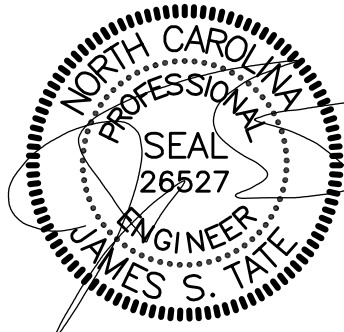


ENCLOSED GABLE END BUILDING
MAXIMUM 30'-0" WIDE X 16'-0" EAVE HEIGHT WITH BOX FRAME / (UP TO) 145 M.P.H. WIND ZONE

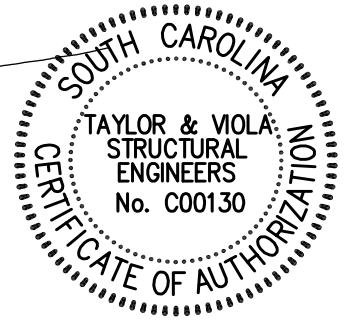
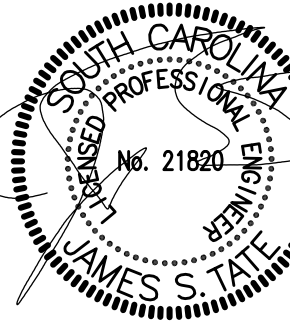
FOR:
TWIN CARPORTS
PILOT MOUNTAIN, NORTH CAROLINA

ISSUE DATE: MARCH 03, 2023

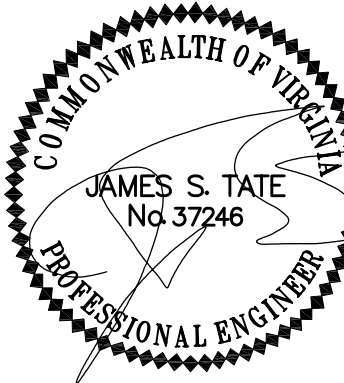




DOCUMENTS DESIGNED AND DRAWN TO
MEET THE 2018 NC BUILDING CODE (2015 IBC)



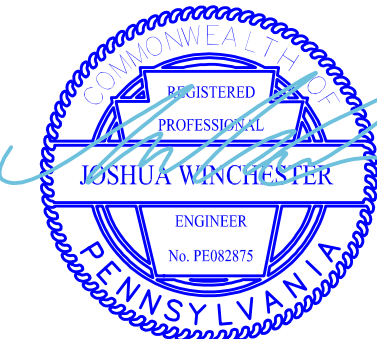
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MEET THE 2021 SC BUILDING CODE (2021 IBC)



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AND DRAWN TO
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CONSTRUCTION CODE
(2018 IBC)



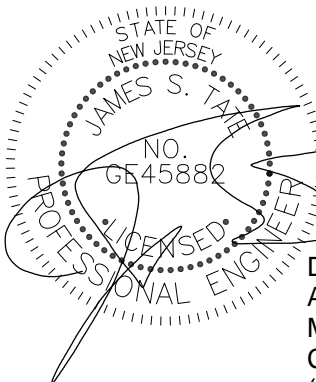
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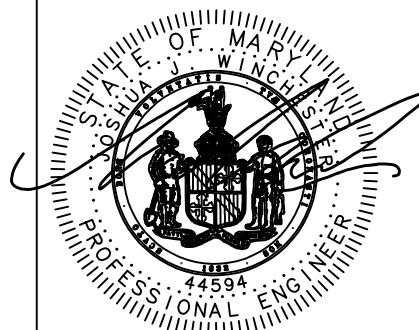
DOCUMENTS DESIGNED AND DRAWN TO
MEET THE 2018 IBC



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
CODE NEW JERSEY EDITION
(2021 IBC)



DOCUMENTS DESIGNED AND DRAWN TO
MEET THE 2018 IBC



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CARPORTS

PILOT MOUNTAIN, NORTH CAROLINA

DRAWN BY:
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DATE:
2023.03.03

SHEET NO:
S1



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 2018 KENTUCKY BUILDING CODE
(2015 IBC)



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S1

SHEET INDEX

SHEET NUMBER	SHEET TITLE
S0	SEALED COVER SHEET
S1	P.E. SEALS SHEET
S1A	P.E. SEALS SHEET
S2	DRAWING INDEX
S3	GENERAL NOTES AND SPECIFICATIONS
S4	SIDE AND END ELEVATIONS
S5	TYPICAL RAFTER / COLUMN FRAME SECTIONS
S5A	TYPICAL RAFTER / COLUMN FRAME AND SIDE FRAMING SECTION
S6	COLUMN CONNECTION DETAILS (LACED COLUMN)
S6A	COLUMN CONNECTION DETAILS (DOUBLE AND SINGLE COLUMN)
S7	BASE RAIL ANCHORAGE
S7A	BASE RAIL ANCHORAGE
S8	BASE RAIL ANCHORAGE
S9	TYPICAL END WALL OPENINGS FRAMING SECTIONS
S9A	TYPICAL SIDE WALL OPENINGS FRAMING SECTIONS
S10	CONNECTION DETAILS
S11	CONNECTION DETAILS
S12	CONNECTION DETAILS
S13	CONNECTION DETAILS
S14	CONNECTION DETAILS
S15	LEAN-TO OPTIONS
S15A	LEAN-TO CONNECTION DETAILS
S15B	LEAN-TO CONNECTION DETAILS
S15C	LEAN-TO CONNECTION DETAILS
S16	VERTICAL ROOF / SIDING OPTION END AND SIDE ELEVATION
S16A	VERTICAL ROOF / SIDING OPTION END SECTION
S16B	VERTICAL ROOF / SIDING OPTION SIDE SECTION
S17	SIDE WALL HEADER OPTIONS
S17A	END WALL HEADER OPTIONS



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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:

* PSF VARIES - SEE NOTES
30 P.S.F. MIN.

GROUND LOAD:

BASIC WIND SPEED V 145 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 P.S.F. ASSUMED BEARING CAPACITY UNLESS NOTED OTHERWISE.
6. IF 12ga. MATERIAL x 50 KSI MINIMUM MATERIAL IS USED THRU-OUT, 45 P.S.F. SNOW LOAD IS ACCEPTABLE.
7. IF WELDED TUBE TRUSS USED IN LIEU OF 18ga. U-CHANNEL, 35 P.S.F. SNOW LOAD IS ACCEPTABLE.



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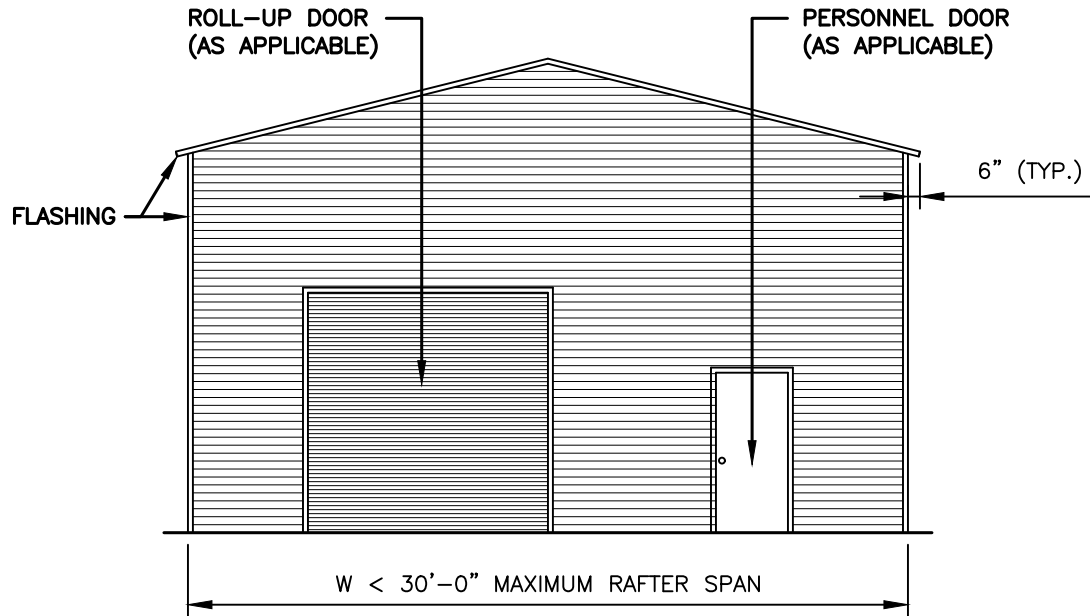
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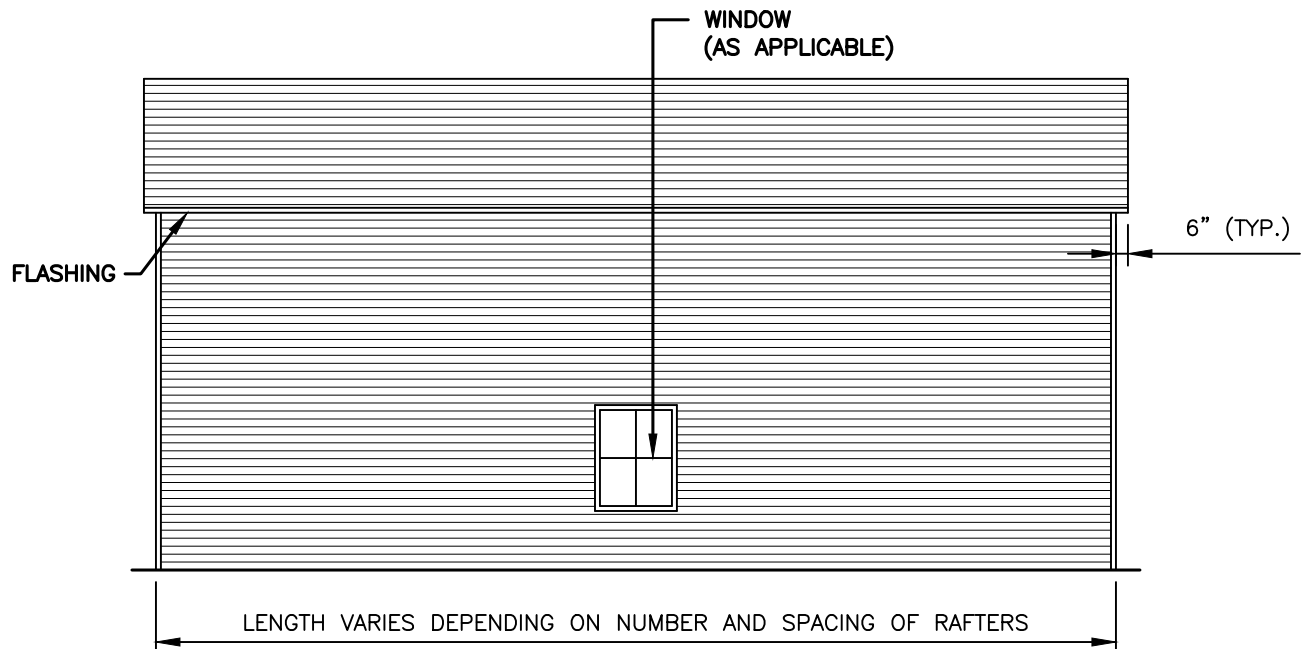
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2023.03.03

SHEET NO:
S3

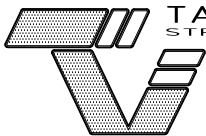
BOX EVE FRAME RAFTER STURCTURE



TYPICAL END ELEVATION



TYPICAL SIDE ELEVATION



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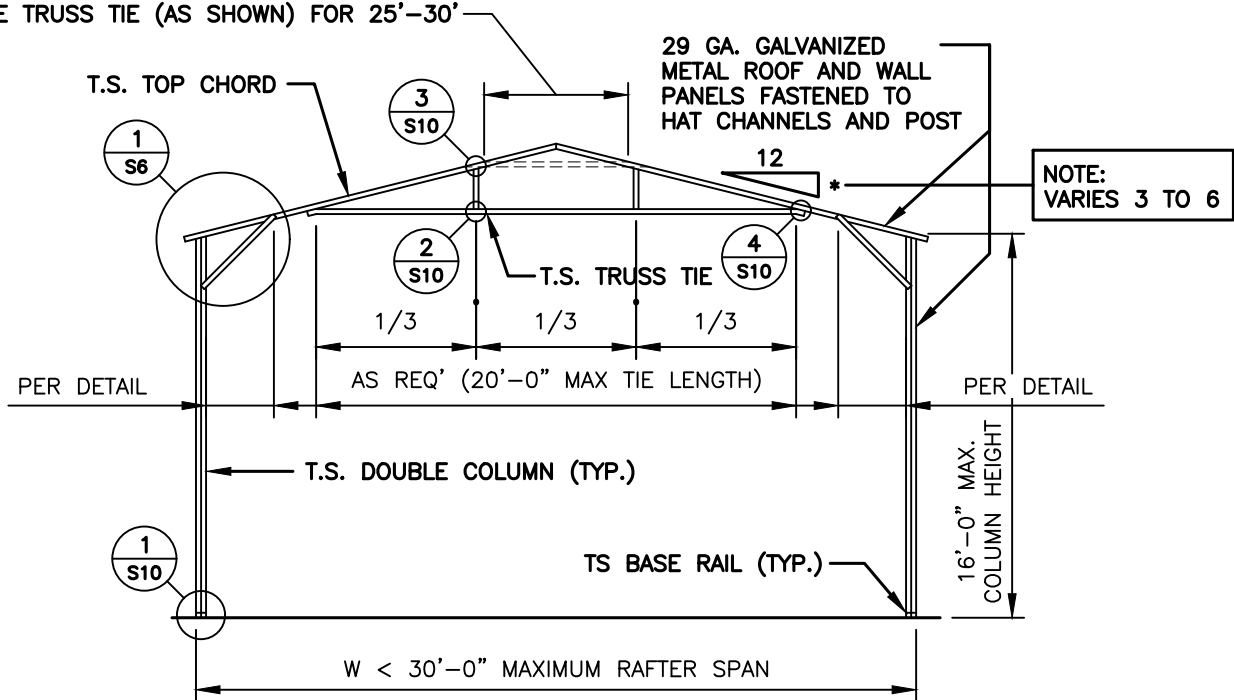
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PROJECT NO:
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SHEET NO:
S4

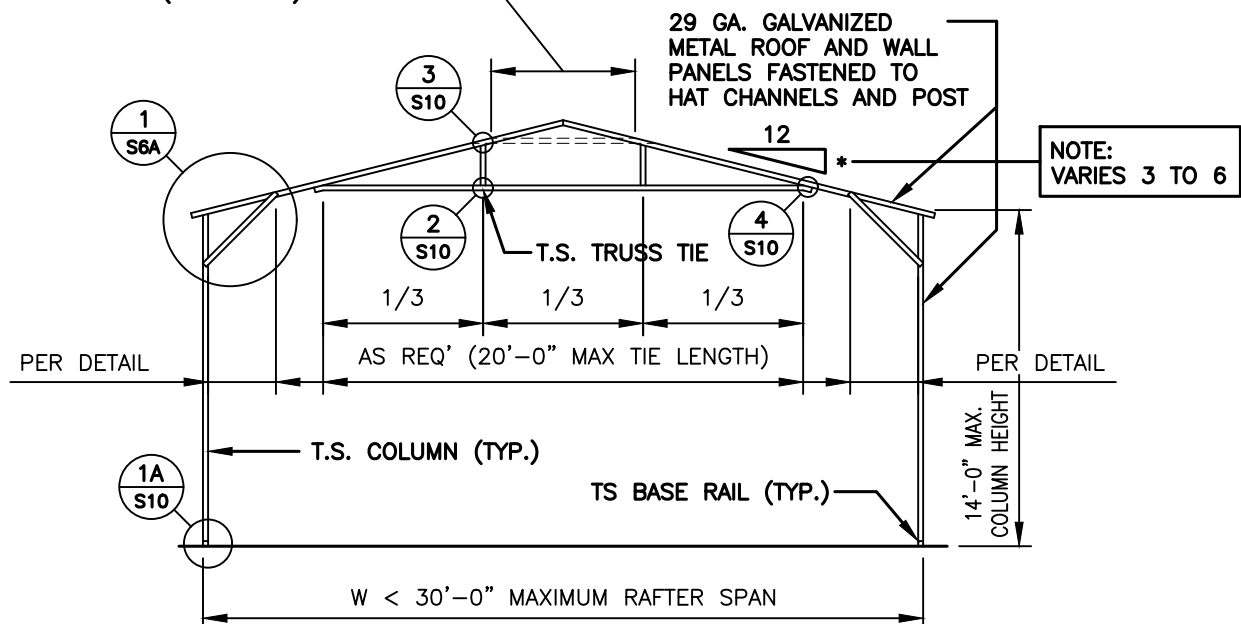
'U' BRACE TRUSS TIE - NOTE:
 6'-0" BRACE FOR 21'-24' BUILDING WIDTH
 20' TUBE TRUSS TIE (AS SHOWN) FOR 25'-30'



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



TWIN
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PILOT MOUNTAIN, NORTH CAROLINA

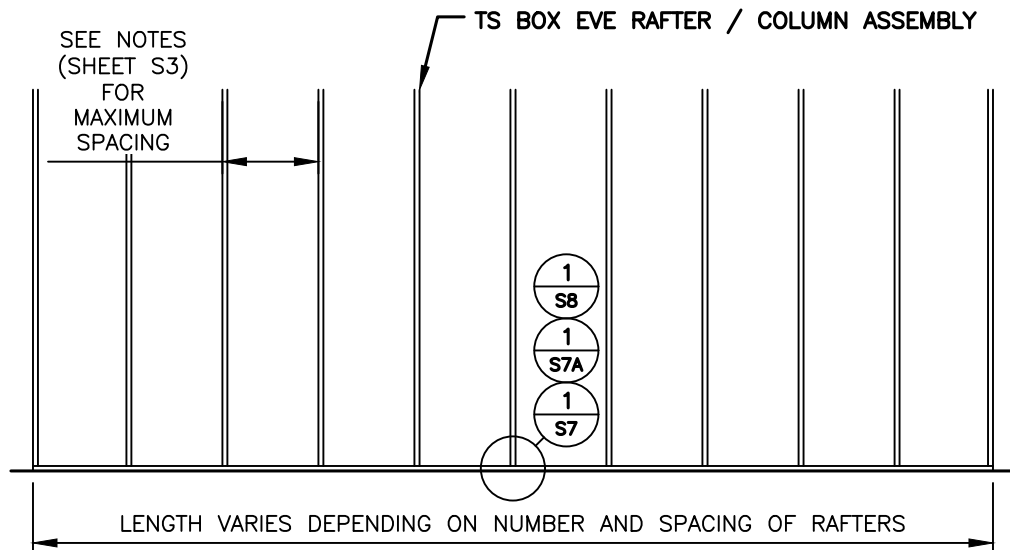
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PROJECT NO:
 22-512

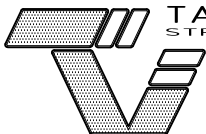
DATE:
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SHEET NO:
S5

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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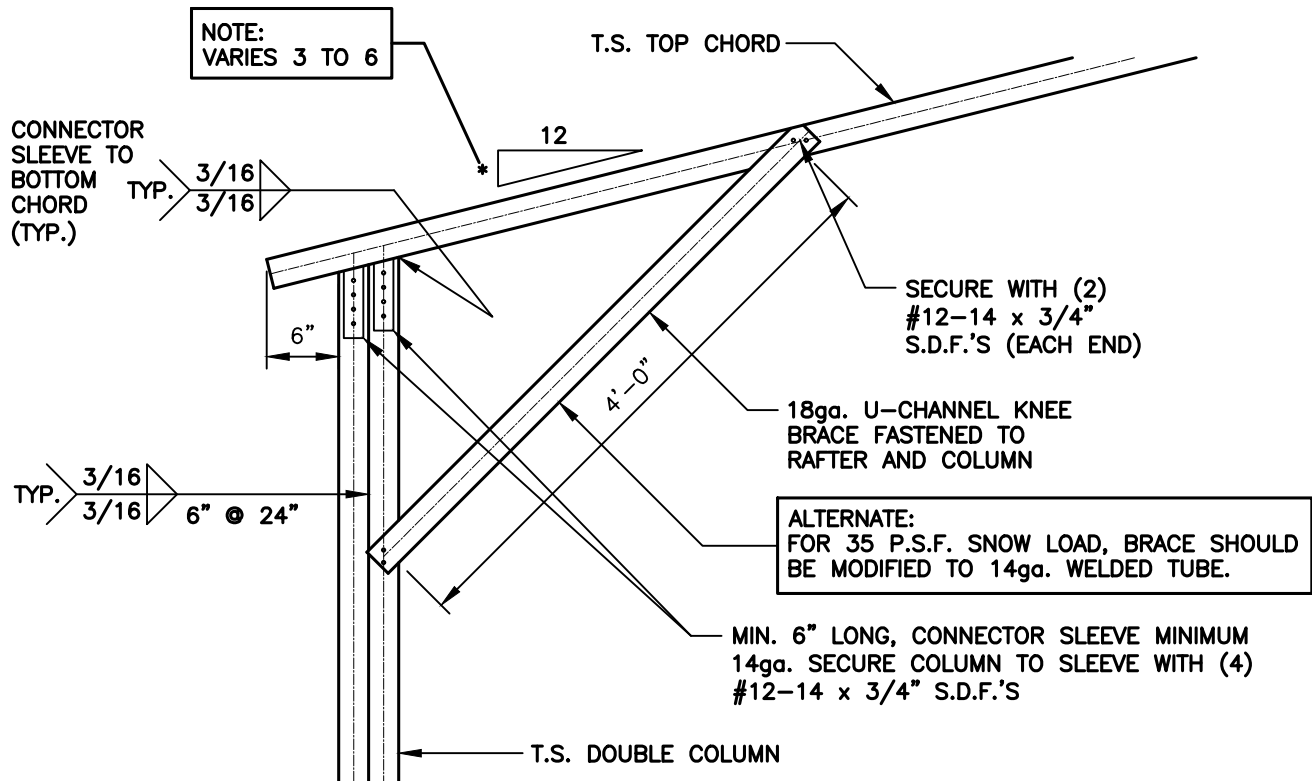
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22-512

DATE:
2023.03.03

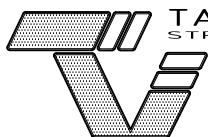
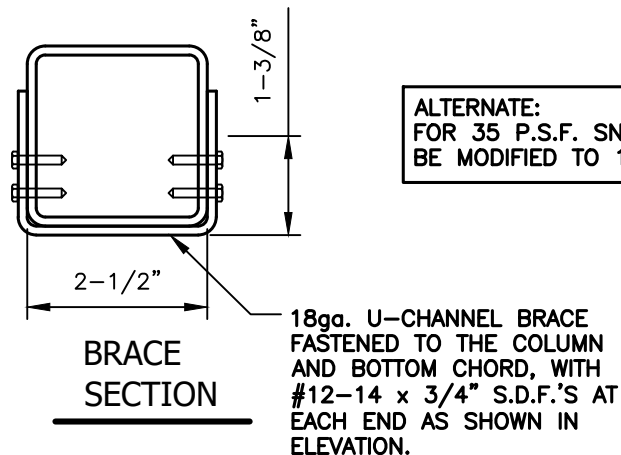
SHEET NO:
S5A



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

S6

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



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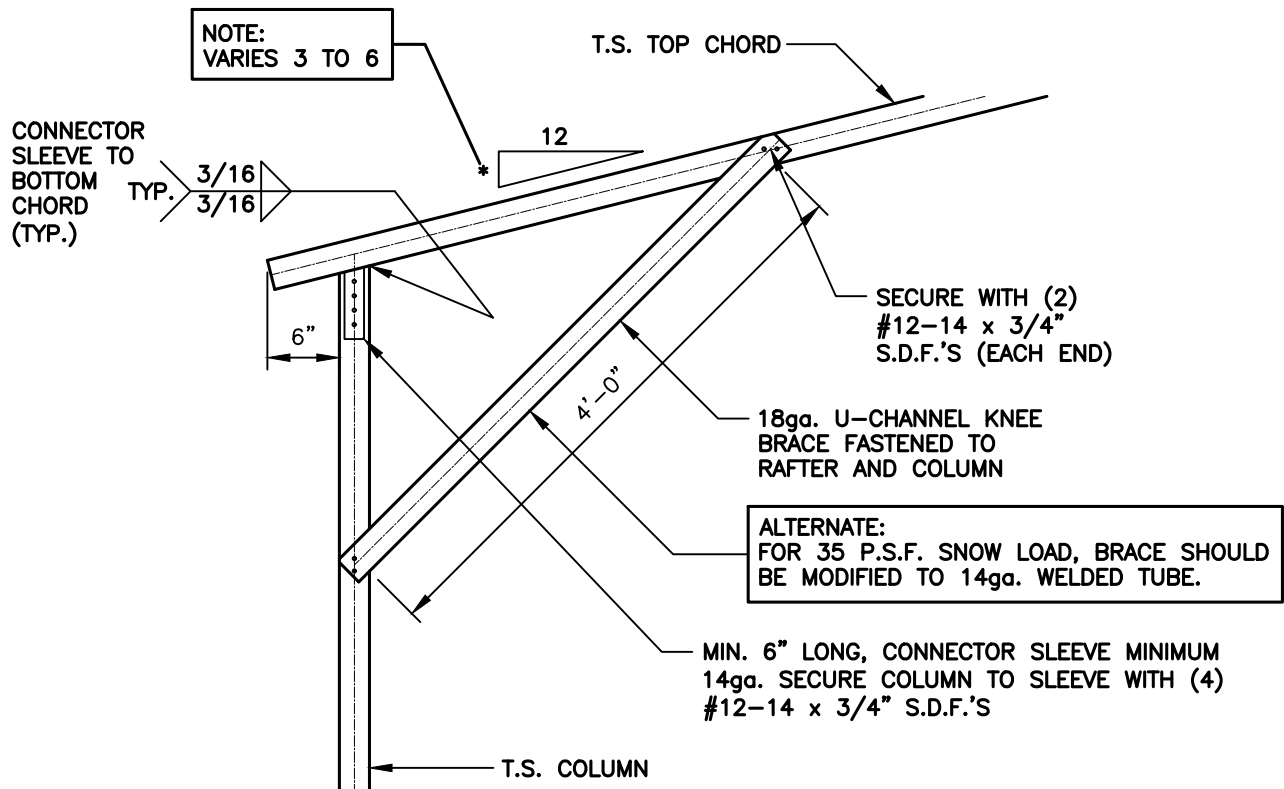
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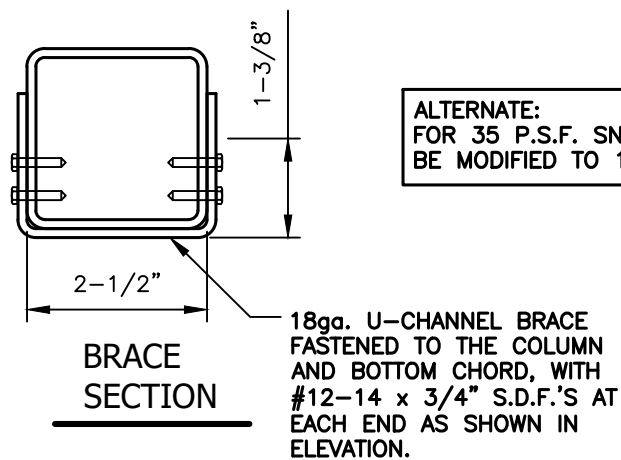
SHEET NO:
S6



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

S6A

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



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PILOT MOUNTAIN, NORTH CAROLINA

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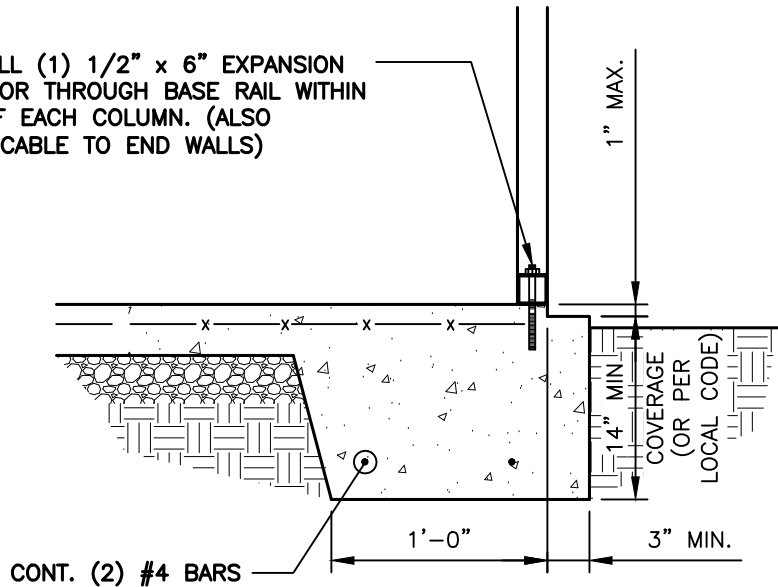
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DATE:
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S6A

CONCRETE BASE RAIL ANCHORAGE

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



BASE RAIL ANCHORAGE DETAIL

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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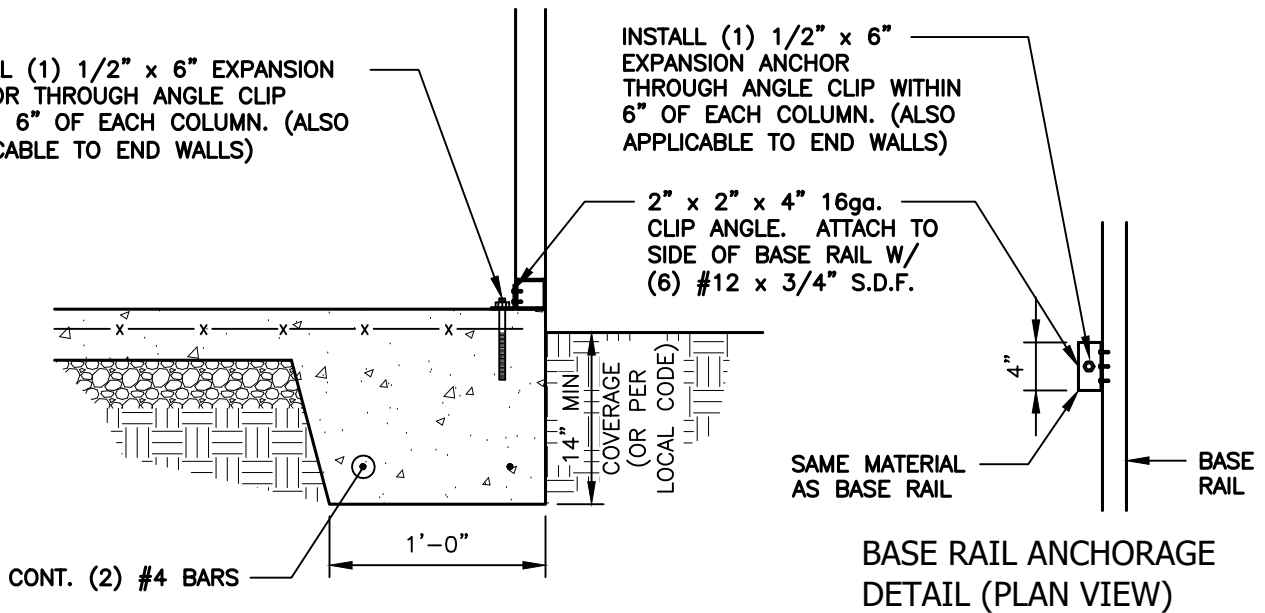
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S7

CONCRETE BASE RAIL ANCHORAGE



BASE RAIL ANCHORAGE DETAIL

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:

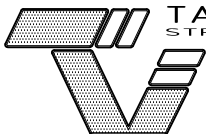
3" IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH AND WEATHER AND 1-1/2" ELSEWHERE.

REINFORCING STEEL:

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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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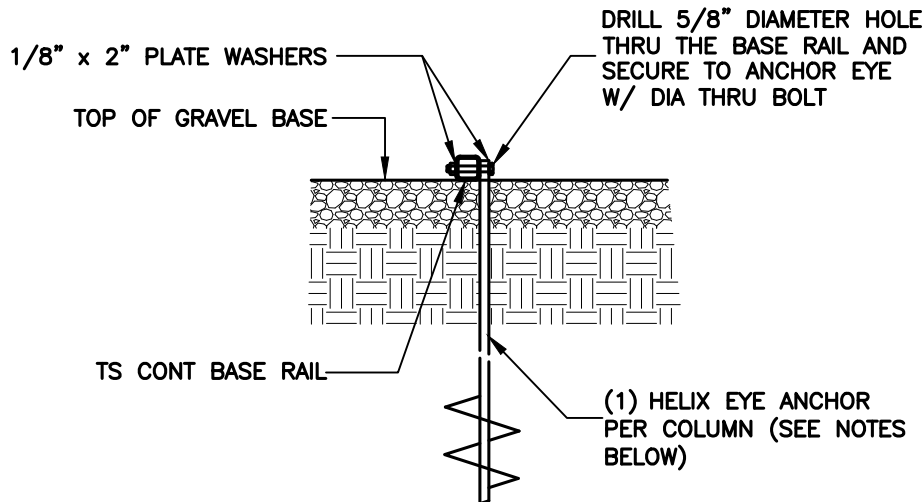
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S7A

SOIL NAIL BASE RAIL ANCHORAGE



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 (1 EACH END AND AT 24'-0" BETWEEN).

FOR CORAL, USE MIN (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH 50" EMBEDMENT (1 EACH END AND AT 24'-0" BETWEEN).

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 (1 EACH END AND AT 24'-0" BETWEEN).

FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, USE MIN (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT (1 EACH END AND AT 24'-0" BETWEEN).

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 (1 EACH END AND AT 24'-0" BETWEEN).



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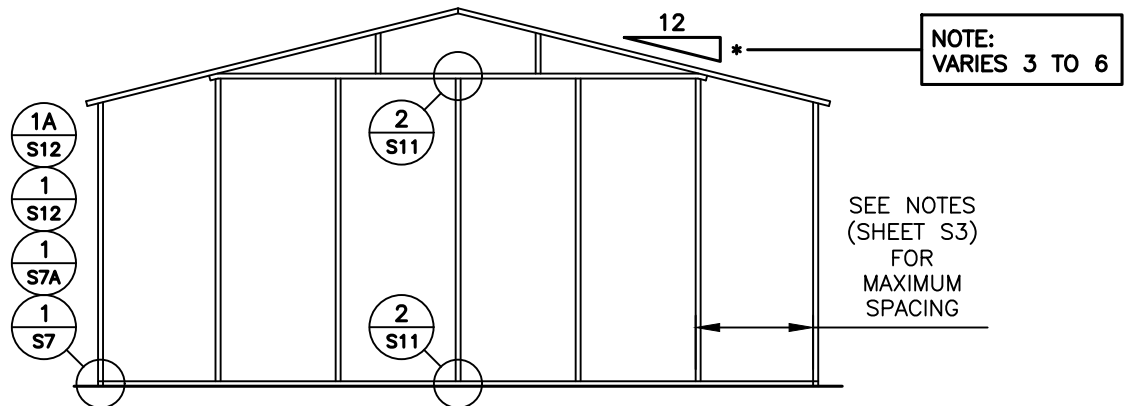
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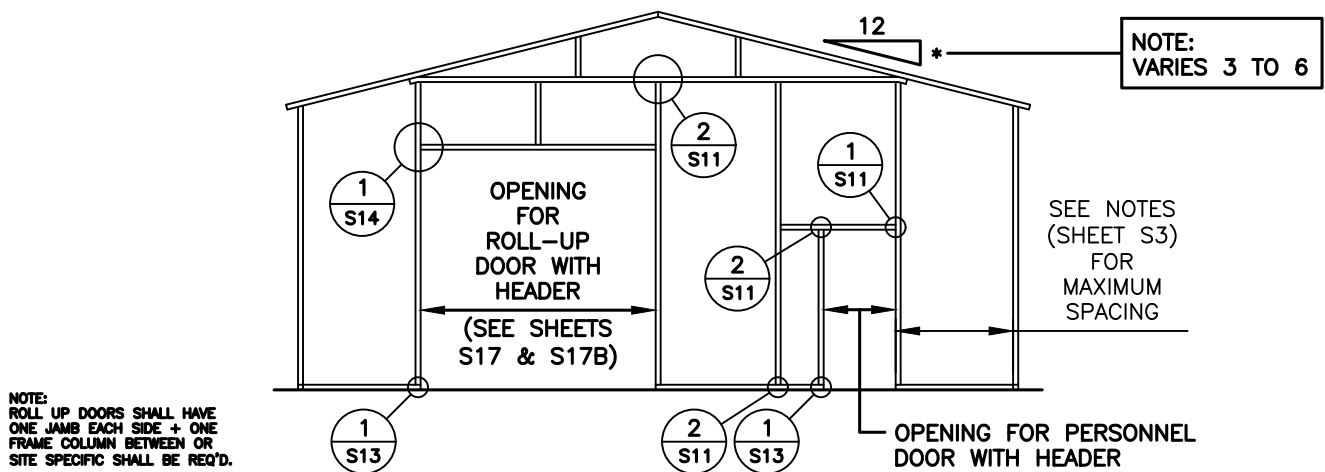
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BOX EVE RAFTER END WALL OPENINGS



TYPICAL BOX EVE RAFTER / END WALL COLUMN FRAME SECTION



TYPICAL BOX EVE RAFTER END WALL OPENINGS FRAMING SECTION



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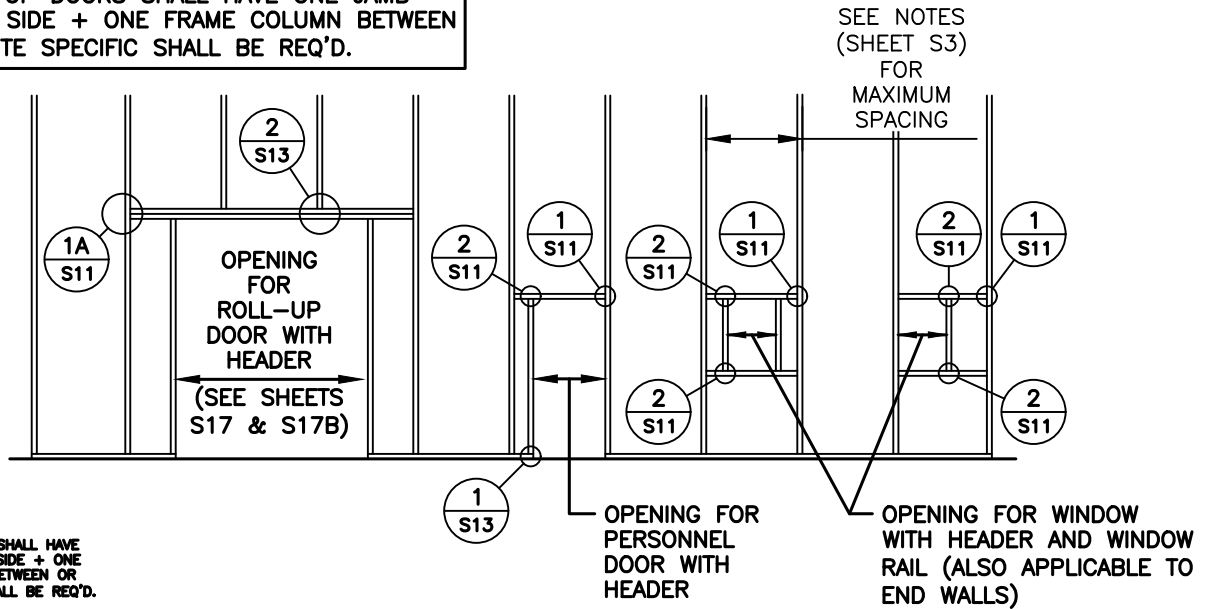
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SHEET NO:
S9

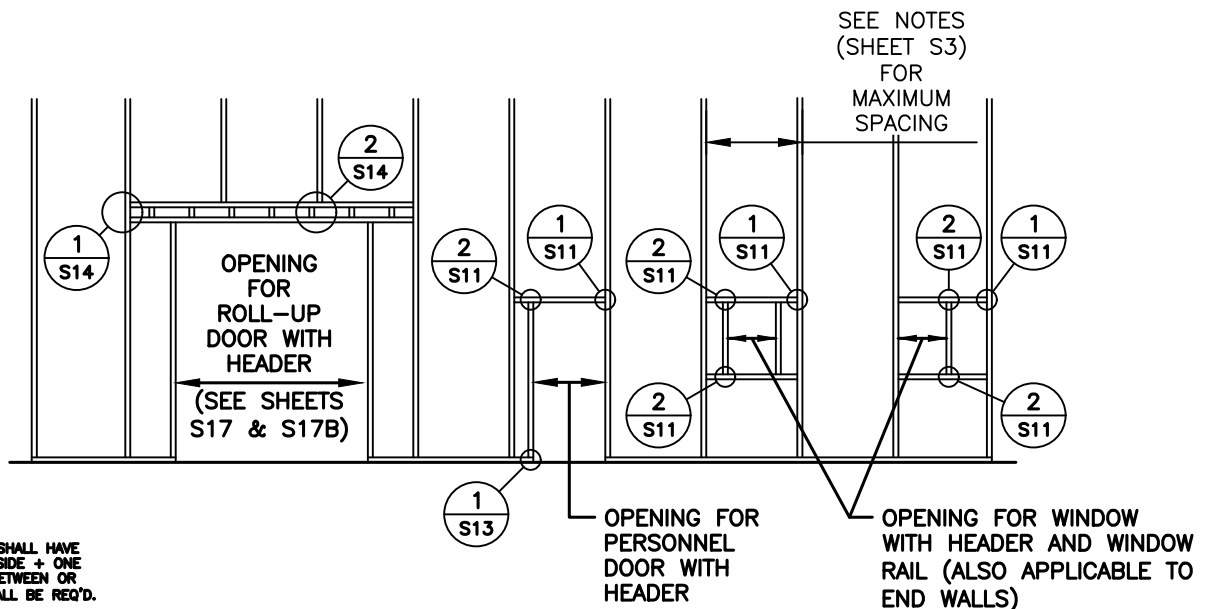
BOX EVE RAFTER END WALL AND SIDE WALL OPENINGS

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



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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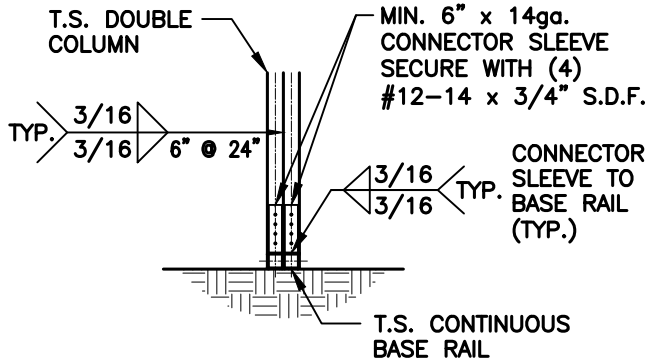
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22-512

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2023.03.03

SHEET NO:
S9A

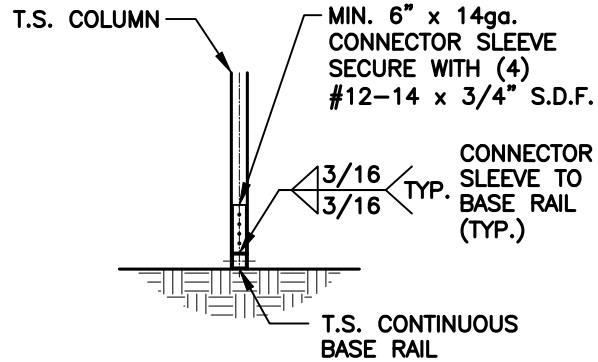
CONNECTION DETAILS



**POST / BASE RAIL
CONNECTION DETAIL**

1
S10

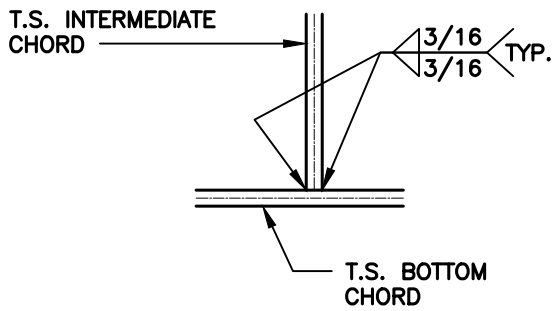
SCALE: 1/2" = 1'-0"



**POST / BASE RAIL
CONNECTION DETAIL**

1A
S10

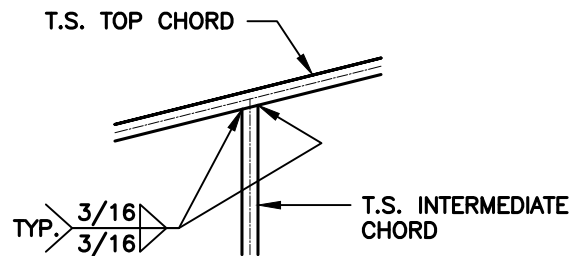
SCALE: 1/2" = 1'-0"



**INTERMEDIATE CHORD
TO BOTTOM CHORD
CONNECTION DETAIL**

2
S10

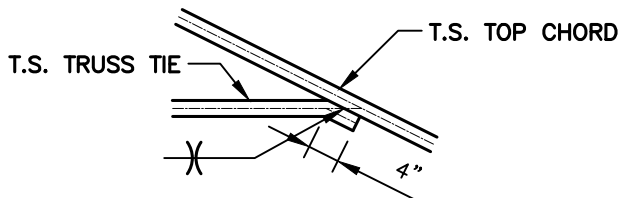
SCALE: 1/2" = 1'-0"



**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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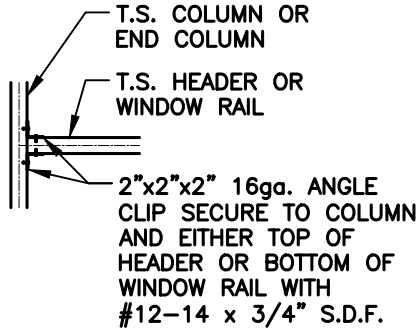
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SHEET NO:
S10

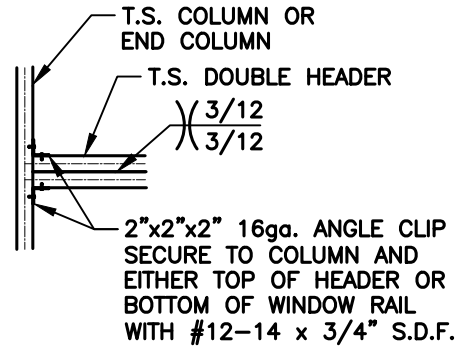
CONNECTION DETAILS



COLUMN OR WINDOW
RAIL / WALL GIRT TO POST
CONNECTION DETAIL

1
S11

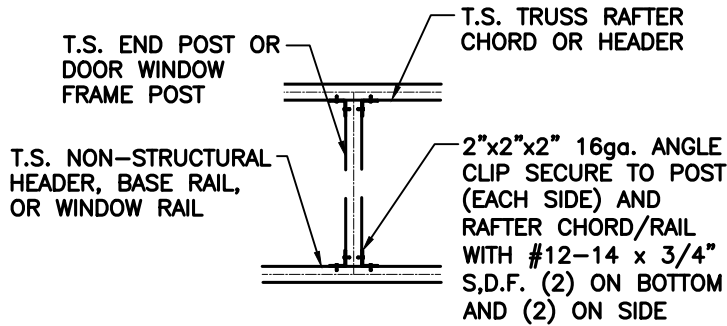
SCALE: 1/2" = 1'-0"



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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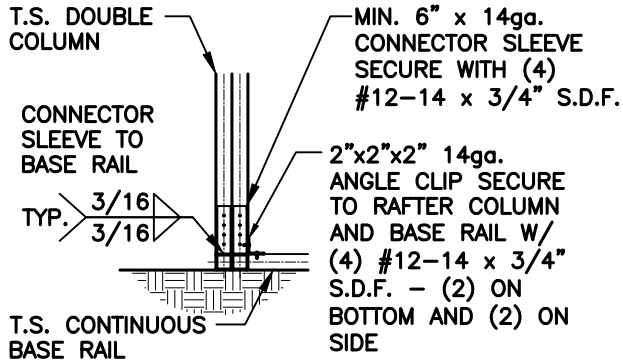
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SHEET NO:
S11

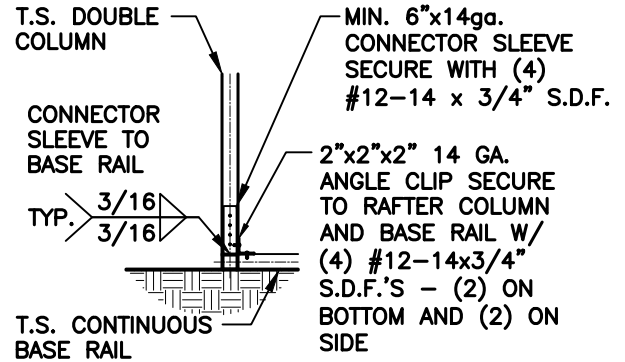
CONNECTION DETAILS



**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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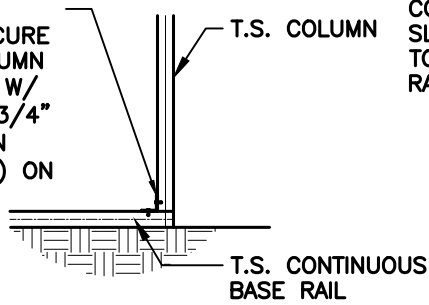
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2023.03.03

SHEET NO:
S12

CONNECTION DETAILS

2"x2"x2" 14ga.
ANGLE CLIP SECURE
TO RAFTER COLUMN
AND BASE RAIL W/
(4) #12-14 x 3/4"
S.D.F. - (2) ON
BOTTOM AND (2) ON
SIDE



COLUMN / BASE RAIL
CONNECTION DETAIL

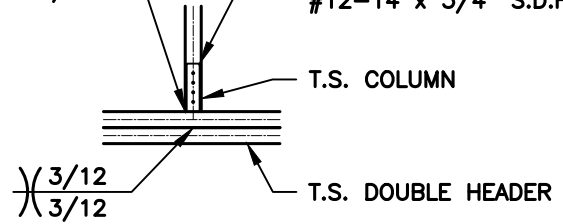
1
S13

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

CONNECTOR
SLEEVE
TO BASE
RAIL

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

MIN. 6"x14 GA.
CONNECTOR SLEEVE
SECURE WITH (4)
#12-14 x 3/4" S.D.F.



COLUMN / DOUBLE HEADER
CONNECTION DETAIL

2
S13

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



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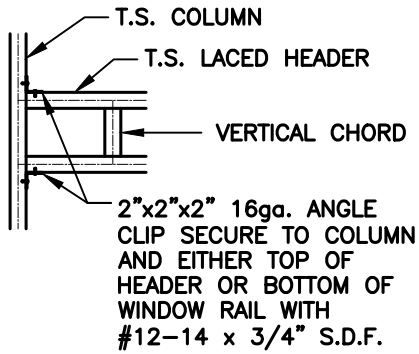
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SHEET NO:
S13

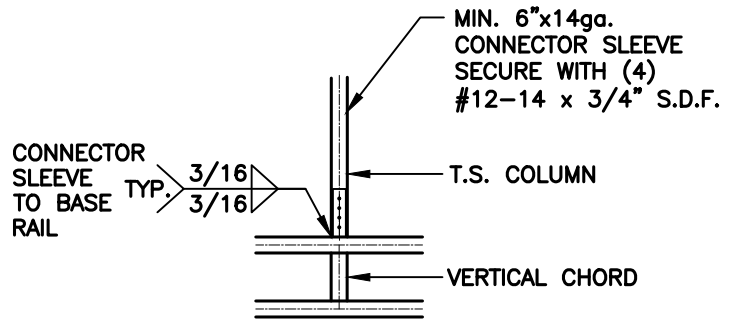
CONNECTION DETAILS



COLUMN / LACED HEADER
CONNECTION DETAIL

1
S14

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



COLUMN / LACED HEADER
CONNECTION DETAIL

3
S14

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



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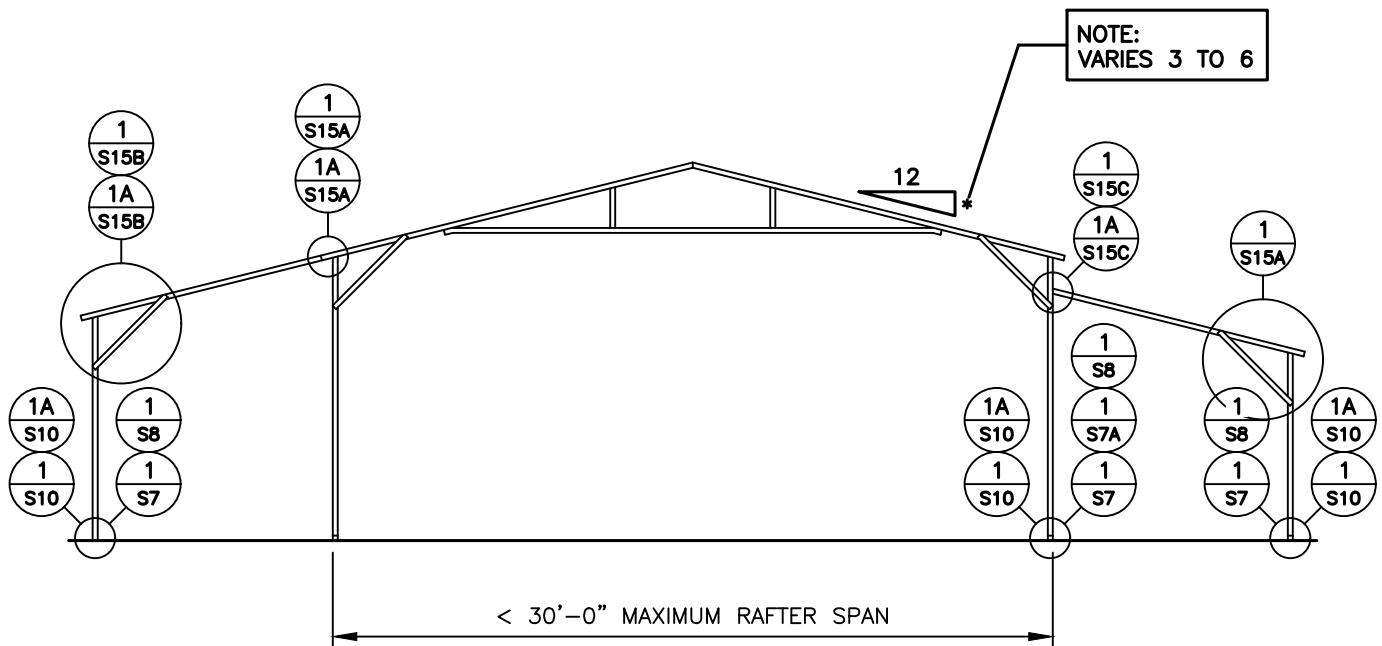
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SHEET NO:
S14

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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2023.03.03


SHEET NO:
S15

NOTE:
VARIES 3 TO 6

6"
EVE

12

3/16
3/16



TYP.

- T.S. COLUMN

1

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

NOTE:
VARIES 3 TO 6

6"
EVE

12

3/16
3/16

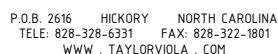
TYP.

- T.S. COLUMN

TYP. $\frac{3-12}{3-12}$

1A

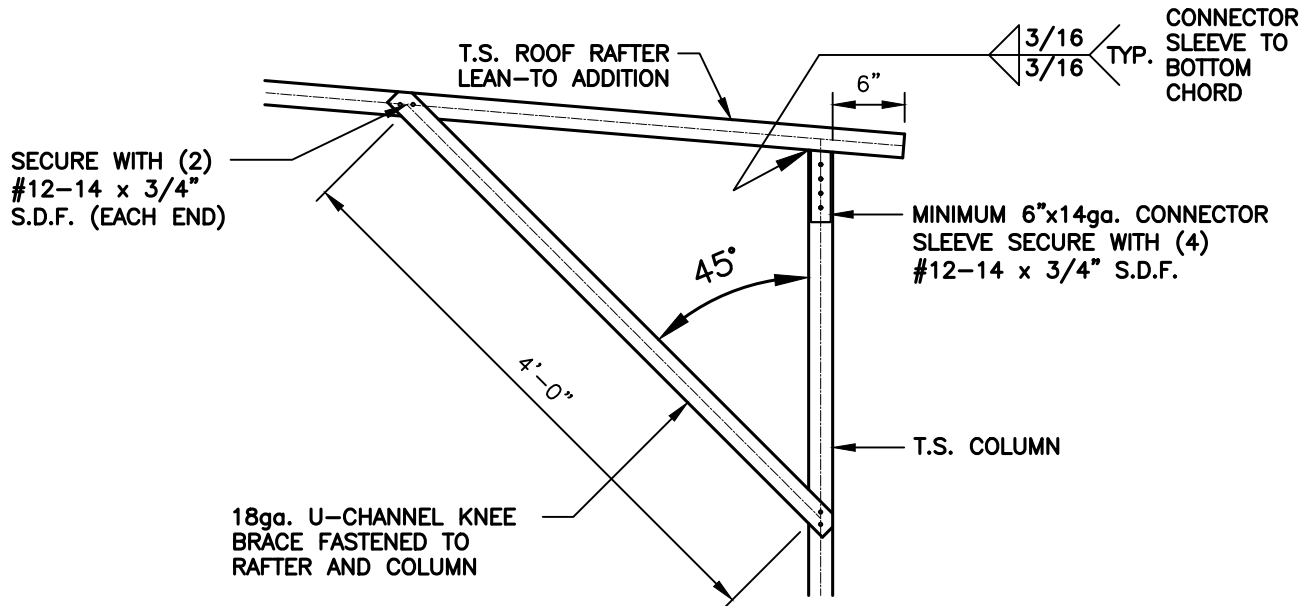
SCALE: 3/4" = 1'-0"



PILOT MOUNTAIN, NORTH CAROLINA

SHEET NO:
S15A

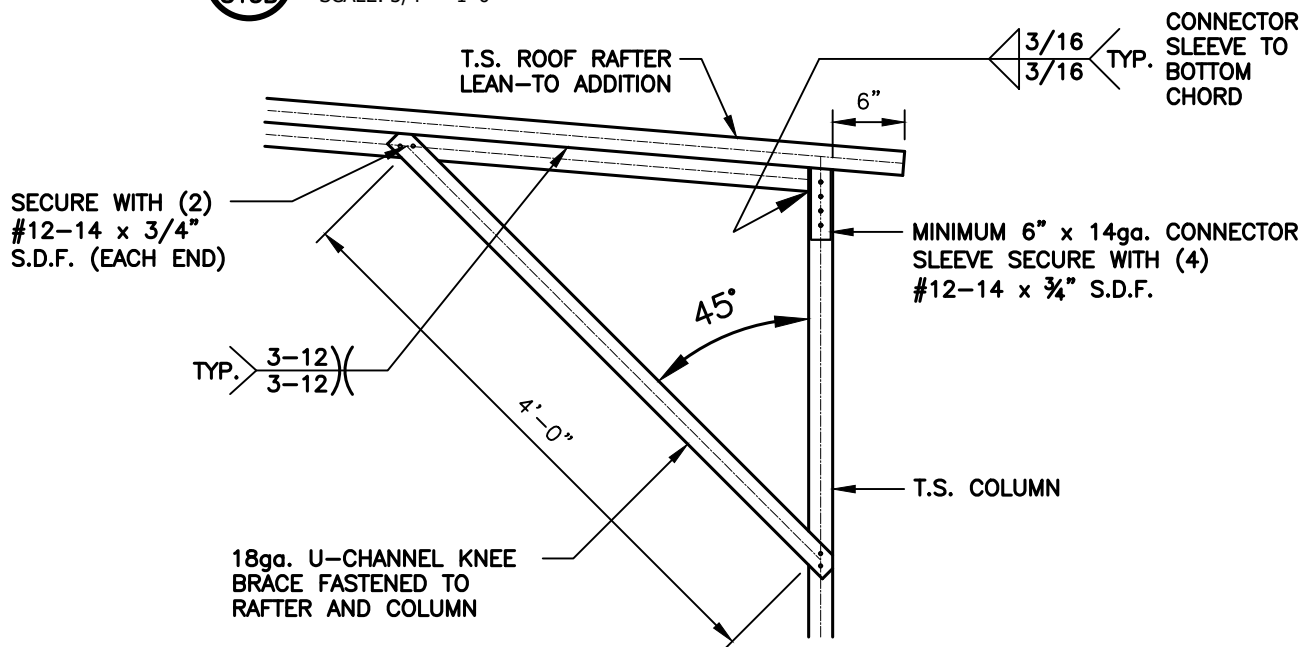
LEAN-TO CONNECTION DETAILS



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"



TWIN
CARPORTS

PILOT MOUNTAIN, NORTH CAROLINA

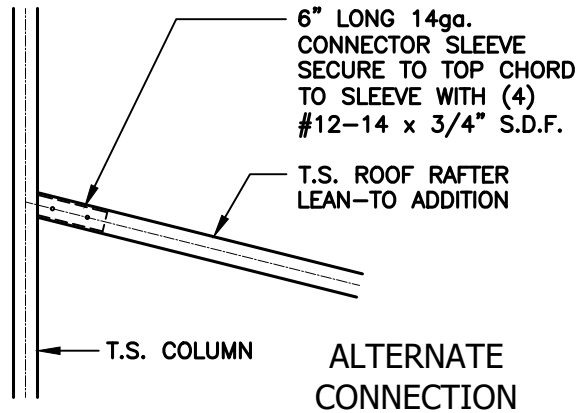
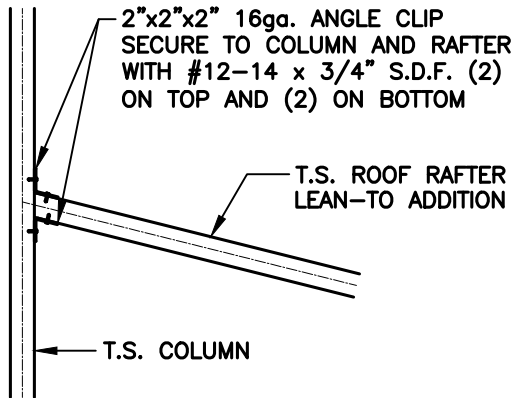
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22-512

DATE:
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SHEET NO:
S15B

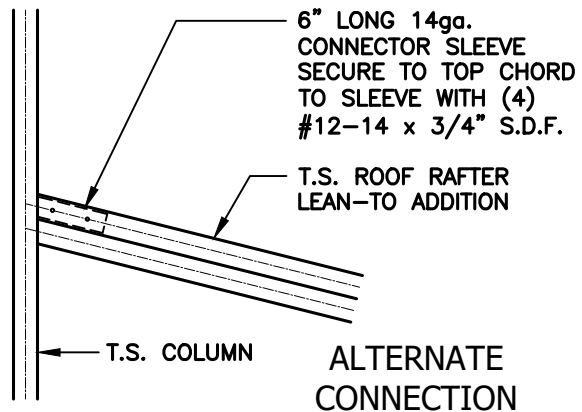
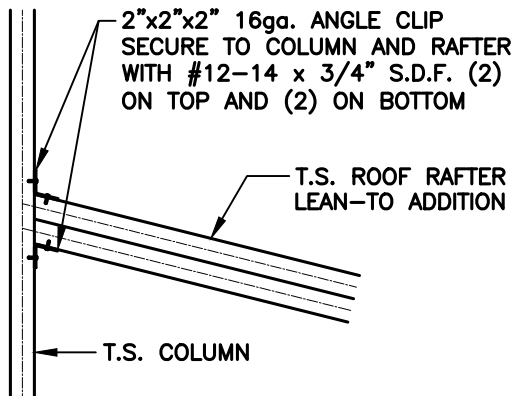
LEAN-TO CONNECTION DETAILS



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

1
S15C

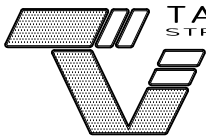
SCALE: 3/4" = 1'-0"



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

1A
S15C

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



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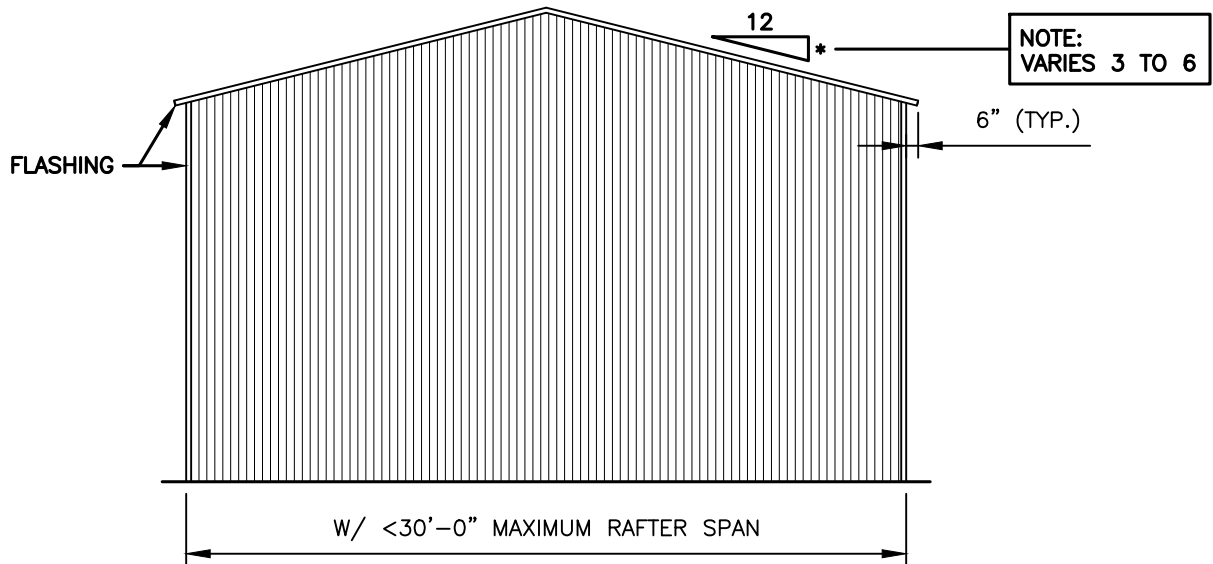
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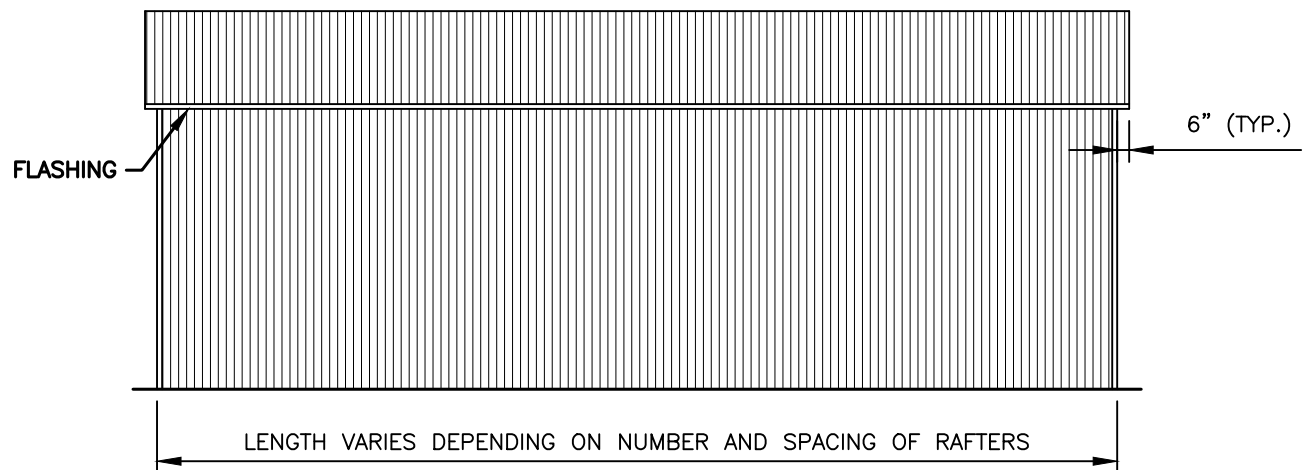
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SHEET NO:
S15C

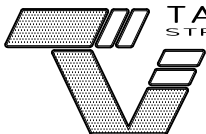
VERTICAL ROOF / SIDING OPTION



TYPICAL END ELEVATION - VERTICAL ROOF / SIDING



TYPICAL SIDE ELEVATION - VERTICAL ROOF / SIDING



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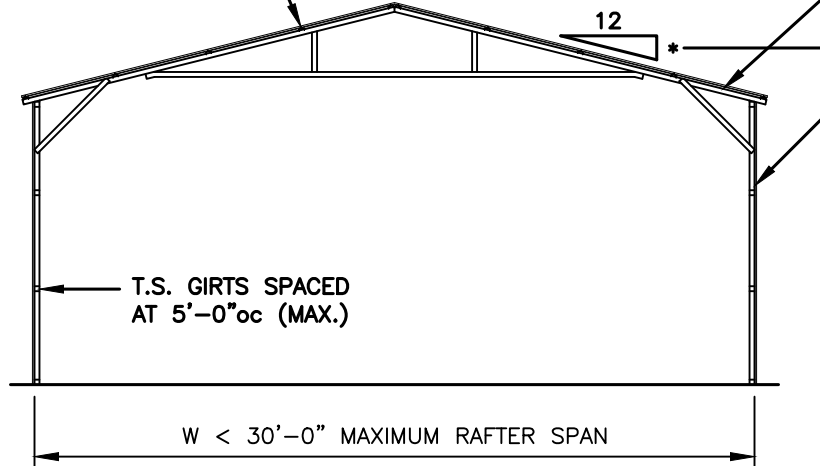
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S16

VERTICAL ROOF / SIDING OPTION

1" MIN. -18ga. HAT CHANNELS
FASTENED TO EACH RAFTER
WITH (2) #12-14 x 3/4" S.D.F.
SPACED AT 4'-0"oc MAX.

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



NOTE:
VARIES 3 TO 6

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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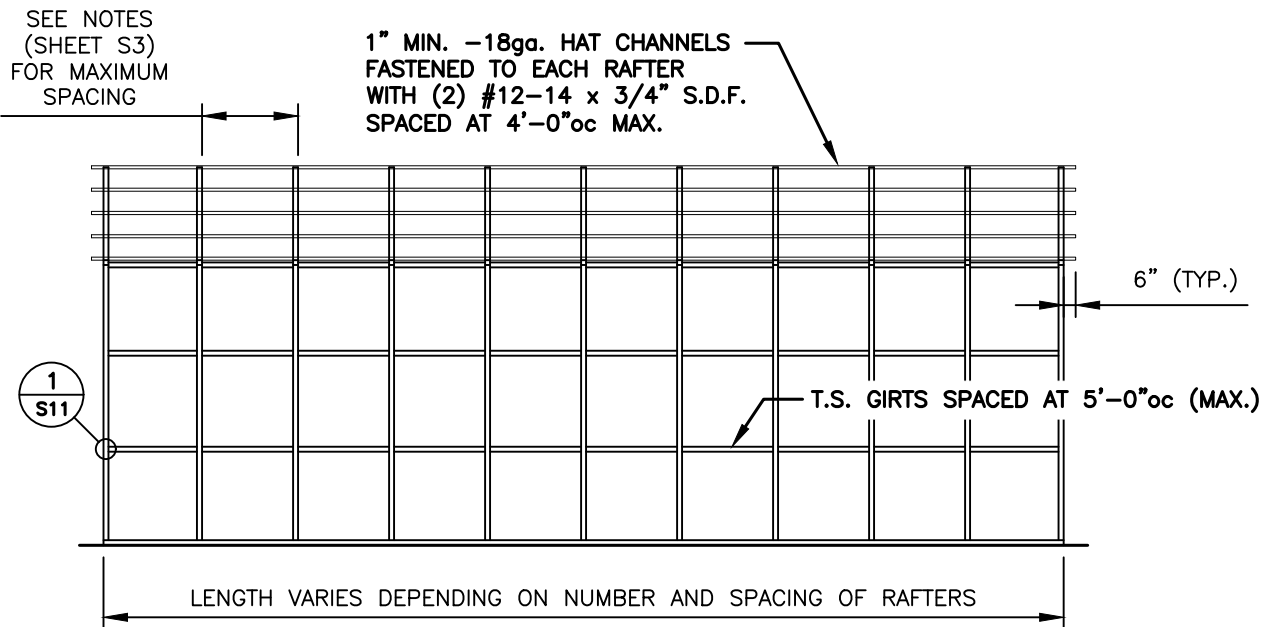
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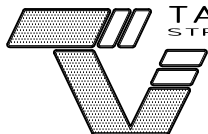
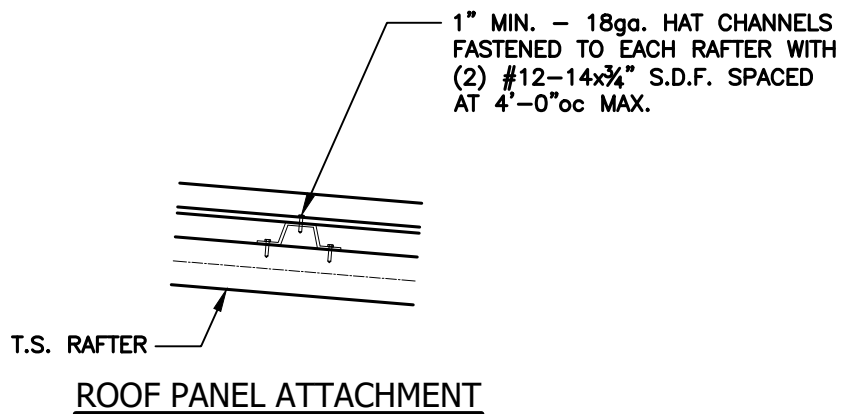
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S16A

VERTICAL ROOF / SIDING OPTION



TYPICAL SIDE FRAMING SECTION VERTICAL ROOF / SIDING OPTION



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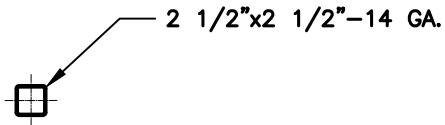
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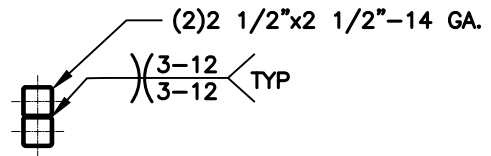
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SHEET NO:
S16B

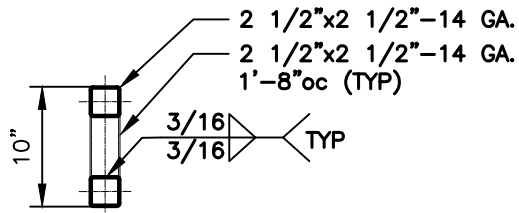
SIDE WALL HEADER OPTIONS



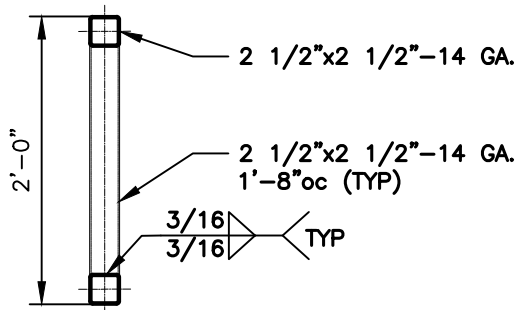
HEADER DETAIL FOR DOOR
OPENINGS < 4'-0"
 NTS



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"



TWIN
CARPORTS

PILOT MOUNTAIN, NORTH CAROLINA

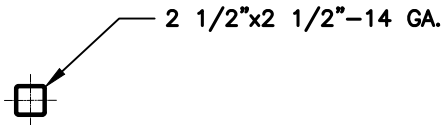
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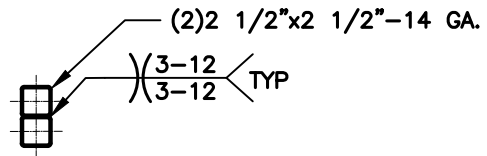
DATE:
2023.03.03

SHEET NO:
S17

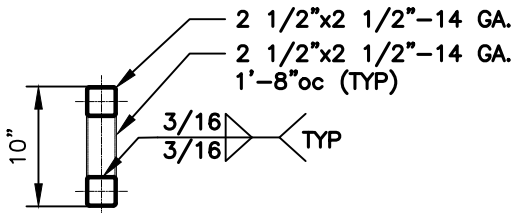
END WALL HEADER OPTIONS



HEADER DETAIL FOR DOOR
OPENINGS <12'-0"
NTS



HEADER DETAIL FOR DOOR
OPENINGS >12'-1" TO <16'-0"
NTS



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



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S17A