

The louver structural support system provides support for multi-section louvers for non-storm rated applications. The aluminum tube will attach to most building conditions via structural angles (anchors not included).

Ratings

Design Load: 30 psf

Standard Construction

Material: Mill finish extruded aluminum

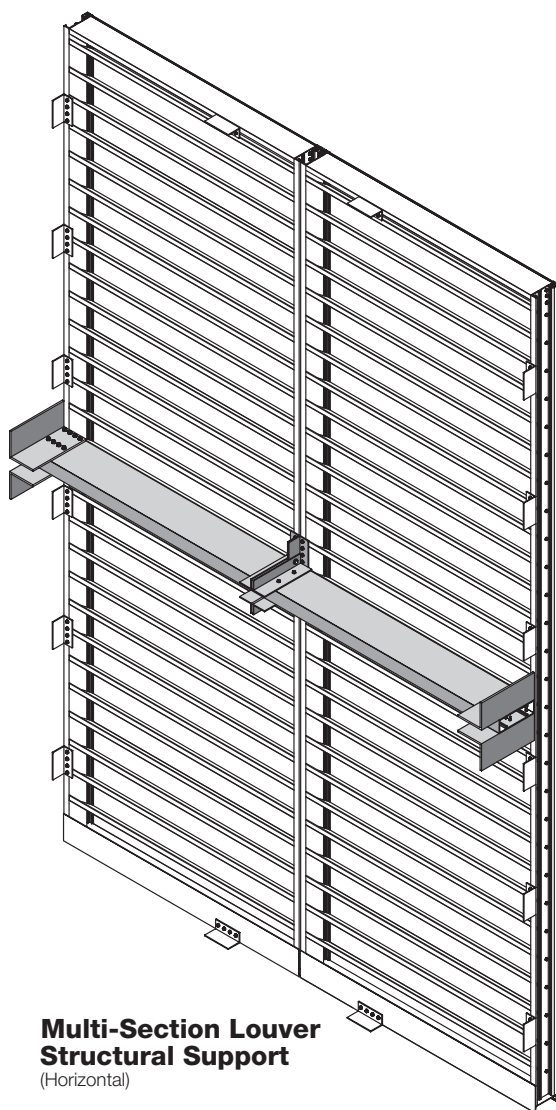
Tube: 6" x 2" x 1/8" (152 x 51 x 3)

Mullion Angle (Vertical Orientation only):
3" x 1" x 1/8" (76 x 25 x 3) angle

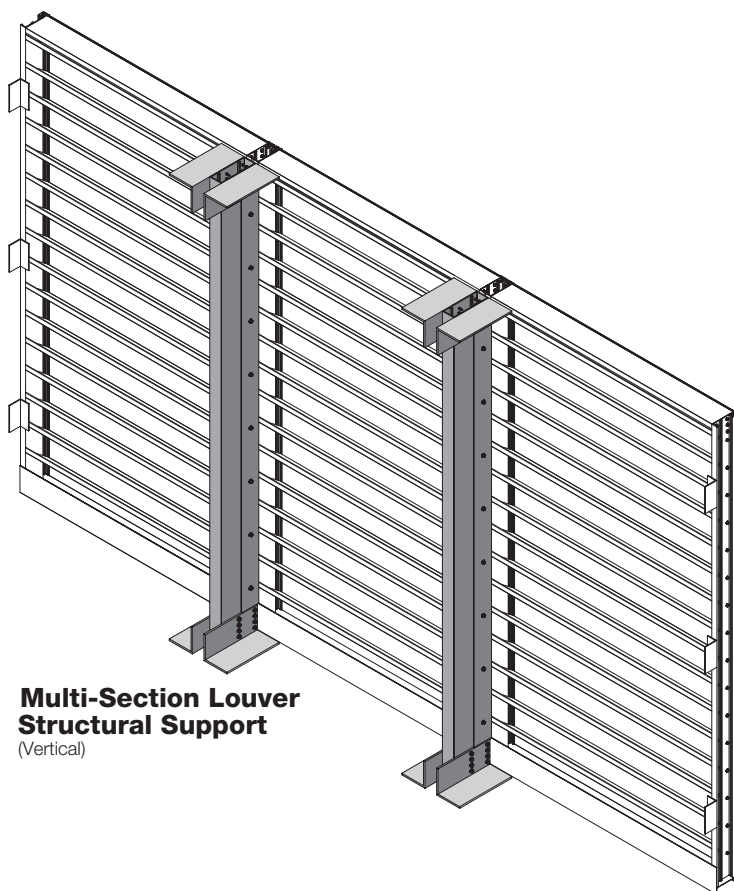
Mullion Angle: 4" x 4" x 1/4" x 9" long (102 x 102 x 6 x 229)

Maximum Size: 240" (6096) in any direction

Orientation: Tube will span along the direction of the opening which has the smallest dimension.



Multi-Section Louver Structural Support
(Horizontal)



Multi-Section Louver Structural Support
(Vertical)

IMPORTANT: READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION

General

The following guidelines provide basic assembly and installation instructions for structural support components holding standard, multiple section C&S extruded aluminum stationary blade louvers. The structural members are designed to resist a 30 psf wind load.

1. Consult with the Engineer of record for the size, type, and surrounding condition.
2. For additional details, refer to the product drawing package posted at www.csairproducts.com as well as any job-specific submittal drawings when provided.
3. Caulk and anchors are by others. Proper isolation (by others) is recommended between aluminum louver components and steel building conditions to prevent corrosion.
4. Refer to the Extruded Aluminum Stationary Louver Installation Instructions when installing stationary louvers. Parts listed in Table 1 of that guide may be called out when installing structural support components.

Preparation

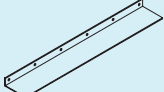
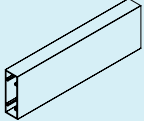
Hardware

1. Locate all crates, boxes, cartons, etc.
2. Remove hardware from packaging, inspect for damage, confirm quantities and sizes with packing list, and organize parts in order of installation
3. Notify your C&S representative immediately of any shortages or shipping damage.

Openings

1. Inspect openings for damage, repair as needed, and remove obstructions and debris as required.
2. Verify that openings are square, plumb, and that the louvers will fit properly prior to installation.

Table 1: Installation Hardware

Part	Description		
A-3 (LH)	Clip Angle, Left Hand (4" x 4" x 1/4" x 9" Long)		Included
A-3 (RH)	Clip Angle, Right Hand 4" x 4" x 1/4" x 9" Long		Included
A-4	Mullion Angle (3" x 1" x 1/8" x Varying Length)		Included for vertical support orientation only
E-1	Continuous Angle (3-1/2" x 1-1/2" x 1/8" x Varying Length)		Included
F-4	1/4" x 1" Hex-Head Self-Drilling Screw		Included

Vertical Support Installation

1. Measure the overall thickness of the building wall.
 - a. Check Figures 2-5 for minimum anchor edge distance depending on the building condition.
2. Lay out the louver sections face down in the approximate order in which they will be positioned within the opening. At mullion joints between adjacent sections, use 1/4-14 x 1" self-drilling screws (F-4) to install mullion angles (A-4) to the back of the louver frame jambs. Use Figures 6 and 7 as a reference.
 - a. Align the edge of the 1" angle leg with the outside edge of the frame jamb. The bottom end of the angle will sit directly against the top of the frame sill.
 - b. Screws will run through the existing clearance holes in the mullion angles into the louver frame.
3. Locate all A-1 anchor clip angles as shown in fig. 3.1 of the Stationary Louver Installation (Clip angles are by others or optional by C&S).
4. Follow steps 2-4 for Single Section Louver Installation of the Stationary Louver Installation for all bottom row louvers. Maintain a 1/4" gap between sections, and approximately 1/4" of clearance around the perimeter of the opening (shim by others). **Do not install higher rows until after step 10.**
5. Locate the mullion tubes (E-1), and slide a tube between each pair of mullion angles as shown in Figure 7.

Installation Details

Louver Structural Support Installation Instructions

6. Shim under each tube as needed to maintain an approximate 1/4" clearance between the ends of the tube and the top and bottom of the opening.
7. Fasten the mullion angles to the sides of the tube using 1/4-14 x 1" self-drilling screws (F-4).
 - a. Screws should be located no more than 12" on center, 1/2" from each end of the angle, and at least 1/2" from edges of angles and tube.
 - b. Drill pilot holes as necessary. To ensure proper thread engagement, pilot hole diameters must not exceed 3/16".
 - c. Be sure to keep mullion tubes level.
8. Locate the clip angles (A-3) and determine their orientation at the mullion connections, using Figures 2-5 as a reference.
 - a. Note that the clip angles come in left and right-hand versions for placement on opposite sides of the mullion tube.
 - b. Check the condition to which the anchors (F-3, by others) will be attached to. Make sure that the anchors will have the minimum edge distance based on the building condition. See the figures below based on condition.
9. Fasten the clip angles to the sides of the mullion tubes using 1/4-14 x 1" self-drilling screws running through the existing clearance holes.
10. Use the sections details from Figures 2-5 as a guide for anchor locations. Hole locations in clips angles are based on building condition.
11. Middle and top louver sections can be installed by following steps 4-7.

Multiple Sections High with Stiffeners

Use this section only if structural support tubes are being used vertically and louvers have angle stiffeners.

1. Follow all of the above steps to install supports at louver joints.
2. Set mullion tubes behind stiffeners and mark joint(s) between stiffeners on tubes. See Figure 8.1.
3. Extended clip angles (A-2) will be used to join stiffener joints to mullion tubes.
 - a. Drill four (4) 1/4" holes in the 2" long leg of extended clip angles (A-2).
 - b. Drill six (6) 1/4" holes in the 1.5" long leg of the clip angle. Holes should not be less than 3/4" from each end.
4. Place each extended clip angle over the mark from step 2 with the 2" leg against the tube. The mark should be located at the center of the angle. See Figure 8.2.
5. Fasten the extended clip angle(s) to the mullion tube using 1/4-14 x 1" self-drilling screws.
6. Set the tube and attached extended clip angle(s) against the stiffeners and fasten together with 1/4-14 x 1" self-drilling screws.
 - a. Three (3) screws should be in each stiffener.
7. Follow steps 8-10 above for attaching clip angles (A-3), 1/4" self-drilling screws, and anchors.

Horizontal Support Installation

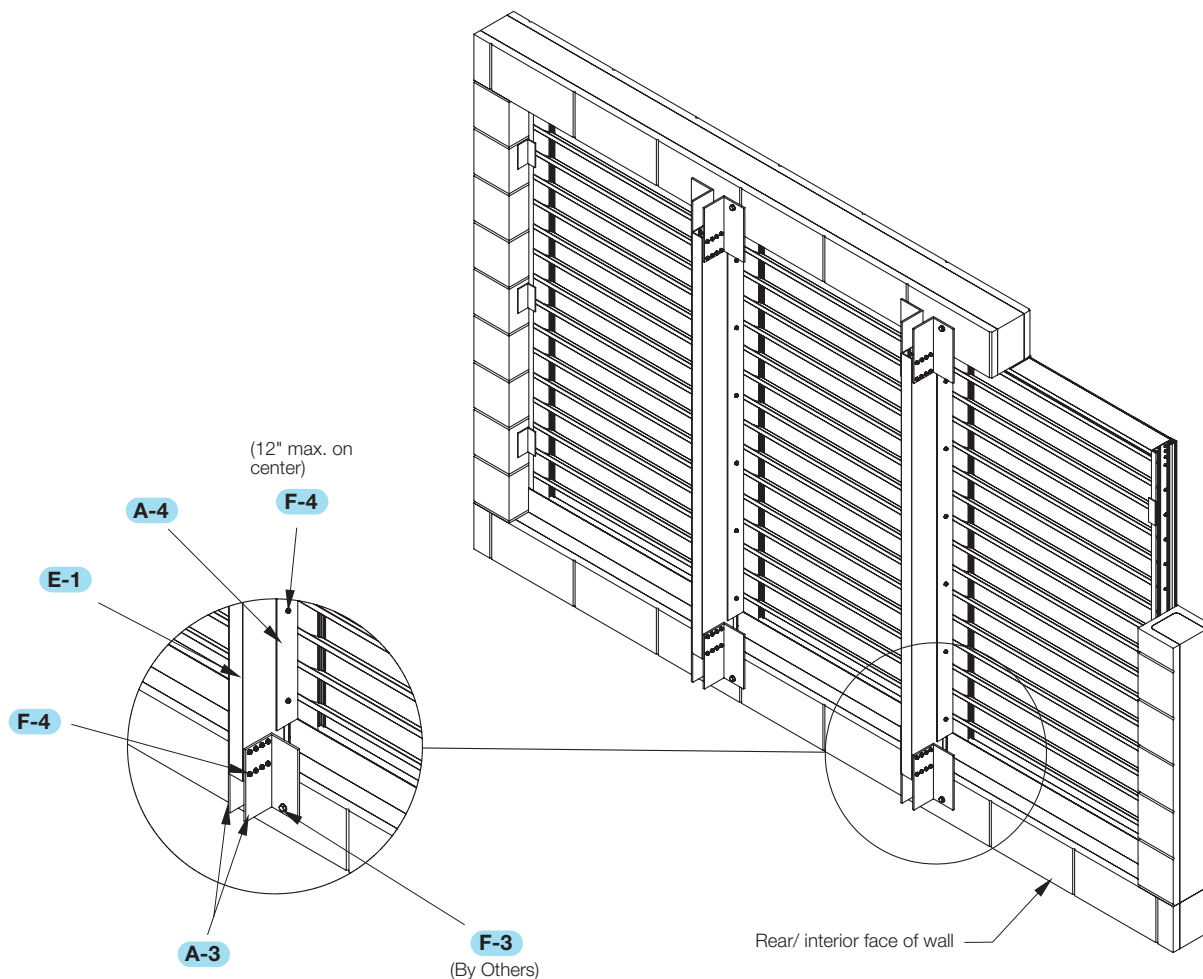
1. Measure the overall thickness of the building wall.
 - a. Check Figures 2-5 for minimum anchor edge distance depending on the building condition.
2. Locate all A-1 anchor clip angles as shown in Fig. 3.1 of the Stationary Louver Installation (Clip angles are by others or optional by C&S).
3. Follow steps 2-4 for Single Section Louver Installation of the Stationary Louver Installation for all bottom row louvers. Maintain a 1/4" gap between sections, and approximately 1/4" of clearance around the perimeter of the opening (shim by others). **Do not install higher rows until after step 6.**
4. At horizontal splice joints fasten A-1 clip angles vertically to the back of jambs.
5. Place mullion tubes (E-1) horizontally behind clip angles and stiffeners (if present). See Figure 3.1 of the Stationary Louver Installation Instructions.
 - a. Be sure that the center of the tube aligns with the joint.
6. Follow steps 8-10 for installing clip angles (A-3), self-drilling screws (F-4), and anchors hole locations.
7. Repeat steps 3-6 for middle and top rows.
 - a. Follow step 2 for Multiple Section Louvers in the Stationary Louver Installation Instructions when attaching extended clip angles (A-2) to the mullion tube and clip angles attached to splice joints. See Figure 3.1 of the Stationary Louver Installation Instructions.

Installation Details

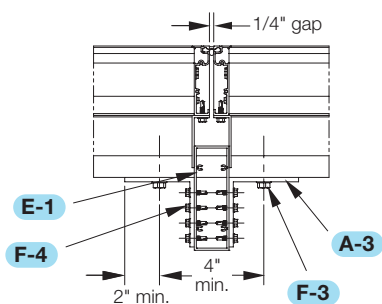
Louver Structural Support

Installation Instructions

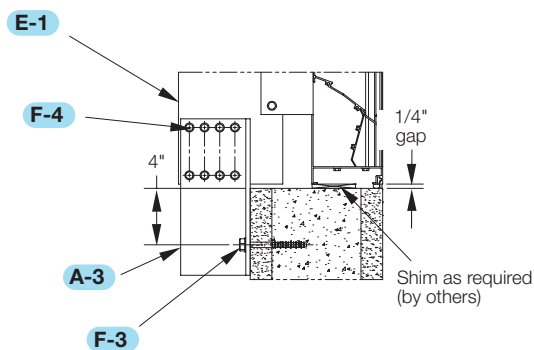
Figure 2: Installation to CMU



Horizontal Section Detail Mullion Connections



Vertical Section Detail Mullion Connections

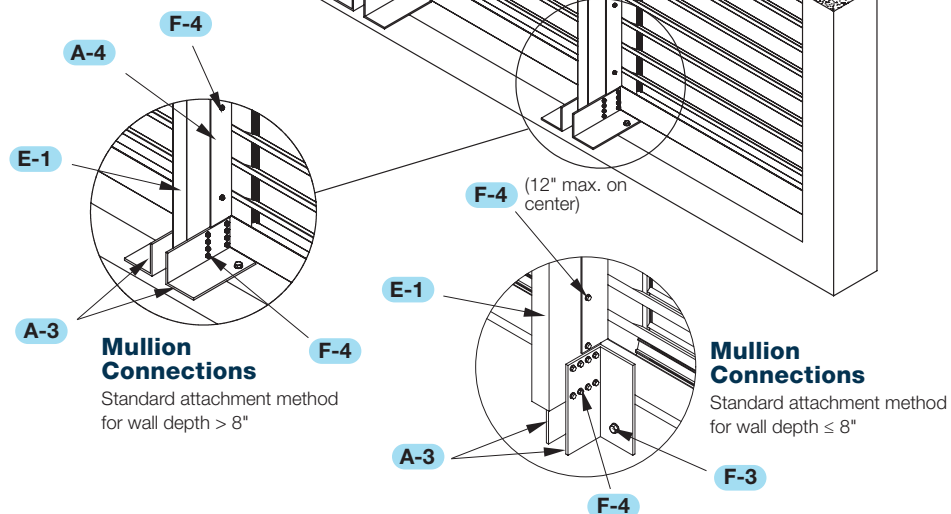
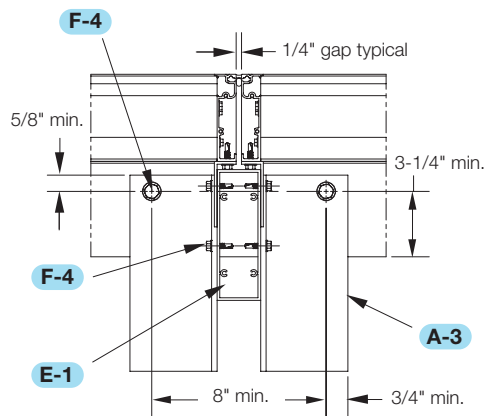


Installation Details

Figure 3: Installation to Concrete

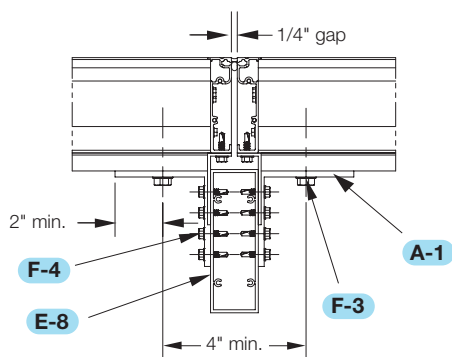
Horizontal Section Detail Mullion Connections

Standard attachment method
for wall depth > 8"



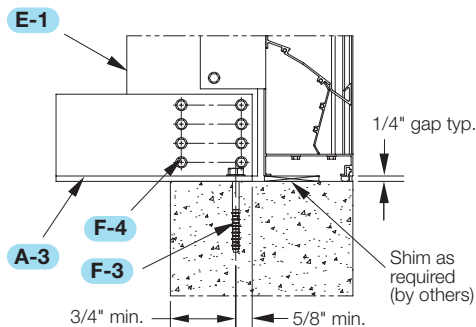
Horizontal Section Detail Mullion Connections

Alternate attachment method
for wall depth ≤ 8"



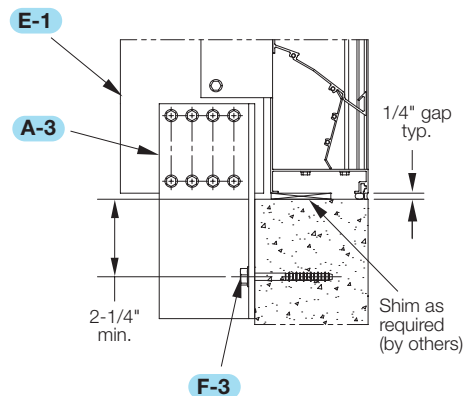
Vertical Section Detail Mullion Connections

Standard attachment method
for wall depth > 8"



Vertical Section Detail Mullion Connections

Standard attachment method
for wall depth ≤ 8"



Louver Structural Support

Installation Instructions

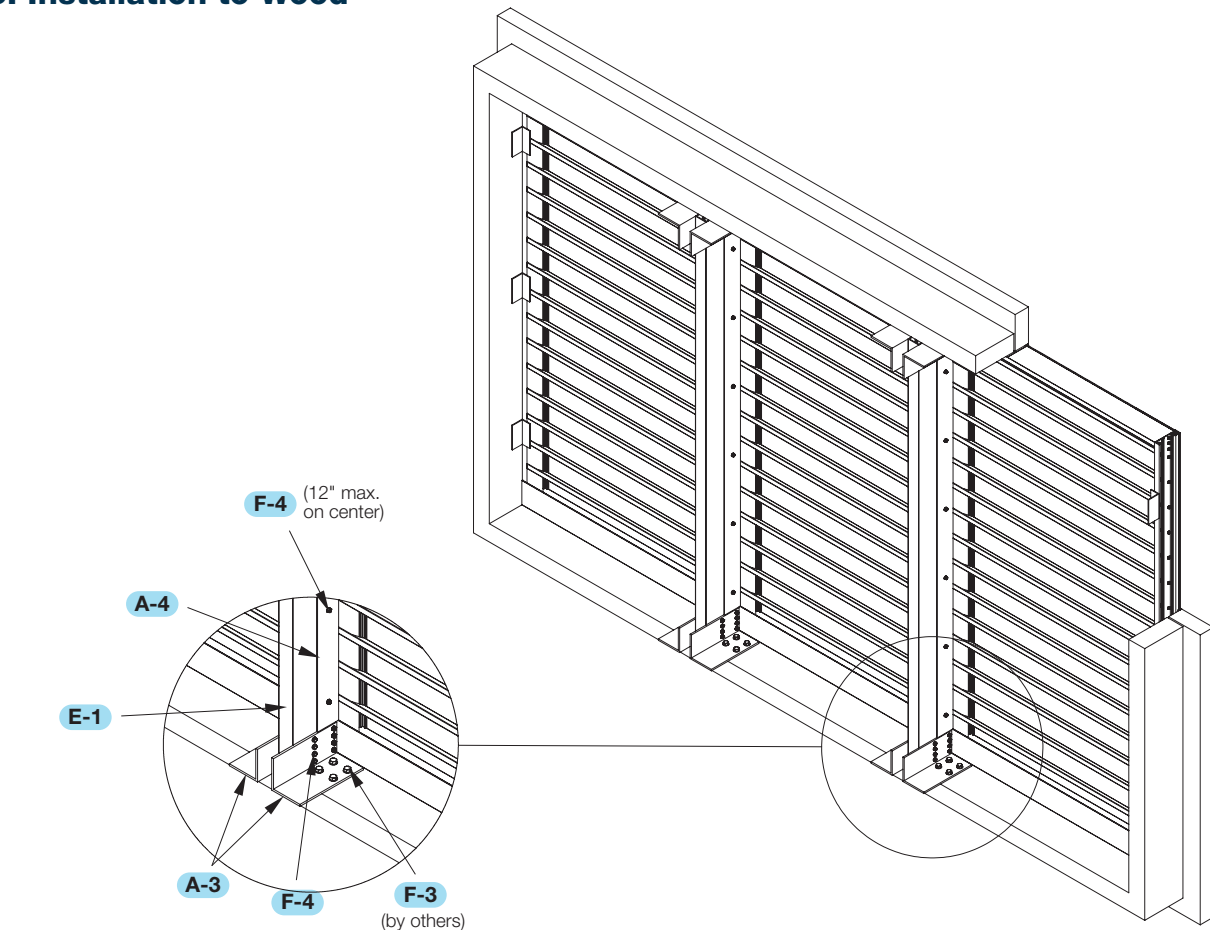
Technical drawing of a door assembly showing a cross-section of the door frame and door. The drawing includes labels E-1, F-4, A-3, and F-4 pointing to various components. Dimensions include 1/4" gap typ., 5/8" min., and 5/8" min. A note indicates "Shim as required (by others)".

Installation Details

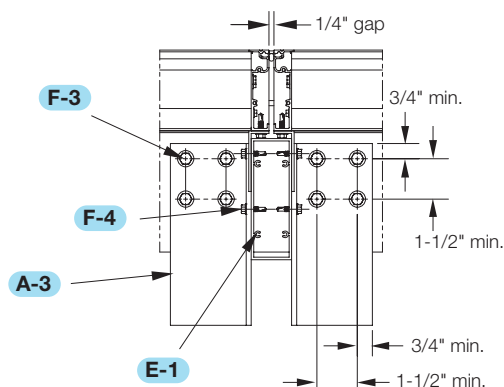
Louver Structural Support

Installation Instructions

Figure 5: Installation to Wood



Horizontal Section Detail Mullion Connections



Vertical Section Detail Mullion Connections

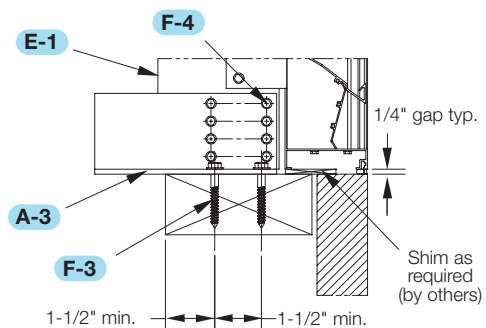


Figure 6: Installing Mullion Angles

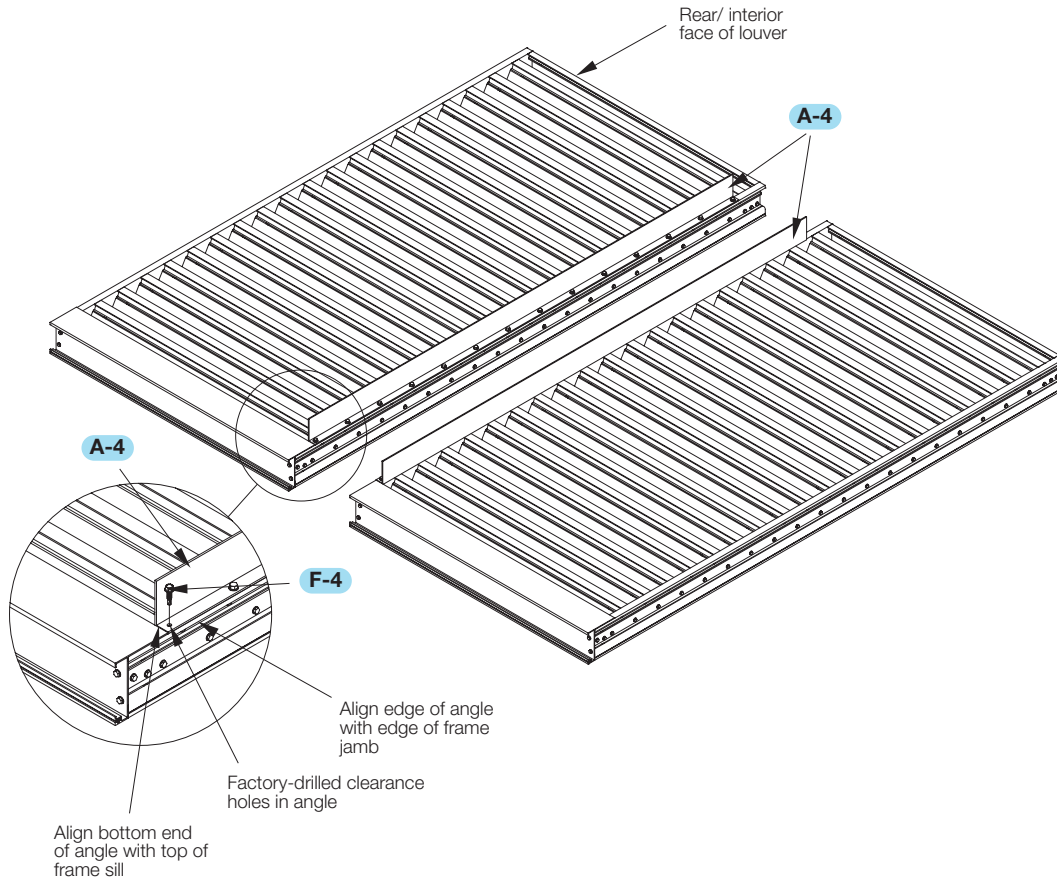
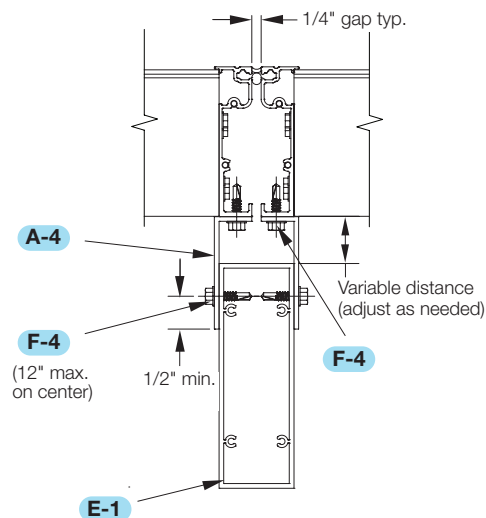


Figure 7: Mullion Section Detail

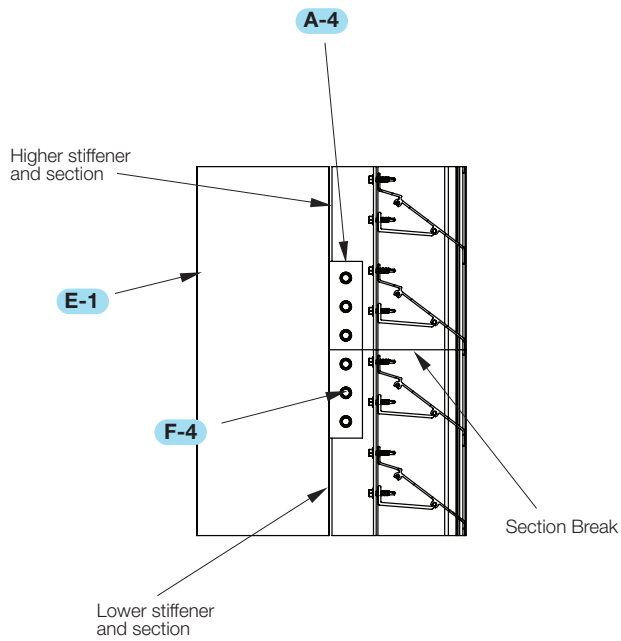


Installation Details

Louver Structural Support

Installation Instructions

**Figure 8.1: Vertical Section Detail
Structural Support at Stiffener Connection**



**Figure 8.2: Horizontal Section Detail
Structural Support at Stiffener Connection**

