

JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521



STRUCTURAL DESIGN
STANDARD PACKAGE
ENCLOSED BUILDING

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

22 July 2024 Revision 5 M&A Project No.
17259S/19076S/19176S/20124S/23125S/24189S

Prepared for:

Universal Metal Buildings
9283 US 601
Dobson, NC 27017

Prepared by:

Moore and Associates Engineering and Consulting, Inc.

1009 East Avenue
North Augusta, SC 29841
401 South Main Street
Mount Airy, NC 27030

JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521



Validity Notice

Plans Expiration Date: 22 July 2025


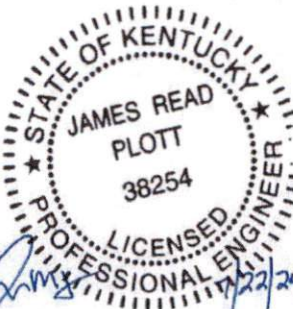
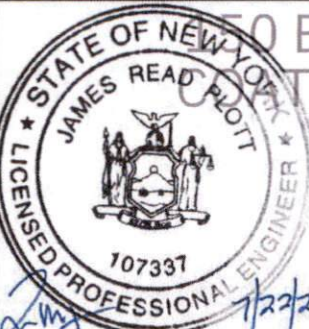
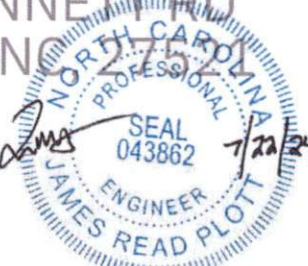
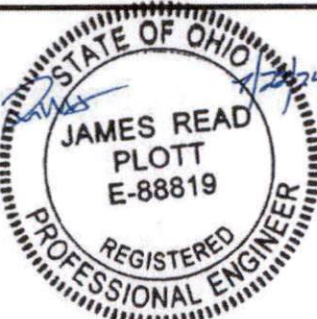
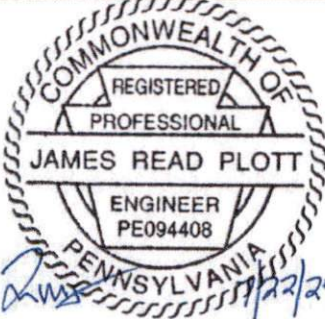


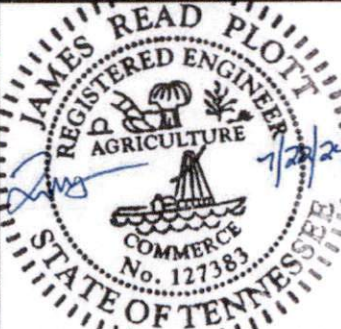


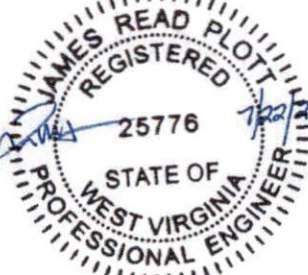
Plans are valid for one year from issuance date.

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 copyright license is granted to you for use of the Instruments of Service solely and exclusively in connection with the specific project for which the Instrument Service were created by Moore & Associates. All other uses, including without limitation transfer to a third party, are strictly prohibited. Acceptance of Instruments of Service constitutes your agreement to indemnify and to hold Moore & Associates harmless from all cost, expenses, damages, and fees arising from or relating to any unauthorized use or transfer of the Instruments of Service.

JOSH EVERHART

150 BENNETT RD

COATS, NC, 27521

			
			
			
<p>JOSH EVERHART 150 BENNETT RD COATS, NC, 27521</p>			
<p>Validity Notice Plans Expiration Date: 22 July 2025</p>			
<p>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</p>		<p>UNIVERSAL METAL BUILDINGS 9283 US 601 DOBSON, NC 27017 30'-0"x14'-0" SP ENCLOSED STRUCTURE</p>	
		<p>JOB NO: 17259S/19076S /19176S/20124S/23125S /24189S</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>		<p>DRAWN BY: BF CHECKED BY: JS PROJECT MGR: JRP CLIENT: UNIVERSAL</p>	<p>DATE: 7-22-24 SHT. 1 SCALE: NTS DWG. NO: SK-3 REV: 5</p>

DRAWING INDEX

JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521

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 END AND SIDE ELEVATIONS
SHEET 5	TYPICAL RAFTER/COLUMN END AND SIDE FRAMING SECTION (BOX EAVE RAFTER)
SHEET 5A	TYPICAL RAFTER/COLUMN END AND SIDE FRAMING SECTION (BOX EAVE RAFTER)
SHEET 6	RAFTER/COLUMN CONNECTION DETAILS (BOX EAVE RAFTER)
SHEET 6A	RAFTER/COLUMN CONNECTION DETAILS (BOX EAVE RAFTER)
SHEET 7	TYPICAL RAFTER/COLUMN END AND SIDE FRAMING SECTION (BOW EAVE RAFTER)
SHEET 7A	TYPICAL RAFTER/COLUMN END AND SIDE FRAMING SECTION (BOW EAVE RAFTER)
SHEET 8	RAFTER/COLUMN CONNECTION DETAILS (BOW EAVE RAFTER)
SHEET 8A	RAFTER/COLUMN CONNECTION DETAILS (BOW EAVE RAFTER)
SHEET 9	BASE RAIL ANCHORAGE OPTIONS
SHEET 9A	BASE RAIL ANCHORAGE OPTIONS
SHEET 9B	BASE RAIL ANCHORAGE OPTIONS
SHEET 10	TYPICAL END WALL AND SIDE WALL FRAMING SECTIONS (BOX EAVE)
SHEET 11	TYPICAL END WALL AND SIDE WALL FRAMING SECTIONS (BOW EAVE)
SHEET 12	CONNECTION DETAILS
SHEET 13	CONNECTION DETAILS
SHEET 14	CONNECTION DETAILS
SHEET 15	BOX EAVE RAFTER LEAN-TO OPTIONS
SHEET 15A	BOX EAVE RAFTER LEAN-TO OPTION FOR GROUND SNOW LOADS \leq 20 PSF
SHEET 16	BOW EAVE RAFTER LEAN-TO OPTION FOR GROUND SNOW LOADS \leq 20 PSF
SHEET 17	BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION
SHEET 18	SIDE WALL AND END WALL HEADER OPTIONS FOR TS SINGLE COLUMNS
SHEET 18A	SIDE WALL AND END WALL HEADER OPTIONS FOR TS DOUBLE COLUMNS

JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521

Validity Notice

Plans Expiration Date:

22 July 2025

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SCALE: NTS

SHT. 2

DWG. NO: SK-3

REV: 5

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: 17259S/19076S
/19176S/20124S/23125S
/24189S

INSTALLATION NOTES AND SPECIFICATIONS

1. DESIGN IS FOR MAXIMUM 30'-0" WIDE x 14'-0" EAVE HEIGHT ENCLOSED STRUCTURES.
2. DESIGN WAS DONE IN ACCORDANCE WITH ALL THE APPLICABLE BUILDING CODES LISTED ON SHEET 3A.
3. DESIGN LOADS ARE AS FOLLOWS:

A) ROOF DEAD LOADS:

SELF-WEIGHT = 1.5 PSF
MEP = 0 PSF
COLLATERAL = 0 PSF

B) ROOF LIVE LOAD = 12 PSF

C) FLOOR LIVE LOAD = 100 PSF (4" CONCRETE SLAB/FOOTING)

D) GROUND SNOW LOAD = 35 PSF

= 20 PSF WITH U-CHANNEL RAFTER TIE ($w \leq 16'-0"$)

NOTE: DROP-DOWN LEAN-TO'S (THOSE CAUSING A HEIGHT DIFFERENTIAL FROM THE MAIN STRUCTURE) SHALL BE LIMITED TO GROUND SNOW LOADS ≤ 20 PSF DUE TO ADDITIONAL SNOW DRIFT LOADING.

4. ULTIMATE 3-SECOND GUST WIND SPEED = ≤ 145 MPH (NOMINAL WIND SPEED = 112 MPH).
5. MAXIMUM RAFTER/POST AND END POST SPACING = 5.0 FEET (UNLESS NOTED OTHERWISE).
6. END WALL COLUMNS ARE EQUIVALENT TO SIDE WALL COLUMNS 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 TYPE SS WITH MINIMUM YIELD STRENGTH (F_y) OF 50 KSI AND GALVANIZING MEETING THE MINIMUM REQUIREMENTS OF G60.
10. HORIZONTAL ROOF PANELING ONLY ADEQUATE FOR GROUND SNOW LOADS ≤ 30 PSF.
11. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2"x2 1/2"-14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS (UNLESS NOTED OTHERWISE).
12. CONNECTOR SLEEVES ARE MINIMUM 6" LONG, TS 2 1/4"x2 1/4"-14 GAUGE FOR 2 1/2"x2 1/2"-14 GAUGE (UNLESS NOTED OTHERWISE).
13. AVERAGE FASTENER SPACING ON-CENTERS = 10" (MAX.).
14. FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS.
15. ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH COLUMN.
16. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT x 36" LONG AND MAY ONLY BE USED IN CONJUNCTION WITH OTHER (OPTIONAL) ANCHOR DEVICES AND ONLY IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED. COORDINATE WITH LOCAL CODES/ORDINANCES REGARDING MINIMUM LENGTH FOR FROST DEPTH PROTECTION.
17. CONTRACTOR TO PROVIDE ADEQUATE BRACING FOR STRUCTURE SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURE AND FOUNDATIONS ARE DESIGNED FOR A COMPLETED CONDITION ONLY AND, THEREFORE, REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION.
18. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
SOIL SITE CLASS = D
RISK CATEGORY I
 $R = 3.25$ $I_E = 1.0$
 $S_{DS} = 2.625 g$ $V = C_s W$
 $S_{DI} = 2.13 g$
19. IF MORE THAN 50% OF COLUMN (LEG) ARE REMOVED IN ANY LONGITUDINAL (SIDE) WALL 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. WHEN USING GENERIC MASTER DESIGNS TO OBTAIN BUILDING PERMIT, IT MUST BE ACCOMPANIED BY SUFFICIENT ADDITIONAL INFORMATION TO INDICATE THE LOCATION, NATURE, AND EXTEND OF THE CONSTRUCTION AND SHOW IN DETAIL THAT IT WILL CONFORM TO ALL APPLICABLE CODES, LAWS, ORDINANCES, RULES, AND REGULATIONS.
22. 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.
23. ANY VARIATION FROM THE ANALYSIS/DESIGN PARAMETERS OF THE MASTER DESIGN REQUIRES THE DEVELOPMENT OF A SITE-SPECIFIC DESIGN.

JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521

JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521

Validity Notice

Plans Expiration Date:

22 July 2025

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SCALE: NTS

SHT. 3

DWG. NO: SK-3

REV: 5

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: 17259S/19076S
/19176S/20124S/23125S
/24189S

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)
GEORGIA STATE MINIMUM STANDARD BUILDING CODE
(ADOPTS THE IBC 2018 WITH AMENDMENTS)
2018 KENTUCKY BUILDING CODE
(ADOPTS THE IBC 2015 WITH AMENDMENTS)
2020 BUILDING CODE OF NEW YORK STATE
(ADOPTS THE IBC 2018 WITH AMENDMENTS)
2018 NORTH CAROLINA BUILDING CODE
(ADOPTS THE IBC 2015 WITH AMENDMENTS)
2024 OHIO BUILDING CODE
(ADOPTS THE IBC 2021 WITH AMENDMENTS)
PENNSYLVANIA BUILDING CODE 2018
(ADOPTS THE IBC 2018 WITH AMENDMENTS)
PHILADELPHIA BUILDING CODE
(ADOPTS THE IBC 2018 WITH AMENDMENTS)
2021 SOUTH CAROLINA BUILDING CODE
(ADOPTS THE IBC 2021 WITH AMENDMENTS)
TENNESSEE BUILDING CODE 2012
(ADOPTS THE IBC 2012 WITH AMENDMENTS)
BUILDING CODE OF THE CITY OF KNOXVILLE
(ADOPTS THE IBC 2018 WITH 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 1,
CONSTRUCTION/VIRGINIA CONSTRUCTION CODE (VCC)
(ADOPTS THE IBC 2021 WITH AMENDMENTS)
WEST VIRGINIA BUILDING CODE 2018
(ADOPTS THE IBC 2018 WITH AMENDMENTS)

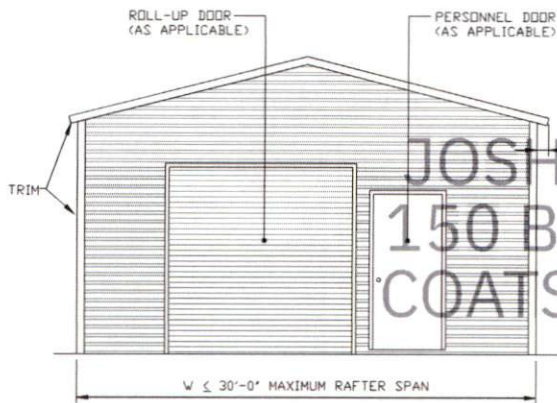
JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521

JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521

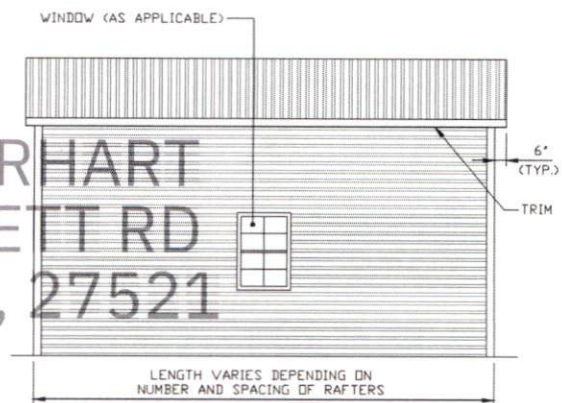
Validity Notice
Plans Expiration Date:
22 July 2025

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: BF	UNIVERSAL METAL BUILDINGS 9283 US 601 DOBSON, NC 27017 30'-0"x14'-0" SP ENCLOSED STRUCTURE		
	CHECKED BY: JS			
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: 7-22-24	SCALE: NTS	JOB NO: 17259S/19076S /19176S/20124S/23125S /24189S
	CLIENT: UNIVERSAL	SHT. 3A	DWG. NO: SK-3	REV: 5

BOX EAVE FRAME RAFTER STRUCTURE

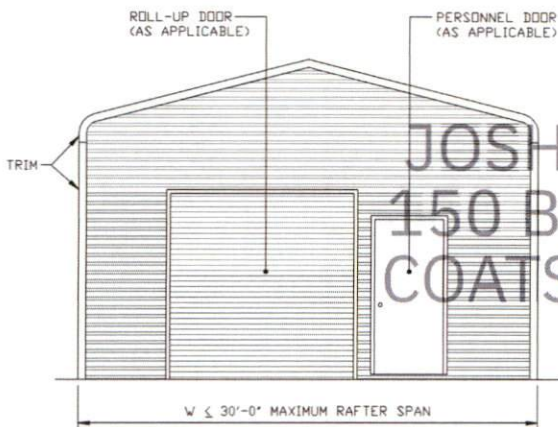


TYPICAL END ELEVATION
SCALE: NTS

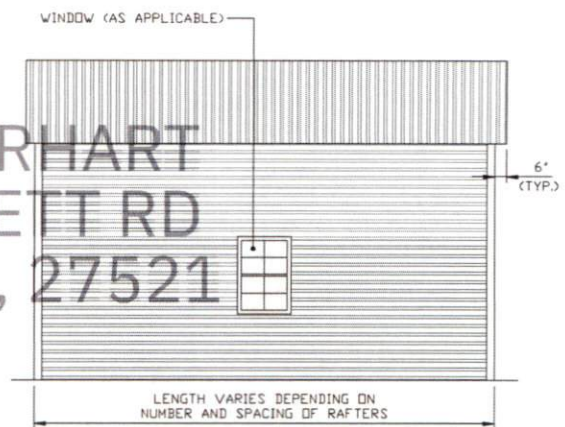


TYPICAL SIDE ELEVATION
SCALE: NTS

BOW FRAME RAFTER STRUCTURE



TYPICAL END ELEVATION
SCALE: NTS



TYPICAL SIDE ELEVATION
SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SCALE: NTS

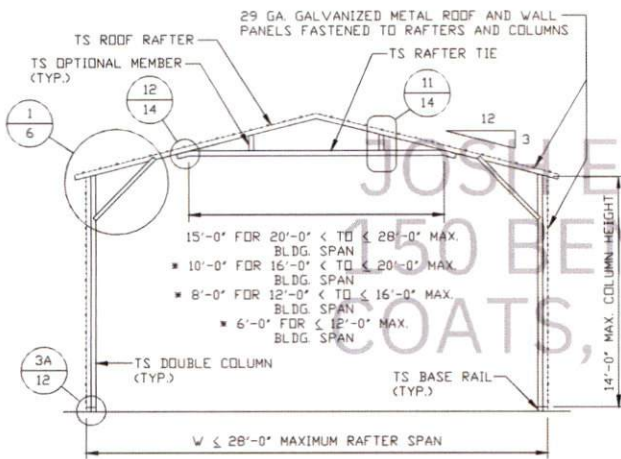
SHT. 4

DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

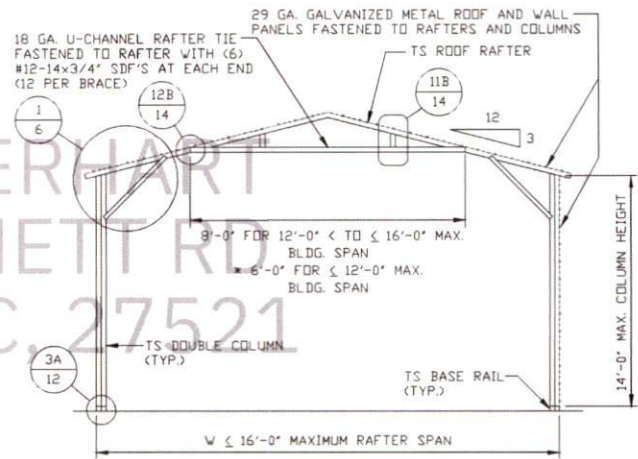
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

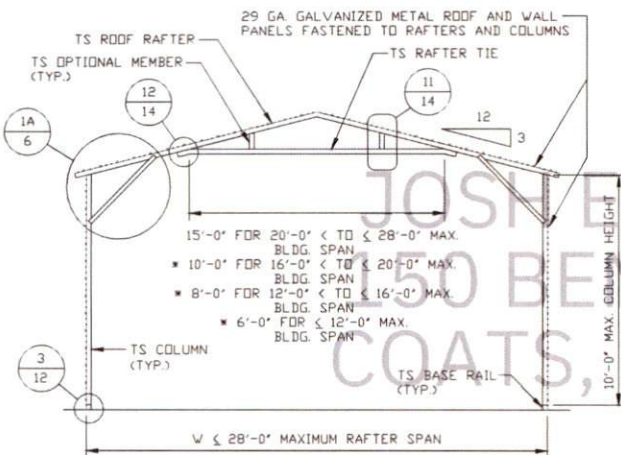
* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

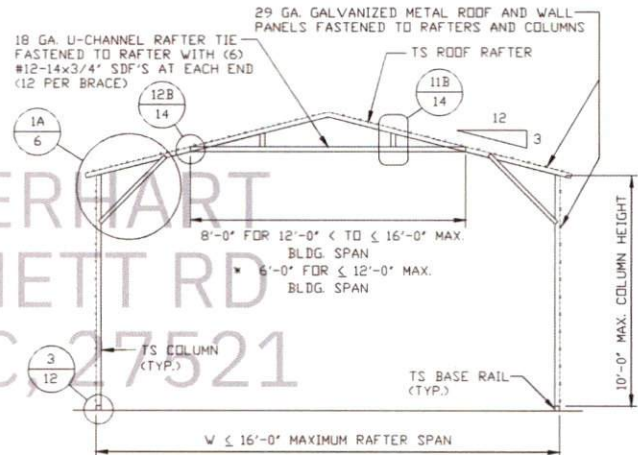
* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

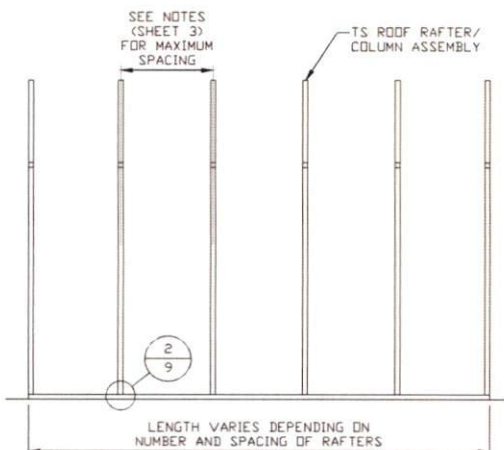
* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS



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:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 5

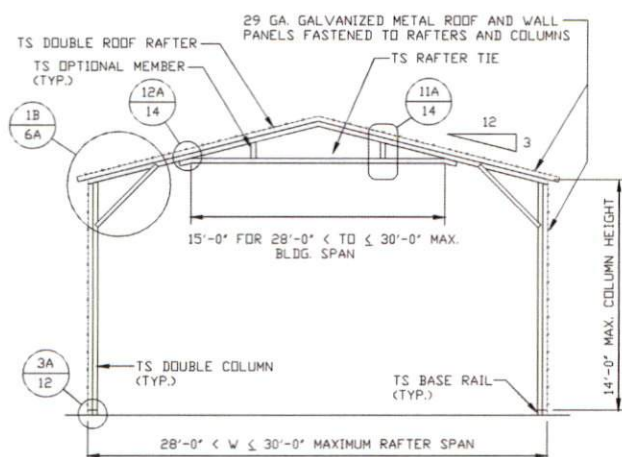
SCALE: NTS

DWG. NO: SK-3

**JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S**

REV: 5

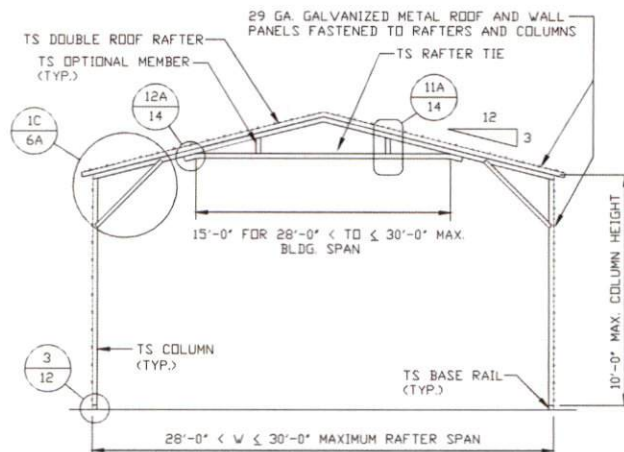
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

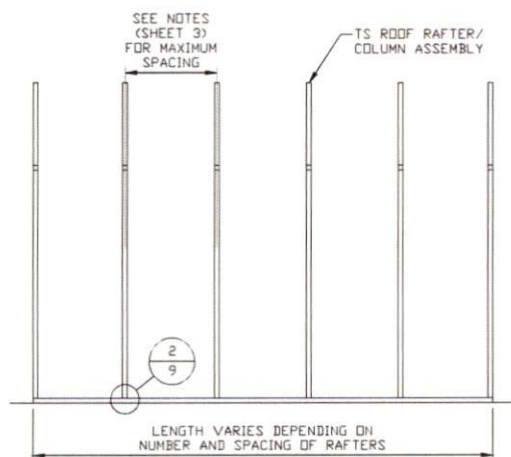
NOTE: SINGLE TUBE RAFTER CAN BE USED FOR GROUND SNOW LOADS ≤ 30 PSF



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

NOTE: SINGLE TUBE RAFTER CAN BE USED FOR GROUND SNOW LOADS ≤ 30 PSF



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601
DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 5A

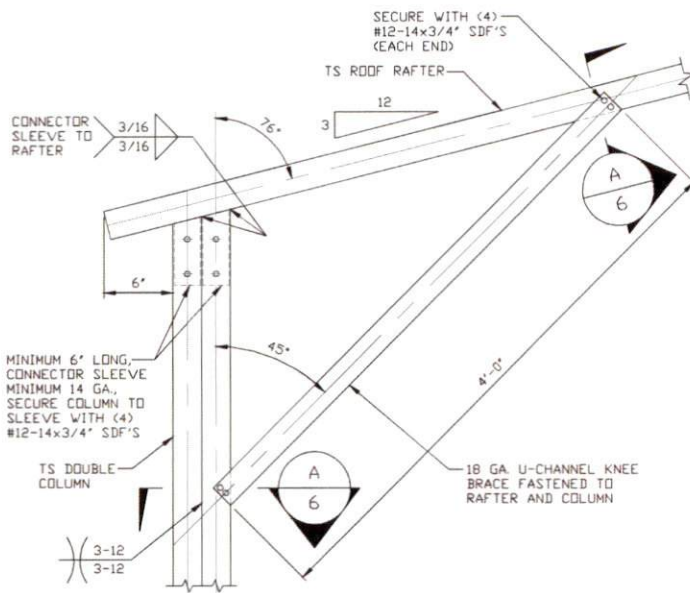
SCALE: NTS

DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

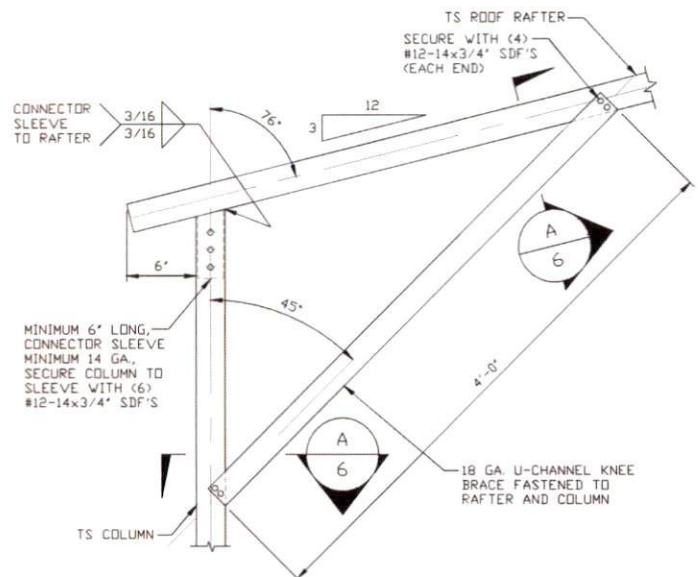
REV: 5

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 COLUMN
CONNECTION DETAIL FOR
HEIGHTS 10'-0" < TO ≤ 14'-0"**
SCALE: NTS

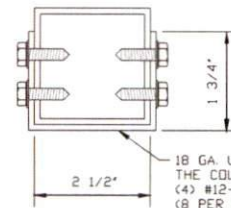
1



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

1A

NOTE: MAXIMUM COLUMN HEIGHT IS
12'-0" FOR WIND SPEEDS ≤ 115 MPH.



A

BRACE SECTION
SCALE: NTS

[Validity Notice](#)

[Plans Expiration Date:](#)

[22 July 2025](#)

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601
DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 6

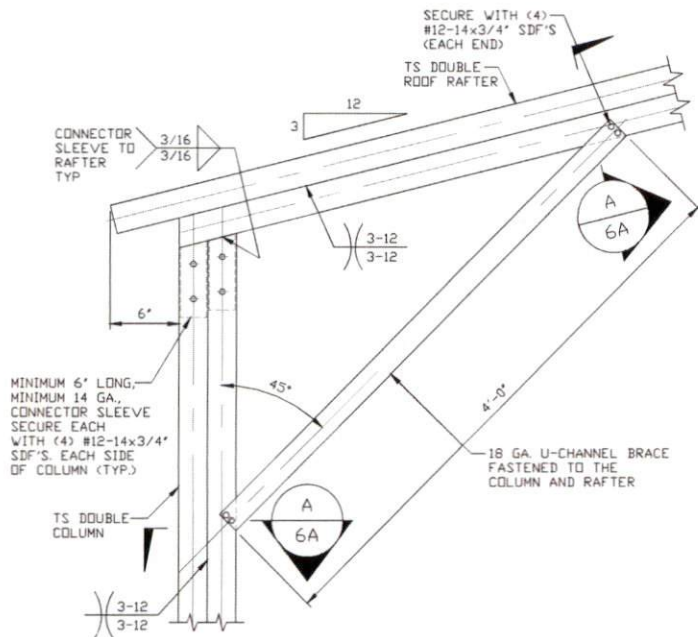
SCALE: NTS

DWG. NO: SK-3

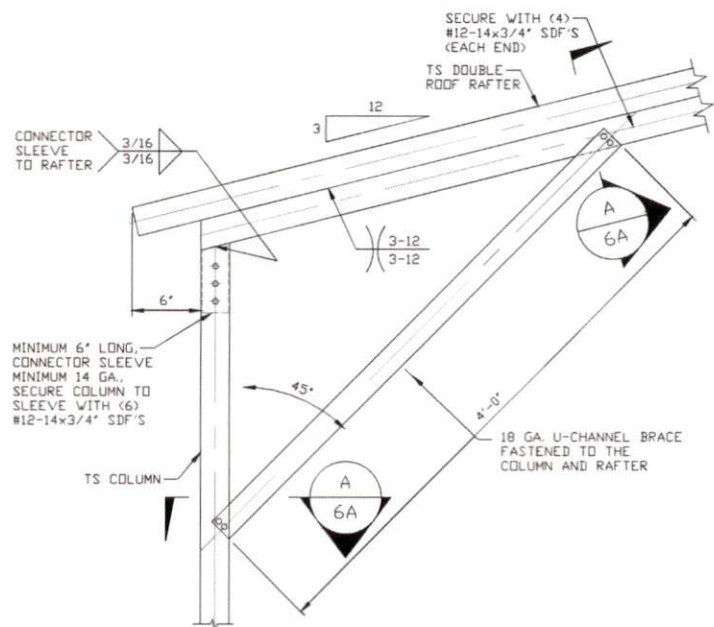
JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

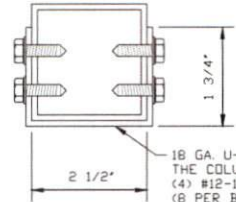
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



1B BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < TO ≤ 14'-0"
SCALE: NTS



1C BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS ≤ 10'-0"
SCALE: NTS
NOTE: MAXIMUM COLUMN HEIGHT IS 12'-0" FOR WIND SPEEDS ≤ 115 MPH.



A BRACE SECTION
SCALE: NTS

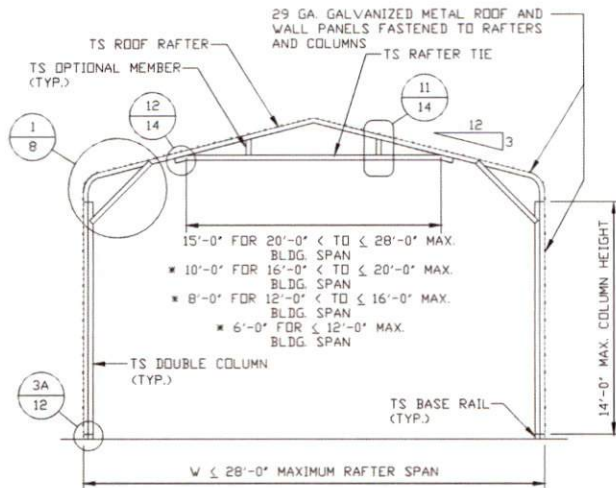
Validity Notice
Plans Expiration Date:
22 July 2025

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

DRAWN BY: BF
CHECKED BY: JS
PROJECT MGR: JRP
CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601
DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE
DATE: 7-22-24
SHT. 6A
SCALE: NTS
DWG. NO: SK-3
JOB NO: 17259S/19076S /19176S/20124S/23125S /24189S
REV: 5

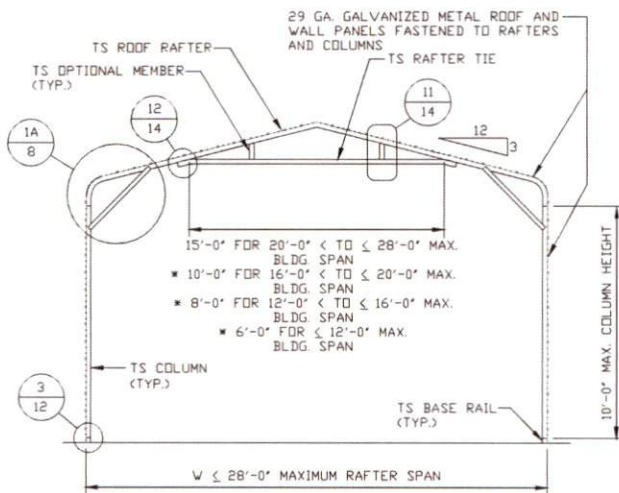
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

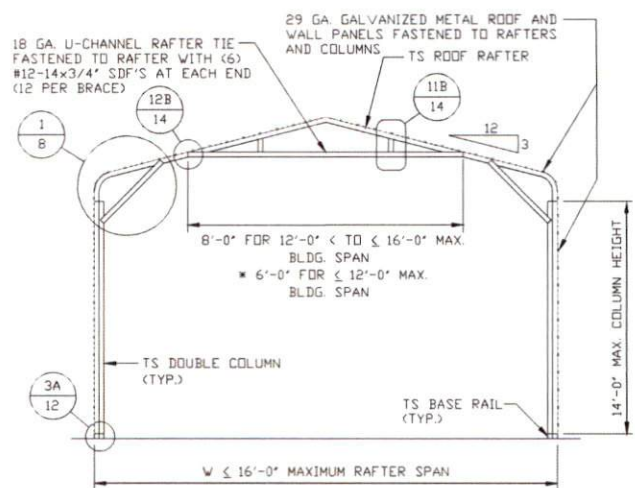
* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

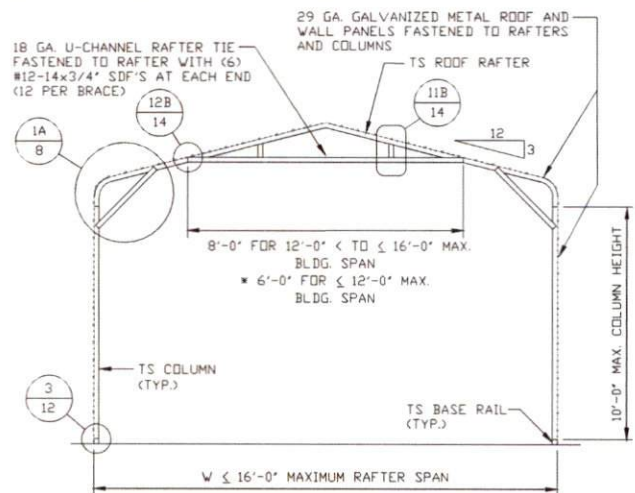
* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

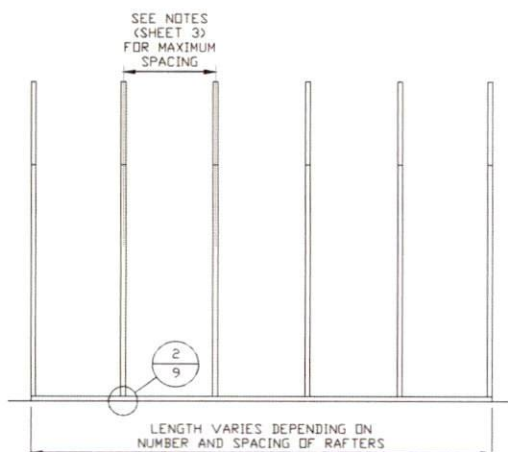
* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS



TYPICAL RAFTER/COLUMN FRAMING SIDE SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 7

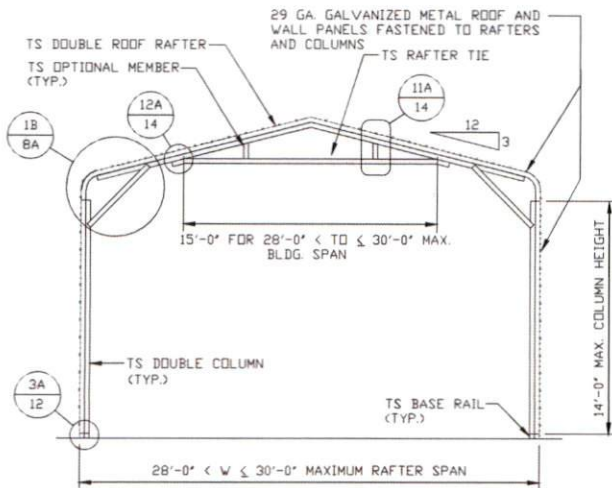
SCALE: NTS

DWG. NO: SK-3

**JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S**

REV: 5

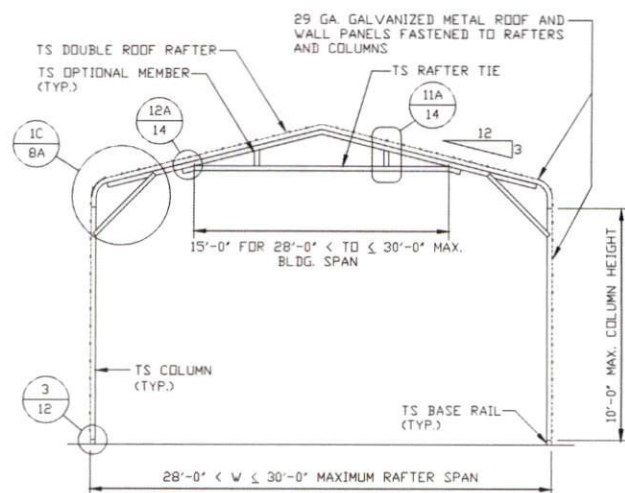
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

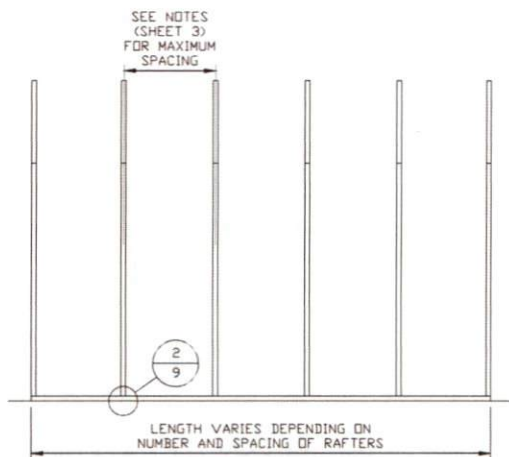
NOTE: SINGLE TUBE RAFTER CAN BE USED FOR GROUND SNOW LOADS ≤ 30 PSF



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

NOTE: SINGLE TUBE RAFTER CAN BE USED FOR GROUND SNOW LOADS ≤ 30 PSF



TYPICAL RAFTER/COLUMN FRAMING SIDE SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 7A

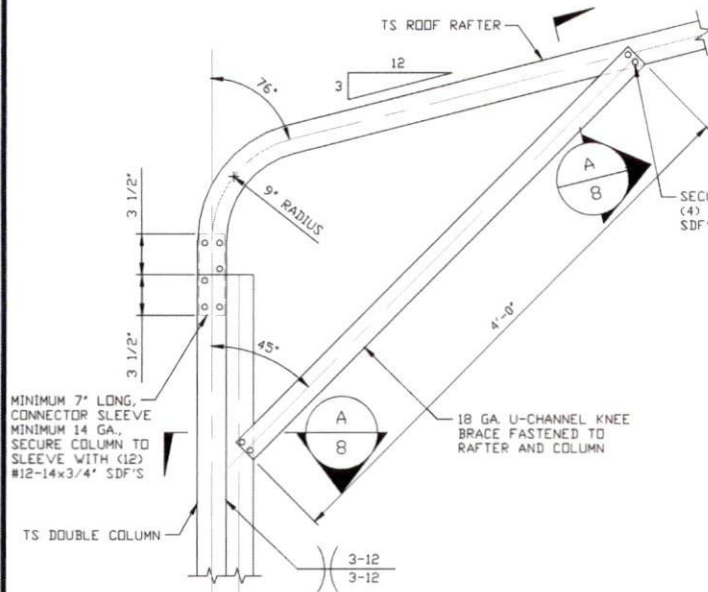
SCALE: NTS

DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

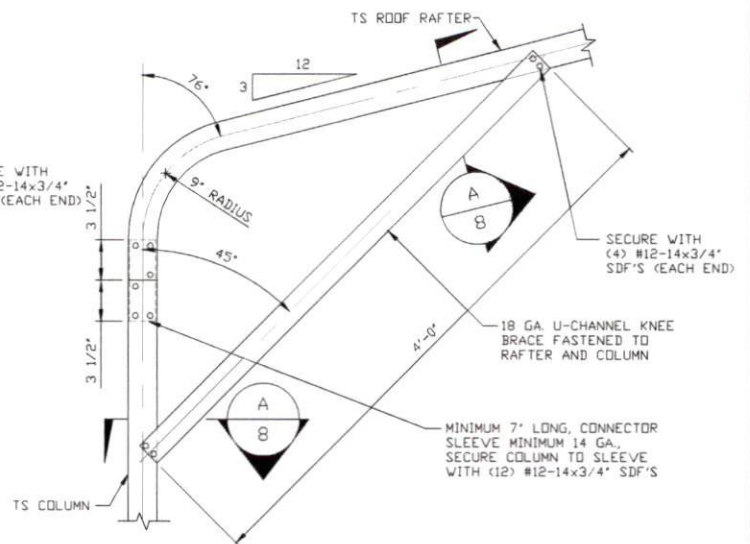
REV: 5

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.



1 BOW EAVE RAFTER COLUMN CONNECTION
DETAIL FOR HEIGHTS 10'-0" < TO ≤ 14'-0"

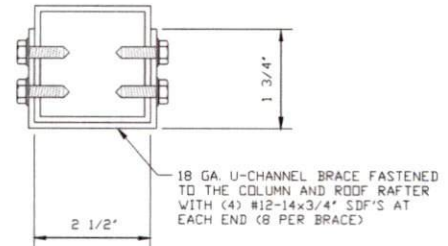
SCALE: NTS



1A BOW EAVE RAFTER COLUMN
CONNECTION DETAIL FOR
HEIGHTS ≤ 10'-0"

SCALE: NTS

NOTE: MAXIMUM COLUMN HEIGHT IS
12'-0" FOR WIND SPEEDS ≤ 115 MPH.



A BRACE SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601

DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 8

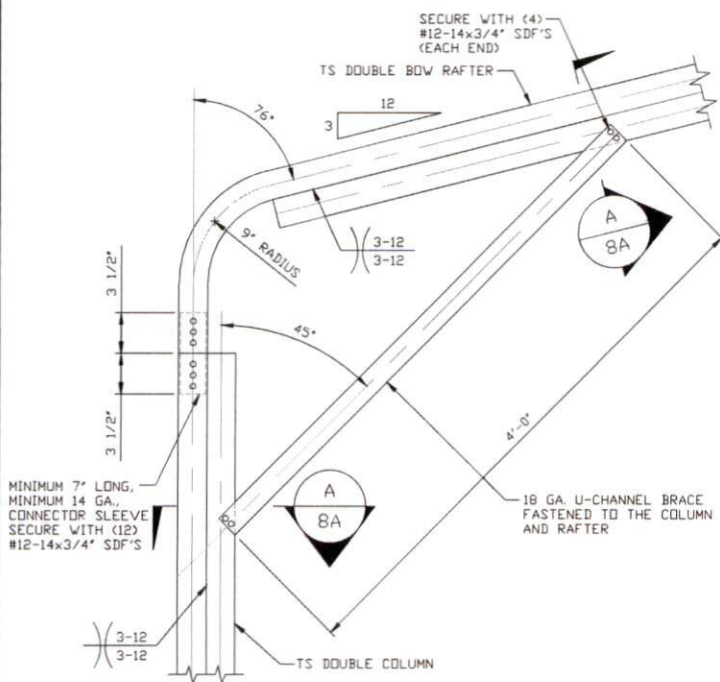
SCALE: NTS

DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

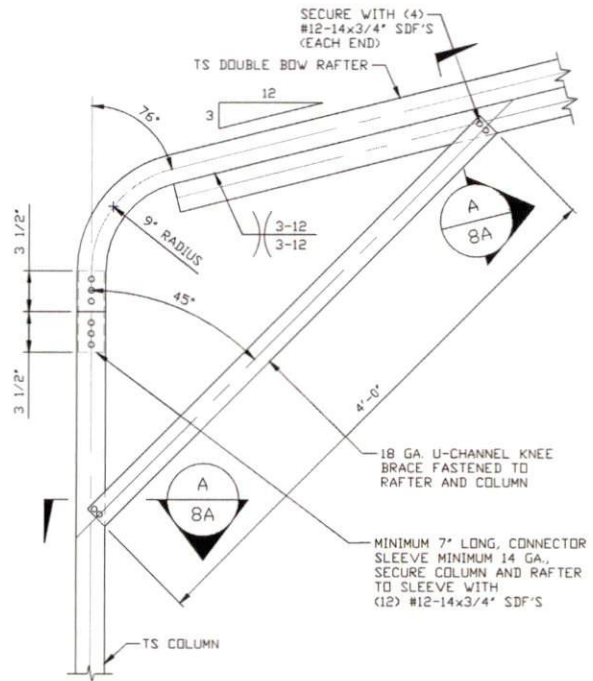
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



1B

**BOW EAVE RAFTER COLUMN CONNECTION
DETAIL FOR HEIGHTS 10'-0" < TO ≤ 14'-0"**

SCALE: NTS

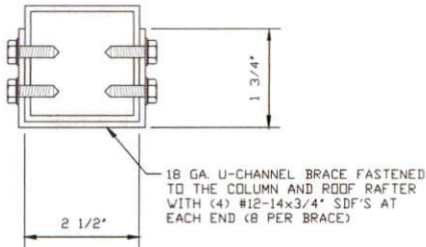


1C

**BOW EAVE RAFTER COLUMN
CONNECTION DETAIL FOR
HEIGHTS ≤ 10'-0"**

SCALE: NTS

NOTE: MAXIMUM COLUMN HEIGHT IS
12'-0" FOR WIND SPEEDS ≤ 115 MPH.



A

BRACE SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 8A

SCALE: NTS

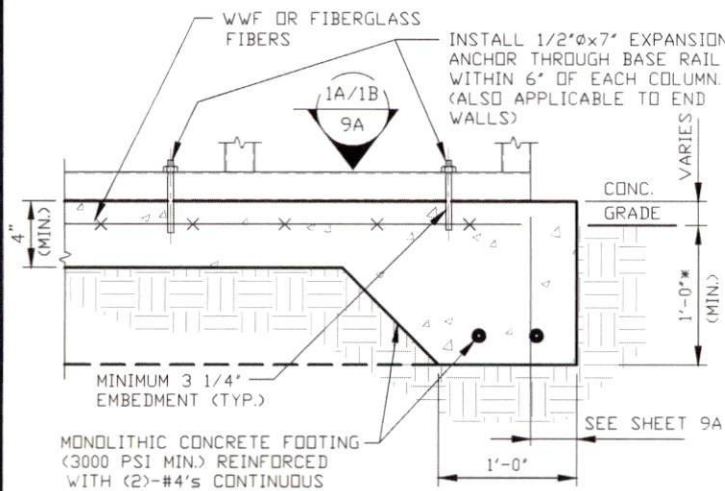
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

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.

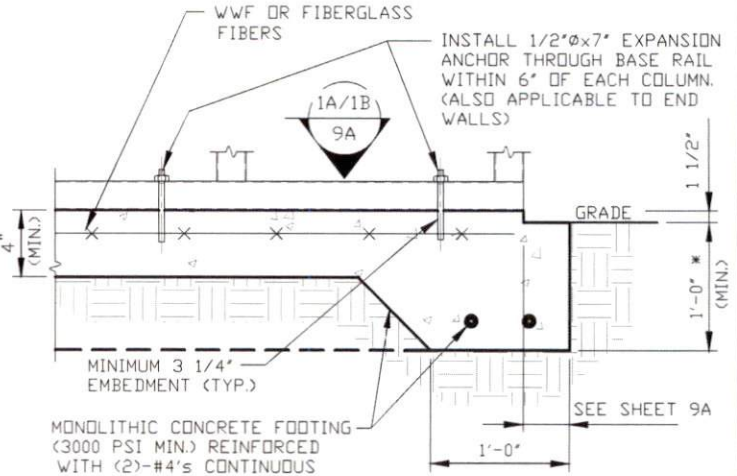
BASE RAIL ANCHORAGE OPTIONS



2A

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS
SEE SHEET 9A FOR MINIMUM ANCHOR
EDGE DISTANCE.
* COORDINATE WITH LOCAL BUILDING
CODE/ORD. REGARDING MINIMUM FROST
DEPTH (LENGTH).



2B

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS
SEE SHEET 9A FOR MINIMUM ANCHOR
EDGE DISTANCE.
* COORDINATE WITH LOCAL BUILDING
CODE/ORD. REGARDING MINIMUM FROST
DEPTH (LENGTH).

GENERAL NOTES

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

CONCRETE:

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

COVER OVER REINFORCING STEEL:

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

REINFORCING STEEL:

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

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

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

JOSH EVERHART
150 BENNETT RD
COATS, NC, 27521

[Validity Notice](#)

[Plans Expiration Date:](#)

[22 July 2025](#)

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 9

SCALE: NTS

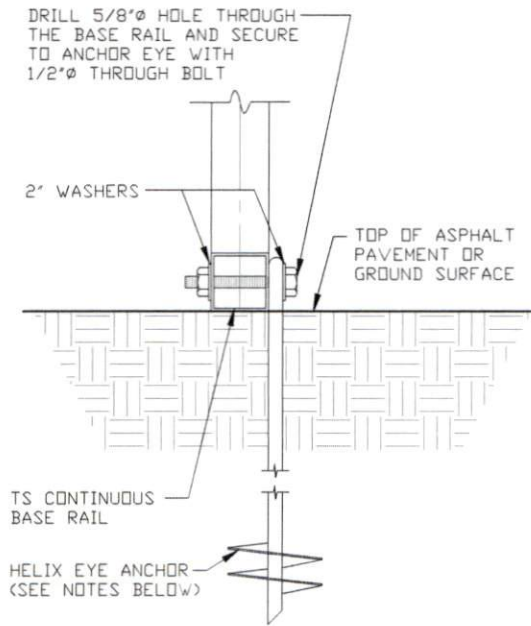
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

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

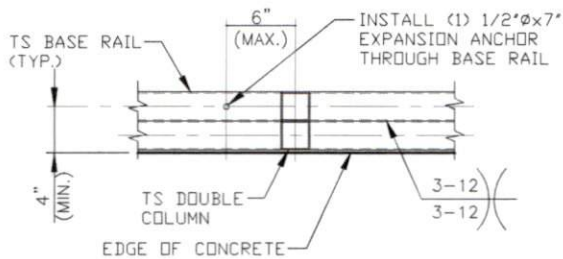


2C

GROUND BASE HELIX ANCHORAGE

SCALE: NTS (CAN BE USED FOR GRADE OR ASPHALT)

* COORDINATE WITH LOCAL BUILDING CODE/ORD. REGARDING MINIMUM FROST DEPTH (LENGTH).



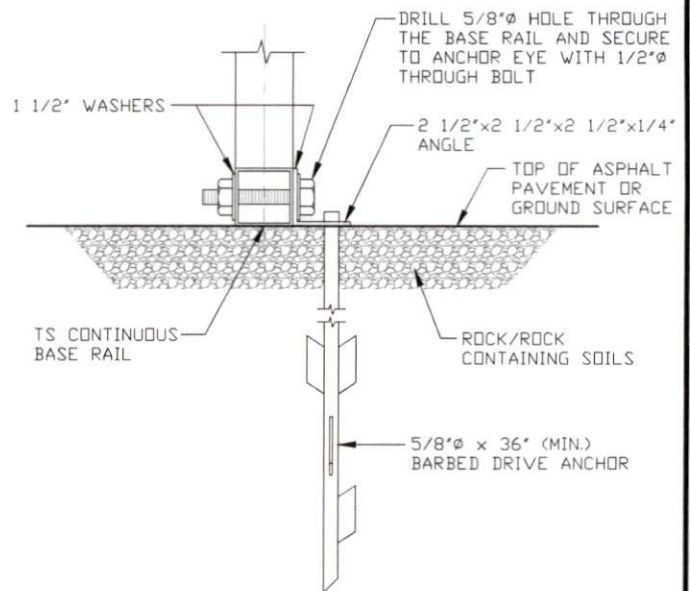
1A

SECTION

SCALE: NTS

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.

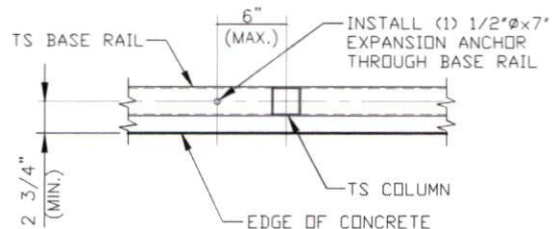


2D

ASPHALT BASE ANCHORAGE

SCALE: NTS

* COORDINATE WITH LOCAL BUILDING CODE/ORD. REGARDING MINIMUM FROST DEPTH (LENGTH).



1B

SECTION

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601

DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 9A

SCALE: NTS

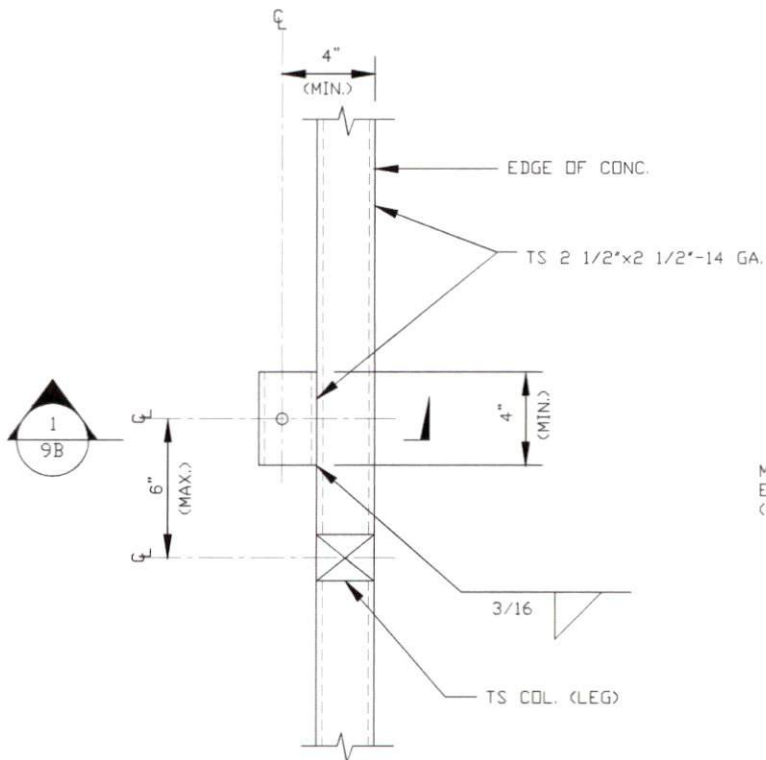
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

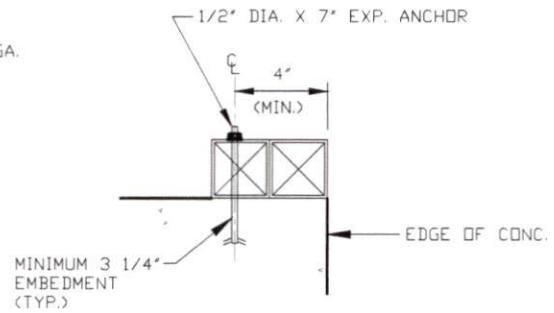
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BASE RAIL ANCHORAGE OPTIONS



**TYPICAL ANCHOR DETAIL WHEN BASE
RAIL IS NEAR EDGE OF CONCRETE**

SCALE: NTS



SECTION 1/9B
SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SCALE: NTS

SHT. 9B

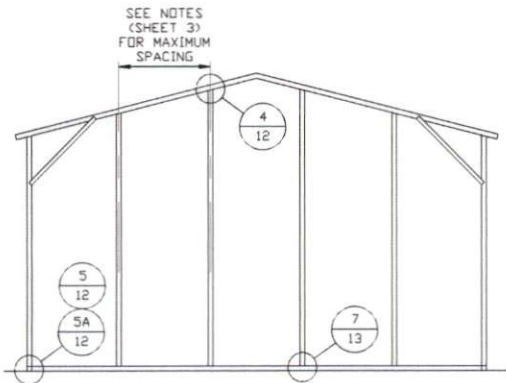
DWG. NO: SK-3

REV: 5

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.

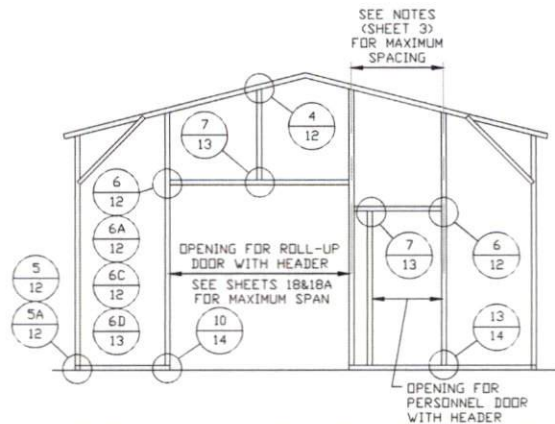
JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

TYPICAL END WALL AND SIDE WALL FRAMING SECTIONS



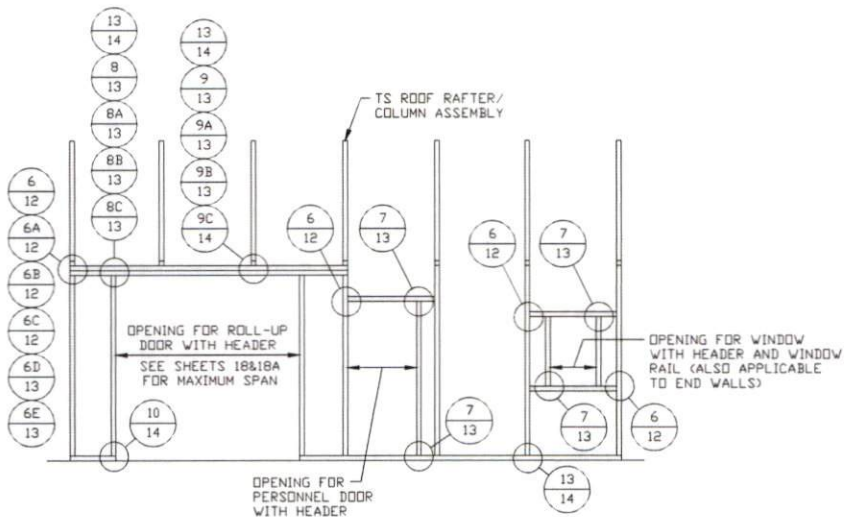
**TYPICAL BOX EAVE RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601
DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 10

SCALE: NTS

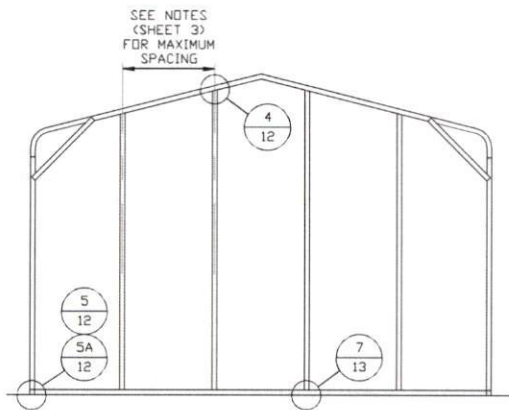
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

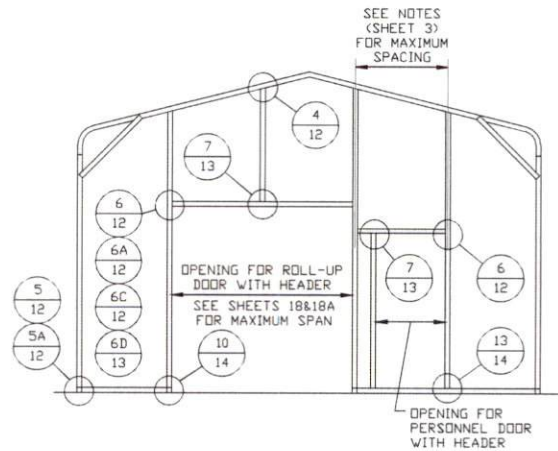
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

TYPICAL END WALL AND SIDE WALL FRAMING SECTIONS



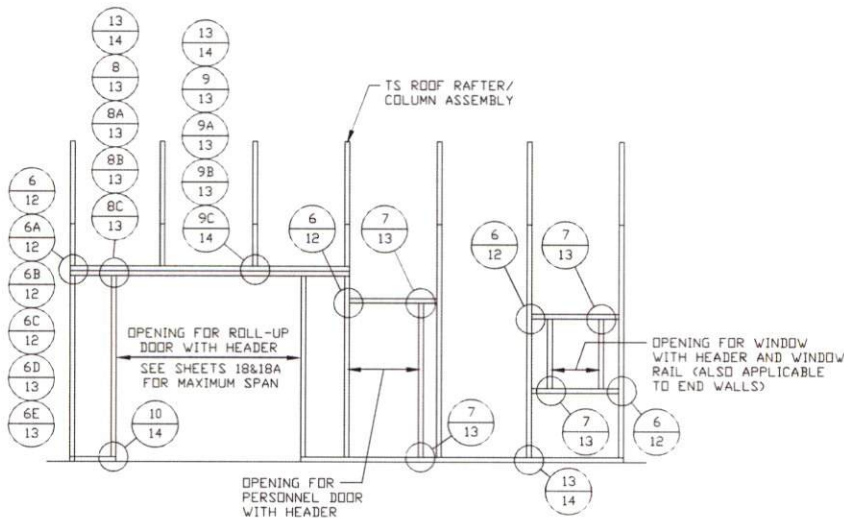
**TYPICAL BOW RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 11

SCALE: NTS

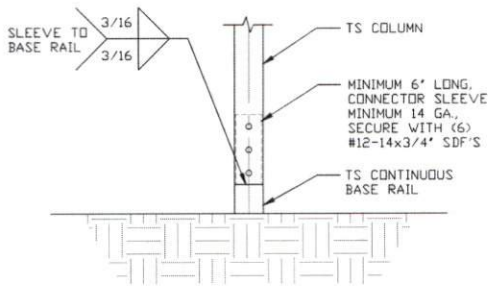
DWG. NO: SK-3

**JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S**

REV: 5

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.

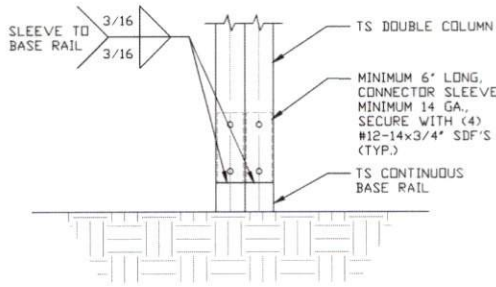
CONNECTION DETAILS



3

RAFTER COLUMN/BASE RAIL CONNECTION DETAIL

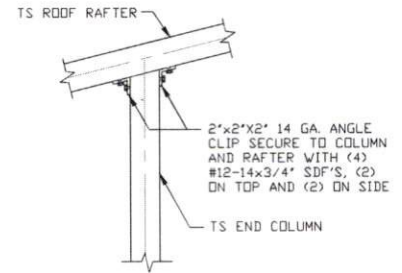
SCALE: NTS



3A

RAFTER COLUMN/BASE RAIL CONNECTION DETAIL

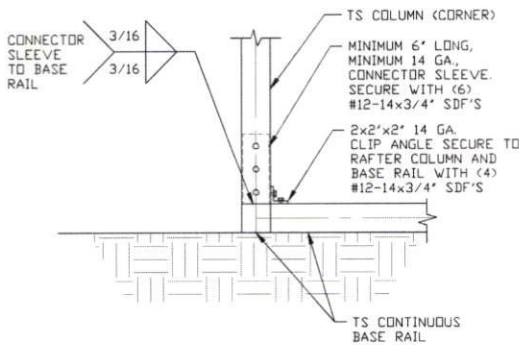
SCALE: NTS



4

END COLUMN/RAFTER CONNECTION DETAIL

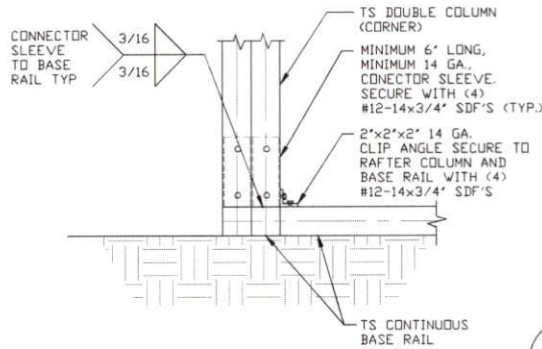
SCALE: NTS



5

END COLUMN/BASE RAIL CONNECTION DETAIL

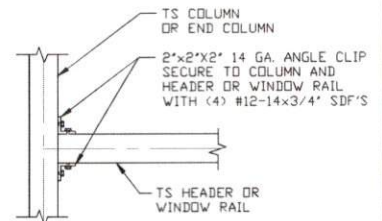
SCALE: NTS



5A

END COLUMN/BASE RAIL CONNECTION DETAIL

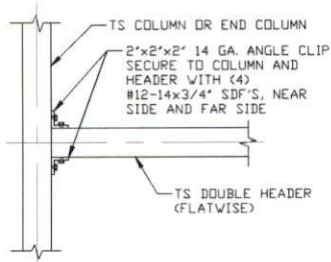
SCALE: NTS



6

COLUMN TO WINDOW RAIL/HEADER CONNECTION DETAIL

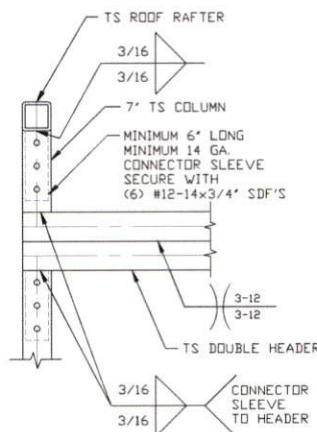
SCALE: NTS



6A

DOUBLE HEADER (FLATWISE) TO COLUMN CONNECTION DETAIL

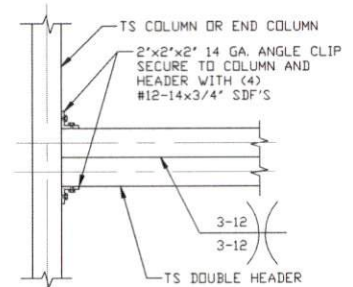
SCALE: NTS



6B

DOUBLE HEADER TO COLUMN CONNECTION DETAIL

SCALE: NTS



6C

DOUBLE HEADER TO COLUMN CONNECTION DETAIL

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601

DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 12

SCALE: NTS

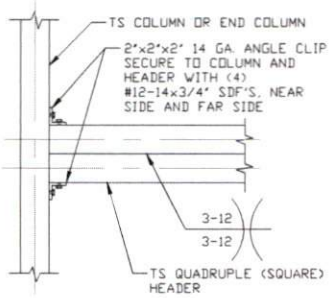
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

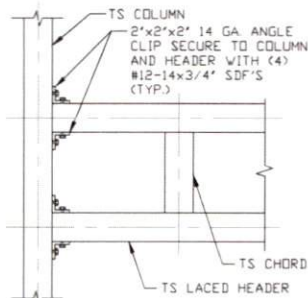
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

CONNECTION DETAILS



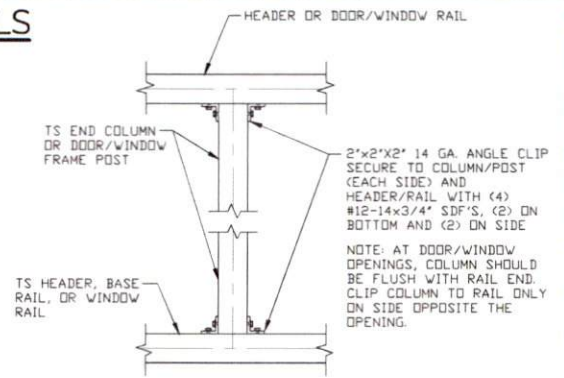
6D QUADRUPLE (SQUARE) HEADER TO COLUMN CONNECTION DETAIL

SCALE: NTS



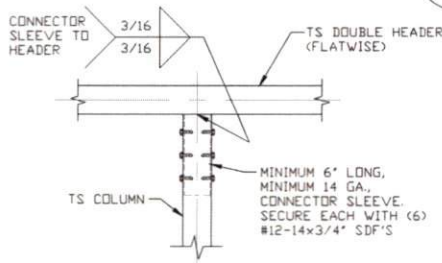
6E LACED HEADER TO COLUMN CONNECTION DETAIL

SCALE: NTS



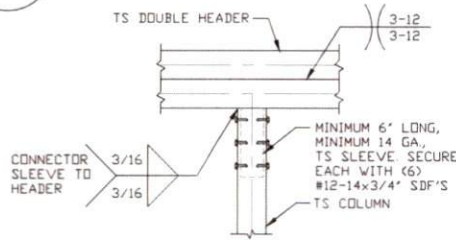
7 COLUMN/POST TO HEADER/RAIL CONNECTION DETAIL

SCALE: NTS



8 DOUBLE HEADER/ (FLATWISE) COLUMN CONNECTION DETAIL

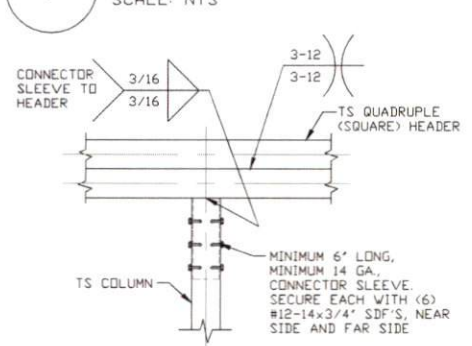
SCALE: NTS



8A

DOUBLE HEADER/COLUMN CONNECTION DETAIL

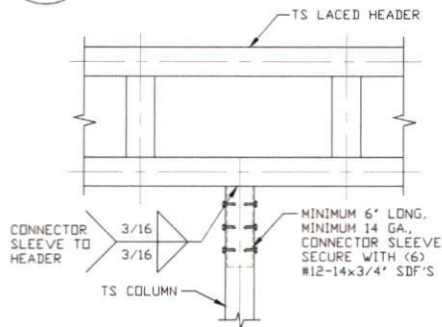
SCALE: NTS



8B

QUADRUPLE (SQUARE) HEADER/COLUMN CONNECTION DETAIL

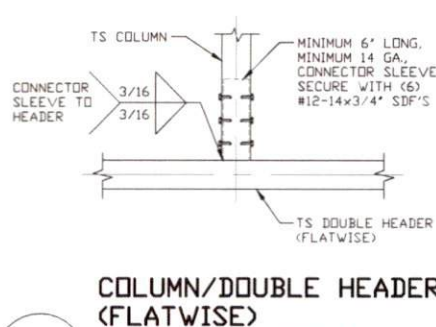
SCALE: NTS



8C

LACED HEADER/ COLUMN CONNECTION DETAIL

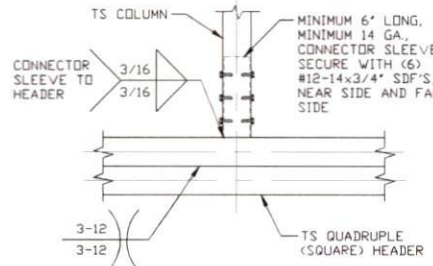
SCALE: NTS



9

COLUMN/DOUBLE HEADER (FLATWISE) CONNECTION DETAIL

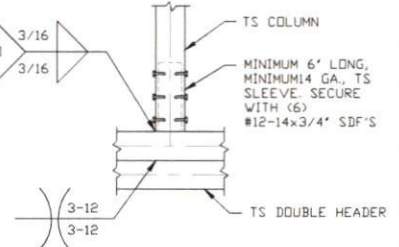
SCALE: NTS



9B

COLUMN/QUADRUPLE (SQUARE) HEADER CONNECTION DETAIL

SCALE: NTS



9A

COLUMN/DOUBLE HEADER CONNECTION DETAIL

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0" x 14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 13

SCALE: NTS

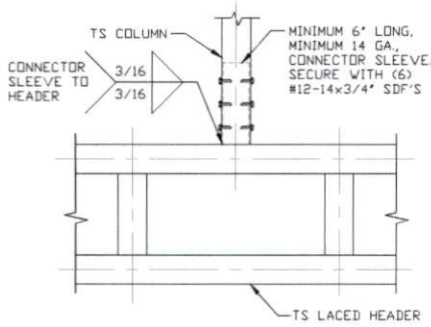
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

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.

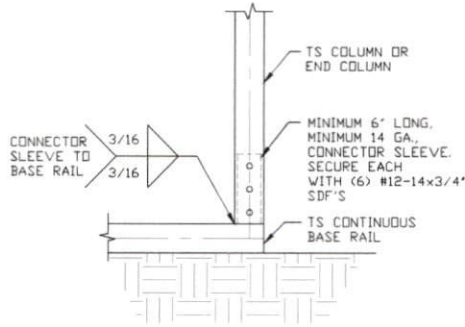
CONNECTION DETAILS



9C

COLUMN/LACED HEADER CONNECTION DETAIL

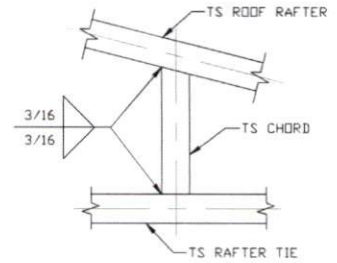
SCALE: NTS



10

COLUMN/BASE RAIL CONNECTION DETAIL

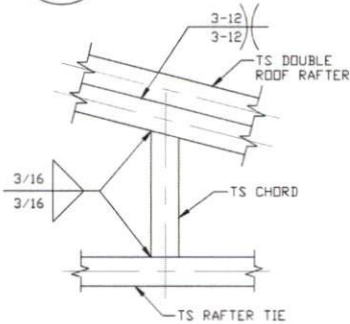
SCALE: NTS



11

RAFTER TO VERTICAL STRUT CONNECTION DETAIL

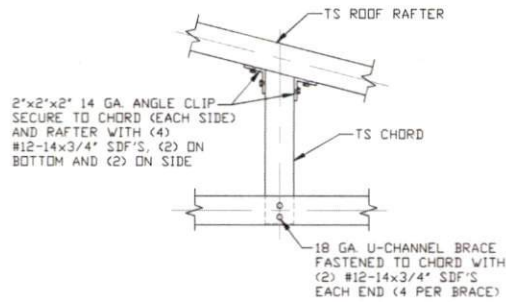
SCALE: NTS



11A

RAFTER TO VERTICAL STRUT CONNECTION DETAIL

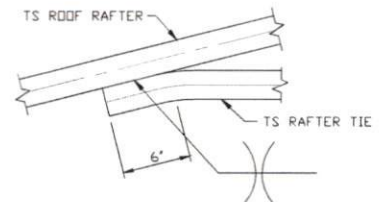
SCALE: NTS



11B

RAFTER TO VERTICAL STRUT CONNECTION DETAIL

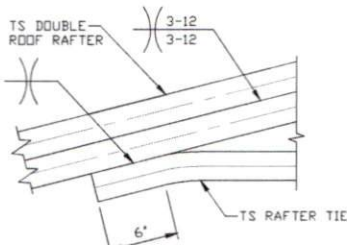
SCALE: NTS



12

RAFTER TIE CONNECTION DETAIL

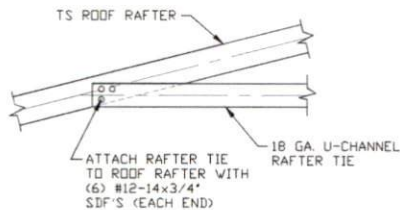
SCALE: NTS



12A

RAFTER TIE CONNECTION DETAIL

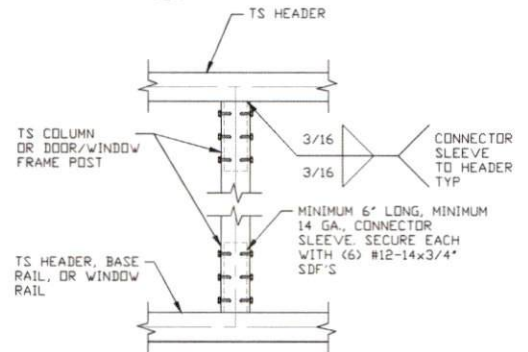
SCALE: NTS



12B

RAFTER TIE CONNECTION DETAIL

SCALE: NTS



13

COLUMN/POST TO HEADER OR RAIL CONNECTION DETAIL

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 14

SCALE: NTS

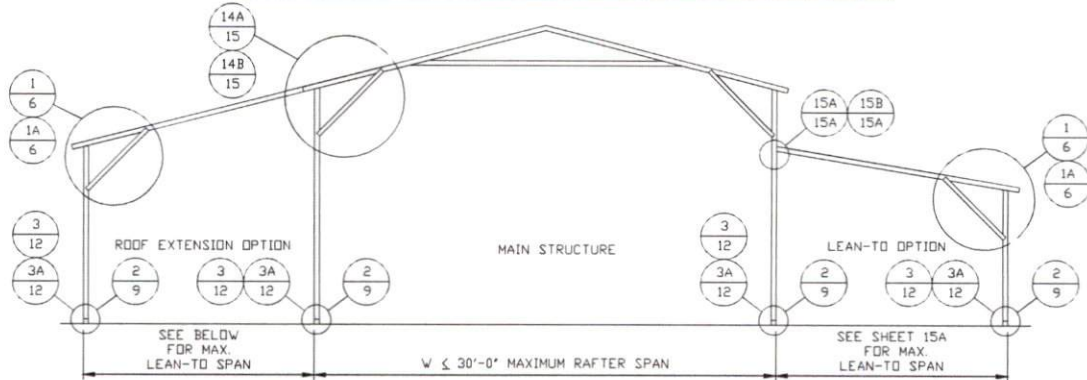
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

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.

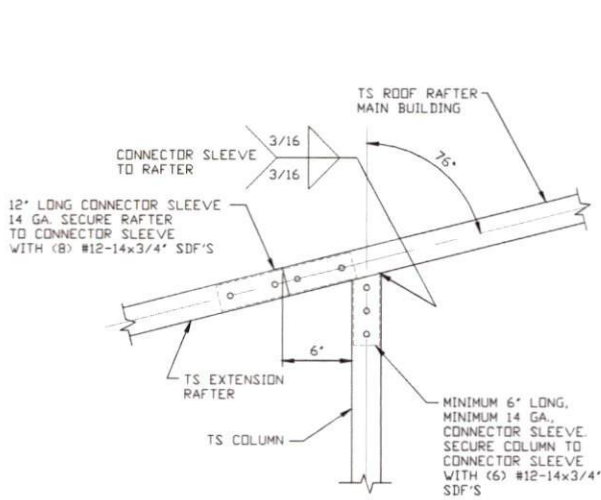
BOX EAVE RAFTER LEAN-TO OPTIONS



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

SCALE: NTS

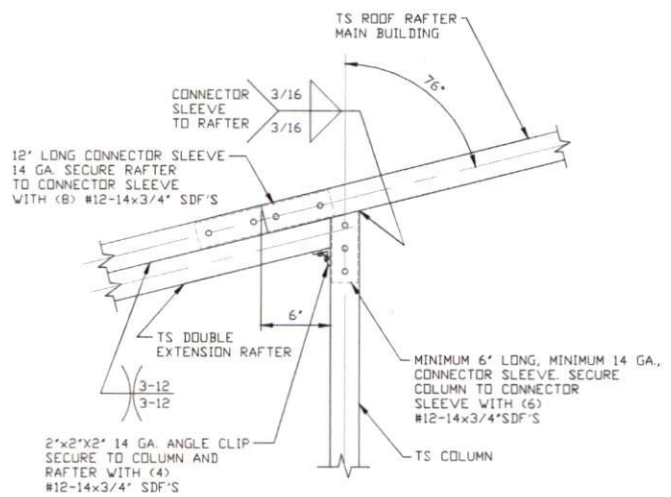
NOTE: 1. REFER TO SHEET 6 FOR COLUMN HEIGHTS AND TYPES
2. LEAN-TO COLUMN SPACING SHALL MATCH MAIN BUILDING



14A

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

SCALE: NTS



14B

SIDE EXTENSION RAFTER/ COLUMN DETAIL FOR WIDTHS 12'-0" < L ≤ 18'-0"

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 15

SCALE: NTS

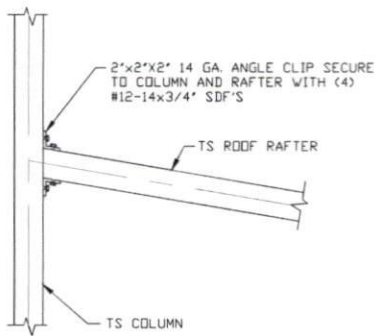
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

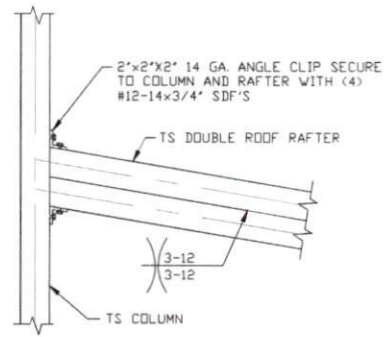
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER LEAN-TO OPTION FOR GROUND SNOW LOADS \leq 20 PSF



15A LEAN-TO RAFTER TO RAFTER
COLUMN CONNECTION DETAIL
FOR RAFTER SPANS \leq 12'-0"

SCALE: NTS



15B LEAN-TO RAFTER TO RAFTER
COLUMN CONNECTION DETAIL
FOR RAFTER SPANS 12'-0" $<$ L \leq 18'-0"

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SCALE: NTS

DWG. NO: SK-3

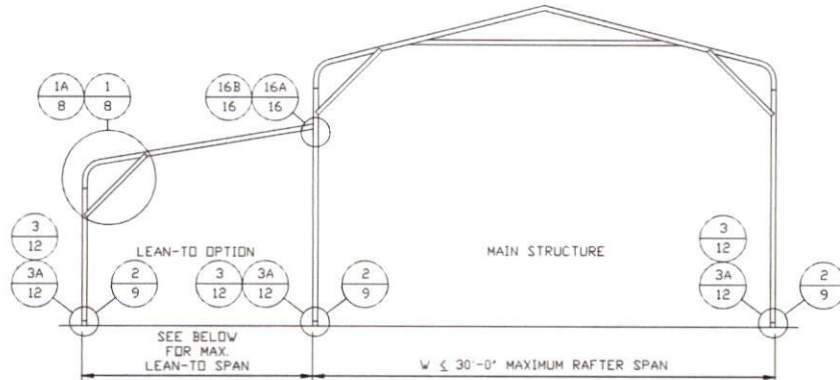
JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

SHT. 15A

REV: 5

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.

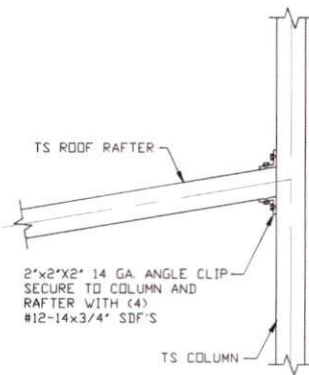
BOW EAVE RAFTER LEAN-TO OPTION FOR GROUND SNOW LOADS < 20 PSF



TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION

SCALE: NTS

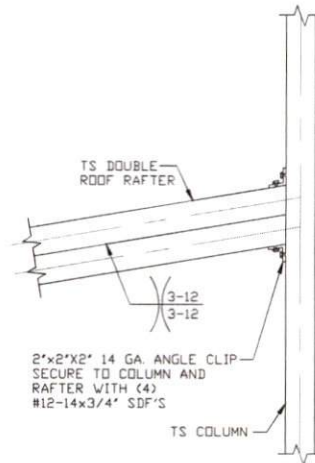
NOTE: 1. REFER TO SHEET 8 FOR COLUMN HEIGHTS AND TYPES
2. LEAN-TO COLUMN SPACING SHALL MATCH MAIN BUILDING



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR WIDTHS < 12'-0"

16A

SCALE: NTS



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR WIDTHS 12'-0" < L ≤ 18'-0"

16B

SCALE: NTS

Validity Notice

Plans Expiration Date:

22 July 2025

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601

DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 16

SCALE: NTS

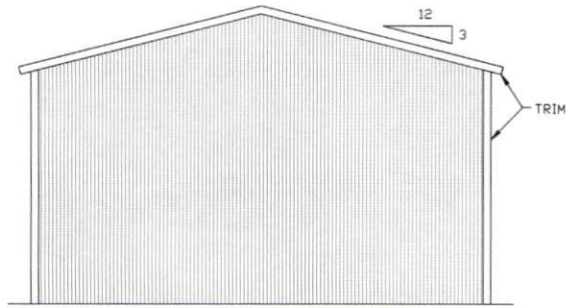
DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

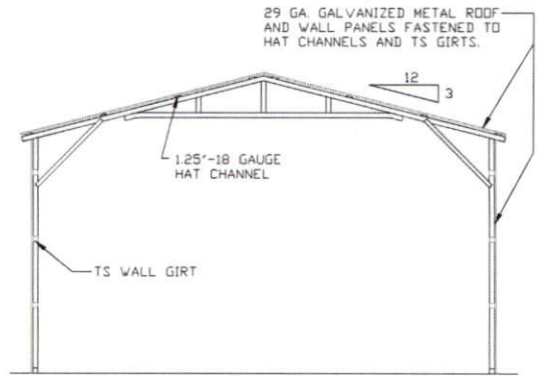
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



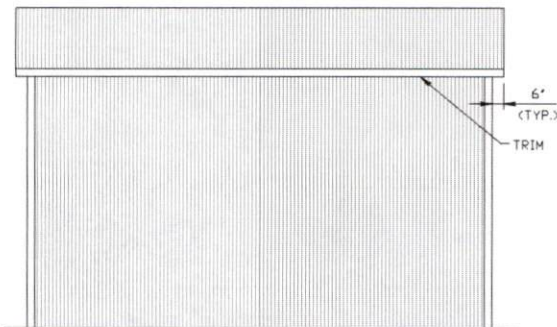
**TYPICAL END ELEVATION
VERTICAL ROOF/SIDING**

SCALE: NTS



**TYPICAL SECTION VERTICAL
ROOF/SIDING OPTION**

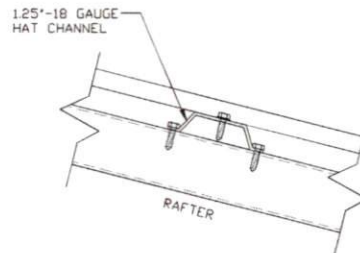
SCALE: NTS



**TYPICAL SIDE ELEVATION
VERTICAL ROOF/SIDING**

SCALE: NTS

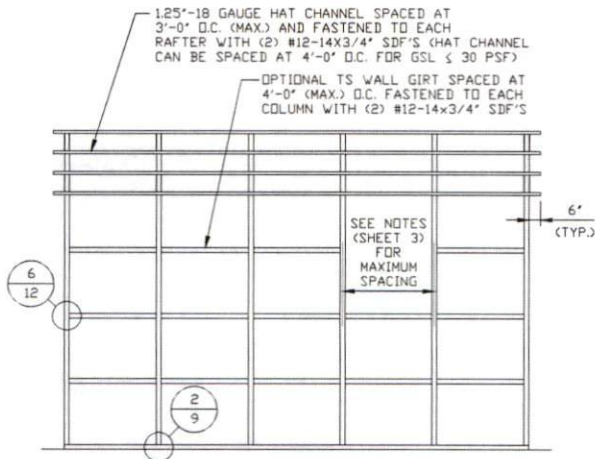
NOTE: HORIZONTAL ROOF PANELS CAN BE
USED FOR GSL ≤ 30 PSF



PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF PANELS)

SCALE: NTS



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

SCALE: NTS

NOTE: HAT CHANNEL CAN BE USED IN LIEU OF TS FOR
WALL GIRTS. HAT CHANNELS SHALL BE SPACED AT 4'-0"
O.C. AND FASTENED WITH (2) #12-14x3/4" SDF'S.

Validity Notice

Plans Expiration Date:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601

DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 17

SCALE: NTS

DWG. NO: SK-3

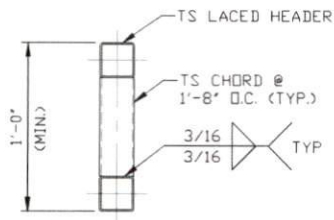
JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

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.

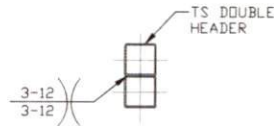
SIDE WALL HEADER OPTIONS FOR TS SINGLE COLUMNS

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



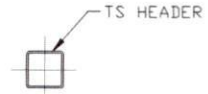
**HEADER DETAIL FOR
 $10'-0'' < \text{LENGTH} \leq 12'-0''$**

SCALE: NTS



**HEADER DETAIL FOR
 $6'-0'' < \text{LENGTH} \leq 10'-0''$**

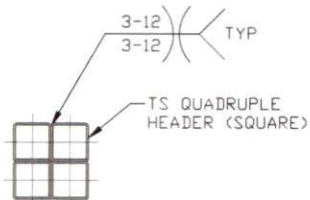
SCALE: NTS



**HEADER DETAIL FOR
 $\text{LENGTH} \leq 6'-0''$**

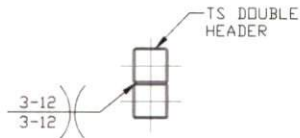
SCALE: NTS

END WALL HEADER OPTIONS FOR TS SINGLE COLUMNS



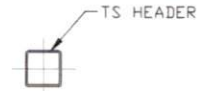
**HEADER DETAIL FOR
 $13'-0'' < \text{LENGTH} \leq 16'-0''$**

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:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS

9283 US 601

DOBSON, NC 27017

30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SCALE: NTS

DWG. NO: SK-3

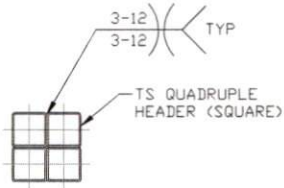
REV: 5

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: 17259S/19076S
/19176S/20124S/23125S
/24189S

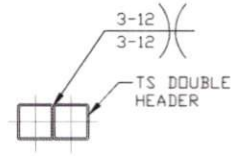
SIDE WALL HEADER OPTIONS FOR TS DOUBLE COLUMNS

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



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

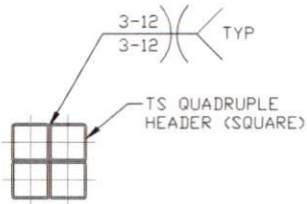
SCALE: NTS



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

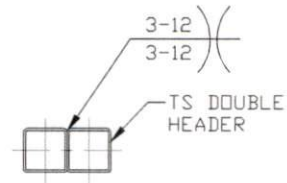
SCALE: NTS

END WALL HEADER OPTIONS FOR TS DOUBLE 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:

22 July 2025

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

DRAWN BY: BF

CHECKED BY: JS

PROJECT MGR: JRP

CLIENT: UNIVERSAL

UNIVERSAL METAL BUILDINGS
9283 US 601
DOBSON, NC 27017
30'-0"x14'-0" SP ENCLOSED STRUCTURE

DATE: 7-22-24

SHT. 18A

SCALE: NTS

DWG. NO: SK-3

JOB NO: 17259S/19076S
/19176S/20124S/23125S
/24189S

REV: 5

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.

DATE: 06/04/2025

REF: Residential Building Application

TO: Central Permitting

FAX: (910) 893-2793

FROM: Joshua Everhart

PHONE: (813) 763-7536

Please see the application for my Residential Building Application. Please let me know if you need additional information or if you have any questions.

Thank you,

Joshua Everhart