Oldcastle BuildingEnvelope™

Sun Control-Solar Eclipse-Solar Shelf

INSTALLATION AND GLAZING MANUAL

Note: Installation and Glazing Manuals are product specific. ***FOR REVIEW ONLY!***

January 2012

Phone: 1-866-OLDCASTLE (653-2278)
Web Address: www.oldcastlebe.com

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SOLAR ECLIPSE

SOLAR SHELF

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GENERAL INFORMATION

PRODUCT USE

The SOLAR ECLIPSE™ and SOLAR SHELF™ sun control systems are intended for installation by glazing professionals with appropriate experience. Subcontractors without experience should employ a qualified person to provide field instructions and project management.

Variations from the details shown are not the responsibility of Oldcastle BuildingEnvelope™ when drawn by others. Oldcastle BuildingEnvelope™ strongly encourages its customers to utilize Oldcastle BuildingEnvelope™ supplied calculations and shop drawings. Sun Control products must be reviewed by an engineer for each project to ensure proper application.

Oldcastle BuildingEnvelope™ does not control the application or selection of its product configurations, sealant or glazing material and assumes no responsibility thereof. It is the responsibility of the owner, architect and installer to make these selections in strict compliance with applicable laws and building codes.

Consult sealant manufacturer for review and recommendation of sealant application. Follow sealant manufacturer's recommendations and literature for proper installation.

PROTECTION AND STORAGE

Handle all material carefully. Do not drop from the truck. Stack with adequate separation so materials do not rub together. Store material off the ground, protecting against the elements and other construction hazards by using a well ventilated covering. Remove material from package if wet or located in a damp area. For further guidelines consult AAMA publication " Care and Handling of Architectural Aluminum from Shop to Site".

CHECK MATERIAL

Check all material upon arrival at job site for quality and to determine any shipping damage.

Using the contract documents, completely check the surrounding conditions that will receive your material. Notify the general contractor by letter of any discrepancies before proceeding with the work. Failure to do so constitutes acceptance of work by other trades.

Check shop drawings, installation instructions, architectural drawings and shipping list to become familiar with the project. The shop drawings take precedence and include specific details for the project. The installation instructions are of a general nature and cover the common conditions. Due to varying job conditions all sealant used must be approved by the sealant manufacturer to insure it will perform per the conditions shown on the instructions and shop drawings. The sealant must be compatible with all surfaces in which adhesion is required, including other sealant surfaces. Use primers where directed by sealant manufacturer. Properly store sealant at the recommended temperatures and check sealant for remainder of shelf life before using.

FIELD CONDITIONS

All materials to be installed must be plumb, level and true. Aluminum to be placed in direct contact with masonry or incompatible material should be isolated with a heavy coat of zinc chromate, bituminous paint or non-metallic material.

CLEANING MATERIALS

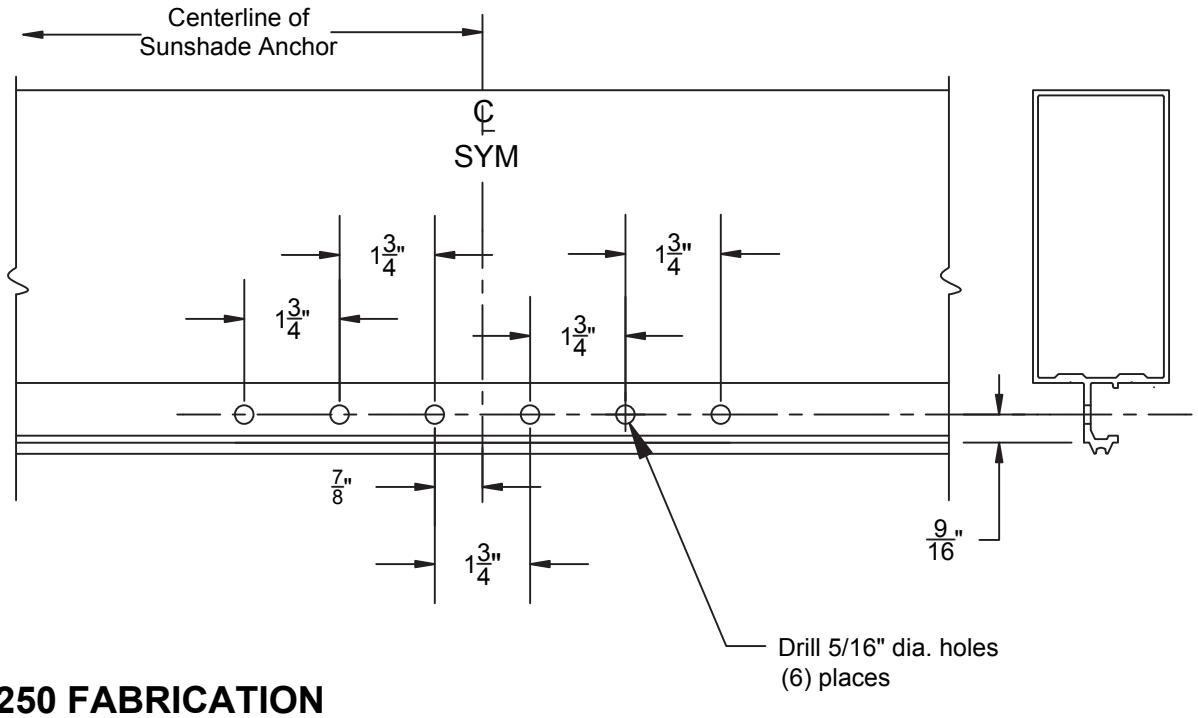
Cement, plaster terrazzo, alkaline and acid based materials used to clean masonry is very harmful to finishes. Any residue should be removed with water and mild soap immediately or permanent staining will occur. A spot test is recommended before cleaning agent is used. Refer to Architectural Finish Guide in the Detail Catalog.

SOLAR SHELF ™

1.1 Fabrication

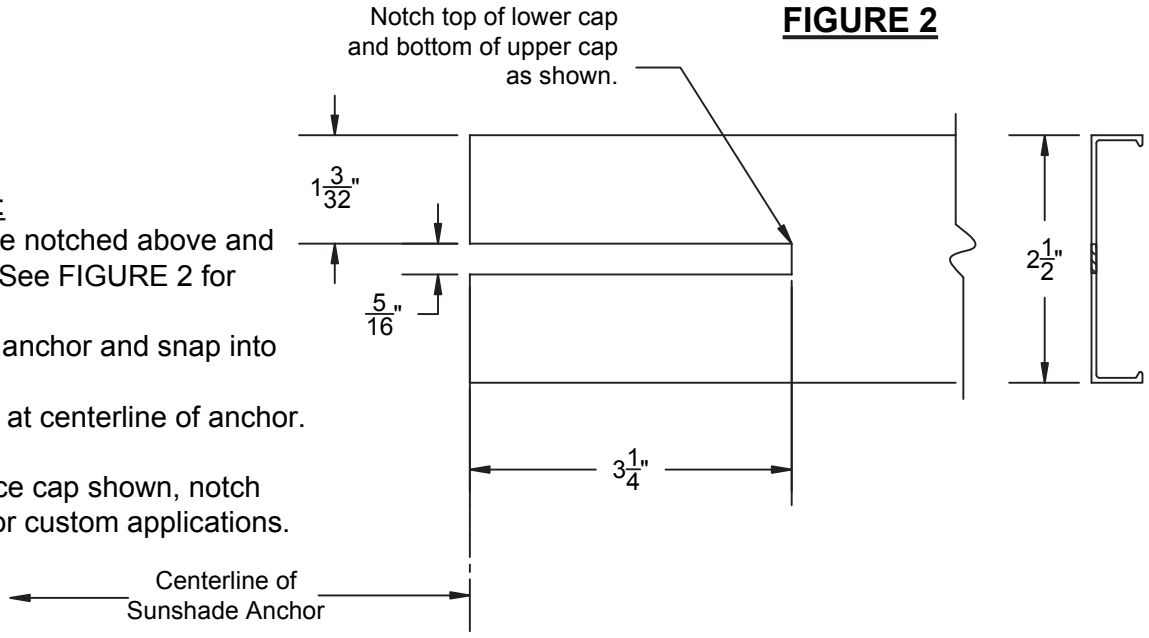
1) Locate the centerline of each sunshade anchor. The standard sunshade anchor for (CW-2058) for CW-250 will require (6) six 5/16" clear holes for attachment. See FIGURE 1 for hole locations. (Size, locations and quantity of bolts may vary based on project requirements, consult engineer for specific applications.)
2) Face caps must be notched to clear anchor. Face caps are cut at centerline of sunshade, notched on ends. Notch per FIGURE 2.

FIGURE 1



CW-250 FABRICATION

FIGURE 2



Installation Notes:

1) Face cap will be notched above and below anchor. See FIGURE 2 for fabrication.
2) Slide cap over anchor and snap into position.
3) Butt splice cap at centerline of anchor.

Note: CW-2 face cap shown, notch similar for custom applications.

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1.2 Assembly

3) Hardware required for attachment of standard anchor (CW-2058) will be contained in the hardware package, (part. no.12845). This package contains (1) one CW-2059 cover plate, (6) six 5/16"- 18 x 1" stainless steel hex head bolts, nuts and washers and (4) 3/8"-16 x 1-1/4" stainless steel hex head bolts, nuts and washers.

4) Attach anchor to mullion by first hooking into tongue of mullion. The 5/16" nuts will next in the side of the anchor and allow the bolt to be inserted through the stem and anchor and tightened. Repeat for each of the 6 bolts. See FIGURE 3 (Size and quantity of bolts may vary based on project requirements, consult engineer for specific job applications).

5) Once system is glazed, install section of CW-17 gasket onto CW-2059 cover plate and install plate over anchor attaching to mullion using (2) two FS-322 (#12-14 x 1" HWH Drill-Flex fasteners).

Note: Due to reduced clearance for attachment of anchors, special care must be taken when installing glass.

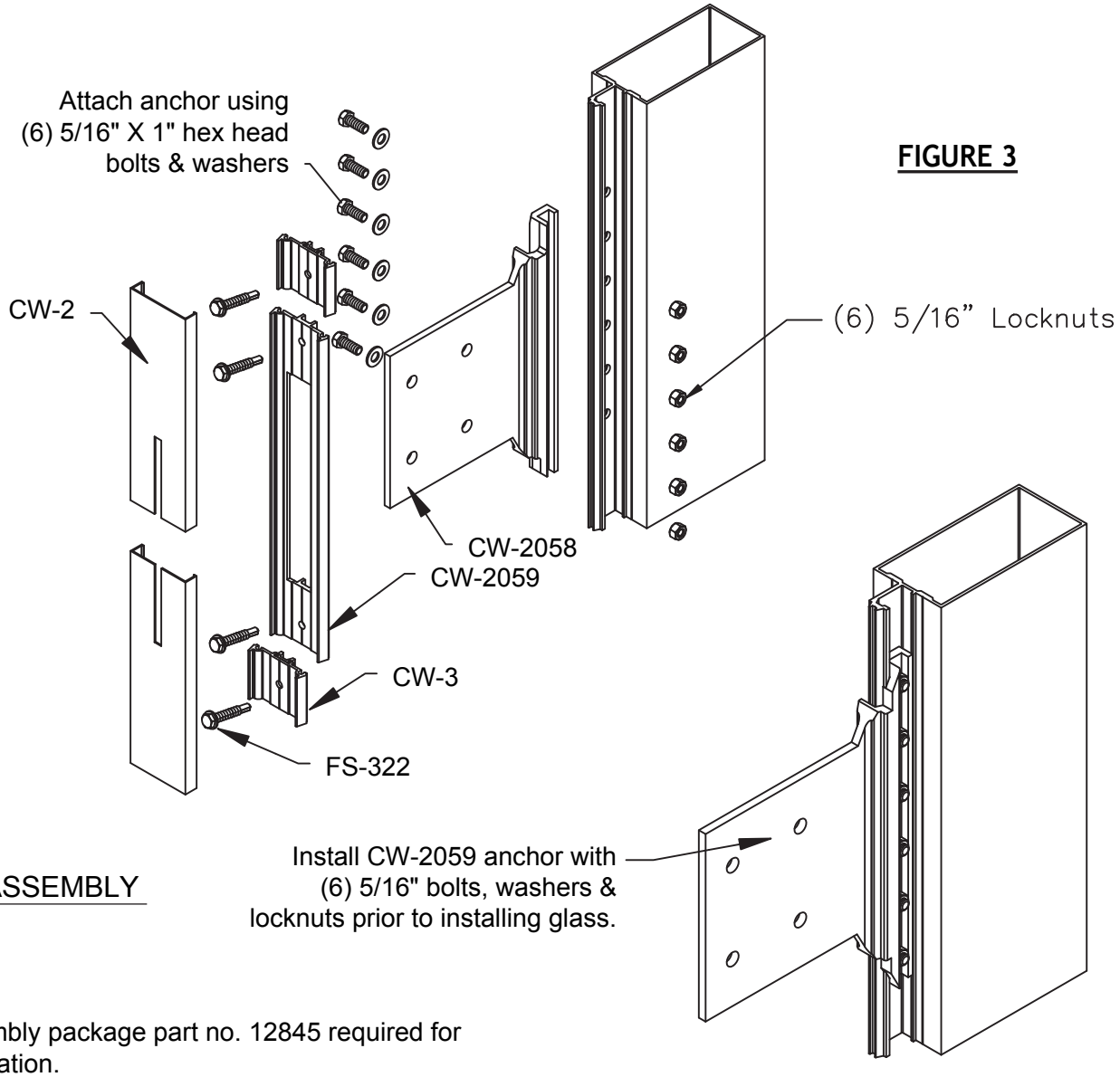

FIGURE 3

CW-250 ASSEMBLY

Notes:

1) Assembly package part no. 12845 required for installation.
2) Anchor must be installed prior to glazing.
3) Glass clearance at anchor is reduced to 3/16", so care should be exercised during installation of glass.

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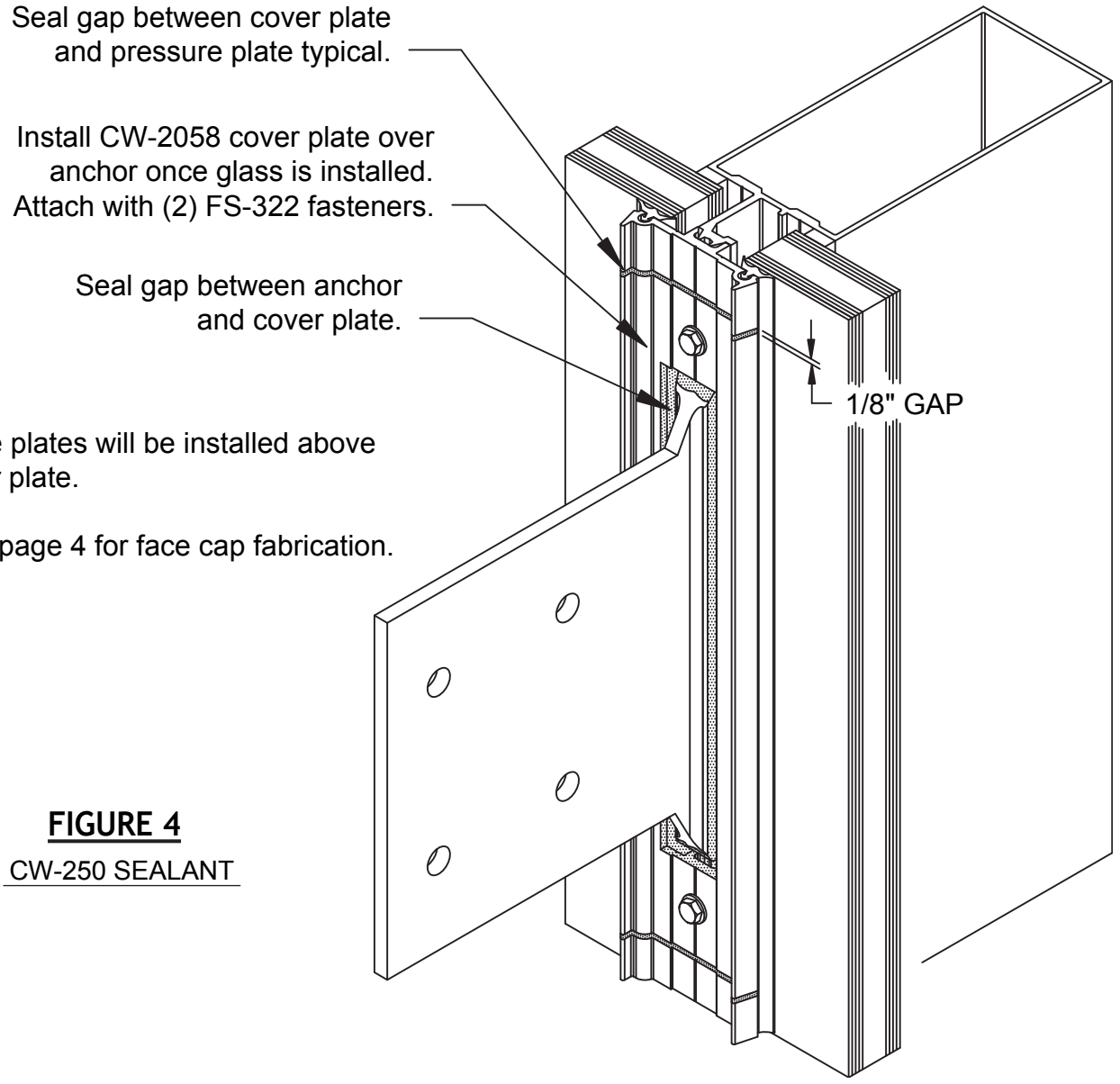
1.3 Sealant

6) Clean all surfaces to be sealed using isopropyl alcohol. Then seal cover plate to anchor to prevent any water infiltration. See FIGURE 4.
7) Pressure plates should be located above and below the cover plate allowing 1/8" joint. This joint should be cleaned and sealed. See FIGURE 4.



Note:
Typical pressure plates will be installed above and below cover plate.

See FIGURE 2, page 4 for face cap fabrication.

FIGURE 4

CW-250 SEALANT

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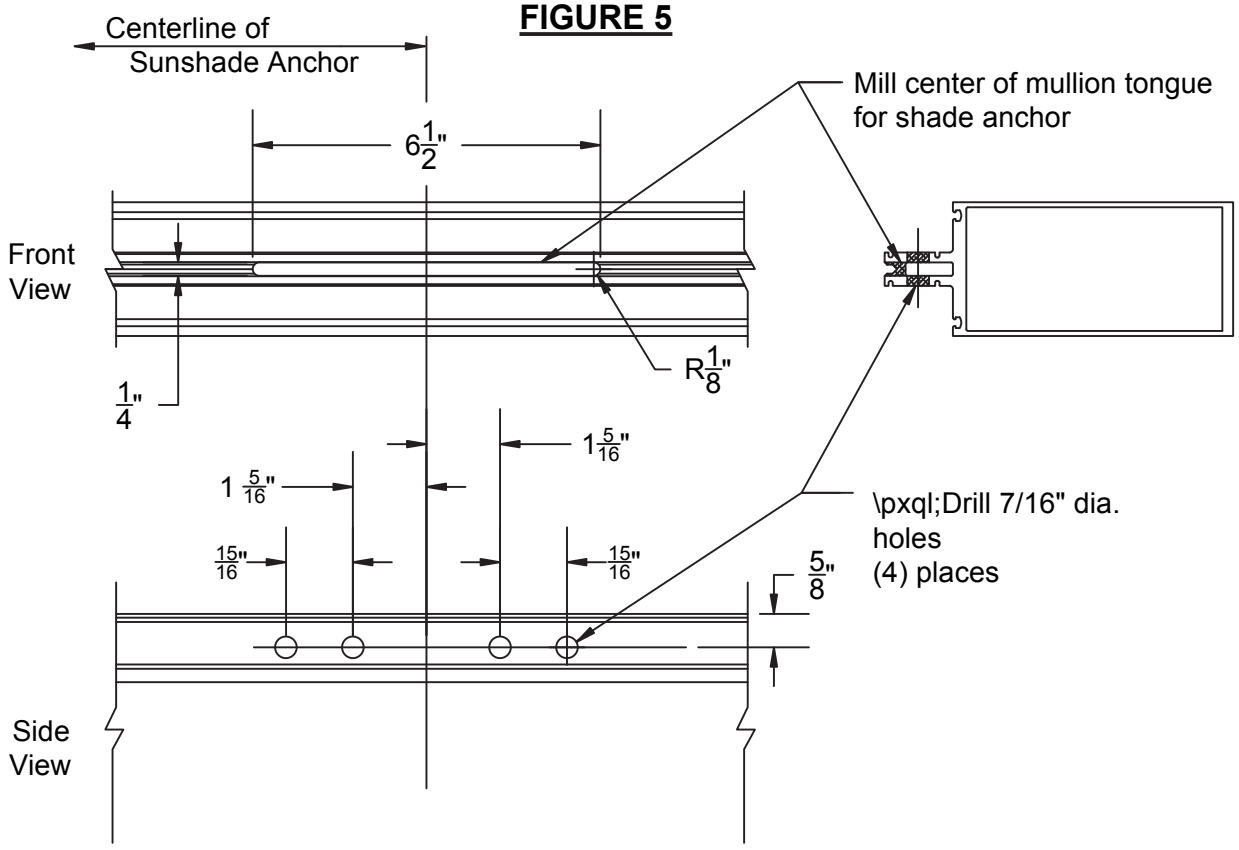
2.1 Fabrication

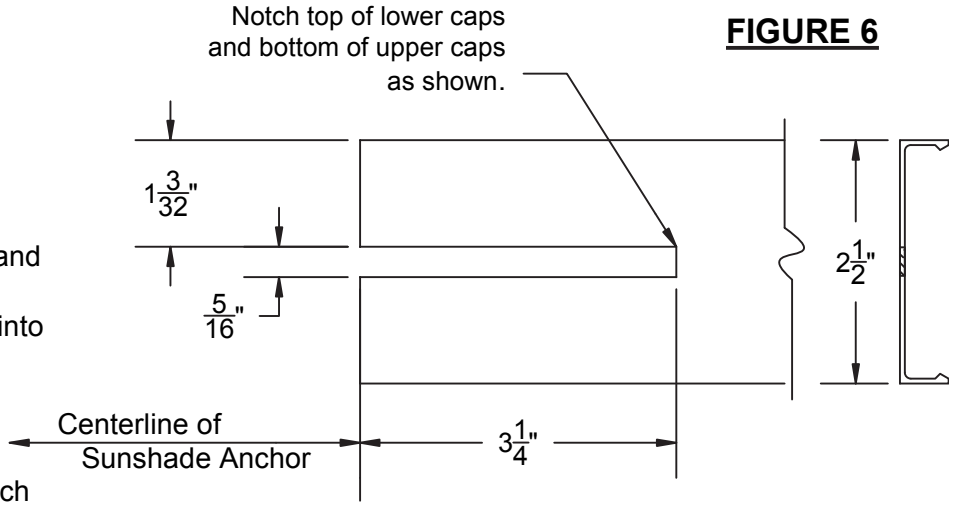
8) Locate the centerline of each sunshade anchor. A 1/4" wide x 6-1/2" long cutout must be milled into face of mullion tongue as shown in upper detail of FIGURE 5. The standard sunshade anchor (WW-107-01) for Reliance Curtain Wall will require (4) four 7/16" clear holes for attachment. See FIGURE 5 for hole locations. (Size, locations and quantity of bolts may vary based on project requirements, consult engineer for specific applications.)
9) Face caps must be notched to clear anchor. Face caps are cut at centerline of sunshade, notched on ends. Notch per FIGURE 6.

FIGURE 5



Reliance Fabrication

FIGURE 6



Installation Notes:
1) Face cap will be notched above and below anchor. See FIGURE 6.
2) Slide cap over anchor and snap into position.
3) Butt splice cap at centerline of anchor.

Note: WW-110 face cap shown, notch similar for custom applications.

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1.2 Assembly

10) Hardware required for attachment of standard anchor (WW-107-01) will be contained in the hardware package, (part. no. 12854). This package contains (1) one WW-162-02 cover plate, (4) four 3/8"- 16 x 7/8" stainless steel button socket head bolts, nuts and washers and (4) four 3/8"-16 x1-1/4" stainless steel hex head bolts, nuts and washers. (Size and quantity of bolts may vary based on project requirements, consult engineer for specific job applications).

11) Attach anchor to mullion by first inserting anchor into cutout in face of mullion tongue. Attach anchor using the 3/8"-16 x 7/8" S.S. button socket head bolts, washers and securing using the 3/8"-16 S.S. jamb nuts. Repeat for each of the 4 bolts. See FIGURE 7 (Size and quantity of bolts may vary based on project requirements, consult engineer for specific job applications).

12) Once system is glazed. Install section of GP-103 gasket onto WW-162-02 cover plate and install plate over anchor attaching to mullion using (2) two FS-325 (#12-14 x 1-1/2" HWH Drill-Flex fasteners).

Note: Due to reduced clearance for attachment of anchors, special care must be taken when installing glass.

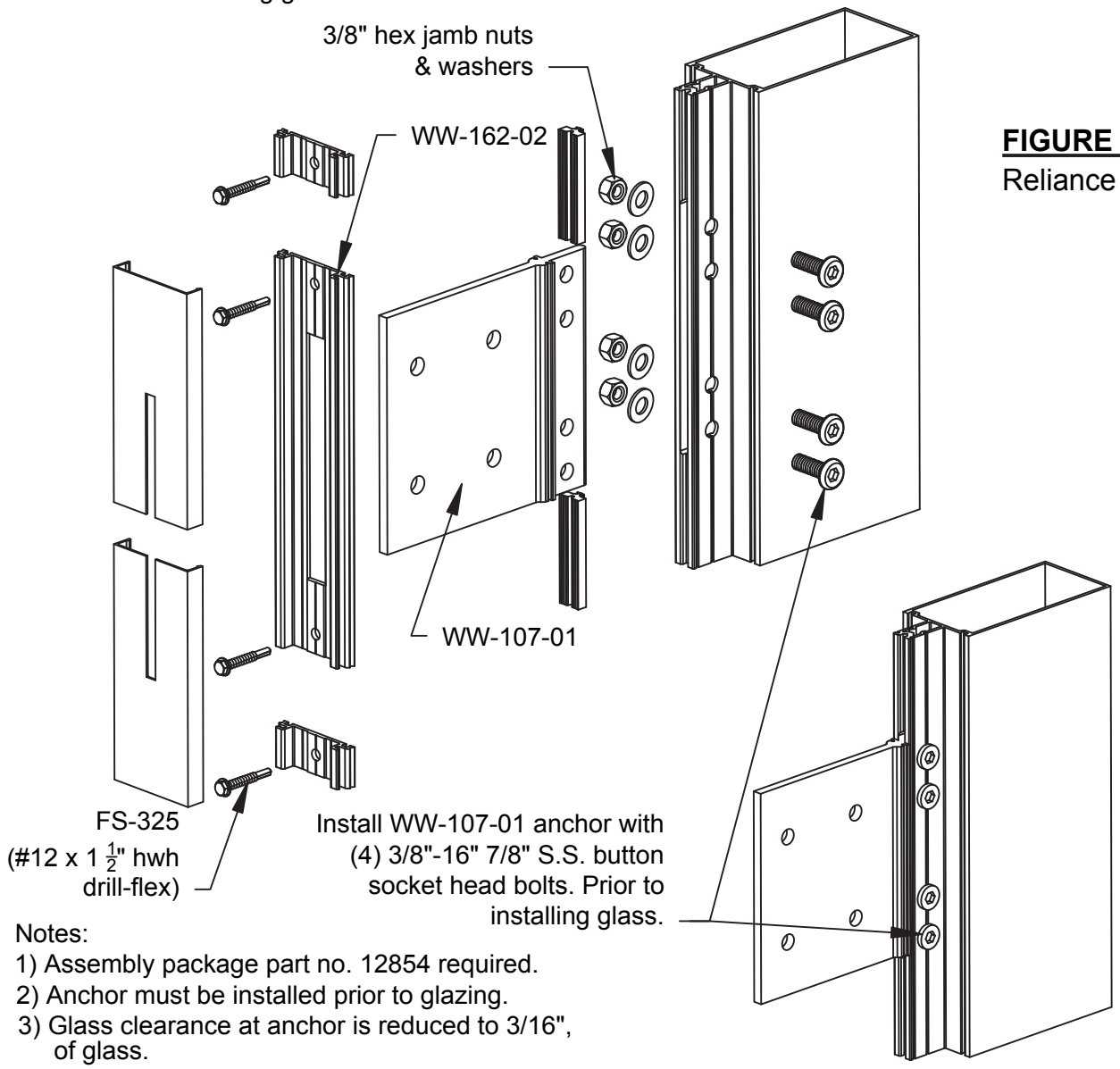

FIGURE 7
Reliance Assembly

Notes:

1) Assembly package part no. 12854 required.
2) Anchor must be installed prior to glazing.
3) Glass clearance at anchor is reduced to 3/16", of glass.

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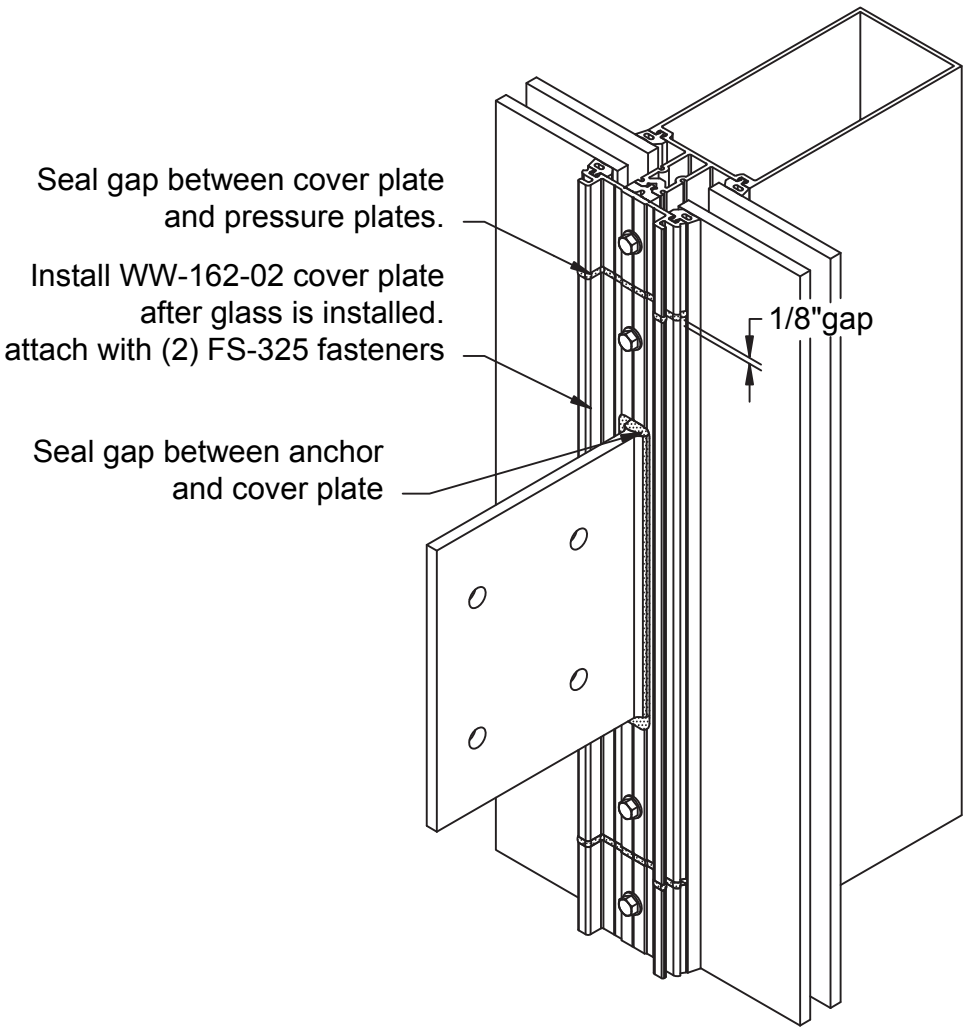
1.3 Sealant

6) Clean all surfaces to be sealed using isopropyl alcohol. Then seal cover plate to anchor to prevent any water infiltration. See FIGURE 8.
7) Pressure plates should be located above and below the cover plate allowing 1/8" joint. This joint should be cleaned and sealed. See FIGURE 8.

FIGURE 8

Reliance Sealant



Note:

1) Typical pressure plates will be installed above and below cover plate.
2) See FIGURE 6 page 7 for face cap fabrication.

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3.1 Fabrication

15) All standard sunshade outriggers are factory drilled for attachment to shade louvers

16) Cut louvers to fit between outriggers per formulas shown on FIGURE 9.

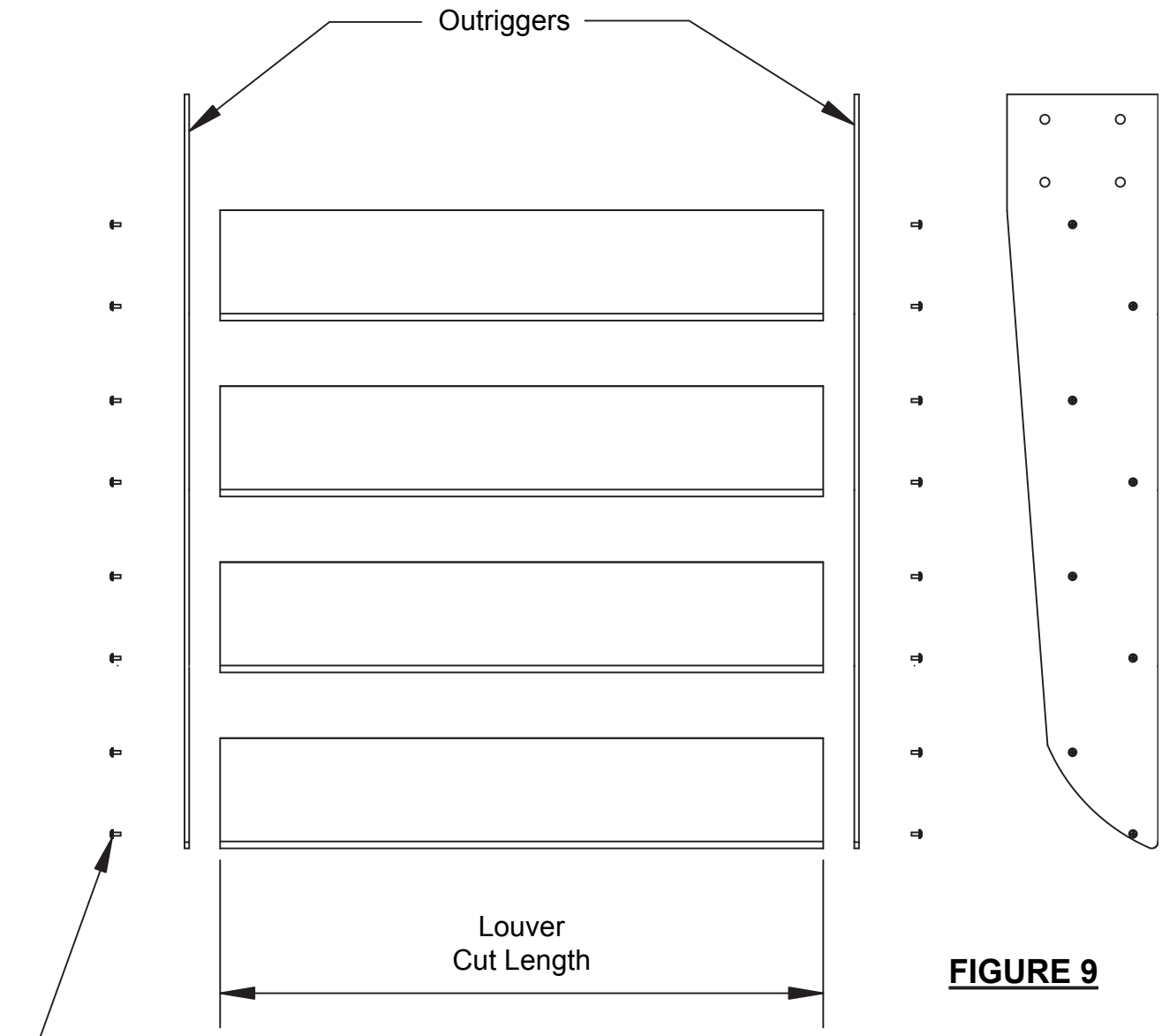

FIGURE 9

Fabrication Notes:

1) Louver Cut Length = Mull centerline minus 11/16" or mull centerline minus anchor (1/4" std.) minus 3/8" (thickness of two standard outriggers) minus 1/16" clearance.
2) Each louver attached to outriggers with (4) FS-20 fasteners. Custom louvers may require additional fasteners.
3) Note: Number of louvers will vary based on sunshade depth and project requirements.

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3.2 Assembly

17) Attach outriggers to louvers using FS-20 (#10 x 1/2" stainless steel button socket head). Quantity of fasteners will vary based on sunshade depth. See FIGURE 10.

18) Attach sunshades to anchors using (4) four 3/18"-16 x 1" stainless steel head head bolts. See FIGURE 11. (Size and quantity of bolts may vary based on project requirements, consult engineer for specific job applications.)

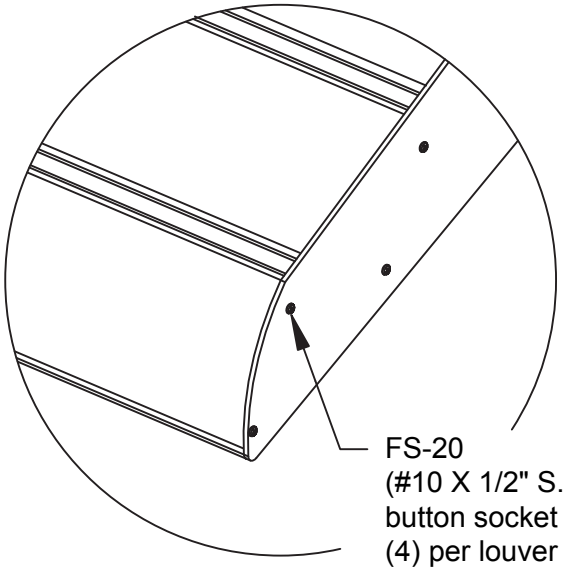

FIGURE 10
Sunshade Assembly

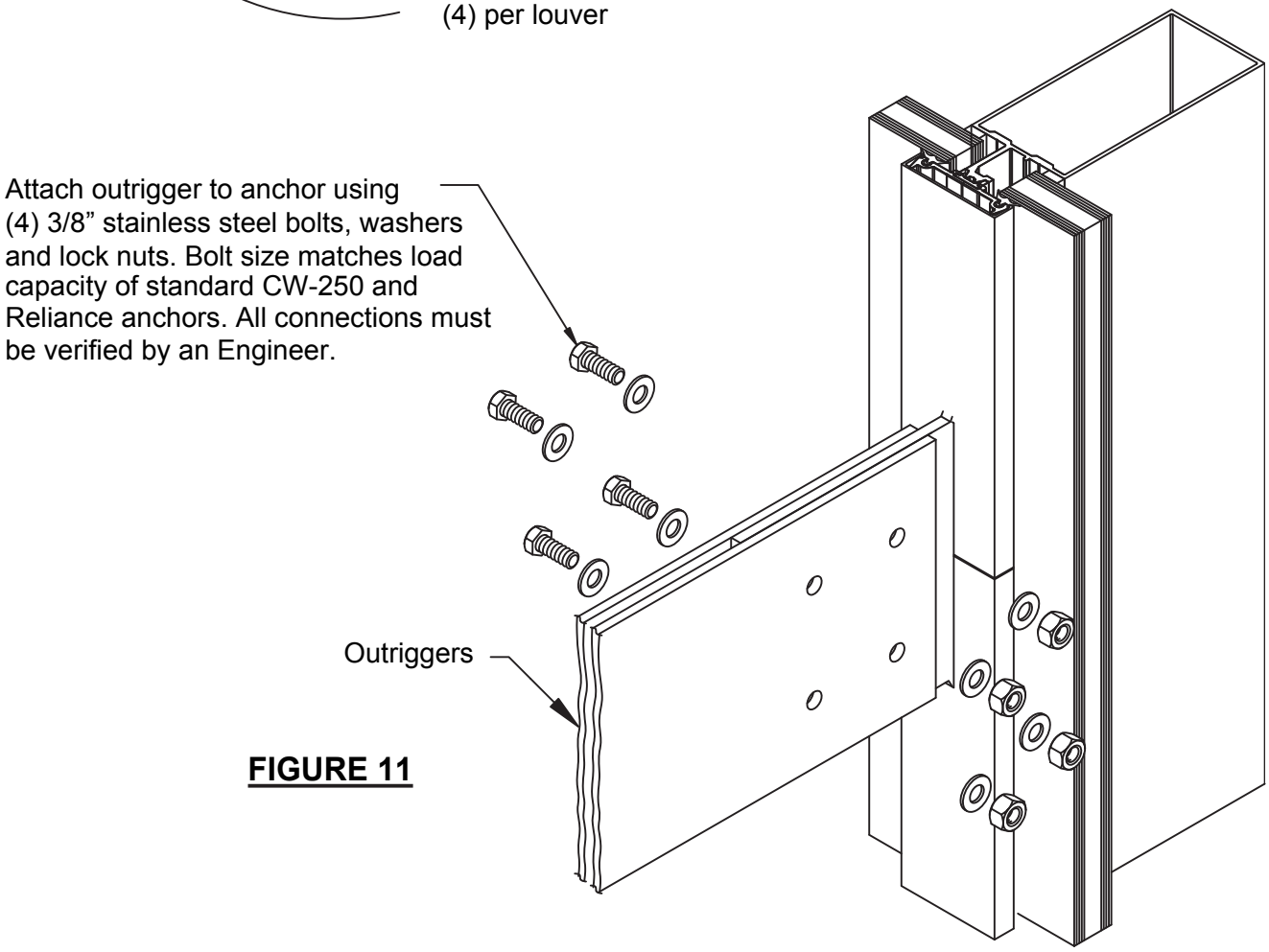

FIGURE 11

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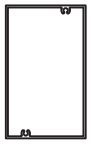
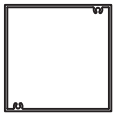
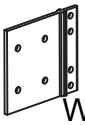
Parts List

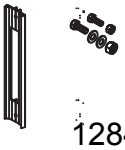
Sunshade Extrusions

ITEM	DESCRIPTION
 SS-100	4" Diamond
 SS-101	5" Rectangle
 SS-102	4" Square
 SS-103	5" Zee
 SS-104	4" Round
 SS-105	5" Round
 SS-106	5" Bullnose
 SS-107	6" Half Airfoil
 SS-108	6" Airfoil
 SS-109	4" Airfoil

Sunshade Anchors

 CW-2058	CW-250 Anchor
 WW-107-01	Reliance Anchor

FASTENERS

ITEM	DESCRIPTION
 FS-20	#10 X 1/2" S.S. Button Socket Head Blade Attachment
 12845	Hardware Package for CW-250 Sunshade Anchor
 12854	Hardware Package for Reliance Sunshade Anchor
 FS-322	#12-24 x 1" H.W.H. Drill Flex Fastener CW-250 Pressure Plate Attachment
 FS-325	#12-24 x 1 1/2" H.W.H. Drill Flex Fastener Reliance Pressure Plate Attachment

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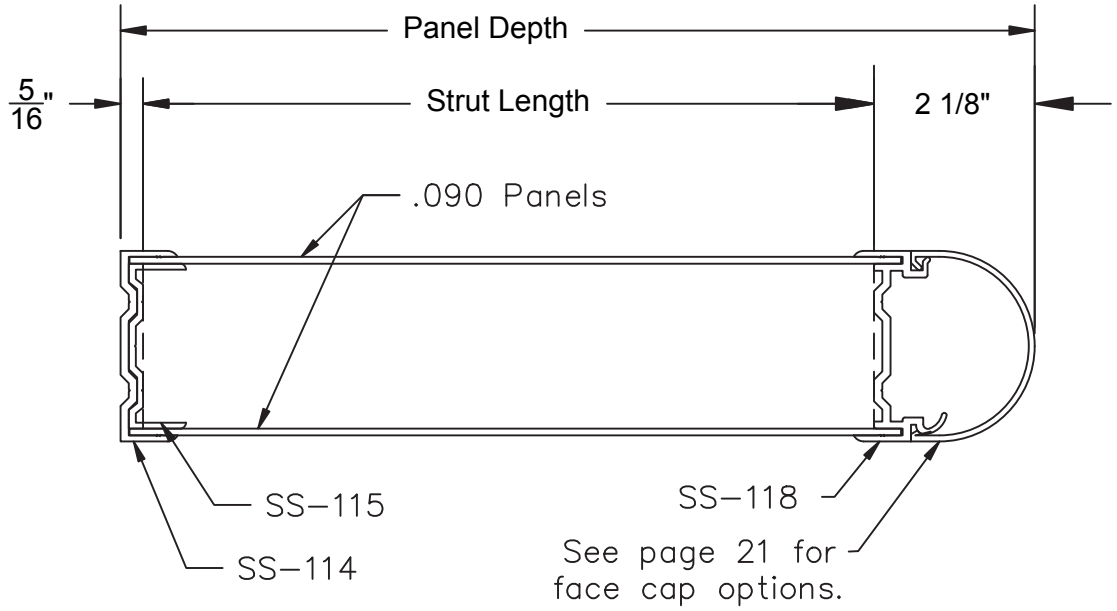
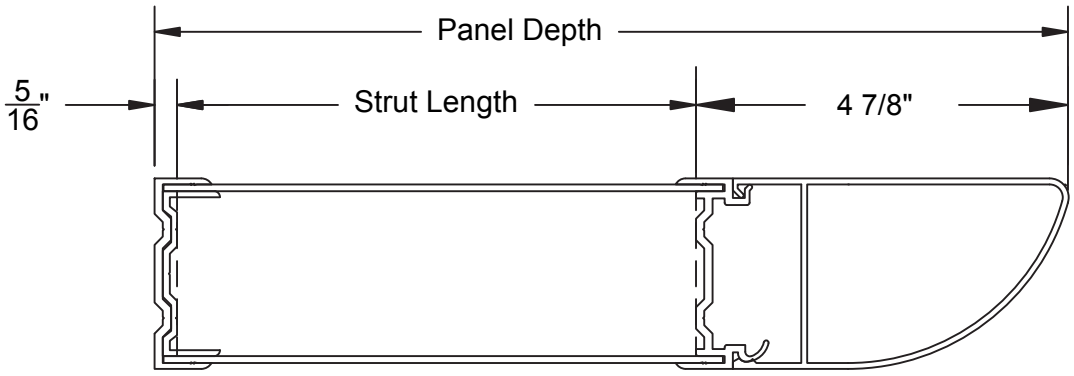
4.1) Cut material to size per chart below.

Part Description	Part No.	Cut Length Formulas
Wall Mount	SS-114	Maximum length 24 ft, splice at mid-lite
Panel Retainer	SS-115	Mull Centerline minus 2 5/8"
Strut	SS-116	Shelf Depth minus 2 3/8" for SS-124 & SS-125 Covers Shelf Depth minus 5 1/8" for SS-119 & SS-123 Covers See **FIGURE 12**
.090 Panels		Maximum length 10 ft, splice at mull centerline
Cap Retainer	SS-118	Maximum length 24 ft, splice at mid-lite
Interior Cap	Varies	Maximum length 24 ft, splice at mid-lite

* Note: If mull centerline is greater than 5', additional strut must be added at mid-lite and Panel Retainer length will be cut to fit between struts using formula above.





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Fabrication

4.2) Locate 1/4" sealant joint at centerline of strut, every 10 feet (max.). Run bead of sealant between panels, hard splice extrusions at mid-lite every 24 feet (max.). See FIGURE 13.

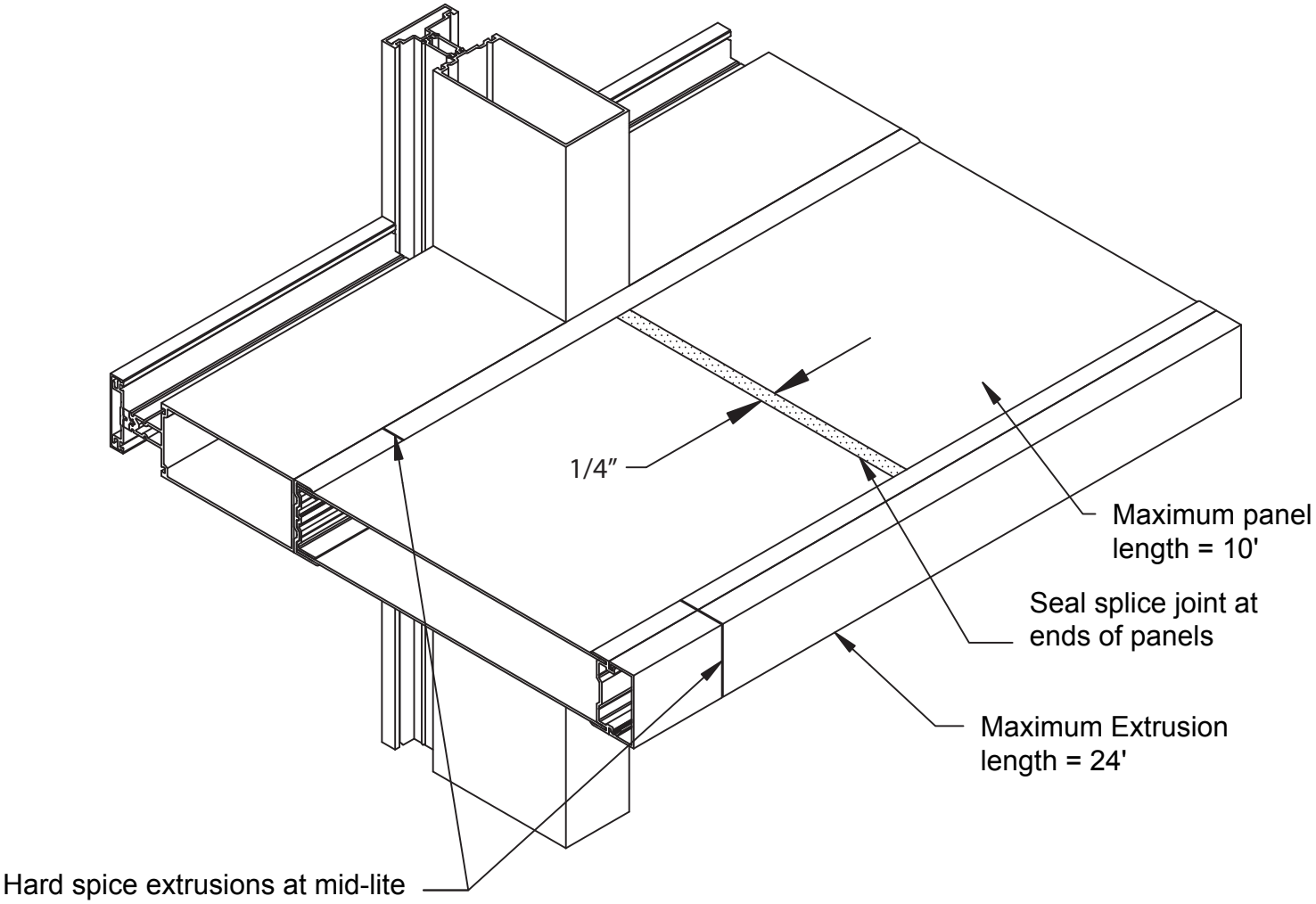

FIGURE 13

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4.3) Fabricate the SS-114 wall mount (see FIGURE 14) and SS-118 cover retainer (see FIGURE 15) as shown. Locate holes at center line of shelf struts. (Struts should be located at center line of vertical mullions. If bay is larger than 5 feet, add an additional strut at mid-lite. Addition struts may also be required at end cap locations.)

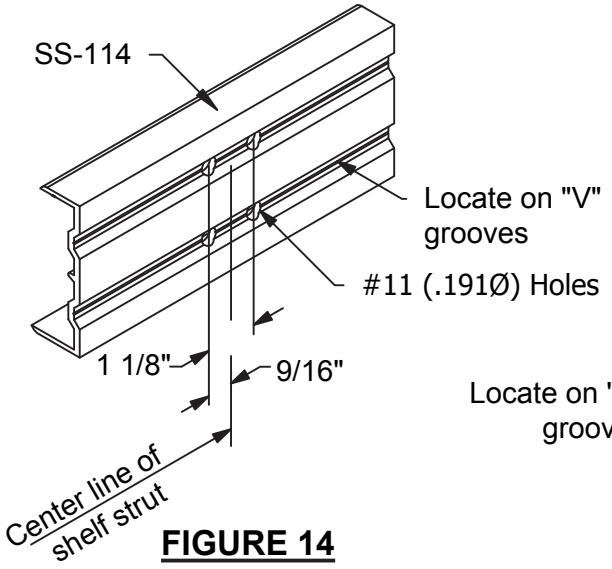


FIGURE 14

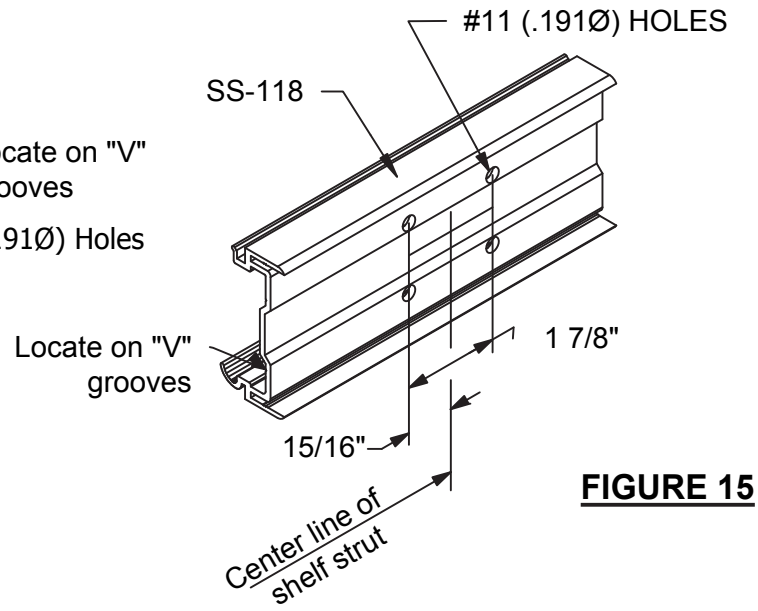
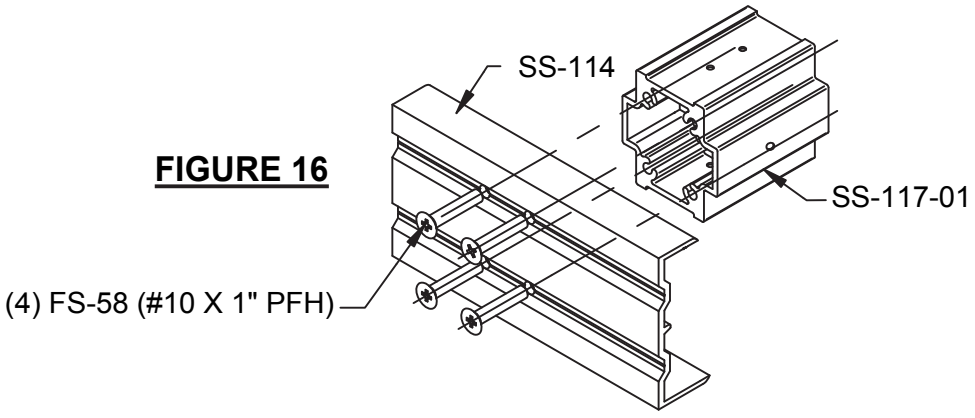


FIGURE 15

4.4) Attach the SS-117-01 shear block to the SS-114 wall mount using (4) four FS-58 (#10 x 1" pfh) fasteners. See FIGURE 16. Optional assembly: Attach SS-116 strut to SS-114 wall mount with (4) FS-58 fasteners. See FIGURE 17.

FIGURE 16



Optional Strut Installation

Strut may be installed directly to wall mount using (4) FS-58 fasteners. Use hole pattern shown in FIGURE 15.

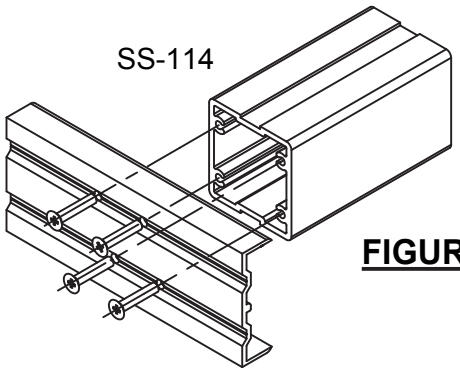


FIGURE 17

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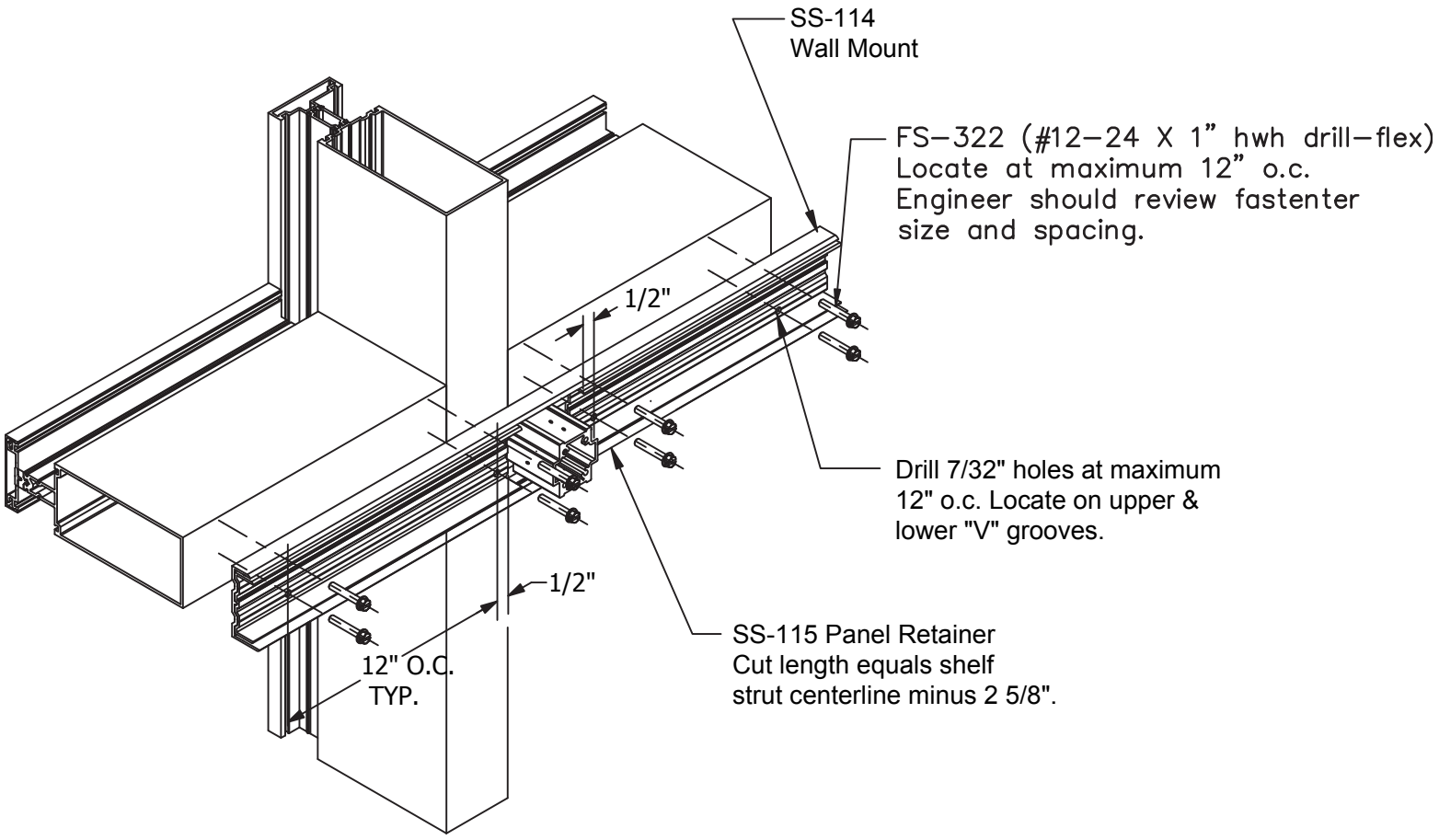
4.5 Fabricate anchor holes in SS-114 wall mount and the SS-115 panel retainer. Two rows of 7/32" dia. holes should be drilled between each strut at 12" on center or as required by engineer's review. Holes should be located in SS-115 at 1/2" from both ends. Take care to align holes in both extrusions. See FIGURE 18.



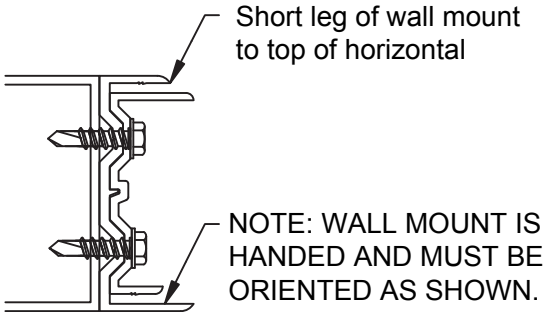


FIGURE 18

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4.6) Drill (4) #11 (.191 dia.) holes and counter sink for #10 pfh in end of struts. See FIGURE 19. Install the SS-116 shelf strut onto the shear blocks and attach with (4) four FS-58 fasteners, two on top and one on either side. See FIGURE 20. Strut to be cut shelf depth minus 2 3/8" for SS-124 & SS125, and minus 5 1/8" for SS-119 & SS-123.

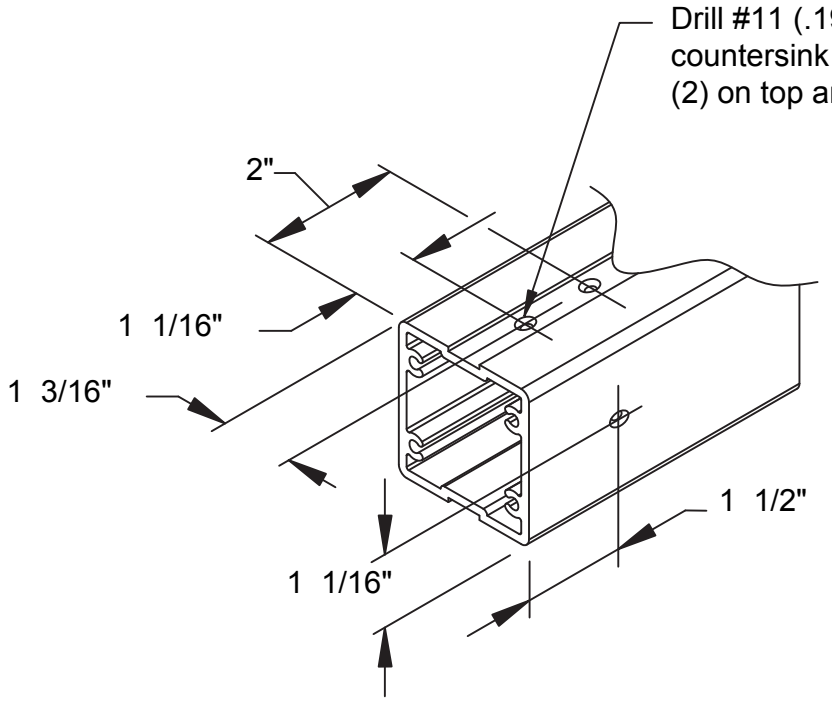

FIGURE 19

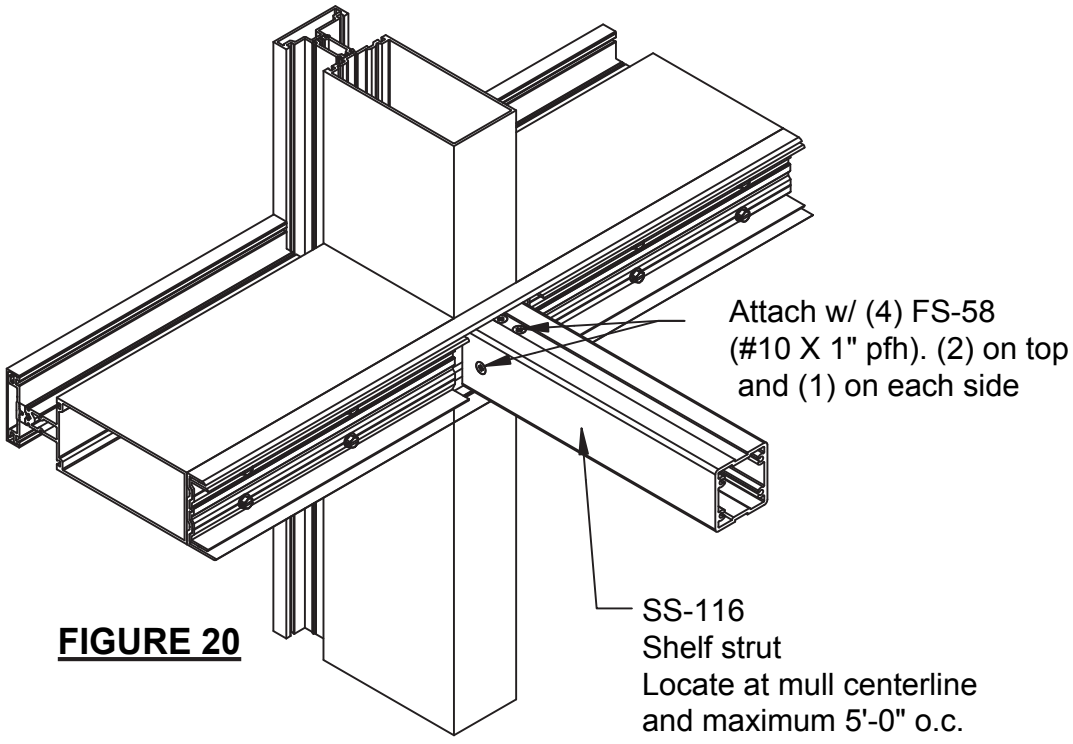

FIGURE 20

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4.7) Install .090" thick aluminum panels into upper and lower receivers. Lightly tap on edge of panel to secure into track. Place wood block on outer edge of panel and tap into place using dead-blow hammer. See FIGURE 21. Note: Panels should be cut shelf depth minus 1 7/8" for SS-124 & SS-125, and shelf depth minus 4 5/8" for SS-119 & SS-123.

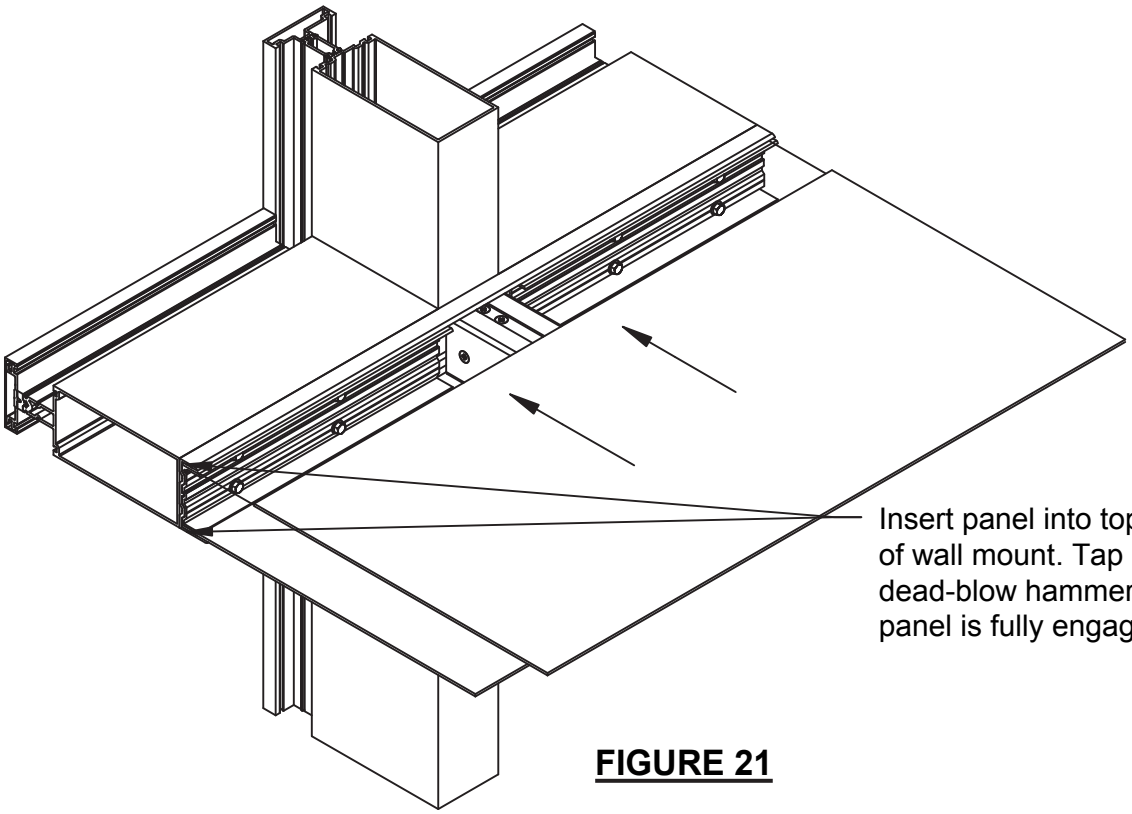
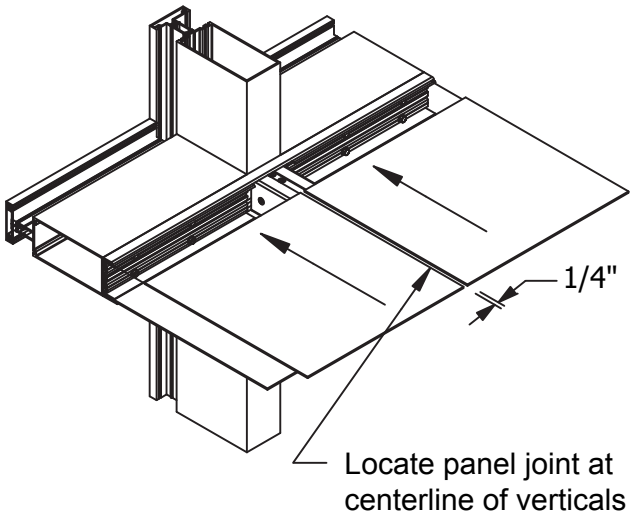


FIGURE 21



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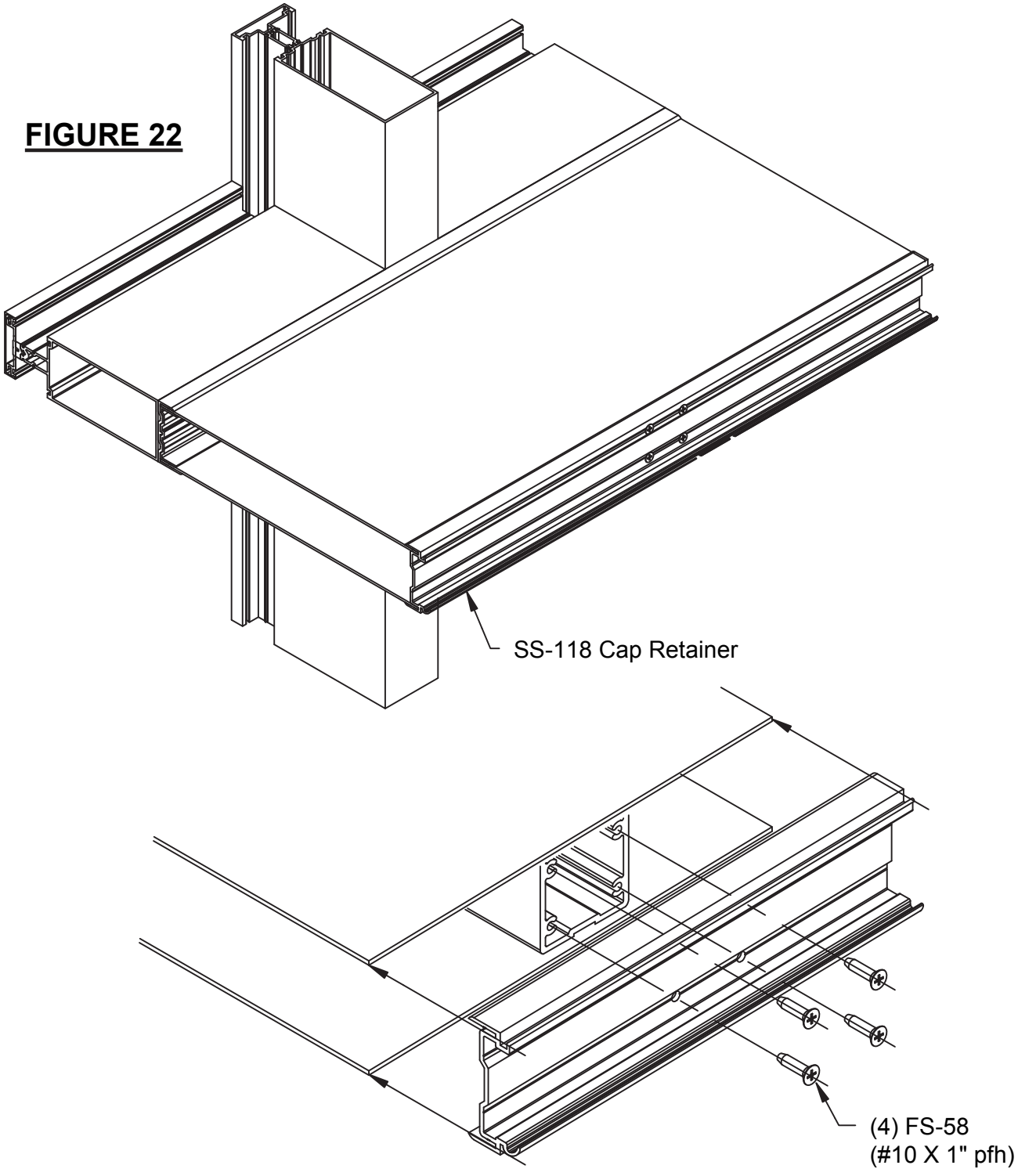
4.8) Install SS-118 cap retainer to back of panels. Retainer may have to be tapped into place using a block and dead-blow hammer. Attach to struts using (4) four FS-58 fasteners at each location. See FIGURE 22.

FIGURE 22



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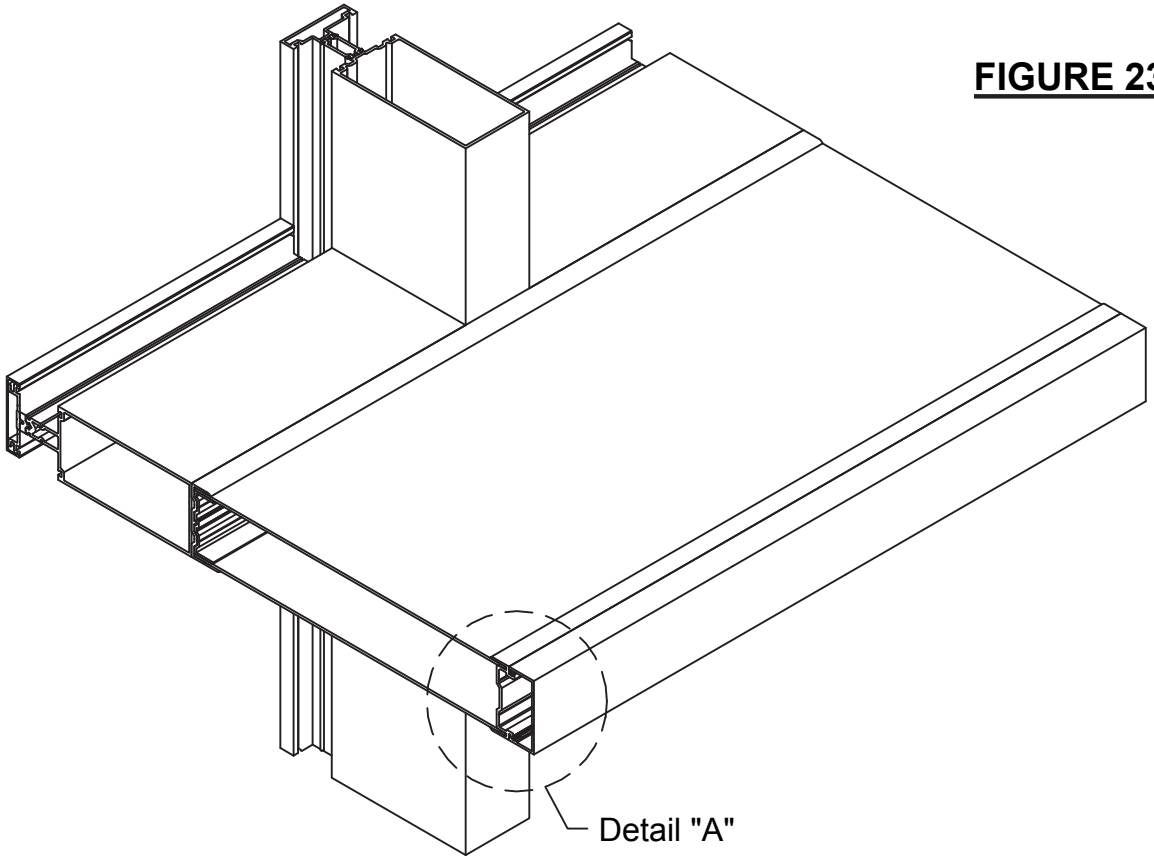
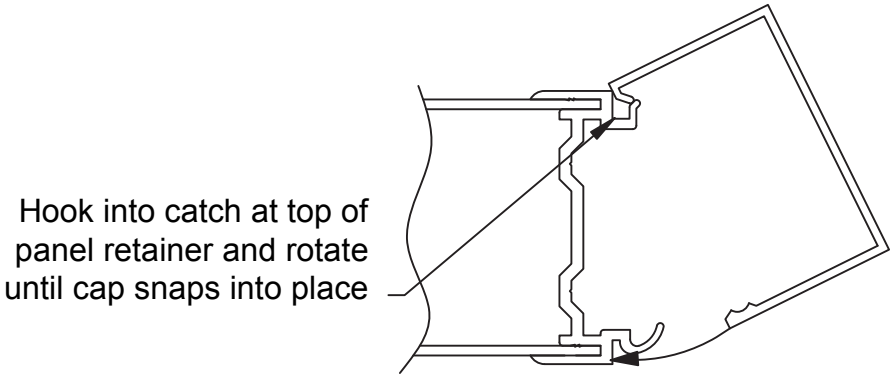
4.9) Install face cap by hooking into upper track and rotating downwards until cap snaps into place. See FIGURE 23.

FIGURE 23





Detail "A"

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4.10) If necessary, attach end caps to shelf strut using (4) four FS-25 (#8 x 1/2" pfh tek) fasteners, at ends requiring end caps; panel strut must be mounted flush with ends of panels. See FIGURE 24.

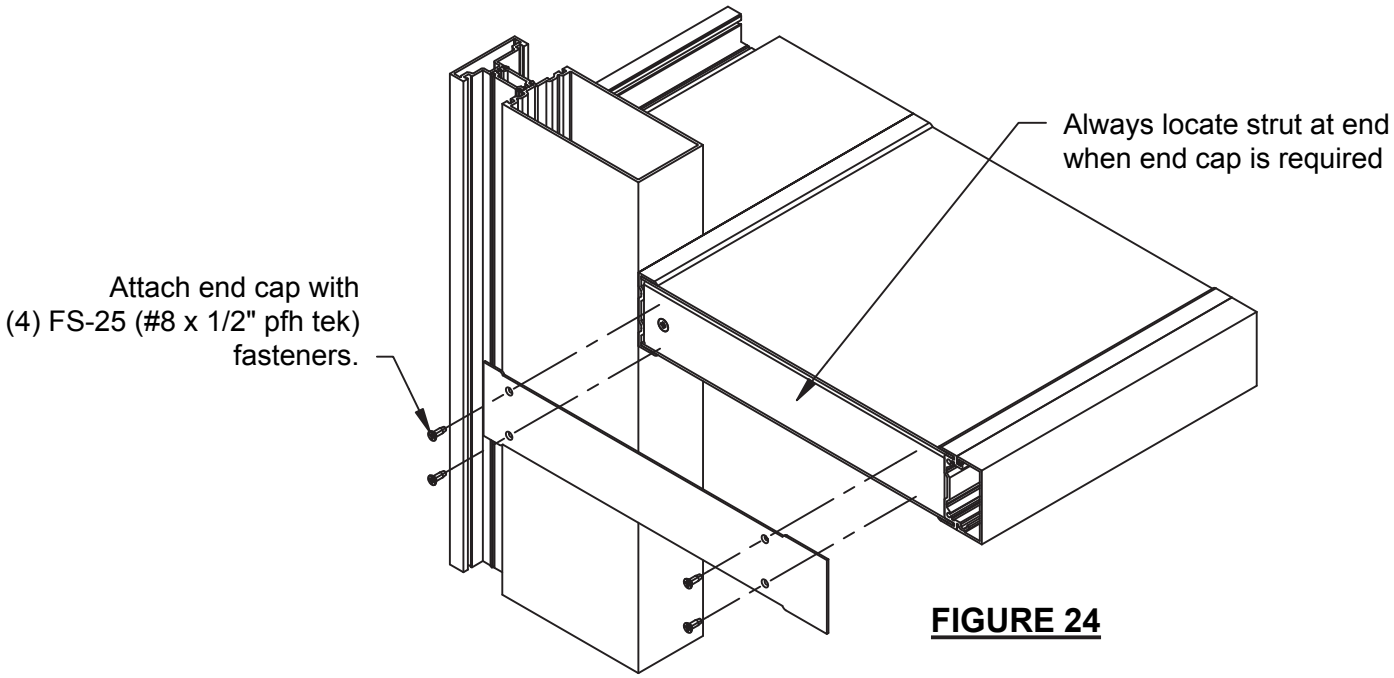
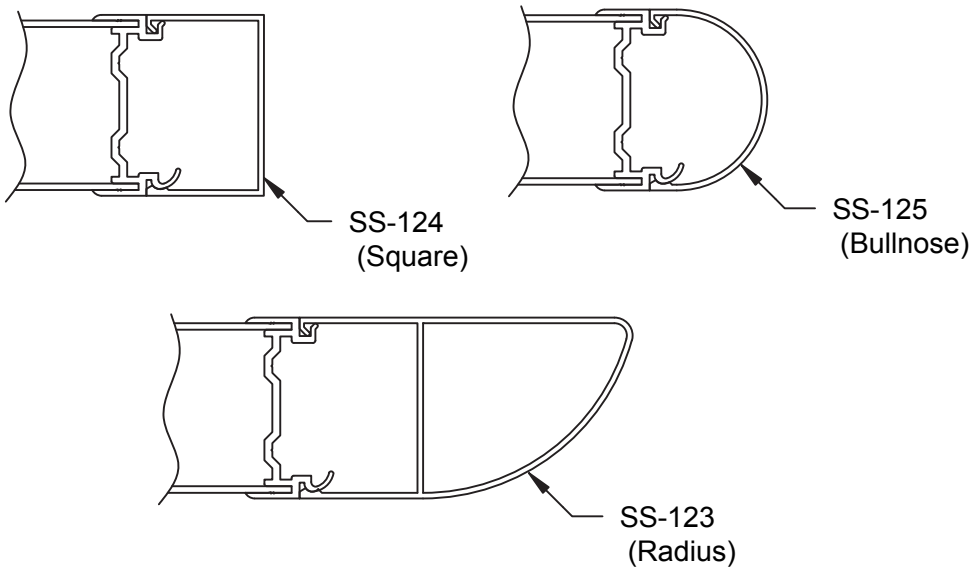


FIGURE 24

Optional Interior Covers



SOLAR SHELF ™

PARTS LIST

Shelf Extrusions

ITEM	DESCRIPTION
 SS-114	Wall Mount
 SS-115	Panel Retainer
 SS-116	Strut
 SS-118	Cover Retainer

Interior Covers

 SS-123	Radius Cover
 SS-124	Square Cover
 SS-125	Bullnose Cover

Accessories

ITEM	DESCRIPTION
 SS-117-01	Shear Block

FASTENERS

 FS-25	#8 X 1/2" P.F.H. Tek Screw End Cap Attachment
 FS-58	#10 X 1" P. F. H. Attachment of Shear Block, Wall Mount, & Cover Retainer
 FS-322	#12-24 x 1" H.W.H. Drill Flex Fastener Attachment of Wall Mount to Curtain Wall

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