIDE ELEVATION  
VERTICAL ROOF/SIDING**

SCALE: NTS



**TYPICAL FRAMING SECTION  
VERTICAL ROOF/SIDING OPTION**

SCALE: NTS



**PANEL ATTACHMENT**

(ALTERNATE FOR VERTICAL ROOF PANELS)  
SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 15

SCALE: NTS

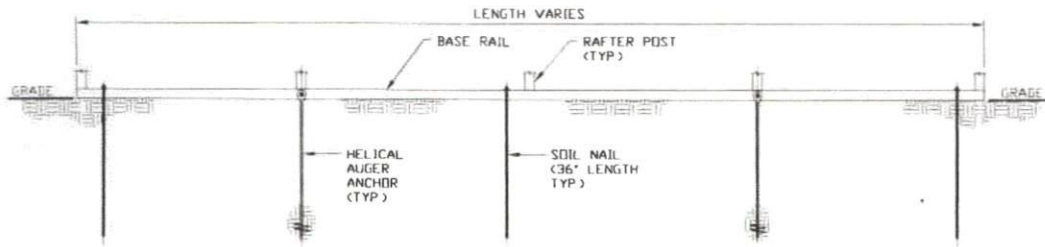
DWG. NO: SK-3

JOB NO: 15156S 16135S  
17324S

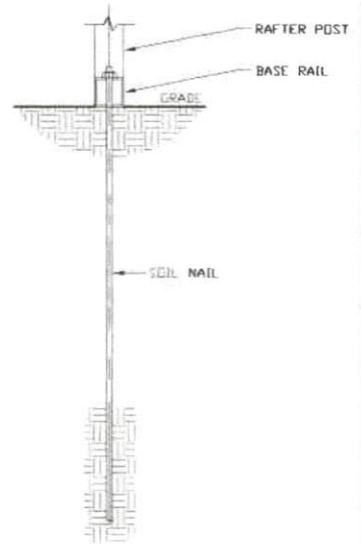
REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

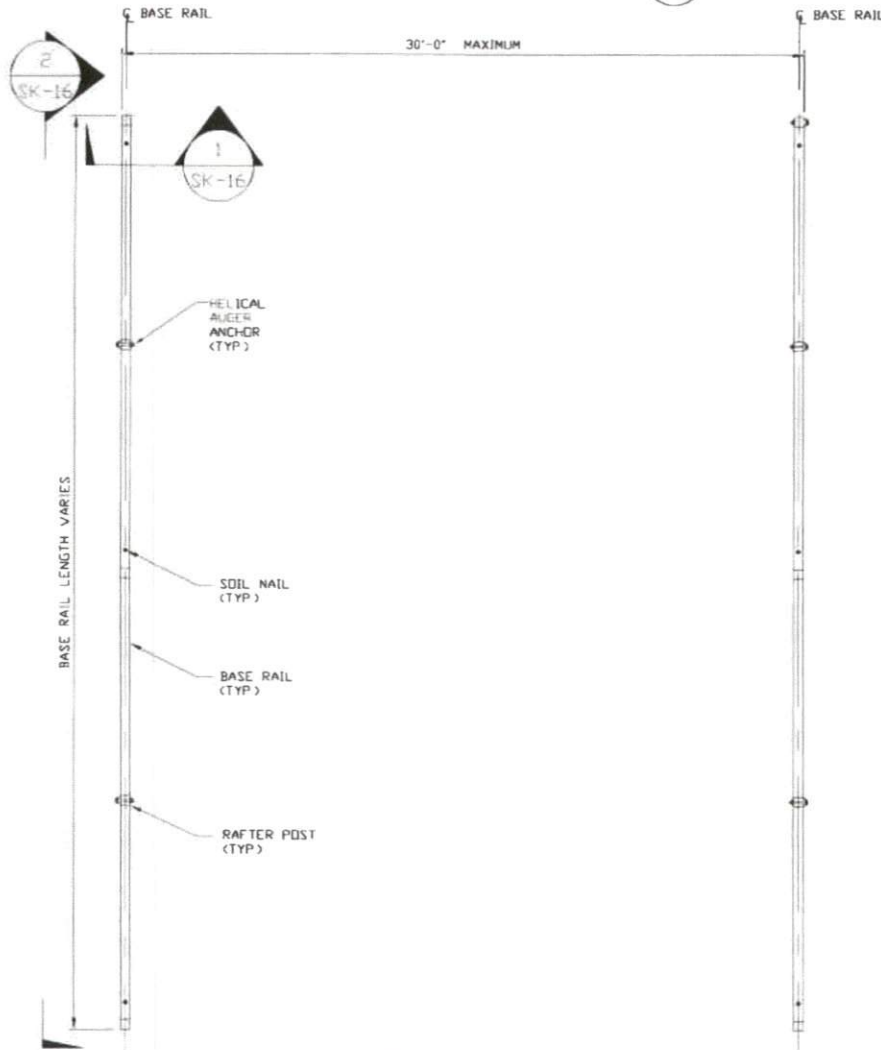
# BASE RAIL ON GRADE APPLICATION



**SECTION 2**  
SCALE: NTS  
SK-16



**SECTION 1**  
SCALE: NTS  
SK-16



**BASE RAIL PLAN**  
SCALE: NTS

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

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

DATE: 1-15-18

SCALE: NTS

SHT. 16

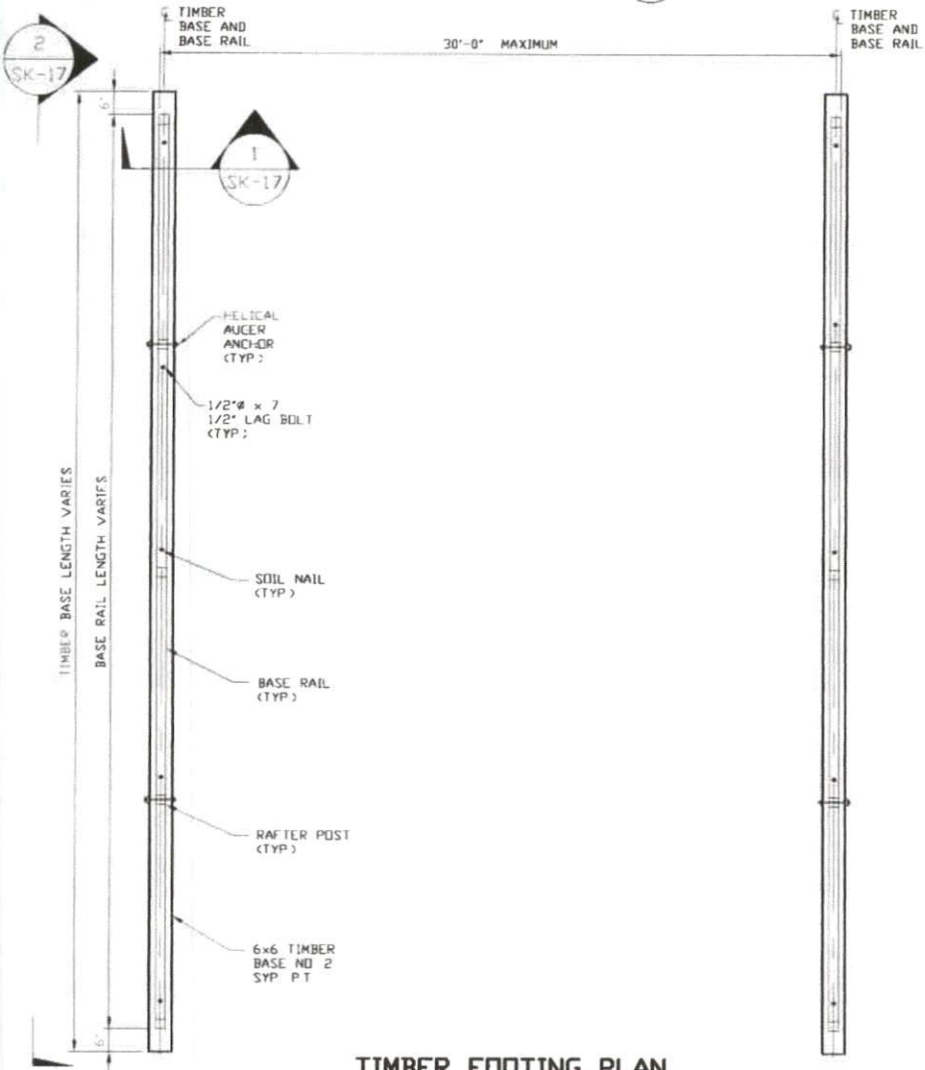
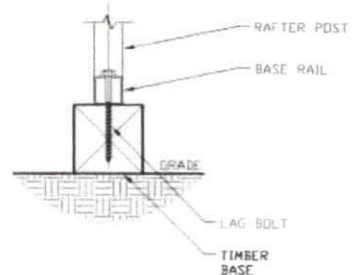
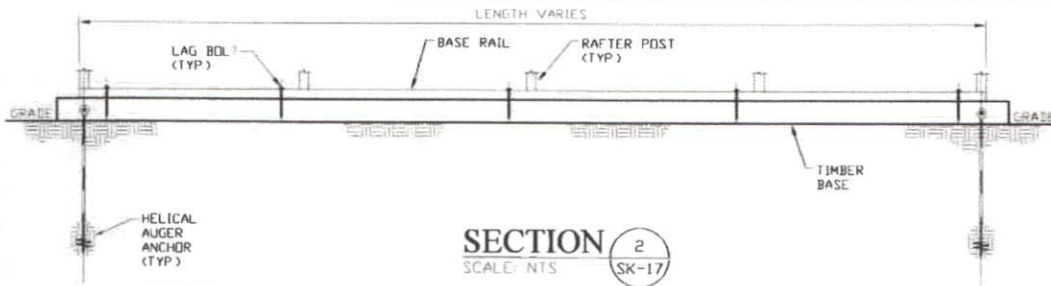
DWG. NO: SK-3

JOB NO: 15156S 1613SS  
17324S

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# OPTIONAL BASE RAIL ON TIMBER BEAM



**TIMBER FOOTING PLAN**  
SCALE: NTS

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**

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

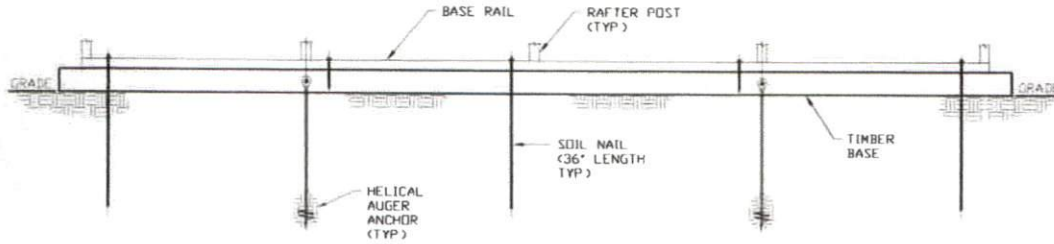
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

**PROJECT MGR: VSM**  
**CLIENT: CAROLINA CARPORTS**

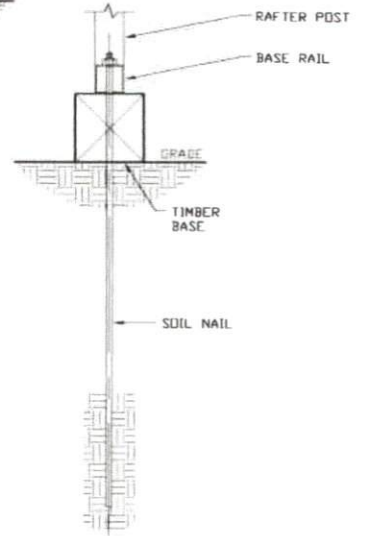
**DATE: 1-15-18**  
**SHT. 17**

**SCALE: NTS**  
**DWG. NO: SK-3**  
**JOB NO: 15156S 16135S 17324S**  
**REV: 7**

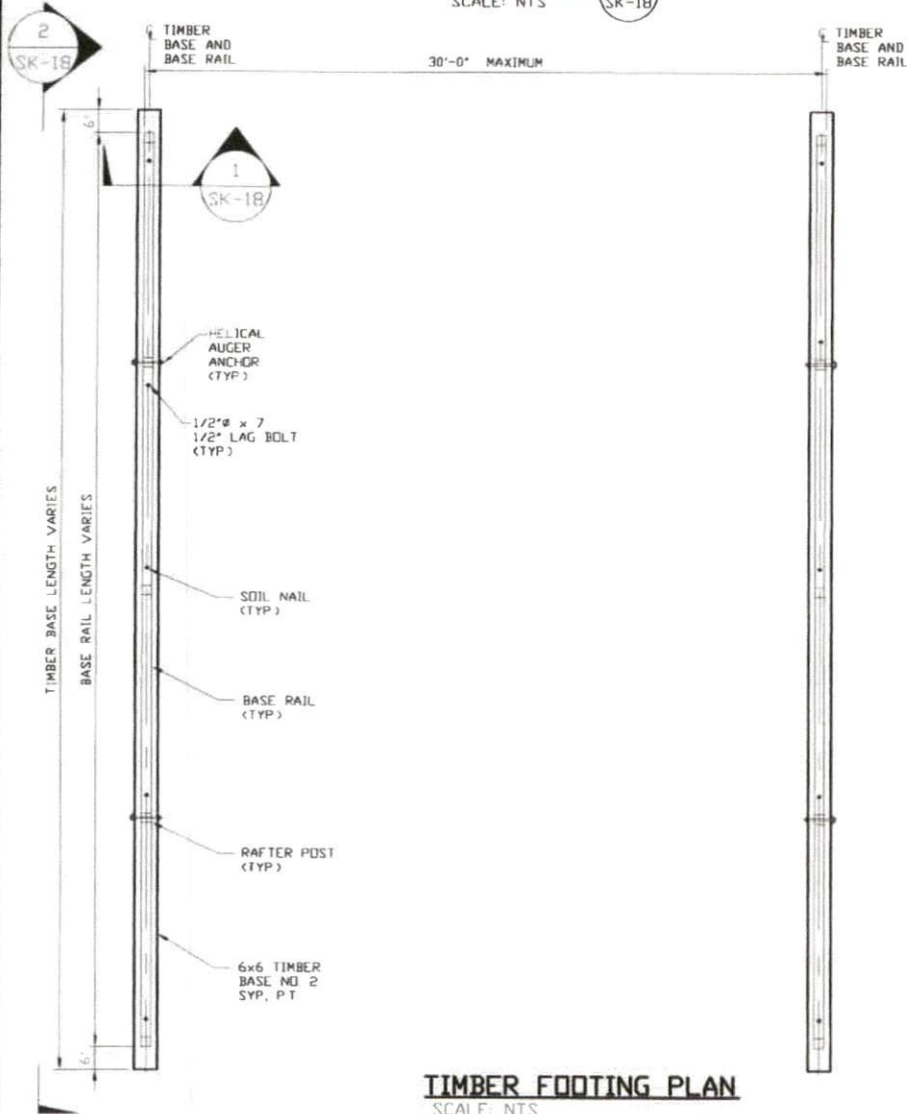
# OPTIONAL BASE RAIL ON TIMBER BEAM WITH SOIL NAIL



**SECTION 2**  
SCALE: NTS  
SK-18



**SECTION 1**  
SCALE: NTS  
SK-18



**TIMBER FOOTING PLAN**  
SCALE: NTS

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**

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

**DATE: 1-15-18**

**SHT. 18**

**SCALE: NTS**

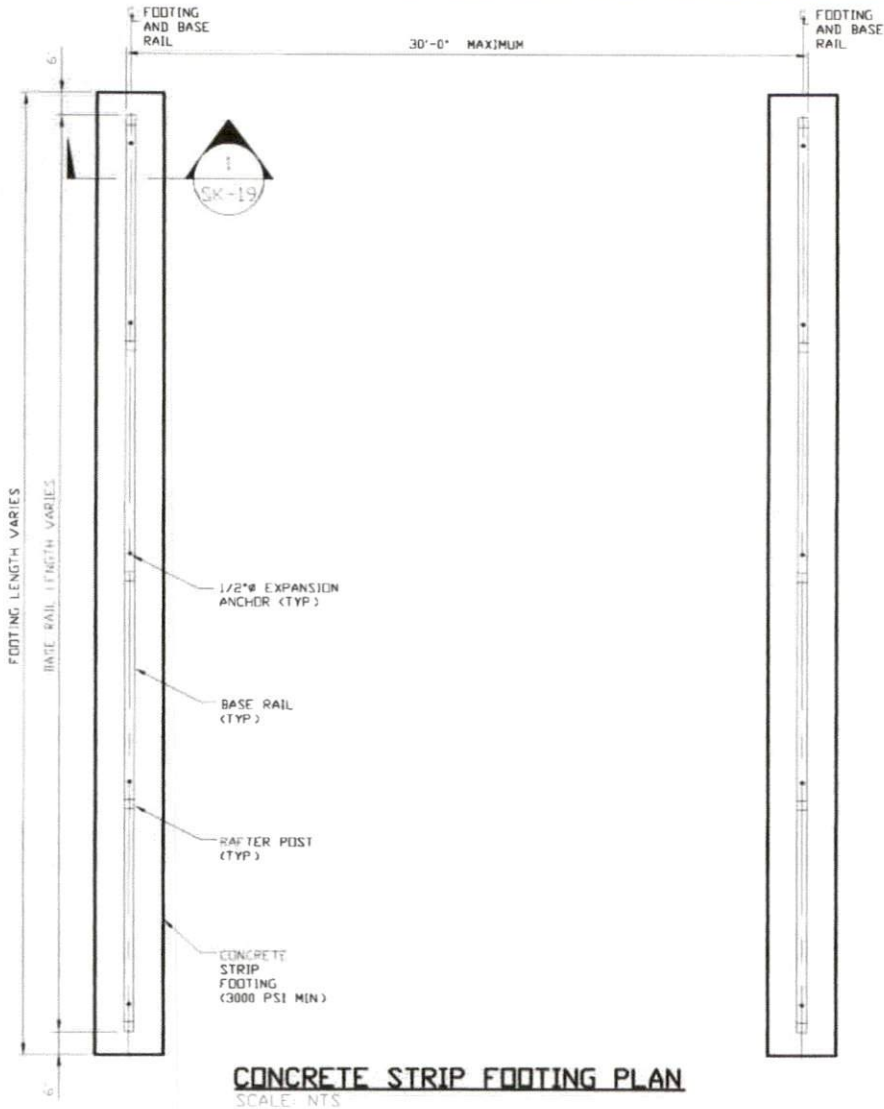
**DWG. NO: SK-3**

**JOB NO: 15156S 16135S  
17324S**

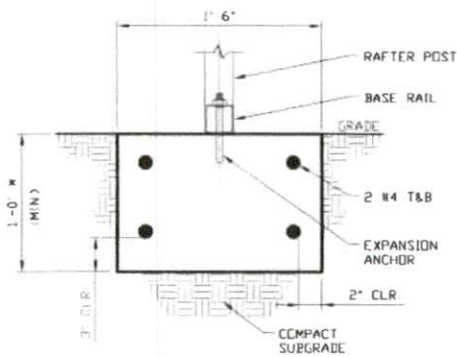
**REV: 7**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

# OPTIONAL CONCRETE STRIP FOOTING



**CONCRETE STRIP FOOTING PLAN**  
SCALE: NTS



**SECTION 1**  
SCALE: NTS

\* COORDINATE WITH LOCAL CODES/ORD

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CAROLINA  
CARPORTS

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

DATE: 1-15-18

SHT. 19

SCALE: NTS

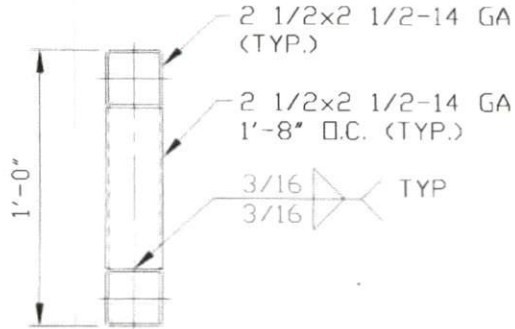
DWG. NO SK-3

JOB NO: 15156S 16135S  
17324S

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

## OPTIONAL HEADER



**HEADER DETAIL FOR OPENINGS**  
**12'-0" ≤ LENGTH ≤ 20'-0"**

SCALE: NTS

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

DRAWN BY: JRS

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CAROLINA  
 CARPORTS

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

DATE: 1-15-18

SCALE: NTS

JOB NO: 15156S 16135S  
 17324S

SHT. 20

DWG. NO: SK-3

REV: 7

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.