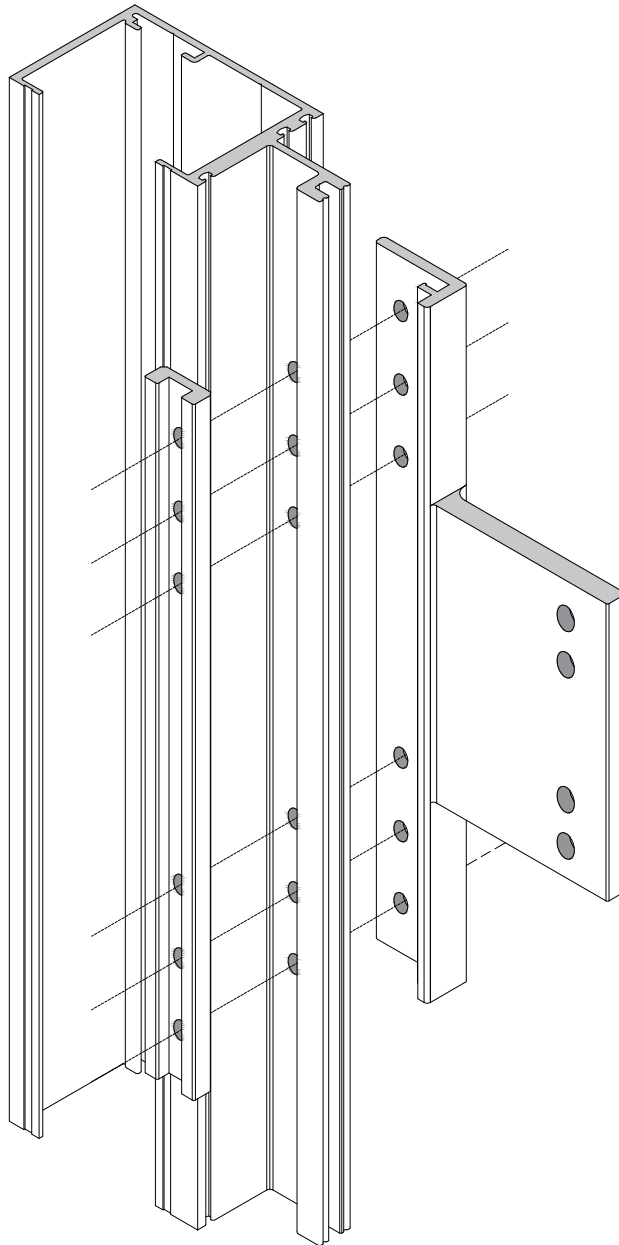


TUBELITE®

DEPENDABLE

**LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS**



**SUNSHADE BRACKET for 400 CASSETTE
400SS & 400CW/T Curtain Wall Back Mullions**

INSTALLATION INSTRUCTIONS

3056 Walker Ridge Dr. NW, Suite G • Walker, MI 49544 • 800-866-2227

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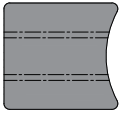
GENERAL CONSTRUCTION NOTES

1. These instructions cover typical product application, fabrication, installation and standard conditions and are general in nature. They provide useful guidelines, but the final shop drawings may include additional details specific to the project. Any conflict or discrepancies must be clarified prior to execution.
2. Materials stored at the job site must be kept in a safe place protected from possible damage by other trades. Stack with adequate separation so materials will not rub together and store off the ground. Cardboard or paper wrapped materials must be kept dry. Check arriving materials for quantity and keep a record of where various materials are stored.
3. All field welding must be done in accordance with AISC guidelines. All aluminum and glass should be shielded from field welding to avoid damage from weld splatter. Results will be unsightly and may be structurally unsound. Advise general contractor and other trades accordingly.
4. Coordinate protection of installed work with general contractor and/or other trades.
5. Coordinate sequence of other trades which affect framing installation with the general contractor (e.g. fire proofing, back up walls, partitions, ceilings, mechanical ducts, HVAC, etc.).
6. General contractor should furnish and guarantee bench marks, offset lines and opening dimensions. These items should be checked for accuracy before proceeding with erection. Make certain that all adjacent substrate construction is in accordance with the contract documents and/or approved shop drawings. If not, notify the general contractor in writing before proceeding with installation because this could constitute acceptance of adjacent substrate construction by others.
7. Isolate all aluminum to be placed directly in contact with masonry or other incompatible materials with a heavy coat of zinc chromate or bituminous paint. Fasteners attaching framing to building structure are typically not provided by Tubelite.
8. Sealant selection is the responsibility of the erector, installer and/or glazing contractor and must be approved by the sealant manufacturer with regard to application and compatibility for its intended use. All sealants must be used in strict accordance with the manufacturer's instructions and applied only by trained personnel to surfaces that have been properly prepared.
9. Sealant must be compatible with all materials with which they have contact, including other sealant surfaces. Consult the sealant manufacturer for recommendations relative to shelf life, compatibility, cleaning of substrate, priming, tooling adhesion, environment, temperature and humidity. Recommend sealant manufacturer perform adhesion "pull test" at "wet" glazing for quality assurance.
10. Drainage gutters and weep holes must be kept clean at all times. Tubelite will not accept responsibility for improper drainage as a result of clogged gutters and weep holes.
11. This product requires clearances at the head, sill and jambs to allow for thermal expansion and contraction as well as construction tolerances. Refer to final distribution drawings for joint sizes. Joints smaller than 1/2" may be subject to failure. Consult the sealant manufacturer for proper sizing of joints.
12. All framing members, entrances and other materials are to be installed plumb, level and true with regard to established bench marks, column center lines or other working points established by the general contractor and checked by the erector, installer and/or glazing contractor.
13. After sealant is set and a representative amount of the wall has been glazed (500 square feet or more), run a water hose test to check installation. On large projects, a hose test should be repeated during glazing operation. This testing should be conducted in accordance with AAMA 501.2 specifications.
14. Cleaning of exposed aluminum surfaces should be done per AAMA recommendations.
15. Care must be taken when assembling aluminum framing components. Over tightening any fastener may cause stripping or fastener failure. Tubelite recommends the use of drill motors with clutches engaged to provide satisfactory tightening of the screw while preventing over torque. The use of impact drill motors is not recommended due to the absence of a clutch device.

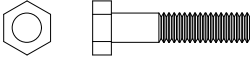




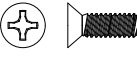
GENERAL CONSTRUCTION NOTES (con't)

16. For cold weather installation, glazing materials (including but not limited to glazing gaskets, isolators and gaskets for air seals and expansion mullions) can become more rigid and thus more difficult to install. These materials should be installed at temperatures above 40 degrees Fahrenheit for proper system performance and ease of installation. A hot box may be required to warm the glazing materials prior to installation. Allow glazing materials to lay flat at 50 degrees Fahrenheit minimum temperature prior to installing.
17. Check www.tubeliteinc.com for any installation instruction updates.

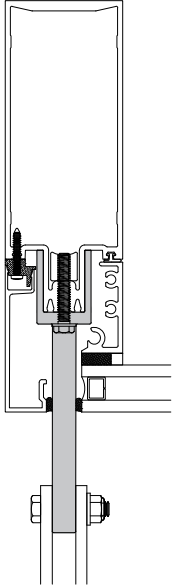
PARTS LIST

SHAPE	DESCRIPTION	PART No.
	400CW/T OUTSIDE SSG CORNER SUN SHADE BRACKET	P6941
	400CW/T TYPICAL VERTICAL MULLION SUN SHADE BRACKET	P6942
	400SS OUTSIDE CORNER SSG MULLION SUN SHADE BRACKET	P6943
	400SS TYPICAL VERTICAL MULLION SUN SHADE BRACKET	P6944
	CAPTURED MULLION BACKER BAR	P6912
	CAPTURED MULLION BACKER BAR	P6948

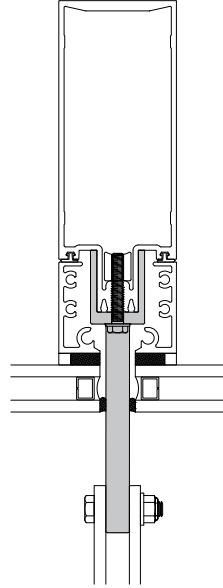
ACCESSORIES LIST

SHAPE	DESCRIPTION	PART No.
	5/16-18 x 1-1/2" Stainless Steel 18-8 (Outrigger mounting bolt & P6943 Sun shade bracket)	S367
	5/16-18 Hex Nylon Insert Lock Nut Stainless Steel 18-8 (P6943 & Outrigger mounting nut)	S368
	1/4-20 x 1-1/2" Steel, Zinc Plated (400CW/T attachments - P6942)	S427
	1/4-20 x 1-1/4" Steel, Zinc Plated (400CW/T attachments - P6941)	S430
	1/4-20 Top Lock Nut Zinc Electroplate (400CW/T attachments - P6941) (400SS attachments - P6944)	S006
	1/4-20 x 3/4" Zinc Electroplate (400SS attachments - P6944)	S047

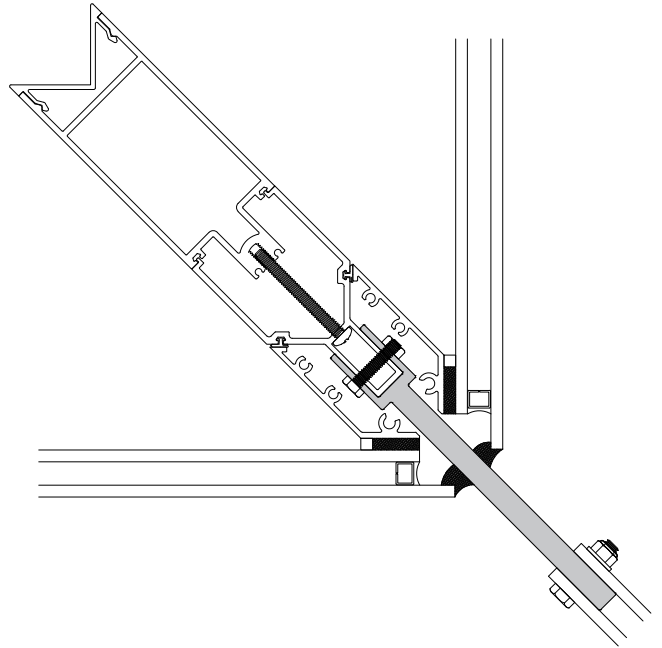
SUN SHADE BRACKETS / VERTICAL MULLIONS



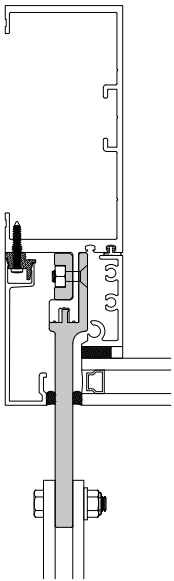
P6942 - 400CW/T Vertical
End Jamb



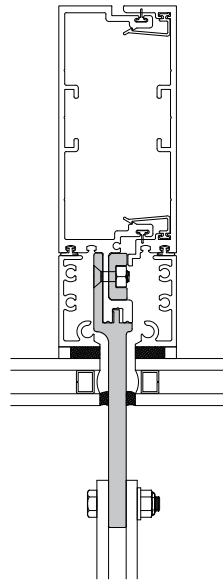
P6942 - 400CW/T Vertical
Intermediate Mullions



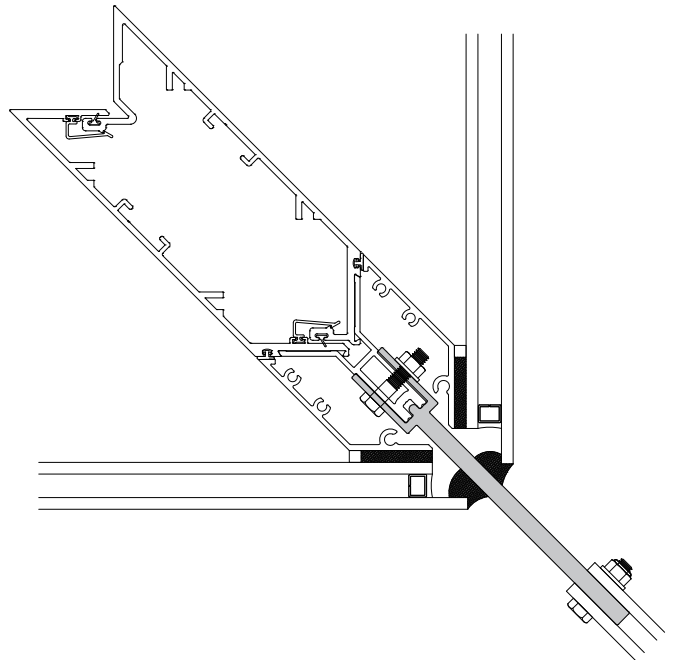
P6941 - 400CW/T Outside Corner



P6944 / P6912 - 400SS
Vertical End Jamb



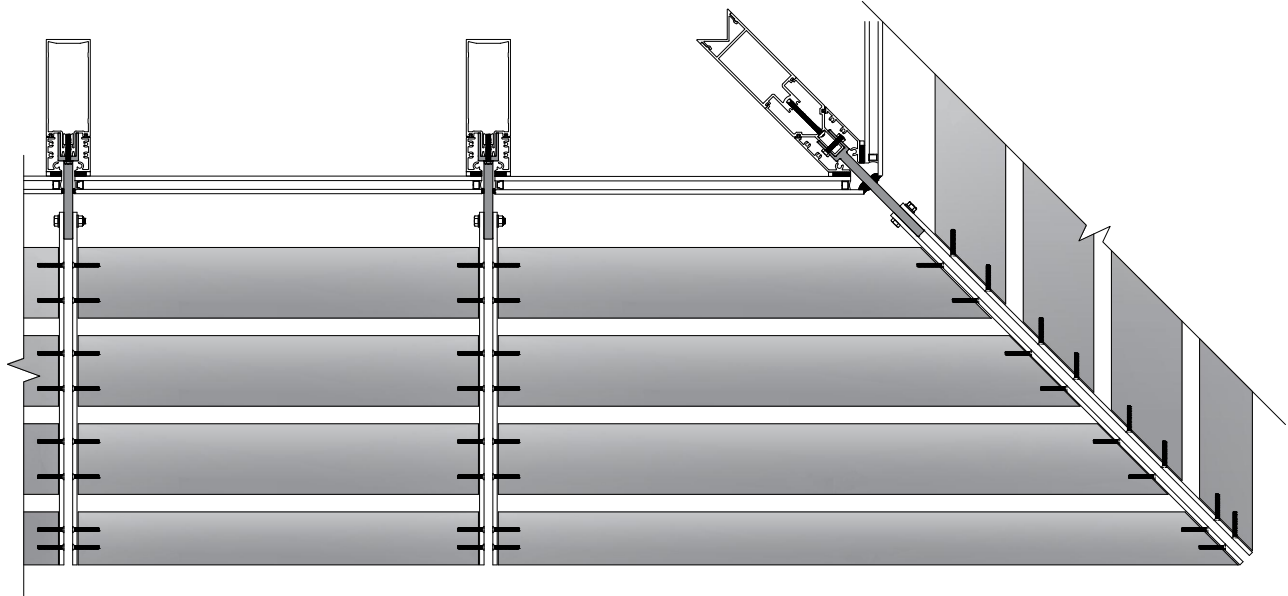
P6944 / P6912 - 400SS
Intermediate Mullions



P6943 - 400SS Outside Corner

SUN SHADE BLADE / FASCIA CUT LENGTH FORMULA

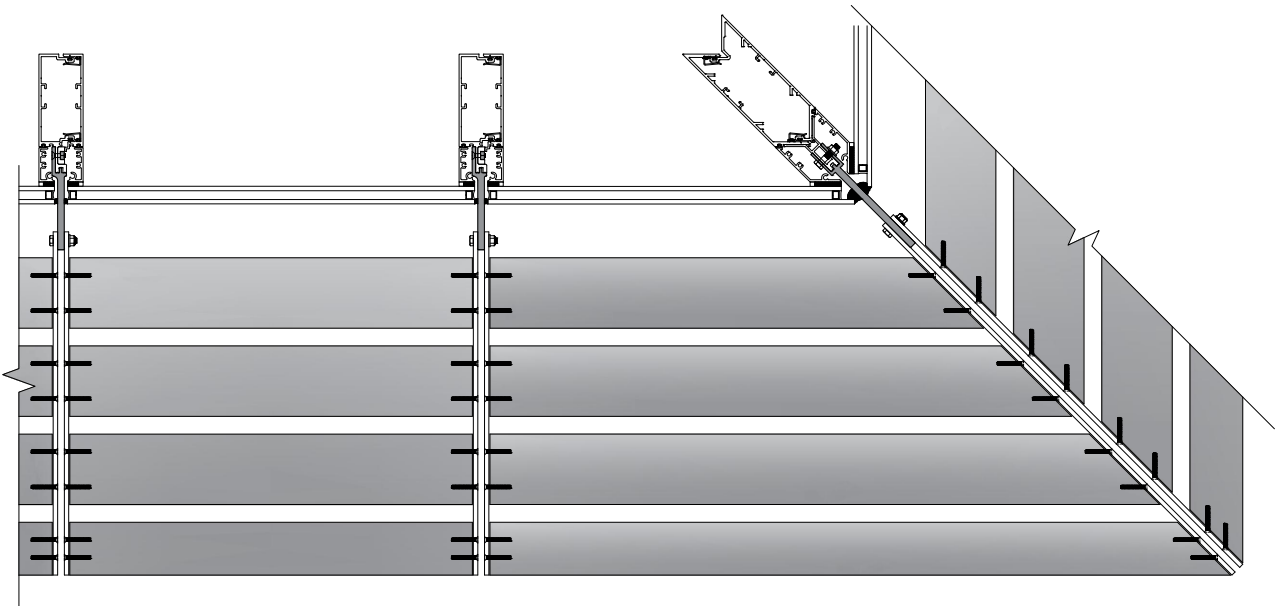
Cassette on 400CW/T Curtain Wall	
Sun Shade Bracket P-Part Number	Blade / Fascia Size Formula
P6941 - Outside Corner SSG Vertical Mullion	Layout vertical corner mullions and blade spacing for cut lengths
P6942 - SSG Vertical Mullion	DLO Plus 1-1/2"



Varying Blade / Fascia Cut Length at Corners

SUN SHADE BLADE / FASCIA CUT LENGTH FORMULA

Cassette on 400SS Curtain Wall	
Sun Shade Bracket P-Part Number	Blade / Fascia Size Formula
P6943 - Outside Corner SSG Vertical Mullion	Layout vertical corner mullions and blade spacing for cut lengths
P6944 / P6912 - Vertical SSG Mullion	DLO Plus 1-5/8"



Varying Blade / Fascia Cut Length at Corners

SUN SHADE BRACKET INSTALLATION - P6941 (400CW/T)

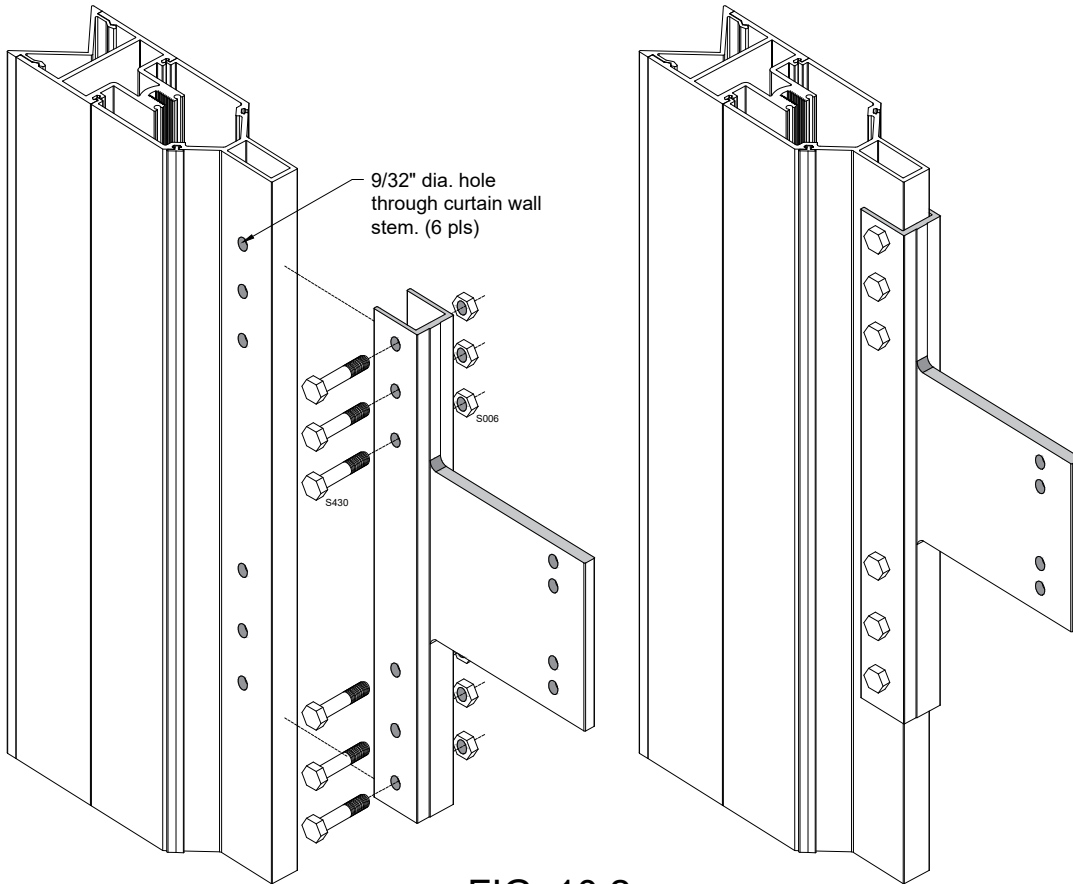


FIG. 10.2

- 1) Locate center line of sun shade bracket on vertical mullion, mark and drill 9/32" diameter clearance hole, FIG. 10.1.
- 2) Install bracket P6941 sun shade bracket securing with S430 bolt and S006 nut. Fig. 10.2.

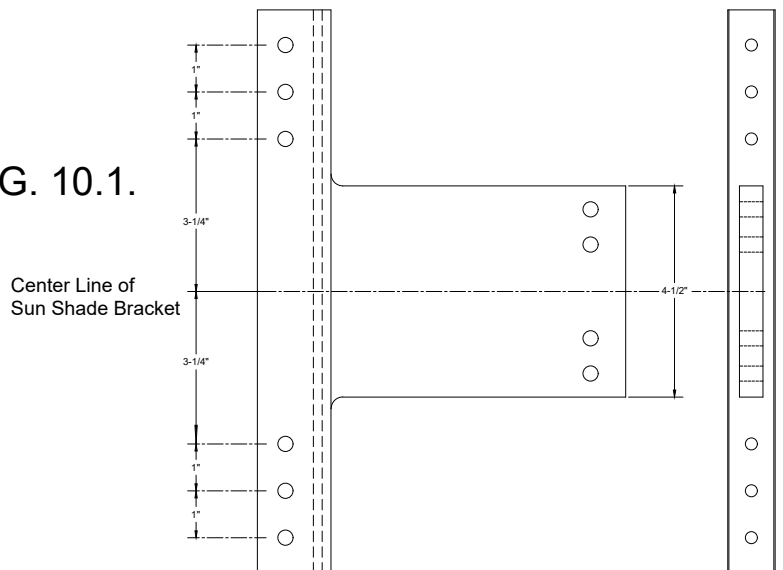
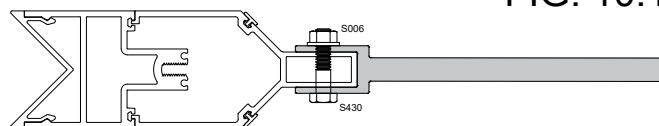


FIG. 10.1



SUN SHADE BRACKET INSTALLATION - P6941 cont. (400CW/T)

- 3) Verify perimeter gasket P4227 has been installed. Fig. 11.1.
- 4) Install Cassette framing following instructions "Cassette Installation Manual" securing Cassette frame to supporting curtain wall framing.
- 5) Once all Cassette framing and closures have been installed, install perimeter glass seals as instructed, sealing around sun shade bracket penetrations. Fig. 11.2.
- 6) Install sun shade outriggers per "Sun Control" instruction manual.

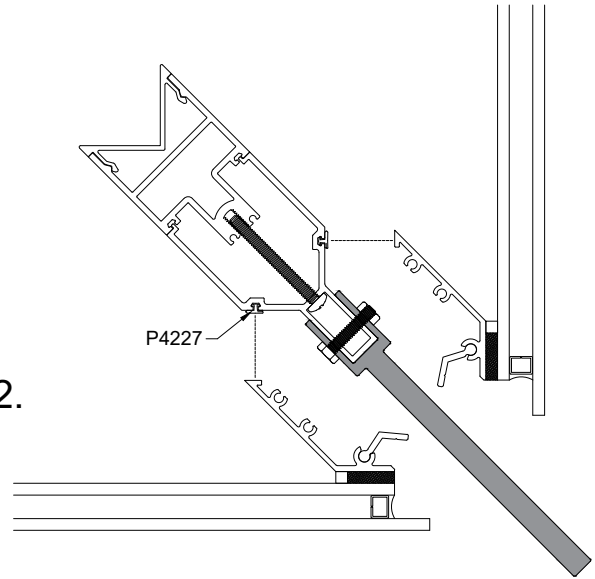


FIG. 11.1

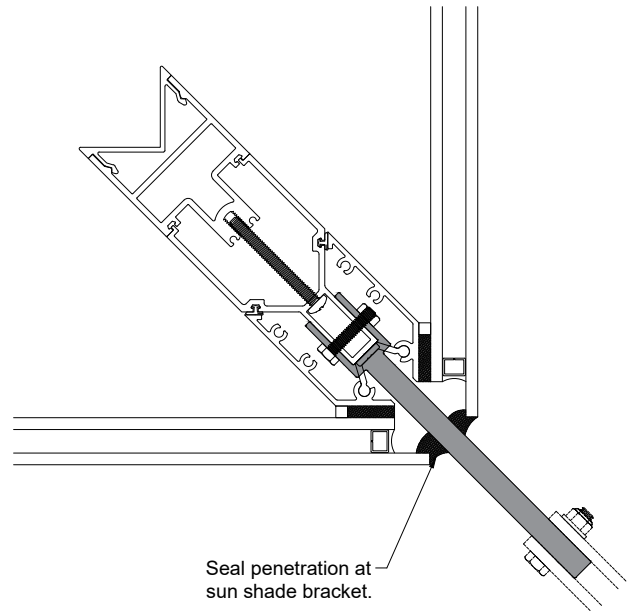


FIG. 11.2

SUN SHADE BRACKET INSTALLATION - P6942 (400CW/T)

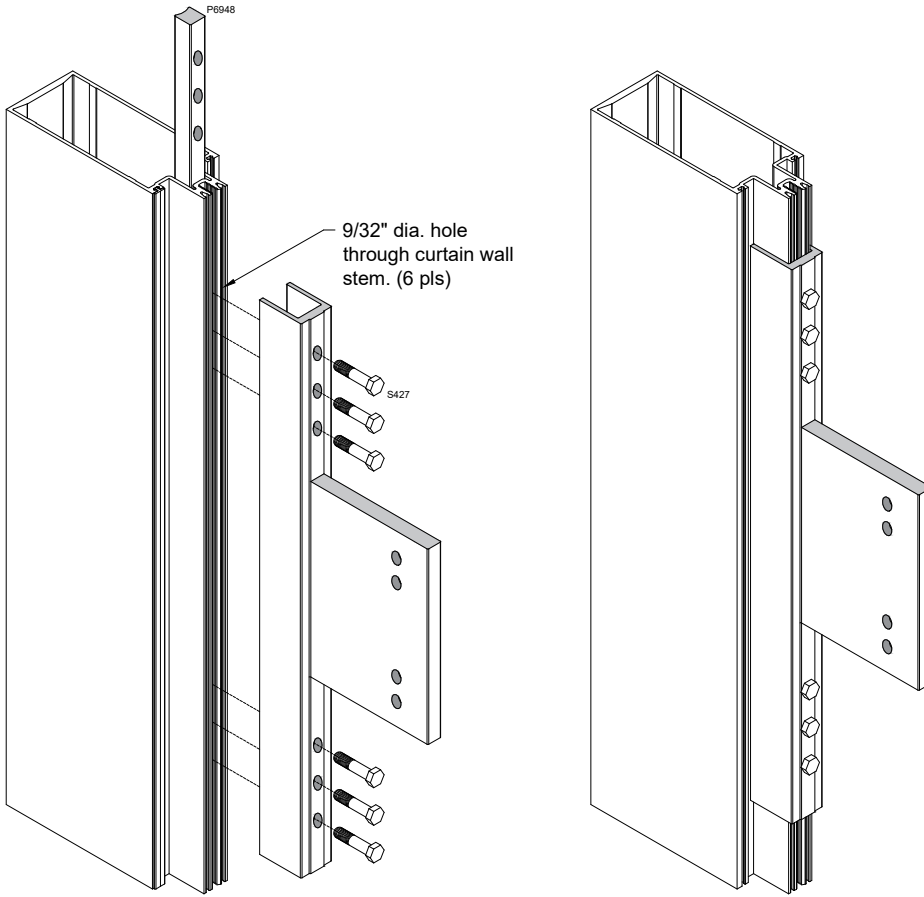


FIG. 12.2

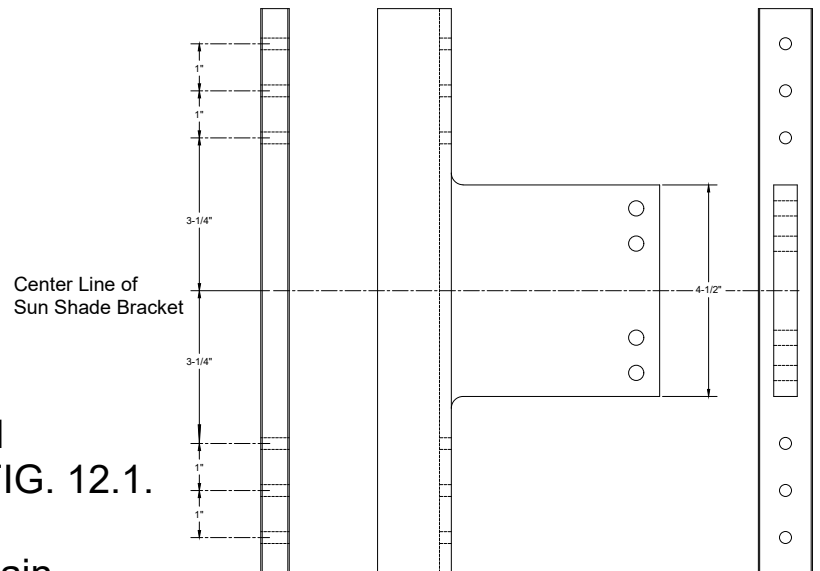
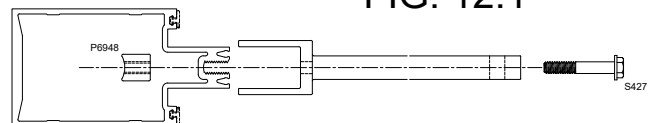


FIG. 12.1

- 1) Locate center line of sun shade bracket on vertical mullion, mark and drill 9/32" diameter clearance hole, FIG. 12.1.
- 2) Install P6942 sun shade bracket and P6948 backer bar and secure to curtain wall using S427 fastener. Fig. 12.2.



SUN SHADE BRACKET INSTALLATION - P6942 con't (400CW/T)

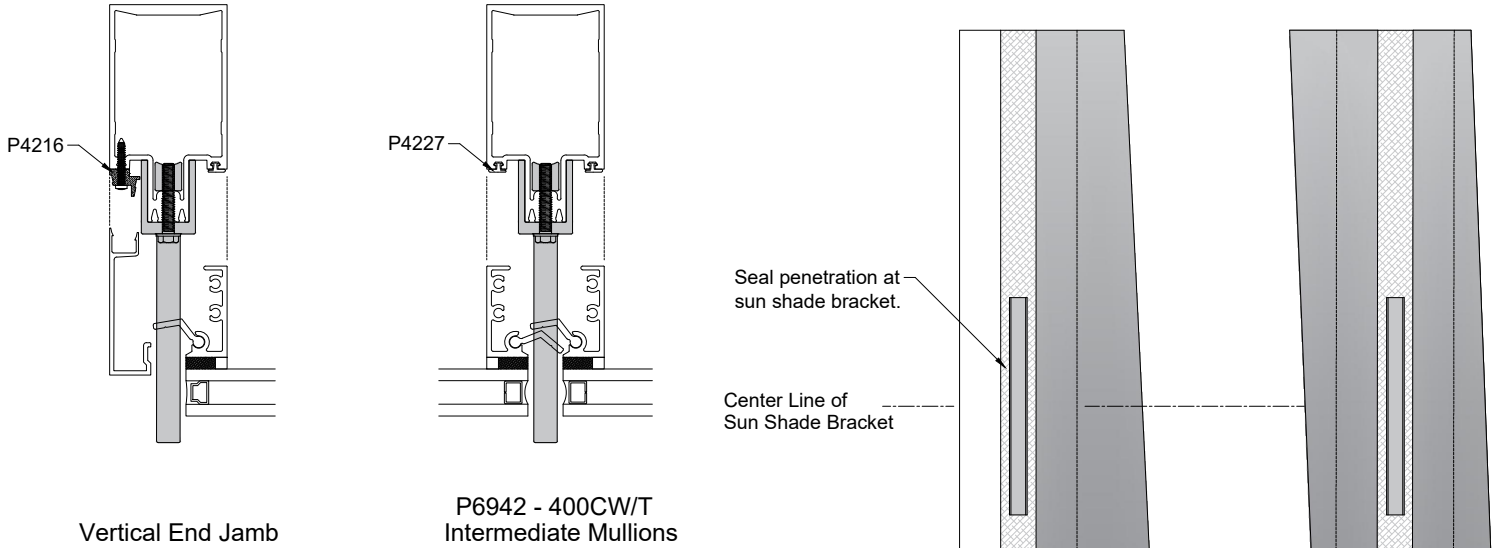


FIG. 13.1

- 3) Verify perimeter trim closure receiver P4216 and backer gasket P4227 have been installed. Fig. 13.1.
- 4) Install Cassette framing following instructions "Cassette Installation Manual" securing Cassette frame to supporting curtain wall framing.
- 5) Once perimeter closure E004CA has been installed, install perimeter glass seals as instructed, sealing around sun shade bracket penetrations. Fig. 13.2.
- 6) Install sun shade outriggers per "Sun Control" instruction manual.

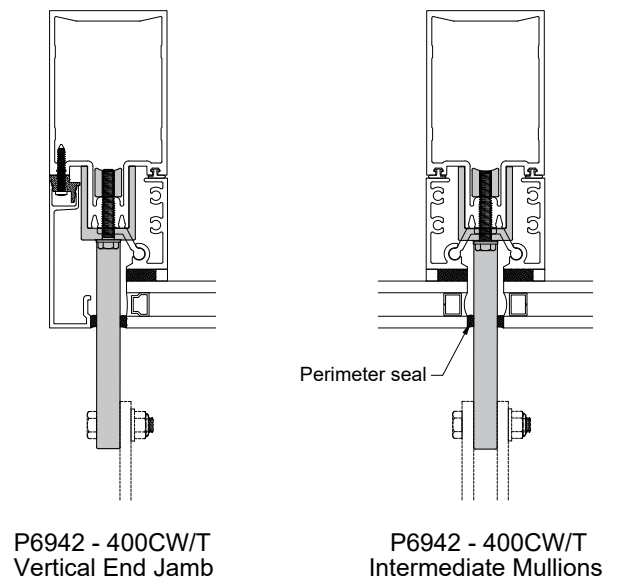


FIG. 13.2

SUN SHADE BRACKET INSTALLATION - P6943 (400SS)

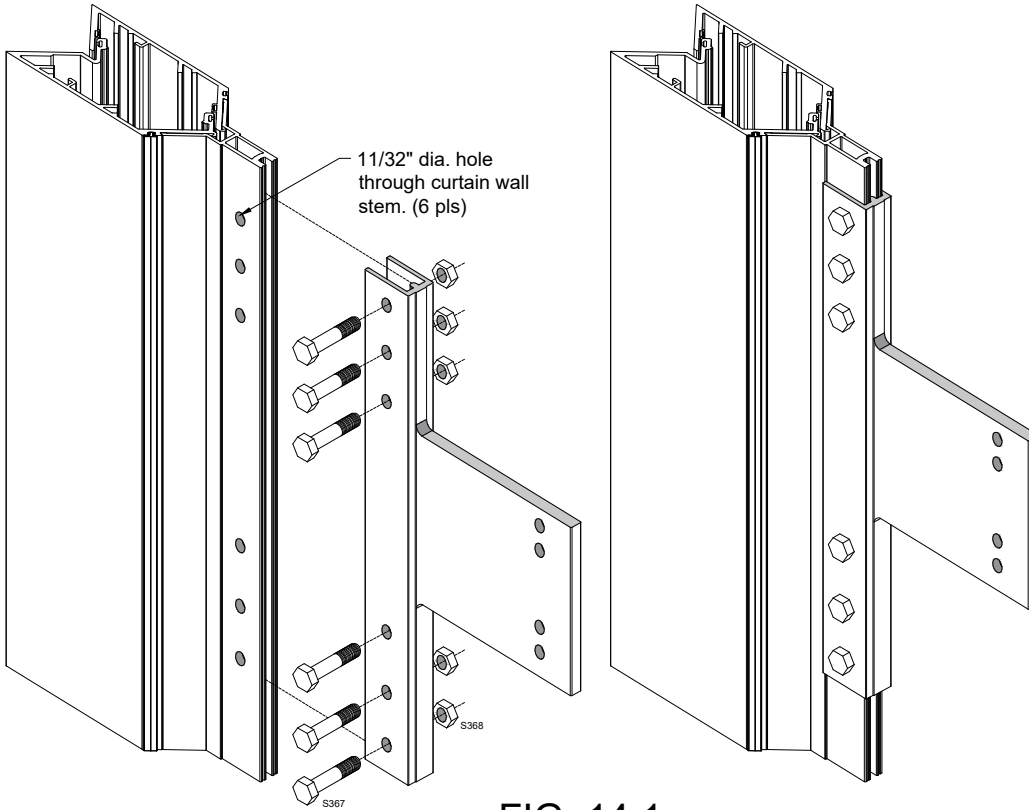


FIG. 14.1

- 1) Locate center line of sun shade bracket on vertical mullion, mark and drill 1 1/32" diameter clearance hole, FIG. 14.1.
- 2) Install bracket P6943 sun shade bracket securing with S367 bolt and S368 nut. Fig. 14.2.

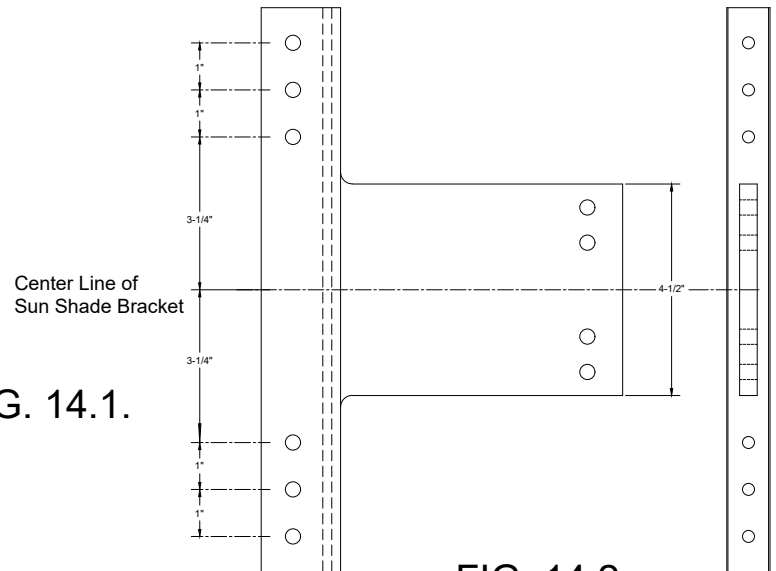
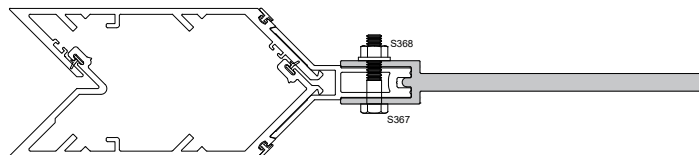


FIG. 14.2



SUN SHADE BRACKET INSTALLATION - P6943 cont. (400SS)

- 3) Verify perimeter gasket P4227 has been installed. Fig. 15.1.
- 4) Install Cassette framing following instructions "Cassette Installation Manual" securing Cassette frame to supporting curtain wall framing.
- 5) Once all Cassette framing and closures have been installed, install perimeter glass seals as instructed, sealing around sun shade bracket penetrations. Fig. 15.2.
- 6) Install sun shade outriggers per "Sun Control" instruction manual.

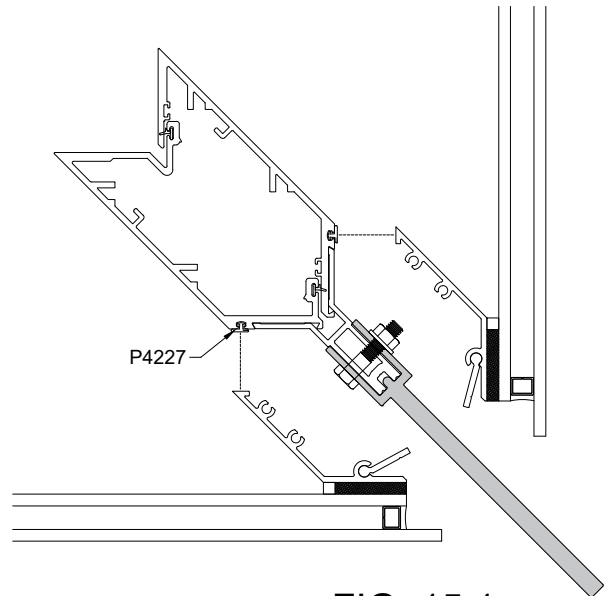


FIG. 15.1

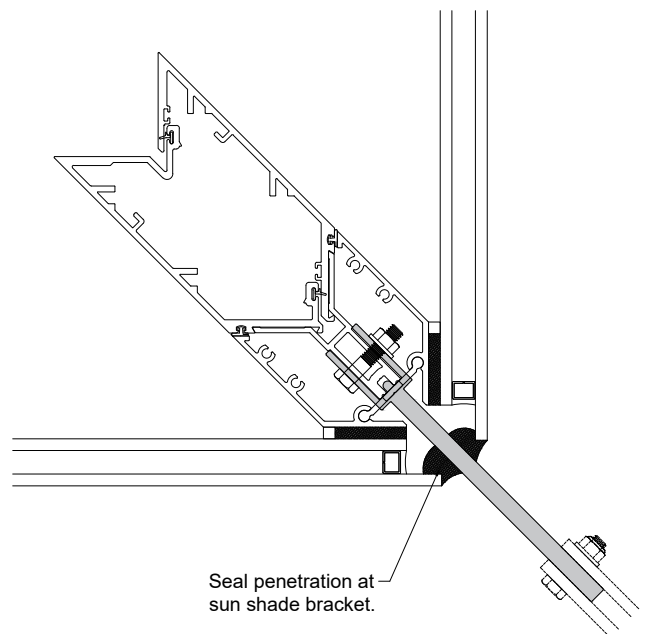


FIG. 15.2

SUN SHADE BRACKET INSTALLATION - P6944 / P6912 (400SS)

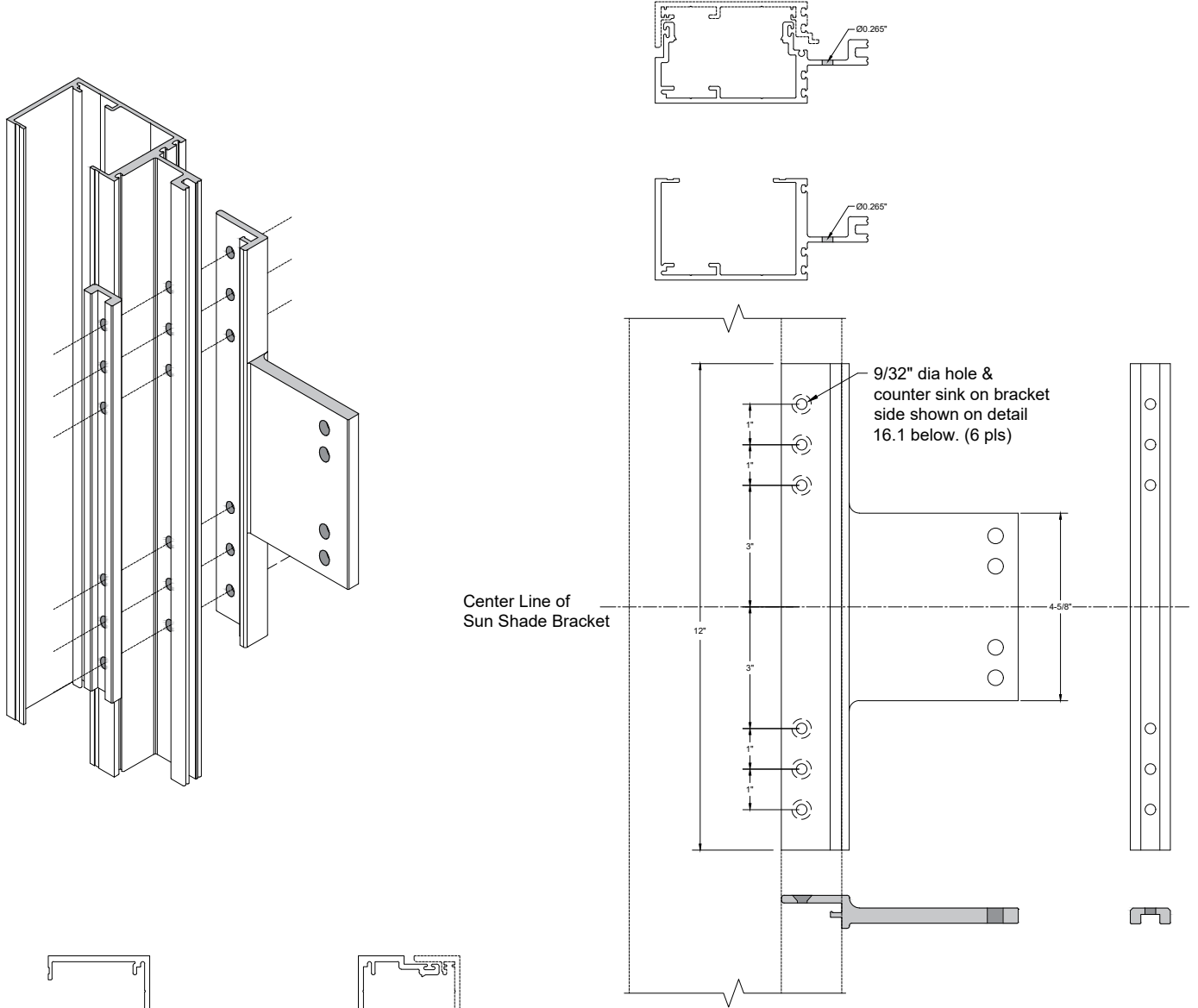


FIG. 16.1

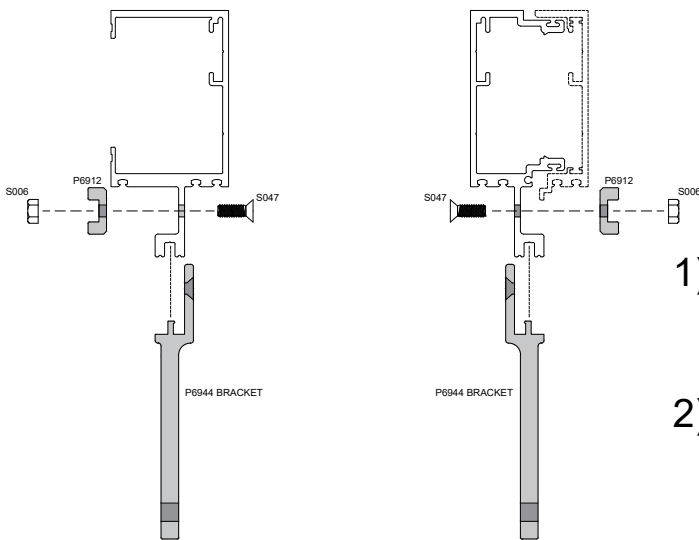


FIG. 16.2

- 1) Locate center line of sun shade bracket on vertical mullion, mark and drill 9/32" diameter clearance hole, FIG. 16.1.
- 2) Install bracket P6944 sun shade bracket, P6912 backer bar and S047 bolt and S006 nut. FIG. 16.2.

SUN SHADE BRACKET INSTALLATION - P6944 / P6912 con't (400SS)

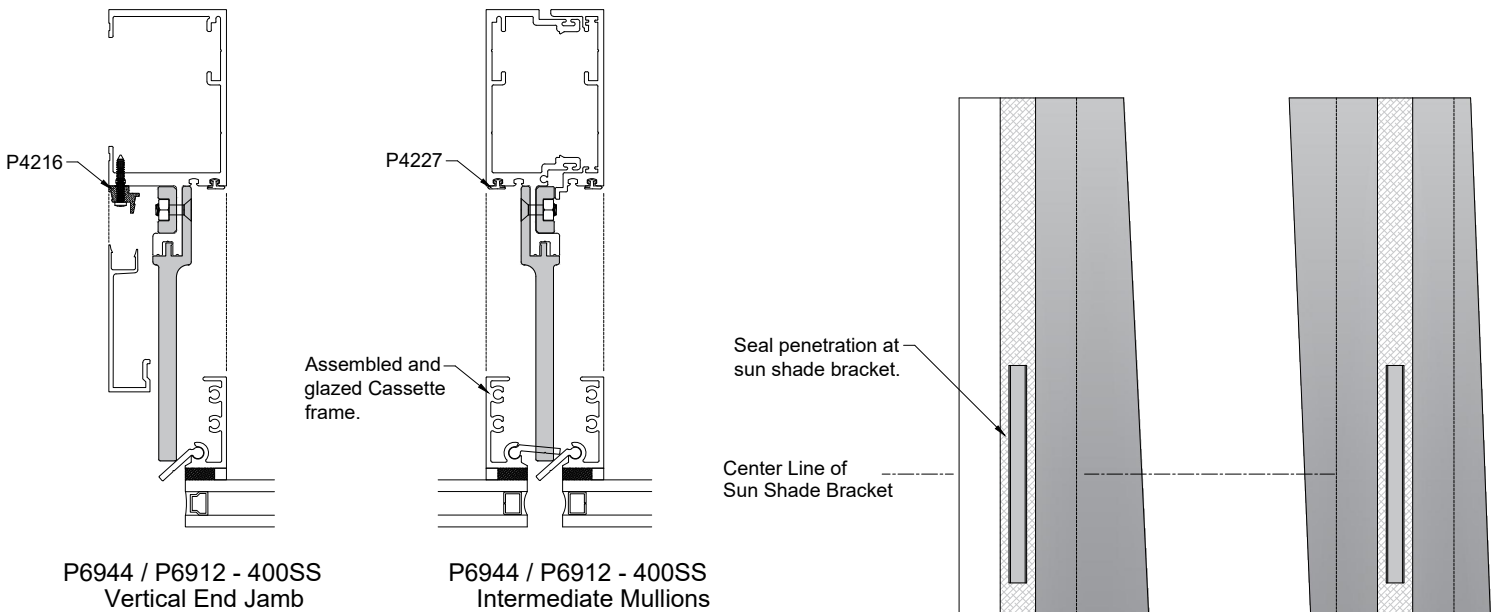


FIG. 17.1

- 3) Verify perimeter trim closure receiver P4216 and backer gasket P4227 have been installed. Fig. 17.1.
- 4) Install Cassette framing following instructions "Cassette Installation Manual" securing Cassette frame to supporting curtain wall framing.
- 5) Once perimeter closure E004CA has been installed, install perimeter glass seals as instructed, sealing around sun shade bracket penetrations. Fig. 17.2.
- 6) Install sun shade outriggers per "Sun Control" instruction manual.

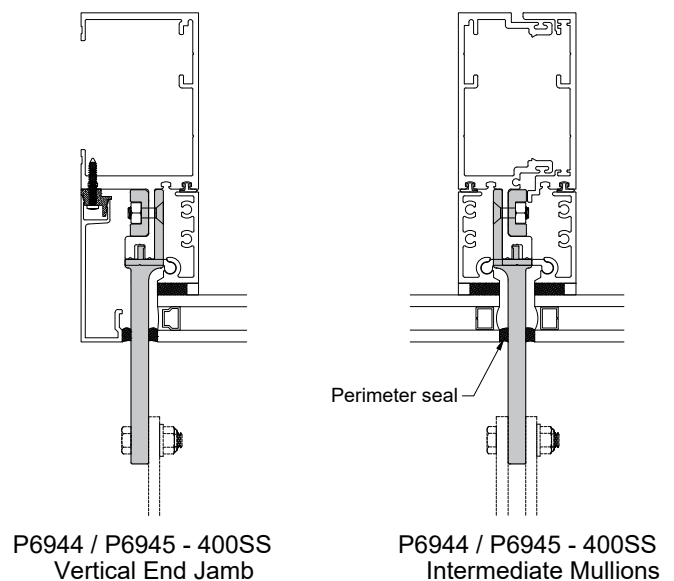


FIG. 17.2