

STRUCTURAL DESIGN ENCLOSED BUILDING

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

3 February 2025
Revision 9

M&A Project No. 17232S/18070S/18094S/19050S/20127S/23045S/24328S

Prepared for:

Elephant Structures
1804 River Street
Wilkesboro, NC 28697

Prepared by:

Moore and Associates Engineering and Consulting, Inc.

1009 East Avenue
North Augusta, SC 29841



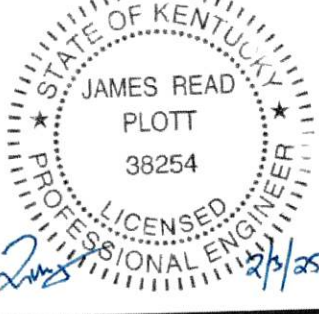




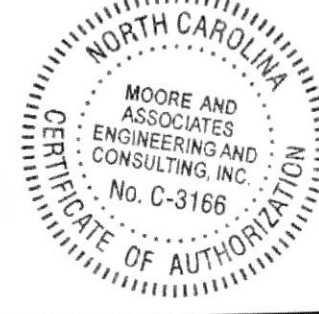
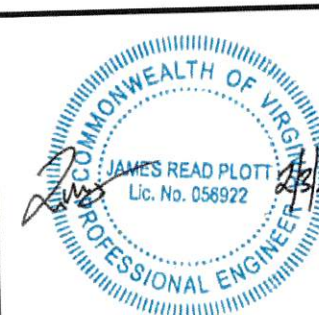
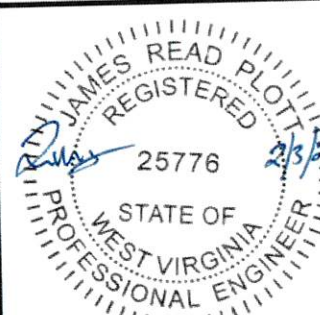
401 S. Main Street, Suite 200
Mount Airy, NC 27030



Validity Notice

Plans Expiration Date: 3 February 2026
Plans are valid for one year from issuance date

Moore and Associates Engineering and Consulting, Inc. ("Moore & Associates") is the author and owner of all plans, drawings, specifications, etc. ("Instruments of Service") provided by it, and retains all common law, statutory, and other reserved rights, including without limitation copyrights. A limited license is granted to you for use of the Instruments of Service solely and exclusively in connection with the specific project for which the Instruments of Service were created by Moore & Associates. All other uses, including without limitation transfer to a third party, are strictly prohibited. Acceptance of the Instruments of Service constitutes your agreement to indemnify and to hold Moore & Associates harmless from all cost, expenses, damages, and attorney's fees arising from or relating to any unauthorized use or transfer of the Instruments of Service.

			
			
			
			<p>Validity Notice</p> <p>Plans Expiration Date:</p> <p>3 February 2026</p>
<p>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</p>		<p>DRAWN BY: JG</p> <p>CHECKED BY: PDH</p> <p>PROJECT MGR: JRP</p> <p>CLIENT: ES</p>	<p>ELEPHANT STRUCTURES 1804 RIVER STREET WILKESBORO, NC 28697 30'-0" x 16'-0" ENCLOSED BUILDING</p> <p>DATE: 2-3-25</p> <p>SHT. 1</p> <p>SCALE: NTS</p> <p>DWG. NO: SK-3</p> <p>JOB NO: 18094S/19050S/ 20127S/23045S/24328S</p> <p>REV: 9</p>
<p>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.</p>			

DRAWING INDEX

SHEET 1	PE SEAL COVER SHEET
SHEET 2	DRAWING INDEX
SHEET 3	INSTALLATION NOTES AND SPECIFICATIONS
SHEET 3A	LIST OF APPLICABLE BUILDING CODES
SHEET 4	TYPICAL SIDE AND END ELEVATIONS
SHEET 5	TYPICAL RAFTER/COLUMN FRAMING AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 5A	TYPICAL RAFTER/COLUMN FRAMING AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 6	COLUMN CONNECTION DETAILS FOR WIND SPEEDS 105 < TO ≤ 150 MPH
SHEET 6A	COLUMN CONNECTION DETAILS FOR WIND SPEEDS 105 < TO ≤ 150 MPH
SHEET 6B	COLUMN CONNECTION DETAILS FOR WIND SPEEDS ≤ 105 MPH
SHEET 6C	COLUMN CONNECTION DETAILS FOR WIND SPEEDS ≤ 105 MPH
SHEET 7	TYPICAL RAFTER/COLUMN FRAMING AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 7A	TYPICAL RAFTER/COLUMN FRAMING AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 8	COLUMN CONNECTION DETAILS FOR WIND SPEEDS 105 < TO ≤ 150 MPH
SHEET 8A	COLUMN CONNECTION DETAILS FOR WIND SPEEDS 105 < TO ≤ 150 MPH
SHEET 8B	COLUMN CONNECTION DETAILS FOR WIND SPEEDS ≤ 105 MPH
SHEET 8C	COLUMN CONNECTION DETAILS FOR WIND SPEEDS ≤ 105 MPH
SHEET 9	BASE RAIL ANCHORAGE OPTIONS
SHEET 9A	BASE RAIL ANCHORAGE OPTIONS
SHEET 9B	BASE RAIL ANCHORAGE OPTIONS
SHEET 9C	BASE RAIL ANCHORAGE OPTIONS
SHEET 9D	BASE RAIL ANCHORAGE OPTIONS FOR WIND SPEEDS 105 MPH < TO ≤ 150 MPH
SHEET 9E	BASE RAIL ANCHORAGE OPTIONS FOR ≤ 105 MPH
SHEET 10	BOX EAVE RAFTER END WALL AND SIDE WALL FRAMING SECTIONS
SHEET 11	BOX EAVE RAFTER END WALL AND SIDE WALL FRAMING SECTIONS
SHEET 12	CONNECTION DETAILS
SHEET 13	CONNECTION DETAILS
SHEET 14	CONNECTION DETAILS
SHEET 15	CONNECTION DETAILS
SHEET 16	BOX EAVE RAFTER LEAN-TO OPTIONS (3:12 LEAN-TO ROOF PITCH)
SHEET 16A	BOX EAVE RAFTER LEAN-TO OPTIONS (3:12 LEAN-TO ROOF PITCH)
SHEET 16B	BOX EAVE RAFTER LEAN-TO OPTIONS (1:12 LEAN-TO ROOF PITCH)
SHEET 16C	BOX EAVE RAFTER LEAN-TO OPTIONS (3:12 LEAN-TO ROOF PITCH)
SHEET 16D	BOX EAVE RAFTER LEAN-TO OPTIONS (1:12 LEAN-TO ROOF PITCH)
SHEET 17	BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION
SHEET 18	OPTIONAL CONCRETE STRIP FOOTING WITH ATTACHED LEAN-TO AND WIND SPEEDS 105 < TO ≤ 150 MPH
SHEET 18A	OPTIONAL CONCRETE STRIP FOOTING WITH ATTACHED LEAN-TO AND WIND SPEEDS ≤ 105 MPH
SHEET 18B	OPTIONAL CONCRETE STRIP FOOTING WITHOUT ATTACHED LEAN-TO AND WIND SPEEDS 105 < TO ≤ 150 MPH
SHEET 19	SIDE WALL HEADER OPTIONS GROUND SNOW LOADS ≤ 35 PSF AND 35 PSF < TO ≤ 45 PSF FOR TS DOUBLE COLUMNS
SHEET 19A	END WALL HEADER OPTIONS GROUND SNOW LOADS ≤ 35 PSF AND 35 PSF < TO ≤ 45 PSF FOR TS DOUBLE COLUMNS
SHEET 19B	END WALL HEADER OPTIONS GROUND SNOW LOADS ≤ 35 PSF AND 35 PSF < TO ≤ 45 PSF FOR TS SINGLE COLUMNS
SHEET 19C	END WALL HEADER OPTIONS GROUND SNOW LOADS ≤ 35 PSF AND 35 PSF < TO ≤ 45 PSF FOR TS SINGLE COLUMNS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

SHT. 2

DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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.

INSTALLATION NOTES AND SPECIFICATIONS

1. DESIGN IS FOR MAXIMUM 30'-0" WIDE x 16'-0" EAVE HEIGHT ENCLOSED STRUCTURES.
 2. DESIGN WAS DONE IN ACCORDANCE WITH ALL THE APPLICABLE BUILDING CODES LISTED ON SHEET 3A.
 3. DESIGN LOADS ARE AS FOLLOWS:
 - A) ROOF DEAD LOADS:
 - SELF-WEIGHT = 1.5 PSF
 - MEP = 0 PSF
 - COLLATERAL = 0 PSF
 - B) ROOF LIVE LOAD = 12 PSF
 - C) FLOOR LIVE LOAD = 100 PSF (4' CONCRETE SLAB-ON-GRADE)
 - D) GROUND SNOW LOAD = 45 PSF MAX. AT 4'-0" RAFTER/POST SPACING
= 35 PSF MAX. AT 5'-0" RAFTER/POST SPACING
= 20 PSF WITH U-CHANNEL RAFTER TIE AND $W \leq 16'-0"$
- NOTE: UNBALANCED LOADING DUE TO SNOW DRIFT/SLIDING FROM AN ADJACENT TALLER STRUCTURE HAS NOT BEEN EVALUATED. DROP-DOWN LEAN-TO'S (THOSE CAUSING A HEIGHT DIFFERENTIAL FROM THE MAIN STRUCTURE) SHALL ONLY BE USED FOR GROUND SNOW LOADS ≤ 30 PSF.
4. 3-SECOND GUST ULTIMATE WIND SPEED (V_{ULT}) = 105 TO 150 MPH (NOMINAL WIND SPEED = 81 TO 116 MPH).
 5. MAXIMUM RAFTER/POST AND END POST SPACING = 5.0 FEET FOR GROUND LOAD ≤ 35 PSF AND 4'-0" O.C. FOR GROUND SNOW LOAD BETWEEN 35 PSF AND 45 PSF.
 6. END WALL COLUMNS/POSTS ARE EQUIVALENT TO SIDE WALL COLUMNS/POSTS IN SIZE AND SPACING UNLESS NOTED OTHERWISE.
 7. RISK CATEGORY I (NOT FOR HUMAN OCCUPANCY).
 8. WIND EXPOSURE CATEGORY B.
 9. STRUCTURAL ANALYSIS/DESIGN IS BASED ON TS MEETING THE REQUIREMENTS OF ASTM A653 GRADE 50 WITH MINIMUM YIELD STRENGTH (F_y) OF 50 KSI AND GALVANIZING MEETING THE MINIMUM REQUIREMENTS OF G60.
 10. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2' x 3' - 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS (UNLESS NOTED OTHERWISE).
 11. CONNECTOR SLEEVES ARE MINIMUM 6' LONG, TS 1 3/4' x 2 3/4' - 14 GAUGE FOR 2' x 3' - 14 GAUGE FRAMING MEMBERS (UNLESS NOTED OTHERWISE).
 12. AVERAGE PANEL FASTENER SPACING ON-CENTERS = 10" O.C. (MAX.)
 13. FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR ROOF SLOPES OF 14° (3:12 PITCH) OR LESS. ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF JOINT SEALANT.
 14. ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES.
 15. CONTRACTOR TO PROVIDE ADEQUATE BRACING FOR STRUCTURE SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURE AND FOUNDATION ARE DESIGNED FOR A COMPLETED CONDITION ONLY AND, THEREFORE, REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION.
 16. CONTRACTOR TO PROVIDE ADEQUATE BRACING FOR STRUCTURE SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURE AND FOUNDATION ARE DESIGNED FOR A COMPLETED CONDITION ONLY AND, THEREFORE, REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION.
 17. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
 - SOIL SITE CLASS = D
 - RISK CATEGORY I
 - $R = 3.25$
 - $S_{DS} = 2.625 g$
 - $S_{D1} = 2.13 g$
 - $I_E = 1.0$
 - $V = C_s W$
 18. APPLY LAP SEALANT TO METAL ROOF PANELS FOR 1:12 ROOF SLOPES.
 19. IF MORE THAN 50% OF COLUMNS (LEGS) ARE REMOVED IN ANY LONGITUDINAL (SIDE) WALLS OF A BUILDING, THE ENGINEER IS TO BE NOTIFIED TO DETERMINE WHETHER PORTAL FRAMES OR OTHER LONGITUDINAL STABILITY ELEMENTS WILL BE REQUIRED.
 20. ANALYSIS/DESIGN OF THIS STRUCTURE WAS BASED ON THE LOADS, BUILDING CODE, AND STRUCTURAL GEOMETRY NOTED HEREIN. NO CHANGES SHALL BE MADE TO THE STRUCTURE WITHOUT EXPRESS WRITTEN PERMISSION FROM THE DESIGN ENGINEER. ANY CHANGES IN THE USE OR GEOMETRY OF THE STRUCTURE IN ANY MANNER IS A VIOLATION OF THE BUILDING CODE AND NEGATES ANY LIABILITY ON THE PART OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.
 21. USE E70 ELECTRODES FOR WELDED CONNECTIONS. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.3.
 22. WHEN USING GENERIC MASTER DESIGNS TO OBTAIN BUILDING PERMIT, IT MUST BE ACCOMPANIED BY SUFFICIENT ADDITIONAL INFORMATION TO INDICATE THE LOCATION, NATURE, AND EXTENT OF THE CONSTRUCTION AND SHOW IN DETAIL THAT IT WILL CONFIRM TO ALL APPLICABLE CODES, LAWS, ORDINANCES, RULES, AND REGULATIONS.
 23. WHEN APPLYING FOR BUILDING PERMIT, THE BUILDING OFFICIAL MUST BE CONSULTED TO VERIFY WHETHER THE USE OF THE MASTER DESIGN IS ADEQUATE OR IF A SITE-SPECIFIC DESIGN IS REQUIRED FOR OBTAINING A BUILDING PERMIT. GENERIC MASTER DESIGNS CAN NOT BE USED WHERE A SITE-SPECIFIC DESIGN IS REQUIRED.
 24. ANY VARIATION FROM THE ANALYSIS/DESIGN PARAMETERS OF THE MASTER DESIGN REQUIRES THE DEVELOPMENT OF A SITE-SPECIFIC DESIGN.

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

JOB NO: 18094S/19050S/
20127S/23045S/24329S

SHT. 3

DWG. NO: SK-3

REV: 9

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.

LIST OF APPLICABLE BUILDING CODES

2021 INTERNATIONAL BUILDING CODE (IBC 2021)

2018 INTERNATIONAL BUILDING CODE (IBC 2018)

2015 INTERNATIONAL BUILDING CODE (IBC 2015)

2012 INTERNATIONAL BUILDING CODE (IBC 2012)

ALABAMA BUILDING CODE 2021
(ADOPTS THE IBC 2021 WITHOUT AMENDMENTS)
(IBC 2015, IBC 2018, IBC 2021
(DEPENDENT UPON LOCAL JURISDICTION))

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

KENTUCKY BUILDING CODE 2018
(ADOPTS THE IBC 2015 WITH AMENDMENTS)

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

SOUTH CAROLINA BUILDING CODE 2021
(ADOPTS THE IBC 2021 WITH AMENDMENTS)

TENNESSEE BUILDING CODE 2012
(ADOPTS THE IBC 2012 WITH AMENDMENTS)
KNOXVILLE BUILDING CODE 2024
(ADOPTS THE IBC 2024 WITHOUT AMENDMENTS)
BUILDING CODE OF METROPOLITAN NASHVILLE AND
DAVIDSON COUNTY (ADOPTS THE IBC 2018 WITH AMENDMENTS)
(IBC 2012, IBC 2018, IBC 2021 (DEPENDENT UPON LOCAL JURISDICTION))

VIRGINIA UNIFORM STATEWIDE BUILDING CODE, PART I,
CONSTRUCTION/VIRGINIA CONSTRUCTION CODE (VCC)
(ADOPTS THE IBC 2021 WITH AMENDMENTS)

WEST VIRGINIA BUILDING CODE 2018
(ADOPTS THE IBC 2018 WITH AMENDMENTS)

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

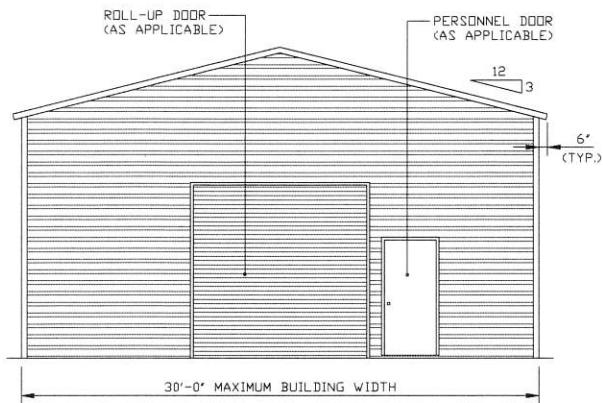
DWG. NO: SK-3

REV: 9

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.

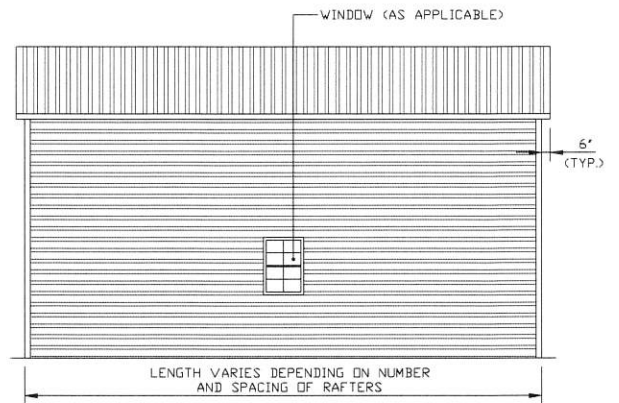
JOB NO: 18094S/19050S/
20127S/23045S/24328S

TYPICAL SIDE AND END ELEVATIONS



TYPICAL END ELEVATION

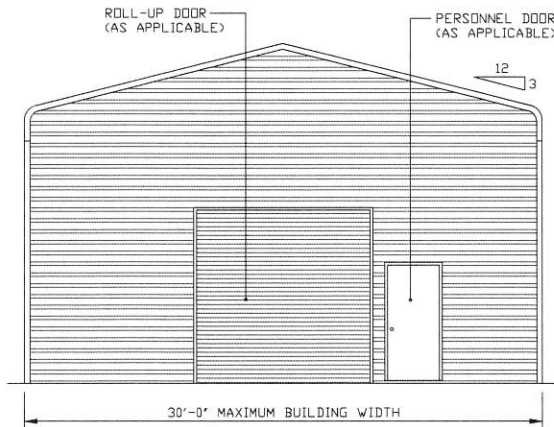
SCALE: NTS



TYPICAL SIDE ELEVATION

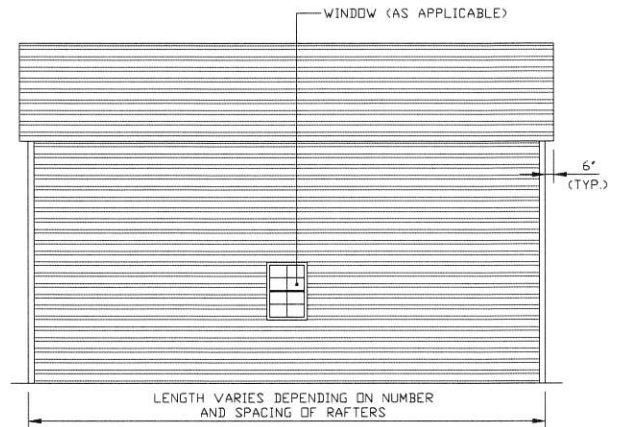
SCALE: NTS

NOTE: HORIZONTAL ROOF PANELING ONLY
APPLICABLE FOR WIND SPEEDS \leq 120 MPH
AND GROUND SNOW LOADS \leq 25 PSF.



TYPICAL END ELEVATION

SCALE: NTS



TYPICAL SIDE ELEVATION

SCALE: NTS

NOTE: HORIZONTAL ROOF PANELING ONLY
APPLICABLE FOR WIND SPEEDS \leq 120 MPH
AND GROUND SNOW LOADS \leq 25 PSF.

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SCALE: NTS

DWG. NO: SK-3

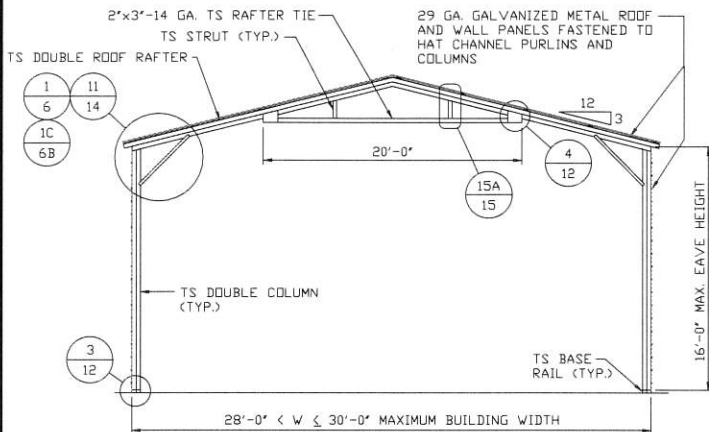
**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

SHT. 4

REV: 9

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.

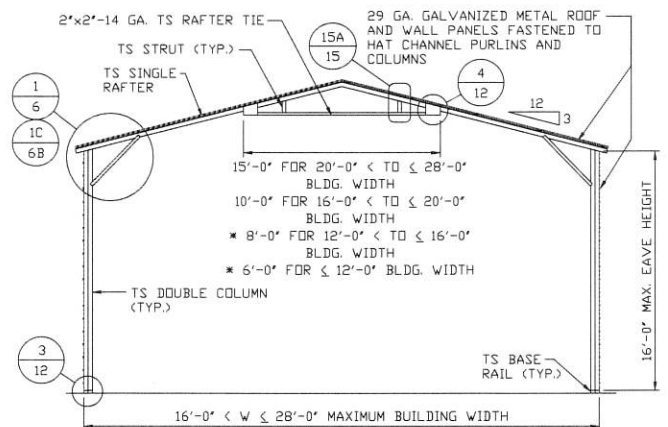
TYPICAL RAFTER/COLUMN FRAME AND SIDE FRAMING SECTION (BOX EAVE STRUCTURE)



TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

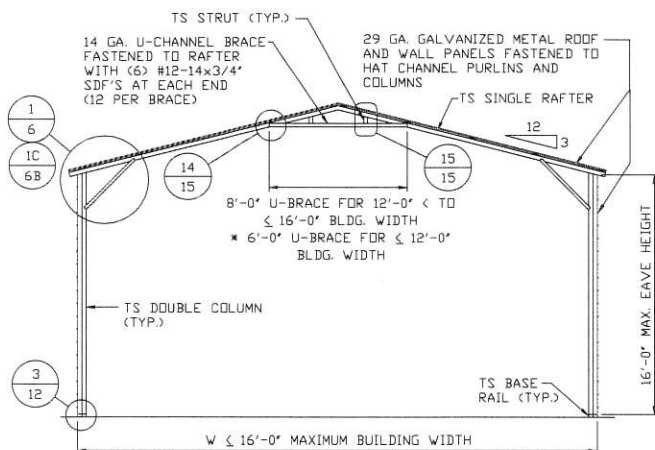
NOTE: SINGLE TUBE RAFTER ALLOWED FOR GROUND SNOW LOADS ≤ 30 PSF.



TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

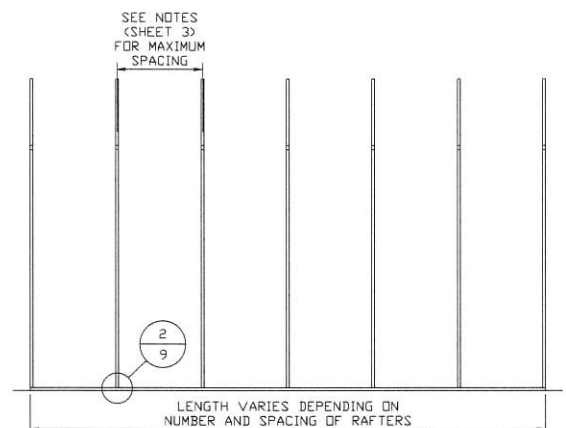
* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.



TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 5

SCALE: NTS

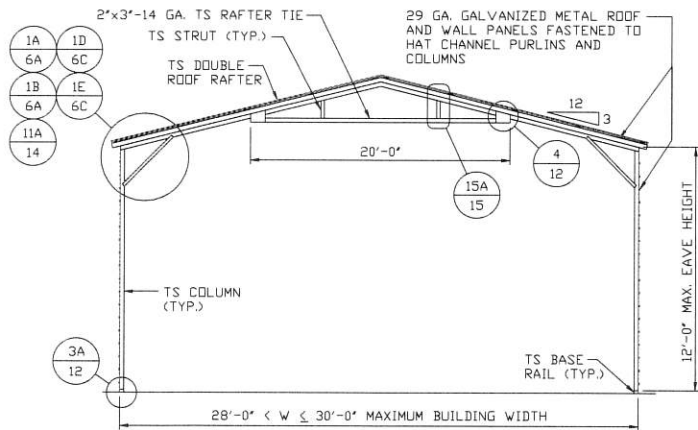
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23043S/24328S**

REV: 9

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.

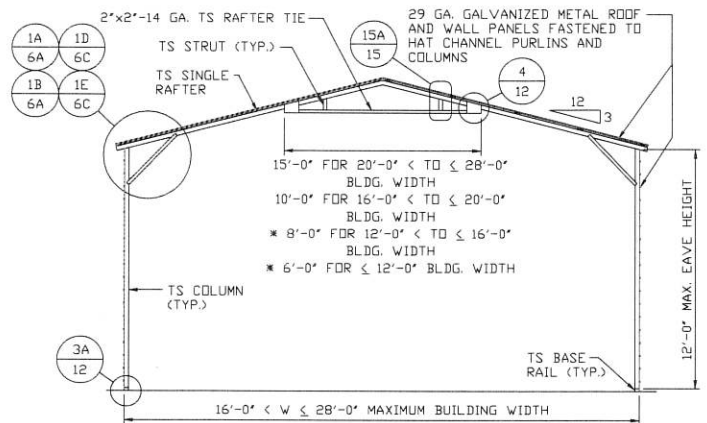
TYPICAL RAFTER/COLUMN FRAME AND SIDE FRAMING SECTION (BOX EAVE STRUCTURE)



TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

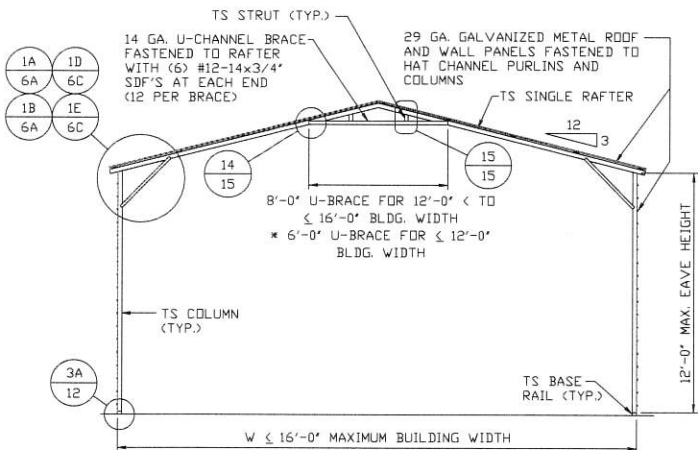
NOTE: SINGLE TUBE RAFTER ALLOWED FOR GROUND SNOW LOADS ≤ 30 PSF.



TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

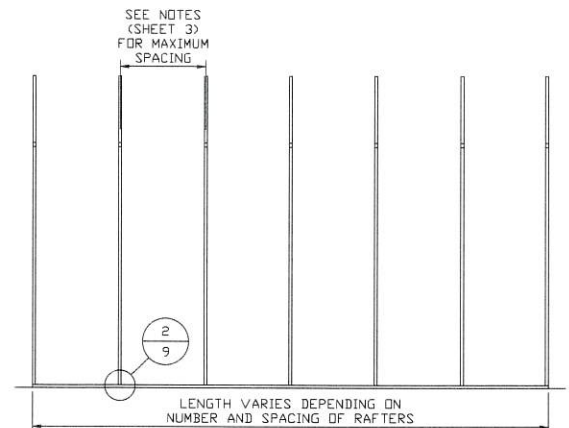
* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.



TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"X16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 5A

SCALE: NTS

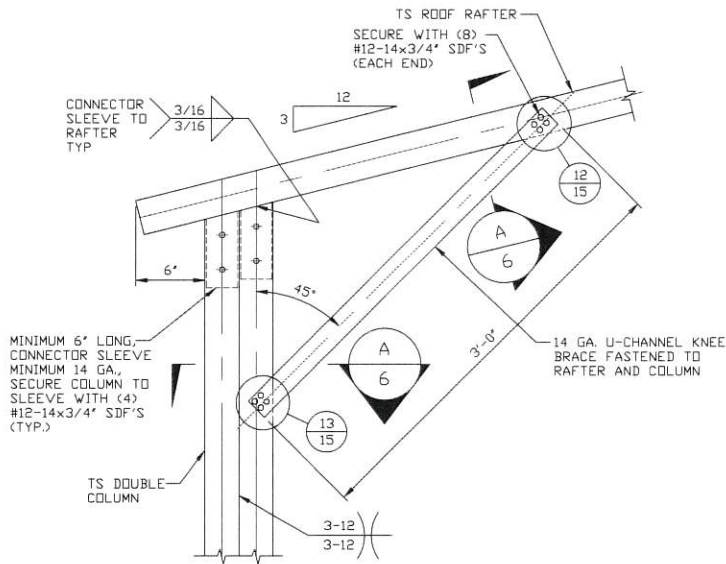
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

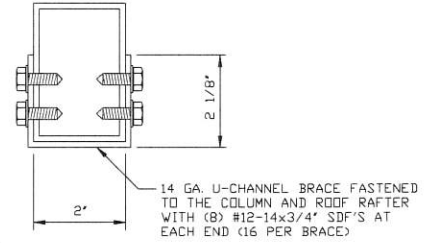
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

COLUMN CONNECTION DETAILS FOR WIND SPEEDS $105 < TO \leq 150$ MPH



**BOX EAVE RAFTER COLUMN
CONNECTION DETAIL**
HEIGHTS 12'-0" < TO \leq 16'-0"
SCALE: NTS

1



A

BRACE SECTION
SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

SHT. 6

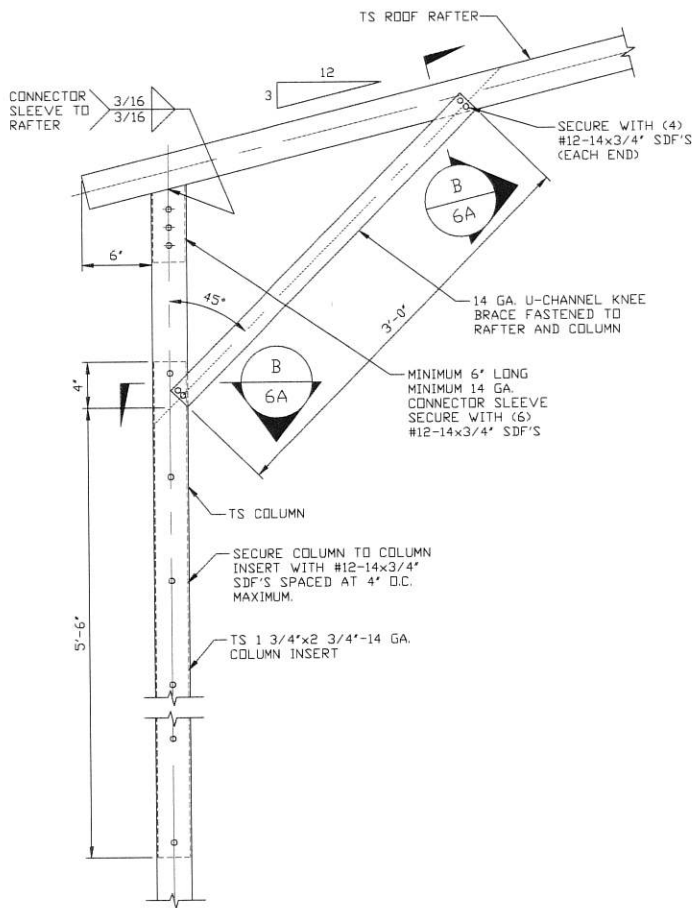
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

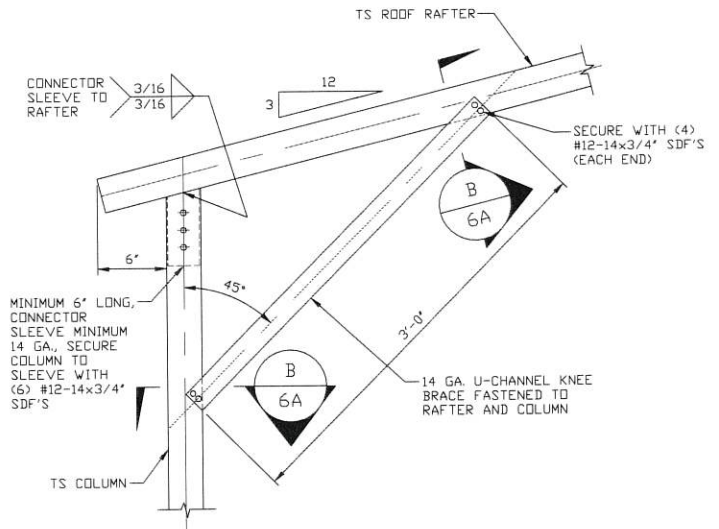
REV: 9

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.

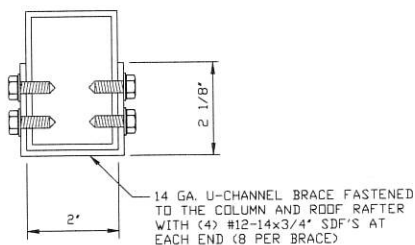
COLUMN CONNECTION DETAILS FOR WIND SPEEDS $105 < TO \leq 150$ MPH



1A BOX EAVE RAFTER COLUMN CONNECTION DETAIL HEIGHTS $9'-0'' < TO \leq 12'-0''$ SCALE: NTS



1B BOX EAVE RAFTER COLUMN CONNECTION DETAIL HEIGHTS $\leq 9'-0''$ SCALE: NTS



B BRACE SECTION SCALE: NTS

Validity Notice
Plans Expiration Date:
3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 6A

SCALE: NTS

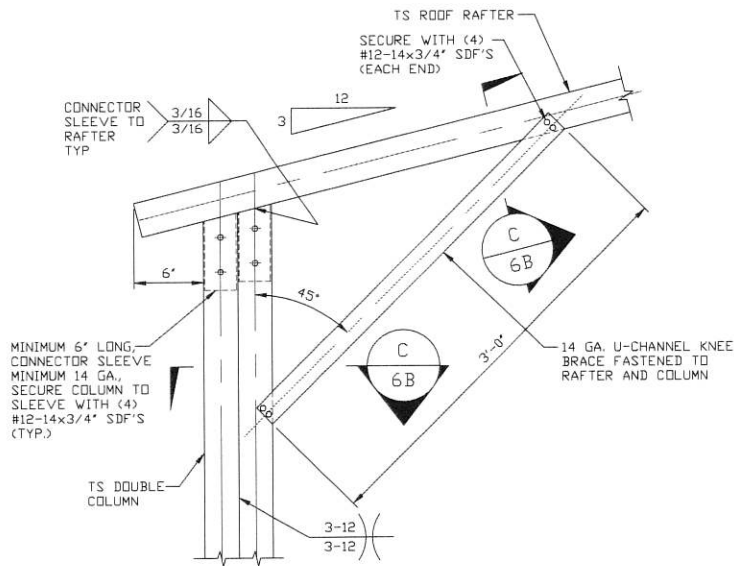
DWG. NO: SK-3

JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

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.

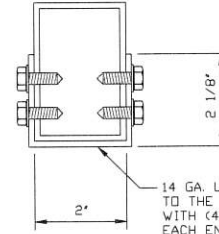
COLUMN CONNECTION DETAILS FOR WIND SPEEDS ≤ 105 MPH



**BOX EAVE RAFTER COLUMN
CONNECTION DETAIL**
HEIGHTS 14'-0" < TO \leq 16'-0"

1C

SCALE: NTS



C

BRACE SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 6B

SCALE: NTS

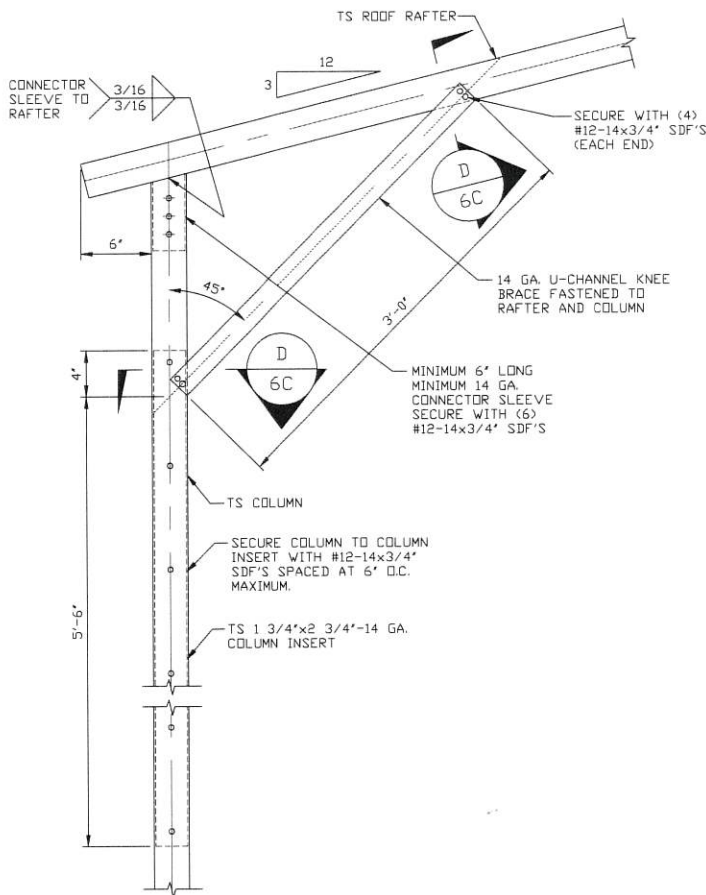
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

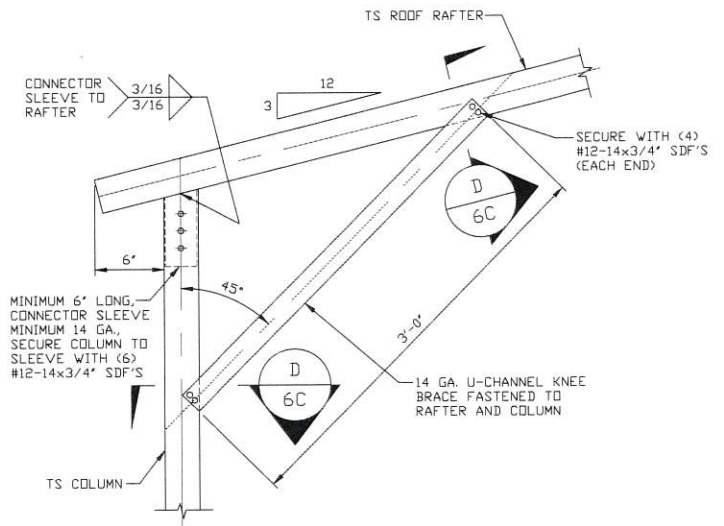
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

COLUMN CONNECTION DETAILS FOR WIND SPEEDS ≤ 105 MPH



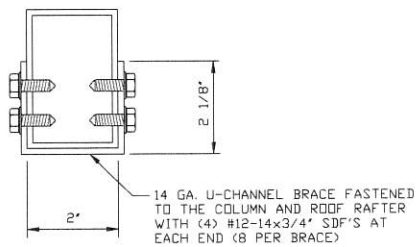
1D

**BOX EAVE RAFTER COLUMN
CONNECTION DETAIL
HEIGHTS 13'-0" < TO ≤ 14'-0"**
SCALE: NTS



1E

**BOX EAVE RAFTER COLUMN
CONNECTION DETAIL
HEIGHTS ≤ 13'-0"**
SCALE: NTS



D

BRACE SECTION
SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 6C

SCALE: NTS

DWG. NO: SK-3

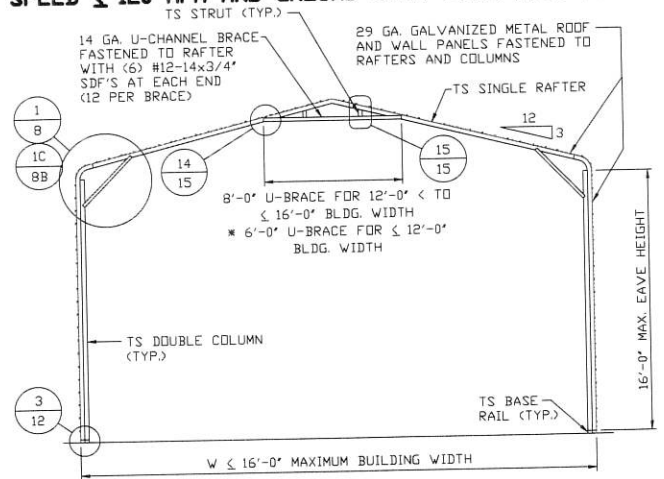
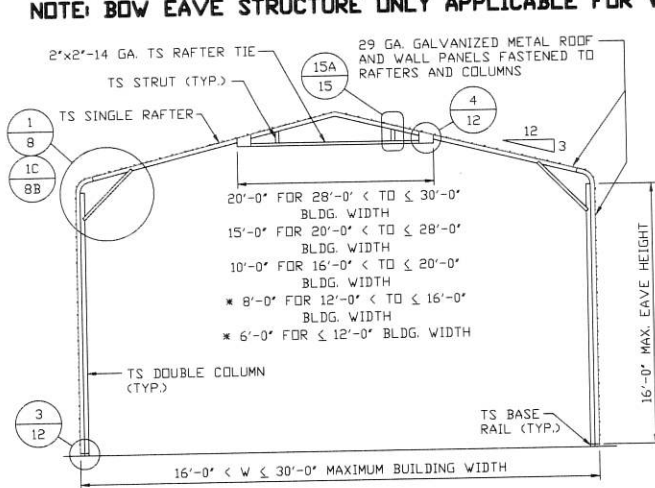
**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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 FRAME AND SIDE FRAMING SECTION (BOW EAVE STRUCTURE)

NOTE: BOW EAVE STRUCTURE ONLY APPLICABLE FOR WIND SPEED ≤ 120 MPH AND GROUND SNOW LOAD ≤ 25 PSF.



TYPICAL RAFTER/COLUMN END FRAME SECTION

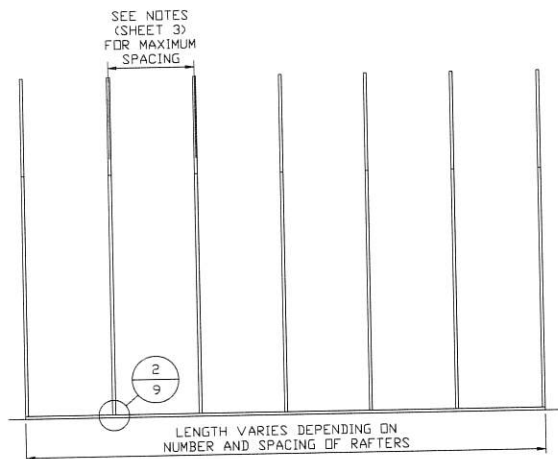
SCALE: NTS

* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.

TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SCALE: NTS

SHT. 7

DWG. NO: SK-3

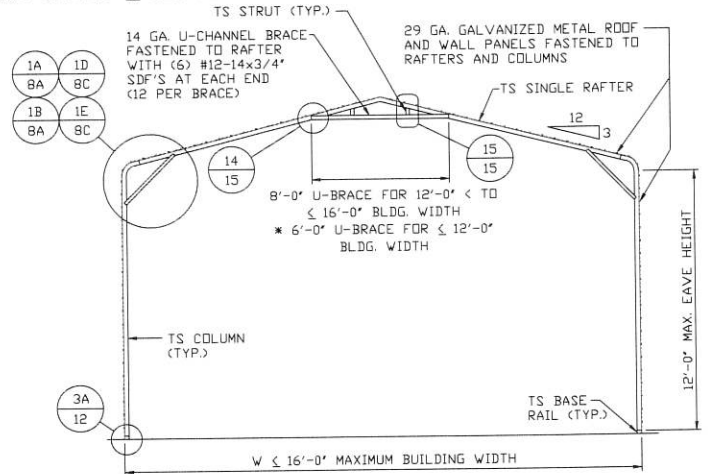
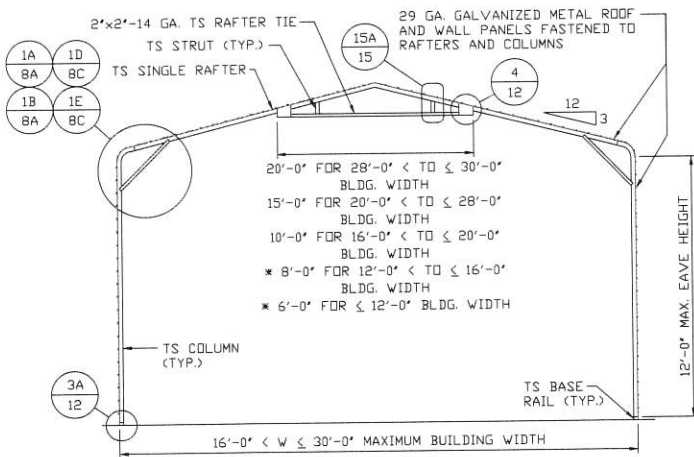
**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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 FRAME AND SIDE FRAMING SECTION (BOW EAVE STRUCTURE)

NOTE: BOW EAVE STRUCTURE ONLY APPLICABLE FOR WIND SPEED ≤ 120 MPH AND GROUND SNOW LOAD ≤ 25 PSF.



TYPICAL RAFTER/COLUMN END FRAME SECTION

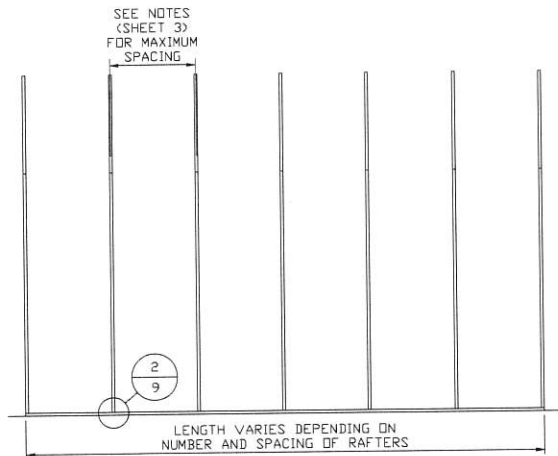
SCALE: NTS

* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.

TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 7A

SCALE: NTS

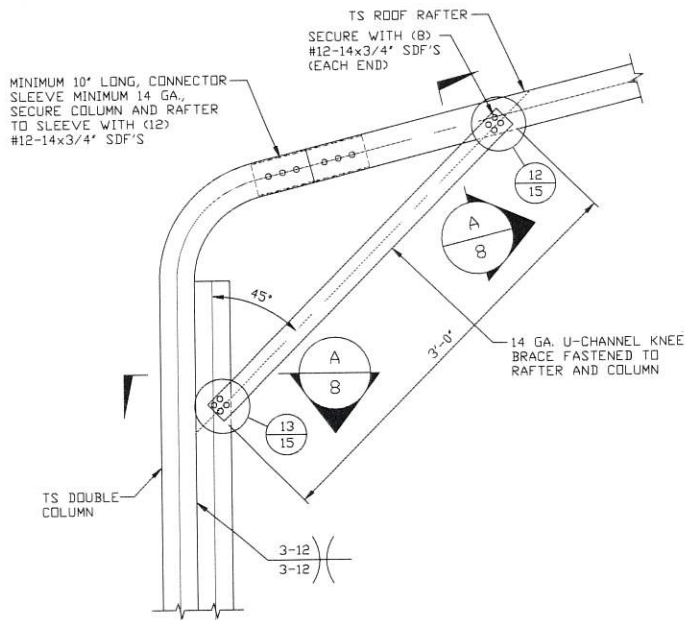
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

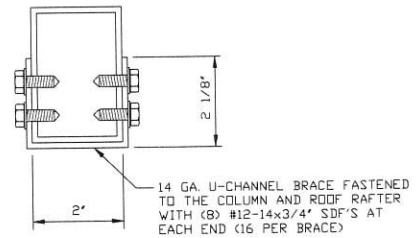
REV: 9

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.

COLUMN CONNECTION DETAILS FOR WIND SPEEDS $105 < TO \leq 120$ MPH



**BOW EAVE RAFTER COLUMN
CONNECTION DETAIL
HEIGHTS 12'-0" < TO \leq 16'-0"**
SCALE: NTS



BRACE SECTION
SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 8

SCALE: NTS

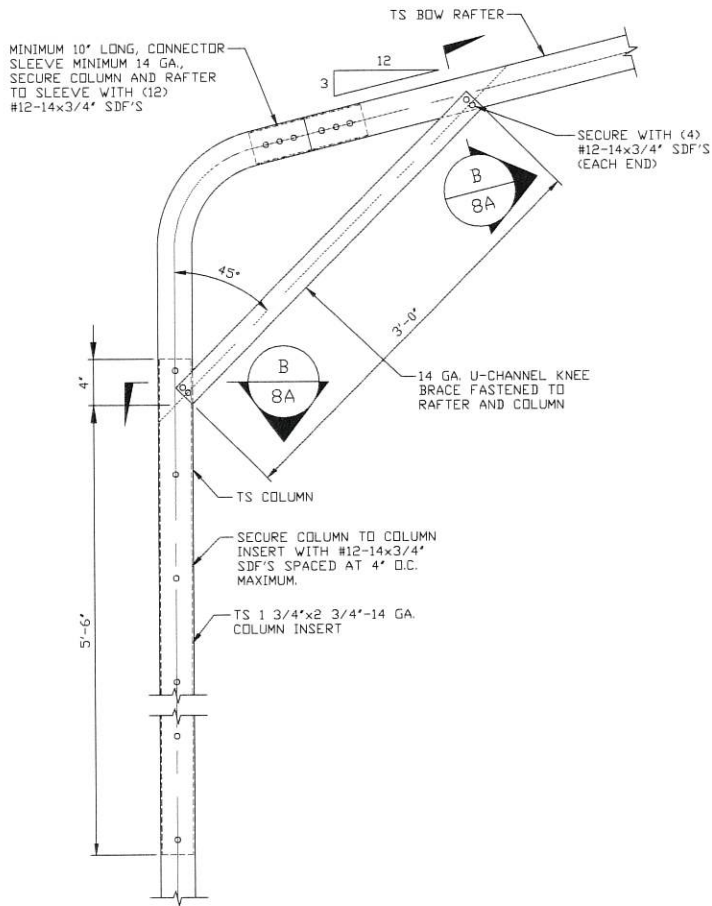
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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.

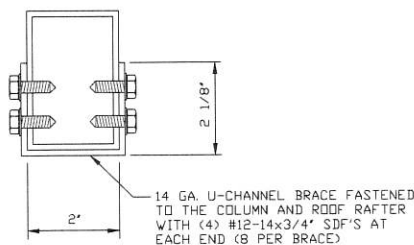
COLUMN CONNECTION DETAILS FOR WIND SPEEDS $105 < TO \leq 120$ MPH



BOW EAVE RAFTER COLUMN CONNECTION DETAIL
HEIGHTS 9'-0' < TO ≤ 12'-0'

1A

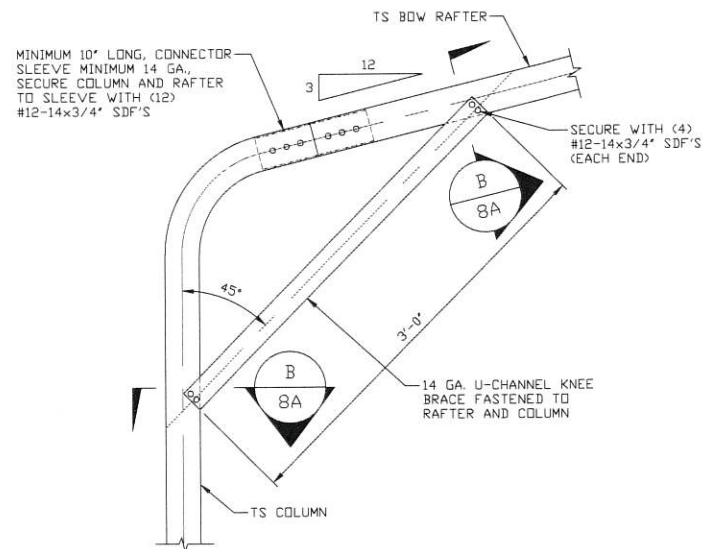
SCALE: NTS



B

BRACE SECTION

SCALE: NTS



BOW EAVE RAFTER COLUMN CONNECTION DETAIL
HEIGHTS ≤ 9'-0'

1B

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 8A

SCALE: NTS

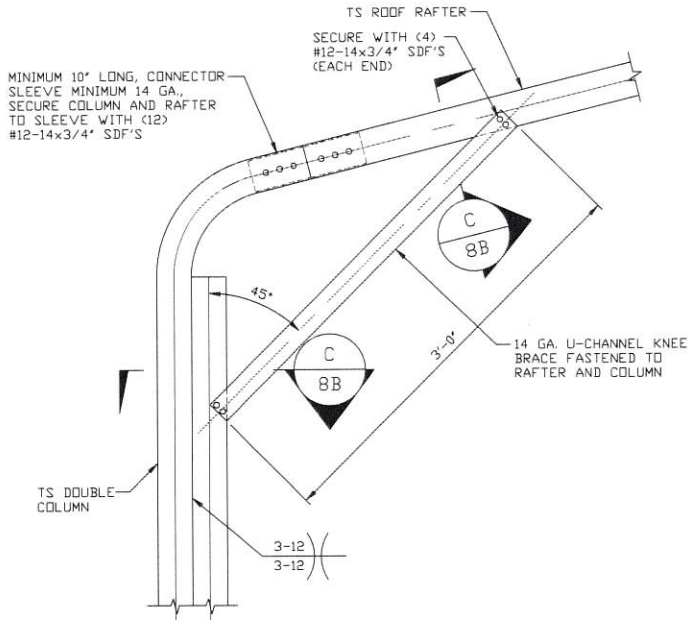
DWG. NO: SK-3

JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

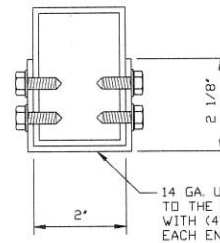
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

COLUMN CONNECTION DETAILS FOR WIND SPEEDS ≤ 105 MPH



**BOW EAVE RAFTER COLUMN
CONNECTION DETAIL**
HEIGHTS 14'-0" < TO \leq 16'-0"
SCALE: NTS

1C



BRACE SECTION
SCALE: NTS

C

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 8B

SCALE: NTS

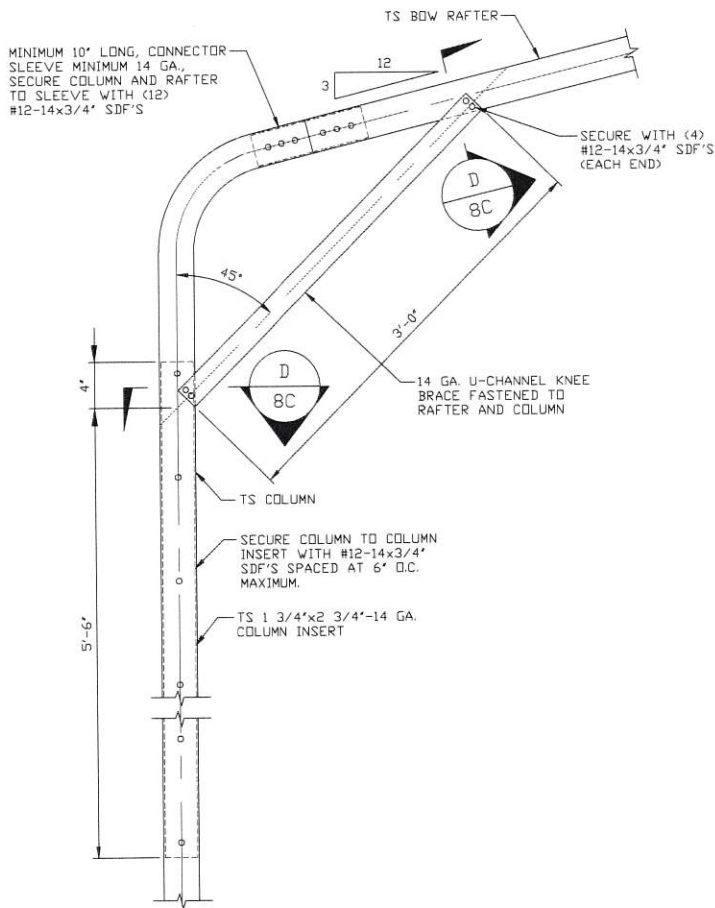
DWG. NO: SK-3

JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

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.

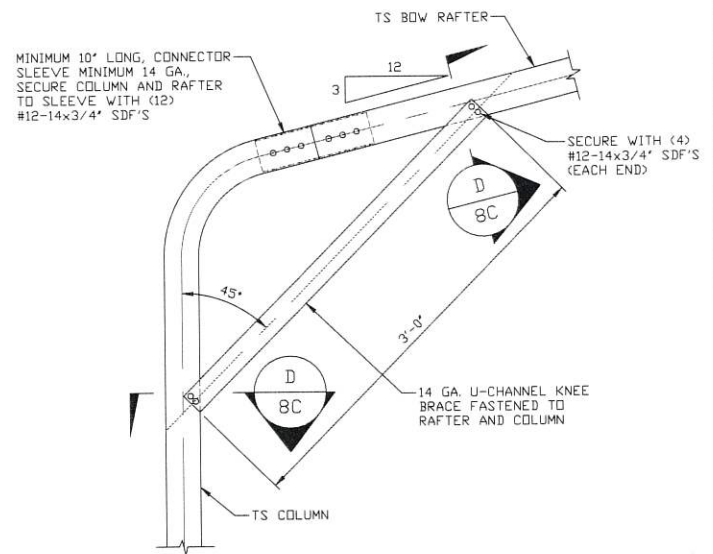
COLUMN CONNECTION DETAILS FOR WIND SPEEDS ≤ 105 MPH



BOW EAVE RAFTER COLUMN CONNECTION DETAIL
HEIGHTS 13'-0" < TO \leq 14'-0"

1D

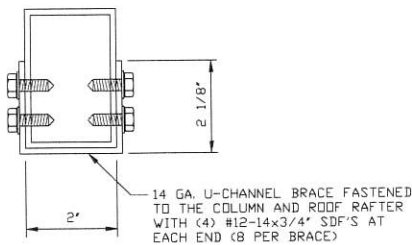
SCALE: NTS



BOW EAVE RAFTER COLUMN CONNECTION DETAIL
HEIGHTS \leq 13'-0"

1E

SCALE: NTS



D

BRACE SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

SHT. 8C

DWG. NO: SK-3

REV: 9

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.

WWF OR FIBERGLASS FIBERS

INSTALL 1/2"Øx7" EXPANSION ANCHOR THROUGH BASE RAIL WITHIN 6" OF EACH COLUMN. (ALSO APPLICABLE TO END WALLS)

1/1A
9B

4" (MIN.)

T/CONC. GRADE

VARIES

3" CLR.

1'-0" *

MINIMUM 3 1/4" EMBEDMENT (TYP.)

MONOLITHIC CONCRETE FOOTING (3000 PSI MIN.) REINFORCED WITH (2)-#4's CONTINUOUS

3" CLR. (TYP.)

1'-0"

SEE SHEET 9B

WWF OR FIBERGLASS FIBERS

INSTALL 1/2"Øx7" EXPANSION ANCHOR THROUGH BASE RAIL WITHIN 6" OF EACH COLUMN. (ALSO APPLICABLE TO END WALLS)

1/1A
9B

4" (MIN.)

T/CONC. GRADE

VARIES

3" CLR.

1'-0" *

MINIMUM 3 1/4" EMBEDMENT (TYP.)

MONOLITHIC CONCRETE FOOTING (3000 PSI MIN.) REINFORCED WITH (2)-#4's CONTINUOUS

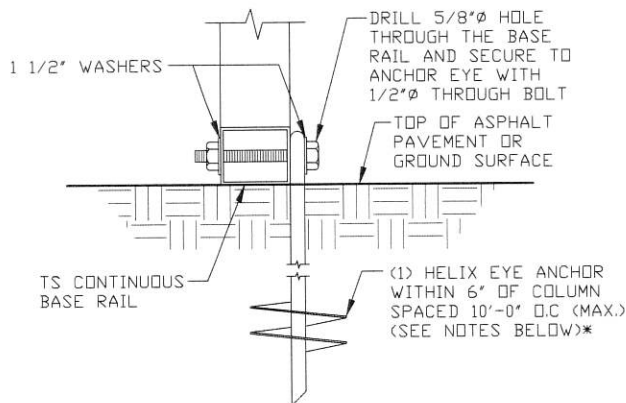
3" CLR. (TYP.)

1'-0"

SEE SHEET 9B

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG	ELEPHANT STRUCTURES 1804 RIVER STREET WILKESBORO, NC 28697 30'-0"x16'-0" ENCLOSED BUILDING			
	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: JRP	DATE: 2-3-25	SCALE: NTS	JOB NO: 18094S/19050S/ 20127S/23045S/24328S	
	CLIENT: ES	SHT. 9	DWG. NO: SK-3	REV. 9	

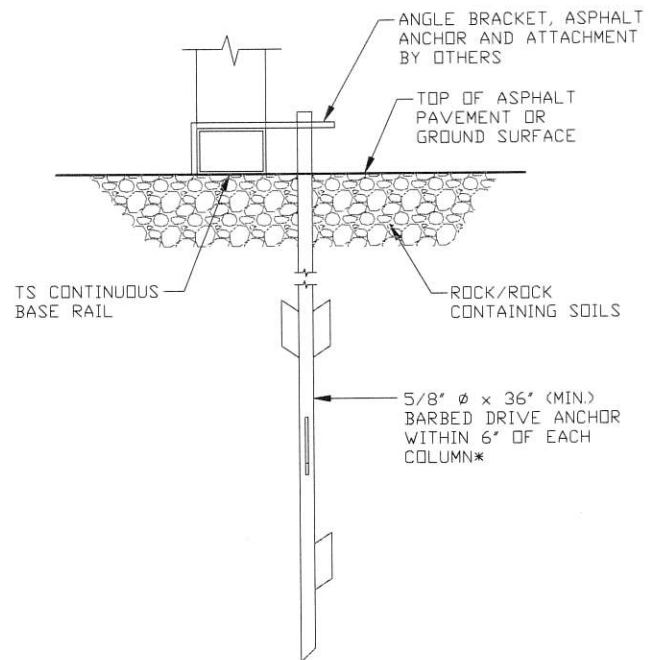
BASE RAIL ANCHORAGE OPTIONS



2B

GROUND BASE HELIX ANCHORAGE

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



2C

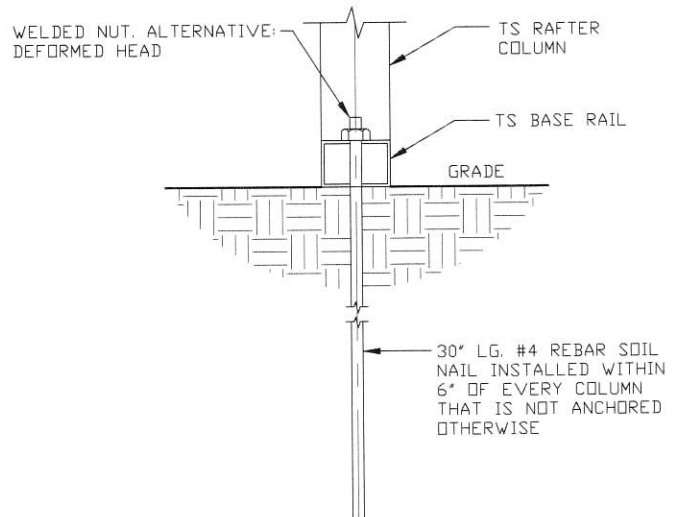
ALTERNATE DRIVE ANCHORAGE

SCALE: NTS
* COORDINATE WITH LOCAL CODES/ORD.
REGARDING MIN. FROST DEPTH (LENGTH).

GENERAL NOTES

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.



2D

GROUND BASE SOIL NAIL ANCHORAGE

SCALE: NTS (CAN BE USED FOR ASPHALT)

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 9A

SCALE: NTS

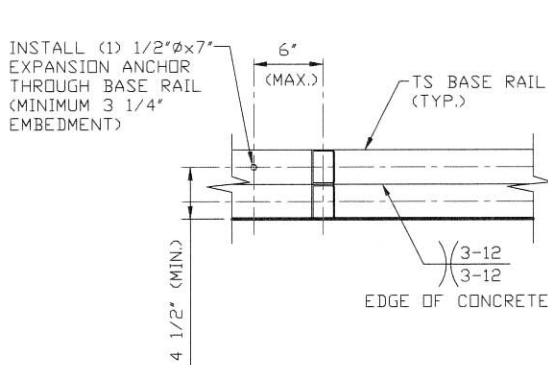
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

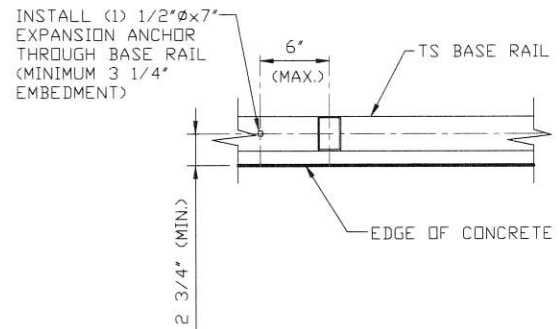
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BASE RAIL ANCHORAGE OPTIONS



1

SECTION
SCALE: NTS



1A

SECTION
SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 9B

SCALE: NTS

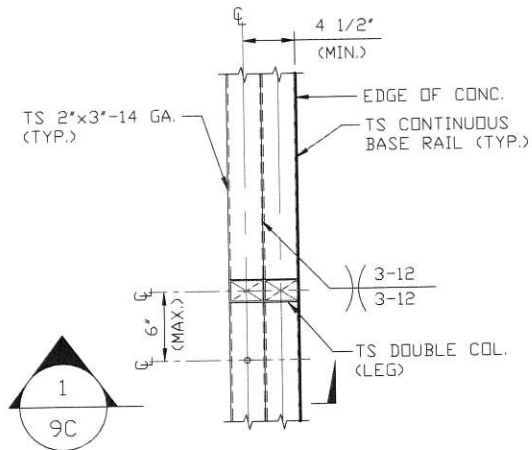
DWG. NO: SK-3

JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

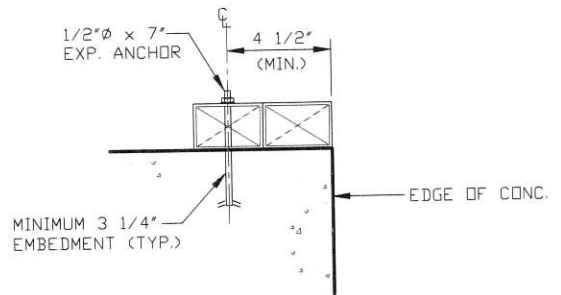
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BASE RAIL ANCHORAGE OPTIONS

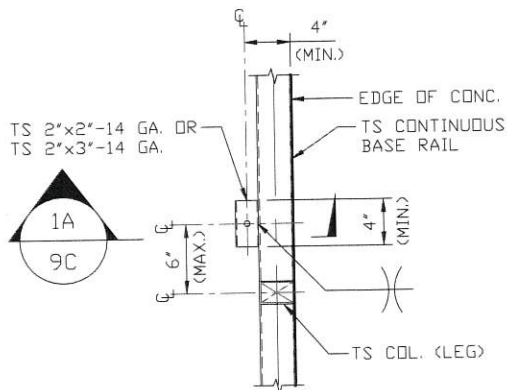


TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS FLUSH WITH EDGE OF CONCRETE

SCALE: NTS

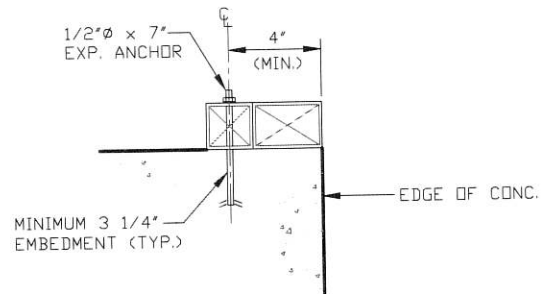


1 SECTION
SCALE: NTS



TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS FLUSH WITH EDGE OF CONCRETE

SCALE: NTS



1A SECTION
SCALE: NTS

Validity Notice
Plans Expiration Date:
3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 9C

SCALE: NTS

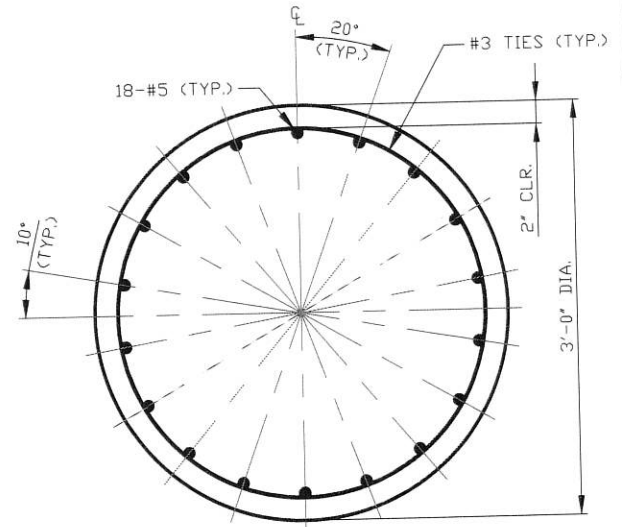
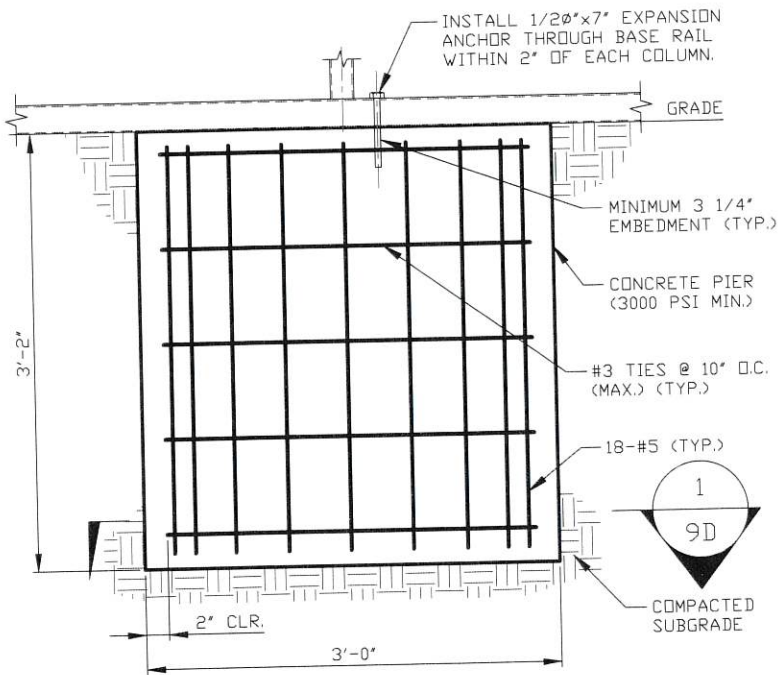
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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 **FOR WIND SPEEDS 105 MPH < TO ≤ 150 MPH**



2E

DRILLED CONCRETE PIER BASE RAIL ANCHORAGE

SCALE: NTS

* COORDINATE WITH LOCAL BUILDING CODE
 AND/OR BUILDING OFFICIAL REGARDING
 REQUIRED FOOTING DEPTH.

1

SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
 1804 RIVER STREET
 WILKESBORO, NC 28697
 30'-0"x16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 9D

SCALE: NTS

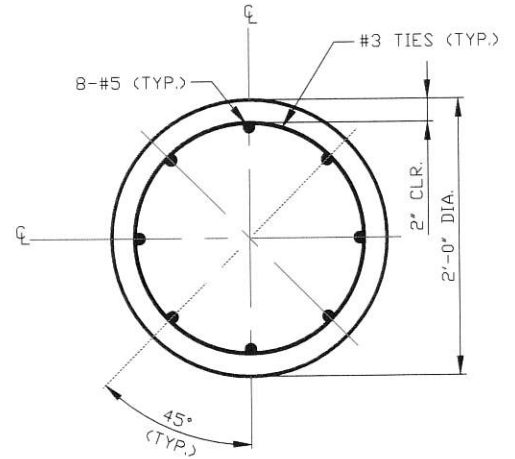
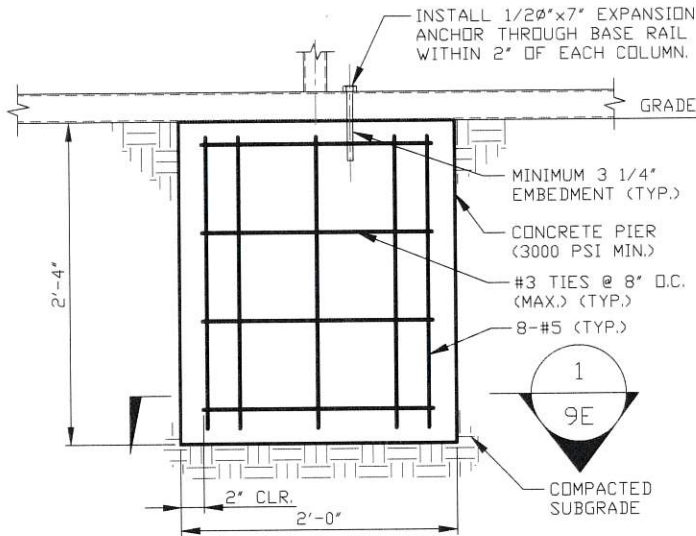
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
 20127S/23045S/24326S**

REV: 9

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 FOR WIND SPEEDS ≤ 105 MPH



2F

DRILLED CONCRETE PIER BASE RAIL ANCHORAGE

SCALE: NTS

* COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING REQUIRED FOOTING DEPTH.

1

SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SCALE: NTS

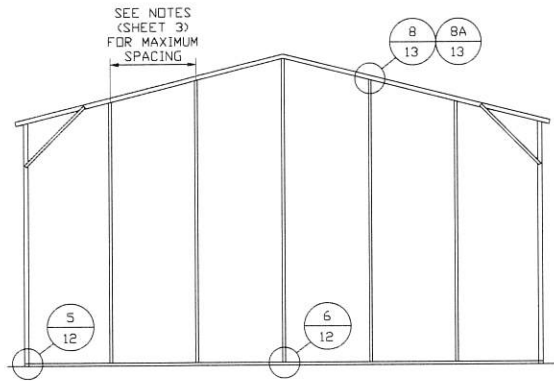
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

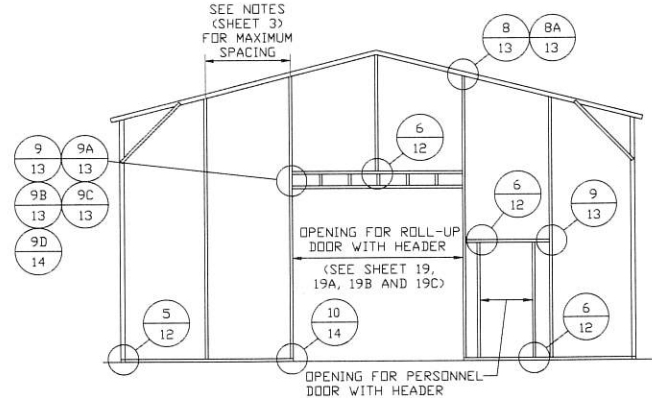
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER END WALL AND SIDE WALL FRAMING SECTIONS



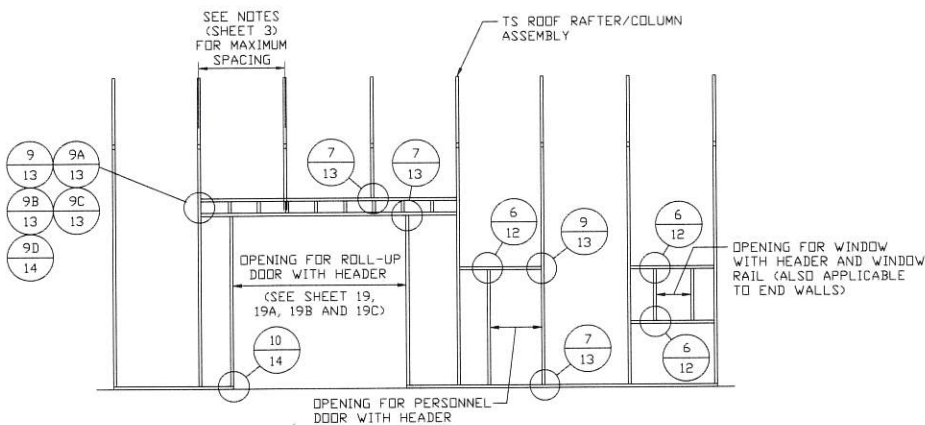
**TYPICAL BOX EAVE RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



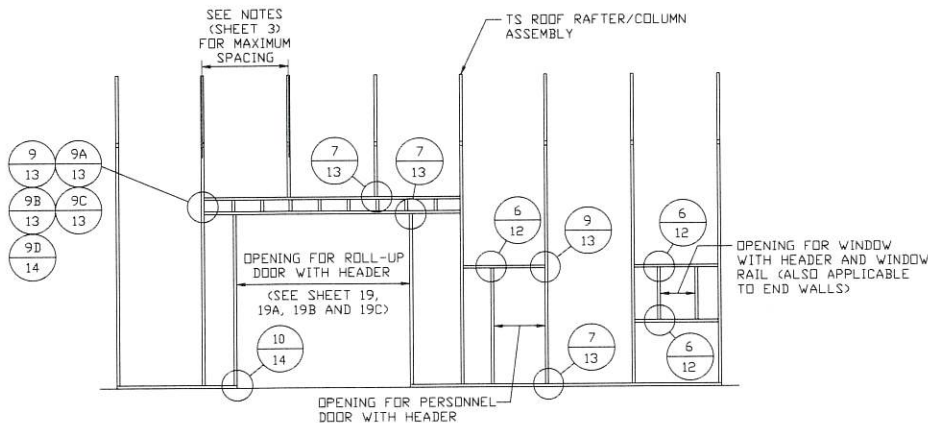
**TYPICAL BOX EAVE RAFTER END
WALL OPENING FRAMING SECTION**

SCALE: NTS



**TYPICAL BOX EAVE RAFTER SIDE
WALL OPENINGS FRAMING SECTION
FOR GROUND SNOW LOADS ≤ 35 PSF**

SCALE: NTS



**TYPICAL BOX EAVE RAFTER SIDE WALL
OPENINGS FRAMING SECTION FOR GROUND
SNOW LOADS 35 PSF < TO ≤ 45 PSF**

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 10

SCALE: NTS

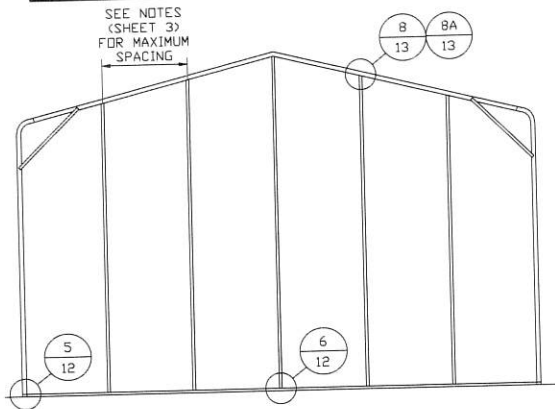
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

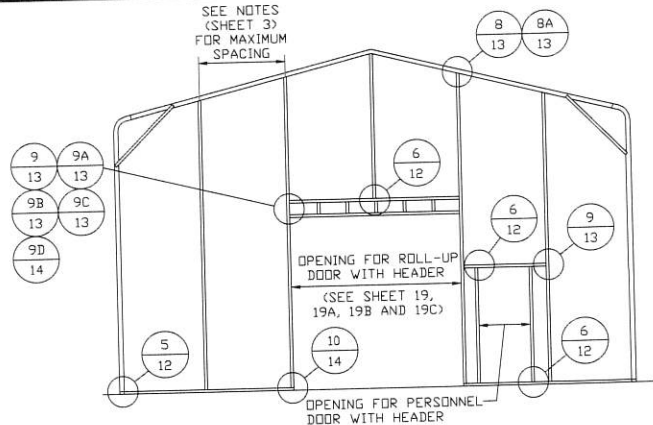
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOW EAVE RAFTER END WALL AND SIDE WALL FRAMING SECTIONS



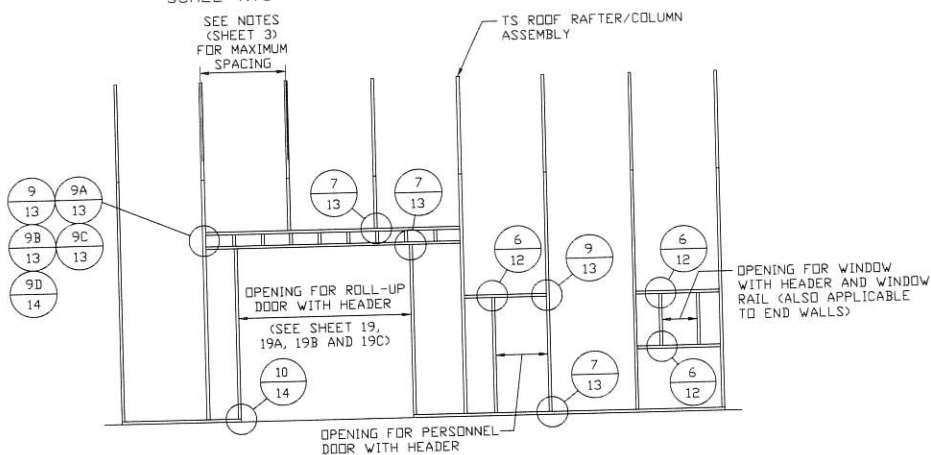
**TYPICAL BOW EAVE RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



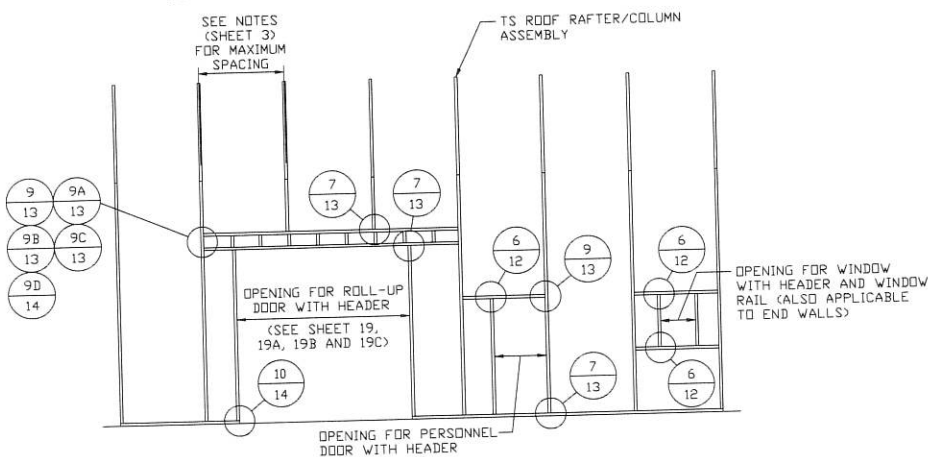
**TYPICAL BOW EAVE RAFTER END
WALL OPENING FRAMING SECTION**

SCALE: NTS



**TYPICAL BOW EAVE RAFTER SIDE
WALL OPENINGS FRAMING SECTION
FOR GROUND SNOW LOADS ≤ 35 PSF**

SCALE: NTS



**TYPICAL BOW EAVE RAFTER SIDE WALL
OPENINGS FRAMING SECTION FOR GROUND
SNOW LOADS $35 \text{ PSF} < \text{TO} \leq 45 \text{ PSF}$**

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 11

SCALE: NTS

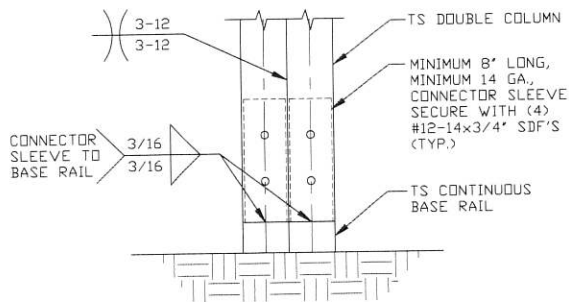
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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.

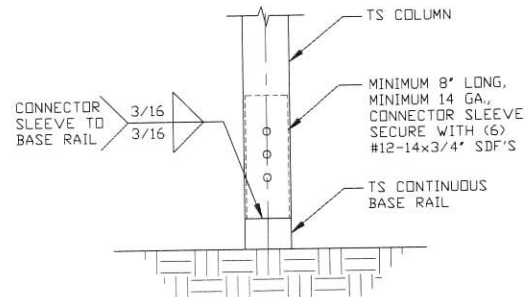
CONNECTION DETAILS



3

RAFTER COLUMN/BASE RAIL CONNECTION DETAIL

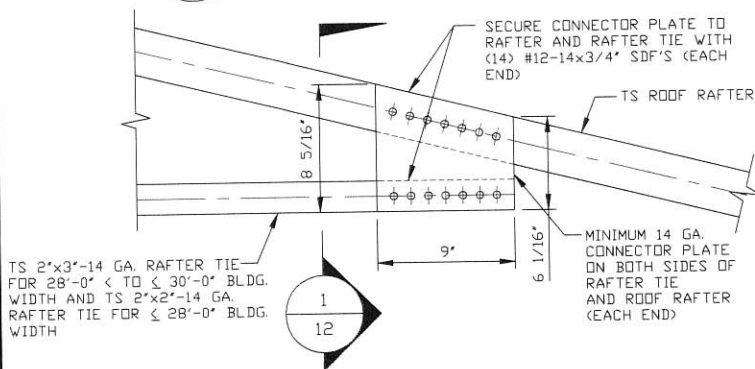
SCALE: NTS



3A

RAFTER COLUMN/BASE RAIL CONNECTION DETAIL

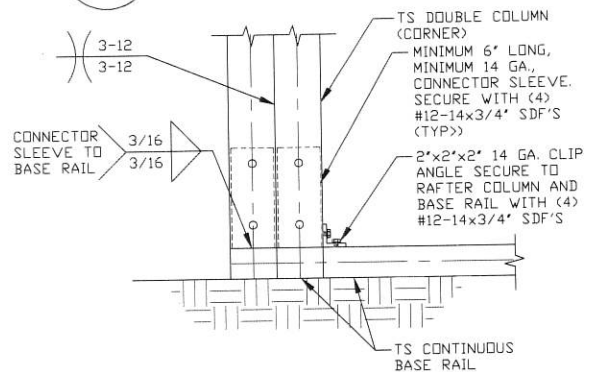
SCALE: NTS



4

ROOF RAFTER TIE CONNECTION DETAIL

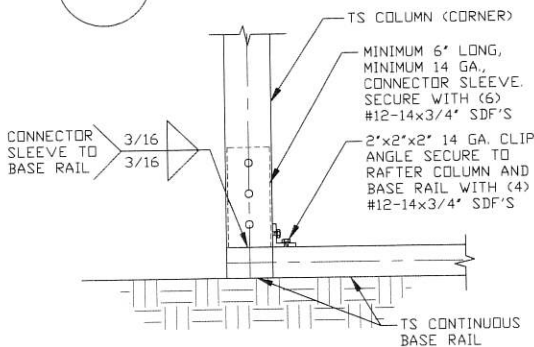
SCALE: NTS



5

END COLUMN/BASE RAIL CONNECTION DETAIL

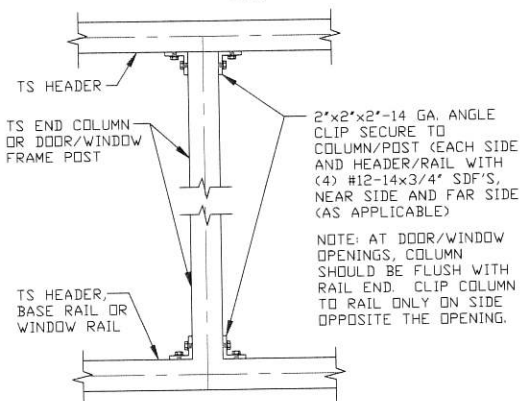
SCALE: NTS



5A

END COLUMN/BASE RAIL CONNECTION DETAIL

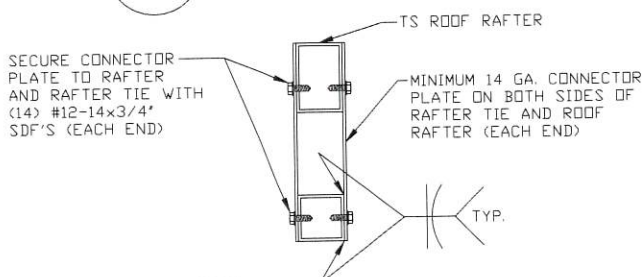
SCALE: NTS



6

COLUMN TO WINDOW RAIL CONNECTION DETAIL

SCALE: NTS



1

SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 12

SCALE: NTS

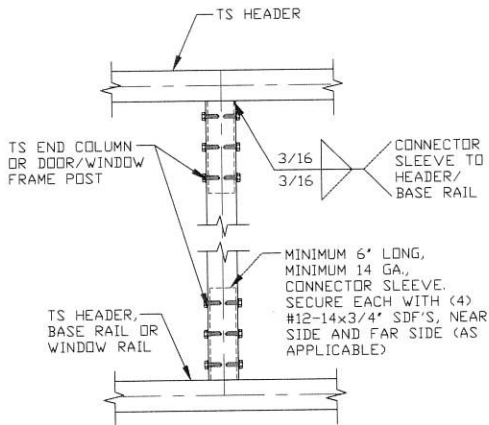
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
120127S/23045S/24328S**

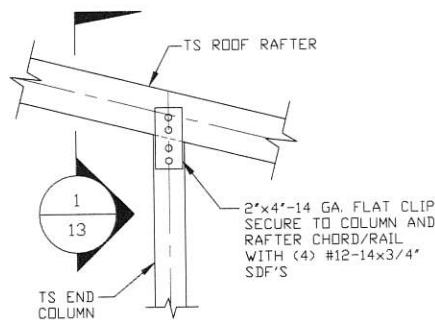
REV: 9

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.

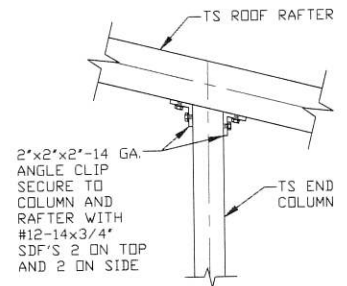
CONNECTION DETAILS



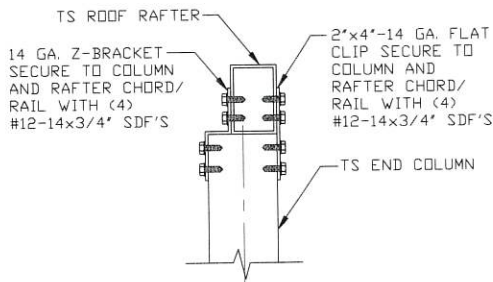
7 **COLUMN TO HEADER OR BASE RAIL CONNECTION DETAIL**
SCALE: NTS



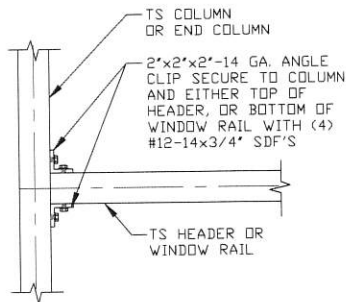
8 **RAFTER TO POST CONNECTION DETAIL**
SCALE: NTS



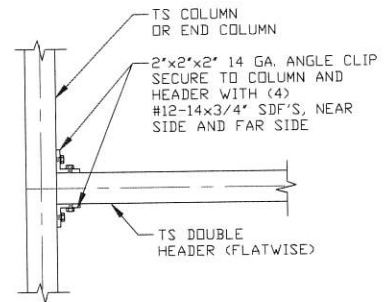
8A **RAFTER TO POST CONNECTION DETAIL**
SCALE: NTS



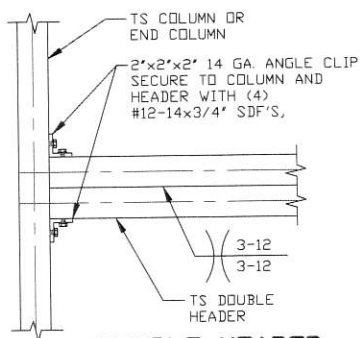
1 **SECTION**
SCALE: NTS



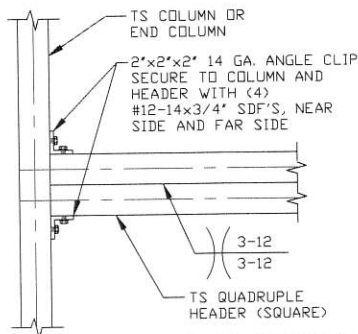
9 **COLUMN OR WINDOW RAIL/WALL GIRT TO POST CONNECTION DETAIL**
SCALE: NTS



9A **DOUBLE HEADER (FLATWISE) TO COLUMN CONNECTION DETAIL**
SCALE: NTS



9B **DOUBLE HEADER TO COLUMN CONNECTION DETAIL**
SCALE: NTS



9C **QUADRUPLE HEADER (SQUARE) TO COLUMN CONNECTION DETAIL**
SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 13

SCALE: NTS

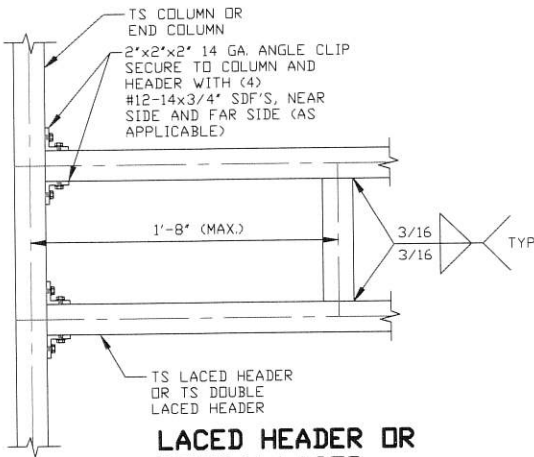
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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.

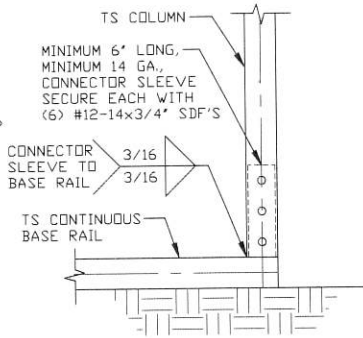
CONNECTION DETAILS



9D

LACED HEADER OR DOUBLE LACED HEADER TO COLUMN CONNECTION DETAIL

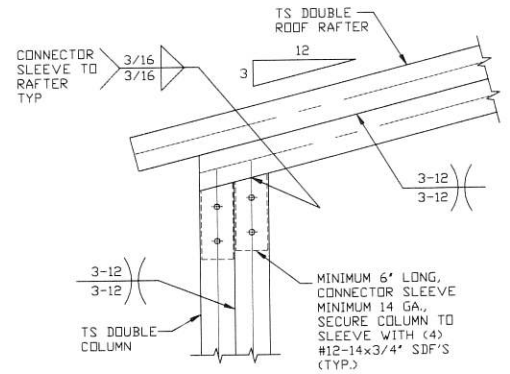
SCALE: NTS



10

COLUMN/BASE RAIL CONNECTION DETAIL

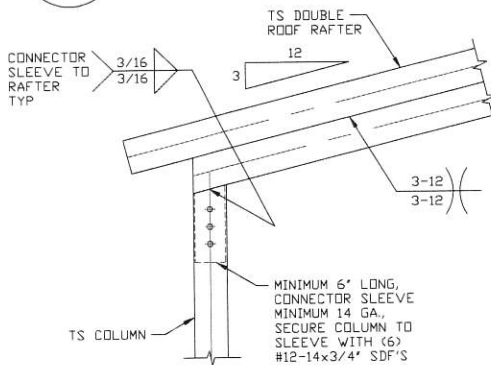
SCALE: NTS



11

BOX EAVE DOUBLE ROOF RAFTER CONNECTION DETAIL

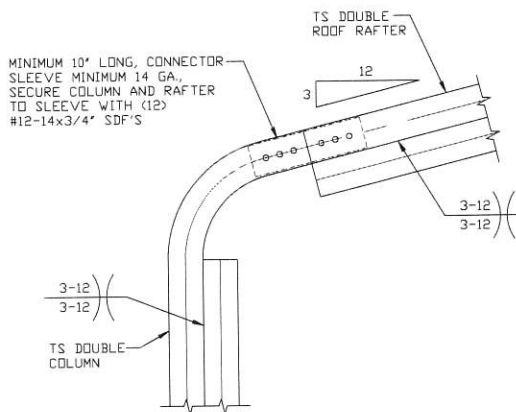
SCALE: NTS
NOTE: KNEE BRACE NOT SHOWN FOR CLARITY.



11A

BOX EAVE DOUBLE ROOF RAFTER CONNECTION DETAIL

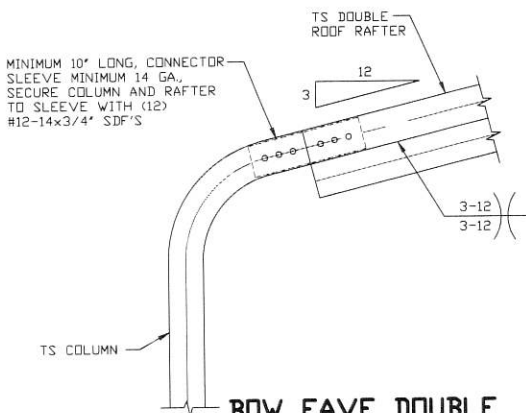
SCALE: NTS
NOTE: KNEE BRACE NOT SHOWN FOR CLARITY.



11B

BOW EAVE DOUBLE ROOF RAFTER CONNECTION DETAIL

SCALE: NTS
NOTE: KNEE BRACE NOT SHOWN FOR CLARITY.



11C

BOW EAVE DOUBLE ROOF RAFTER CONNECTION DETAIL

SCALE: NTS
NOTE: KNEE BRACE NOT SHOWN FOR CLARITY.

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"X16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

DWG. NO: SK-3

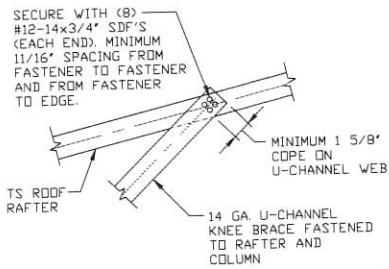
JOB NO: 18094S/19050S/
20127S/23045S/24328S

SHT. 14

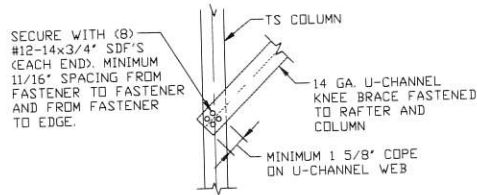
REV: 9

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.

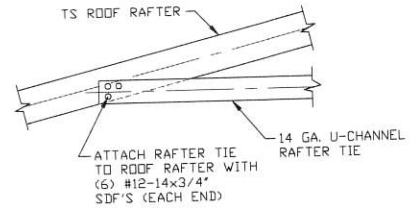
CONNECTION DETAILS



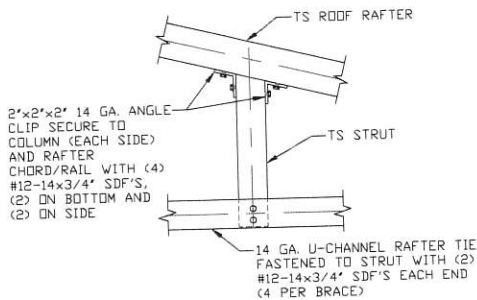
12 U-CHANNEL TO RAFTER CONNECTION DETAIL
SCALE: NTS



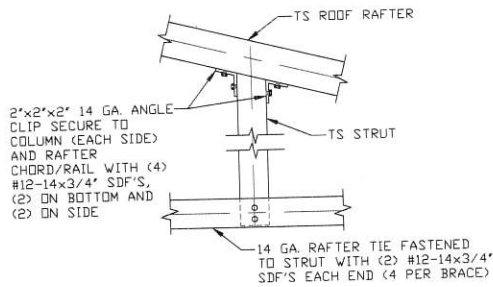
13 U-CHANNEL TO RAFTER CONNECTION DETAIL
SCALE: NTS



14 RAFTER TIE CONNECTION DETAIL
SCALE: NTS



15 RAFTER/U-CHANNEL TO CHORD CONNECTION DETAIL
SCALE: NTS



15A ROOF RAFTER/RAFTER TIE TO CHORD CONNECTION DETAIL
SCALE: NTS
NOTE: DOUBLE TUBE RAFTER NOT SHOWN FOR CLARITY.

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 15

SCALE: NTS

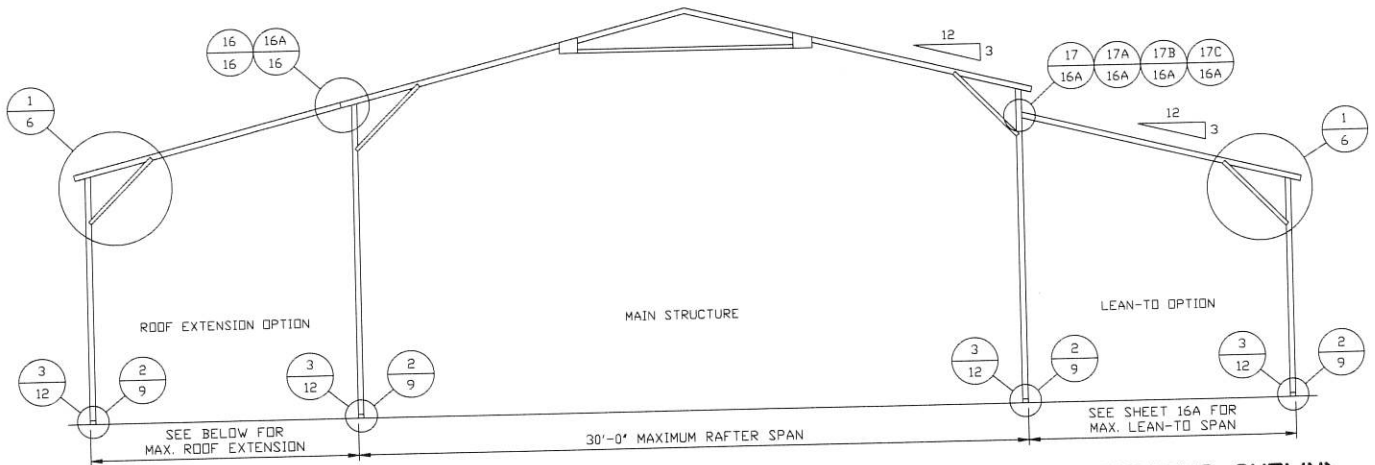
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

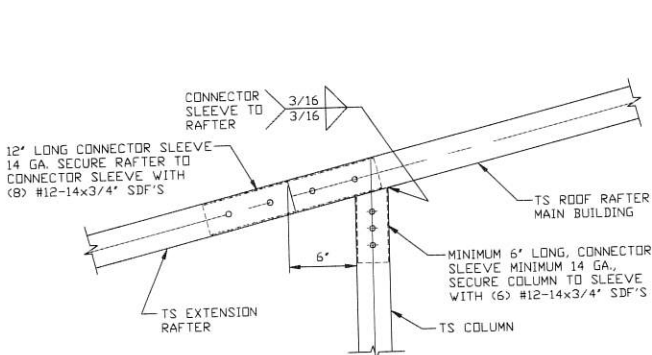
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER LEAN-TO OPTIONS (3:12 LEAN-TO ROOF PITCH)



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

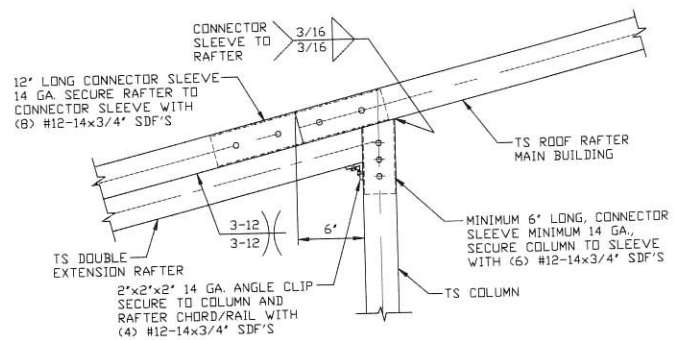
SCALE: NTS
REFER TO SHEETS 6, 6A, 6B AND 6C FOR COLUMN HEIGHTS AND TYPES.
LEAN-TO COLUMN SPACING SHALL MATCH MAIN BUILDING.



SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS ≤ 12'-0"

16

SCALE: NTS



SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS 12'-0" < TO ≤ 15'-0"

16A

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

SHT. 16

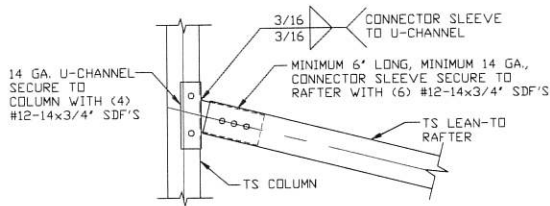
DWG. NO: SK-3

JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

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.

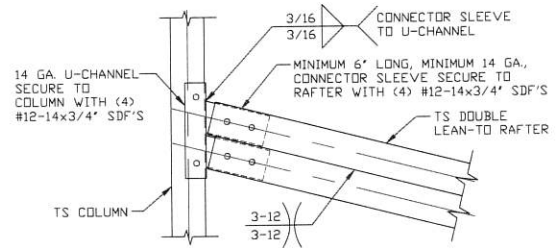
BOX EAVE RAFTER LEAN-TO OPTIONS (3:12 LEAN-TO ROOF PITCH)



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

17

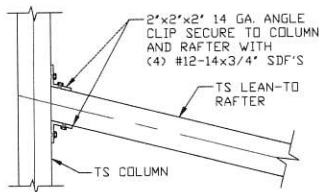
SCALE: NTS



**LEAN-TO RAFTER TO RAFTER COLUMN
CONNECTION DETAIL FOR RAFTER
SPANS $12'-0'' < \text{TO} \leq 15'-0''$**

17A

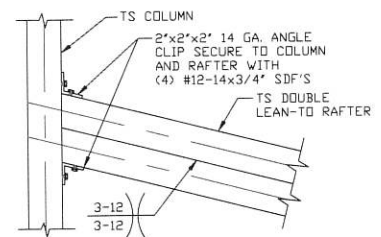
SCALE: NTS



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

17B

SCALE: NTS



**LEAN-TO RAFTER TO RAFTER COLUMN
CONNECTION DETAIL FOR RAFTER
SPANS $12'-0'' < \text{TO} \leq 15'-0''$**

17C

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"X16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 16A

SCALE: NTS

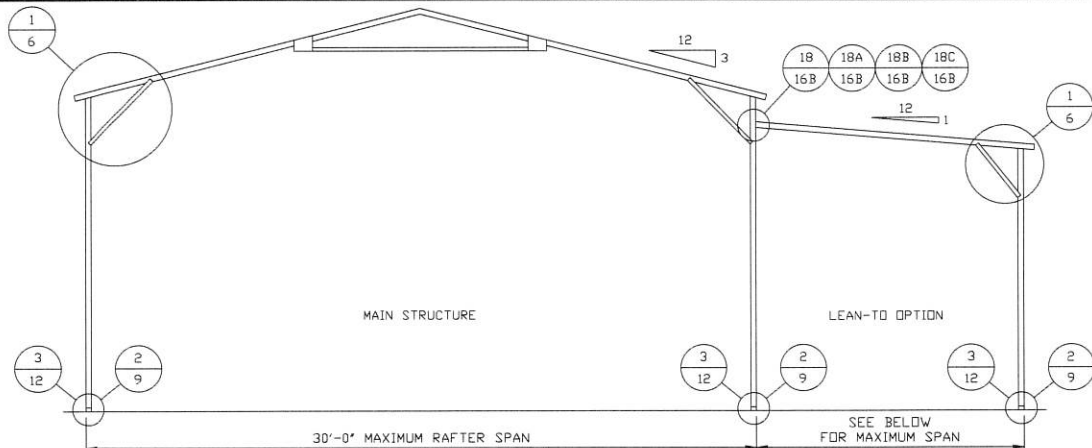
DWG. NO SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

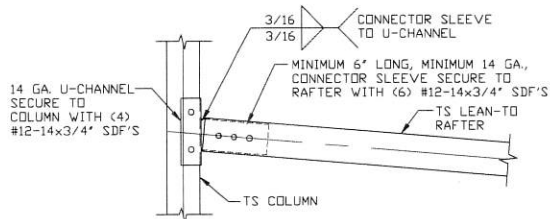
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER LEAN-TO OPTIONS (1:12 LEAN-TO ROOF PITCH)



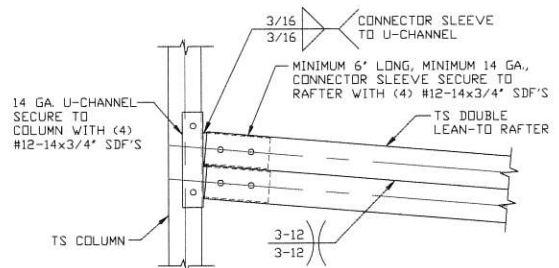
TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION

SCALE: NTS
REFER TO SHEETS 8, 8A, 8B AND 8C FOR COLUMN HEIGHTS AND TYPES.
LEAN-TO COLUMN SPACING SHALL MATCH MAIN BUILDING.



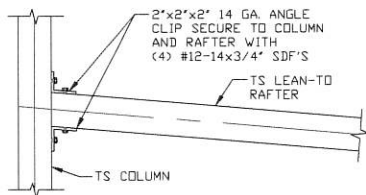
LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $\leq 12'-0''$

SCALE: NTS



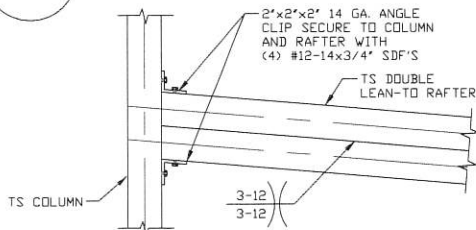
LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0'' < \text{TO} \leq 15'-0''$

SCALE: NTS



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

SCALE: NTS



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0'' < \text{TO} \leq 15'-0''$

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

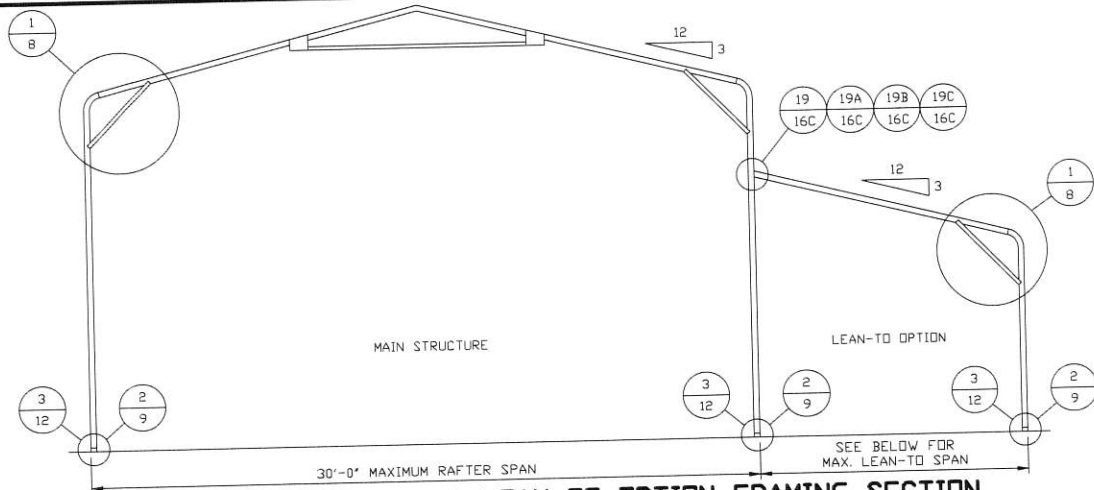
DWG. NO SK-3

JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

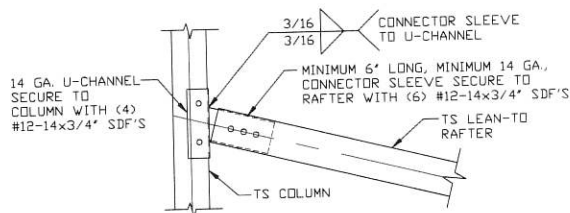
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOW EAVE RAFTER LEAN-TO OPTIONS (3:12 LEAN-TO ROOF PITCH)



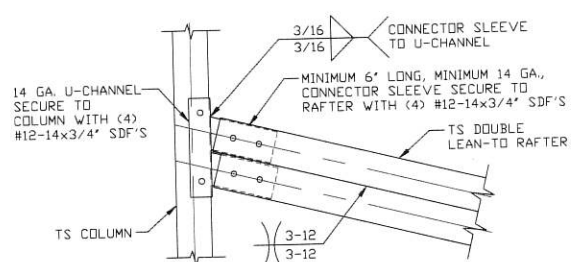
TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION

SCALE: NTS
REFER TO SHEETS 8, 8A, 8B AND 8C FOR COLUMN HEIGHTS AND TYPES.
LEAN-TO COLUMN SPACING SHALL MATCH MAIN BUILDING.



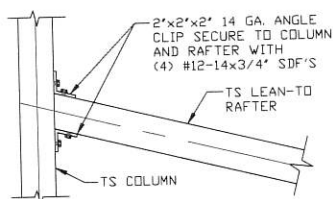
19 LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $\leq 12'-0"$

SCALE: NTS



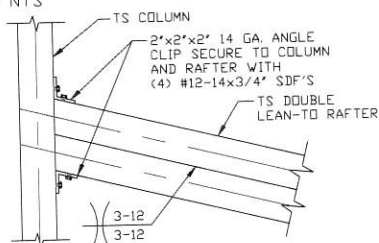
19A LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0" < \text{TO } \leq 15'-0"$

SCALE: NTS



19B LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $\leq 12'-0"$

SCALE: NTS



19C LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0" < \text{TO } \leq 15'-0"$

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 16C

SCALE: NTS

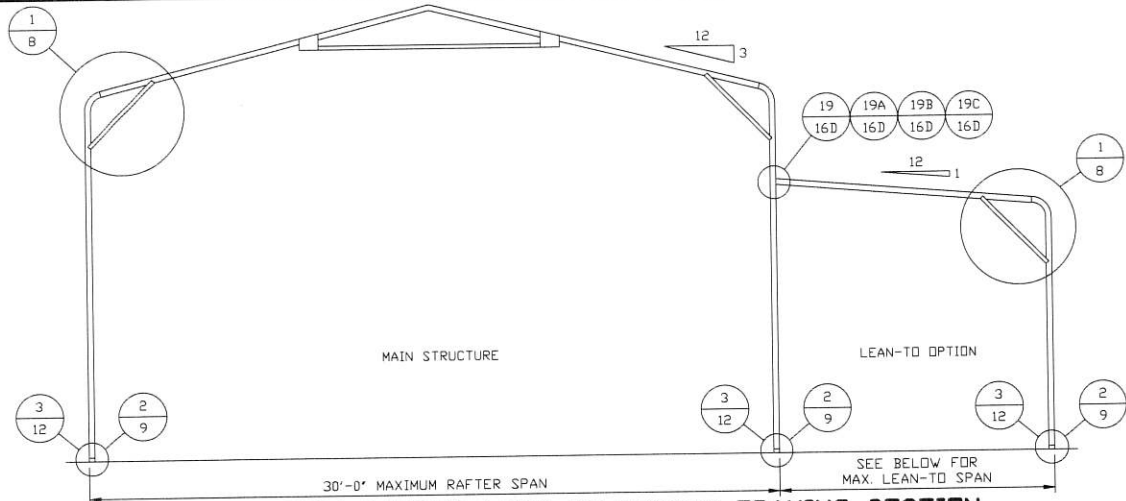
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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.

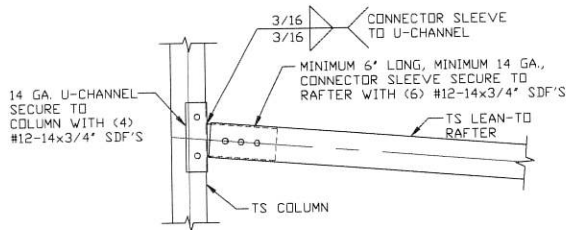
BOW EAVE RAFTER LEAN-TO OPTIONS (1:12 LEAN-TO ROOF PITCH)



TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION

SCALE: NTS

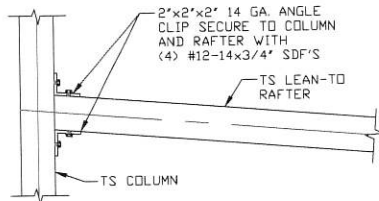
REFER TO SHEETS 8, 8A, 8B AND 8C FOR COLUMN HEIGHTS AND TYPES.
LEAN-TO COLUMN SPACING SHALL MATCH MAIN BUILDING.



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

SCALE: NTS

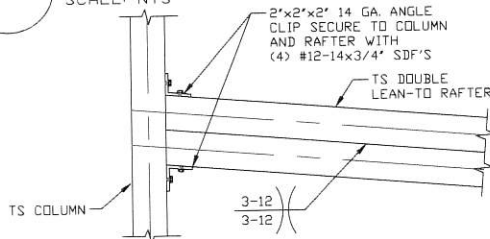
20



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

SCALE: NTS

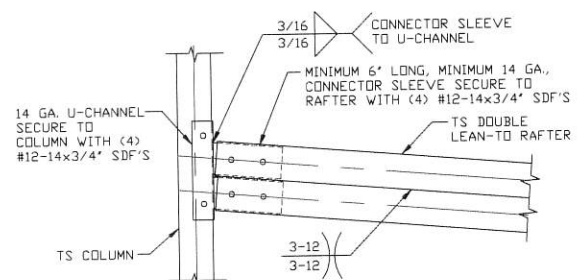
20B



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0" < \text{TO} \leq 15'-0"$

SCALE: NTS

20C



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0" < \text{TO} \leq 15'-0"$

SCALE: NTS

20A

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 16D

SCALE: NTS

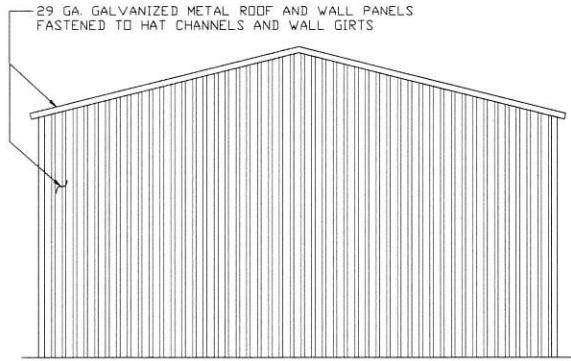
DWG. NO SK-3

JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

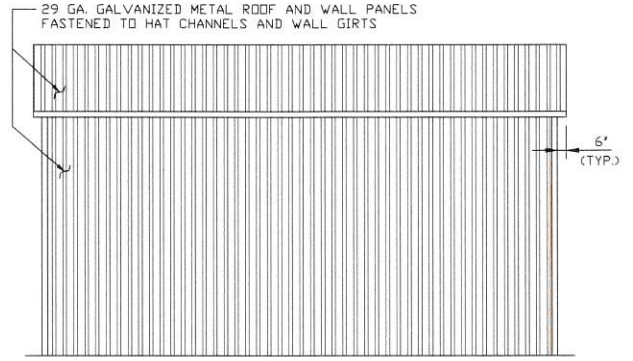
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



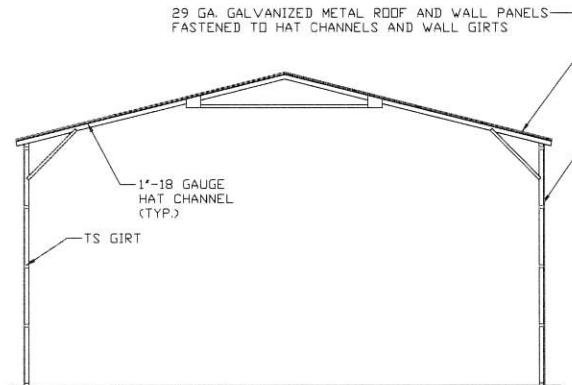
**TYPICAL END ELEVATION
VERTICAL ROOF/SIDING**

SCALE: NTS



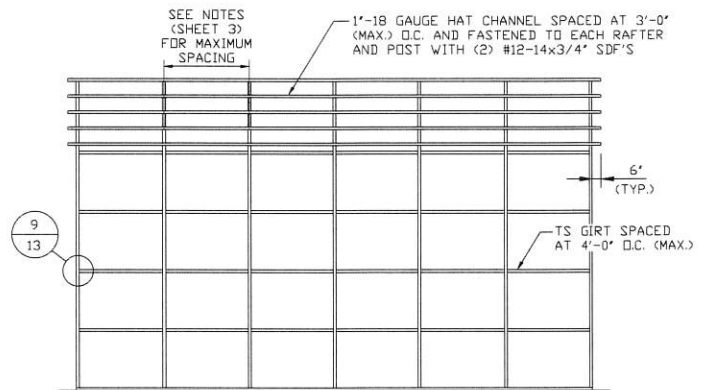
**TYPICAL SIDE ELEVATION
VERTICAL ROOF/SIDING**

SCALE: NTS



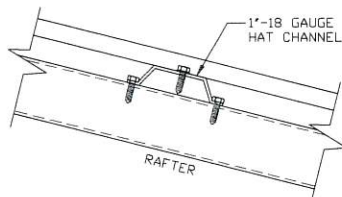
**TYPICAL SECTION
VERTICAL ROOF OPTION**

SCALE: NTS



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

SCALE: NTS



ROOF PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF PANELS)
SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"X16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 17

SCALE: NTS

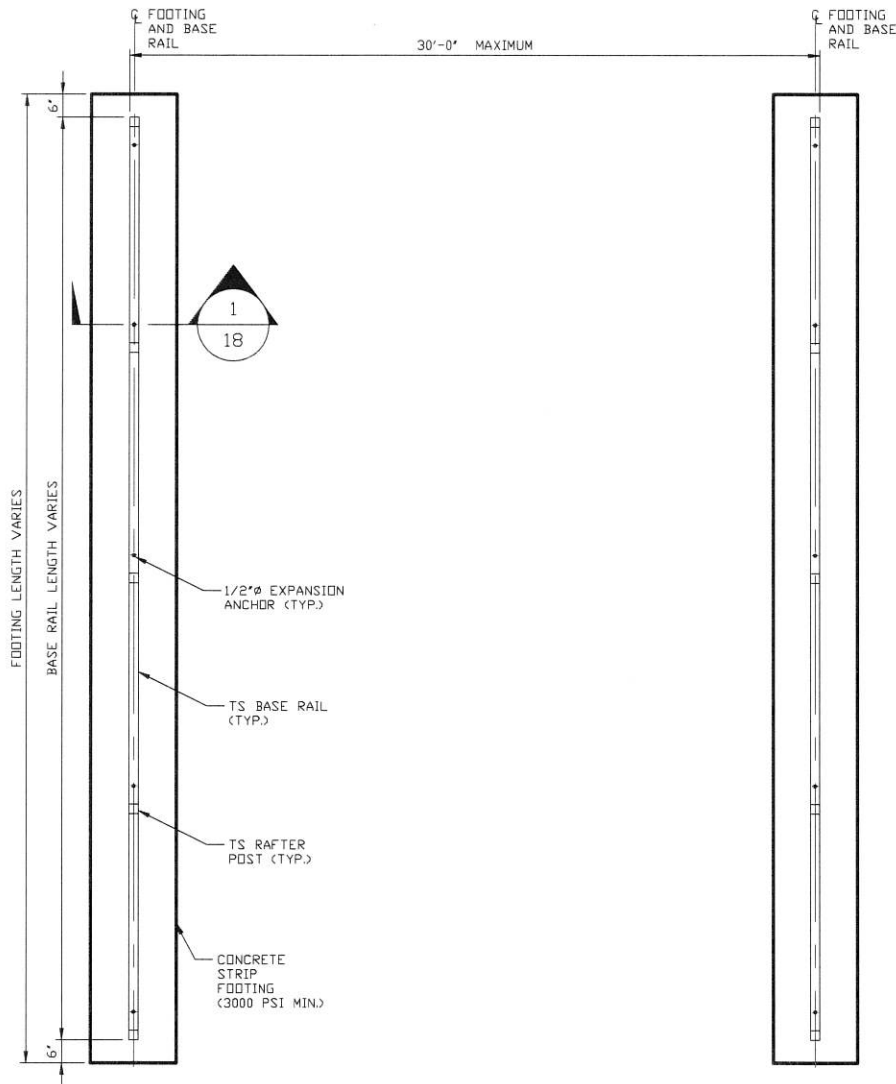
DWG. NO: SK-3

JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

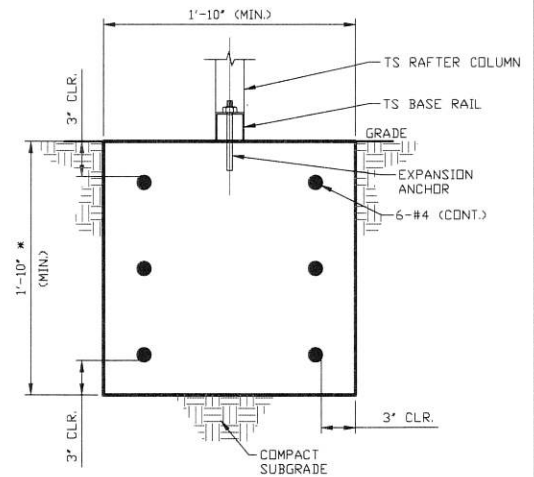
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

OPTIONAL CONCRETE STRIP FOOTING WITH ATTACHED LEAN-TO AND WIND SPEEDS 105 MPH < TO ≤ 150 MPH



CONCRETE STRIP FOOTING PLAN

SCALE: NTS



SECTION 1/18

SCALE: NTS

*COORDINATE WITH LOCAL CODES/ORD. TO ENSURE COMPLIANCE WITH LOCAL FROST DEPTH REQUIREMENTS.

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 18

SCALE: NTS

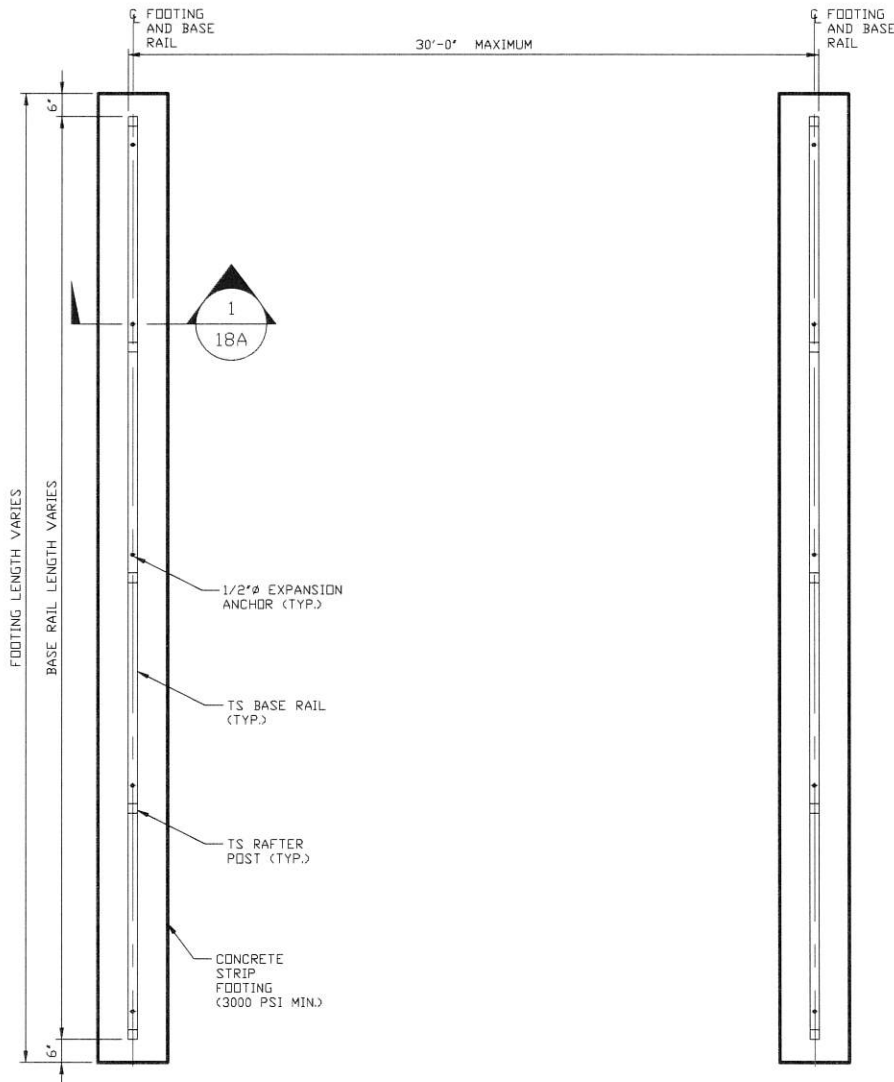
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

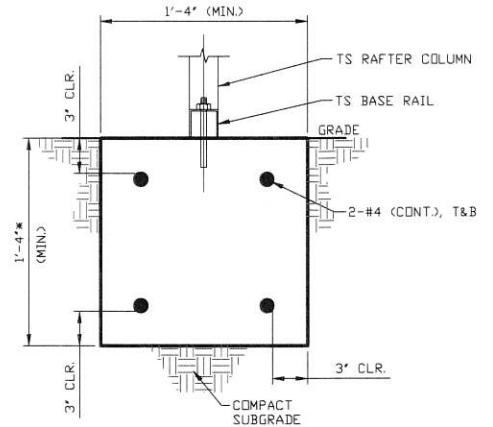
REV: 9

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 WITH ATTACHED LEAN-TO **AND WIND SPEEDS \leq 105 MPH**



CONCRETE STRIP FOOTING PLAN
 SCALE: NTS



SECTION 1
 SCALE: NTS
 18A

*COORDINATE WITH LOCAL CODES/ORD.
 TO ENSURE COMPLIANCE WITH LOCAL
 FROST DEPTH REQUIREMENTS.

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
 1804 RIVER STREET
 WILKESBORO, NC 28697
 30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SCALE: NTS

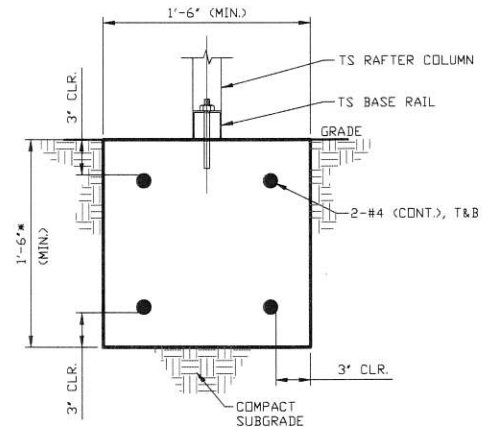
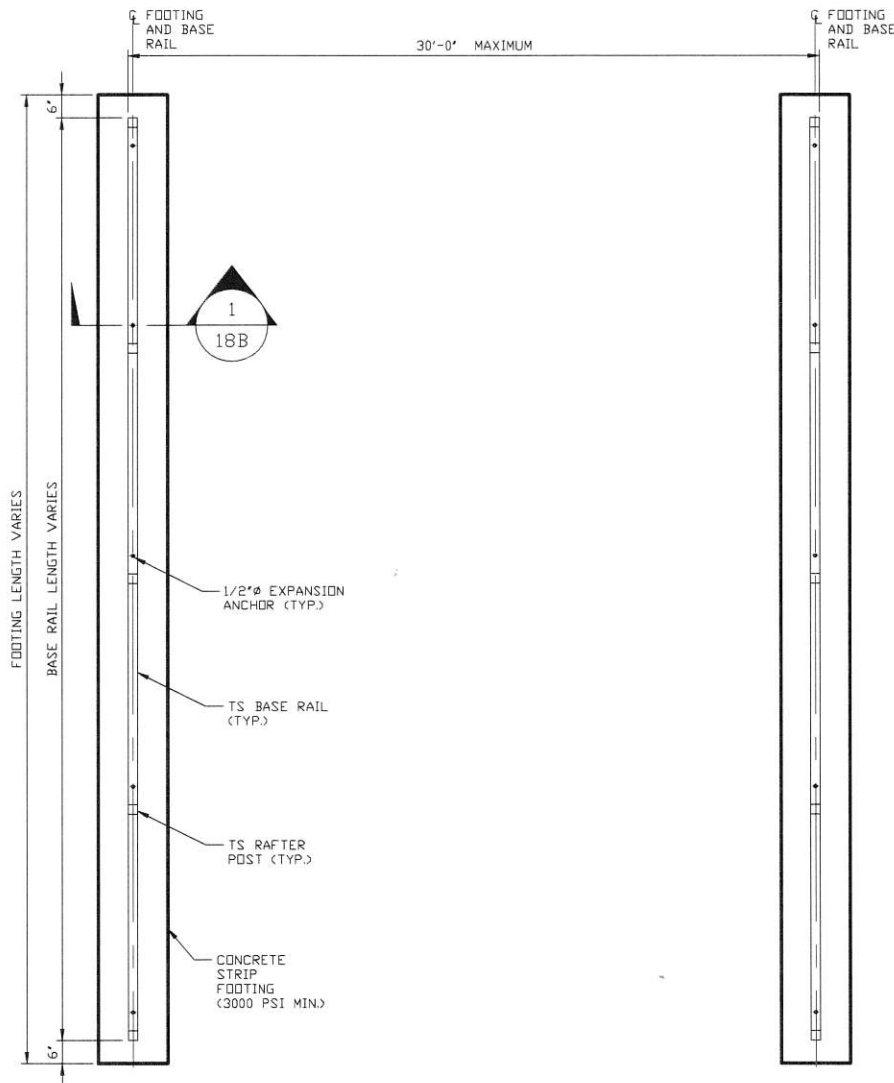
DWG. NO: SK-3

**JOB NO: 18094S/19050S/
 20127S/23045S/24328S**

REV: 9

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 WITHOUT ATTACHED LEAN-TO **AND WIND SPEEDS 105 MPH < TO ≤ 150 MPH**



SECTION 1
 SCALE: NTS
 18B

*COORDINATE WITH LOCAL CODES/ORD. TO ENSURE COMPLIANCE WITH LOCAL FROST DEPTH REQUIREMENTS.

CONCRETE STRIP FOOTING PLAN
 SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
 1804 RIVER STREET
 WILKESBORO, NC 28697
 30'-0"x16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

SHT. 18B

DWG. NO: SK-3

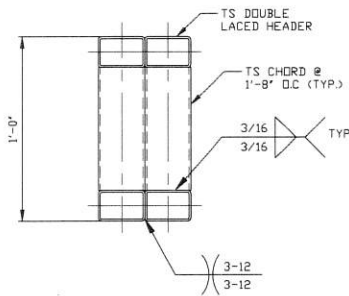
**JOB NO: 18094S/19050S/
 20127S/23045S/24328S**

REV: 9

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.

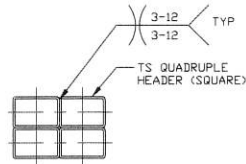
SIDE WALL HEADER OPTIONS FOR TS DOUBLE COLUMNS AND GROUND SNOW LOADS $35 < TO \leq 45$ PSF

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.
NOTE: SINGLE TUBE HEADERS CAN BE USED FOR FRAME-OUTS THAT DON'T CUT COLUMNS.



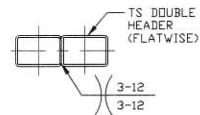
**HEADER DETAIL FOR
 $12'-0'' < \text{LENGTH} \leq 16'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $8'-0'' < \text{LENGTH} \leq 12'-0''$**

SCALE: NTS

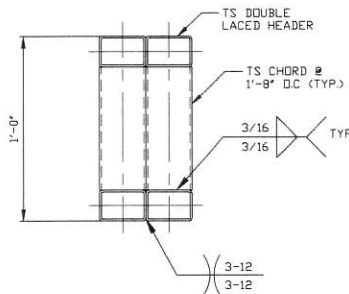


**HEADER DETAIL FOR
 $\text{LENGTH} \leq 8'-0''$**

SCALE: NTS

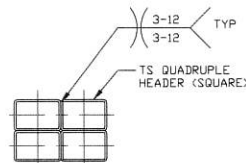
SIDE WALL HEADER OPTIONS FOR TS DOUBLE COLUMNS AND GROUND SNOW LOADS ≤ 35 PSF

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.
NOTE: SINGLE TUBE HEADERS CAN BE USED FOR FRAME-OUTS THAT DON'T CUT COLUMNS.



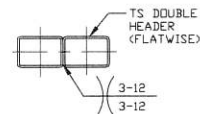
**HEADER DETAIL FOR
 $13'-0'' < \text{LENGTH} \leq 16'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $8'-0'' < \text{LENGTH} \leq 13'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $\text{LENGTH} \leq 8'-0''$**

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SCALE: NTS

SHT. 19

DWG. NO: SK-3

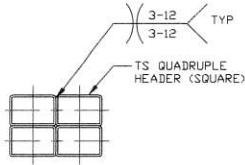
REV: 9

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.

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

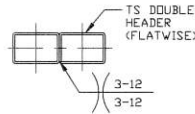
END WALL HEADER OPTIONS FOR TS DOUBLE COLUMNS AND GROUND SNOW LOADS $35 < TO \leq 45$ PSF

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.
NOTE: SINGLE TUBE HEADERS CAN BE USED FOR FRAME-OUTS THAT DON'T CUT COLUMNS.



**HEADER DETAIL FOR
 $11'-0'' < \text{LENGTH} \leq 16'-0''$**

SCALE: NTS

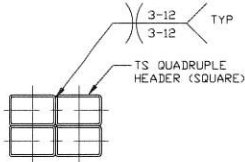


**HEADER DETAIL FOR
 $\text{LENGTH} \leq 11'-0''$**

SCALE: NTS

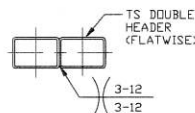
END WALL HEADER OPTIONS FOR TS DOUBLE COLUMNS AND GROUND SNOW LOADS ≤ 35 PSF

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.
NOTE: SINGLE TUBE HEADERS CAN BE USED FOR FRAME-OUTS THAT DON'T CUT COLUMNS.



**HEADER DETAIL FOR
 $11'-0'' < \text{LENGTH} \leq 16'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $\text{LENGTH} \leq 11'-0''$**

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0"x16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SCALE: NTS

DWG. NO: SK-3

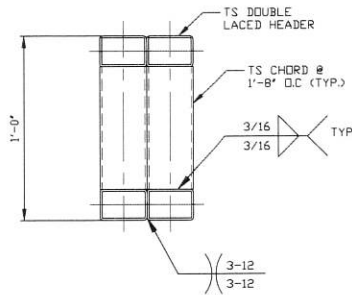
JOB NO: 18094S/19050S/
20127S/23045S/24328S

REV: 9

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.

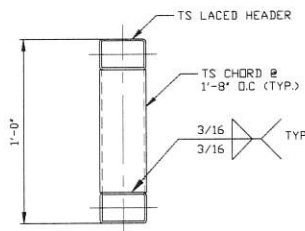
SIDE WALL HEADER OPTIONS FOR TS SINGLE COLUMNS AND GROUND SNOW LOADS $35 < TO \leq 45$ PSF

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.



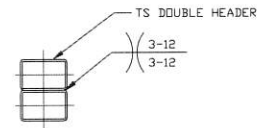
**HEADER DETAIL FOR
 $13'-0'' < \text{LENGTH} \leq 16'-0''$**

SCALE: NTS



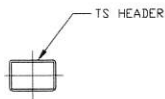
**HEADER DETAIL FOR
 $8'-0'' < \text{LENGTH} \leq 13'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $5'-0'' < \text{LENGTH} \leq 8'-0''$**

SCALE: NTS

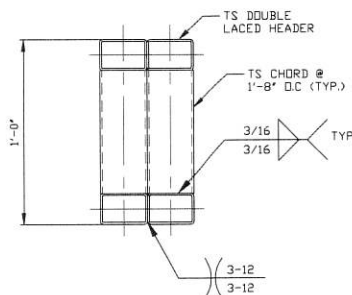


**HEADER DETAIL FOR
 $\text{LENGTH} \leq 5'-0''$**

SCALE: NTS

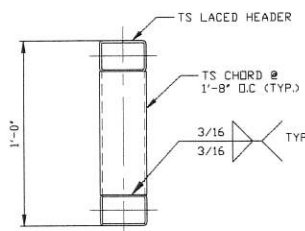
SIDE WALL HEADER OPTIONS FOR TS SINGLE COLUMNS AND GROUND SNOW LOADS ≤ 35 PSF

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.



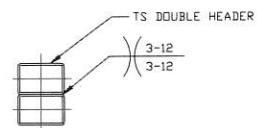
**HEADER DETAIL FOR
 $14'-0'' < \text{LENGTH} \leq 16'-0''$**

SCALE: NTS



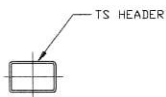
**HEADER DETAIL FOR
 $8'-0'' < \text{LENGTH} \leq 14'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $5'-0'' < \text{LENGTH} \leq 8'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $\text{LENGTH} \leq 5'-0''$**

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

**ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING**

DATE: 2-3-25

SHT. 19B

SCALE: NTS

DWG. NO: SK-3

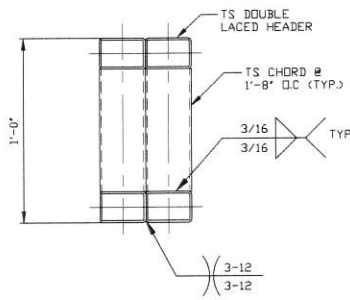
**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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.

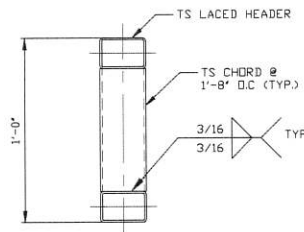
END WALL HEADER OPTIONS FOR TS SINGLE COLUMNS AND GROUND SNOW LOADS $35 < TO \leq 45$ PSF

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.



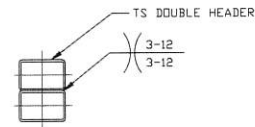
**HEADER DETAIL FOR
 $13'-0'' < \text{LENGTH} \leq 16'-0''$**

SCALE: NTS



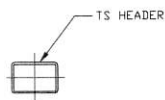
**HEADER DETAIL FOR
 $12'-0'' < \text{LENGTH} \leq 13'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $7'-0'' < \text{LENGTH} \leq 12'-0''$**

SCALE: NTS

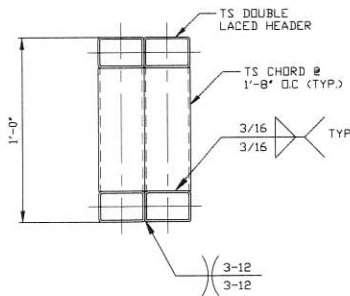


**HEADER DETAIL FOR
 $\text{LENGTH} \leq 7'-0''$**

SCALE: NTS

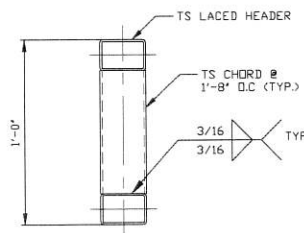
END WALL HEADER OPTIONS FOR TS SINGLE COLUMNS AND GROUND SNOW LOADS ≤ 35 PSF

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.



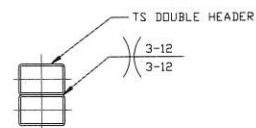
**HEADER DETAIL FOR
 $13'-0'' < \text{LENGTH} \leq 16'-0''$**

SCALE: NTS



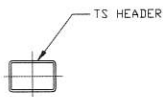
**HEADER DETAIL FOR
 $12'-0'' < \text{LENGTH} \leq 13'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $7'-0'' < \text{LENGTH} \leq 12'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $\text{LENGTH} \leq 7'-0''$**

SCALE: NTS

Validity Notice

Plans Expiration Date:

3 February 2026

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

DRAWN BY: JG

CHECKED BY: PDH

PROJECT MGR: JRP

CLIENT: ES

ELEPHANT STRUCTURES
1804 RIVER STREET
WILKESBORO, NC 28697
30'-0" x 16'-0" ENCLOSED BUILDING

DATE: 2-3-25

SHT. 19C

SCALE: NTS

DWG. NO: SK-3

**JOB NO: 18094S/19050S/
20127S/23045S/24328S**

REV: 9

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.