

ENCLOSED GABLE END BUILDING

MAXIMUM 30'-0" WIDE X 16'-0" EAVE HEIGHT WITH BOX FRAME / (UP TO) 145 M.P.H. WIND ZONE - 30 P.S.F. SNOW LOAD

FOR:

**N.C. CARPORTS & GARAGES
116 EAST MARKET STREET / ELKIN, NC. 28621**

ISSUE DATE: FEBRUARY 01, 2023



JCMT Associates, LLC

**211 Stone Drive, Pilot Mountain, NC 27041
336-399-6277**

**NOTE:
THESE DRAWINGS ARE VALID FOR 1 (ONE)
CALENDER YEAR AFTER THE ISSUE DATE
LISTED ON THIS SHEET**

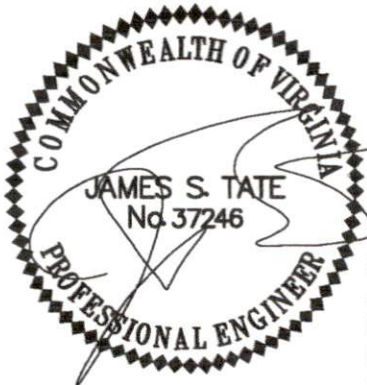
Peter Bertolino



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 NC BUILDING CODE (2015 IBC)



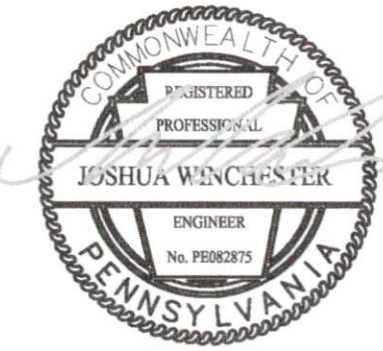
DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2021 SC BUILDING CODE (2021 IBC)



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 VA CONSTRUCTION CODE (2018 IBC)



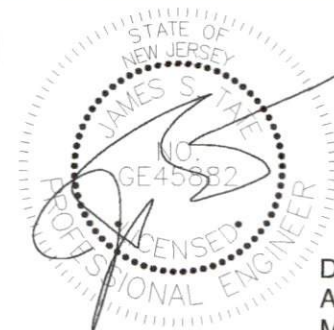
DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2012 IBC



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC



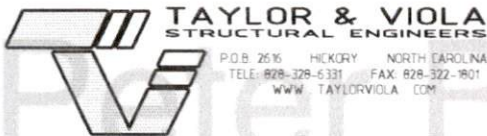
DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2020 BUILDING CODE OF NEW YORK STATE (2018 IBC)



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2021 BUILDING CODENEW JERSEY EDITION (2021 IBC)



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC



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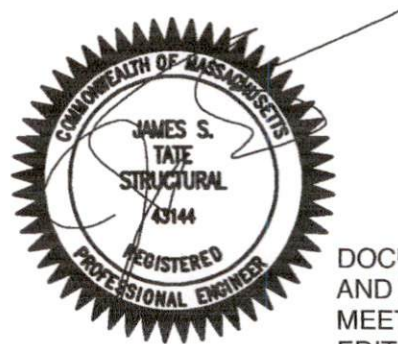
DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2021 BUILDING CODE OF ALABAMA (2021 IBC)



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC



DOCUMENTS DESIGNED AND DRAWN TO MEET THE NINTH EDITION OF THE MA STATE BUILDING CODE



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC



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SHEET INDEX

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S1	P.E. SEALS SHEET
S1A	P.E. SEALS SHEET
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S4	SIDE AND END ELEVATIONS
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S5A	TYPICAL RAFTER / COLUMN FRAME SECTIONS
S5B	TYPICAL RAFTER / COLUMN FRAME AND SIDE FRAMING SECTION
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DESIGN LOADS:

IMPORTANCE FACTORS	WIND	(1w)	1.00	
	SNOW	(1s)	1.00	
	SEISMIC	(1e)	1.00	
DEAD LOADS	ROOF		13	PSF
	ROOF COLLATERAL		0	PSF
LIVE LOADS	ROOF		20	PSF
GROUND SNOW LOAD:			30	PSF
GROUND LOAD:	BASIC WIND SPEED	V	145	mph (ASCE 7-10)
	EXPOSURE CATAGORY	B		

*DRIFT LOAD HAS NOT BEEN CALCULATED

SEISMIC DESIGN CATAGORY A

COMPLIANCE WITH SECTION 1616.4? NO YES

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:

OCCUPANCY CATEGORY I

SPECTRAL RESPONSE ACCELERATION S_e 20.5 %g S_1 8.8 %g

SITE CLASSIFICATION D FIELD TEST PRESUMPTIVE HISTORICAL DATA

BASIC STRUCTURAL SYSTEM (CHECK ONE)

<input type="checkbox"/> BEARING WALL	<input type="checkbox"/> DUAL W/ SPECTRAL MOMENT FRAME
<input checked="" type="checkbox"/> BUILDING FRAME	<input type="checkbox"/> DUAL W/ INTERMEDIATE R/C OR SPECIAL STEEL
<input type="checkbox"/> MOMENT FRAME	<input type="checkbox"/> INVERTED PENDULUM

ANALYSIS PROCEDURE SIMPLIFIED EQUIVALANT LATERAL FORCE MODAL

LATERAL DESIGN CONTROL? EARTHQUAKE WIND

SOIL BEARING CAPACITIES:

PRESUMPTIVE BEARING CAPACITIES: 2,000 PSF

GENERAL NOTES:

1. MAX FRAME SPACING SHALL BE 60"oc UNLESS NOTED OTHERWISE.
2. MAX. END-WALL COLUMN SPACING SHALL BE 60"oc UNLESS NOTED OTHERWISE.
3. TUBE MATERIAL SHALL BE 2-1/2" x 2-1/2" x 14 GA. 50 KSI MIN. UNLESS NOTED OTHERWISE.
4. ALL FASTENERS SHALL BE #12 SELF TAPPING AT 9"o.c. UNLESS NOTED OTHERWISE.
5. 2,000 PSF ASSUMED BEARING CAPACITY UNLESS NOTED OTHERWISE.



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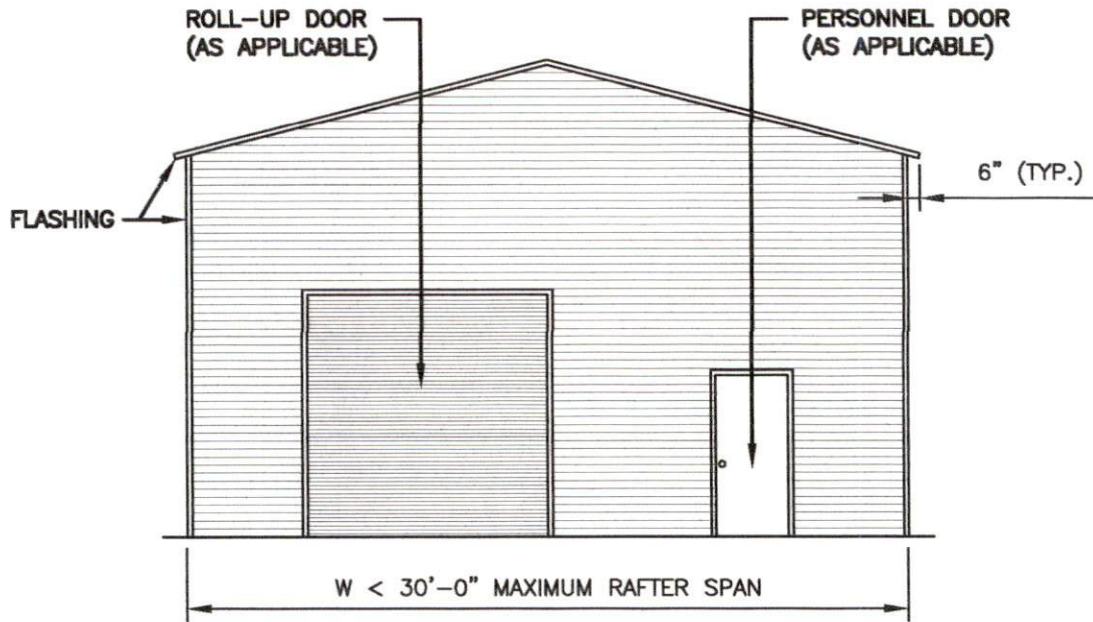
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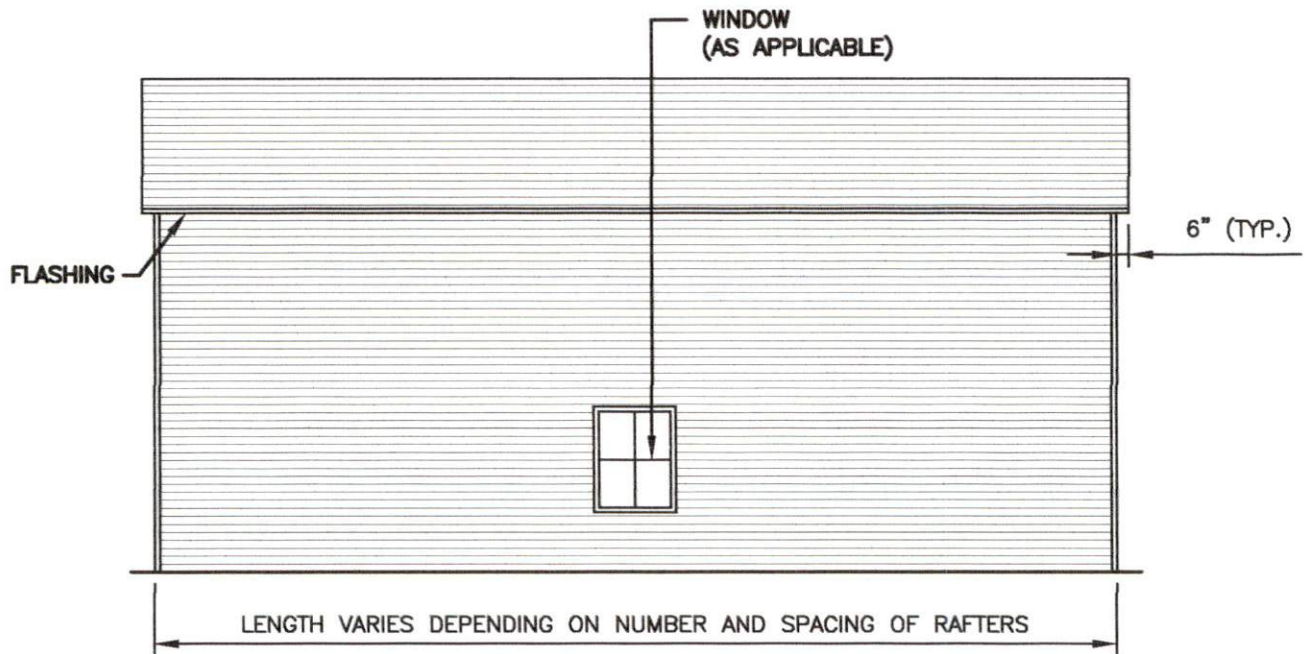
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S3

BOX EVE FRAME RAFTER STRUCTURE



TYPICAL END ELEVATION



TYPICAL SIDE ELEVATION



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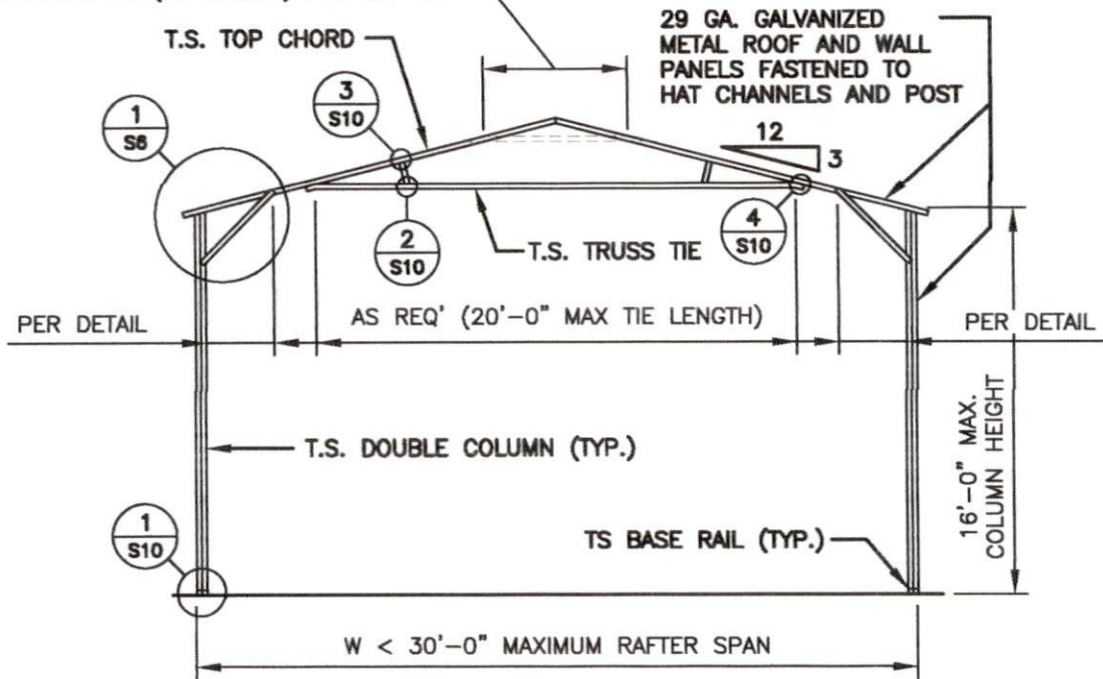
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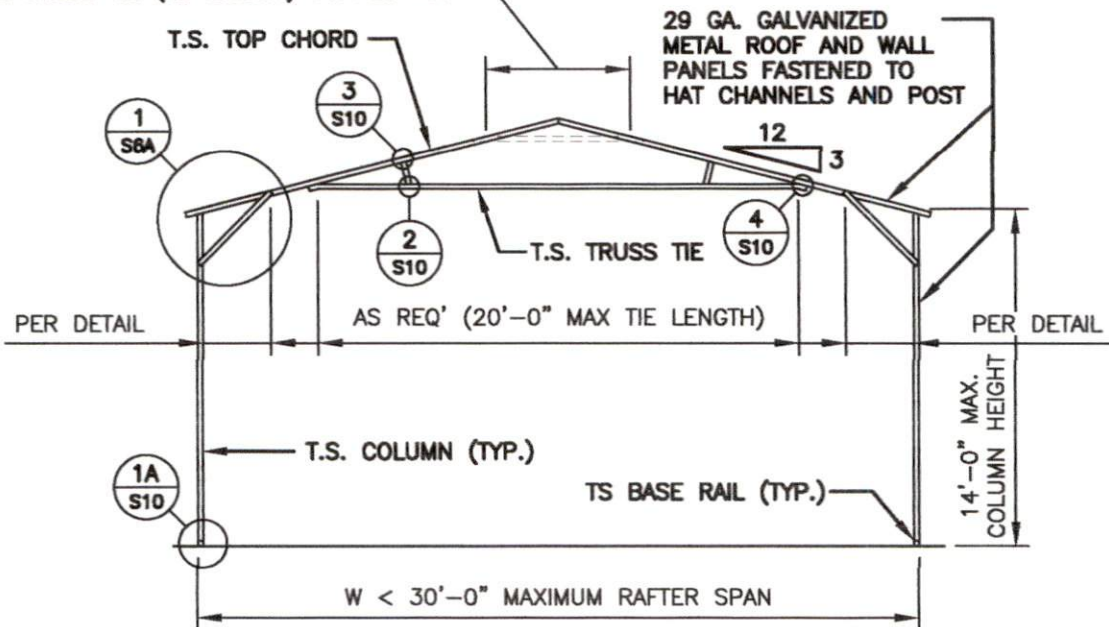
'U' BRACE TRUSS TIE - NOTE:
 6'-0" BRACE FOR 21'-24' BUILDING WIDTH
 20' TUBE TRUSS TIE (AS SHOWN) FOR 25'-30'



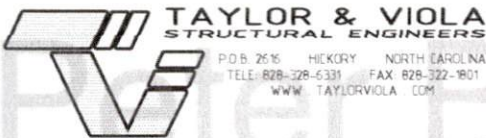
TYPICAL RAFTER / COLUMN FRAME SECTION

'U' BRACE TRUSS TIE - NOTE:
 6'-0" BRACE FOR 21'-24' BUILDING WIDTH
 20' TUBE TRUSS TIE (AS SHOWN) FOR 25'-30'

NOTE:
 H.S.S. 2-1/2"x2-1/2"x14ga. OR 2-1/4"x2-1/4"x14ga.
 MATERIAL MAY BE USED FOR TRUSS METAL.



TYPICAL RAFTER / COLUMN FRAME SECTION



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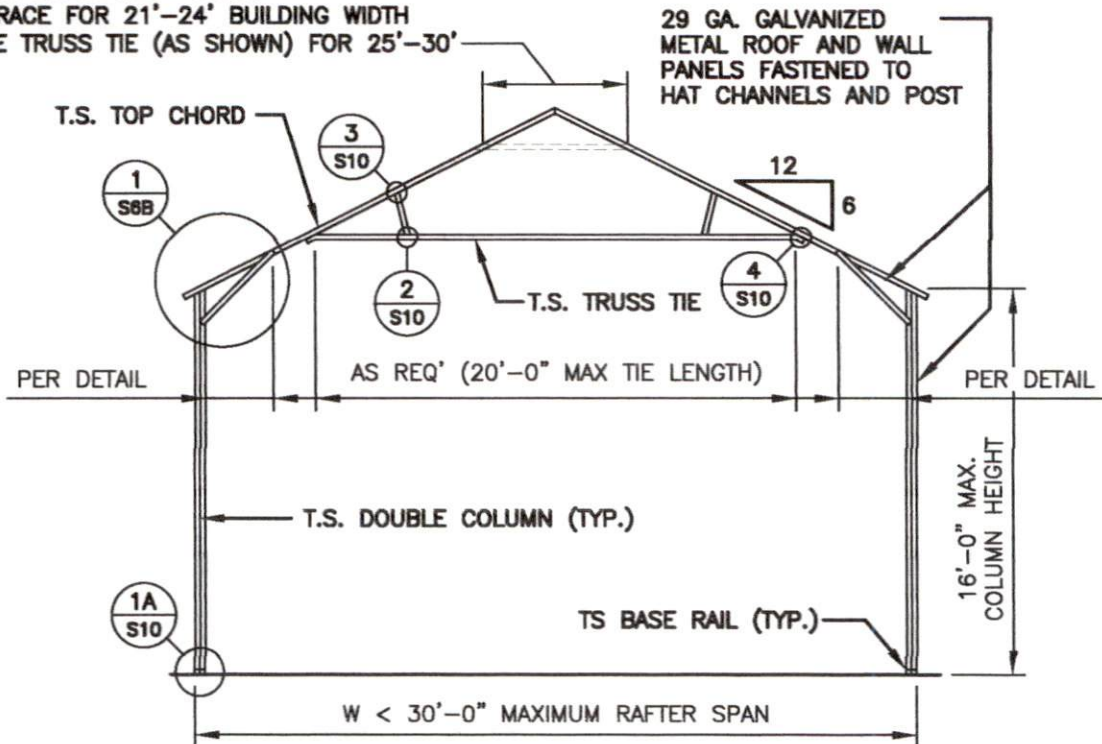
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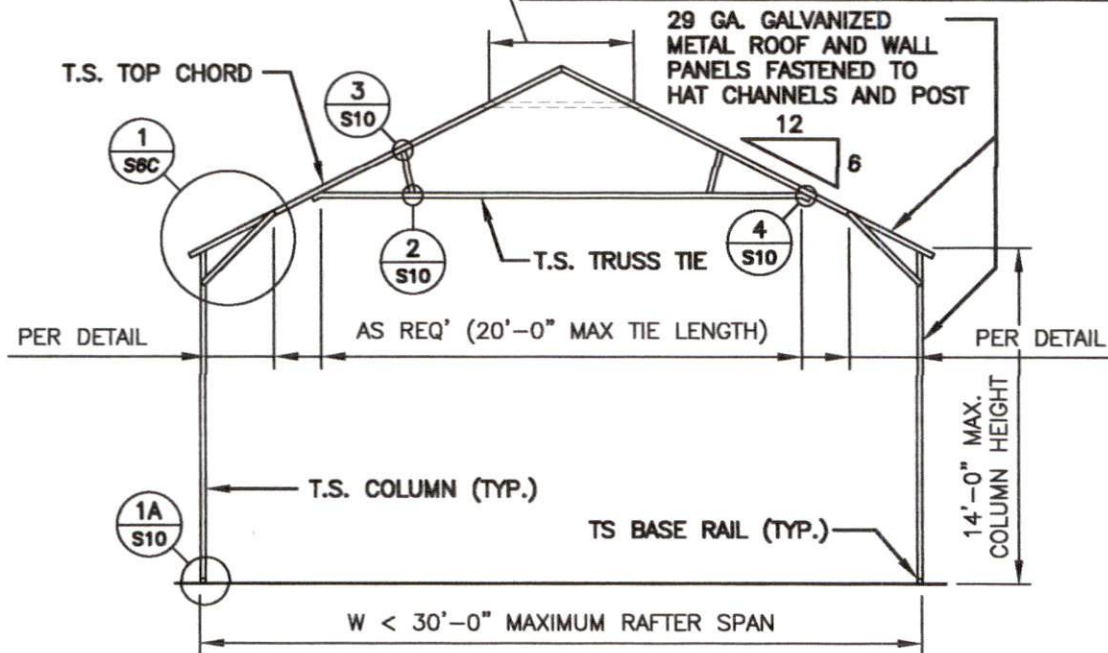
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TYPICAL RAFTER / COLUMN FRAME SECTION

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 20' TUBE TRUSS TIE (AS SHOWN) FOR 25'-30'

NOTE:
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 MATERIAL MAY BE USED FOR TRUSS METAL.



TYPICAL RAFTER / COLUMN FRAME SECTION



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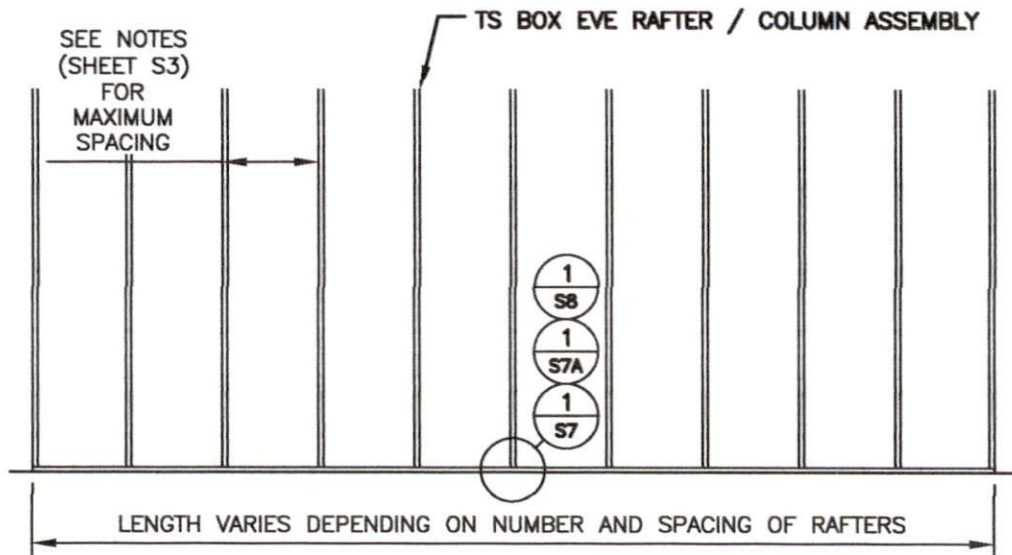
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 S5A

NOTE:
 H.S.S. 2-1/2"x2-1/2"x14ga. OR
 2-1/4"x2-1/4"x14ga. MATERIAL
 MAY BE USED FOR TRUSS METAL



TYPICAL RAFTER / COLUMN SIDE FRAME SECTION

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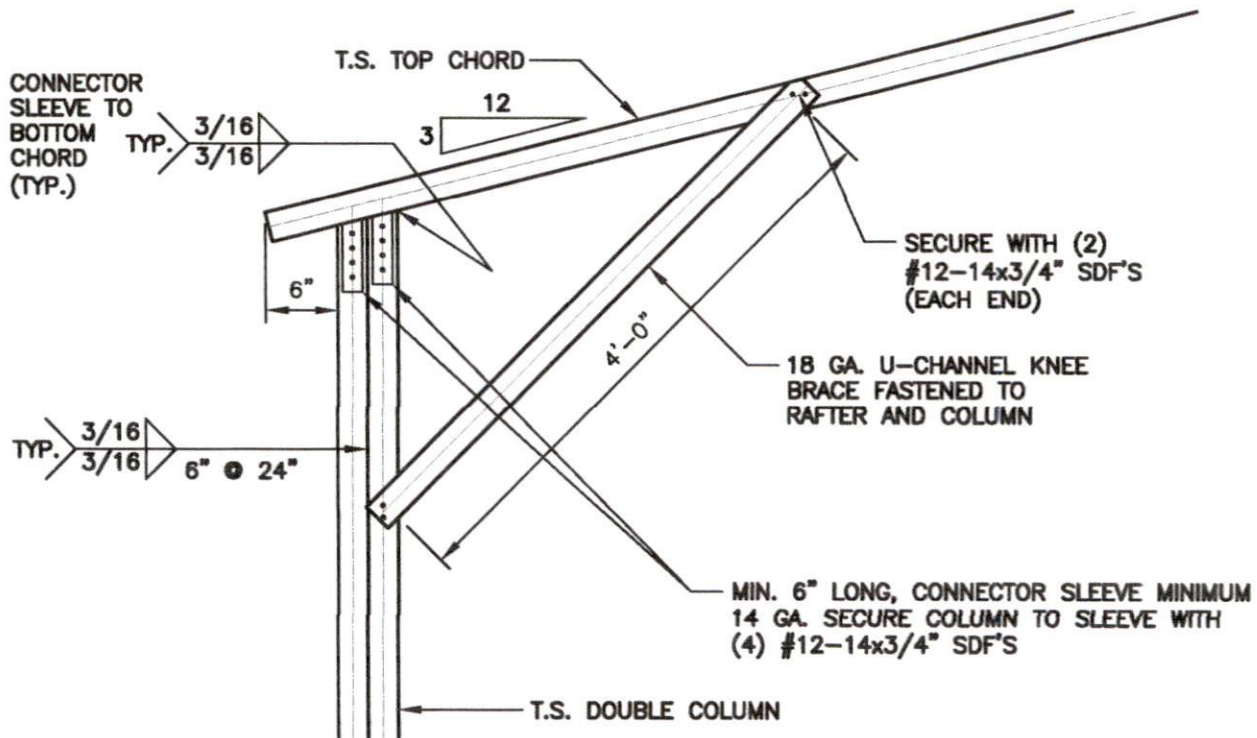
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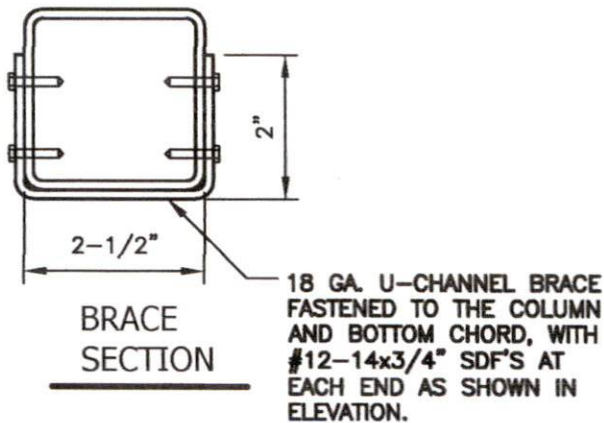
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1 BOX EAVE / CORNER POST CONNECTION DETAIL FOR HEIGHTS 14'-1" < TO <16'-0"
S6 SCALE: 3/4" = 1'-0"



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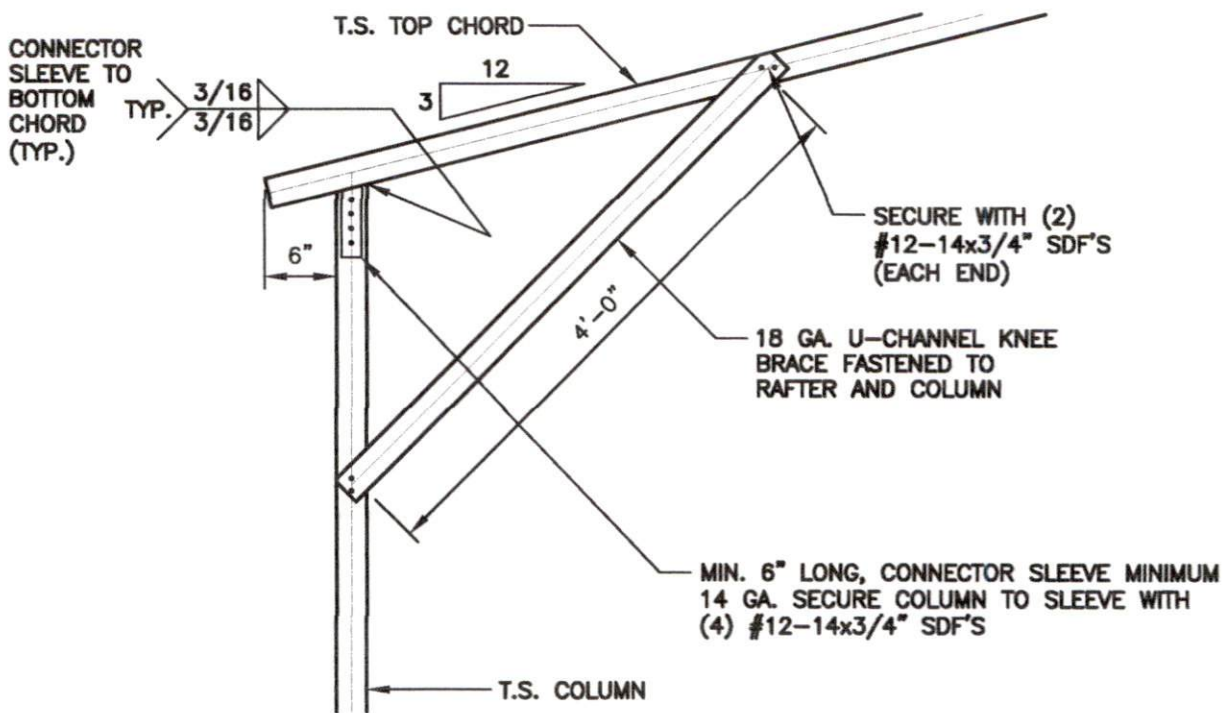
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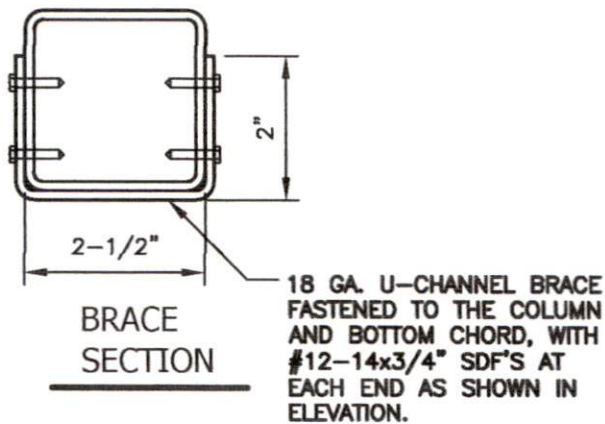
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1 BOX EAVE / CORNER POST CONNECTION DETAIL FOR HEIGHTS < 14'-0"

S6A SCALE: 3/4" = 1'-0"



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S6A

CONNECTOR SLEEVE TO BOTTOM CHORD (TYP.)

TYP. $\frac{3}{16}$ / $\frac{3}{16}$

T.S. TOP CHORD

12

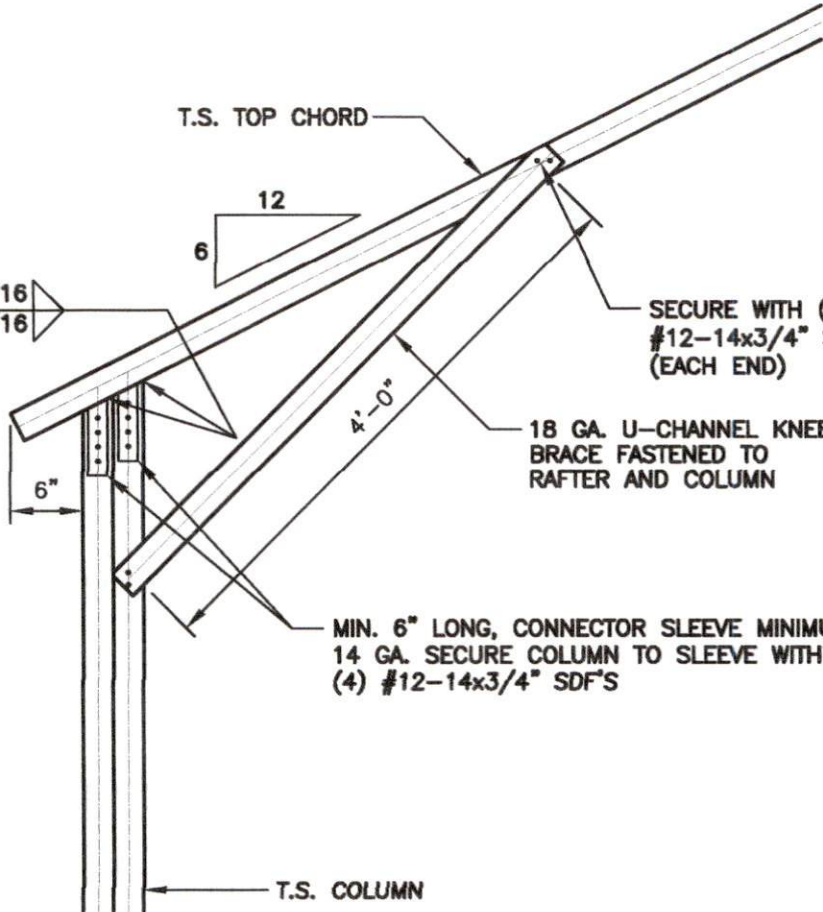
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SECURE WITH (2) #12-14x3/4" SDF'S (EACH END)

18 GA. U-CHANNEL KNEE BRACE FASTENED TO RAFTER AND COLUMN

MIN. 6" LONG, CONNECTOR SLEEVE MINIMUM 14 GA. SECURE COLUMN TO SLEEVE WITH (4) #12-14x3/4" SDF'S

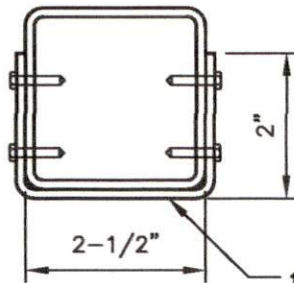
T.S. COLUMN



1
S6C

BOX EAVE / CORNER POST CONNECTION DETAIL FOR HEIGHTS 14'-1" < TO <16'-0"

SCALE: 3/4" = 1'-0"



BRACE SECTION

18 GA. U-CHANNEL BRACE FASTENED TO THE COLUMN AND BOTTOM CHORD, WITH #12-14x3/4" SDF'S AT EACH END AS SHOWN IN ELEVATION.



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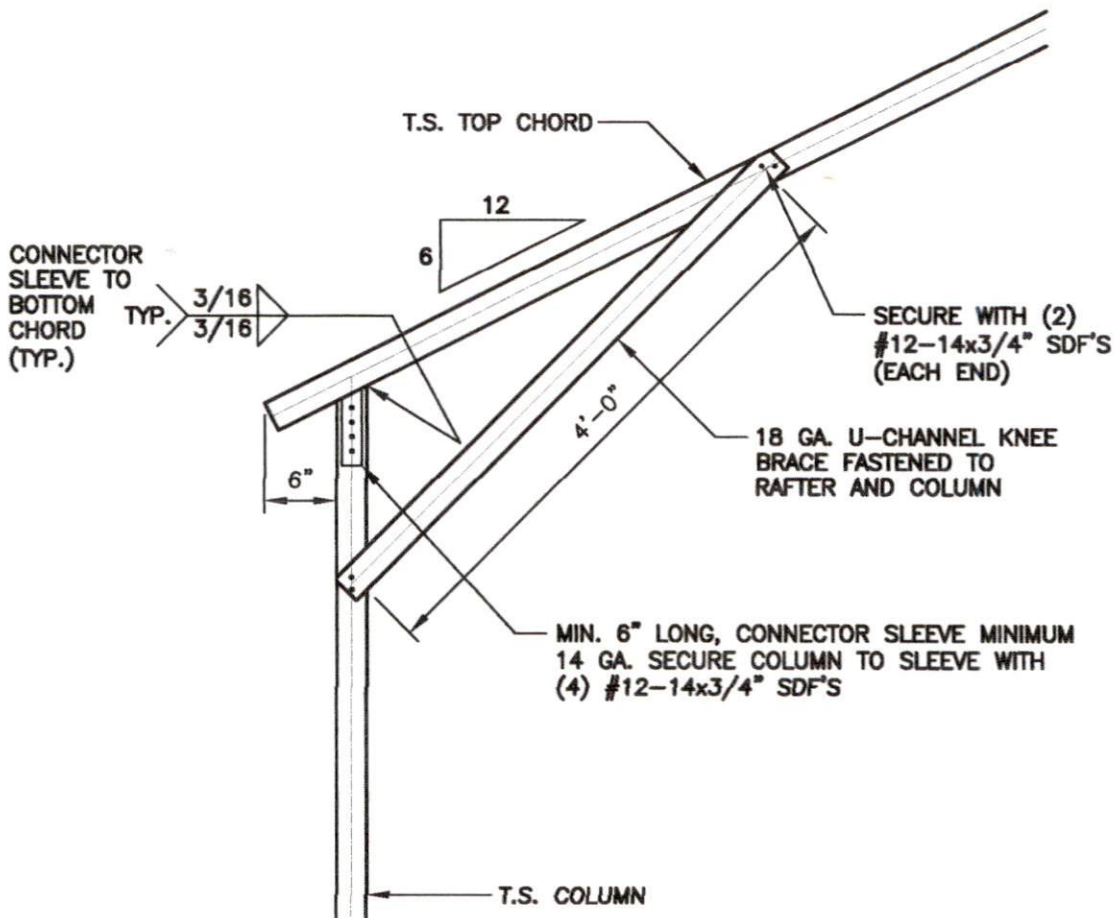
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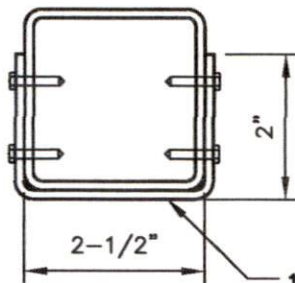
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S6B



1 BOX EAVE / CORNER POST CONNECTION DETAIL FOR HEIGHTS < 14'-0"

S6C

SCALE: 3/4" = 1'-0"



BRACE SECTION

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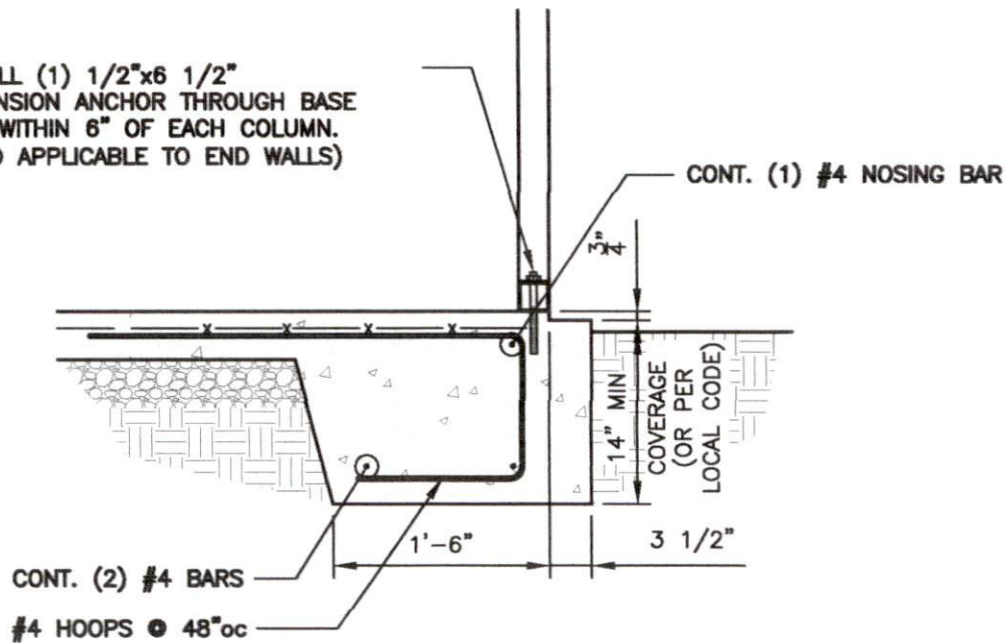
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S6C

CONCRETE BASE RAIL ANCHORAGE

INSTALL (1) 1/2"x6 1/2"
EXPANSION ANCHOR THROUGH BASE
RAIL WITHIN 6" OF EACH COLUMN.
(ALSO APPLICABLE TO END WALLS)



1
BASE RAIL ANCHORAGE DETAIL
S7
SCALE: 3/4" = 1'-0"

GENERAL NOTES:

ALL CONCRETE MONOLITHIC SLAB DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 2,000 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 AND 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 OF 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.



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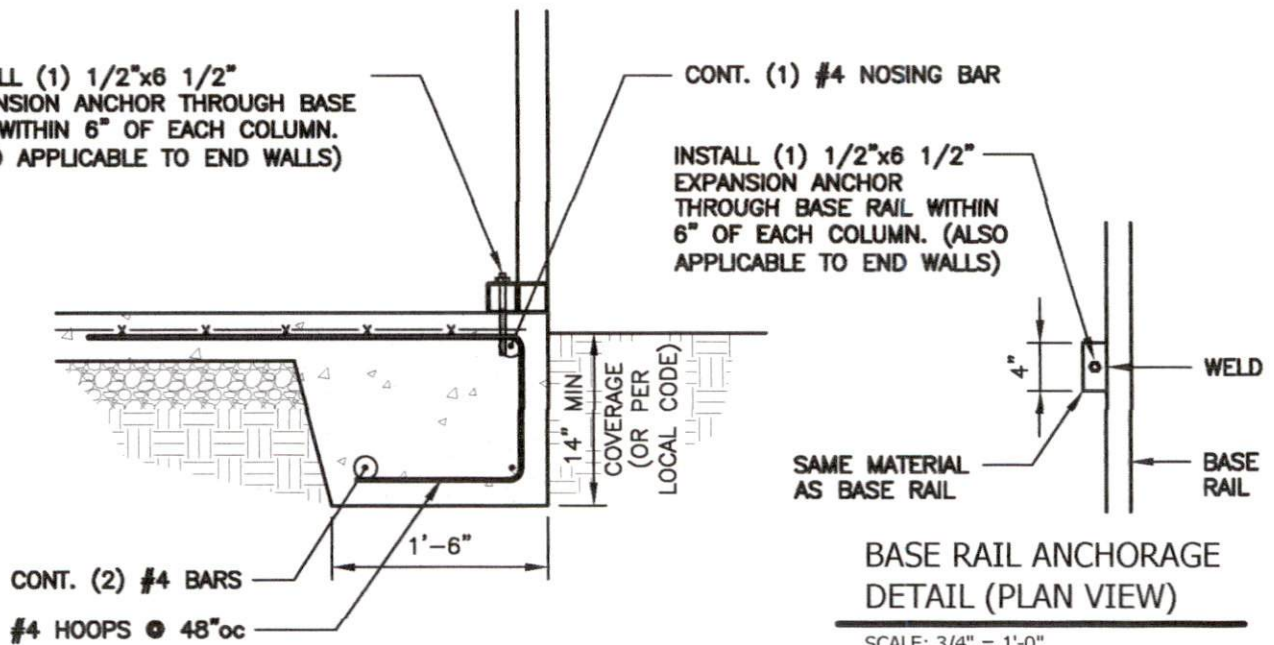
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CONCRETE BASE RAIL ANCHORAGE

INSTALL (1) 1/2"x6 1/2"
EXPANSION ANCHOR THROUGH BASE
RAIL WITHIN 6" OF EACH COLUMN.
(ALSO APPLICABLE TO END WALLS)

CONT. (1) #4 NOSING BAR

INSTALL (1) 1/2"x6 1/2"
EXPANSION ANCHOR
THROUGH BASE RAIL WITHIN
6" OF EACH COLUMN. (ALSO
APPLICABLE TO END WALLS)



**BASE RAIL ANCHORAGE
DETAIL (PLAN VIEW)**

SCALE: 3/4" = 1'-0"



BASE RAIL ANCHORAGE DETAIL

SCALE: 3/4" = 1'-0"

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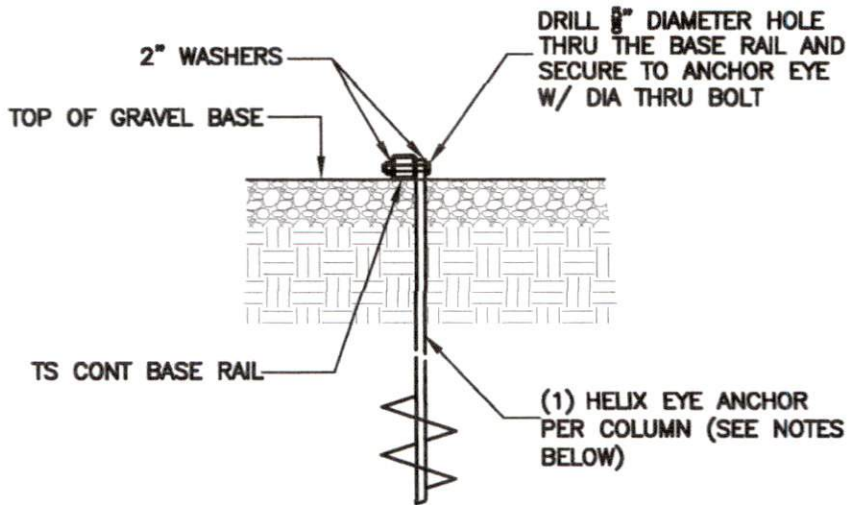
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S7A

SOIL NAIL BASE RAIL ANCHORAGE



1
S8

BASE RAIL ANCHORAGE DETAIL

SCALE: 3/4" = 1'-0"

HELIX EMBEDMENT INFORMATION:

FOR VERY DENSE OR CEMENTED SANDS, COARSE GRAVEL, COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, USE MIN (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH 50" EMBEDMENT

FOR CORAL, USE MIN (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH 50" EMBEDMENT

FOR MED DENSE COARSE SANDS, SANDY GRAVEL, VERY STIFF SILTS, AND CLAYS, USE MIN (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH 50" EMBEDMENT

FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, USE MIN (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT

FOR VERY LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS AND ALLUVIAL FILL, USE MIN (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT

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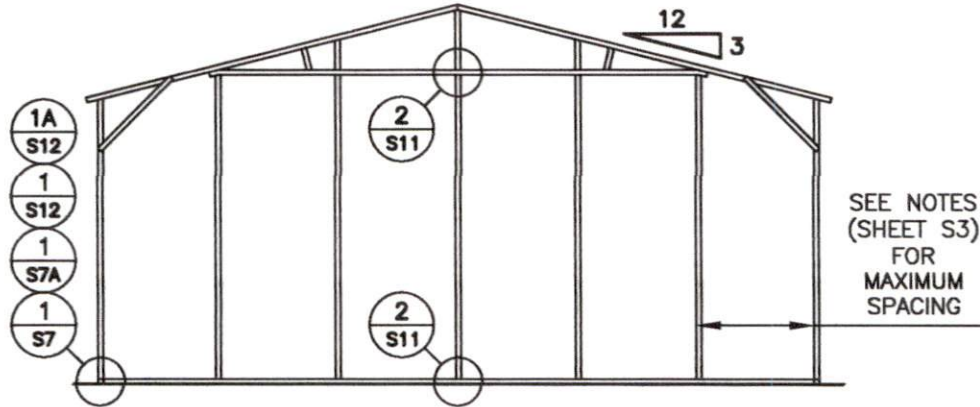
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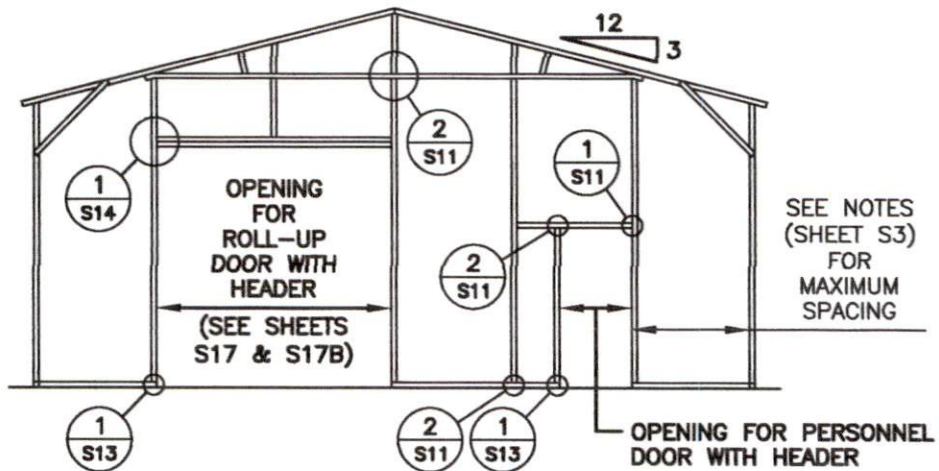
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BOX EVE RAFTER END WALL OPENINGS



TYPICAL BOX EVE RAFTER / END WALL COLUMN FRAME SECTION

NOTE:
 ROLL UP DOORS SHALL
 HAVE ONE JAMB EACH
 SIDE + ONE FRAME
 COLUMN BETWEEN OR SITE
 SPECIFIC SHALL BE REQ'D.



TYPICAL BOX EVE RAFTER END WALL OPENINGS FRAMING SECTION



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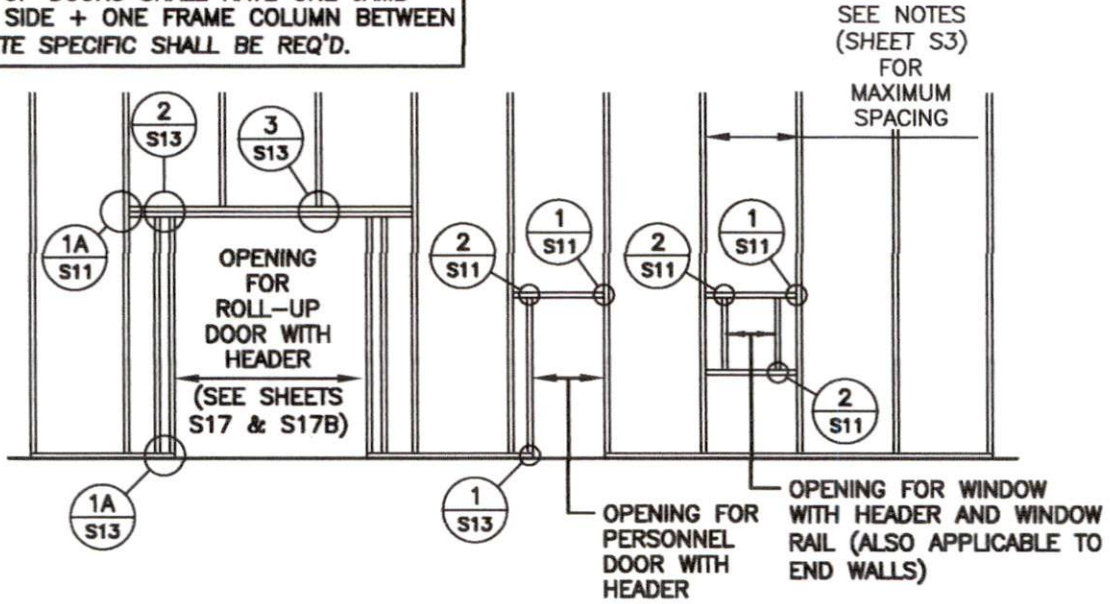
PROJECT NO:
 MISC

DATE:
 2023.02.01

SHEET NO:
59

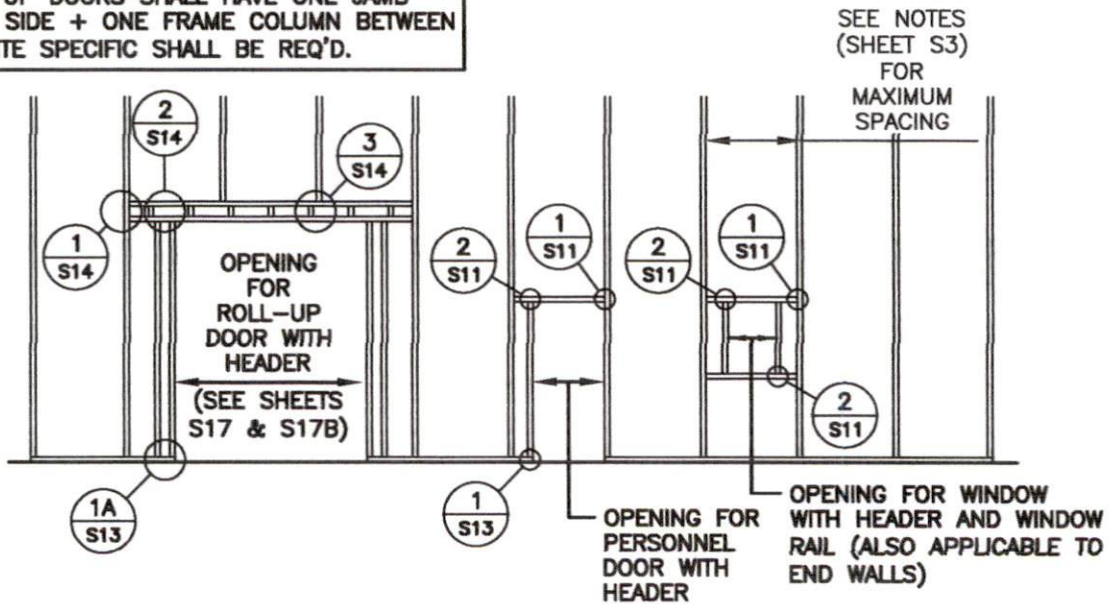
BOX EVE RAFTER END WALL AND SIDE WALL OPENINGS

NOTE:
ROLL UP DOORS SHALL HAVE ONE JAMB
EACH SIDE + ONE FRAME COLUMN BETWEEN
OR SITE SPECIFIC SHALL BE REQ'D.



TYPICAL END WALL OPENING FRAMING SECTION

NOTE:
ROLL UP DOORS SHALL HAVE ONE JAMB
EACH SIDE + ONE FRAME COLUMN BETWEEN
OR SITE SPECIFIC SHALL BE REQ'D.



TYPICAL SIDE WALL OPENING FRAMING SECTION

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**N.C. CARPORT
& GARAGES**

116 EAST MARKET STREET
ELKIN, NORTH CAROLINA 28621

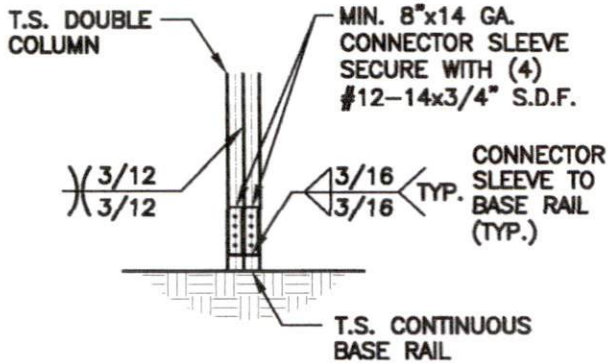
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S9A

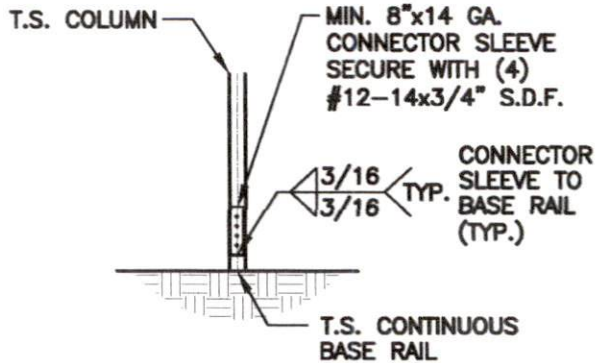
CONNECTION DETAILS



POST / BASE RAIL
CONNECTION DETAIL

1
S10

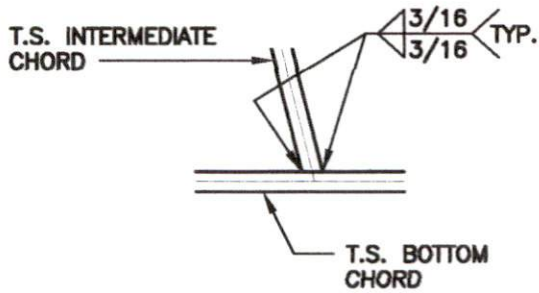
SCALE: 1/2" = 1'-0"



POST / BASE RAIL
CONNECTION DETAIL

1A
S10

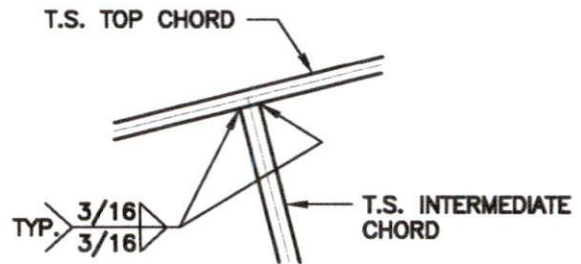
SCALE: 1/2" = 1'-0"



INTERMEDIATE CHORD
TO BOTTOM CHORD
CONNECTION DETAIL

2
S10

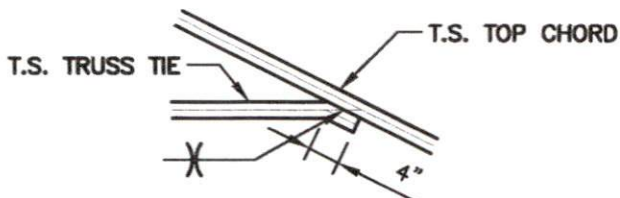
SCALE: 1/2" = 1'-0"



INTERMEDIATE CHORD TO TOP
CHORD CONNECTION DETAIL

3
S10

SCALE: 1/2" = 1'-0"



TRUSS TIE
CONNECTION DETAIL

4
S10

SCALE: 1/2" = 1'-0"



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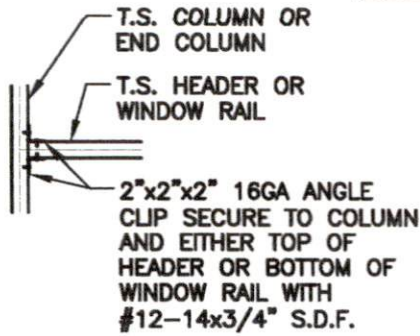
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PROJECT NO:
MISC

DATE:
2023.02.01

SHEET NO:
S10

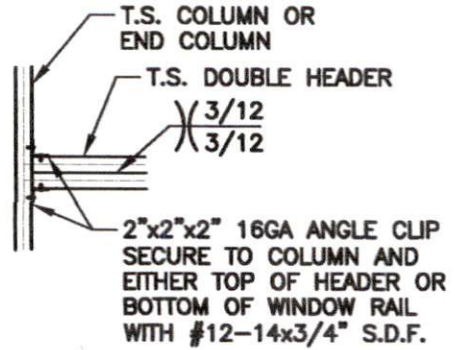
CONNECTION DETAILS



COLUMN OR WINDOW
RAIL / WALL GIRT TO POST
CONNECTION DETAIL

1
S11

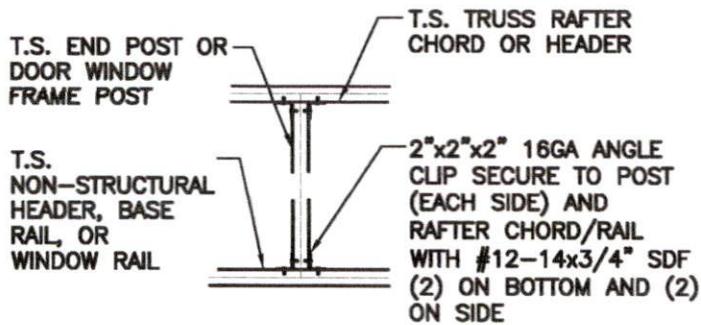
SCALE: 1/2" = 1'-0"



COLUMN / DOUBLE HEADER
CONNECTION DETAIL

1A
S11

SCALE: 1/2" = 1'-0"



DOOR OR WINDOW HEADER
RAIL TO POST CONNECTION
DETAIL

2
S11

SCALE: 1/2" = 1'-0"



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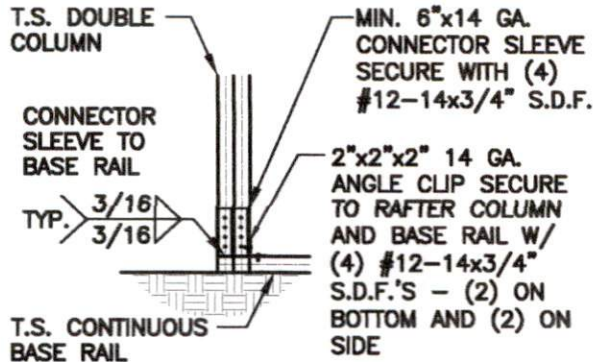
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MISC

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2023.02.01

SHEET NO:
S11

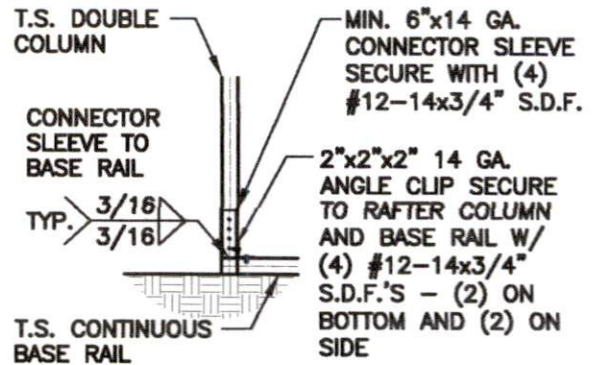
CONNECTION DETAILS



END COLUMN / BASE RAIL
CONNECTION DETAIL

1
S12

SCALE: 1/2" = 1'-0"



END COLUMN / BASE RAIL
CONNECTION DETAIL

1A
S12

SCALE: 1/2" = 1'-0"



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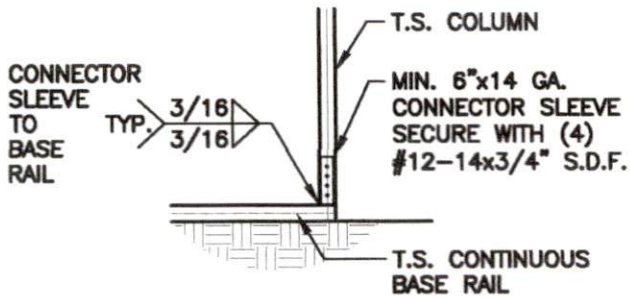
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DATE:
2023.02.01

SHEET NO:
S12

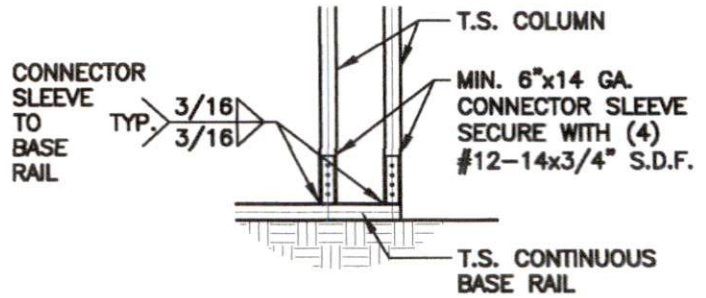
CONNECTION DETAILS



1
COLUMN / BASE RAIL
CONNECTION DETAIL

S13

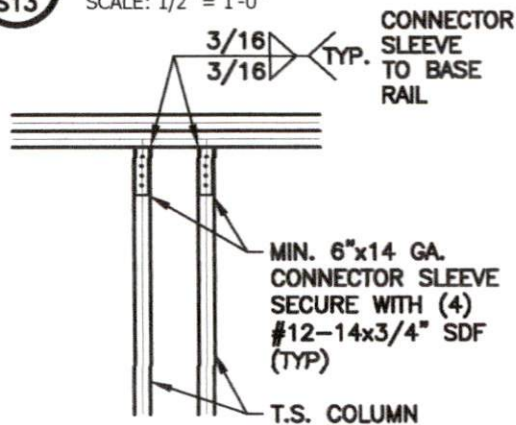
SCALE: 1/2" = 1'-0"



1A
COLUMN / BASE RAIL
CONNECTION DETAIL

S13

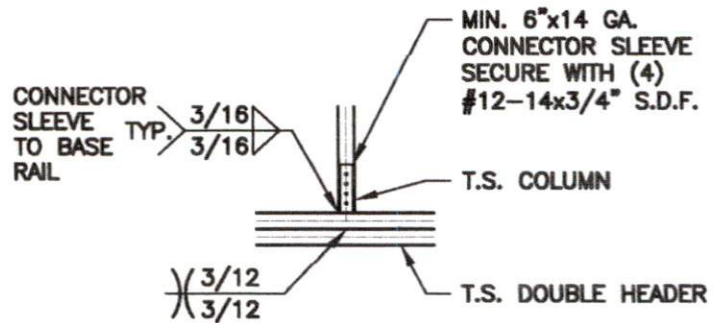
SCALE: 1/2" = 1'-0"



2
DOUBLE HEADER / COLUMN
CONNECTION DETAIL

S13

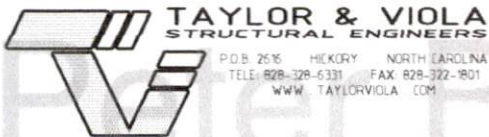
SCALE: 1/2" = 1'-0"



3
COLUMN / DOUBLE HEADER
CONNECTION DETAIL

S13

SCALE: 1/2" = 1'-0"



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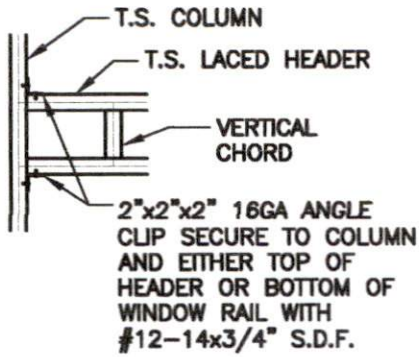
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2023.02.01

SHEET NO:
S13

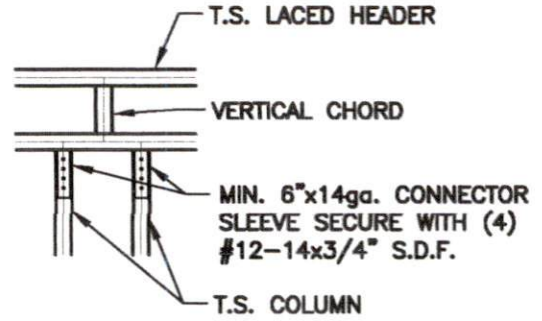
CONNECTION DETAILS



1
COLUMN / LACED HEADER
CONNECTION DETAIL

S14

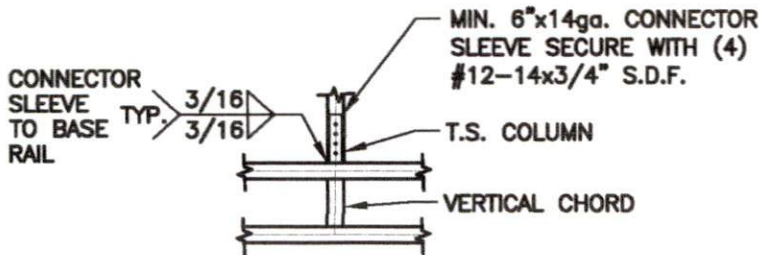
SCALE: 1/2" = 1'-0"



2
LACED HEADER / COLUMN
CONNECTION DETAIL

S14

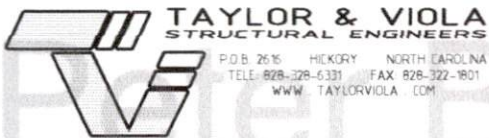
SCALE: 1/2" = 1'-0"



3
COLUMN / LACED HEADER
CONNECTION DETAIL

S14

SCALE: 1/2" = 1'-0"



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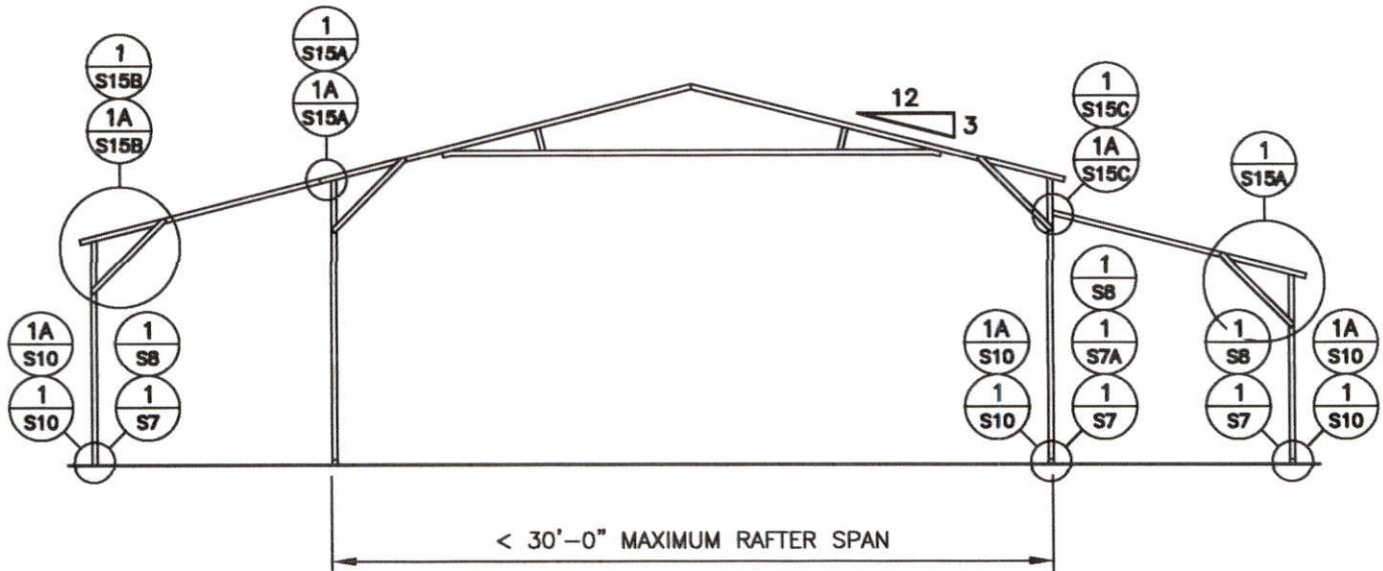
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2023.02.01

SHEET NO:
S14

BOX EVE RAFTER LEAN-TO OPTIONS

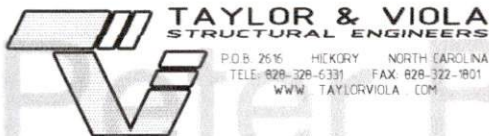


TYPICAL LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

MAXIMUM WIDTH OF SINGLE MEMBER ROOF EXTENSION AND LEAN-TO OPTION IS 12'-0"

MAXIMUM WIDTH OF DOUBLE MEMBER ROOF EXTENSION AND LEAN-TO IS 15'-0"

12'-0" MAX. LEAN-TO HEIGHT WITH SINGLE COLUMN



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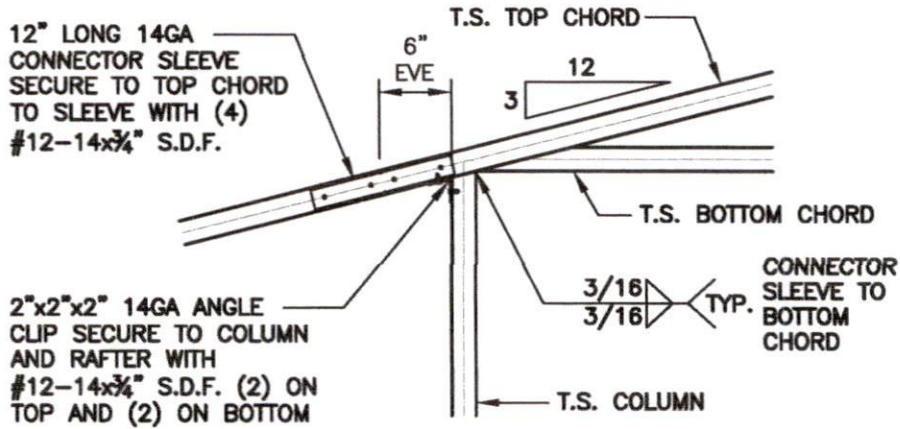
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SHEET NO:
S15

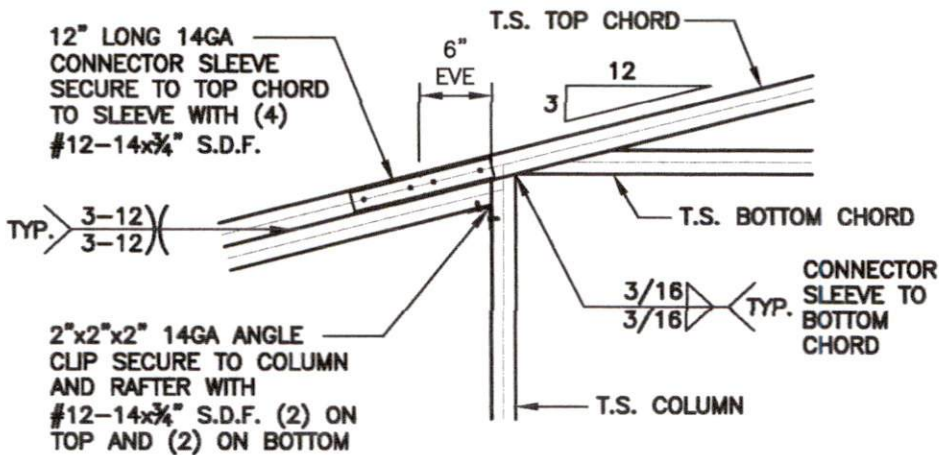
LEAN-TO CONNECTION DETAILS



ROOF EXTENSION RAFTER / CORNER POST
DETAIL FOR WIDTHS < 12'-0"

1
S15A

SCALE: 3/4" = 1'-0"



ROOF EXTENSION RAFTER / CORNER POST
DETAIL FOR WIDTHS < 15'-0"

1A
S15A

SCALE: 3/4" = 1'-0"



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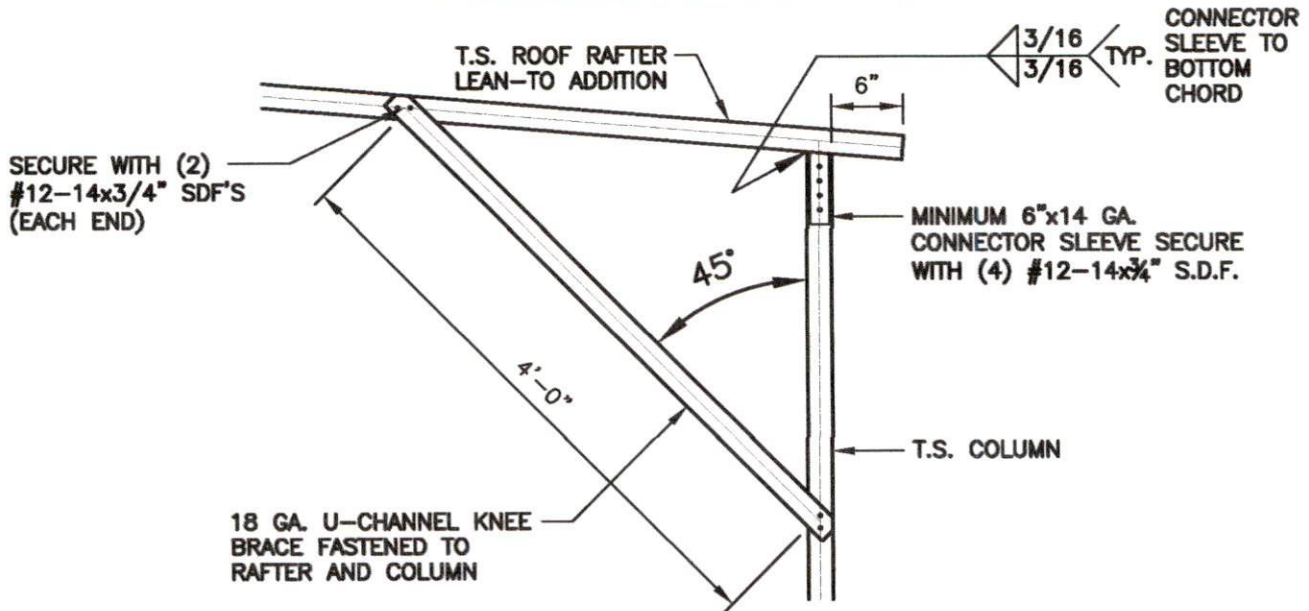
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2023.02.01

SHEET NO:
S15A

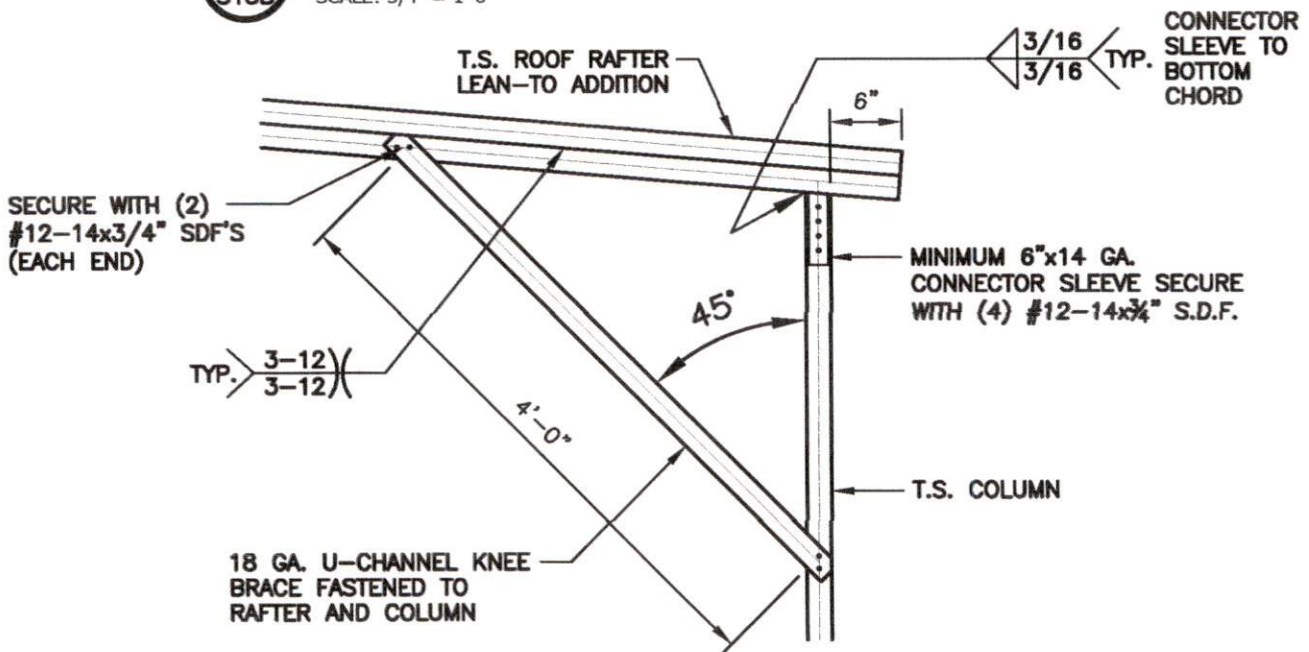
LEAN-TO CONNECTION DETAILS



**BOX EAVE RAFTER COLUMN CONNECTION
DETAIL FOR LEAN-TO RAFTER SPAN <12'-0"**

1
S15B

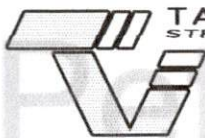
SCALE: 3/4" = 1'-0"



**BOX EAVE RAFTER COLUMN CONNECTION
DETAIL FOR LEAN-TO RAFTER SPAN <15'-0"**

1A
S15B

SCALE: 3/4" = 1'-0"



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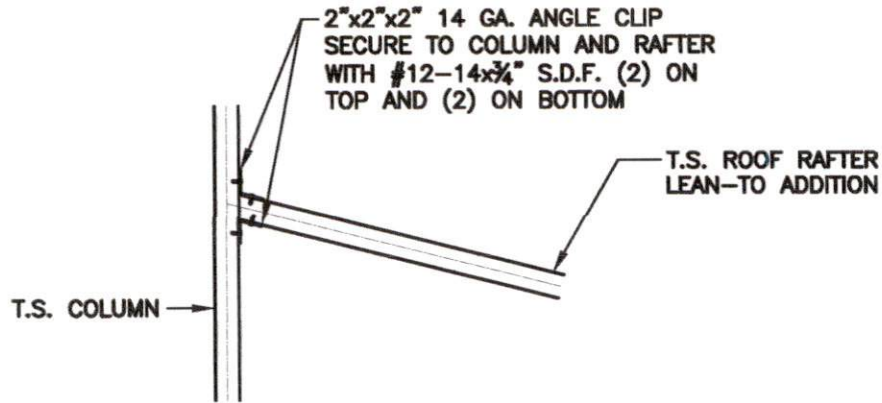
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MISC

DATE:
2023.02.01

SHEET NO:
S15B

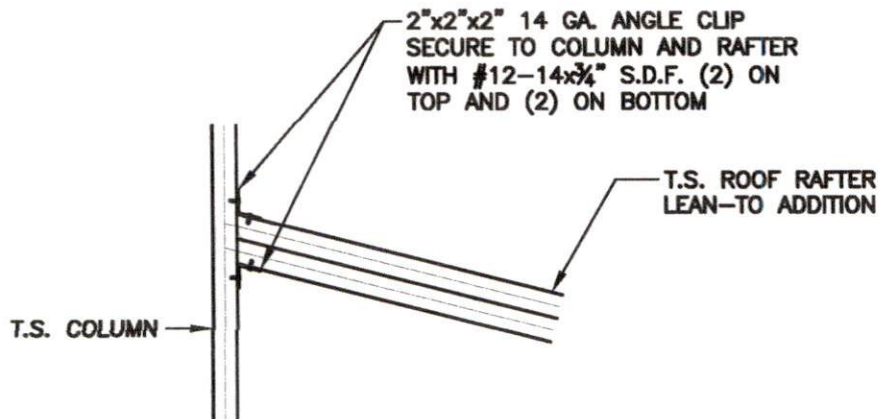
LEAN-TO CONNECTION DETAILS



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

1
S15C

SCALE: 3/4" = 1'-0"



LEAN-TO RAFTER TO RAFTER POST
CONNECTION DETAIL FOR WIDTHS < 15'-0"

1A
S15C

SCALE: 3/4" = 1'-0"



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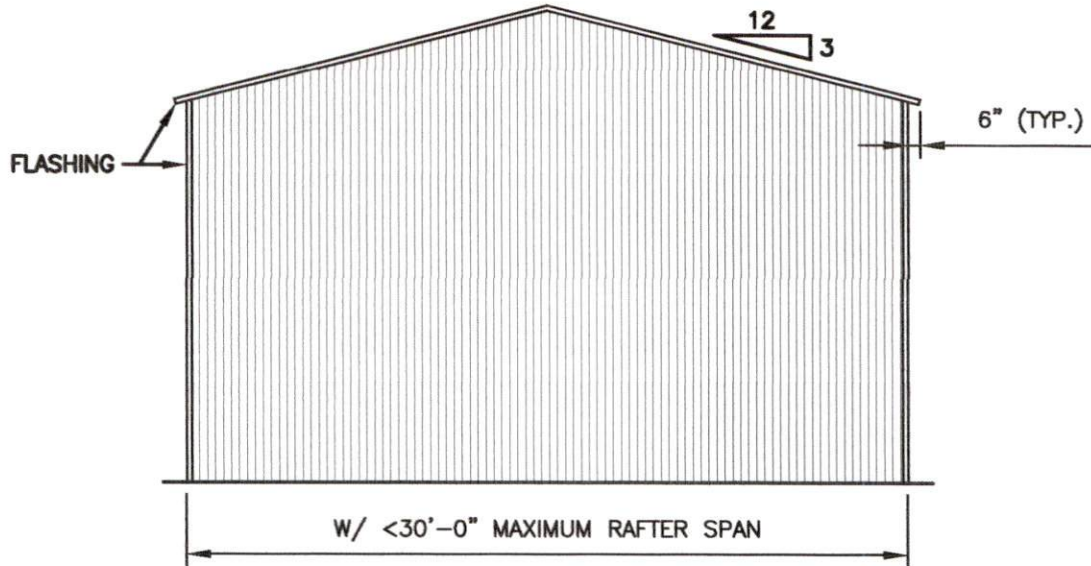
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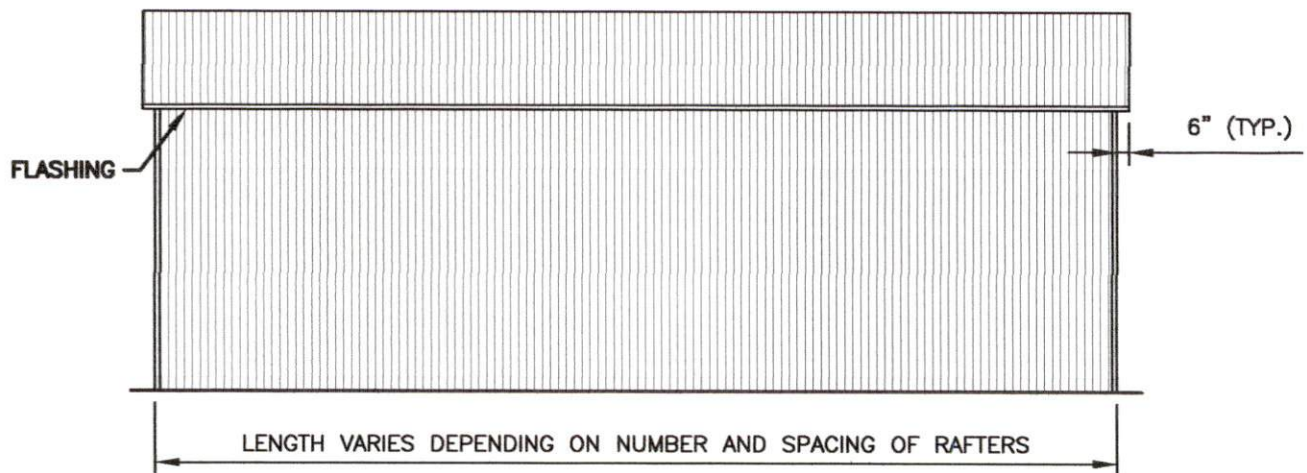
DATE:
2023.02.01

SHEET NO:
S15C

VERTICAL ROOF / SIDING OPTION



TYPICAL END ELEVATION - VERTICAL ROOF / SIDING



TYPICAL SIDE ELEVATION - VERTICAL ROOF / SIDING



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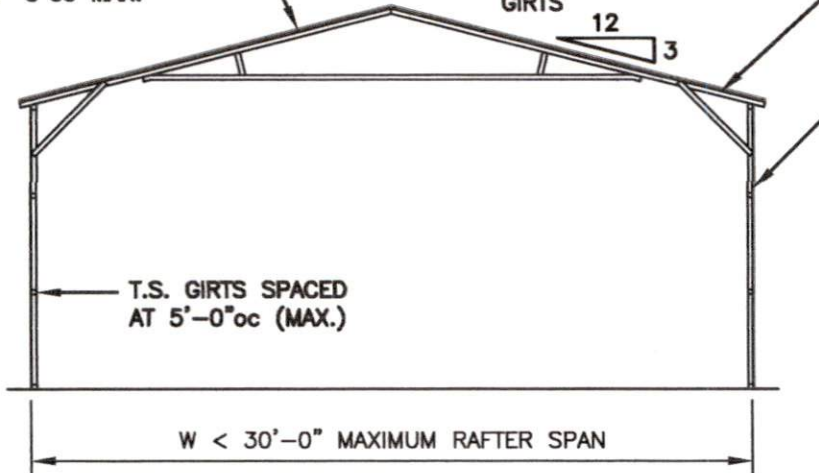
DATE:
2023.02.01

SHEET NO:
S16

VERTICAL ROOF / SIDING OPTION

1.125"-18 GA. HAT CHANNELS
FASTENED TO EACH RAFTER
WITH (2) #12-14x3/4" S.D.F.
SPACED AT 4'-0"oc MAX.

29 GA. GALVANIZED
METAL ROOF AND WALL
PANELS FASTENED TO
HAT CHANNELS AND
GIRTS



TYPICAL SECTION VERTICAL ROOF / SIDING OPTION

NOTE:
H.S.S. 2-1/2"x2-1/2"x14ga. OR
2-1/4"x2-1/4"x14ga. MATERIAL
MAY BE USED FOR TRUSS METAL.



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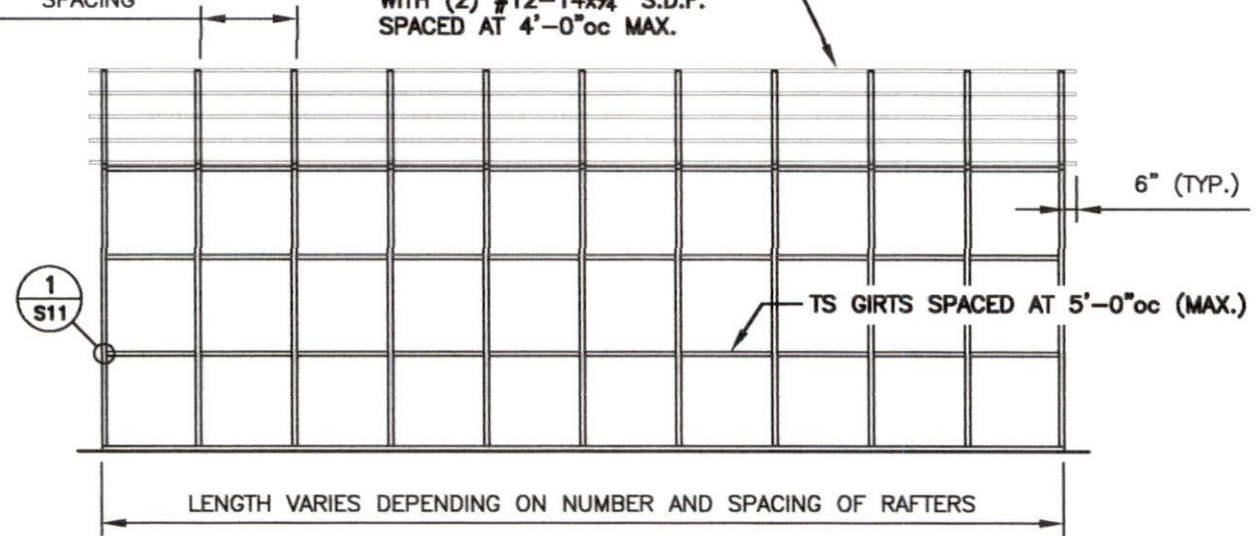
DATE:
2023.02.01

SHEET NO:
S16A

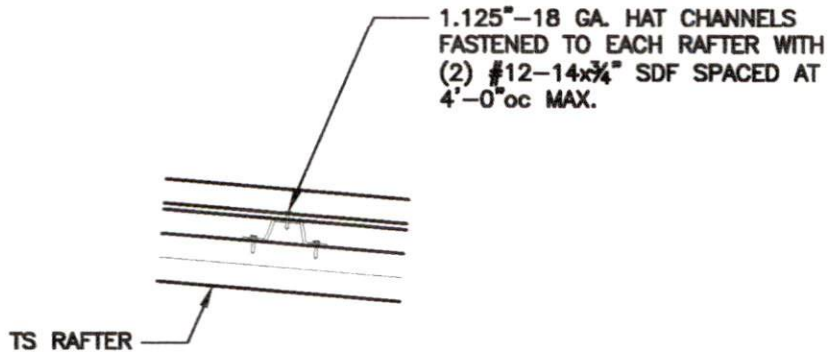
VERTICAL ROOF / SIDING OPTION

SEE NOTES
(SHEET S3)
FOR MAXIMUM
SPACING

1.125"-18 GA. HAT CHANNELS
FASTENED TO EACH RAFTER
WITH (2) #12-14x³/₄" S.D.F.
SPACED AT 4'-0"oc MAX.



TYPICAL SIDE FRAMING SECTION VERTICAL ROOF / SIDING OPTION



ROOF PANEL ATTACHMENT
NTS

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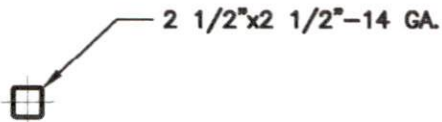
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PROJECT NO:
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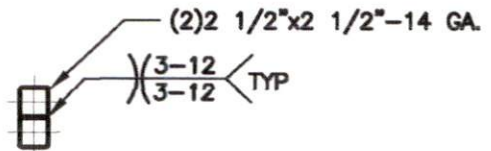
DATE:
2023.02.01

SHEET NO:
S16B

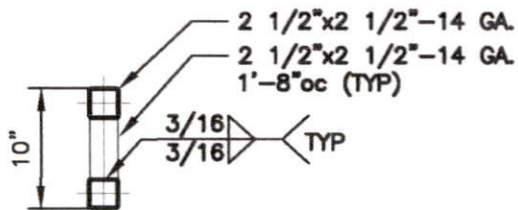
SIDE WALL HEADER OPTIONS



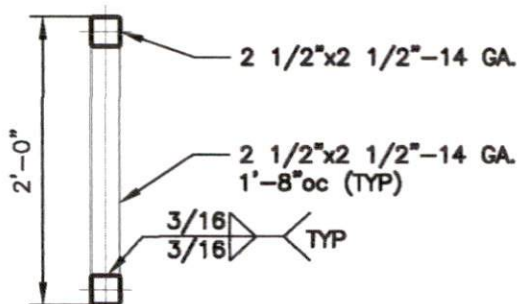
**HEADER DETAIL FOR DOOR
OPENINGS < 4'-0"**
NTS



**HEADER DETAIL FOR DOOR
OPENINGS 4'-1" < TO < 12'-0"**
NTS



**LACED HEADER DETAIL FOR DOOR
OPENINGS 12'-1" < TO < 15'-0"**
NTS



**LACED HEADER DETAIL FOR DOOR
OPENINGS 15'-1" < TO < 20'-0"**



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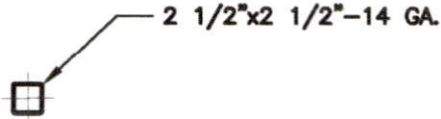
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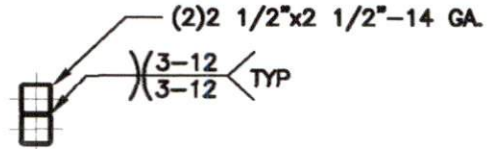
DATE:
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SHEET NO:
S17

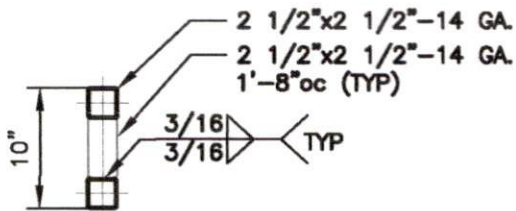
END WALL HEADER OPTIONS



HEADER DETAIL FOR DOOR
OPENINGS < 7'-0"
 NTS



HEADER DETAIL FOR DOOR
OPENINGS 7'-1" < TO < 16'-0"
 NTS



LACED HEADER DETAIL FOR DOOR
OPENINGS 16'-1" < TO < 20'-0"
 NTS



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 & GARAGES

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SHEET NO:
S17A