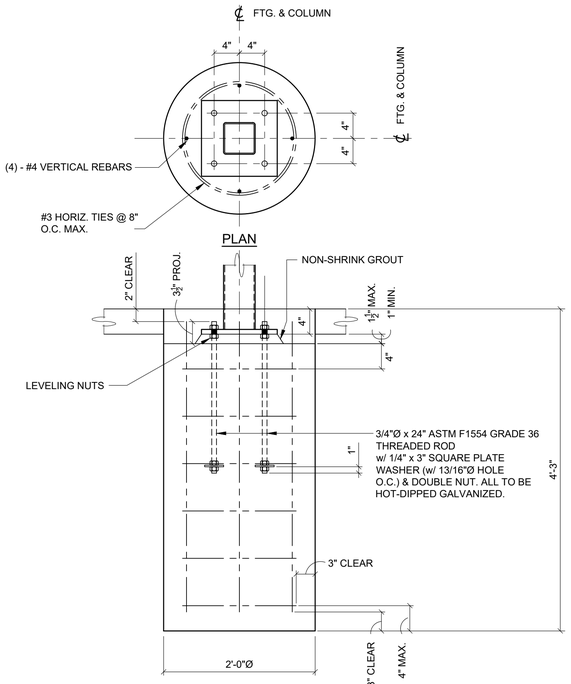
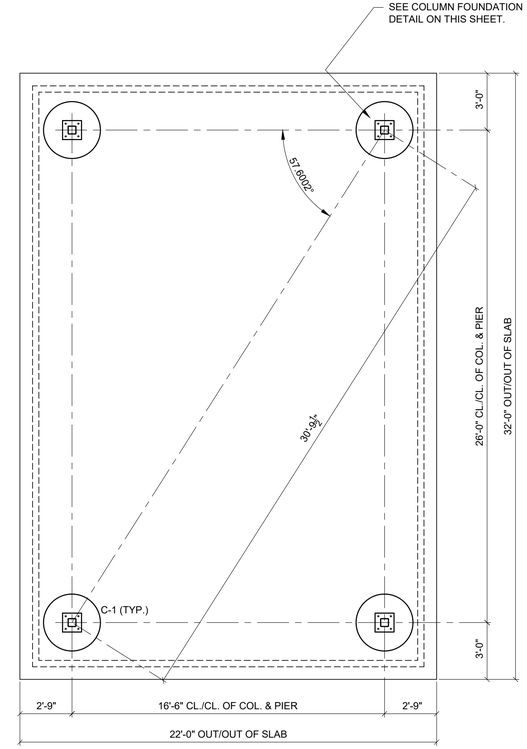


COLUMN FOUNDATION DETAIL

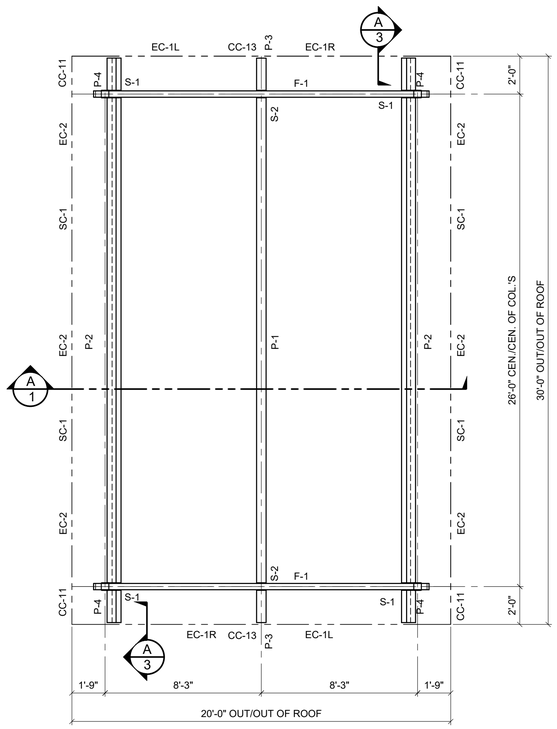
COLUMN BASE REACTIONS:

- $V_{DL+UNBAL\ SL}$ = 5,450#
- $V_{0.6*DL+0.6*WL\ UPLIFT}$ = 800#
- $H_{DL+0.6*\ WL}$ = 650#
- $M_{O.T.\ DL+0.6*WL}$ = 4,600#-ft



FOUNDATION PLAN

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



ROOF FRAMING PLAN

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

STEEL & HARDWARE SHOP NOTES:

1. All steel plate to be ASTM A572 Grade 50.
2. Steel tubes to be ASTM A500 Grade B, Fy=46ksi.
3. All welding is to be done in accordance with latest AWS standards. If welds are not specified, all welds are to develop full strength of all component parts.
4. All bolts to be ASTM A325. Exception: Anchor bolts to be A307.
5. All holes in steel to be $\frac{13}{16}$" diameter unless noted otherwise.
6. All fabricated steel to be powder coated; color selected by owner.

CONCRETE NOTES:

1. Remove all organic material and topsoil from slab area. Verify suitability of subgrade. Footings are to bear on undisturbed, natural soil or engineered fill. Both are to be compacted to 95% Proctor density.
2. Prepare slab with min. 8" compacted sand, gravel, or crushed rock.
3. Concrete slab to be 4" thick. Reinforce slab with 6x6-w1.4xw1.4 welded wire fabric at mid-depth. Lap splices 8". Alt.: Fiber mesh admixture (min. 1.5#/c.y., fibrillated polypropylene).
4. Edge of slab to be thickened to min. 8" deep x 8" wide reinforced with 2-#4 continuous rebars. Lap splices min. 24".
5. In locations subject to frost, install isolation joint, max. 1/8" wide, around column piers using diamond or circular layout. Wire mesh shall be interrupted at isolation joints.
6. Install crack control joints (3/16" wide x 1" deep) at 8' to 12' o.c.
7. Concrete slabs in open areas are to be sloped for drainage from center to edge and away from columns. Surface is to be lightly broomed or have a wood troweled finish.
8. Concrete slabs in enclosed areas are to have positive drainage to floor drains and have a troweled finish.
9. Concrete slab, foundation, re-bar, wire mesh, leveling nuts, grout & anchor bolts (if required) are N.I.C.
10. All concrete reinforcing steel to be grade 60, deformed bars.
11. F'c of concrete to be 3000 psi @ 28 days for foundation. F'c of concrete to be 3500 psi @ 28 days for slab, air-entrained.
12. All concrete work to be in accordance w/ latest ACI code.
13. Assumed allowable soil bearing pressures: 2000 psf vertical bearing, 150 psf passive lateral bearing. It is the Owner's responsibility to verify that the allowable soil bearing values at the site meet or exceed these assumed values. If the actual values are lower than the assumed values, the foundations must be redesigned (N.I.C.).

N.I.C. = Not In Contract

ERECTOR NOTES:
ALL STEEL MEMBERS MUST BE PROPERLY BRACED UNTIL THE COMPLETE STRUCTURAL SYSTEM HAS BEEN CONSTRUCTED. CORRECTION OF MINOR MISFITS AND A REASONABLE AMOUNT OF REAMING OR ALIGNMENT WITH DRIFT PINS WILL BE CONSIDERED A LEGITIMATE EXPENSE OF ERECTION.

IN THE EVENT OF ERROR, DEFECT IN MATERIALS, AND/OR WORKMANSHIP OF SHOP WORK WHICH PREVENTS PROPER ASSEMBLING AND FITTING UP OF PARTS BY THE MODERATE USE OF DRIFT PINS, OR REAMING, IMMEDIATELY REPORT TO THE SELLER AND OBTAIN SELLER'S APPROVAL OF THE METHOD OF CORRECTION.

BOLTS ARE TO BE SNUG TIGHT; TORQUE MEASUREMENT IS NOT REQUIRED.

NOTE: This building has been designed as a free standing, open structure. If walls are to be added, or if the building is to adjoin another structure, or if other modifications are to be made, the structure must be re-engineered prior to these modifications (by others).

DESIGN CRITERIA:
2015 International Building Code
Type of Construction: Type II-B
Occupancy Classification: Assembly A-3
Building Risk Category II
Mean Roof Height = 10'-0"
Building Volume = 6,000 ft³
No. of Occupants = 85 (7 ft² per person)

ROOF DL
Metal Roofing 1.2 psf
Misc. 0.8
Total = 2 psf + weight of framing

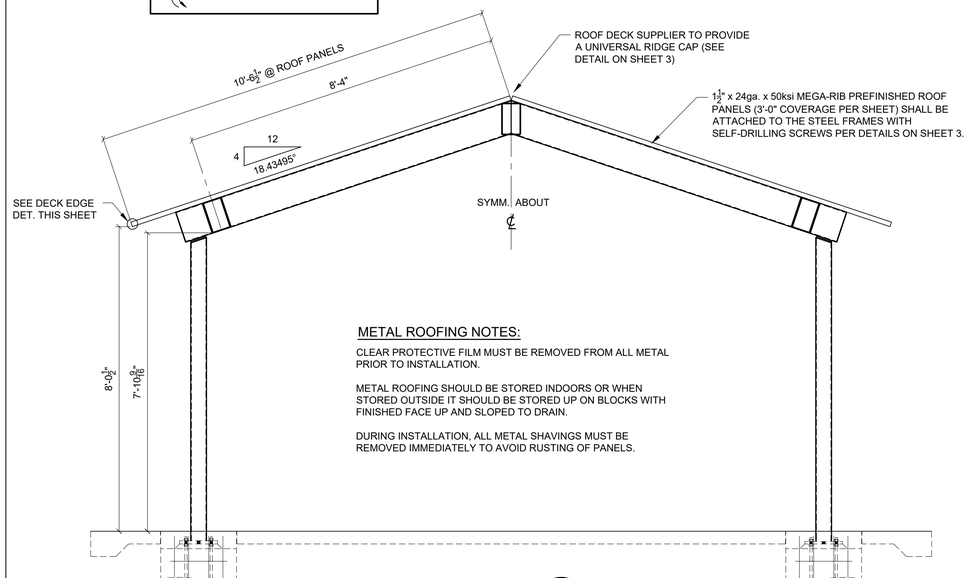
FLOOR LL
L = 100 psf

ROOF LL
L_r = 20 psf

ROOF SL
P_g = 30 psf (Ground Snow)
$P_f = 0.7\ P_g*C_e*C_t*I_S$
C_e = 1.0, C_t = 1.2, I_S = 1.0
P_f = 25 psf
$P_s = P_f*C_s$
4:12 pitch: C_s = 1.0, P_s = 25 psf

WIND LOAD
V_{ult} = 115 mph, V_{asd} = 89 mph
Exposure 'C', Open Building w/ GC_{pi} = 0
Component & Cladding Ultimate Wind Pressures: See Sheet #1

SEISMIC
I_E = 1.0
S_S = 0.129, S_1 = 0.053
Site Class D (assumed)
S_{DS} = 0.138, S_{D1} = 0.084
Seismic Design Category B
Equivalent Lateral Force Procedure
Cantilevered Column Systems - Steel ordinary cantilever column system
R = 1.25, C_S = 0.110
V = 500#



METAL ROOFING NOTES:

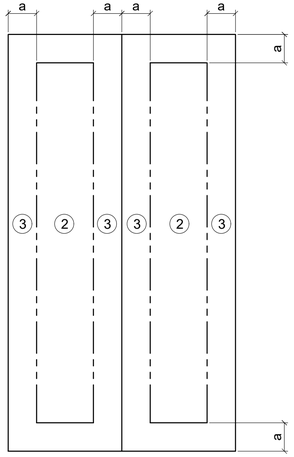
CLEAR PROTECTIVE FILM MUST BE REMOVED FROM ALL METAL PRIOR TO INSTALLATION.

METAL ROOFING SHOULD BE STORED INDOORS OR WHEN STORED OUTSIDE IT SHOULD BE STORED UP ON BLOCKS WITH FINISHED FACE UP AND SLOPED TO DRAIN.

DURING INSTALLATION, ALL METAL SHAVINGS MUST BE REMOVED IMMEDIATELY TO AVOID RUSTING OF PANELS.

SECTION A/1

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

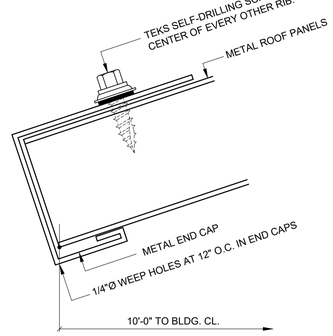


ROOF PLAN

a = 3'-0"

ULTIMATE PRESSURES FOR COMPONENTS & CLADDING

ZONE	PRESSURE	SUCTION
2	37 PSF	34 PSF
3	48 PSF	44 PSF



DECK EDGE DETAIL

Digitally signed by Daniel P. Seymour, P.E.
Date: 2017.07.13 13:57:21 -05'00'

DESIGN CERTIFICATION FOR:

BUILDING SIZE: 20' x 30'
BUILDING LOCATION: KEARNEYSVILLE, WV

THIS CERTIFICATION OF DRAWINGS IS FOR THE ONE BUILDING ONLY AT THE SITE LISTED ABOVE. IT IS VALID ONLY IF THE MATERIALS SHOWN ON THESE DRAWINGS ARE FURNISHED BY RCP SHELTERS, INC. AND ONLY IF MATERIALS ARE PAID FOR IN FULL.

IF MODIFICATION IS MADE WITHOUT EXPRESSED WRITTEN CONSENT OF RCP SHELTERS, INC., OR IF PAYMENT IS NOT MADE IN FULL, THEN CERTIFICATION BECOMES NULL & VOID.

DANIEL P. SEYMOUR REGISTERED 16042 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
7/13/17

AS-G2030-04

JAMES HITE PARK
KEARNEYSVILLE, WV

RCP SHELTERS, INC.
PO BOX 25, STUART, FL 34995 - 0025
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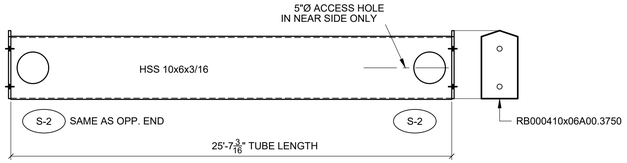
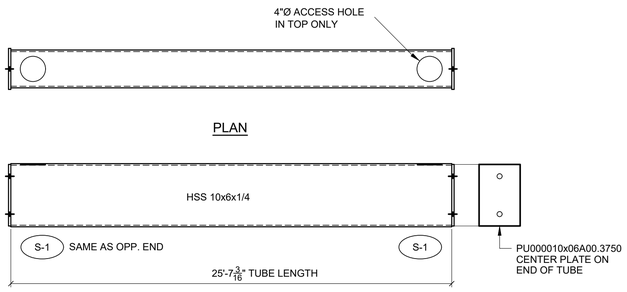
Phone 800 - 525 - 0207 Fax 772 - 288 - 0207
www.rcpshelters.com E-mail - info@rcpshelters.com

PROJ. NO.:	17-108	
DRAWN:	RAR	7-5-17
CHK'D:		
REV 1:	DPS	7-6-17
REV 2:	DPS	7-13-17
REV 3:		
REV 4:		
SHOP DWG NO.:	SH 8953R	
EEC JOB NO.:	12156	
SHEET NO.:	1 OF 3	

ERECTOR NOTE:
SEE DECK SUPPORT CAP DETAIL FOR CAP ATTACHMENT.

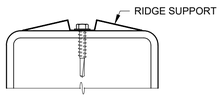


PURLIN P-1 1-req'd.



PURLIN P-2 2-req'd.

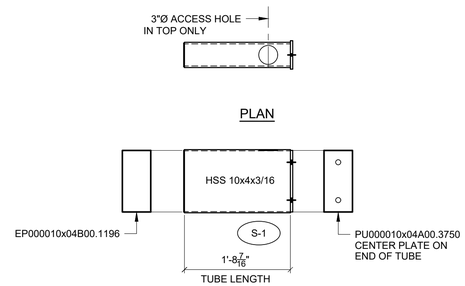
RS-3 5 REQ'D.



RIDGE ATTACHMENT DETAIL

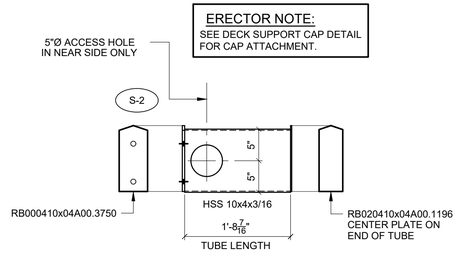
ERECTOR NOTES:
1. CENTER RIDGE SUPPORT ON BEAM AND ATTACH WITH DECK SCREWS @ 16" O.C. AND 4" MAX FROM ENDS PRIOR TO BUILDING ASSEMBLY.
2. RS TO BE CONTINUOUS ON TOP OF BEAM. EXCEPTION: RS TO STOP APPROXIMATELY 1/2" FROM EDGE OF TOP ACCESS HOLE(S). FIELD CUT RS TO LENGTH AS REQ'D.

DECK SUPPORT CAP DETAIL



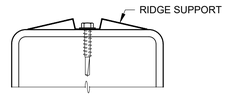
PURLIN P-4 4-req'd

ERECTOR NOTE:
SEE DECK SUPPORT CAP DETAIL FOR CAP ATTACHMENT.



PURLIN P-3 2-req'd.

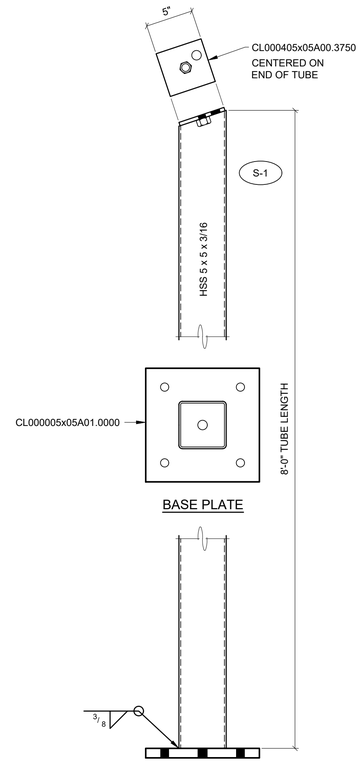
RS-1 1 REQ'D.



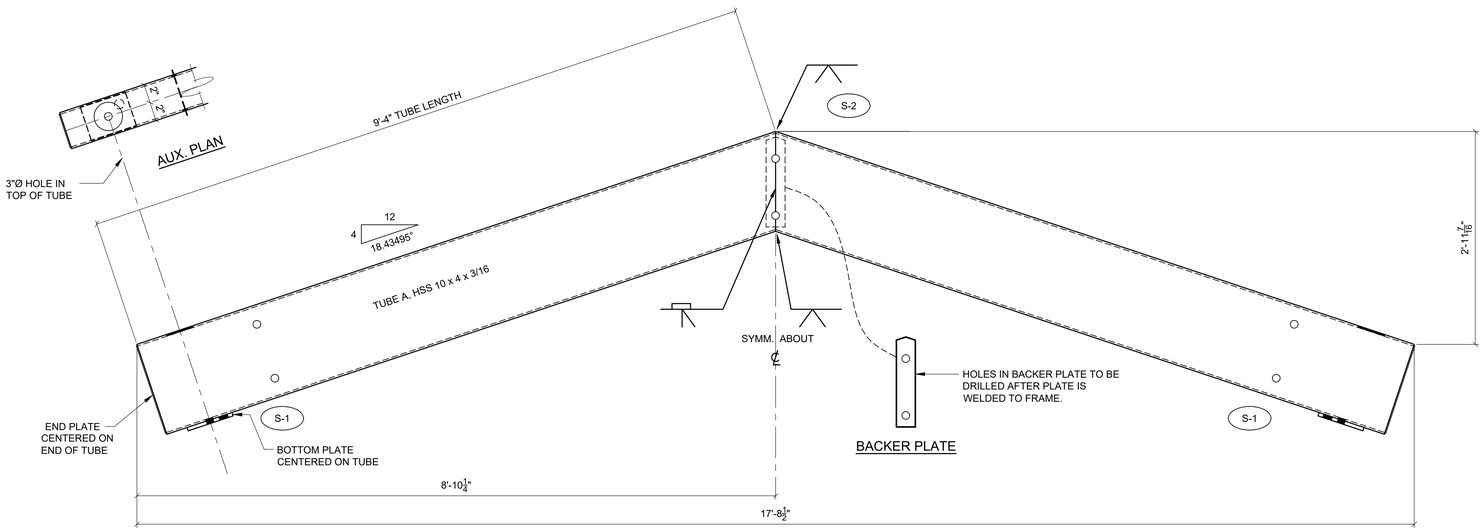
RIDGE ATTACHMENT DETAIL

ERECTOR NOTES:
1. CENTER RIDGE SUPPORT ON BEAM AND ATTACH WITH DECK SCREWS @ 16" O.C. AND 4" MAX FROM ENDS PRIOR TO BUILDING ASSEMBLY.
2. RS TO BE CONTINUOUS ON TOP OF BEAM. EXCEPTION: RS TO STOP APPROXIMATELY 1/2" FROM EDGE OF TOP ACCESS HOLE(S). FIELD CUT RS TO LENGTH AS REQ'D.

DECK SUPPORT CAP DETAIL



COLUMN C-1 4-REQ'D



FRAME F-1 2-REQ'D

CONSISTS OF:
2 - TUBE A
2 - END PLATE (EP000010x04B00.1196)
2 - BOTTOM PLATE (FR000408x04B00.3750)
2 - BACKER PLATE (FR000410x06A00.2500)

AS-G2030-04
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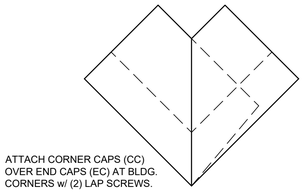
PROJ. NO.: 17-108

DRAWN:	RAR	7-5-17
CHKD:		
REV 1:		
REV 2:		
REV 3:		
REV 4:		
SHOP DWG NO.:		SH 8953R
EEC JOB NO.:		12156

SHEET NO.: 2 OF 3

DANIEL P. SEYMOUR REGISTERED 16042 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
7/13/17

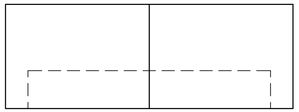


ATTACH CORNER CAPS (CC) OVER END CAPS (EC) AT BLDG. CORNERS w/ (2) LAP SCREWS.

TRUE PLAN

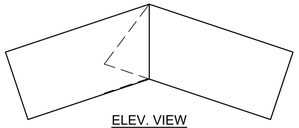
ELEV. VIEW

CC-11 4 REQ'D.



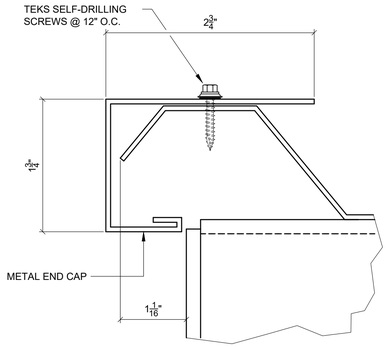
ATTACH PEAK COVER CAP (CC OVER END CAPS (EC) AT BLDG. GABLE PEAK w/ (2) LAP SCREW.

TRUE PLAN

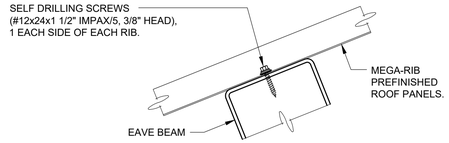


ELEV. VIEW

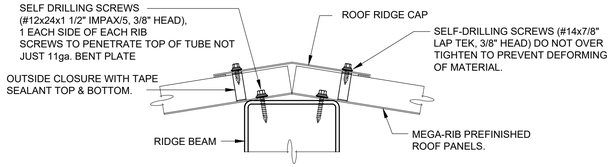
CC-13 2 REQ'D.



SECTION A / 3



DECK DETAIL @ EAVE BEAM

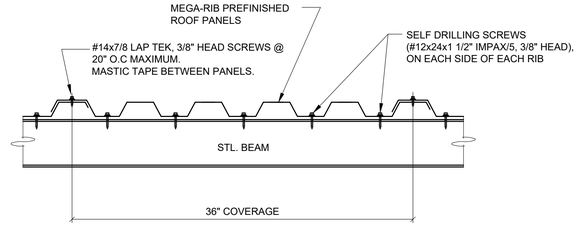


DECK DETAIL @ RIDGE BEAM

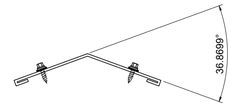
SECTION THRU RIDGE LINE

ERECTOR NOTE:

DECK SUPPORT CAP NOT SHOWN AT RIDGE DETAIL FOR CLARITY.



SECTION THRU ROOFING PANEL @ SUPPORTING MEMBER

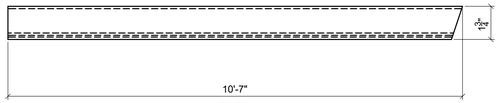


9" RIDGE CAP

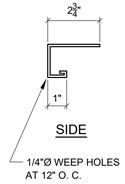
26 GA.

32 LN. FT. REQUIRED

INSTALLATION:
FASTEN RIDGE CAP TO EACH ROOFING PANEL AT EVERY OTHER RIB. (1) SCREW EACH SIDE.



ELEV



SIDE

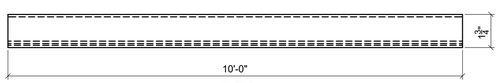
1/4"Ø WEEP HOLES AT 12" O. C.

METAL DECK END CAP EC-1R (AS SHOWN)

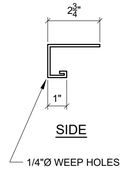
26 GAUGE 2-REQ'D.

METAL DECK END CAP EC-1L (OPPOSITE)

26 GAUGE 2-REQ'D.



ELEV

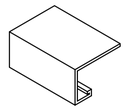


SIDE

1/4"Ø WEEP HOLES AT 12" O. C.

METAL DECK END CAP EC-2

26 GAUGE 6-REQ'D.

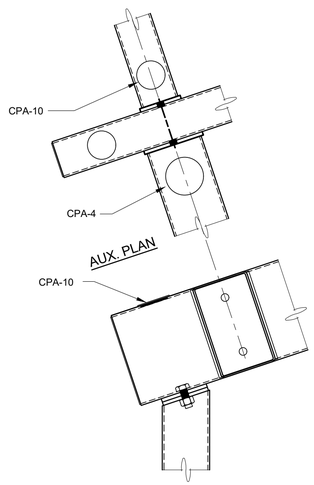


ATTACH SEAM CAPS (SC) OVER END CAP (EC) BUTT SPLICES w/ (2) LAP SCREWS.

SEAM CAP SC-1

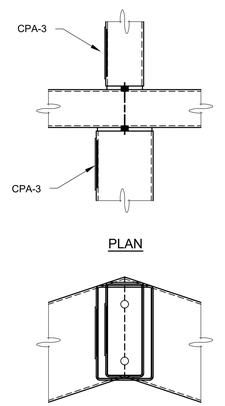
4 REQ'D.

HARDWARE PARTS LIST				
QUANTITY	LOOSE OR ATTACH	HARDWARE DESCRIPTION	PART NO.	REMARKS
12	L	3/4"Ø x 6" BOLT	H325 075 0600	
12	L	3/4"Ø HEX NUT	HN325P 075-10	
4	L	3/4"Ø x 2" BOLT	H325 075 0200	
4	A	3/4"Ø HEX NUT	HN325P 075-10	
8	L	3 1/2" SQ. COVERPLATE ASSEMBLY	CPA-10	
4	L	4 1/2" SQ. COVERPLATE ASSEMBLY	CPA-4	
4	L	5 1/2" SQ. COVERPLATE ASSEMBLY	CPA-3	
16	L	3/4"Ø x 24" (A307) ANCHOR BOLT	·	N.I.C.
16	L	1/4" x 3" SQ. WASHER	·	N.I.C.
32	L	3/4"Ø HEX NUT (ANCHOR & LEVELING)	·	N.I.C.



CONN S-1 4-req'd.

- 2 - CPA-10 3 1/2" SQUARE COVERPLATE ASSEMBLY
- 1 - CPA-4 4 1/2" SQUARE COVERPLATE ASSEMBLY
- 1 - 3/4"Ø x 2" BOLT (WITHOUT NUT)
- 2 - 3/4"Ø x 6" BOLT
- 2 - 3/4"Ø HEX NUT



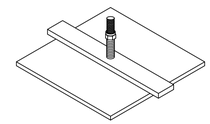
PLAN

CONN S-2 2-req'd.

- 2 - CPA-3 5 1/2" SQUARE COVERPLATE ASSEMBLY
- 2 - 3/4"Ø x 6" BOLT
- 2 - 3/4"Ø HEX NUT

ERECTOR NOTES:

1. BEFORE ATTACHING COVERPLATE ASSEMBLY, MAKE SURE THAT THE NUBS ON THE BACKER PLATE FACE THE COVER PLATE.
2. LOCK NUT IS PRESET IN SHOP, BUT MAY BE ADJUSTED SLIGHTLY IN FIELD IF REQ'D. FOR ERECTION.
3. PLACE COVERPLATE ASSEMBLIES ON TUBES CAREFULLY SO AS TO NOT SCRATCH THE PAINT ON TUBE.
4. ERECTION OF COVERPLATE ASSEMBLY:
   A. PUT ONE END OF BACKER PLATE THRU ACCESS HOLE AND BEHIND TUBE WALL.
   B. SHIFT ASSEMBLY TO ONE SIDE OF ACCESS HOLE SO THAT THE OTHER END OF THE BACKER PLATE CAN SLIDE THRU THE ACCESS HOLE AND BEHIND TUBE WALL. SUGGEST HOLDING A THIN PIECE OF CARDBOARD OR SIMILAR MATERIAL AGAINST TUBE TO PROTECT FROM SCRATCHING WHILE SLIDING COVERPLATE BACK AND FORTH INTO POSITION.
   C. POSITION ASSEMBLY SO THAT IT IS PARALLEL WITH TUBE AND NUBS ON BACKER PLATE SIT INSIDE THE ACCESS HOLE W/ BACKER PLATE ORIENTED AS NEAR VERTICAL AS POSSIBLE.
5. CAULK ALL AROUND COVERPLATE WITH A BEAD OF CLEAR SILICONE CAULK AFTER COVERPLATE IS PROPERLY POSITIONED.



COVERPLATE ASSEMBLY
CPA-3, CPA-4 & CPA-10

AS-G2030-04
JAMES HITE PARK
KEARNEYSVILLE, WV

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