

ENCLOSED GABLE END BUILDING

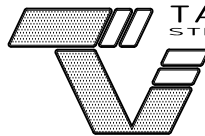
MAXIMUM 30'-0" WIDE X 16'-0" EAVE HEIGHT WITH BOX FRAME / (UP TO) 155 M.P.H. WIND ZONE - 30 P.S.F. SNOW LOAD

FOR:

CUSTOM BUILT STRUCTURES, INC.

MT. AIRY, NORTH CAROLINA

ISSUE DATE: FEBRUARY 24, 2023

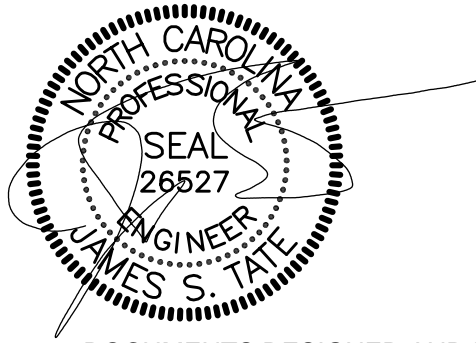


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STRUCTURAL ENGINEERS

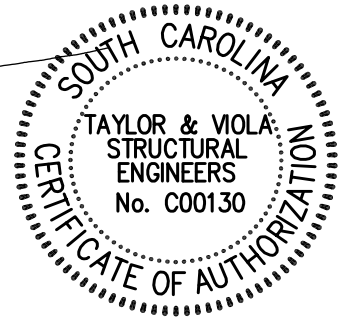
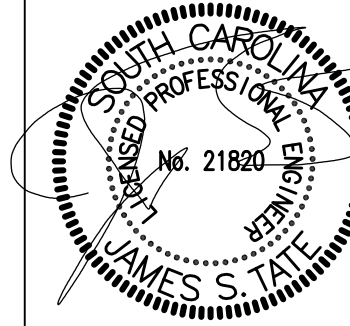
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JCMT Associates, LLC

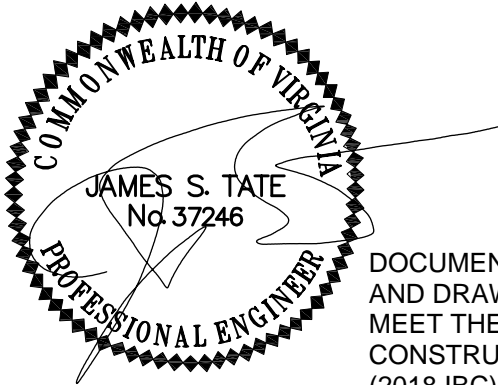
211 Stone Drive, Pilot Mountain, NC 27041
336-399-6277



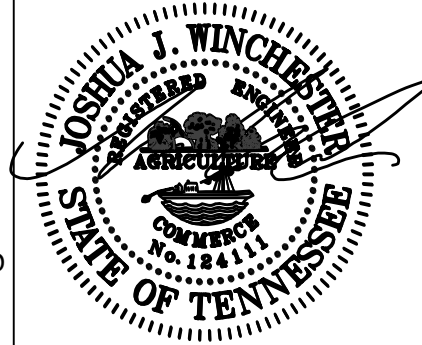
DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 NC BUILDING CODE (2015 IBC)



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)



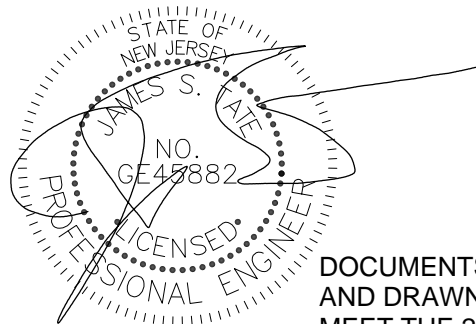
DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2012 IBC



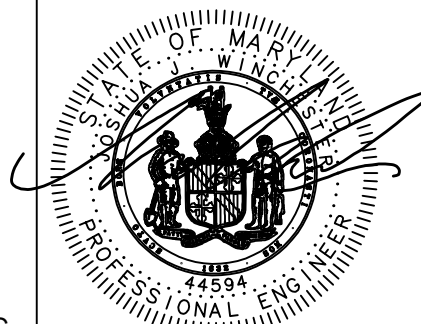
DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC



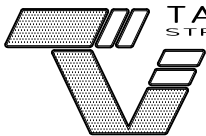
DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2020 BUILDING CODE OF NEW YORK STATE (2018 IBC)



DOCUMENTS DESIGNED AND DRAWN TO MEET THE 20210 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



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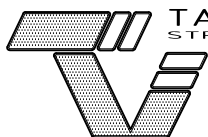
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SHEET INDEX

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S1A	P.E. SEALS SHEET
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S4	SIDE AND END ELEVATIONS
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S2

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 155 mph (ASCE 7-16) *DRIFT LOAD HAS NOT
 EXPOSURE CATAGORY B 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 Ss 20.5 %g S1 8.8 %g

SITE CLASSIFICATION D FIELD TEST PRESUMPTIVE HISTORICAL DATA

BASIC STRUCTURAL SYSTEM (CHECK ONE)

BEARING WALL DUAL W/ SPECTRAL MOMENT FRAME
 BUILDING FRAME DUAL W/ INTERMEDIATE R/C OR SPECIAL STEEL
 MOMENT FRAME INVERTED PENDULUM

ANALYSIS PROCEDURE SIMPLIFIED EQUIVALANT LATERAL FORCE MODAL

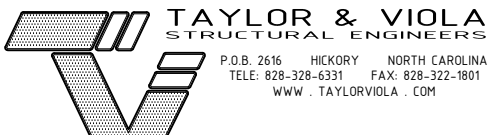
LATERAL DESIGN CONTROL? EARTHQUAKE WIND

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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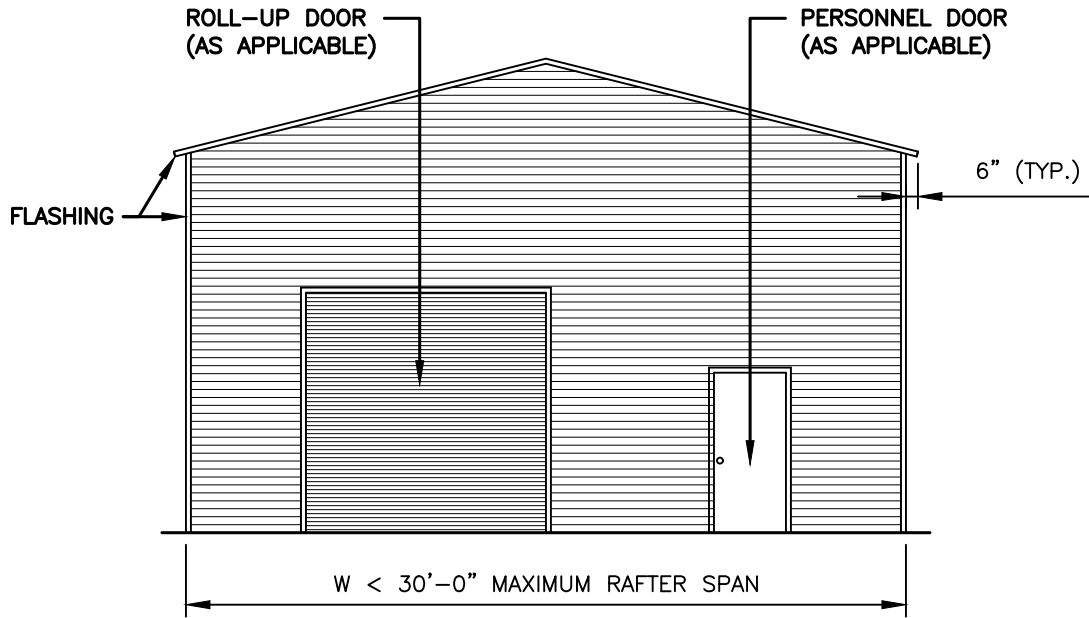
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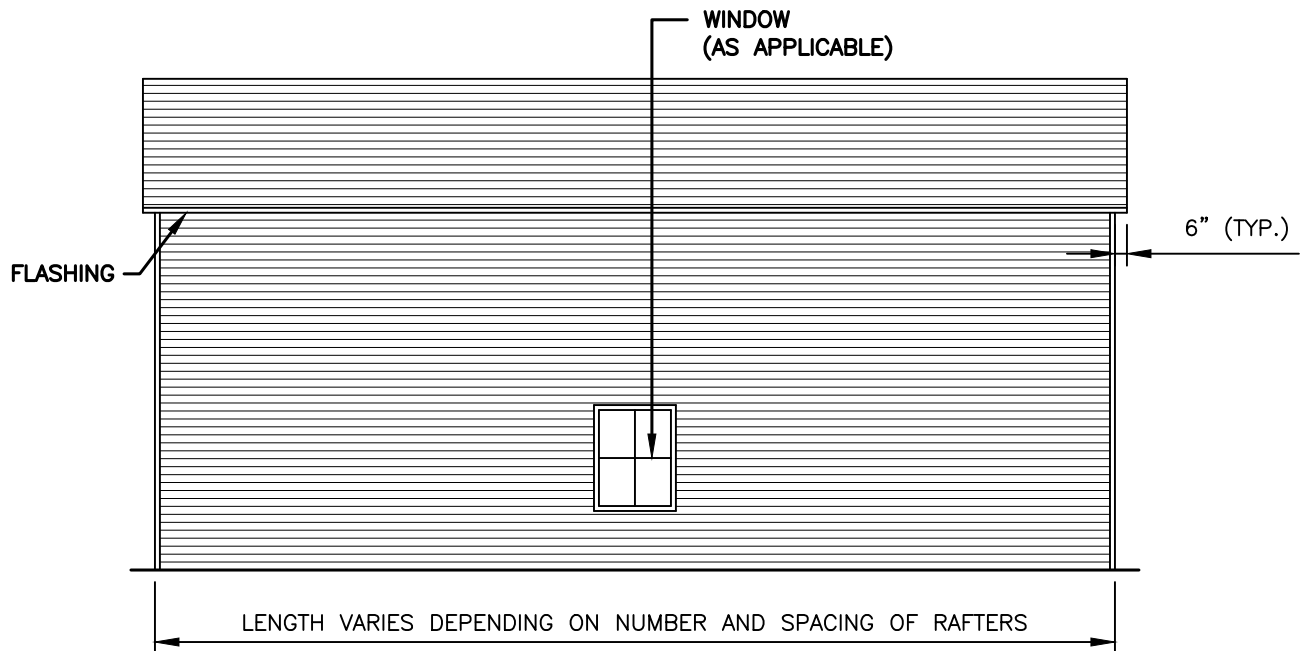
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BOX EVE FRAME RAFTER STRUCTURE



TYPICAL END ELEVATION



TYPICAL SIDE ELEVATION



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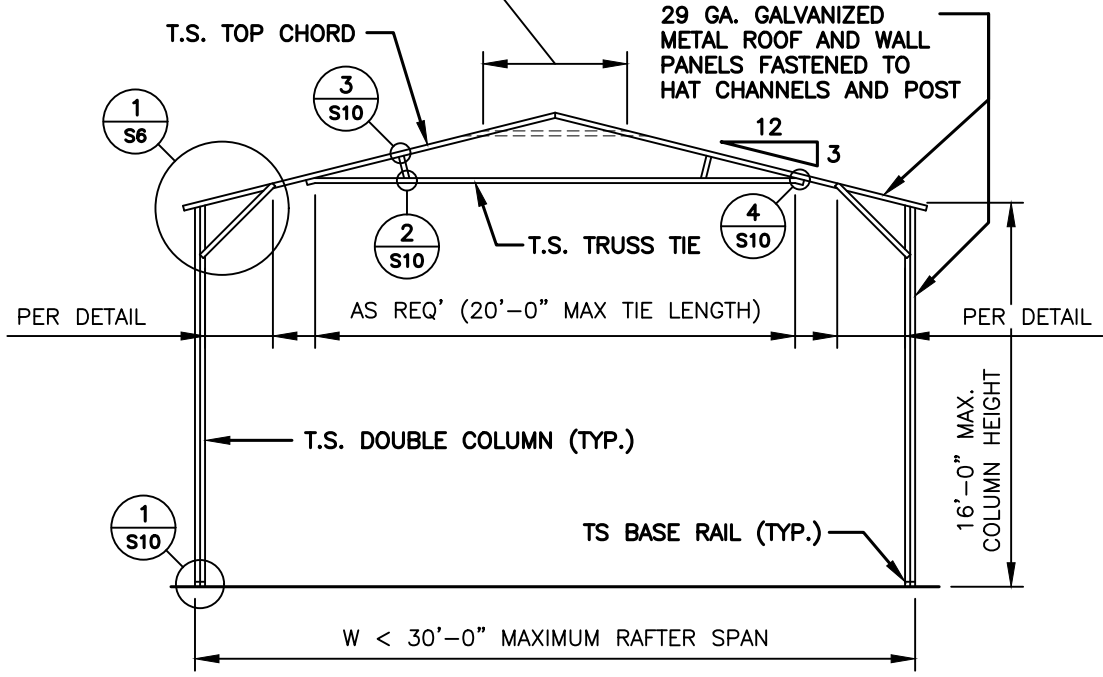
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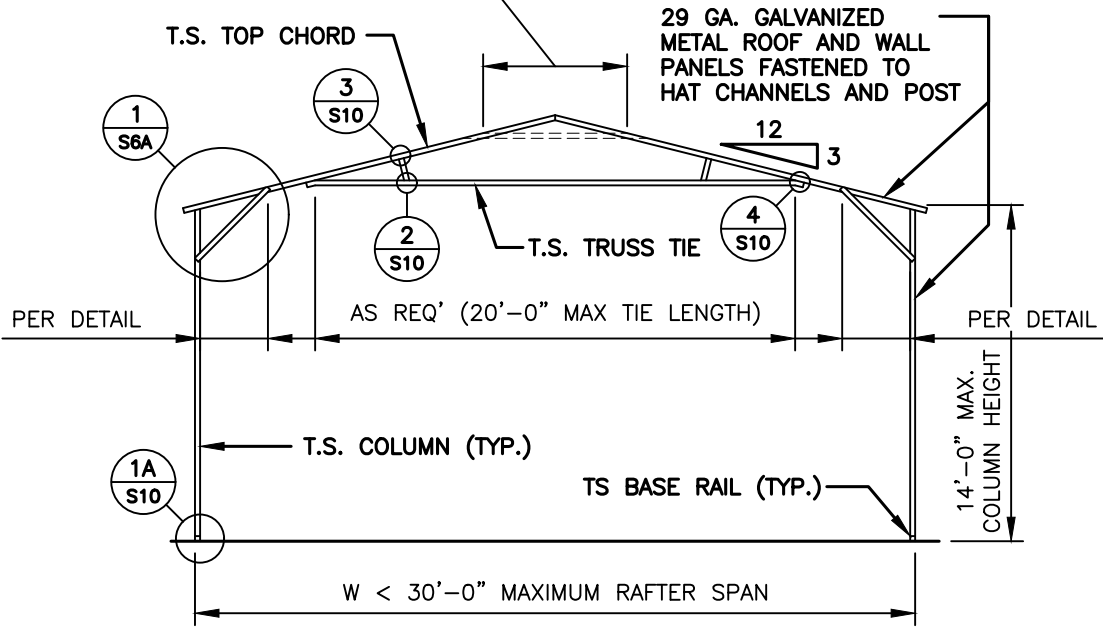
'U' BRACE TRUSS TIE - NOTE:
 6'-0" BRACE FOR 21'-24' BUILDING WIDTH
 20' TUBE TRUSS TIE (AS SHOWN) FOR 25'-30'



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.



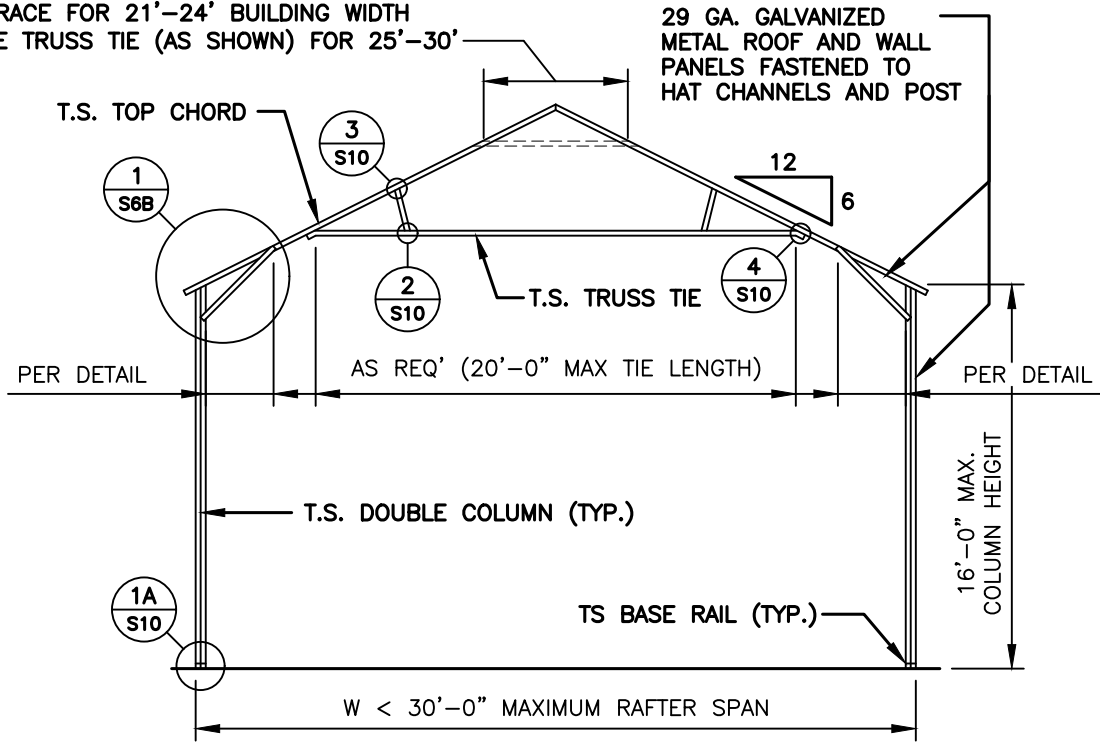
TYPICAL RAFTER / COLUMN FRAME SECTION



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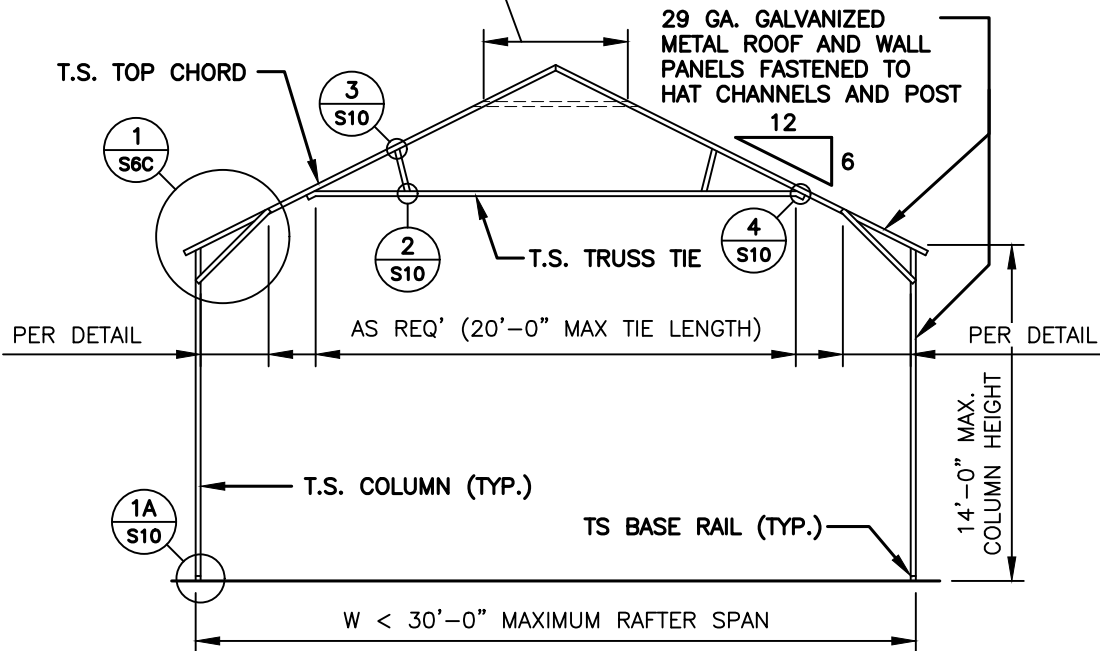
'U' BRACE TRUSS TIE - NOTE:
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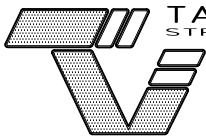
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 20' TUBE TRUSS TIE (AS SHOWN) FOR 25'-30'

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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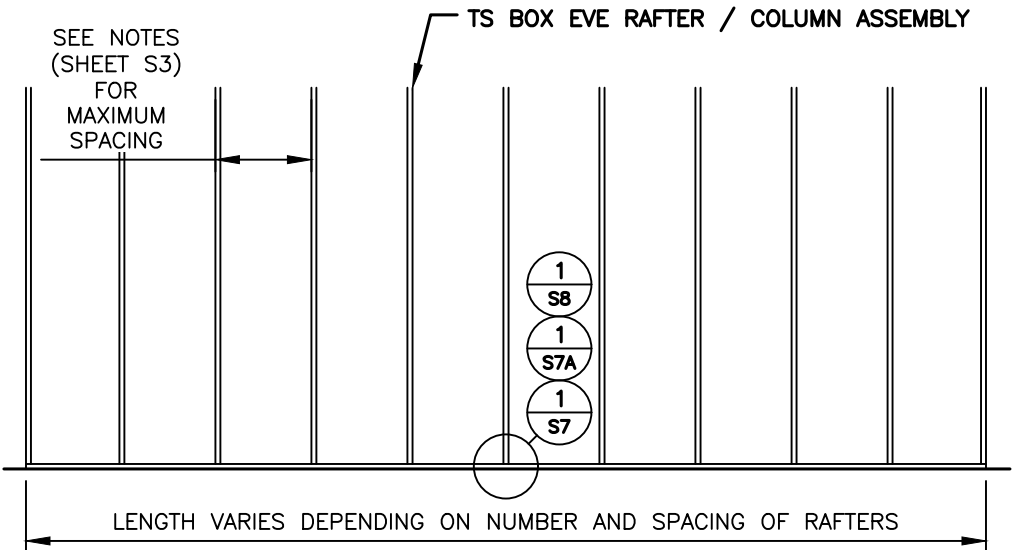
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S5A

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.



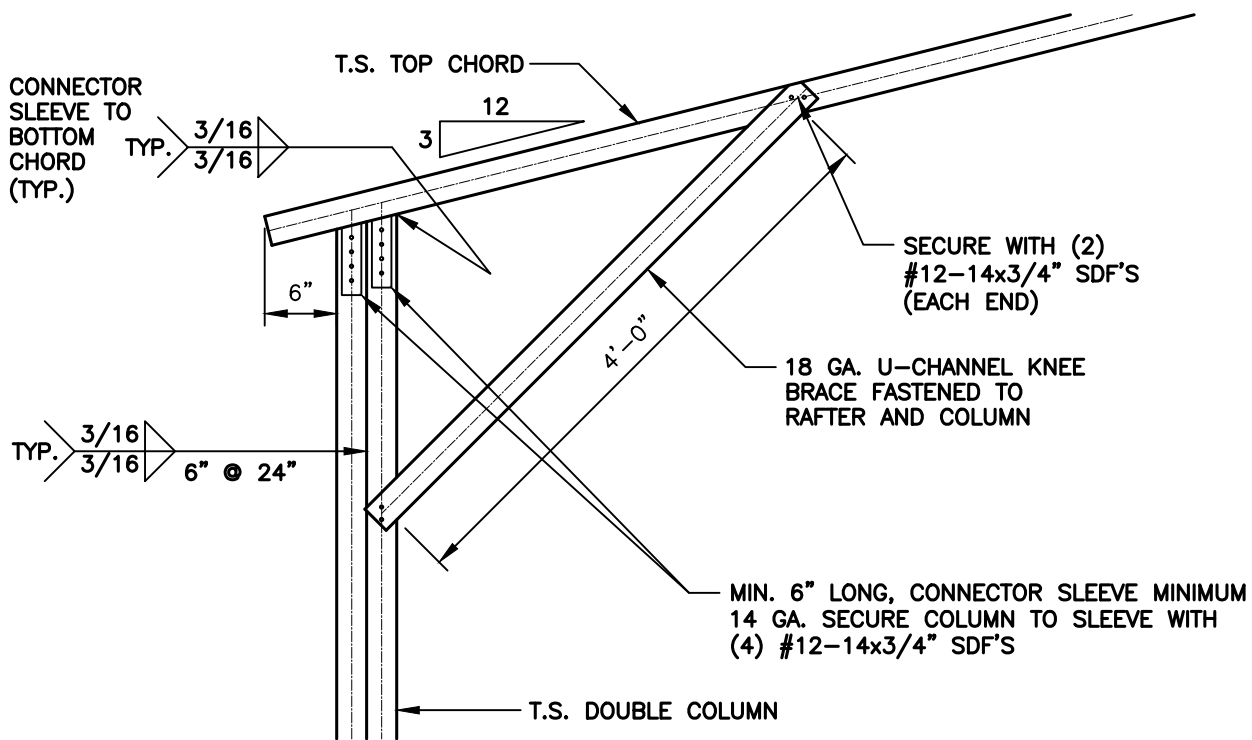
TYPICAL RAFTER / COLUMN SIDE FRAME SECTION



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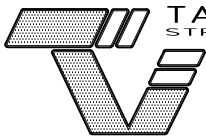
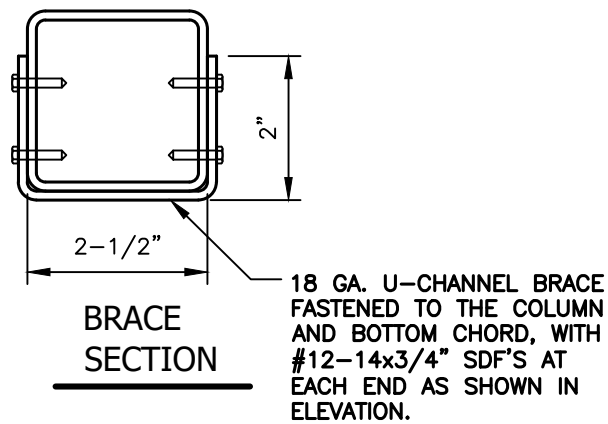
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1 BOX EAVE / CORNER POST CONNECTION DETAIL FOR HEIGHTS 14'-1" < TO <16'-0"

S6 SCALE: 3/4" = 1'-0"



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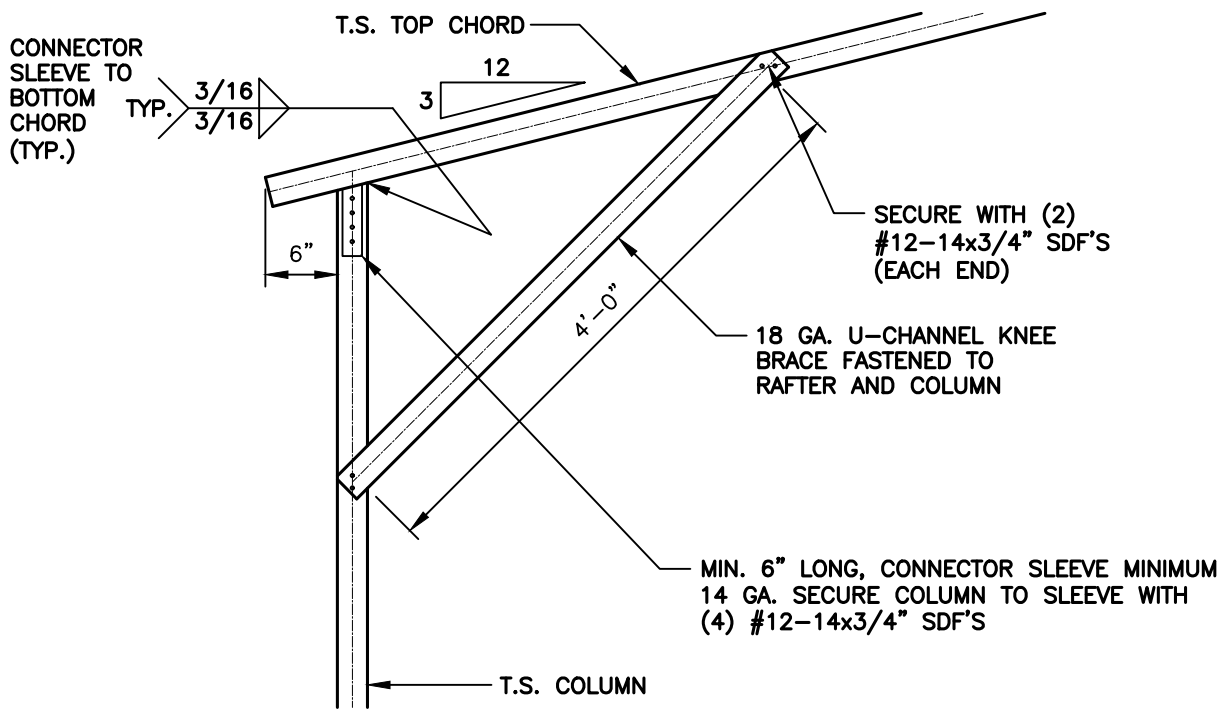
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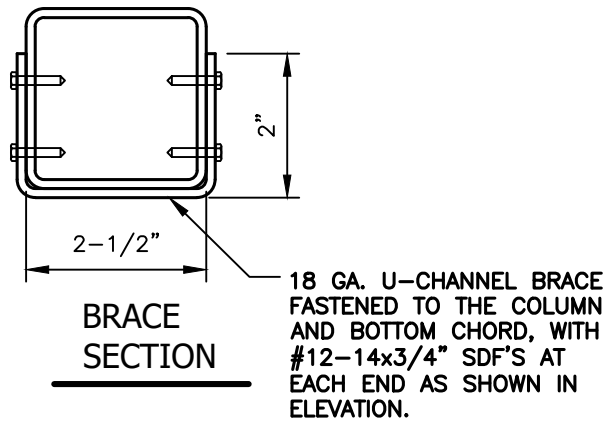
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1 BOX EAVE / CORNER POST CONNECTION DETAIL FOR HEIGHTS < 14'-0"
S6A SCALE: 3/4" = 1'-0"



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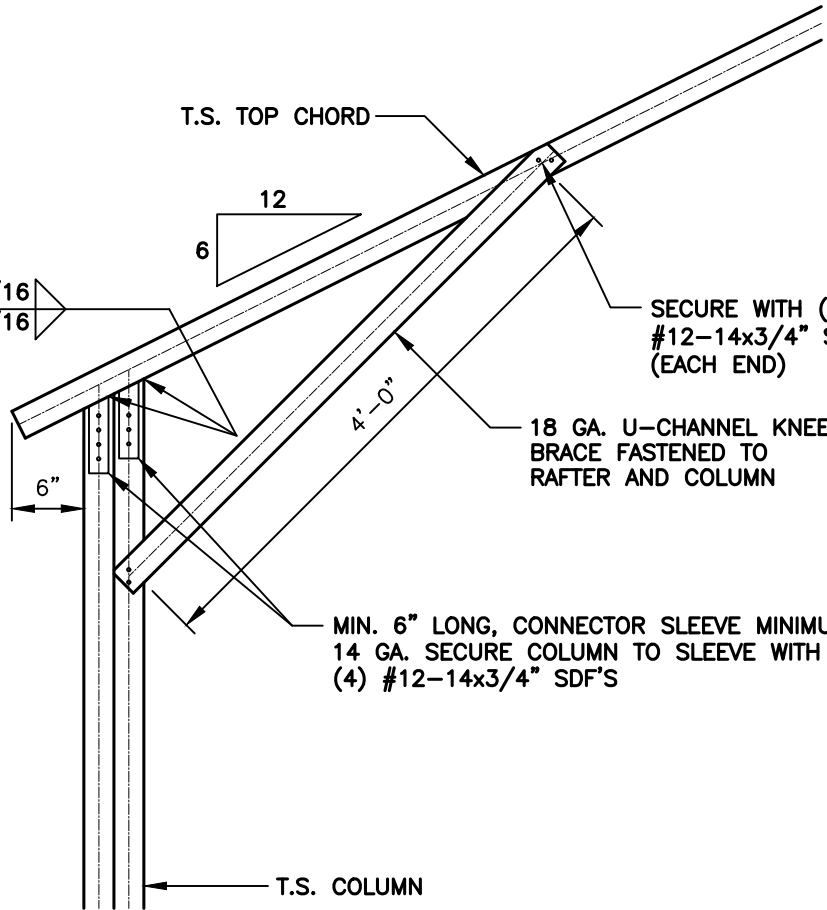
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S6A

CONNECTOR SLEEVE TO BOTTOM CHORD (TYP.)

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

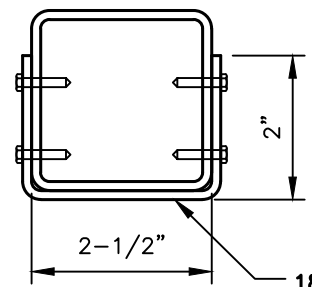


SECURE WITH (2) #12-14x3/4" SDF'S (EACH END)

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

1 BOX EAVE / CORNER POST CONNECTION DETAIL FOR HEIGHTS 14'-1" < TO <16'-0"
S6C SCALE: 3/4" = 1'-0"



BRACE SECTION

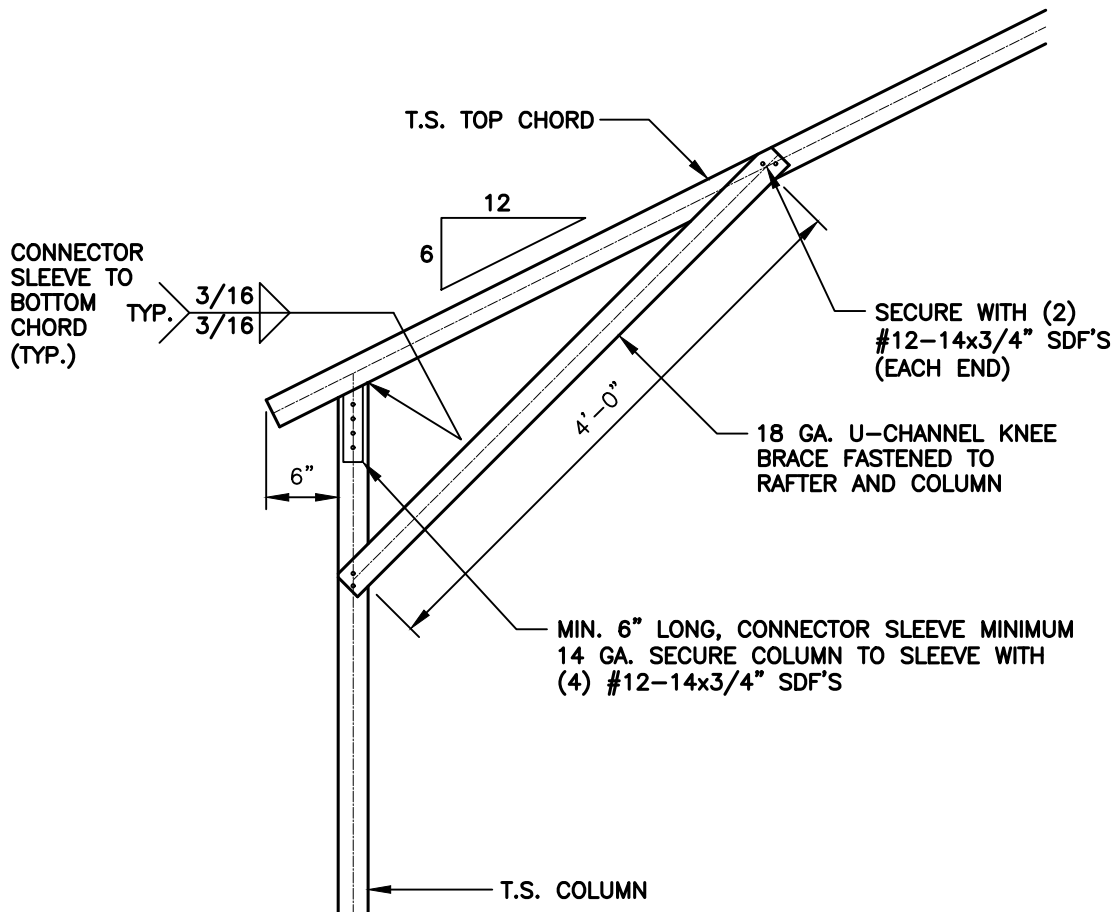
18 GA. U-CHANNEL BRACE FASTENED TO THE COLUMN AND BOTTOM CHORD, WITH #12-14x3/4" SDF'S AT EACH END AS SHOWN IN ELEVATION.



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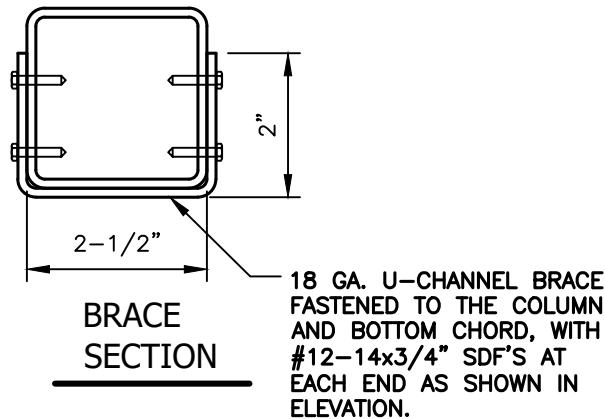
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1 BOX EAVE / CORNER POST CONNECTION DETAIL FOR HEIGHTS < 14'-0"

S6C SCALE: 3/4" = 1'-0"



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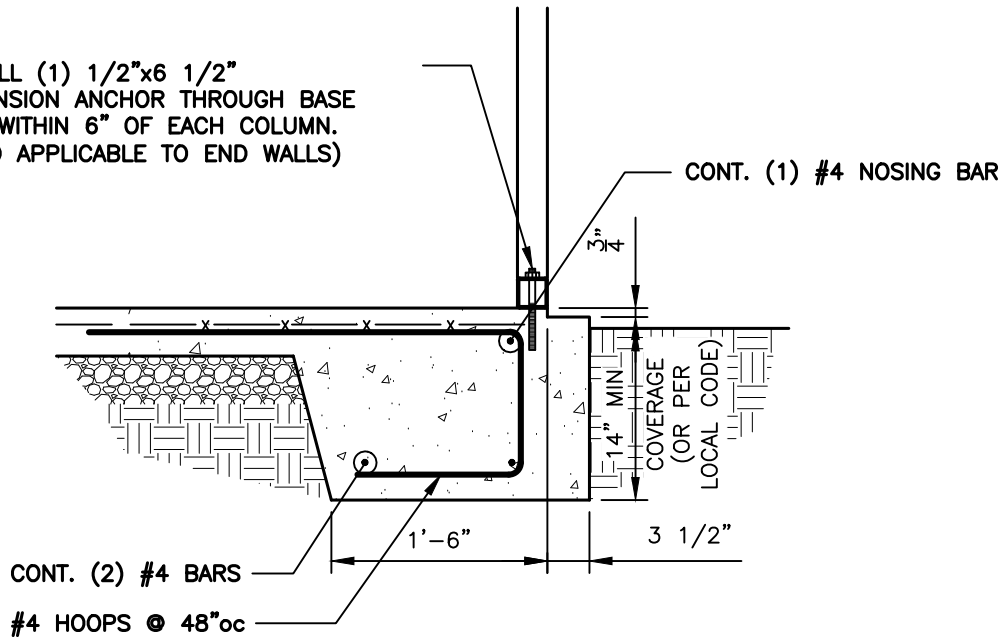
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S6C

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 MAT 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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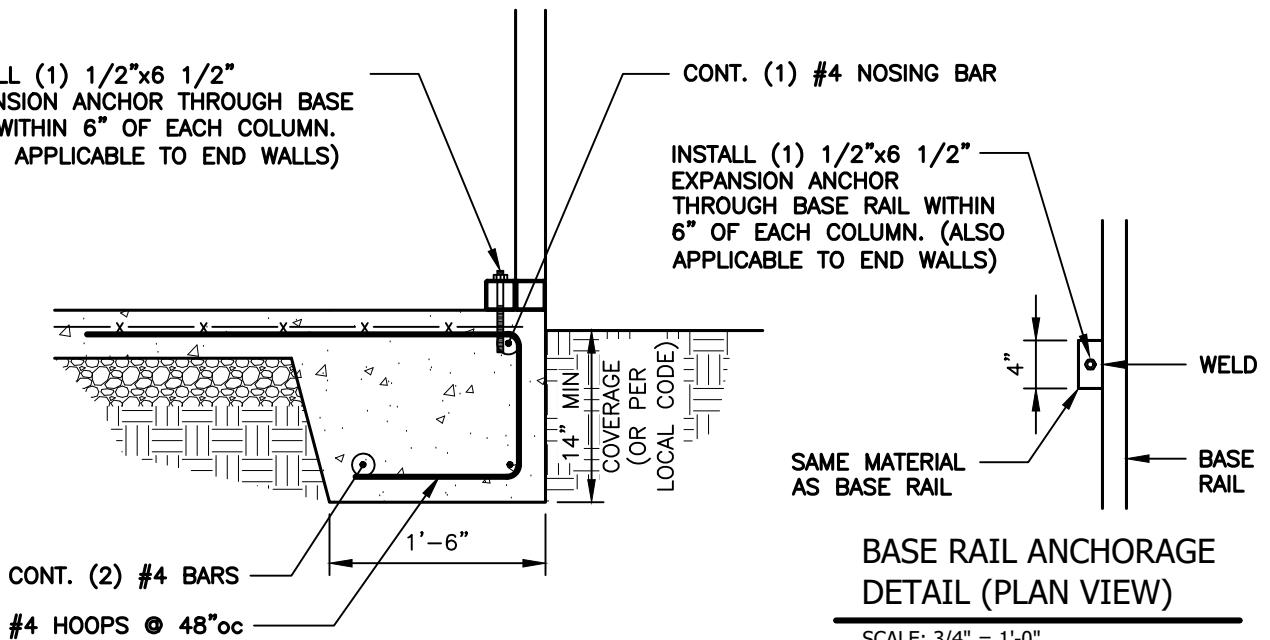
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S7

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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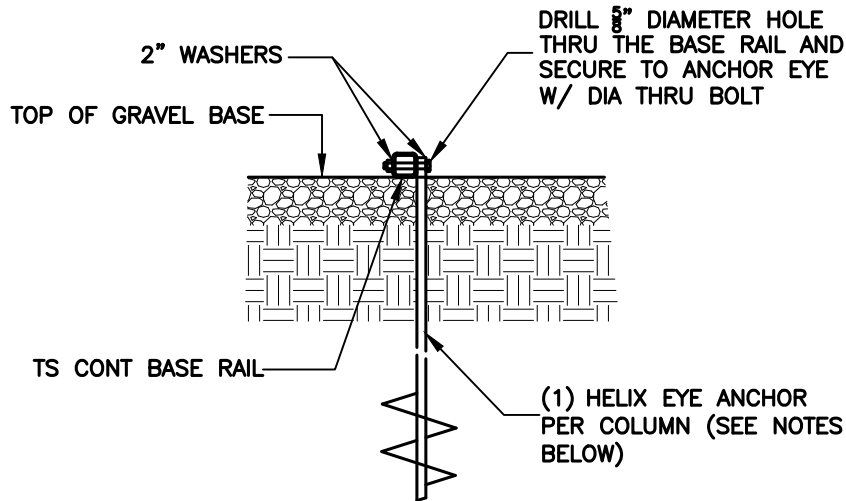
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S7A

SOIL NAIL BASE RAIL ANCHORAGE

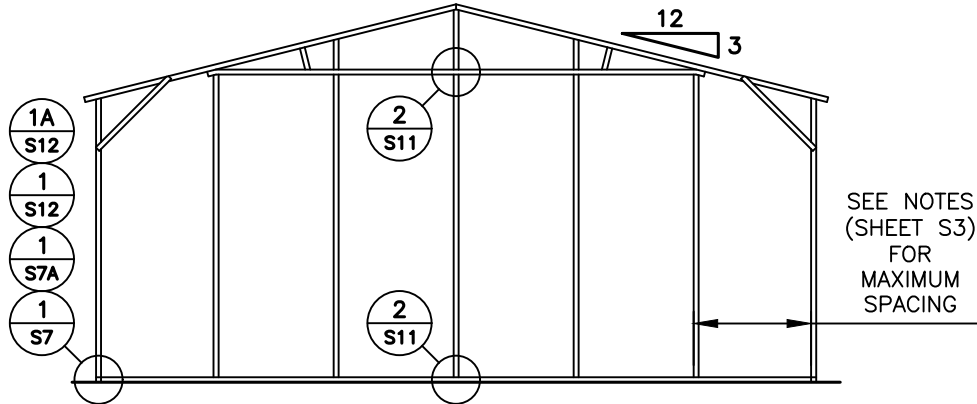


1 BASE RAIL ANCHORAGE DETAIL
S8 SCALE: 3/4" = 1'-0"

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

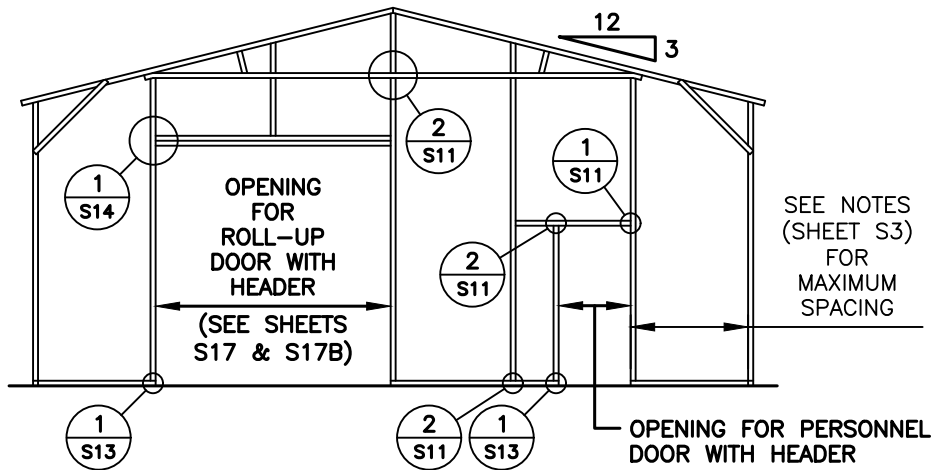
 <p>TAYLOR & VIOLA STRUCTURAL ENGINEERS</p> <p><small>P.O.B. 2616 HICKORY NORTH CAROLINA TELE: 828-328-6331 FAX: 828-322-1801 WWW.TAYLORVIOLA.COM</small></p>	<p>CUSTOM BUILT STRUCTURES, INC. MT. AIRY, NORTH CAROLINA</p>	DRAWN BY: BKS	PROJECT NO: 23-509
		DATE: 2023.02.24	SHEET NO: S8

BOX EVE RAFTER END WALL OPENINGS

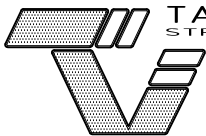


TYPICAL BOX EVE RAFTER / END WALL COLUMN FRAME SECTION

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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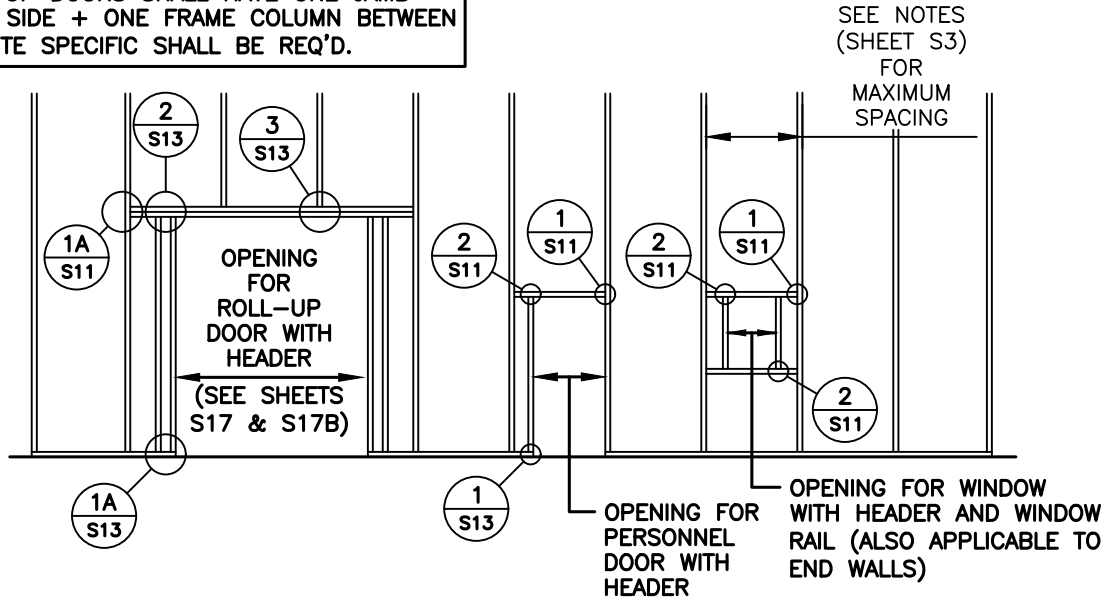
PROJECT NO:
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S9

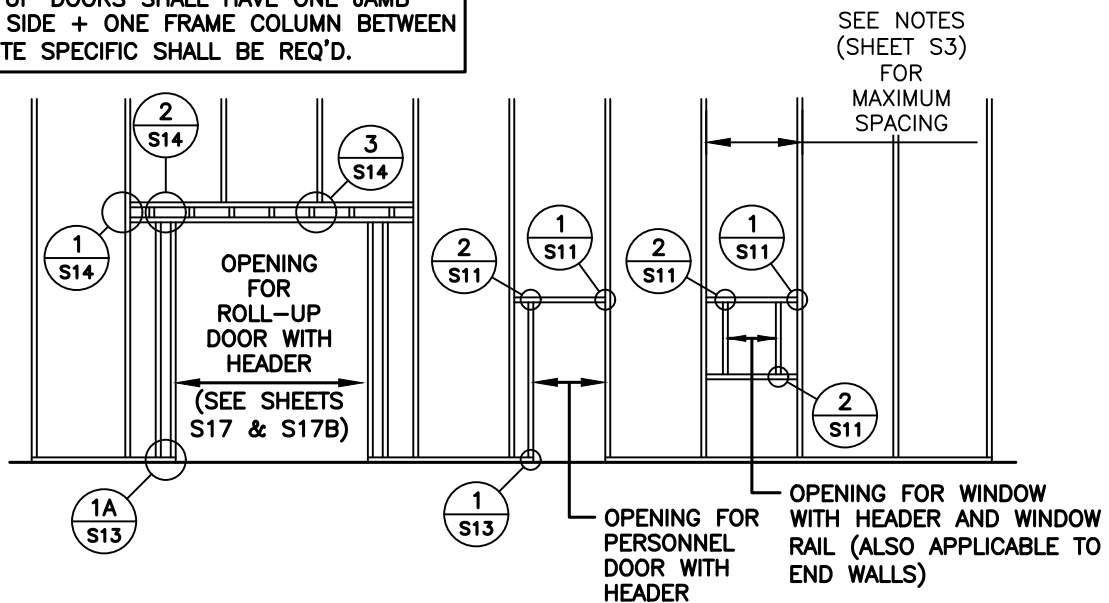
BOX EVE RAFTER END WALL AND SIDE WALL OPENINGS

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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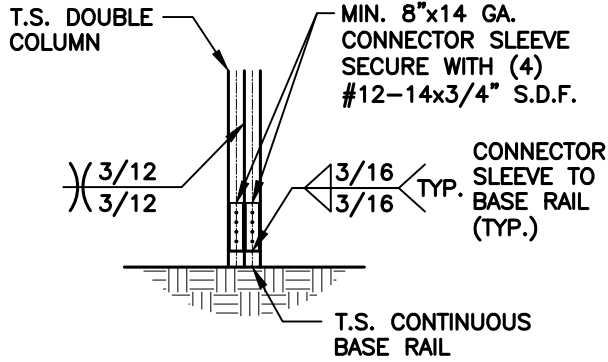
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SHEET NO:
S9A

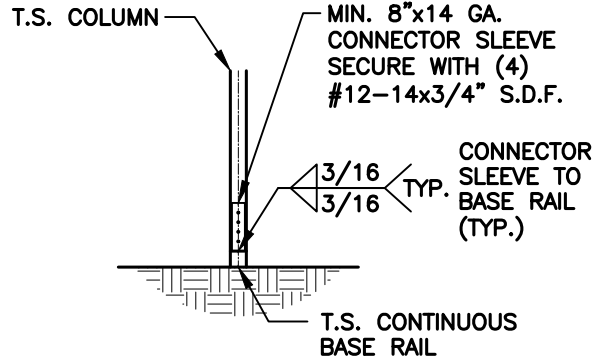
CONNECTION DETAILS



1
POST / BASE RAIL
CONNECTION DETAIL

S10

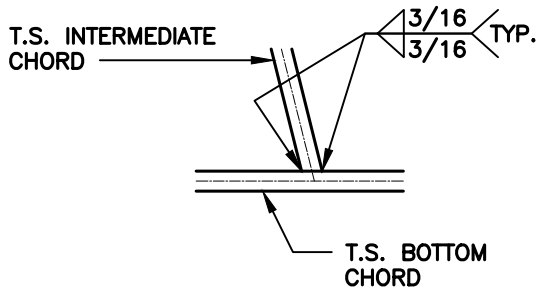
SCALE: 1/2" = 1'-0"



1A
POST / BASE RAIL
CONNECTION DETAIL

S10

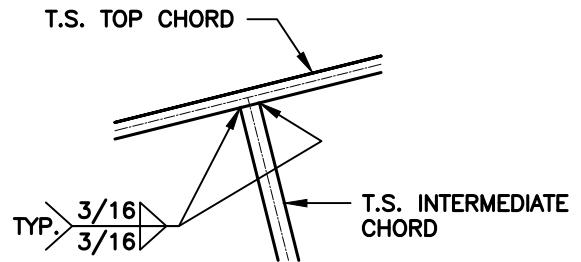
SCALE: 1/2" = 1'-0"



2
INTERMEDIATE CHORD
TO BOTTOM CHORD
CONNECTION DETAIL

S10

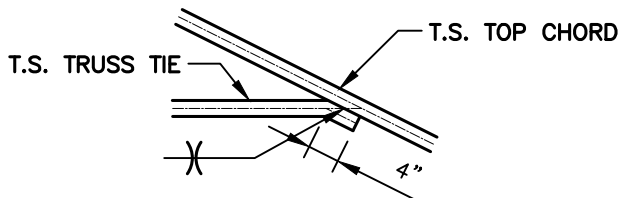
SCALE: 1/2" = 1'-0"



3
INTERMEDIATE CHORD TO TOP
CHORD CONNECTION DETAIL

S10

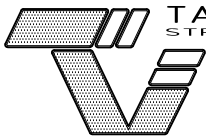
SCALE: 1/2" = 1'-0"



4
TRUSS TIE
CONNECTION DETAIL

S10

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



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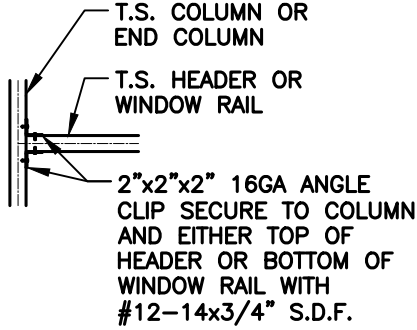
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S10

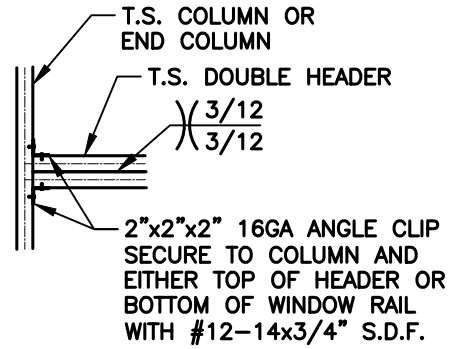
CONNECTION DETAILS



COLUMN OR WINDOW
RAIL / WALL GIRT TO POST
CONNECTION DETAIL

1
S11

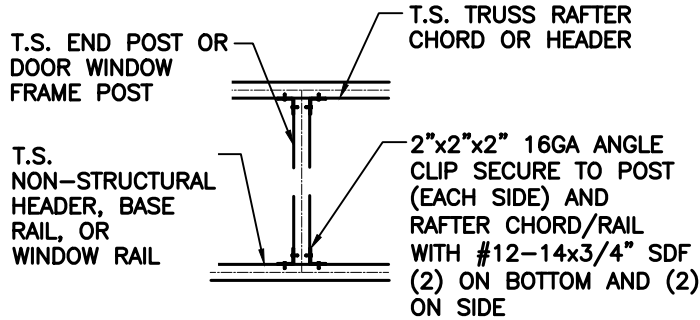
SCALE: 1/2" = 1'-0"



COLUMN / DOUBLE HEADER
CONNECTION DETAIL

1A
S11

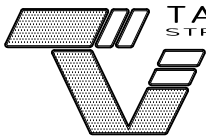
SCALE: 1/2" = 1'-0"



DOOR OR WINDOW HEADER
RAIL TO POST CONNECTION
DETAIL

2
S11

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



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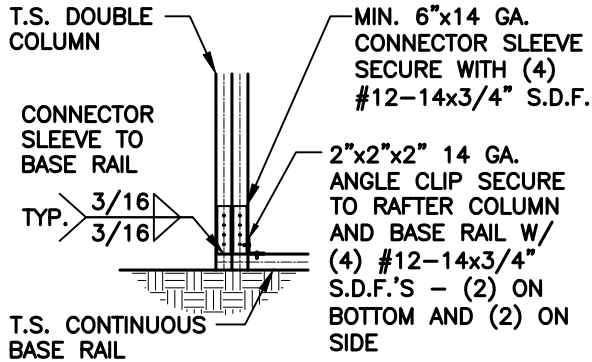
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S11

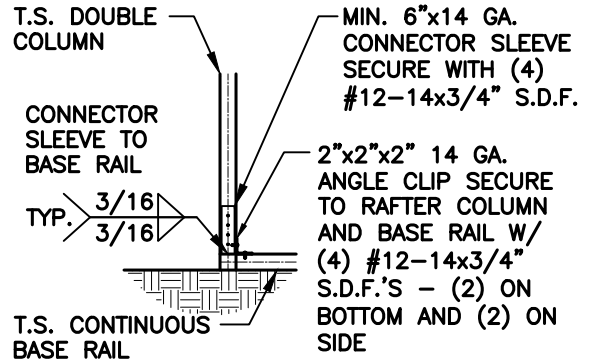
CONNECTION DETAILS



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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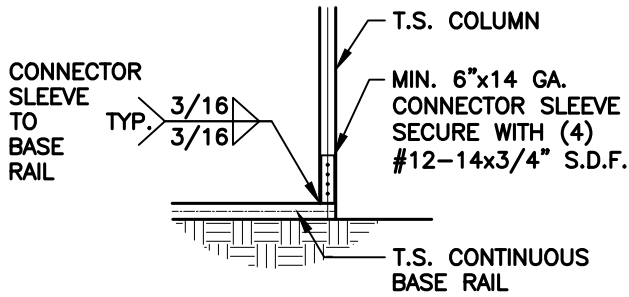
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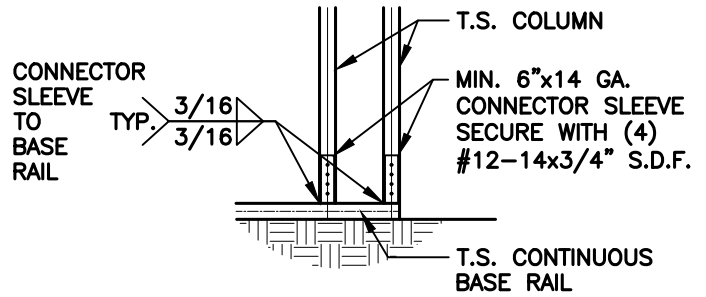
SHEET NO:
S12

CONNECTION DETAILS



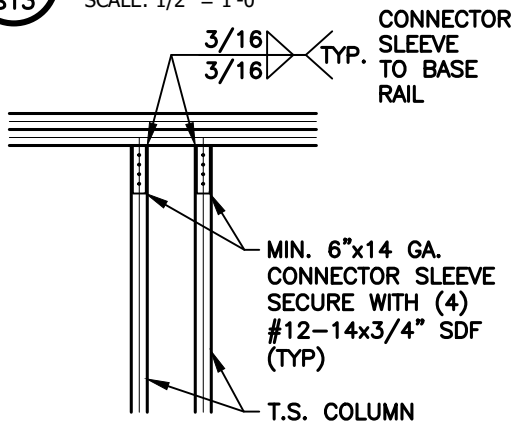
1
S13 COLUMN / BASE RAIL CONNECTION DETAIL

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



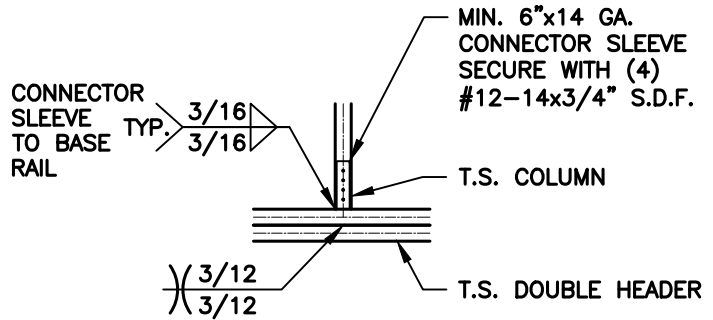
1A
S13 COLUMN / BASE RAIL CONNECTION DETAIL

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



2
S13 DOUBLE HEADER / COLUMN CONNECTION DETAIL

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



3
S13 COLUMN / DOUBLE HEADER CONNECTION DETAIL

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



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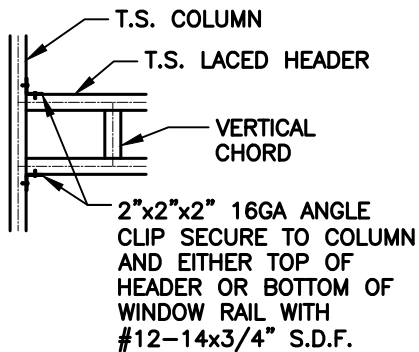
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DATE:
2023.02.24

SHEET NO:
S13

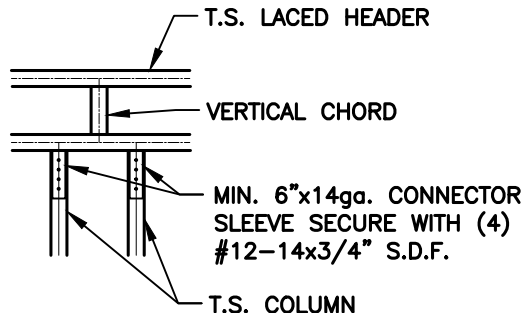
CONNECTION DETAILS



1
COLUMN / LACED HEADER CONNECTION DETAIL

S14

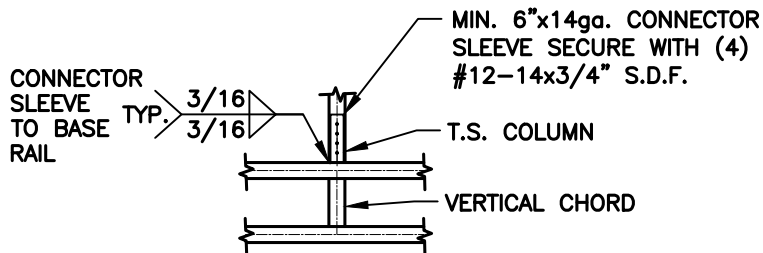
SCALE: 1/2" = 1'-0"



2
LACED HEADER / COLUMN CONNECTION DETAIL

S14

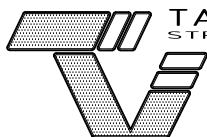
SCALE: 1/2" = 1'-0"



3
COLUMN / LACED HEADER CONNECTION DETAIL

S14

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



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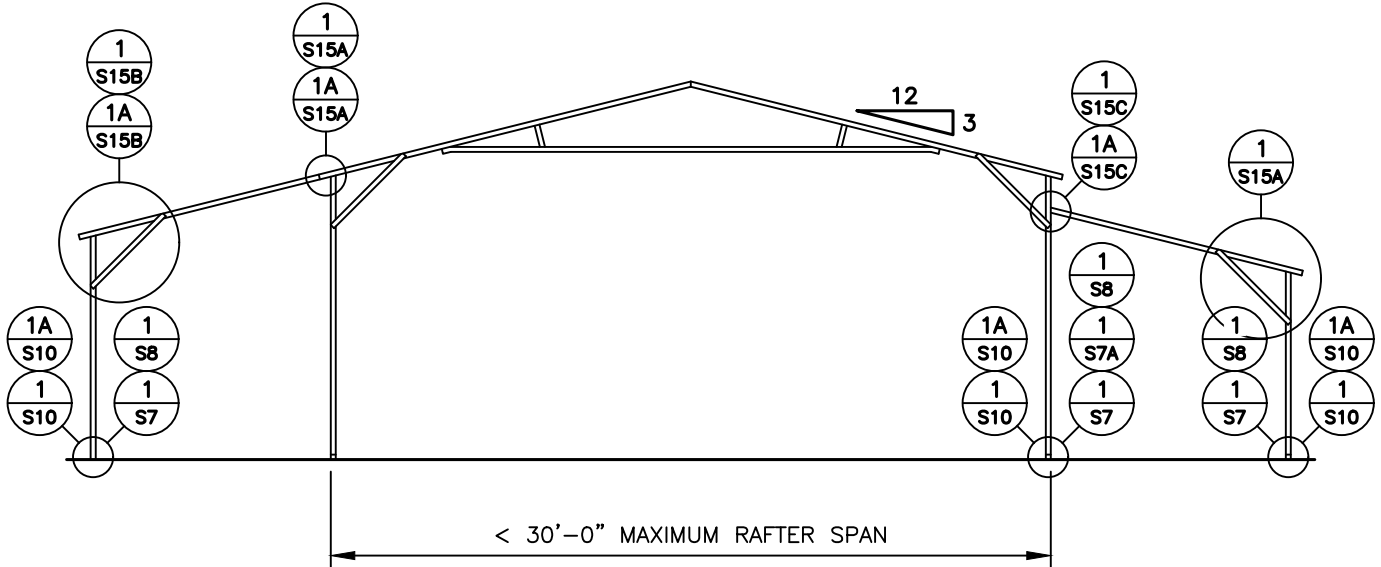
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23-509

DATE:
2023.02.24

SHEET NO:
S14

BOX EVE RAFTER LEAN-TO OPTIONS

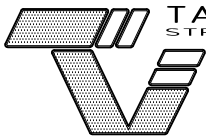


TYPICAL LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

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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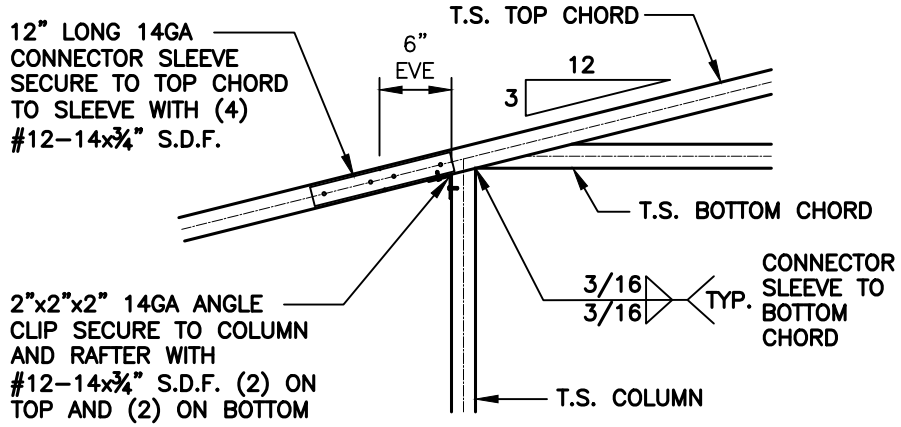
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2023.02.24

SHEET NO:
S15

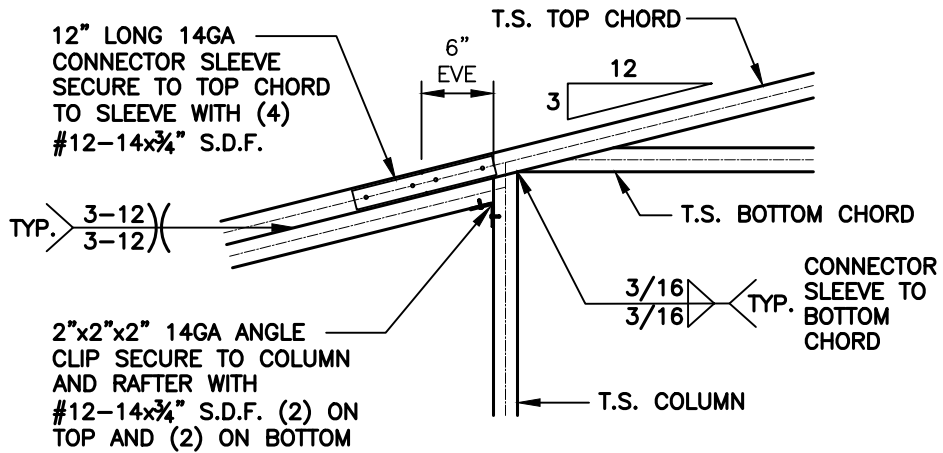
LEAN-TO CONNECTION DETAILS



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

1
S15A

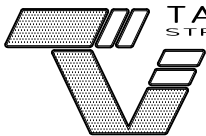
SCALE: 3/4" = 1'-0"



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

1A
S15A

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



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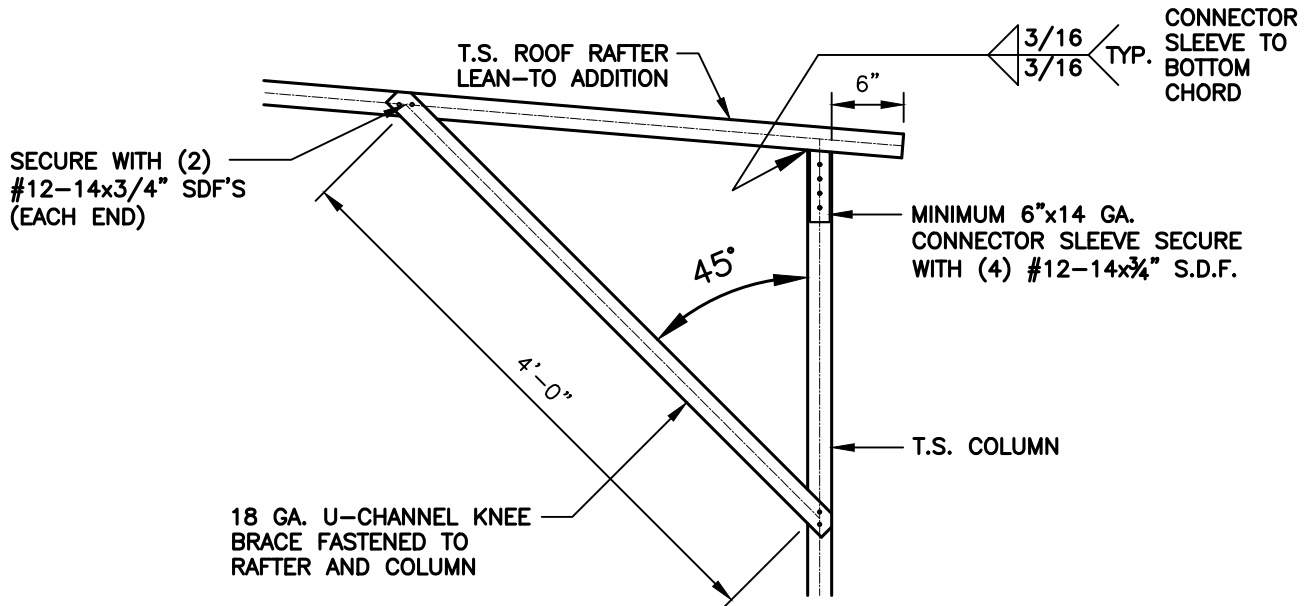
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2023.02.24

SHEET NO:
S15A

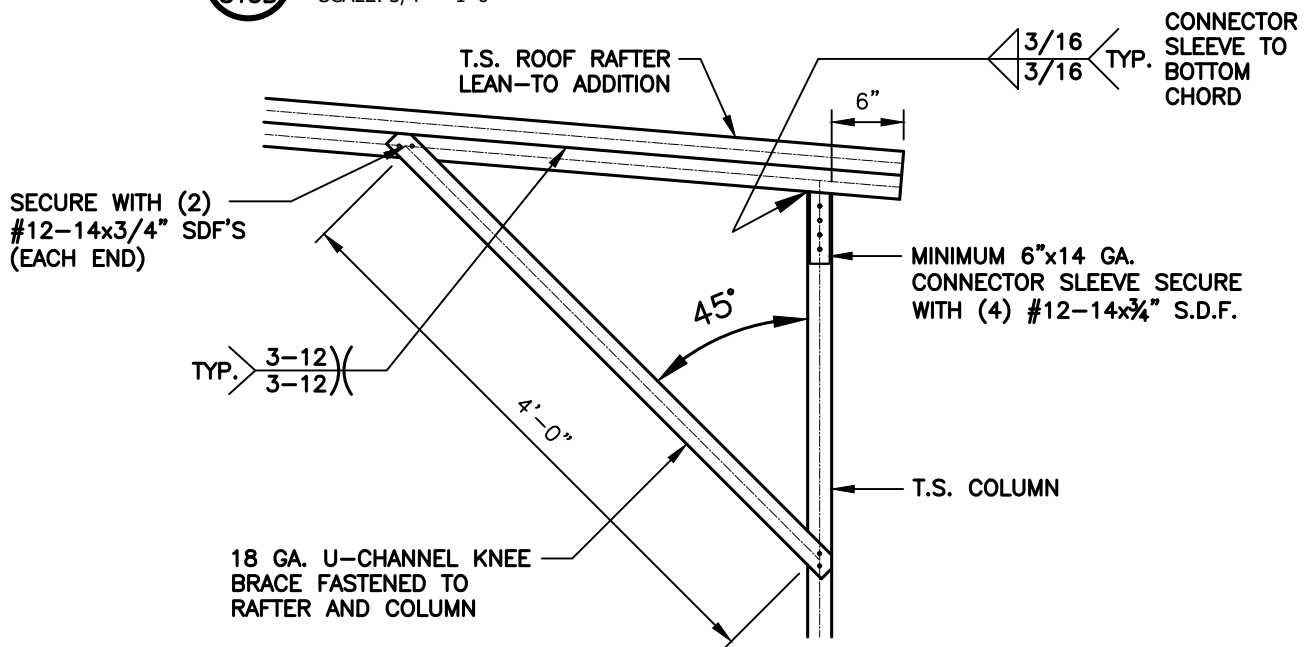
LEAN-TO CONNECTION DETAILS



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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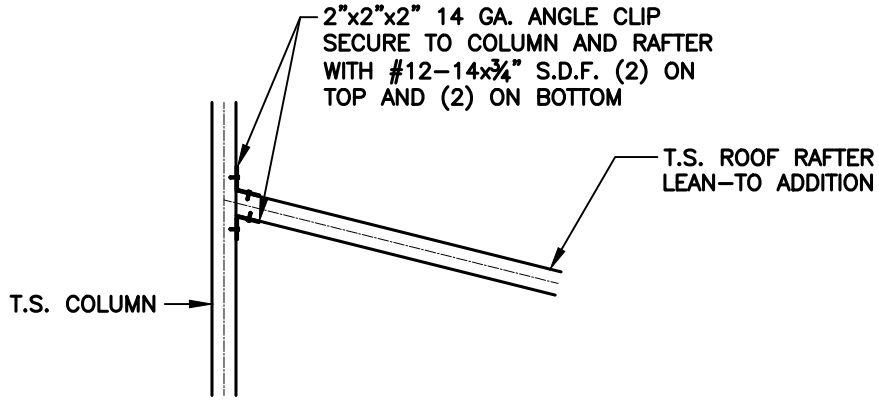
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S15B

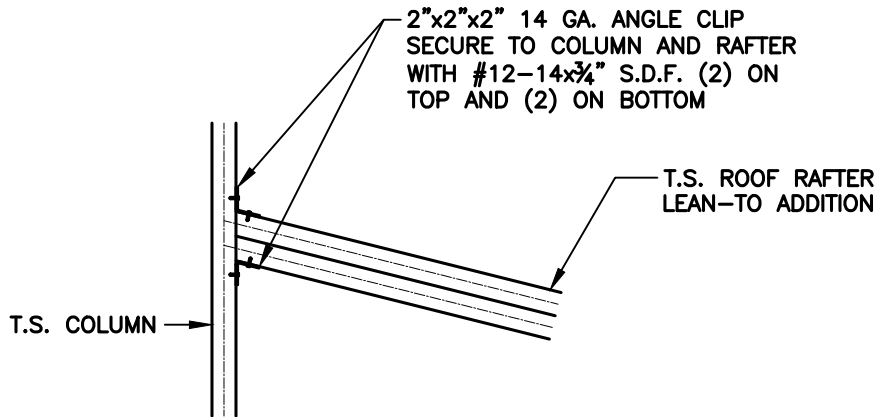
LEAN-TO CONNECTION DETAILS



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

1
S15C

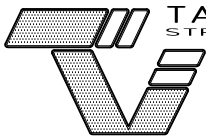
SCALE: 3/4" = 1'-0"



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

1A
S15C

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



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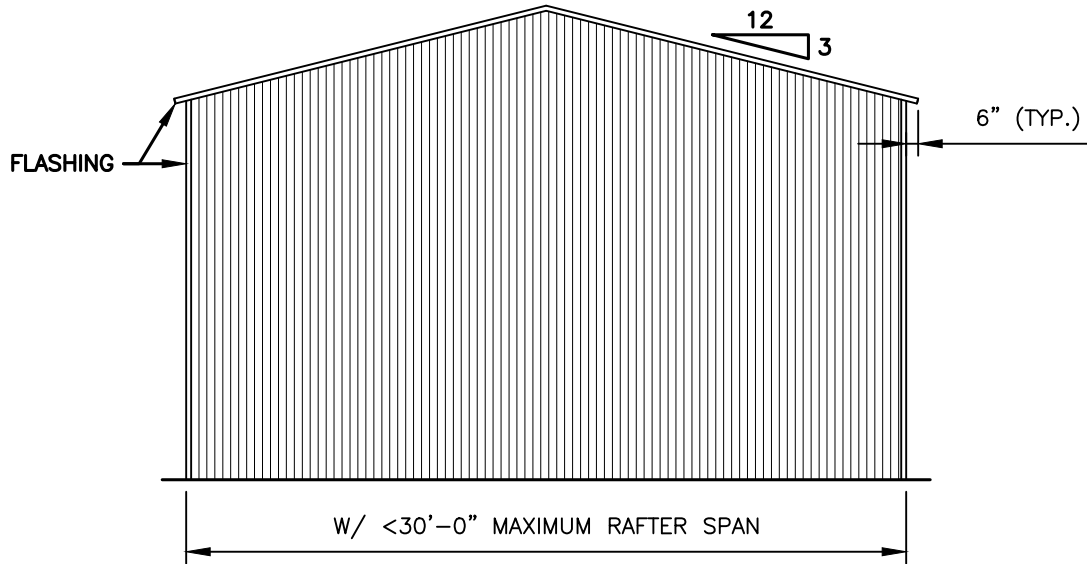
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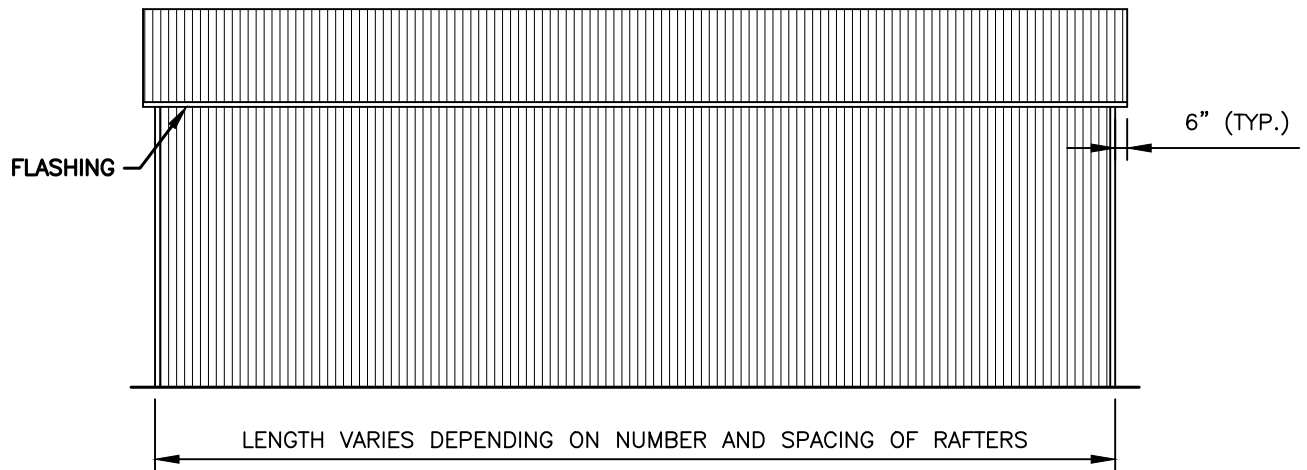
DATE:
2023.02.24

SHEET NO:
S15C

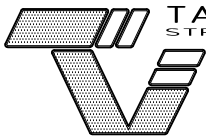
VERTICAL ROOF / SIDING OPTION



TYPICAL END ELEVATION - VERTICAL ROOF / SIDING



TYPICAL SIDE ELEVATION - VERTICAL ROOF / SIDING



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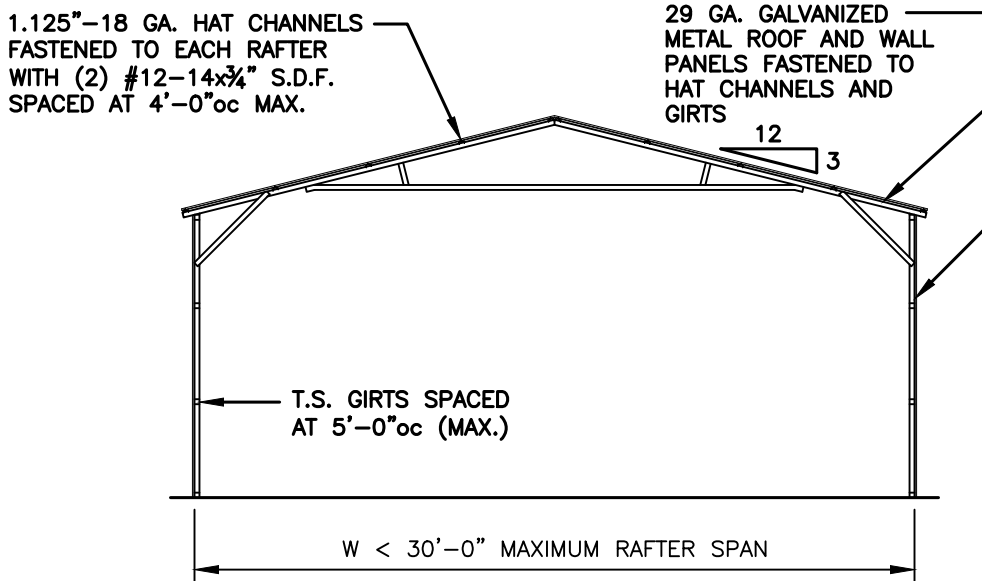
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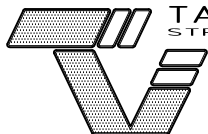
SHEET NO:
S16

VERTICAL ROOF / SIDING OPTION



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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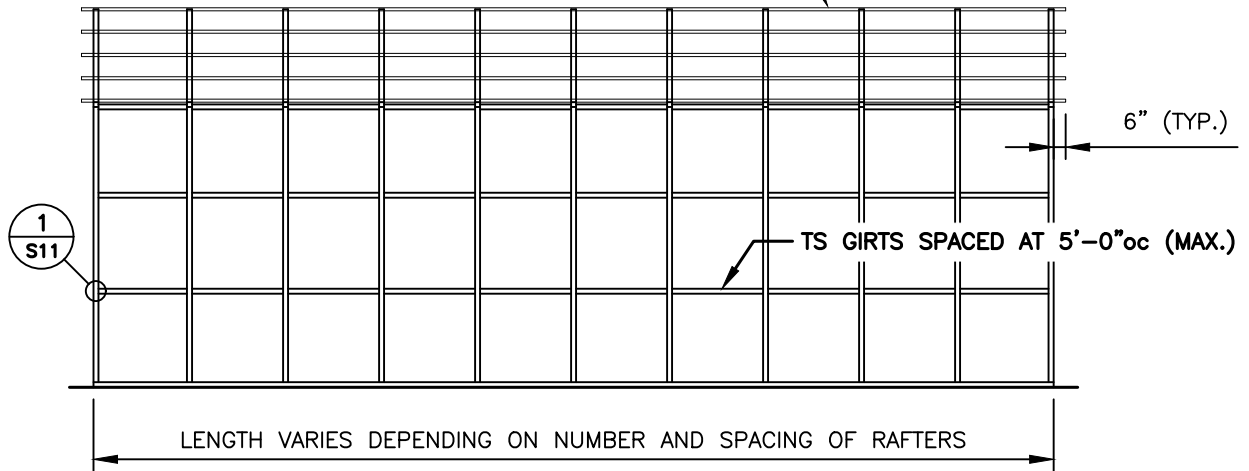
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SHEET NO:
S16A

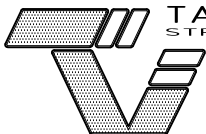
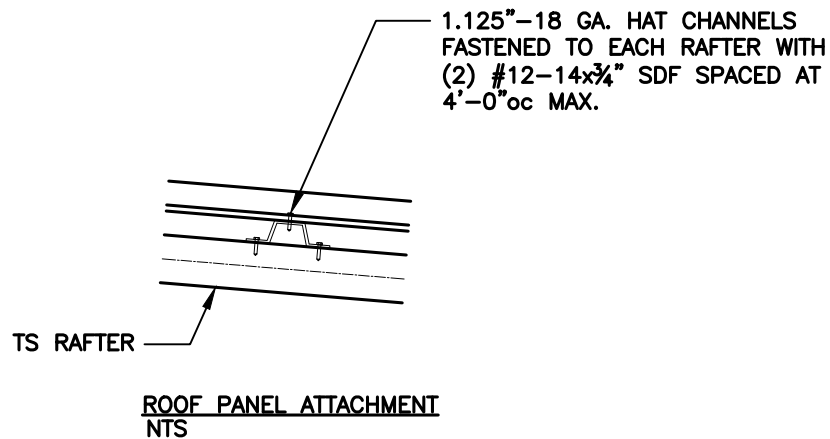
VERTICAL ROOF / SIDING OPTION

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



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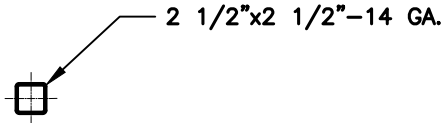
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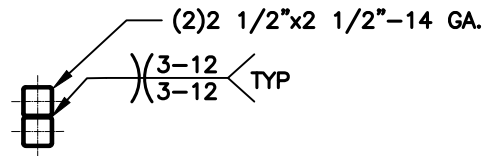
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2023.02.24

SHEET NO:
S16B

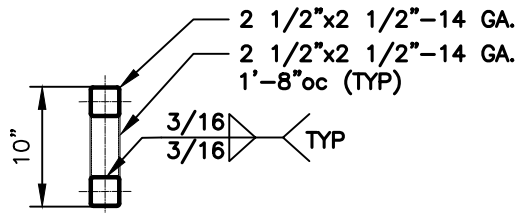
SIDE WALL HEADER OPTIONS



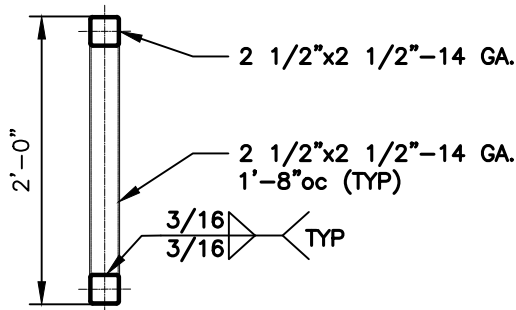
HEADER DETAIL FOR DOOR
OPENINGS < 4'-0"
 NTS



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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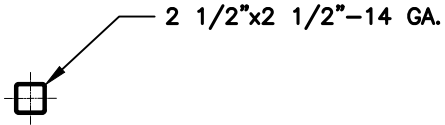
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PROJECT NO:
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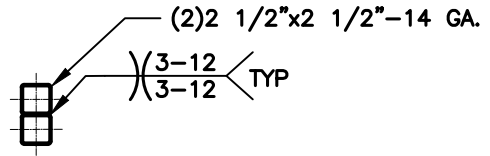
DATE:
 2023.02.24

SHEET NO:
S17

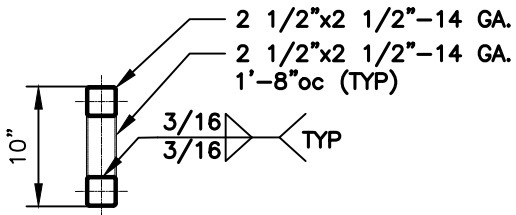
END WALL HEADER OPTIONS



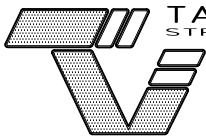
HEADER DETAIL FOR DOOR
OPENINGS < 7'-0"
 NTS



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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CUSTOM BUILT
 STRUCTURES, INC.
 MT. AIRY, NORTH CAROLINA

DRAWN BY:
 BKS

PROJECT NO:
 23-509

DATE:
 2023.02.24

SHEET NO:
S17A