



**STRUCTURAL DESIGN**  
**ENCLOSED BUILDING**

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

**22 November 2024**

**Revision 11**

**M&A Project No. 17062S/17174S/17254S/18033S/18113S/18246S/19309S/22257S/23335S**

**Prepared for:**

**Newmart Builders  
1000 Cycle Lane  
South Hill, VA 23970**

**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: 31 December 2024**  
**Plans are valid for one year from issuance date**

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			<p style="text-align: center;"><b>Validity Notice</b></p> <p style="text-align: center;"><b>Plans Expiration Date:</b></p> <p style="text-align: center;"><b><u>31 December 2024</u></b></p>
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	<p><b>CHECKED BY:</b> JRP</p>			
<p><b>CLIENT:</b> NEWMART BUILDERS</p>	<p><b>SHT.</b> 1</p>	<p><b>DWG. NO.:</b> SK-3</p>	<p><b>REV.:</b> 11</p>	

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	CLIENT: NEWMART BUILDERS	SHT. 2	DWG. NO: SK-3	REV: 11	



## 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)

2009 INTERNATIONAL BUILDING CODE (IBC 2009)

2006 INTERNATIONAL BUILDING CODE (IBC 2006)

DELAWARE BUILDING CODE  
(IBC 2012, IBC 2015, IBC 2018 (DEPENDENT  
UPON LOCAL JURISDICTION))

BUILDING CODE 2018 OF MARYLAND  
(ADOPTS THE IBC 2018 WITH AMENDMENTS)

BUILDING CODE 2021 OF NEW JERSEY  
(ADOPTS THE IBC 2021 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)

BUILDING CODE 2018 OF PENNSYLVANIA  
(ADOPTS THE IBC 2018 WITH AMENDMENTS)  
PHILADELPHIA BUILDING CODE  
(ADOPTS THE IBC 2018 WITH AMENDMENTS)

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

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

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

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**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART  
BUILDERS**

NEWMART BUILDERS, INC.  
1000 CYCLE LANE  
SOUTH HILL, VA 23970  
30'-0"x14'-0" ENCLOSED STRUCTURE

**DATE: 11-22-24**

**SHT. 3A**

**SCALE: NTS**

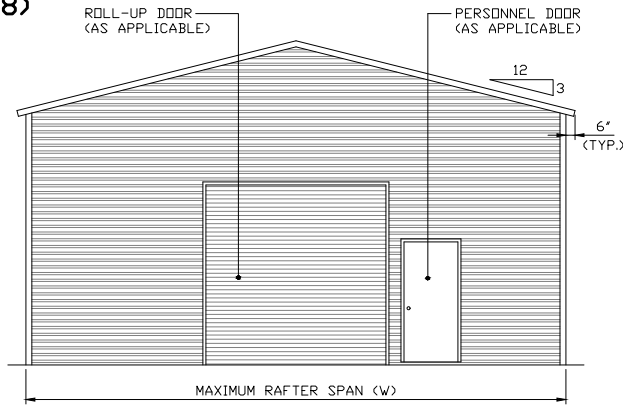
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**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

**REV: 11**

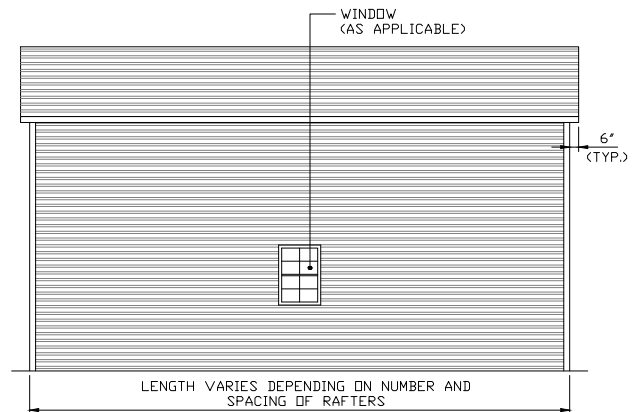
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**BOX EAVE FRAME RAFTER STRUCTURE (Sheets 4, 5, 6, 6A, 9, 9A, 10, 12, 13, 14, 16, 17 AND 18)**



**TYPICAL END ELEVATION**

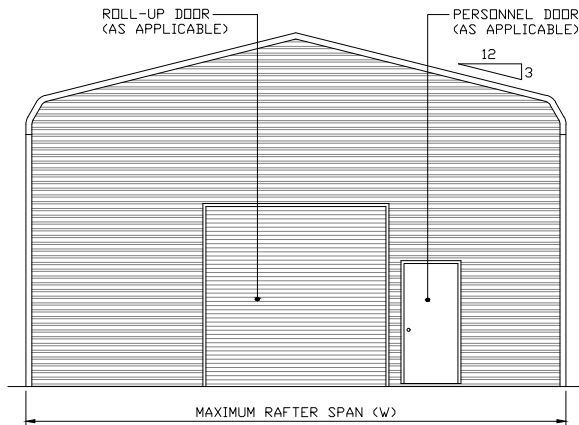
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**TYPICAL SIDE ELEVATION**

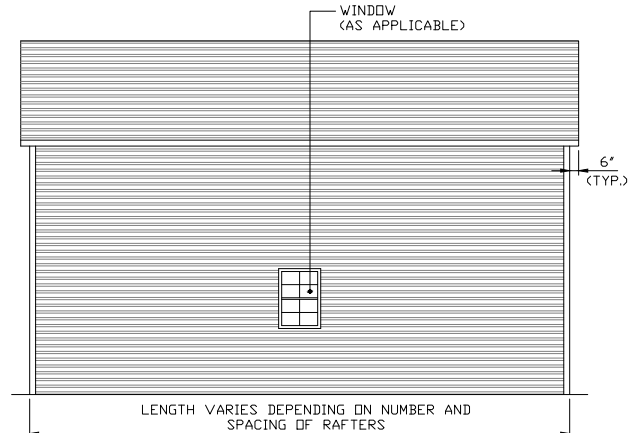
SCALE: NTS

**BOW FRAME RAFTER STRUCTURE (Sheets 4, 7, 8, 8A, 9, 9A, 11, 12, 13, 15, 17 AND 18)**



**TYPICAL END ELEVATION**

SCALE: NTS



**TYPICAL SIDE ELEVATION**

SCALE: NTS

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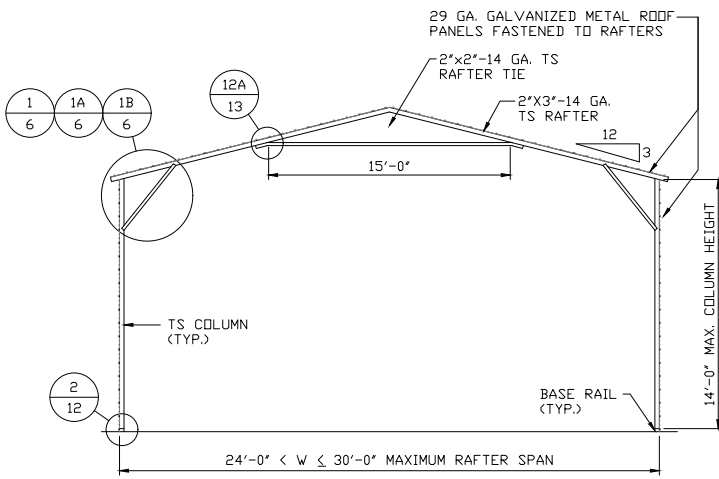
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1000 CYCLE LANE  
SOUTH HILL, VA 23970  
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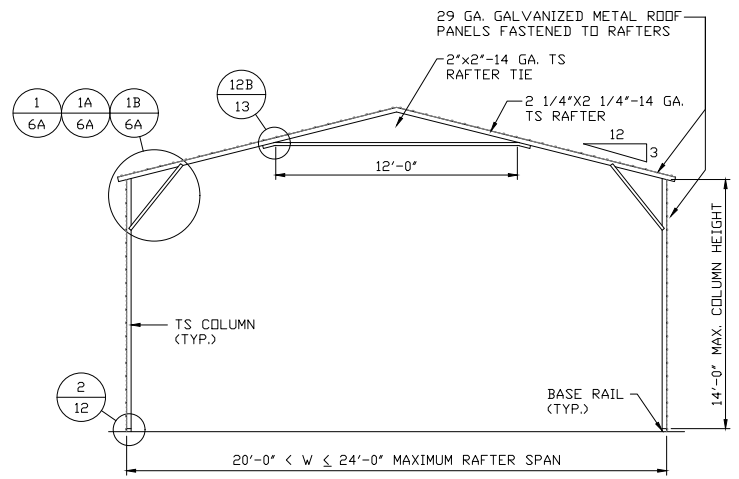
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**SHT. 4**

**SCALE: NTS**  
**DWG. NO: SK-3**  
**JOB NO: 18113S/18246S/19309S/22257S/23335S**  
**REV: 11**



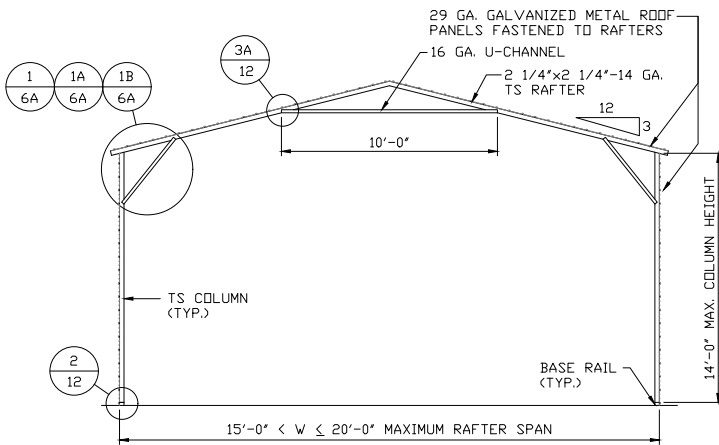
**TYPICAL INTERIOR RAFTER/  
COLUMN FRAME SECTION**

SCALE: NTS



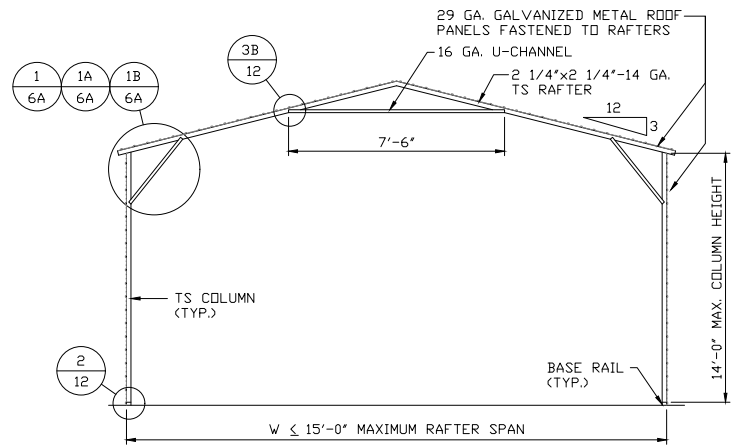
**TYPICAL INTERIOR RAFTER/  
COLUMN FRAME SECTION**

SCALE: NTS



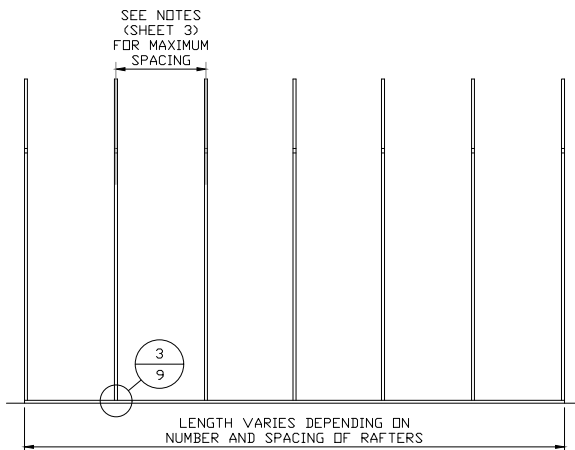
**TYPICAL INTERIOR RAFTER/  
COLUMN FRAME SECTION**

SCALE: NTS



**TYPICAL INTERIOR RAFTER/  
COLUMN FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**

SCALE: NTS

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SOUTH HILL, VA 23970  
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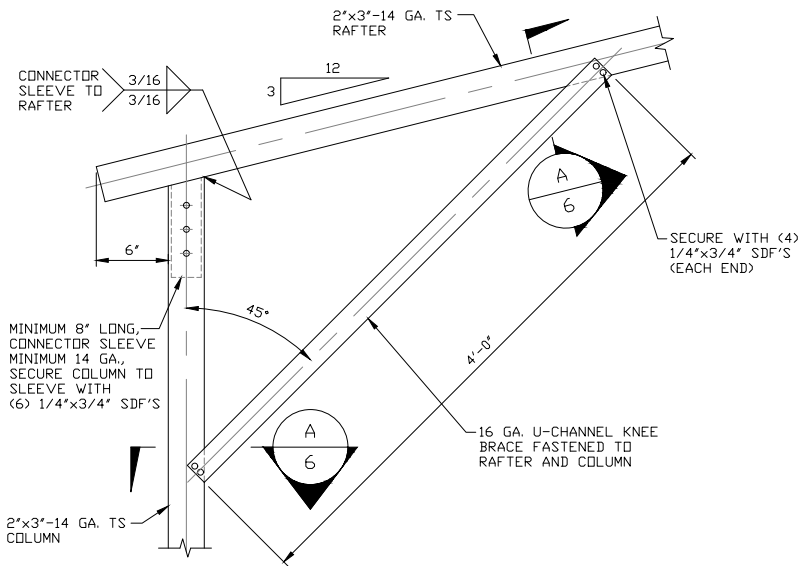
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**CLIENT: NEWMART BUILDERS**

**DATE: 11-22-24**  
**SHT. 5**

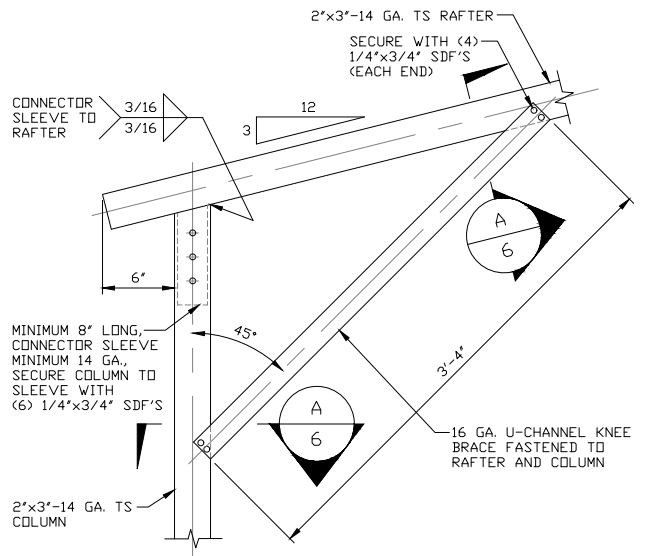
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**DWG. NO: SK-3**

**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**  
**REV: 11**

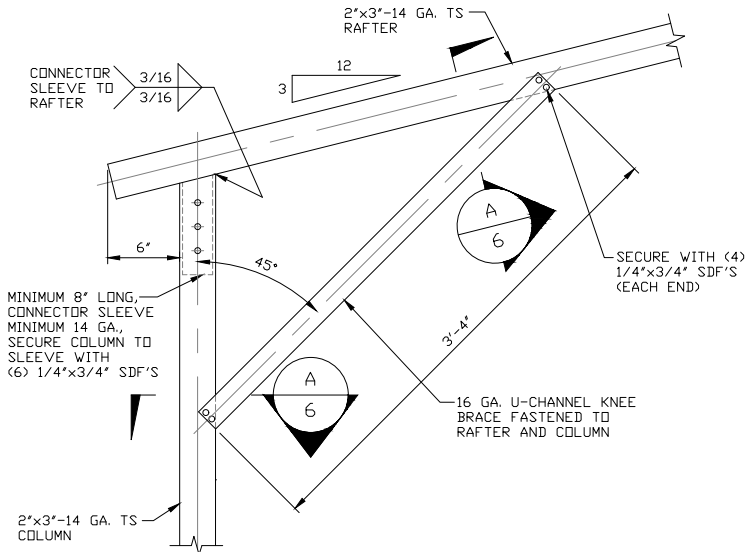
**24'-0" < W ≤ 30'-0" MAXIMUM RAFTER SPAN**



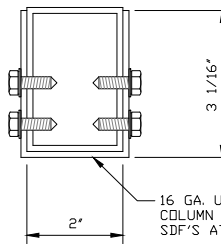
**1** BOX EAVE RAFTER COLUMN CONNECTION DETAIL  
HEIGHTS 12'-0" < TO ≤ 14'-0" @ 3'-0" D.C.  
SCALE: NTS



**1B** BOX EAVE RAFTER COLUMN CONNECTION DETAIL  
HEIGHTS ≤ 10'-0" @ 3'-6" D.C.  
SCALE: NTS



**1A** BOX EAVE RAFTER COLUMN CONNECTION DETAIL  
HEIGHTS 10'-0" < TO ≤ 12'-0" @ 3'-6" D.C.  
SCALE: NTS



**A** BRACE SECTION  
SCALE: NTS

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

**DATE: 11-22-24**

**SHT. 6**

**SCALE: NTS**

**DWG. NO: SK-3**

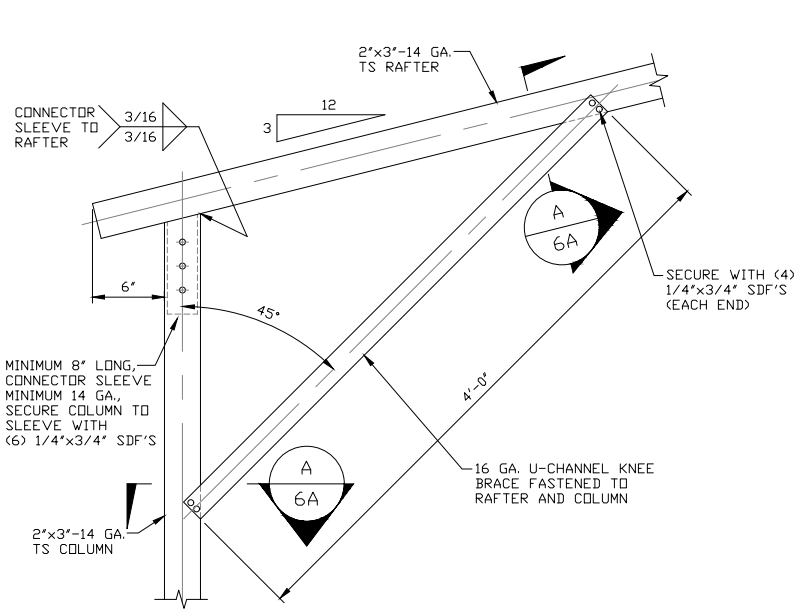
**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

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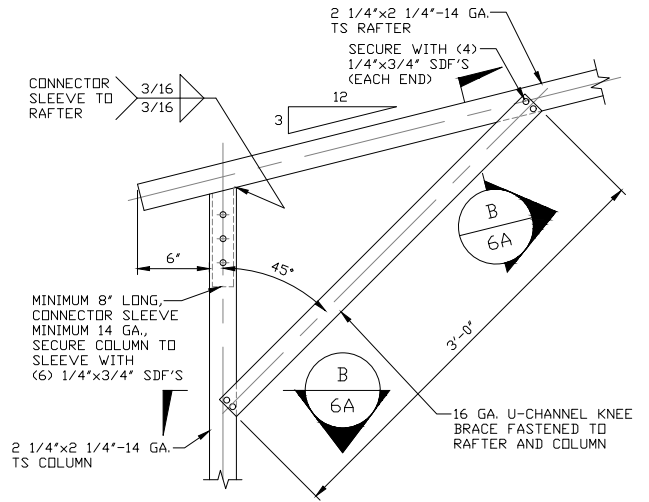


**W ≤ 24'-0" MAXIMUM RAFTER SPAN**

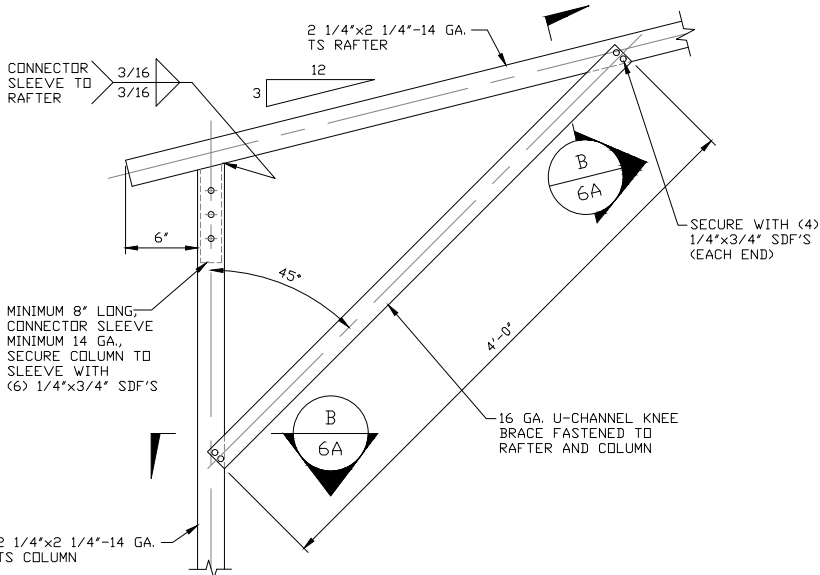


**1** BOX EAVE RAFTER COLUMN CONNECTION DETAIL  
HEIGHTS 12'-0" < TO ≤ 14'-0" @ 3'-6" O.C.

SCALE: NTS  
(3'-0" O.C. SPACING FOR WIND SPEEDS = 105 MPH < TO ≤ 130 MPH)

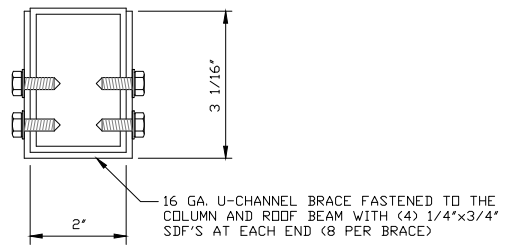


**1B** BOX EAVE RAFTER COLUMN CONNECTION DETAIL  
HEIGHTS ≤ 10'-0" @ 4'-0" O.C.  
SCALE: NTS

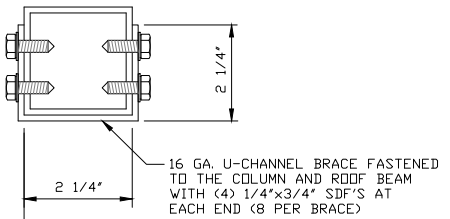


**1A** BOX EAVE RAFTER COLUMN CONNECTION DETAIL  
HEIGHTS 10'-0" < TO ≤ 12'-0" @ 3'-0" O.C.

SCALE: NTS  
(2'-6" O.C. SPACING FOR WIND SPEEDS = 105 MPH < TO ≤ 130 MPH)



**A** BRACE SECTION  
SCALE: NTS



**B** BRACE SECTION  
SCALE: NTS

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**MOORE AND ASSOCIATES  
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**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART BUILDERS**

**NEWMART BUILDERS, INC.  
1000 CYCLE LANE  
SOUTH HILL, VA 23970  
30'-0"x14'-0" ENCLOSED STRUCTURE**

**DATE: 11-22-24**

**SHT. 6A**

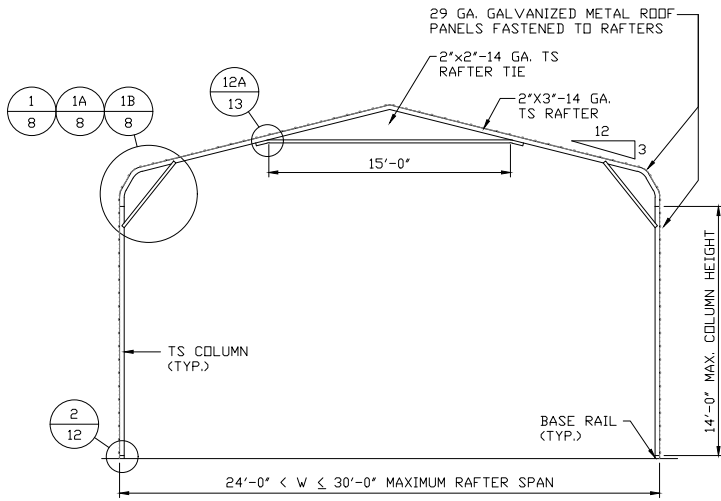
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**DWG. NO: SK-3**

**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

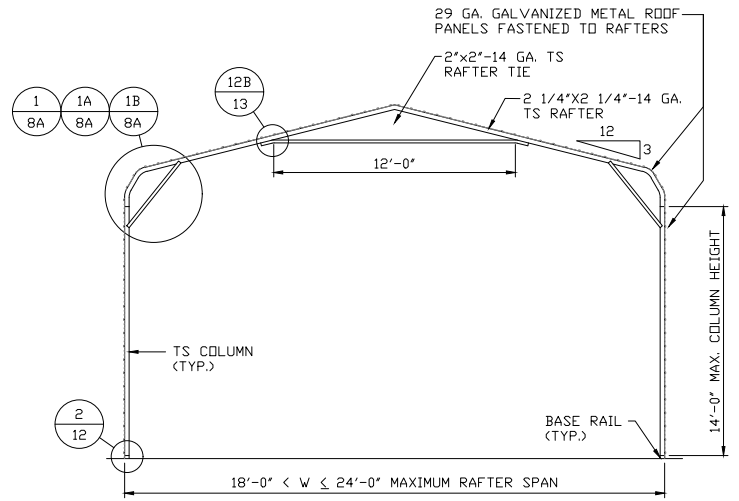
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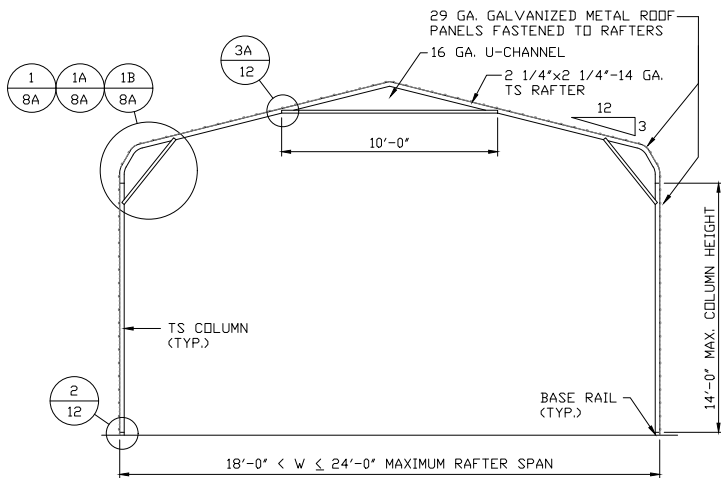
**TYPICAL INTERIOR RAFTER/  
COLUMN FRAME SECTION**

SCALE: NTS



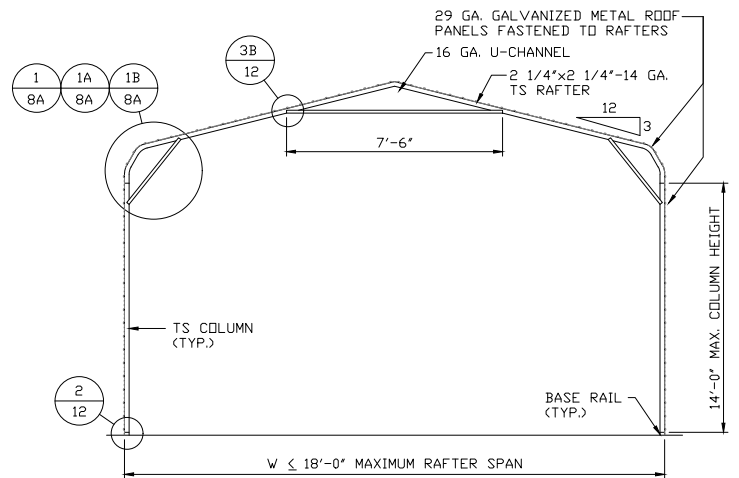
**TYPICAL INTERIOR RAFTER/  
COLUMN FRAME SECTION**

SCALE: NTS



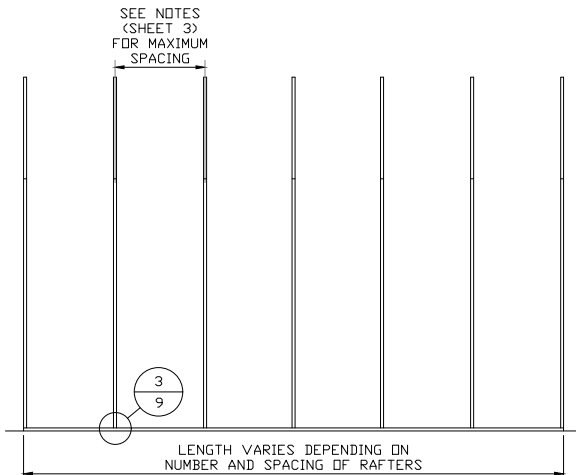
**TYPICAL INTERIOR RAFTER/  
COLUMN FRAME SECTION**

SCALE: NTS



**TYPICAL INTERIOR RAFTER/  
COLUMN FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**

SCALE: NTS

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

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**SHT. 7**

**SCALE: NTS**

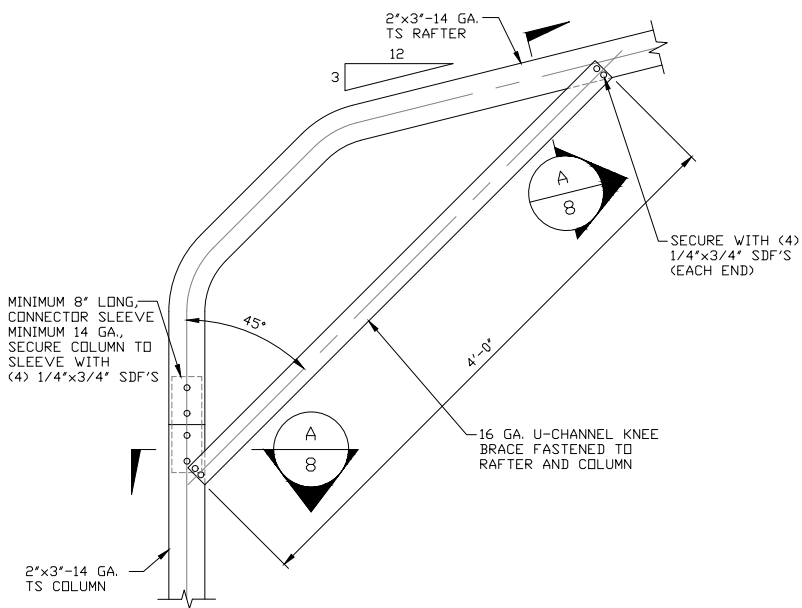
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**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

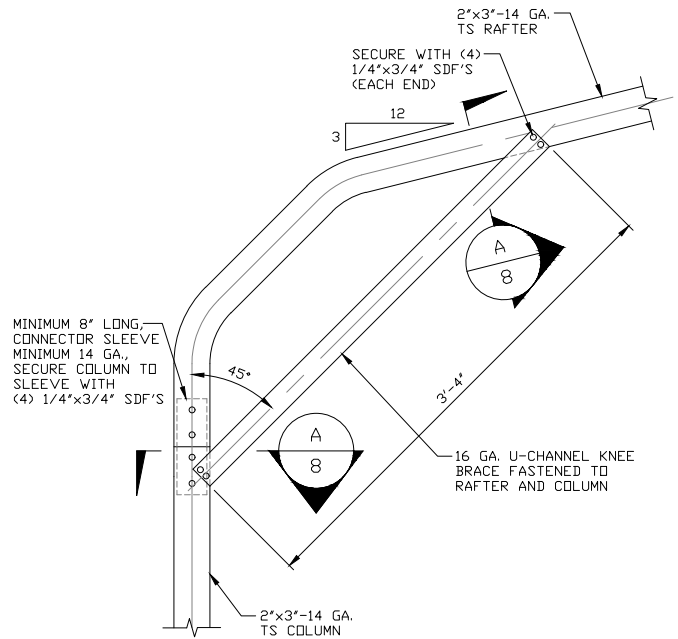
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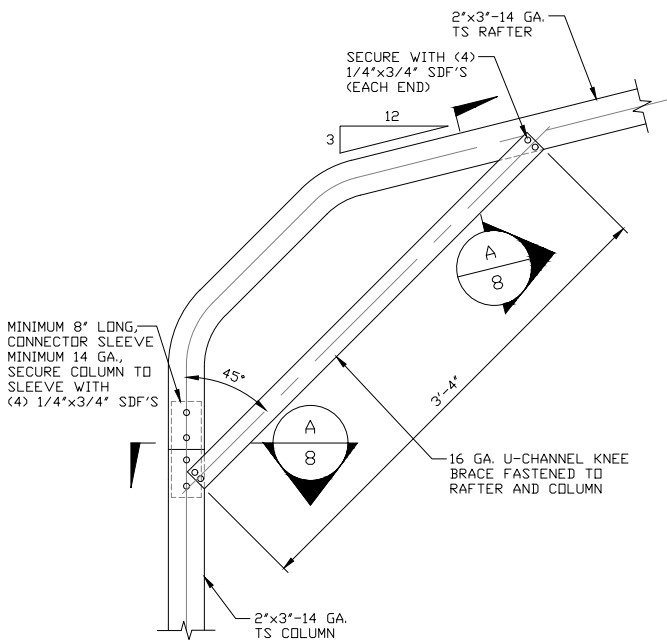
**24'-0" < W ≤ 30'-0" MAXIMUM RAFTER SPAN**



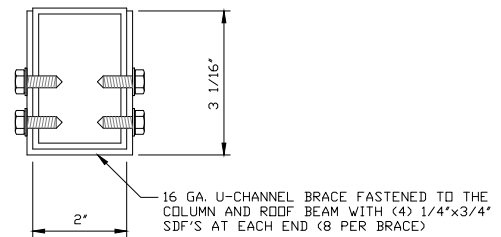
**1**  
**BOW RAFTER COLUMN CONNECTION DETAIL**  
 HEIGHTS 12'-0" < TO ≤ 14'-0" @ 3'-0" O.C.  
 SCALE: NTS



**1B**  
**BOW RAFTER COLUMN CONNECTION DETAIL**  
 HEIGHTS ≤ 10'-0" @ 3'-6" O.C.  
 SCALE: NTS



**1A**  
**BOW EAVE RAFTER COLUMN CONNECTION DETAIL**  
 HEIGHTS 10'-0" < TO ≤ 12'-0" @ 3'-6" O.C.  
 SCALE: NTS



**A**  
**BRACE SECTION**  
 SCALE: NTS

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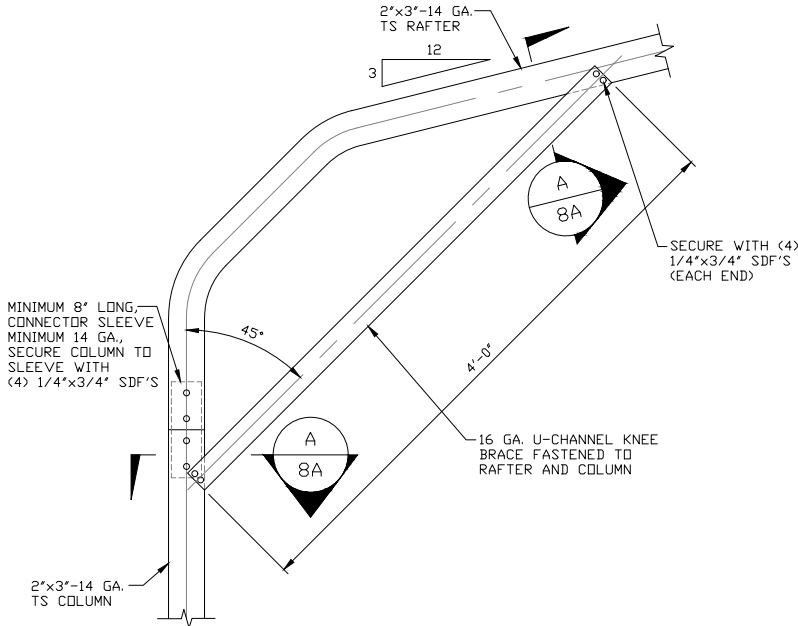
**NEWMART BUILDERS, INC.**  
 1000 CYCLE LANE  
 SOUTH HILL, VA 23970  
 30'-0"x14'-0" ENCLOSED STRUCTURE

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**CLIENT: NEWMART BUILDERS**

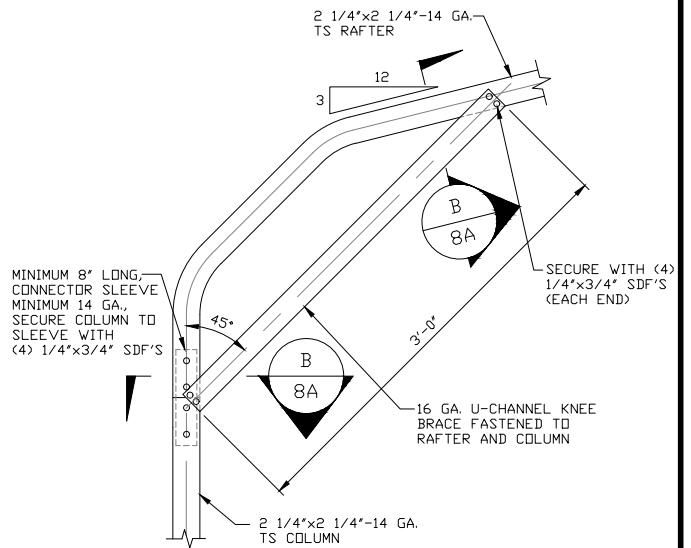
**DATE: 11-22-24**  
**SCALE: NTS**  
**SHT. 8**  
**JOB NO: 18113S/18246S/19309S/22257S/23335S**  
**DWG. NO: SK-3**  
**REV: 11**

**W ≤ 24'-0" MAXIMUM RAFTER SPAN**



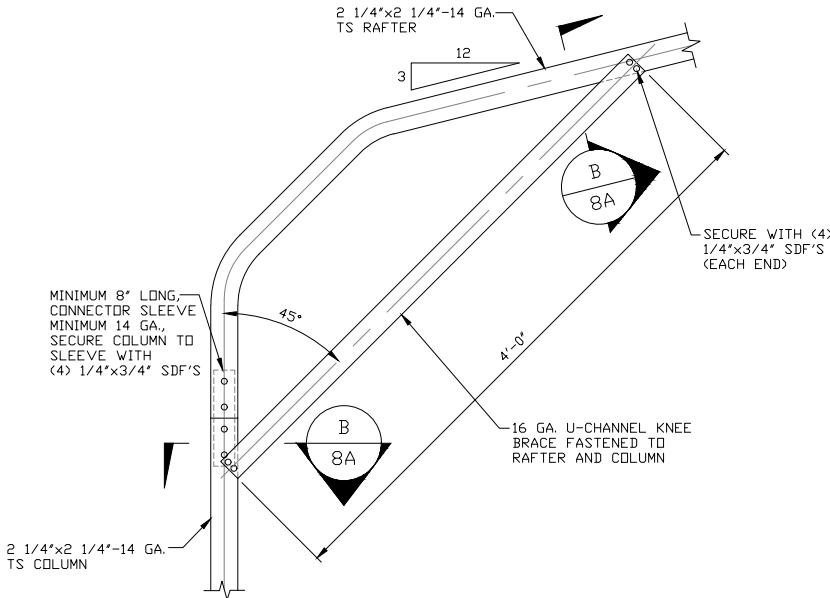
**1**  
**BOW RAFTER COLUMN CONNECTION DETAIL**  
 HEIGHTS 12'-0" < TO ≤ 14'-0" @ 3'-6" O.C.

SCALE: NTS  
 (3'-0" O.C. SPACING FOR WIND SPEEDS = 105 MPH < TO ≤ 130 MPH)



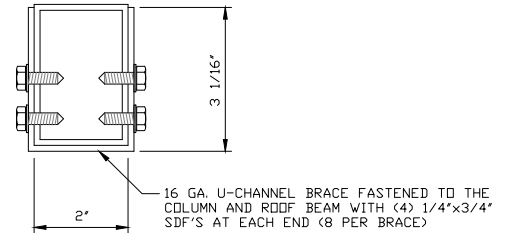
**1B**  
**BOW RAFTER COLUMN CONNECTION DETAIL**  
 HEIGHTS ≤ 10'-0" @ 4'-0" O.C.

SCALE: NTS

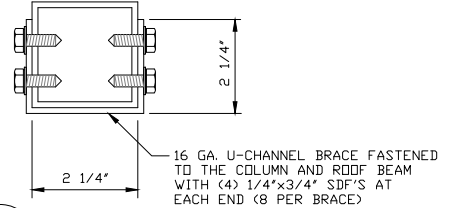


**1A**  
**BOW EAVE RAFTER COLUMN CONNECTION DETAIL**  
 HEIGHTS 10'-0" < TO ≤ 12'-0" @ 3'-0" O.C.

SCALE: NTS  
 (2'-6" O.C. SPACING FOR WIND SPEEDS = 105 MPH < TO ≤ 130 MPH)



**A**  
**BRACE SECTION**  
 SCALE: NTS



**B**  
**BRACE SECTION**  
 SCALE: NTS

**Validity Notice**

**Plans Expiration Date:**

**31 December 2024**

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

**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART BUILDERS**

**NEWMART BUILDERS, INC.**  
 1000 CYCLE LANE  
 SOUTH HILL, VA 23970  
 30'-0"x14'-0" ENCLOSED STRUCTURE

**DATE: 11-22-24**

**SHT. 8A**

**SCALE: NTS**

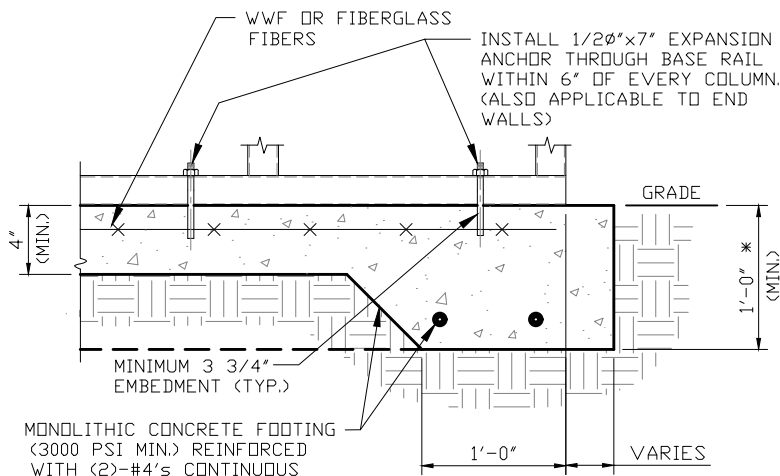
**DWG. NO: SK-3**

**JOB NO: 18113S/18246S/19309S/22257S/23335S**

**REV: 11**

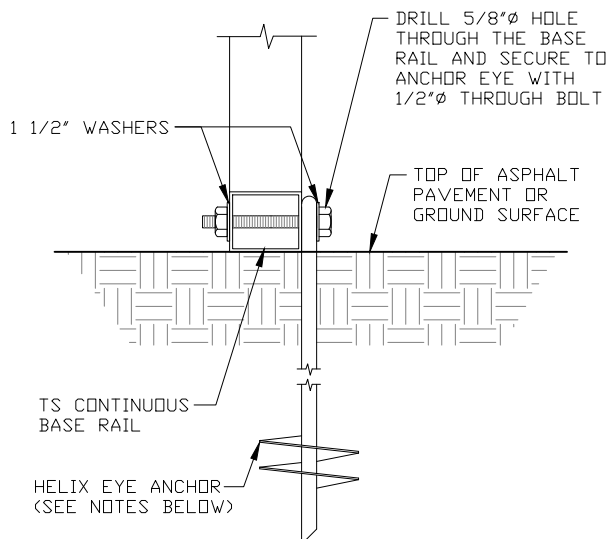
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## BASE RAIL ANCHORAGE OPTIONS



### 3A CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS  
 NOTE: MIN. ANCHOR EDGE DISTANCE IS 4"  
 \* COORDINATE WITH LOCAL BUILDING CODES/ORD.  
 REGARDING REQUIRED FOOTING DEPTH.



### 3B GROUND BASE HELIX ANCHORAGE

SCALE: NTS (CAN BE USED FOR ASPHALT)  
 \* COORDINATE WITH LOCAL CODES/ORD.  
 REGARDING REQUIRED ANCHOR 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.

### HELIX ANCHOR NOTES:

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

**Validity Notice**  
**Plans Expiration Date:**  
**31 December 2024**

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

**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART BUILDERS**

NEWMART BUILDERS, INC.  
 1000 CYCLE LANE  
 SOUTH HILL, VA 23970  
 30'-0"x14'-0" ENCLOSED STRUCTURE

**DATE: 11-22-24**

**SHT. 9**

**SCALE: NTS**

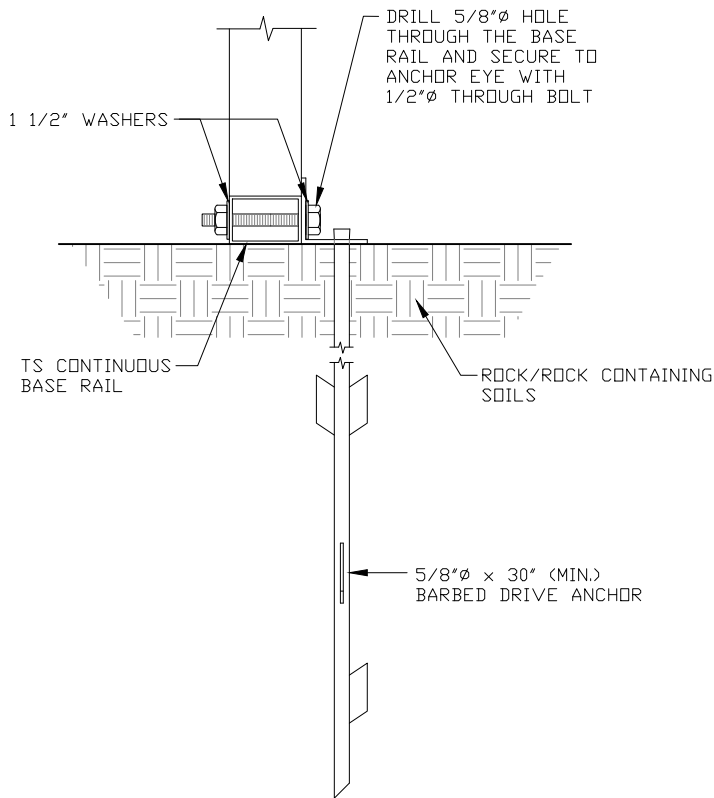
**DWG. NO: SK-3**

**JDB NO: 18113S/18246S/  
19309S/22257S/23335S**

**REV: 11**

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## BASE RAIL ANCHORAGE OPTION

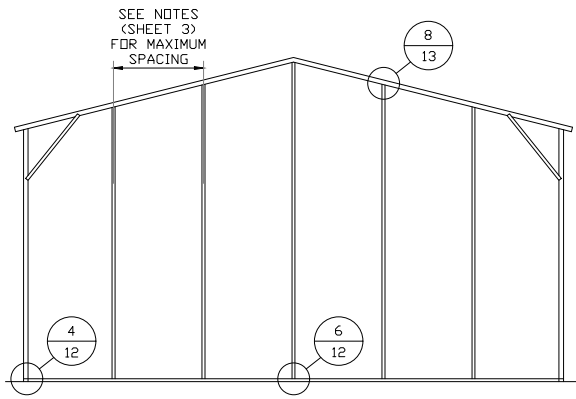


**3C** BARBED DRIVE ANCHORAGE  
 SCALE: NTS  
 \* COORDINATE WITH LOCAL CODES/ORD.  
 REGARDING REQUIRED ANCHOR LENGTH.

**Validity Notice**  
**Plans Expiration Date:**  
**31 December 2024**

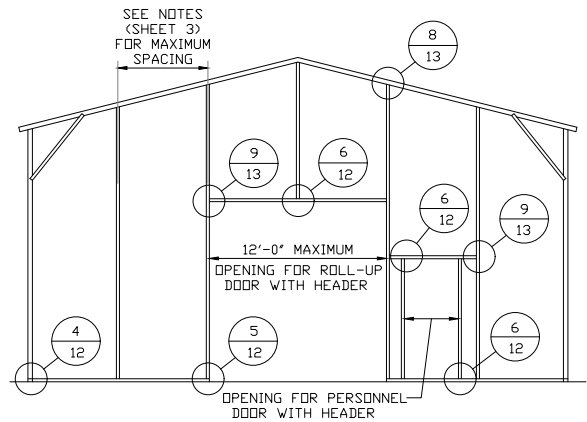
<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRP	NEWMART BUILDERS, INC. 1000 CYCLE LANE SOUTH HILL, VA 23970 30'-0"x14'-0" ENCLOSED STRUCTURE			
	CHECKED BY: JRP				
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# BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



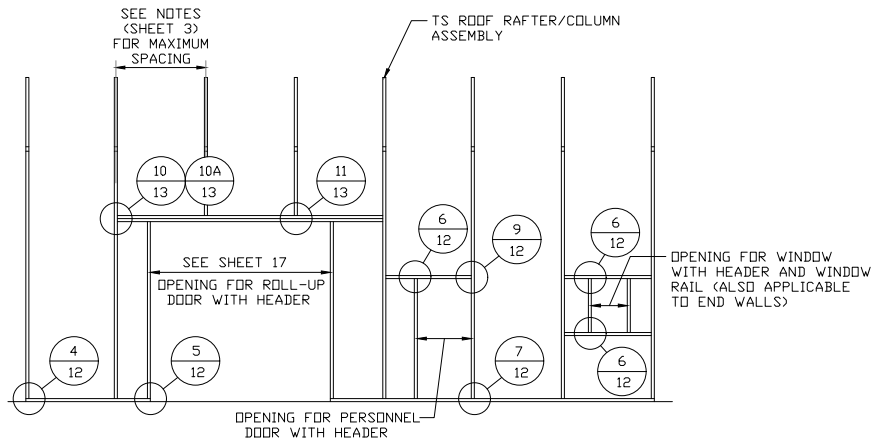
**TYPICAL BOX EAVE RAFTER  
END WALL FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

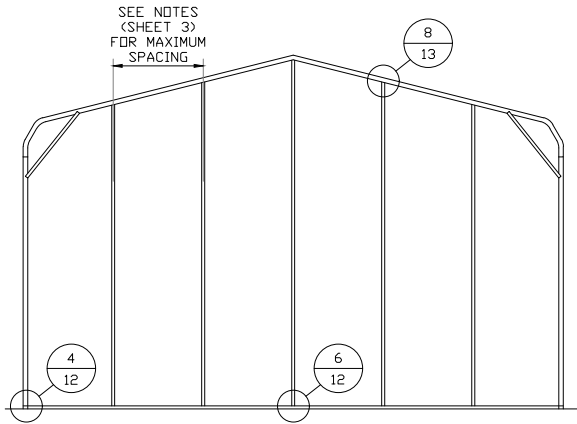
**Validity Notice**

Plans Expiration Date:

**31 December 2024**

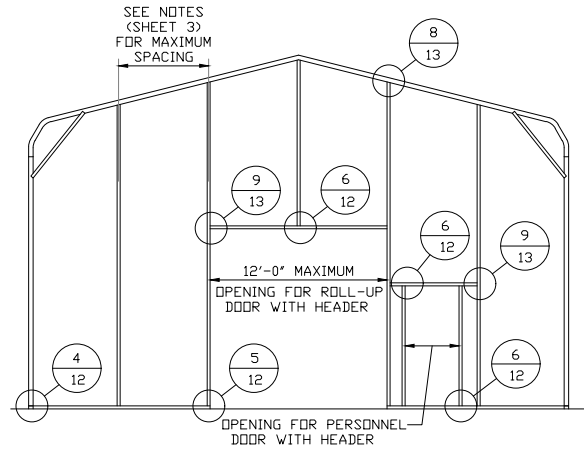
<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRP	NEWMART BUILDERS, INC. 1000 CYCLE LANE SOUTH HILL, VA 23970 30'-0"x14'-0" ENCLOSED STRUCTURE			
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# BOW EAVE RAFTER END WALL AND SIDE WALL OPENINGS



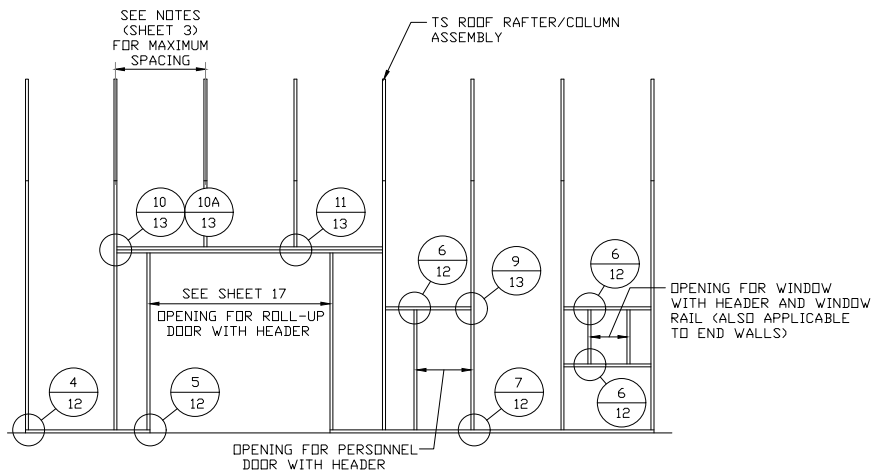
**TYPICAL BOW EAVE RAFTER  
END WALL FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

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**Plans Expiration Date:**

**31 December 2024**

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

**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART  
BUILDERS**

**NEWMART BUILDERS, INC.  
1000 CYCLE LANE  
SOUTH HILL, VA 23970  
30'-0"x14'-0" ENCLOSED STRUCTURE**

**DATE: 11-22-24**

**SHT. 11**

**SCALE: NTS**

**DWG. NO: SK-3**

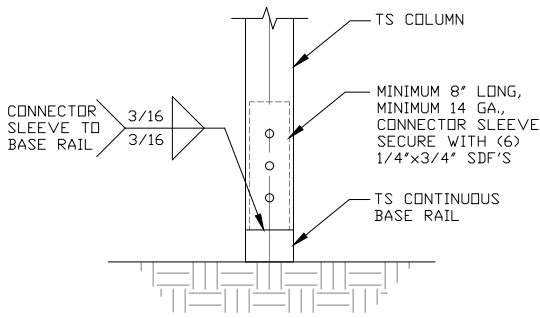
**JOB NO: 18113S/18246S/  
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**REV: 11**

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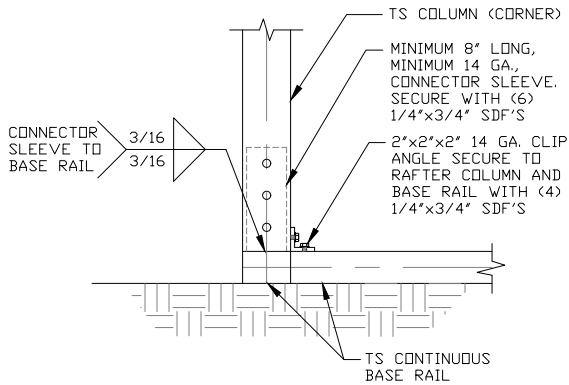


# CONNECTIONS DETAILS



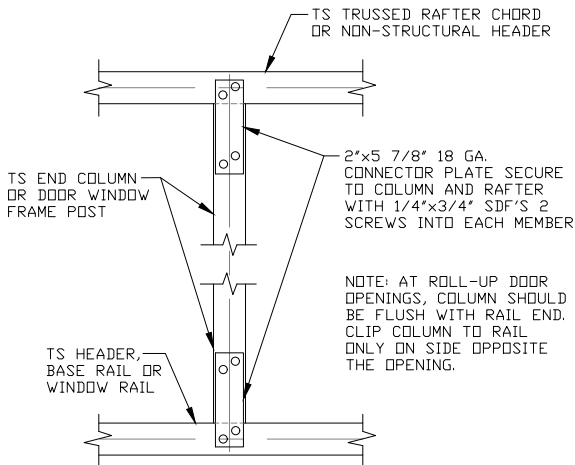
**2** RAFTER COLUMN/BASE RAIL CONNECTION DETAIL

SCALE: NTS



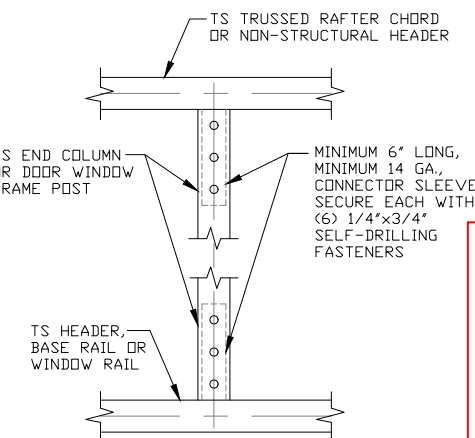
**4** END COLUMN/BASE RAIL CONNECTION DETAIL

SCALE: NTS



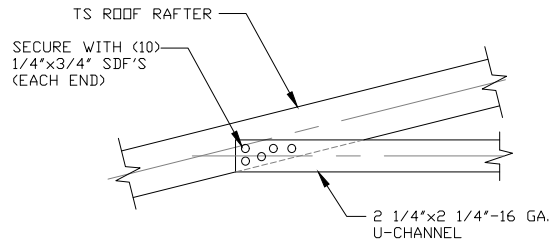
**6** COLUMN TO WINDOW RAIL CONNECTION DETAIL

SCALE: NTS



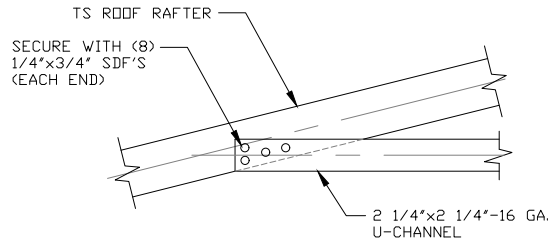
**7** COLUMN TO HEADER OR BASE RAIL CONNECTION DETAIL

SCALE: NTS



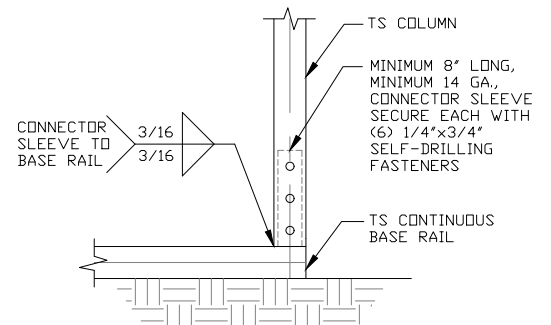
**3A** 10'-0" ROOF RAFTER TIE CONNECTION DETAIL

SCALE: NTS



**3B** 7'-6" ROOF RAFTER TIE CONNECTION DETAIL

SCALE: NTS



**5** COLUMN/BASE RAIL CONNECTION DETAIL

SCALE: NTS

**Validity Notice**

**Plans Expiration Date:**

**31 December 2024**

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

**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART BUILDERS**

**NEWMART BUILDERS, INC.  
1000 CYCLE LANE  
SOUTH HILL, VA 23970  
30'-0"x14'-0" ENCLOSED STRUCTURE**

**DATE: 11-22-24**

**SHT. 12**

**SCALE: NTS**

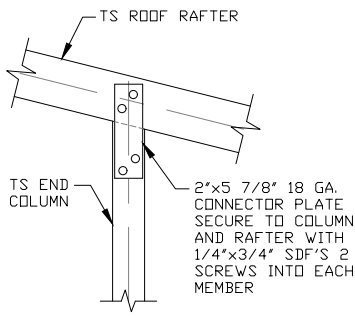
**DWG. NO: SK-3**

**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

**REV: 11**

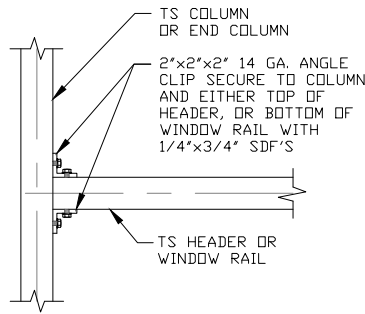
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# CONNECTIONS DETAILS



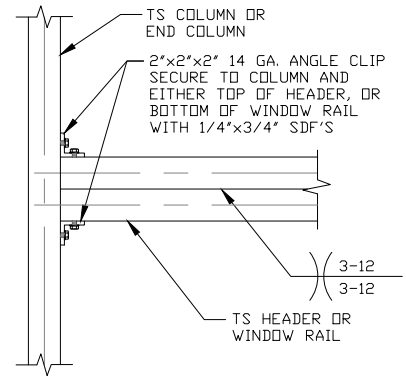
**8** RAFTER TO CHORD CONNECTION DETAIL

SCALE: NTS



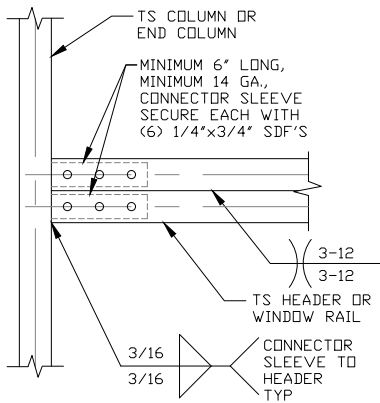
**9** COLUMN OR WINDOW RAIL TO POST CONNECTION DETAIL

SCALE: NTS



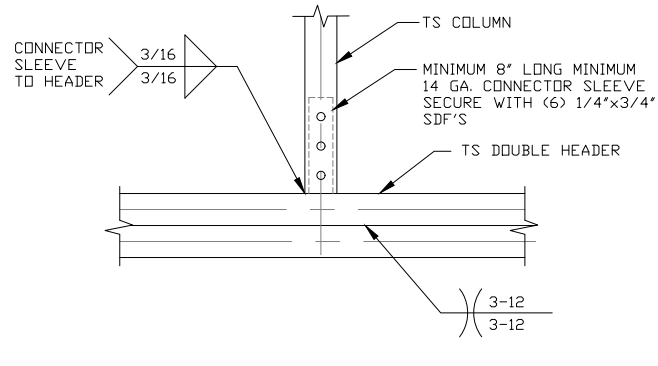
**10** DOUBLE HEADER TO COLUMN CONNECTION DETAIL

SCALE: NTS



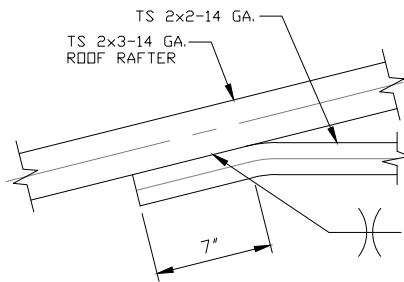
**10A** DOUBLE HEADER TO COLUMN CONNECTION DETAIL

SCALE: NTS



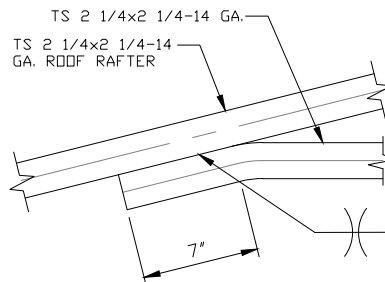
**11** COLUMN/DOUBLE HEADER CONNECTION DETAIL

SCALE: NTS



**12A** 15'-0" ROOF RAFTER TIE CONNECTION DETAIL

SCALE: NTS



**12B** 12'-0" ROOF RAFTER TIE CONNECTION DETAIL

SCALE: NTS

**Validity Notice**

Plans Expiration Date:

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

**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART BUILDERS**

NEWMART BUILDERS, INC.  
1000 CYCLE LANE  
SOUTH HILL, VA 23970  
30'-0"x14'-0" ENCLOSED STRUCTURE

**DATE: 11-22-24**

**SHT. 13**

**SCALE: NTS**

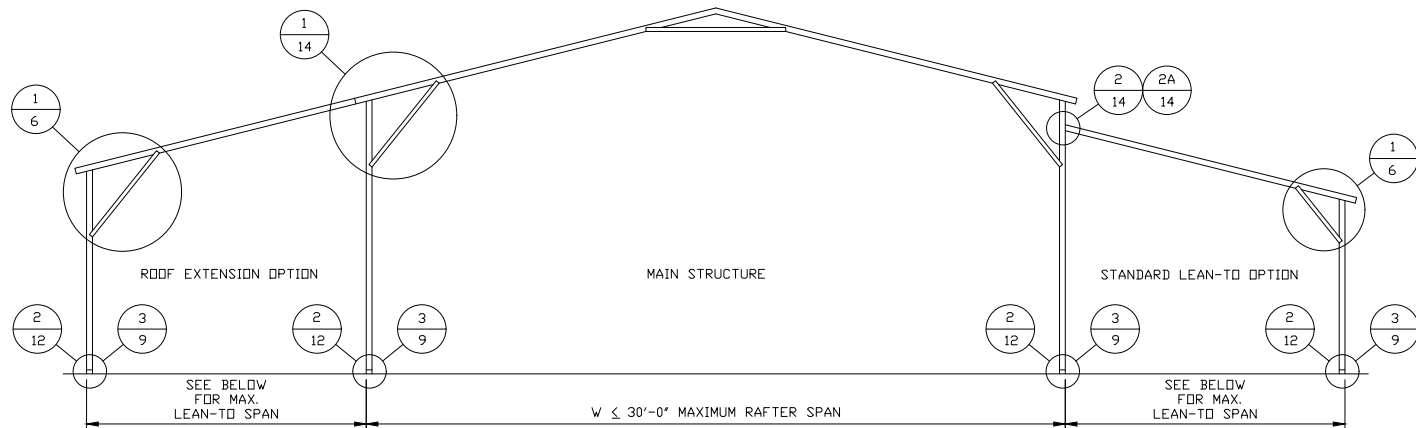
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**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

**REV: 11**

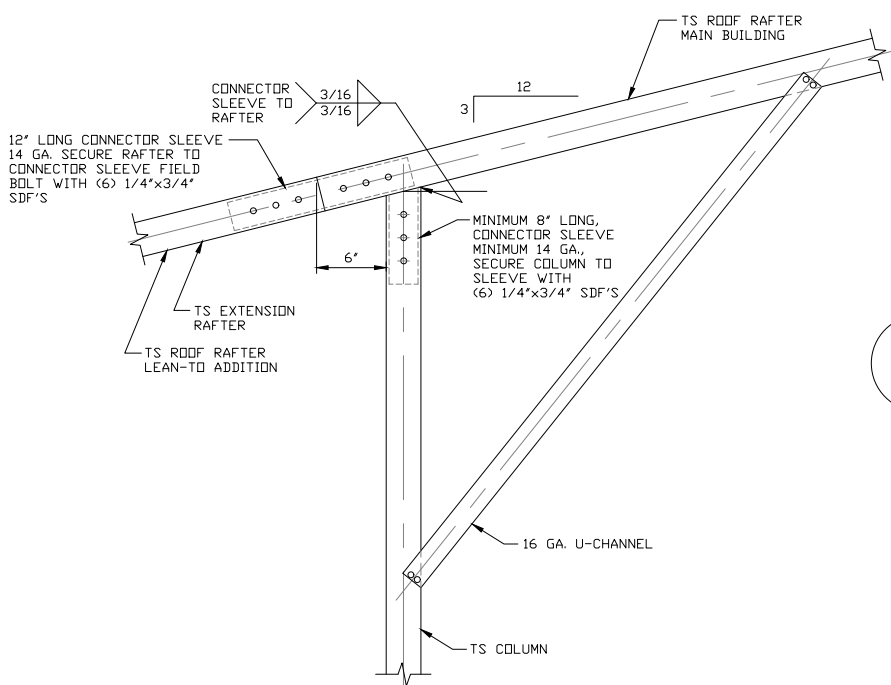
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# BOX EAVE RAFTER LEAN-TO OPTIONS



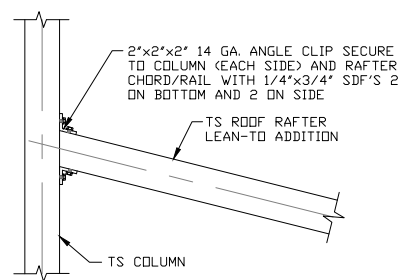
## TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

SCALE: NTS  
 MAXIMUM WIDTH OF SINGLE TUBE MEMBER (RAFTER AND COLUMN) ROOF EXTENSION AND LEAN-TO IS 12'-0".  
 MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE  
 HEIGHTS ≤ 14'-0"



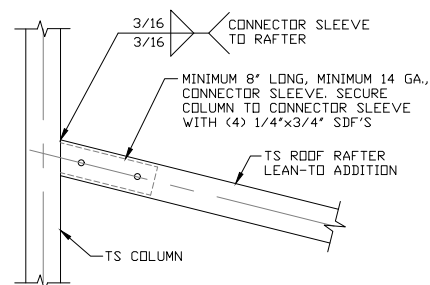
### 1 SIDE EXTENSION RAFTER/COLUMN DETAIL

SCALE: NTS



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

SCALE: NTS



### 2A LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL

SCALE: NTS

#### Validity Notice

Plans Expiration Date:

31 December 2024

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

**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

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NEWMART BUILDERS, INC.  
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 SOUTH HILL, VA 23970  
 30'-0"x14'-0" ENCLOSED STRUCTURE

**DATE: 11-22-24**

**SHT. 14**

**SCALE: NTS**

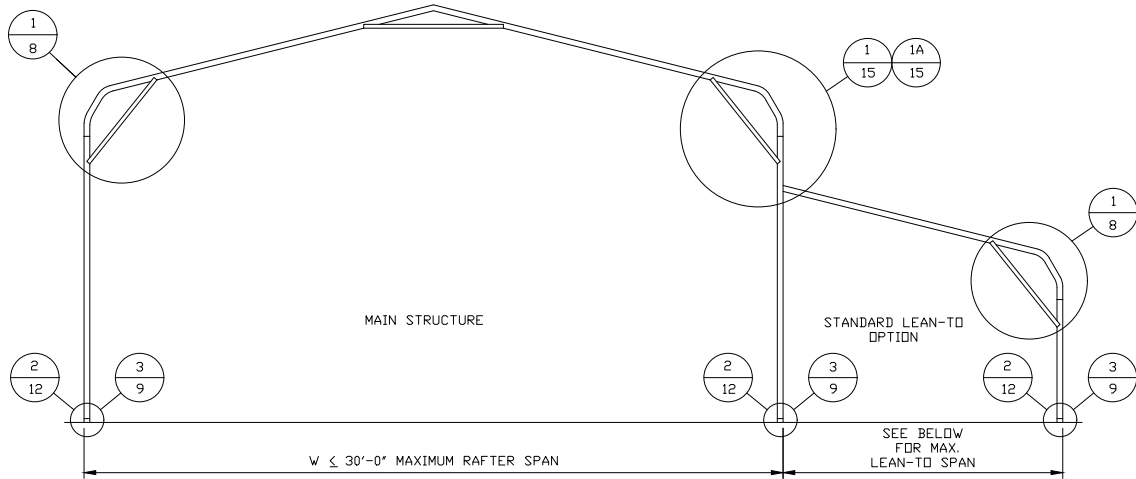
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**JOB NO: 18113S/18246S/  
 19309S/22257S/23335S**

**REV.: 11**

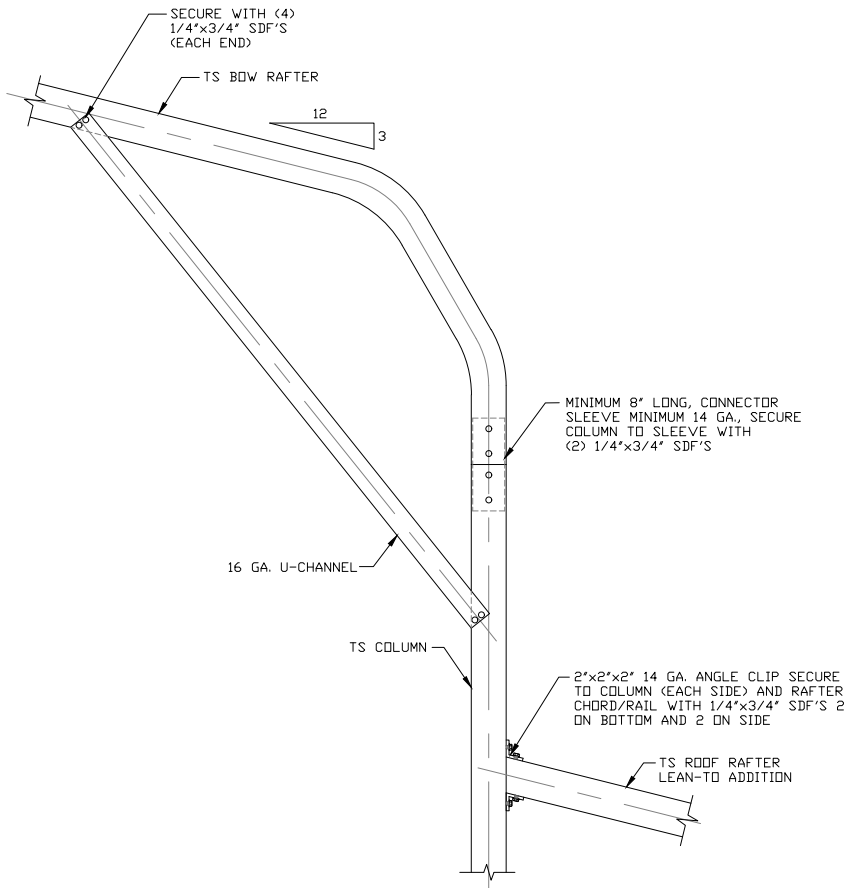
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# BOW RAFTER LEAN-TO OPTIONS



## TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION

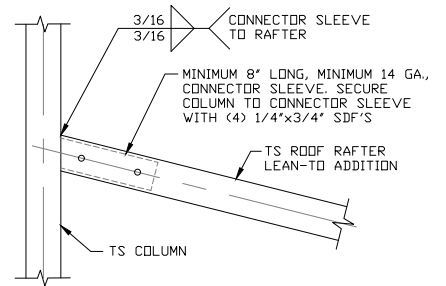
SCALE: NTS  
 MAXIMUM WIDTH OF SINGLE TUBE MEMBER (RAFTER AND COLUMN) ROOF EXTENSION AND LEAN-TO IS 12'-0".  
 MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS ≤ 14'-0"



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

1

SCALE: NTS



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

1A

SCALE: NTS

**Validity Notice**

**Plans Expiration Date:**

**31 December 2024**

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

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NEWMART BUILDERS, INC.  
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30'-0"x14'-0" ENCLOSED STRUCTURE

**DATE: 11-22-24**

**SHT. 15**

**SCALE: NTS**

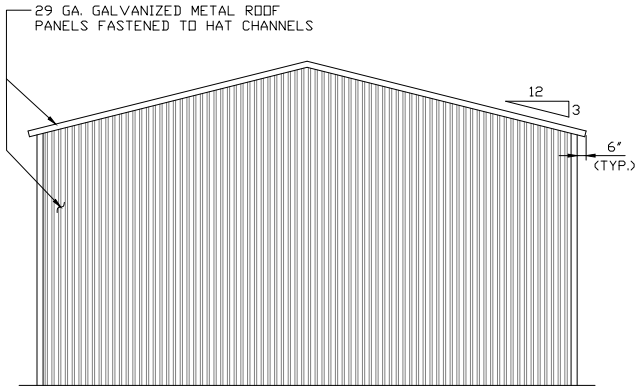
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**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

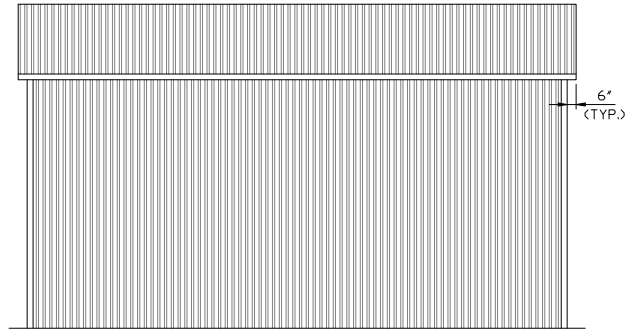
**REV.: 11**

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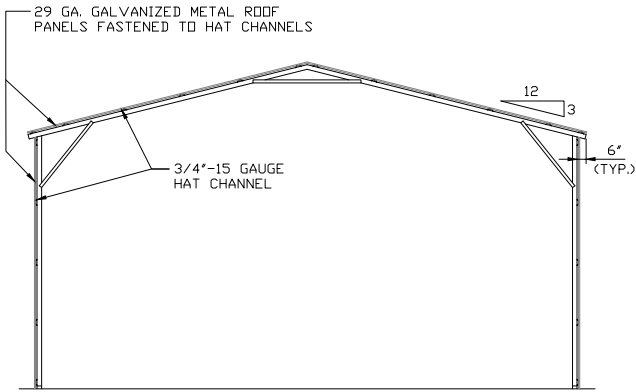
# BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



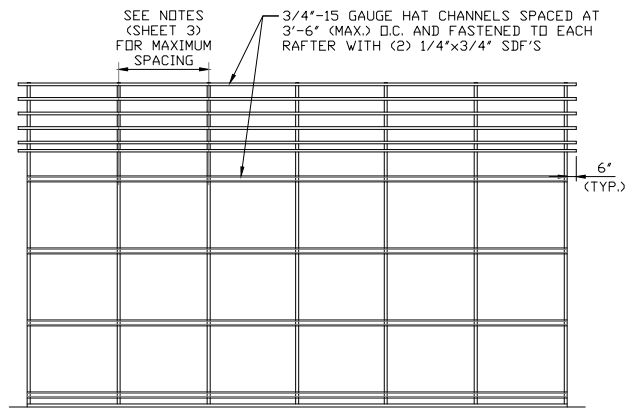
**TYPICAL END ELEVATION  
VERTICAL ROOF/SIDING**  
SCALE: NTS



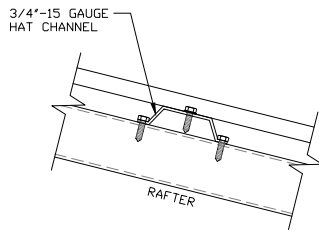
**TYPICAL SIDE ELEVATION  
VERTICAL ROOF/SIDING OPTION**  
SCALE: NTS



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



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



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

**Validity Notice**

**Plans Expiration Date:**

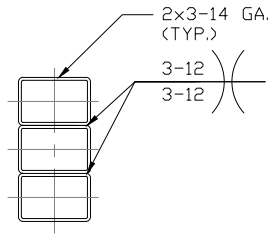
**31 December 2024**

<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRP	NEWMART BUILDERS, INC. 1000 CYCLE LANE SOUTH HILL, VA 23970 30'-0" x 14'-0" ENCLOSED STRUCTURE			
	CHECKED BY: JRP				
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	CLIENT: NEWMART BUILDERS	SHT. 16	DWG. NO: SK-3	REV.: 11	

## SIDE WALL HEADER OPTIONS

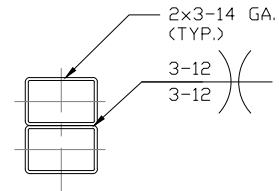
NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.

### FOR 35 PSF < TO ≤ 45 PSF GROUND SNOW LOAD



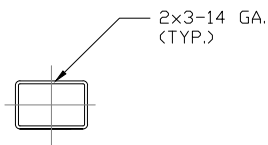
HEADER DETAIL FOR SIDE WALL DOOR OPENINGS 8'-0" < TO ≤ 12'-0" WIDE

SCALE: NTS



HEADER DETAIL FOR SIDE WALL DOOR OPENINGS 5'-0" < TO ≤ 8'-0" WIDE

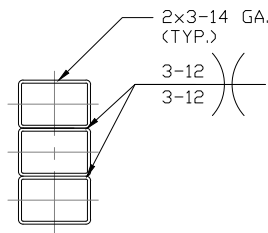
SCALE: NTS



HEADER DETAIL FOR SIDE WALL DOOR OPENINGS < 5'-0" WIDE

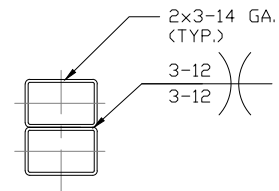
SCALE: NTS

### FOR ≤ 35 PSF GROUND SNOW LOAD



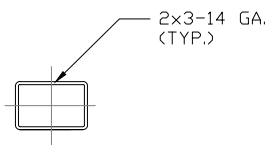
HEADER DETAIL FOR SIDE WALL DOOR OPENINGS 10'-0" < TO ≤ 12'-0" WIDE

SCALE: NTS



HEADER DETAIL FOR SIDE WALL DOOR OPENINGS 6'-0" < TO ≤ 10'-0" WIDE

SCALE: NTS



HEADER DETAIL FOR SIDE WALL DOOR OPENINGS < 6'-0" WIDE

SCALE: NTS

**Validity Notice**

Plans Expiration Date:

**31 December 2024**

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

**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART BUILDERS**

NEWMART BUILDERS, INC.  
1000 CYCLE LANE  
SOUTH HILL, VA 23970  
30'-0"x14'-0" ENCLOSED STRUCTURE

**DATE: 11-22-24**

**SHT. 17**

**SCALE: NTS**

**DWG. NO: SK-3**

**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

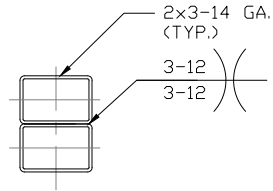
**REV: 11**

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## END WALL HEADER OPTIONS

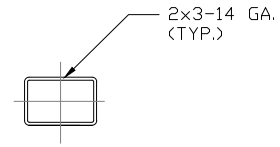
NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES.

### FOR 35 PSF < TO ≤ 45 PSF GROUND SNOW LOAD



**HEADER DETAIL FOR END WALL DOOR  
OPENINGS 7'-0" < TO ≤ 12'-0" WIDE**

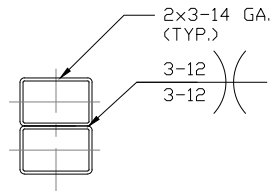
SCALE: NTS



**HEADER DETAIL FOR END WALL DOOR  
OPENINGS ≤ 7'-0" WIDE**

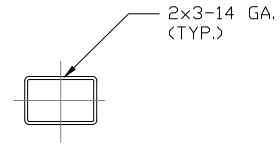
SCALE: NTS

### FOR ≤ 35 PSF GROUND SNOW LOAD



**HEADER DETAIL FOR END WALL DOOR  
OPENINGS 8'-0" < TO ≤ 12'-0" WIDE**

SCALE: NTS



**HEADER DETAIL FOR END WALL DOOR  
OPENINGS ≤ 8'-0" WIDE**

SCALE: NTS

**Validity Notice**

**Plans Expiration Date:**

**31 December 2024**

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

**DRAWN BY: JRP**

**CHECKED BY: JRP**

**PROJECT MGR: JRP**

**CLIENT: NEWMART  
BUILDERS**

NEWMART BUILDERS, INC.  
1000 CYCLE LANE  
SOUTH HILL, VA 23970  
30'-0"x14'-0" ENCLOSED STRUCTURE

**DATE: 11-22-24**

**SHT. 17A**

**SCALE: NTS**

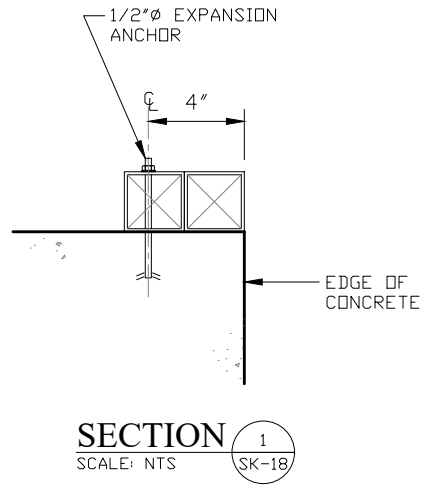
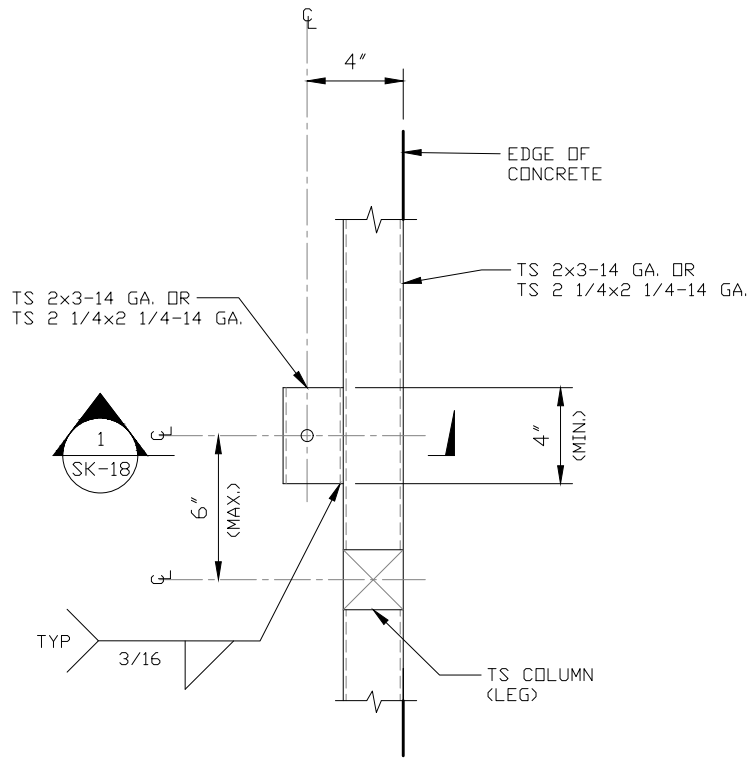
**DWG. NO: SK-3**

**JOB NO: 18113S/18246S/  
19309S/22257S/23335S**

**REV: 11**

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# ADDITIONAL BASE RAIL ANCHORAGE OPTION



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

SCALE: NTS

**Validity Notice**

**Plans Expiration Date:**

**31 December 2024**

<b>MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.</b>	DRAWN BY: JRP	NEWMART BUILDERS, INC. 1000 CYCLE LANE SOUTH HILL, VA 23970 30'-0"x14'-0" ENCLOSED STRUCTURE			
	CHECKED BY: JRP				
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	CLIENT: NEWMART BUILDERS	SHT. 18	DWG. NO: SK-3	REV: 11	